Tell us about your PDF experience.

Dynamics 365 Sales documentation

Discover how to make the most of Dynamics 365 Sales with online training courses, docs, and videos covering product capabilities and how-to articles. Learn how to use Dynamics 365 Sales to build strong relationships with your customers, take actions based on insights, and close deals faster.

GET STARTED
Welcome to Dynamics 365 Sales

WHAT'S NEW
What's new

TRAINING
Training

CONCEPT
Troubleshoot

Implement

Guidance

- Implementation
- Business processes
- Security and compliance

Try/Buy/Install

- Try Dynamics 365 Sales
- Buy Dynamics 365 Sales
- Install Dynamics 365 Sales apps

Set up

- Create an environment
- Grant users access
- Set up sales basics
- Set up the mobile experience

Administer and develop

Configure

- Configure sales accelerator
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Integrate

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Sales Copilot

- Enable and set up Sales Copilot
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Configure conversation intelligence

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Use

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Understand the sales process

Manage leads

Manage opportunities

Manage quote, order, and invoice

Sales Copilot

Use Sales Copilot

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View and copy email summary

Use predictions and insights

Prioritize leads through predictive scores

Prioritize opportunities through predictive scores

Improve customer relationship with relationship analytics

Coach sellers with conversation intelligence

Forecast sales

Define and track your sales goals

Project accurate revenue with sales forecasting

Predict future revenue outcomes using premium forecasting

Accelerate sales

Prioritize sales pipeline with work lists

Group records based on segments

Create conditional workflows with sequences

Collaborate with customers

Create and send email message

Use Microsoft Teams chat

Collaborate using SharePoint

Use dashboards and reports

Track progress with dashboards and charts

Analyze your sales data with Power BI

Go mobile

Install the mobile app

Learn the basics

Use the mobile app

View operational metrics and KPIs

Related products

Microsoft Sales Copilot

Use Microsoft 365 applications to automatically capture, access, and register data into any CRM system.

Customer Insights

Connect data from various transactional, behavioral, and observational sources to create a 360-degree customer view.

Marketing

Orchestrate personalized journeys across all touchpoints to strengthen customer relationships and earn their...

LinkedIn Sales Navigator

Use LinkedIn Sales Navigator to enhance key application scenarios by connecting the system of record with the...

Power Platform

Build custom apps using Power Apps, automate workflows to improve business productivity using Power Automate, and...

Welcome to Dynamics 365 Sales

Article • 07/28/2023

Welcome to Dynamics 365 Sales! Dynamics 365 Sales enables salespeople to build strong relationships with their customers, take actions based on insights, and close deals faster. Use Dynamics 365 Sales to keep track of your accounts and contacts, nurture your sales from lead to order, and create sales collateral. You can also create marketing lists and campaigns, and follow service cases associated with specific accounts or opportunities. This article provides an overview of the capabilities in Dynamics 365 Sales.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

Here's a short video to help you understand the power of using Dynamics 365 Sales in your organization:
https://www.microsoft.com/en-us/videoplayer/embed/RE4AC4d?postJsllMsg=true

> **Important**
>
> Dynamics 365 Sales runs on **Microsoft Dataverse** and uses Power Apps model-driven app design. You can create and manage model-driven apps by using Power Apps. More information: **What are model-driven apps?**

Choose the offering that fits your needs

There's a Dynamics 365 Sales offering to fit every need of a business:

- **Sales Premium**: Ideal for enterprises that need a sales automation solution, along with AI-driven insights powered by conversation intelligence, relationship intelligence, and more. Learn more about Dynamics 365 Sales Premium.
- **Sales Enterprise**: Ideal for enterprises that need a sales automation solution with contextual insights and advanced customization capabilities. Learn more about Dynamics 365 Sales Enterprise.
- **Relationship sales**: Ideal for enterprises that need to connect sales records with LinkedIn to enhance business processes with data about people, organizations, and relationships. Learn more about Microsoft Relationship Sales.

- **Sales Professional**: Ideal for enterprises that need a sales automation solution. Learn more about Dynamics 365 Sales Professional.
- **Microsoft Sales Copilot:** Ideal for enterprises that wants sellers to use Microsoft 365 and Microsoft Teams to automatically capture data, access, and register data into any customer relationship management (CRM) system, eliminating manual data entry. Learn more about Microsoft Sales Copilot

Dynamics 365 Sales Premium

Dynamics 365 Sales Premium combines Dynamics 365 Sales Enterprise capabilities with AI. The AI-driven features in Sales Premium continuously analyze the customer interaction data stored in Dynamics 365 Sales and collected from Microsoft 365. They help you to understand your business relationships, evaluate your activities in relation to previous successes, and choose the best path forward to build strong relationships with customers, take actions based on insights, and close opportunities faster.

A Dynamics 365 Sales Premium subscription includes all the capabilities of Sales Enterprise plus:

- **Guided selling:** Guide sellers on their next course of action with timely and actionable insights with the sales accelerator.
- **Relationship intelligence**: Build stronger relationships with customers and move relationships forward with AI-guided selling features like the sales assistant, who knows whom, and conversation intelligence. Free up sellers' time by minimizing manual data entry with contextual, real-time suggestions, making sure your data is always up to date. Take preemptive steps to mitigate risks with relationship analytics and health scores.
- **Predictive models**: Increase conversion and win rates by using AI to prioritize leads and opportunities using predictive lead and opportunity scoring and predictive forecasting.

Dynamics 365 Sales Enterprise

With Sales Enterprise, your sales organization can automate the sales process from lead to cash, run marketing campaigns, enforce best practices, collaborate with customers, and much more. A Dynamics 365 Sales Enterprise subscription includes the following capabilities:

- **Nurture sales from lead to cash**: Achieve more consistent sales interactions by following the sales process as it takes you through each stage, from creating a lead

to closing the sale. Learn more about the sales process in Dynamics 365 Sales.

- **Forecast sales**: Predict how much revenue your sales team will generate in a given timeframe. Track individual sales performance against quotas to proactively identify pipeline risks and provide coaching. Learn how to project accurate revenue with sales forecasting.
- **Enforce best practices with playbooks**: Automate repeatable processes and define your organization's best response to events that affect sales. Learn how to enforce best practices with playbooks.
- **Run and track marketing campaigns**: Promote your business and improve sales with targeted marketing campaigns. Track customer response and costs for each campaign. Get started with in-app marketing.

With your Dynamics 365 Sales Enterprise license, you can take advantage of Sales Premium features like sales accelerator, conversation intelligence, and predictive scoring with a limited monthly capacity. Learn more about digital selling capabilities in Sales Enterprise.

Microsoft Relationship Sales

Microsoft Relationship Sales combines LinkedIn Sales Navigator with Dynamics 365 Sales Enterprise or Sales Premium. With Sales Navigator embedded in Dynamics 365 Sales, sellers are empowered to have more personalized and valuable interactions with customers. Activities and Smart Links sync between Sales and Sales Navigator, and sellers can save accounts, leads, and contacts to Sales Navigator from the Sales app.

Dynamics 365 Sales Professional

The Sales Professional app is similar to the Sales Hub app, but the entities included in Sales Professional are a subset of the entities included in Sales Enterprise. Go to Dynamics 365 Sales Professional documentation.

Here's a short video to help you understand how Dynamics 365 Sales Professional can transform your sales organization:
https://www.microsoft.com/en-us/videoplayer/embed/RE2OJXb?postJsllMsg=true

Microsoft Sales Copilot

By enriching the data set with customer engagement data from Microsoft 365 and the power of AI, Microsoft Sales Copilot (formerly known as Viva Sales) empowers sellers

with sales intelligence that helps them deeply understand their customers for faster deal closure. Microsoft Sales Copilot is designed to help sellers boost productivity, lighten workloads, save time, and help salespeople sell more. Go to Microsoft Sales Copilot documentation

Compare solutions

To compare the capabilities available in each solution, view the **Compare Dynamics 365 Sales plans** section on the Pricing page.

How Dynamics 365 helps transform your sales organization

The digital selling capabilities in Dynamics 365 Sales include built-in intelligence to equip your sales teams with adaptive guidance to better serve your customers.

Meet buyers where they are

Engage and interact with your customers at the right time and place, using methods that they prefer:

Capability	Description	Reference links
Know the exact customer to engage	Shorten the sales cycle with a single workspace that has everything that sellers need to engage the right customer, stay focused, maximize productivity.	Administrator: Configure the sales accelerator Seller: Prioritize your sales pipeline by using the work list
Complete the next best activity	Help sellers focus by giving them clear and achievable sales activities, prioritized through artificial intelligence (AI) and predictive scoring.	Administrator: Configure the sales accelerator Seller: Prioritize your sales pipeline by using the work list
Communicate with effective call techniques	Converse with empathy by employing AI-powered conversation intelligence to detect customer emotion, sentiment, and priorities.	Administrator: First-run setup experience for conversation intelligence Seller: View and understand call summary page
Connect across channels	Streamline selling with integrated multichannel communications such as, soft phone dialer, Microsoft Teams dialer, and email templates.	Administrator: - Integrate a sample softphone with Dynamics 365 Sales - Configure Microsoft Teams

Capability	Description	Reference links
		dialer - Set up enhanced email Seller: - Call a customer - Send email using the enhanced email experience
Meet and collaborate virtually	Provide coordinated virtual engagement with an enterprise collaboration hub that brings together colleagues, customers, and contextual customer data.	Administrator: Install and set up Microsoft Teams integration Seller: Basic Collaboration experience for Microsoft Teams integration with customer engagement apps in Dynamics 365
Gather and act on customer feedback	See the customer's point of view and improve sales engagement by incorporating survey insights from Dynamics 365 Customer Voice—included with Dynamics 365 Sales.	Dynamics 365 Customer Voice documentation

Build relationships

Build relationships with customers through information from LinkedIn and relationship analytics:

Capability	Description	Reference link
Get insights from LinkedIn Sales Navigator	Within a unified experience from Dynamics 365, view contextual LinkedIn profiles and insights as part of account, contact, lead, and opportunities records.	Administrator: Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales Sales manager/Seller: How to sync LinkedIn leads by using Dynamics 365 Connector for LinkedIn Lead Gen Forms
Find new buyers	See recommended leads and discover mutual connections who can provide a warm introduction.	Administrator: - Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales - Configure who knows whom Seller: -How to sync LinkedIn leads by using Dynamics 365 Connector for LinkedIn Lead Gen Forms

Capability	Description	Reference link
		- How to get introduced to a lead
Keep track of buyers	Within a unified experience from Dynamics 365 Sales, find out when contacts change jobs and visualize relationships between contacts with interactive org charts.	Administrator: Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales Sales manager/Seller: How to sync LinkedIn leads by using Dynamics 365 Connector for LinkedIn Lead Gen Forms
Get a unified view of interactions	Use a comprehensive timeline across Dynamics 365, Microsoft 365, and LinkedIn Sales Navigator to deliver consistent experiences.	Administrator: Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales Sales manager/Seller: How to sync LinkedIn leads by using Dynamics 365 Connector for LinkedIn Lead Gen Forms
Identify customers who need attention	Track relationships with a single score based on signals from Dynamics 365 and Microsoft 365 that reveal relationship health and risks.	Administrator: Configure relationship analytics and health Seller: Use relationship analytics to gather KPIs

Collaborate seamlessly

Collaborate with customers by getting visibility into the right data data and communicate seamlessly using Microsoft Teams:

Capability	Description	Reference link
Gain visibility into the right data	Access customer data and insights in Microsoft Teams to collaborate productively within the sales team.	Administrator: Install and set up Microsoft Teams integration Seller: Basic Collaboration experience for Microsoft Teams integration with customer engagement apps in Dynamics 365
Communicate in context	Use embedded Microsoft Teams chats in Dynamics 365 for real-time collaboration within the sales team.	Administrator: Install and set up Microsoft Teams integration Seller: Enhanced Collaboration Experience with Microsoft Teams

Boost seller productivity

Boost seller productivity by automatically capturing tasks and integrating sales processes with marketing:

Capability	Description	Reference link
Minimize routine tasks	Get suggestions to automatically create new records such as contacts, meetings, and tasks.	Administrator: - Configure notes analysis - Enable and configure auto capture Seller: - How notes analysis assists you with suggestion - Capture customer-related activities with auto capture
Automate sales and marketing processes	Connect your processes with a common platform to optimize efficiencies and marketing ROI and lead handoff.	Administrator/Seller: Overview (Marketing)
Work seamlessly using everyday apps	Minimize app switching with contextual sales data surfaced in productivity apps like Outlook.	Administrator: Deploy and install Dynamics 365 App for Outlook Seller: Basic navigation in App for Outlook
Manage the pipeline in a single workspace	Use an intuitive, personalized workspace to view deals, get context, and act swiftly. Get one-click actions and built-in productivity and collaboration from Microsoft 365 and Teams (preview)	Administrator: Configure the opportunity pipeline view Seller: Preview: Manage opportunities using the pipeline view

Keep selling on the go

Get information on day-to-day tasks and keep your deals current even while you're on the move using the mobile application:

Capability	Description	Reference link
Juggle tasks with ease	Stay on top of tasks from anywhere with a mobile-first interface that includes push notifications and robust search, and quickly create or update records in mobile-optimized forms.	Seller: Use the Dynamics 365 Sales mobile app
See daily priorities at a glance	Quickly scan upcoming meetings, recent contacts, and real-time notifications to accelerate customer engagement.	Seller: Learn the basics

Capability	Description	Reference link
Prepare for meetings	Using the mobile app for iOS and Android, view critical meeting details, attendee information, and AI-generated reminders, and join Teams meetings—all from a single meeting card.	Seller: View meetings
Skip manual data entry	Easily capture notes using voice-to-text or the camera on your smartphone for automatic association with related records.	Seller: Manage notes

Adapt to rapid changes

Get advanced information about revenue projections, performance, and daily actions, and plan better.

Capability	Description	Reference link
Streamline forecasting	Gain visibility and control over revenue with a flexible forecasting solution that reveals risks and opportunities.	Administrator: - Configure forecasts in your organization Seller: - View a forecast - View and understand data through drill-down entities - View and manage underlying opportunities
Increase forecast accuracy	Leverage built-in AI to augment seller-submitted forecasts and view deal flows and trends.	Administrator: - Configure premium forecasting - Take snapshots automatically Seller: - Analyze revenue outcome by using predictive forecasting - Understand forecast projections by using trend charts - Analyze deals flows between snapshots
Gain real-time visibility into sales performance	Use interactive dashboards and reports to track performance, make data-driven decisions, and deliver more effective coaching.	Administrator: - Create or edit a Power BI embedded system

Capability	Description	Reference link
		dashboard - Use Power BI with Microsoft Dataverse data - Use Power BI Seller: - Add or edit Power BI visualizations on your dashboard
Tailor processes based on best practices	Design a sequence of activities and connect the sequence to leads and opportunities that appear in a seller's work queue.	Administrator: Create and activate a sequence Seller: Prioritize your sales pipeline by using the work list
Adapt AI for your unique needs	Use a powerful, flexible, no-code tool to quickly design and implement next best action recommendations for your sales team.	Administrator: Configure the assistant Seller: Use the assistant to guide customer communications
Quickly create custom applications	Extend and adapt the solution with Microsoft Power Platform, including Power Apps and Power Automate, to create custom applications and orchestrate workflows to optimize revenue generation.	Administrator: Overview of creating apps in Power Apps

Integrations

Integrate Dynamics 365 Sales with other applications that your sales team already uses so that you can improve seller efficiency and customer collaboration:

- Integrate LinkedIn Sales Navigator solutions
- Microsoft Teams integration
- Install ZoomInfo app
- Integrate a sample softphone with Dynamics 365 Sales

See also

Learn the basics of Dynamics 365 Sales
User guide

Learn the basics of Dynamics 365 Sales

Article • 11/15/2022

Learn how to access the Sales app, navigate the UI, and understand the data in the app, and some quick tips.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Get productive quickly

The app is designed to make getting up to speed simple and painless, whether you're handling your day-to-day sales transactions or setting up the app for your team.

What's the fastest way to get productive?

Here are a couple options:

- **Dive in and try out the sample data.** If you learn best through hands-on exploration, the app comes with sample data to help you see how data is presented and organized, and to give you something to experiment with as you get oriented.

  Start exploring, and play around with the sample data until you're ready to work with your real customer data.

- **Do a quick read that covers the basics.** The user guide and learning modules contain all the essentials you need to know to navigate the app, find and enter customer data, glean actionable insights from interactive dashboards, and more. And it's short. (We know you're busy.)

No matter how you decide to get started, soon you'll be up and running—working your deals and building profitable relationships along the way, as you turn your customers

into lifelong fans of your products.

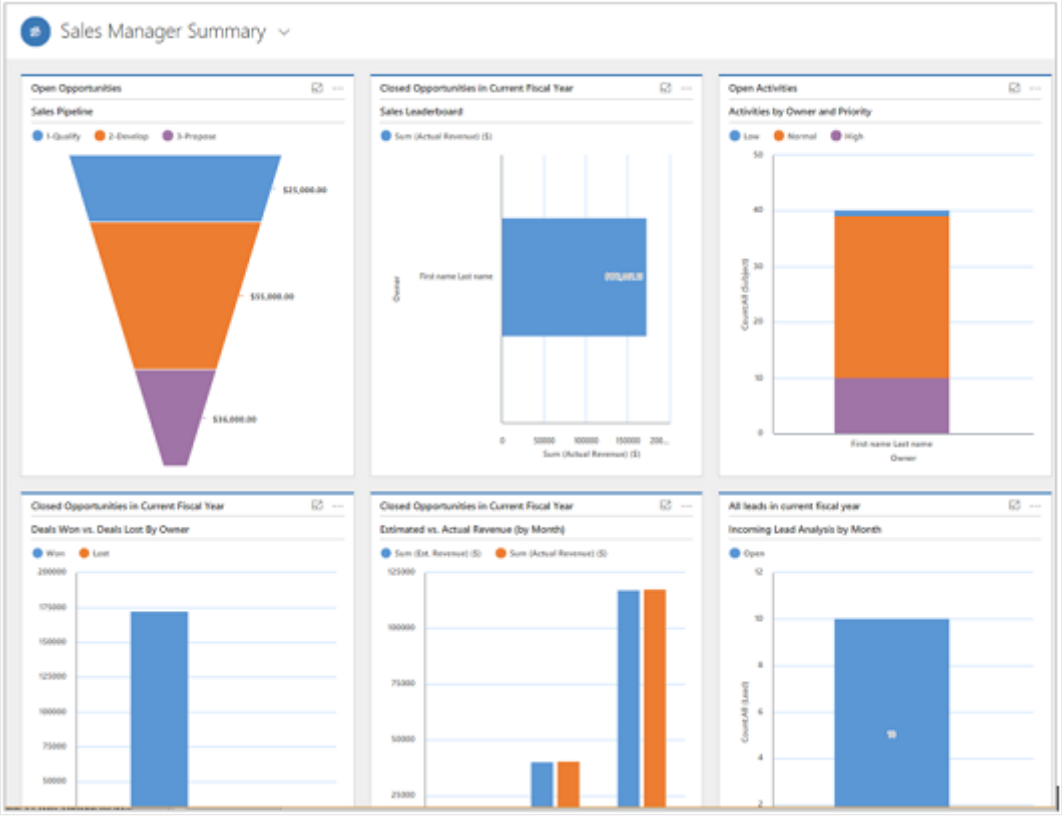
Ready to get started? Here are the feature highlights.

Feature highlights

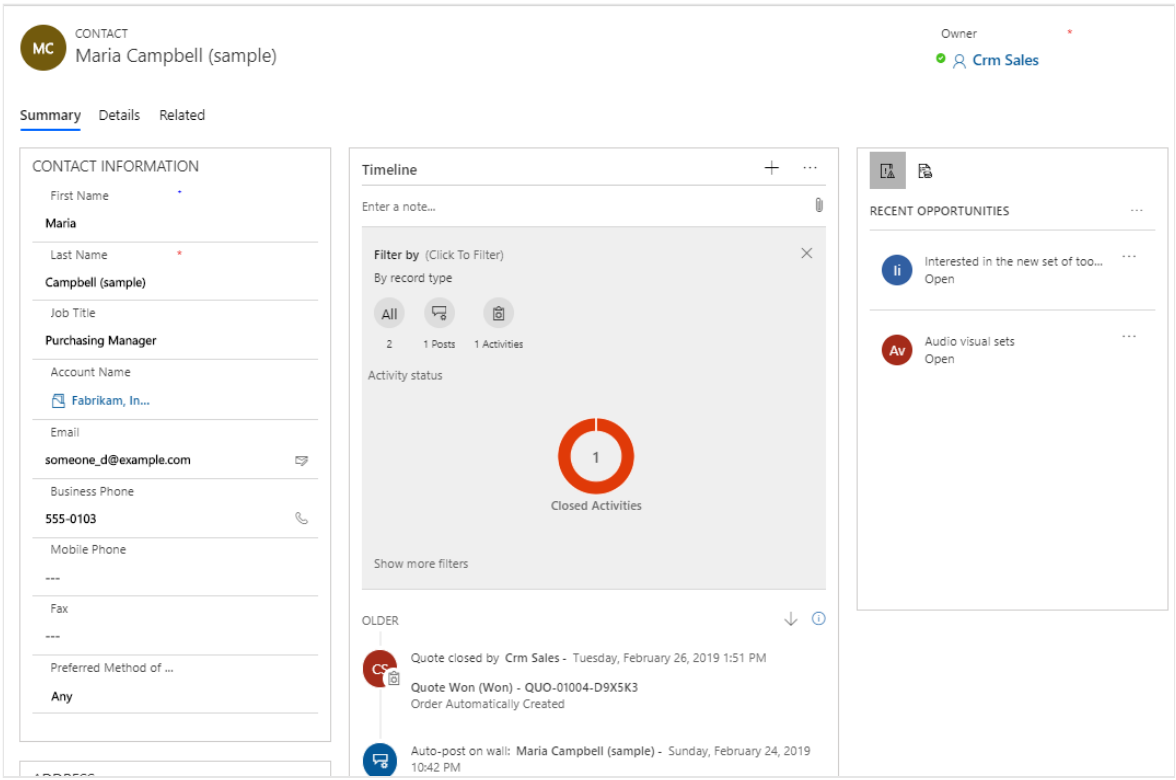
Here are some highlights of Dynamics 365 Sales:

- **Visual insights.** The out-of-the-box dashboards and charts have almost everything that you need to get insight into your business.

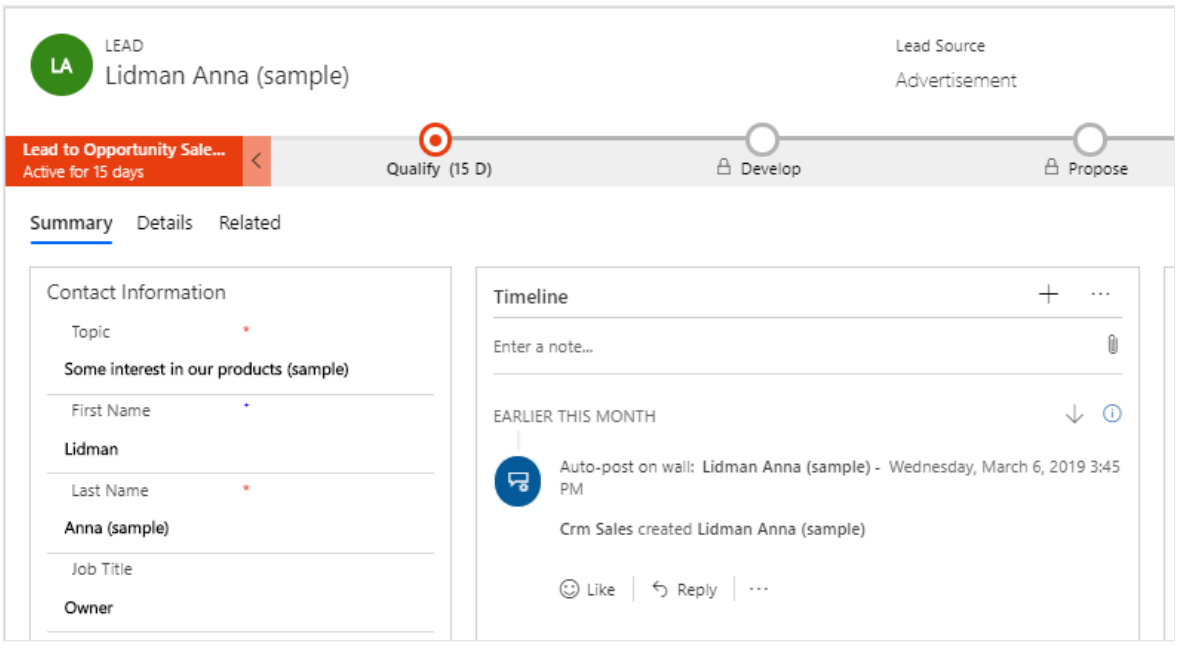
  More information: Gain insights with dashboards in Dynamics 365 Sales.



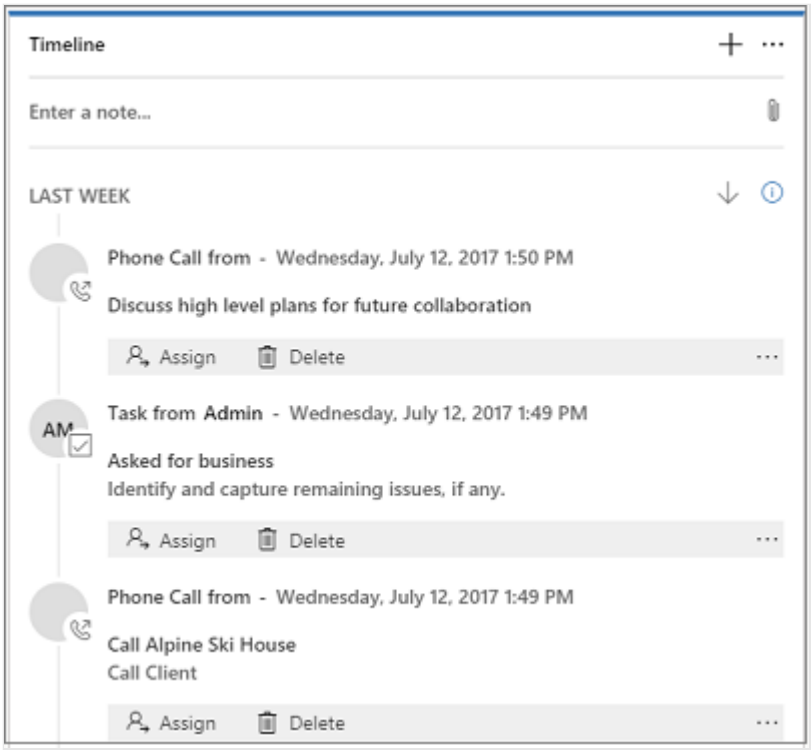
- **Customer 360° view.** Once in the app, quickly get an overview of what's happening with a customer, such as communications with them, progress of individual deals, and much more, all in one place.



- **Business process flow.** The guided process flows on the **Lead and Opportunity** form tell you exactly what to do next. You can quickly find out the steps you must take to increase the likelihood of a successful sale and an increased sales count. The process bar can be docked to the right side of the screen for an omnipresent experience while you work on the opportunity.

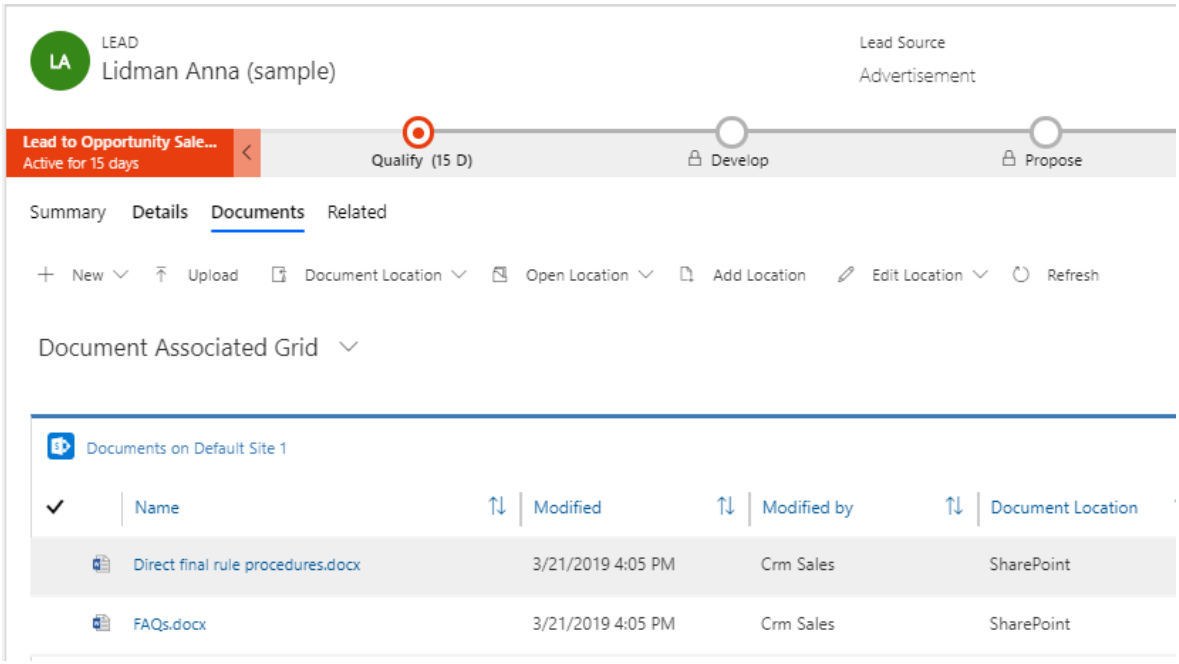


- **Activities timeline.** All the appointments you schedule while you work on an opportunity, the emails that you send or the phone calls you make are available in one place, giving you all the context you need to do your job.



- **Store and view documents in the context of records.** Do you have presentations or documents for an opportunity all over the place? Store them all in one place, so anyone who's working on the opportunity can view them!

  More information: Collaborate using SharePoint.

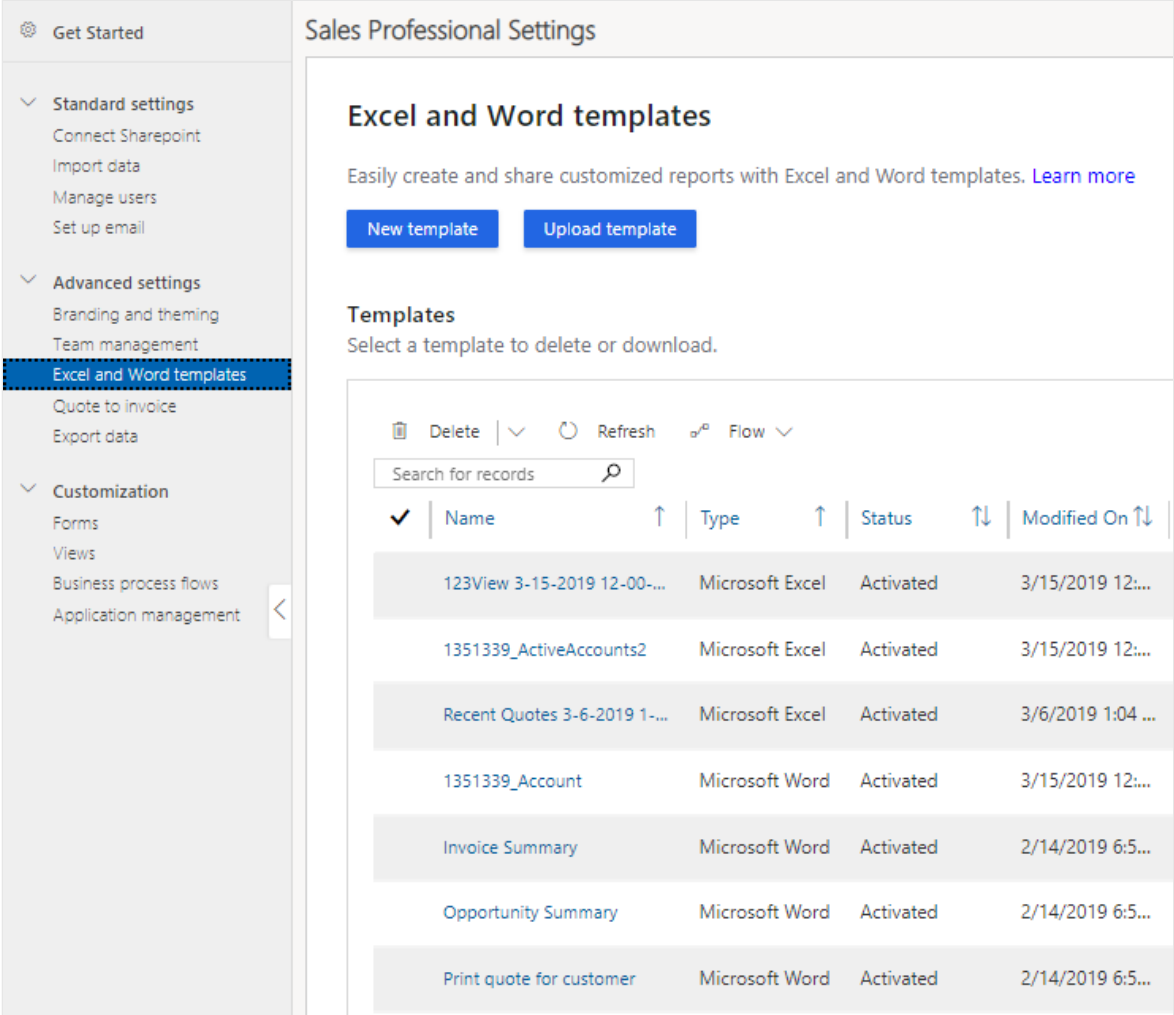


- **Simplified opportunity-to-invoice process.** It is easy to move a customer through the Sales funnel. Just generate a quote right from the opportunity you're working on, and activate it. Use the same quote to quickly generate an invoice and mark the deal as won. You can also email the quotes and invoices to your customer in just one click.

More information: Understand the sales process.

- **Document templates.** The Word and Excel templates ensure that the documents that you're sending out to your customers align with you company's brand.

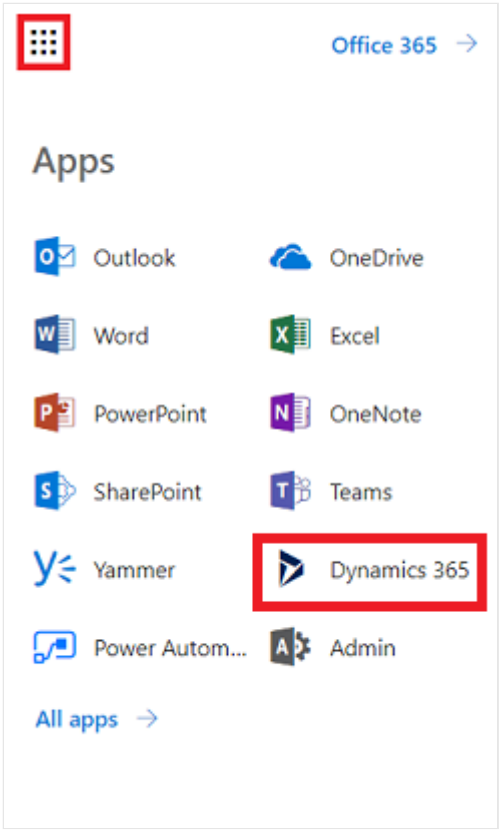
  More information: Manage Word templates.



- **Sales data anywhere and everywhere.** Get all your customer and sales data right on your mobile device or tablet. Whether you are visiting a customer or on the road, you can quickly pull out your device to update the opportunity with information. What's more—you get the same consistent experience regardless of the device you use.

Go to the Sales apps

1. Sign in to Microsoft 365, select the Microsoft 365 app launcher, and then select the icon for **Dynamics 365**.



> **Note**
>
> The apps available to you in the app launcher depend on your subscription.

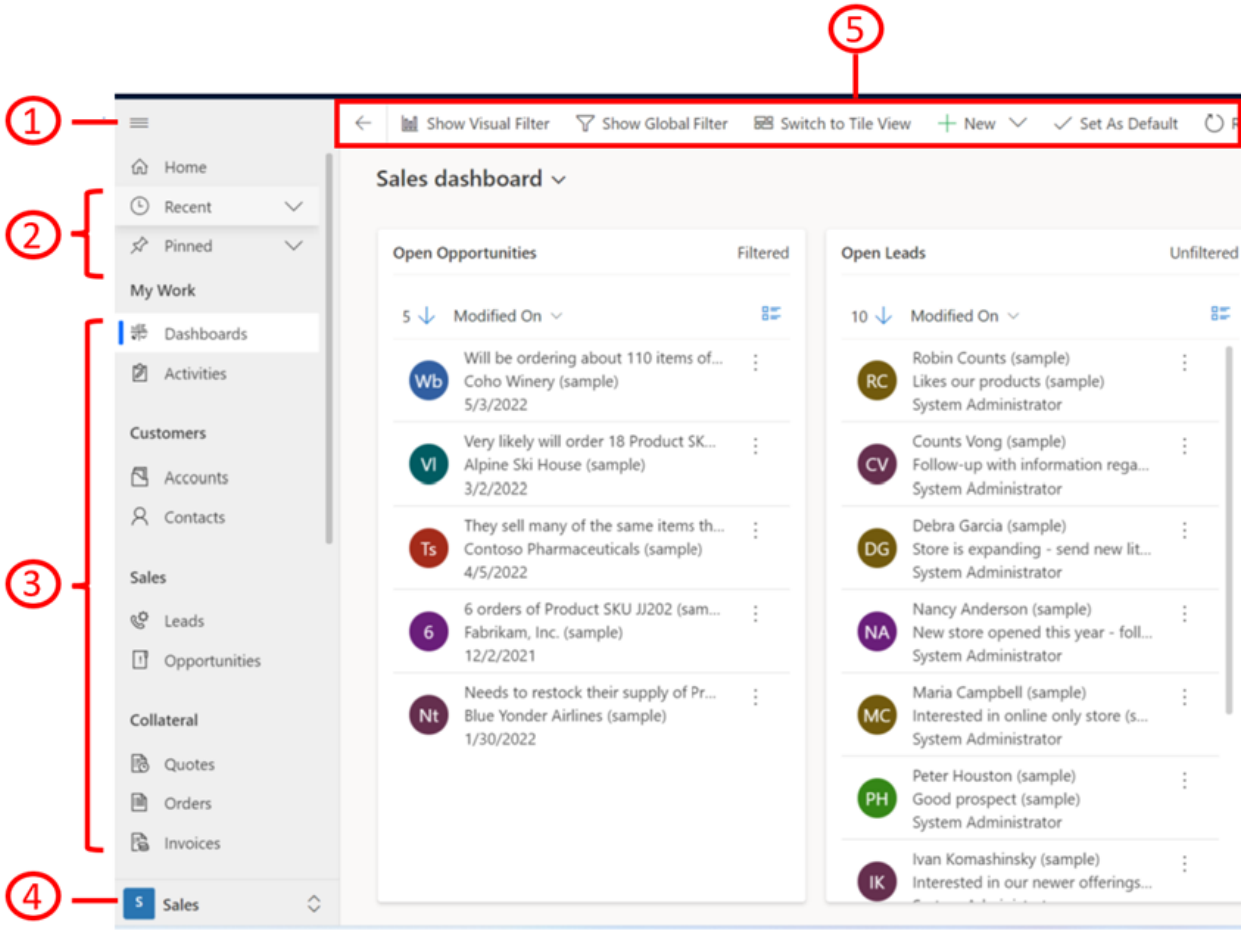
2. Select one of the following tiles depending on your license:
   a. For Sales Enterprise, select **Sales Hub**.
   b. For Sales Professional, select **Sales Professional**.

> **Tip**
>
> Alternatively, visit the **Apps page** on office.com, select **Business Apps**, and then select the Dynamics 365 app that you want.

If you don't see the app, contact your administrator to grant you access. For more information, refer to Grant or revoke access to the Sales Hub app.

Navigate using the site map

The following image shows the site map or menu of the Sales app that helps you navigate to the different areas of the app.



Number	Description
1	Open or collapse the site map.
2	Access the recent items you've worked on or the customers you've pinned.
3	Access everything that you need to communicate with customers, manage your pipeline, and other sales-related records.
4	Use the change area to switch between **Sales** and other settings.
5	Access the command bar for quick actions.

Understand the data in the app

Every day, you'll work with different customer records and record types as you move customers through your business processes, collecting the data you need to fill in the fields for their records—and ultimately to win their business.

- What's a record? In Dynamics 365 Sales, a **record** is a complete unit of information such as all the information about a single contact. You can think of it as a row in a table. For example, each time you add a new account to the app, you're creating a new record in the Sales app.

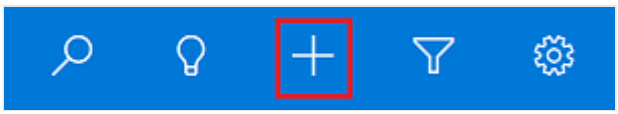
- What's a record type? Each record you add to the system belongs to a certain **record type**, such as an account, contact, lead, or opportunity.

Quick create – Enter new records fast

The Quick Create command makes it fast and easy to enter almost any type of information into the system. The command is on the navigation bar (also referred to as the nav bar), so it's always available whenever you need to enter new info into the system.

With Quick Create, you need to complete only a few fields. Later, when you have more time or more information, you can fill in more details.

1. On the nav bar, select the **New** button and then select the record you want to create.



> **Tip**
>
> On a mobile device, from the nav bar, tap ··· and then tap **Quick Create Menu**.

2. Fill in the fields, and then select **Save**.

Business processes in Dynamics 365 Sales

Business processes help everyone follow best practices, even when handling situations that don't occur very often. You complete a step by entering data or marking the step completed in the process bar at the top of the screen. When all the steps are done, you can move on to the next stage.

The following ready-to-use business processes are available that you can use as you move your leads through a sales process:

- Lead to invoice. This business process flow is available for:
  - All leads.
  - Opportunities created from leads
- Opportunity sales process. This business process flow is available for:
  - All directly created opportunities (not originating from lead) forms

For information on how to create or customize business process flows, see the Tutorial: Create a business process flow

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Understand the sales process

Article • 03/31/2023

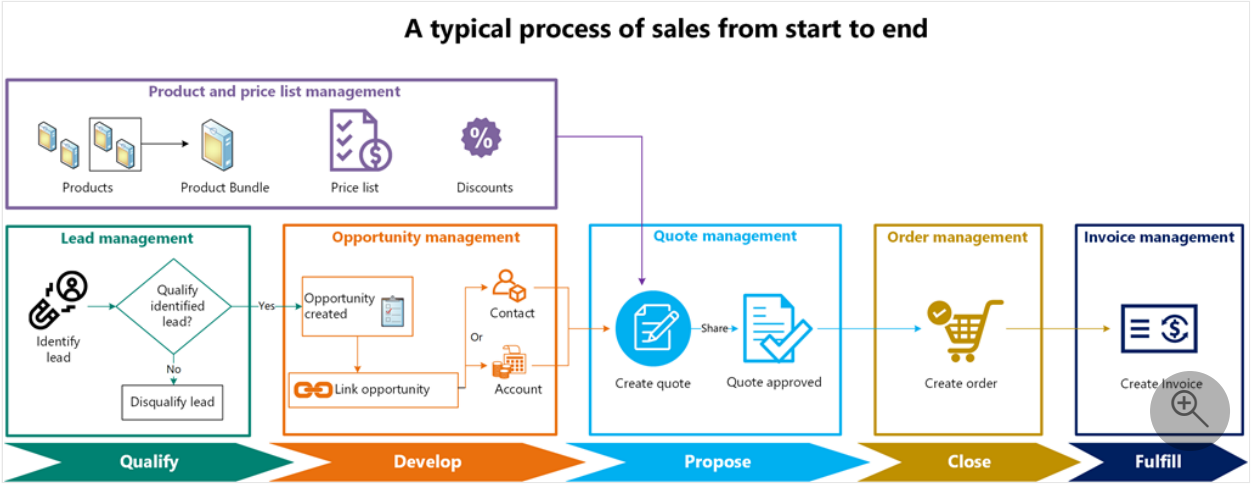
A sales process includes a set of repeatable steps that sellers follow to engage with a prospective customer from the early stage of awareness to closing a sale. You can achieve more consistent sales interactions by following the sales process as it takes you through each stage, from creating a lead to closing the opportunity and recording the sale. You also end up with a more complete history that you can refer to later, if you plan to work with your customer again in the future or if your customer needs support.

Your sales process begins with a lead—someone who is interested in the products or services you provide. Your leads might be automatically generated or they might come from other sources, such as website opt-in pages, email queries, or business cards that you gather at trade shows.

Also, the specific process stages and terminology used by organizations vary based on factors such as, industry, sales strategies, product offerings, or the types of customers they target. Though the actual processes are different, a typical sales process resembles a flow shown in the following diagram:

Each stage typically maps to a specific sales record type. For example, during the qualifying stage, sellers are generally working with a lead. A lead represents someone with an interest in what you are selling. The goal of a lead is to qualify and advance it to the next stage in the sales process, such as the develop stage.

Let's look at an example on how this sales processes is used to implement a sales lifecycle solution in an organization. The following image shows what a sales lifecycle might look like from start to end:



Your sales process begins with a lead—someone who is interested in the products or services you provide. Your leads might be automatically generated, or they might come from other sources, such as website opt-in pages, email queries, or business cards you gather at trade shows.

1. **Qualify**: Great job! You've got your lead...now what? If your lead isn't already in Dynamics 365 Sales, start by creating your lead in the system.
   After you've determined that your lead is interested in your solution and has the appropriate purchasing power, qualify your lead. Qualifying a lead in Dynamics 365 Sales converts it to an opportunity.
   More information:

   - Create or edit a lead
   - Qualify a lead and convert it to an opportunity

2. **Develop**: The opportunity record is used to develop the details of the deal. Details such as the products and services they are interested in, estimated revenue, and timelines are added to the opportunity.
   More information: Create or edit an opportunity
3. **Propose**: Now it's time to present your proposal to your potential customer.
   More information: Create or edit a quote
4. **Close**: When the customer agrees to the quote, an order is generated. The quote and opportunity associated with the order are closed.

More information:

- Create or edit an order
- Close an opportunity as won or lost

5. **Fulfill**: After the order is fulfilled, an invoice is generated to bill the customer.
   More information: Create or edit an invoice

> **Note**
>
> Your Dynamics 365 Sales system might look different because it was customized. This walkthrough guides you through the basic sales process, but your organization might offer further training for your system.

See Also

Overview of Sales

Import data into Dynamics 365 Sales

Article • 03/30/2023

Bring customer and sales data quickly into your app by importing it. Dynamics 365 Sales processes import in the background. After an import completes, you can review which records succeeded, failed to import, or were partially imported. To fix the records that failed to import, export them into a separate file, fix them, and then try to import them again. You can delete all records associated with an import.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Supported file types and sources

You can import data from the following file types and sources:

- Comma-separated value (CSV) files.
- Microsoft Excel templates available in Dynamics 365 Sales.
- XML (Supported only for Sales Premium and Sales Enterprise)
- Exchange

Import data

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.
2. Follow the instructions in How to import data to import data into Dynamics 365.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

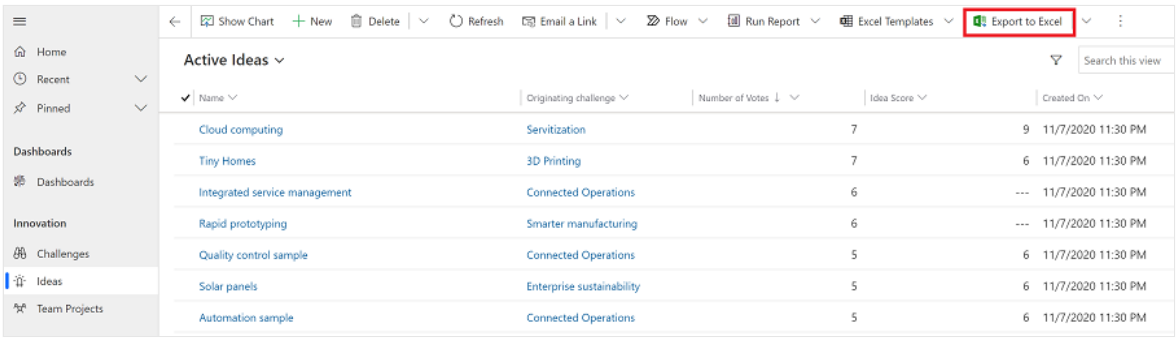
Export data to Excel
Export sales records to PDF

Export data to Excel

Article • 02/15/2022

Export data from your model-driven app to Excel. You can export up to 100,000 rows of data at a time.

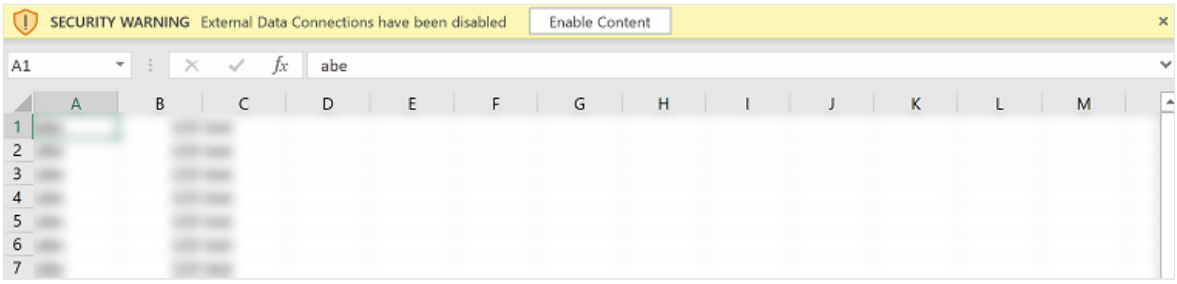
1. From the left nav, select a table that you want to export data from.
2. On the command bar, select **Export to Excel**.



3. When the download is complete, navigate to the location of the downloaded file.

> **Note**
>
> When you download a worksheet it should automatically save to your computer. However, if it doesn't then make sure that you save it before you open and edit it. Otherwise, you might get this error message: **Excel cannot open or save any more documents because there is not enough available memory or disk space.**
>
> Follow these steps to fix the issue:
>
> a. Open Excel and go to **File** > **Options** > **Trust Center Settings Center Settings** > **Protected View**.
>
> b. In **Protected View**, clear all three items.
>
> c. Select **OK** > **OK**.
>
> We still strongly recommend that you save and then open the data file rather than disabling protected view, which might put your computer at risk.

4. Open the saved Excel file.
5. If you see the security warning **External Data Connections have been disabled**, select **Enable Content**.

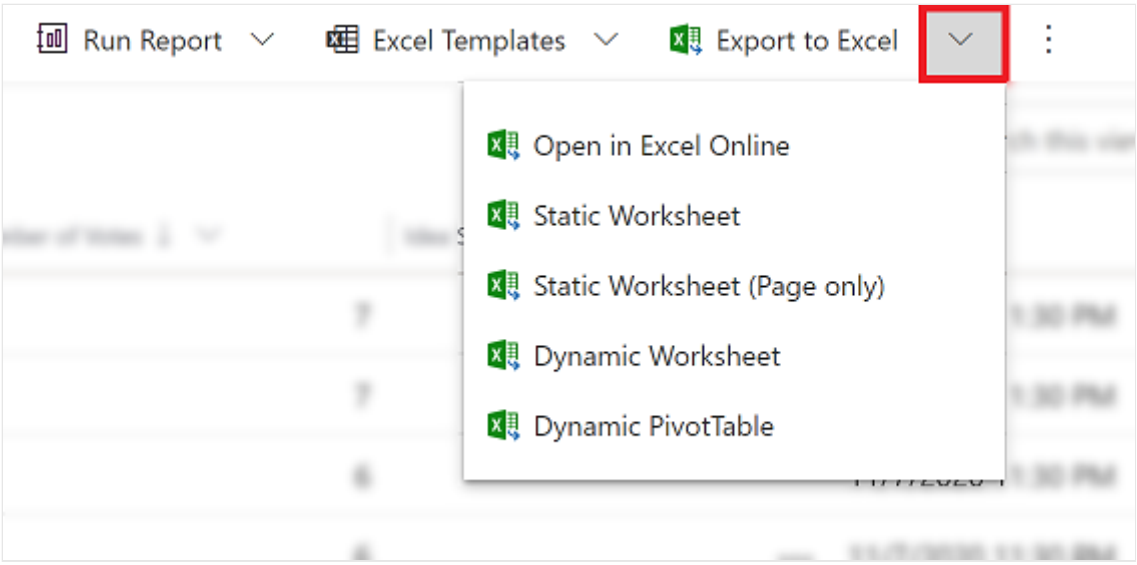


The data is exported in the same format that you see in your app. Text will remain text, numbers will remain numbers, and dates will remain dates. However, when you export data from your app to Excel, some cell formats might change. The following table summarizes how you'll see the data in apps and how the cell format changes when you export the data to Excel.

Data format in model-driven apps	**Cell format in Excel**
Text, Ticker Symbol, Phone, Options set, and Look Up	Shows as Text and option set becomes drop-down list
Email, URL	Shows as General
Number	Shows as Number without group separator
Currency	Shows as Number and does not include dollar sign ($)
Date only, Date and Time	Shows as Date only
Calculated and Roll-up columns	Editable in Excel but can't be imported back to Power Apps
Secured columns	Editable in Excel but can't be imported back to Power Apps

Export options

There are other export options such as Excel Online, Static Worksheet, Dynamics Worksheet, or Dynamics PivotTable.



The table below summerizes the different options. Pick the one that works best for you.

Task	Learn more
Do an *ad-hoc* or *what if* analysis without modifying app data. Or, quick bulk edits to multiple rows.	Open app data in Excel Online
Get a snapshot of the data at the current date and time or if you want to share the data with others.	Export to an Excel static worksheet
Get the most up-to-date information and be able to refresh it in Excel and match what you see in your app at any time.	Export to an Excel dynamic worksheet
View your app data in a pivot table.	Export to an Excel PivotTable

Known issues

1. You can export your app data to Excel (.xlsx format) and use the file as a template to add more data and import back into your app. However, if you add or modify columns in the Excel file and then import the file back into your app, the import will fail. This happens because columns were added or modified and those columns don't map to tables in your app. When you import an Excel file into your app make sure that columns and tables are mapped correctly otherwise the import will fail. For more information on mapping, see Review mapping.

2. If you're using Excel 2010, you might get this error message when you export data from the Accounts area: `The file is corrupt and cannot be opened.`

   The error message occurs due to a setting in Excel. To fix the issue, do this:

a. Open Excel 2010 and go to **File** > **Options** > **Trust Center** > **Trust Center settings**.

b. Select **Protected view** and then clear the check boxes for the first two options.

c. Select **OK** and then close the **Options** dialog box.

See also

Troubleshoot export to excel

Compare search options in Microsoft Dataverse

Article • 05/10/2023

There are three ways to search rows in Dataverse:

- Dataverse search
- Quick Find (single-table or multi-table)
- Advanced Find

> **Note**
>
> Multi-table Quick Find is also called Categorized Search. For a given query, the search results from the three options below might be different due to the searchs cope and search behavior.

The following table provides a brief comparison of the three options.

Functionality	Dataverse search	Quick Find	Advanced Find
Enabled by default?	Yes. **Note:** For non-production environments an administrator must manually enable it.	Yes, for the table grid. No, for multiple-table quick find (categorized search). An administrator must first disable Dataverse search before multiple-table grid find can be enabled.	Yes
Single-table search scope	Not available in a table grid. You can filter the search results by a table on the results page.	Available in a table grid.	Available in a table grid.
Multi-table search scope	There is no maximum limit on the number of tables you can search.	Searches up to 10 tables, grouped by a table.	Multi-table search not available.
Search behavior	Finds matches to any word in the search	Finds matches to all words in the search term in one column in	Query builder where you can define search criteria for the selected row type. Can also

Functionality	Dataverse search	Quick Find	Advanced Find
	term in any column in the table.	a table; however, the words can be matched in any order in the column.	be used to prepare data for export to Office Excel so that you analyze, summarize,or aggregate data, or create PivotTables to view your data from different perspectives.
Searchable columns	Text columns like Single Line of Text, Multiple Lines of Text, Lookups, and Option Sets. Doesn't support searching in columns of Numeric or Date data type.	All searchable columns.	All searchable columns.
Search results	Returns the search results in order of their relevance, in a single list.	For single-table, returns the search results in a table grid. For multi-table, returns the search results grouped by categories, such as accounts, contacts, or leads.	Returns search results of the selected row type with the columns you have specified, in the sort order you have configured.
Wildcards (*)	Trailing wildcard supported for word completion.	Leading wildcard supported. Trailing wildcard added by default.	Leading wildcard supported.

Assign or share a row

Article • 09/26/2022

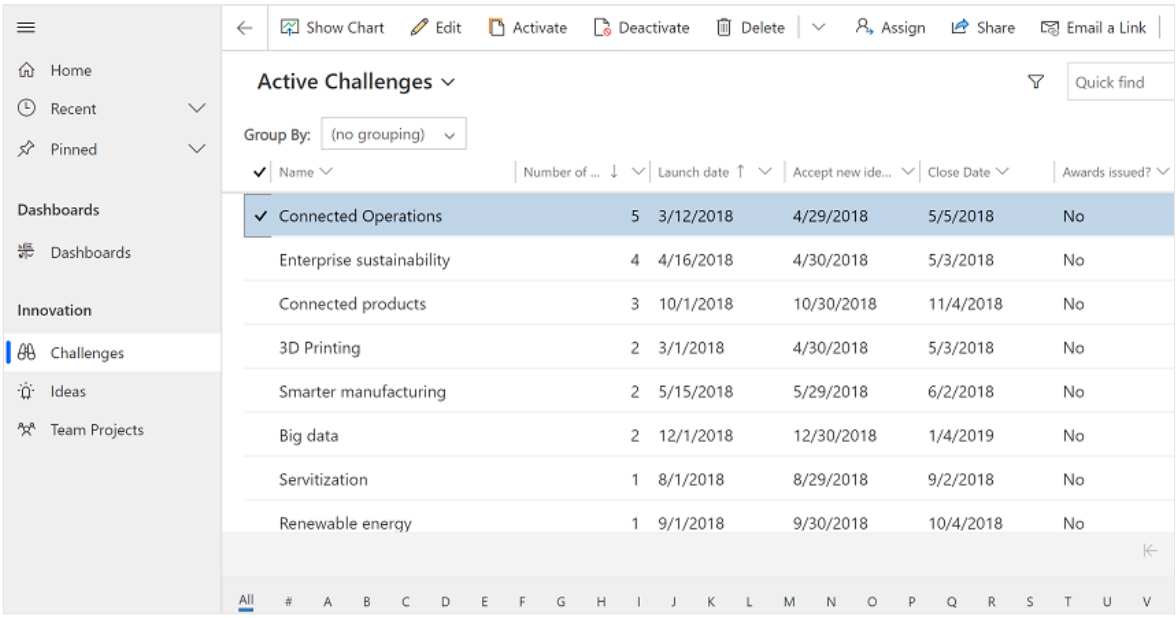
When you create a row, you are the owner of the row. If you would like another person in your organization to take ownership of the row, then you can assign the row to that person. You can assign a row to a user or team. You can also assign a row to yourself that another user owns but you need to have system administrator privilege to do this.

If you want to keep ownership of the row but let someone else work on it with you, then use the **Share** option to share the row. For more information, see Share a row.

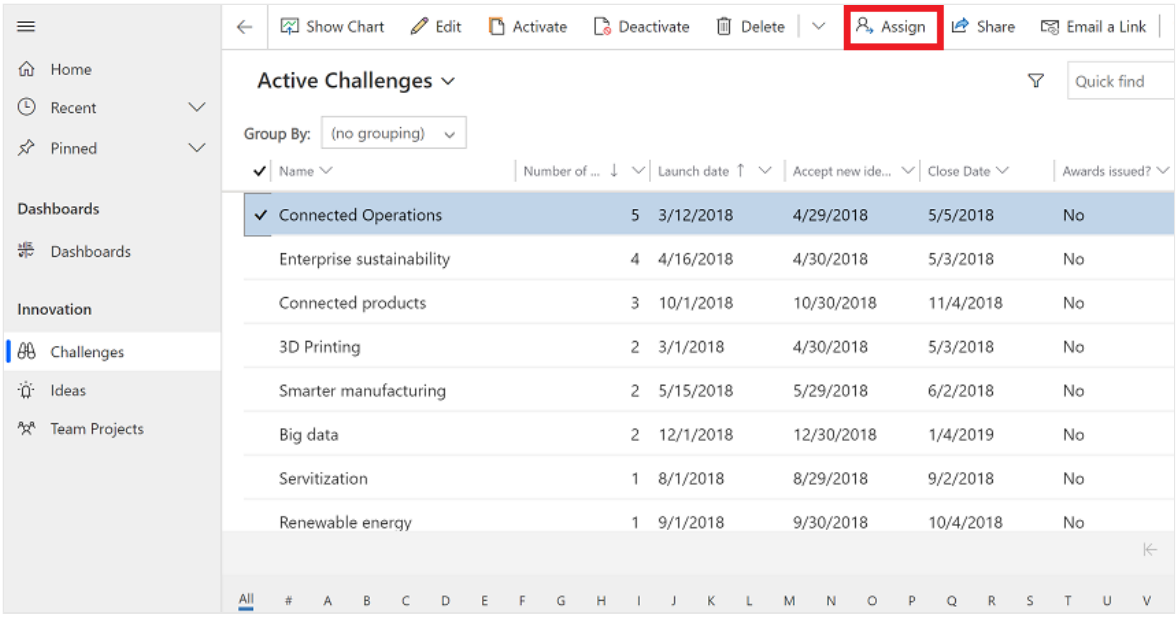
For more information on how privileges and access works, see How access to a row is determined.

Assign a row to a user or team

1. From a list of rows, select the row that you want to assign to someone else. You can select multiple rows.

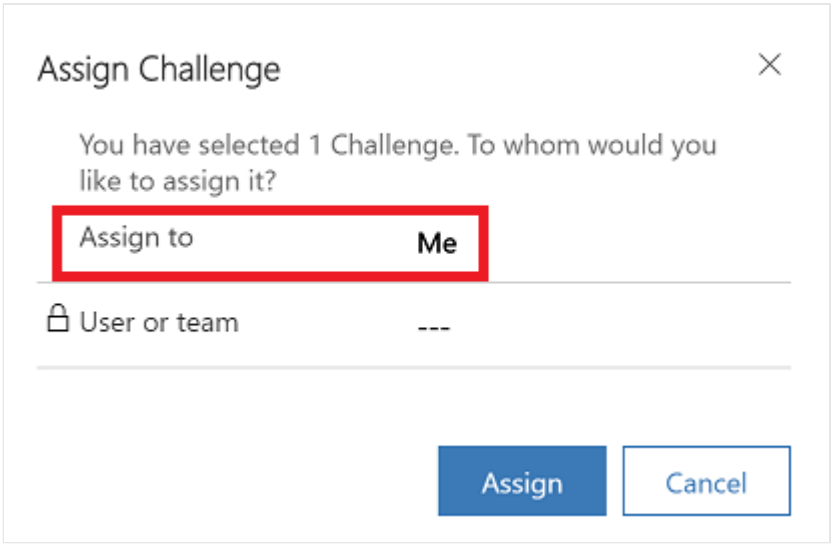


2. On the command bar, select **Assign**.

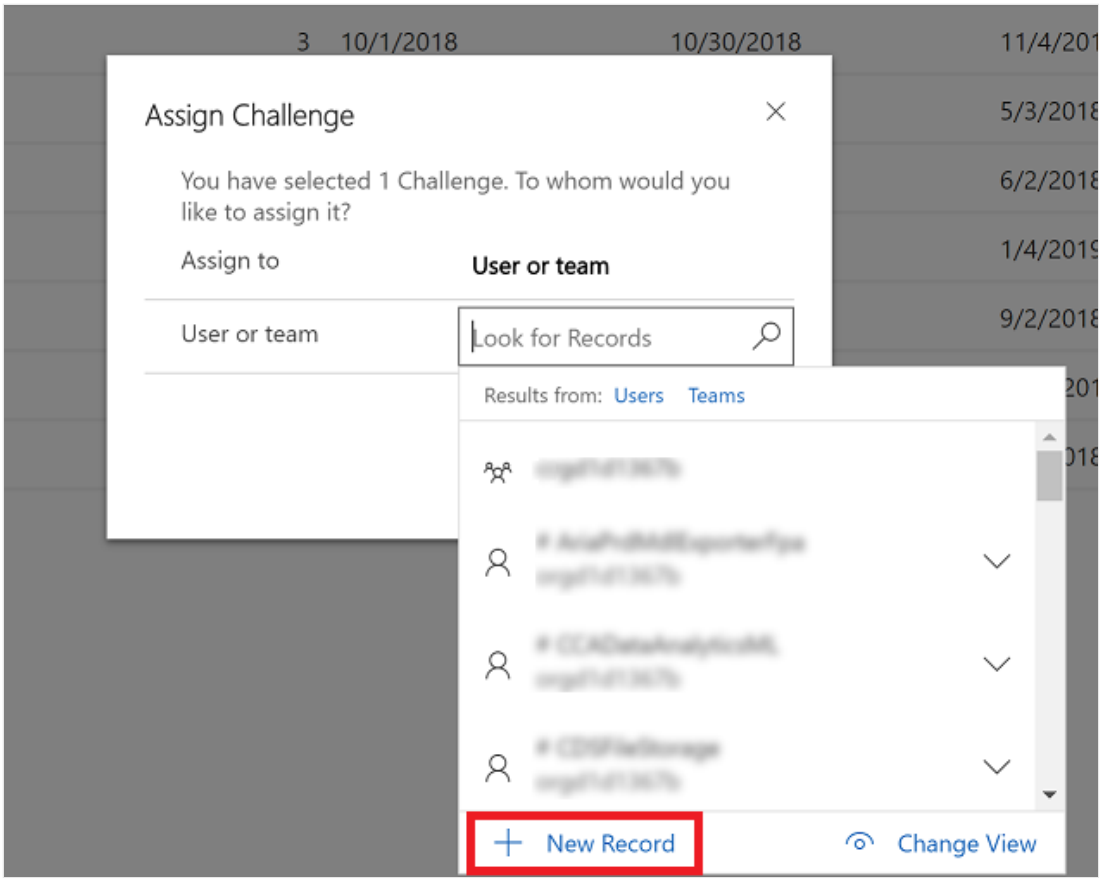


3. In the assign dialog box, select the **Assign to** column, and choose one of the following options:

   - Select **Me** to assign the row to yourself and them select **Assign**. Remember only a system administrator can assign a row that belongs to someone else to themself.



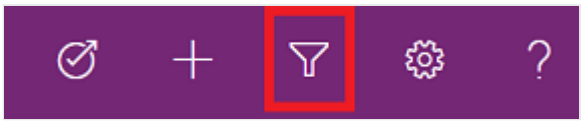
   - Select **User or Team** and then enter the name of the user or team or use the lookup to find them. Or, select **New Row** to create a new user or team row. When you're done select **Assign**.



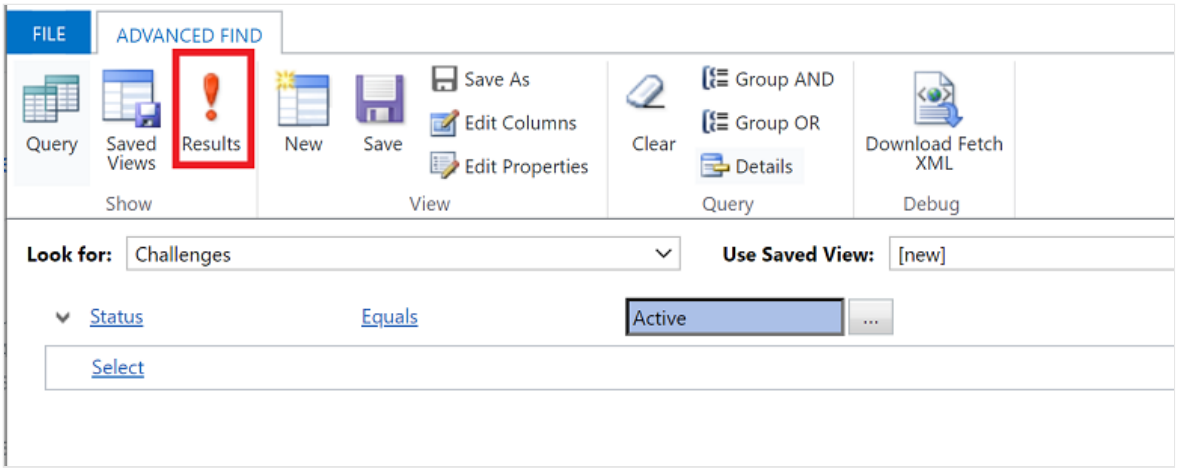
Use advanced find to reassign rows

Use advanced find to search for rows and then reassign them to someone else. For more information on advanced find, see Create, edit, or save an Advanced Find search.

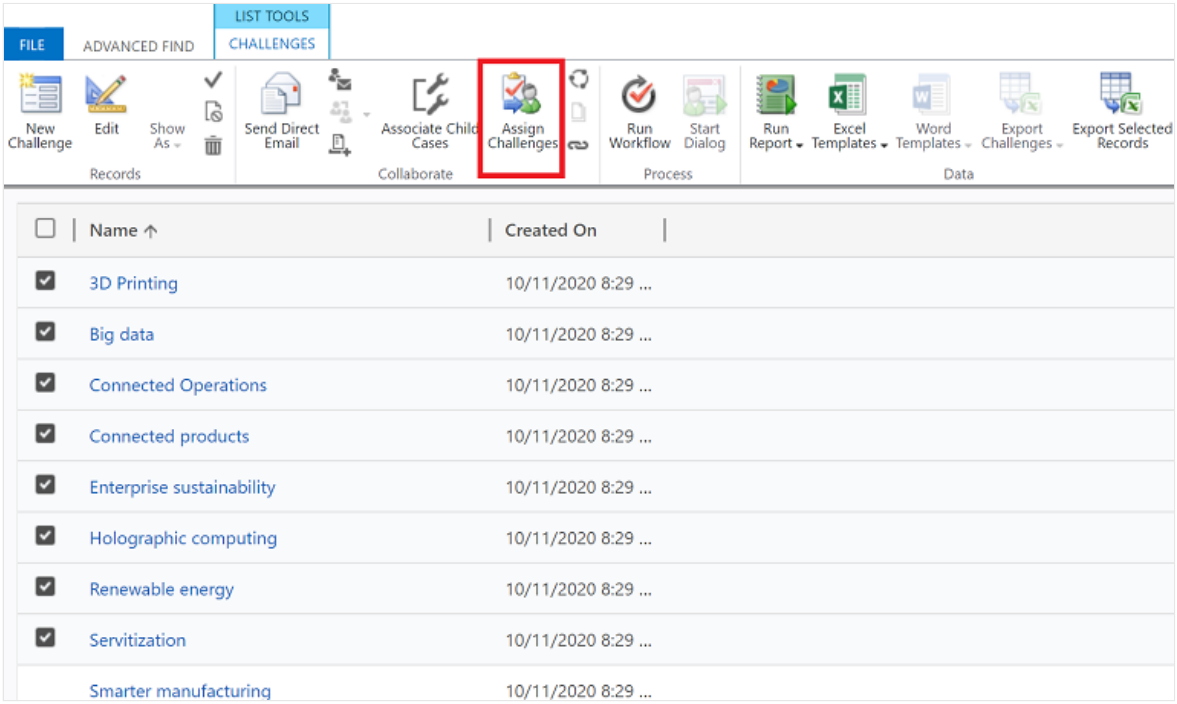
1. On the command bar, select **Advanced Find**.



2. Use the advanced find search to find rows that you want to assign to someone else. For example, to look for active row types that are **Challenges**, in **Look for:** enter **Challenges** and status equals **Active**. Then select **Results** to run the query.



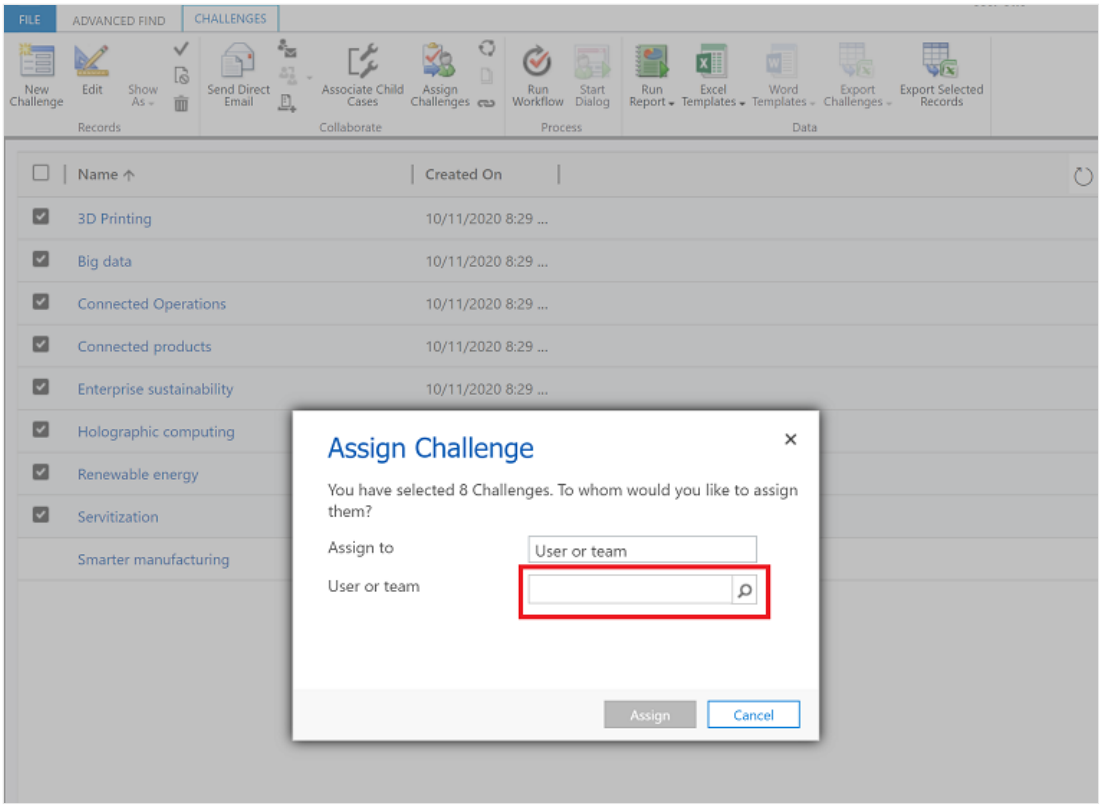
3. Select the rows that you want to assign and then select **Assign (page name)**



4. In the assign dialog box, select the **Assign to** column and choose one of the following options:

   - Select **Me** to assign the row to yourself and then select **Assign**. Remember only a system administrator can assign a row that belongs to someone else to themself.

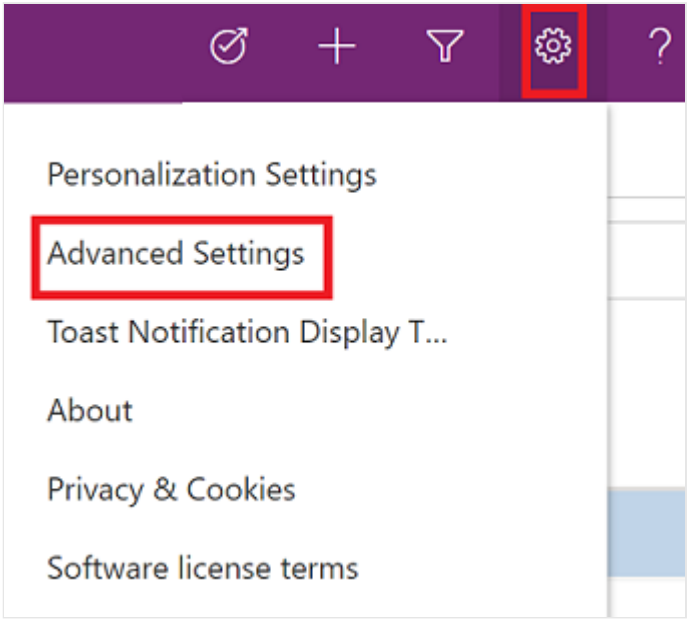
   - Select **User or Team** and then enter the name of the user or team or use the lookup to find them. Or, select **New Row** to create a new user or team row. When you're done select **Assign**.



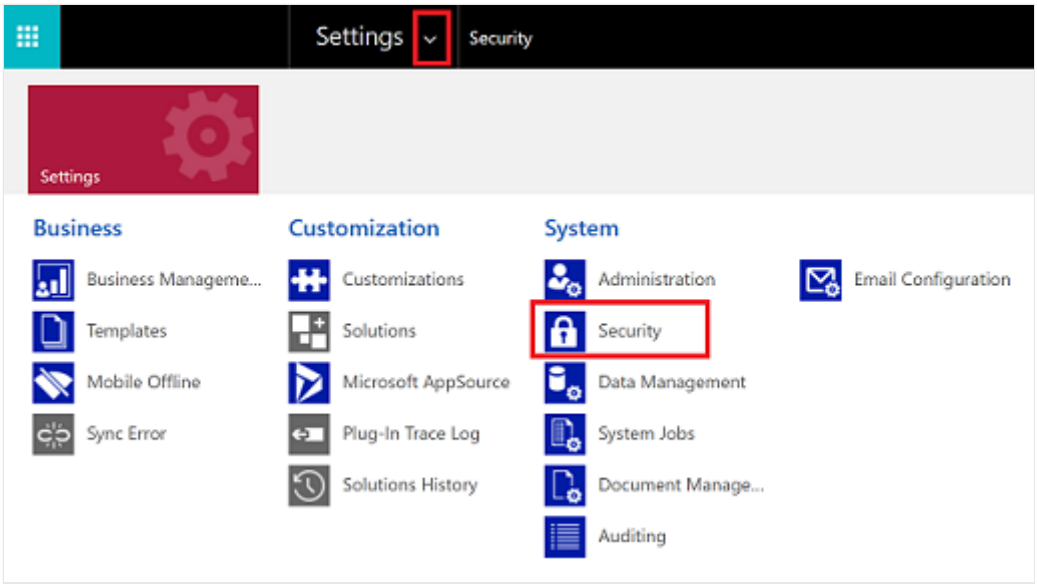
Reassign all rows (for admins)

When you have a user that leaves your organization or ownership needs to change from one user to another the rows can be reassigned by an administrator.

1. Go to **Settings** > **Advanced Settings**.



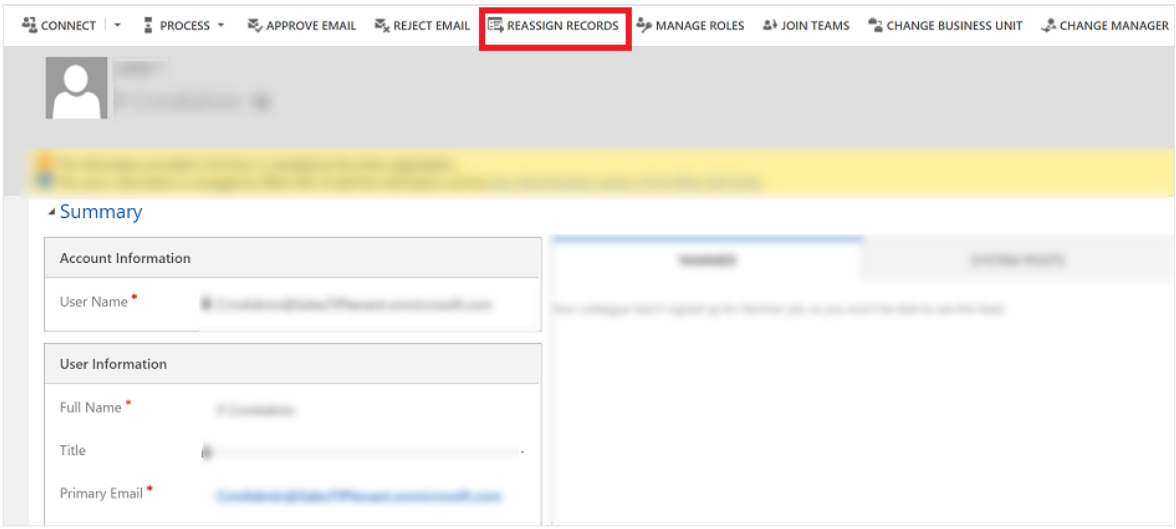
2. From the top menu navigate from **Settings** > **Security**.



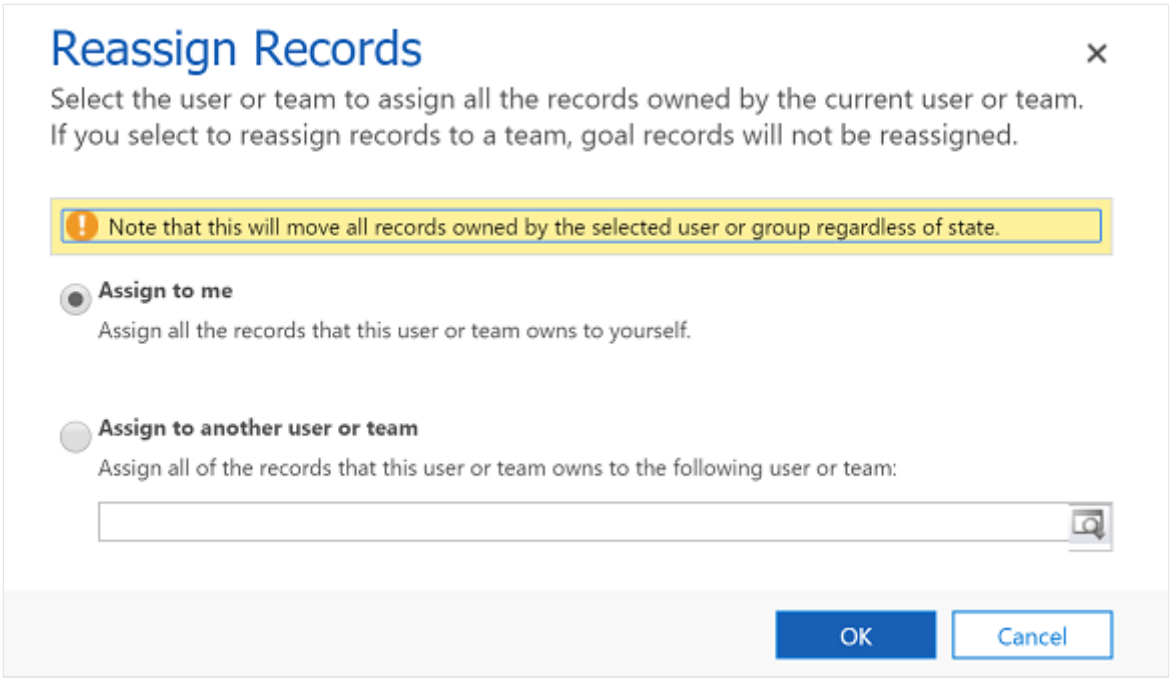
3. Under **Security** select **Users**.

4. From the list of users, select a user name to open the user's profile.

5. On the command bar, select **REASSIGN ROWS**.



6. On the **Reassign Rows** dialog box choose how to want to reassign all the rows and then select **OK**.



> ⓘ Note
>
> - The **Reassign Rows** option will reassign all rows regardless of their status. Inactive and active rows will be reassigned to the other user or team. This will also deactivate all activated processes including business rules and workflows when the row is reassigned to another user or team. The new owner must activate the processes that was deactivated when the row is reassigned.
> - When there is a large amount rows to reassign, the system may take a while to process.
> - If there is an issue during the reassignment process such as the user that the rows are being reassigned to doesn't have the required privileges then the **Reassign Rows** process will stop. The rows that are processed before the issue will be updated and saved. For the rows that were not saved, you will need to reassign the rows again using the **Reassign Rows** option.

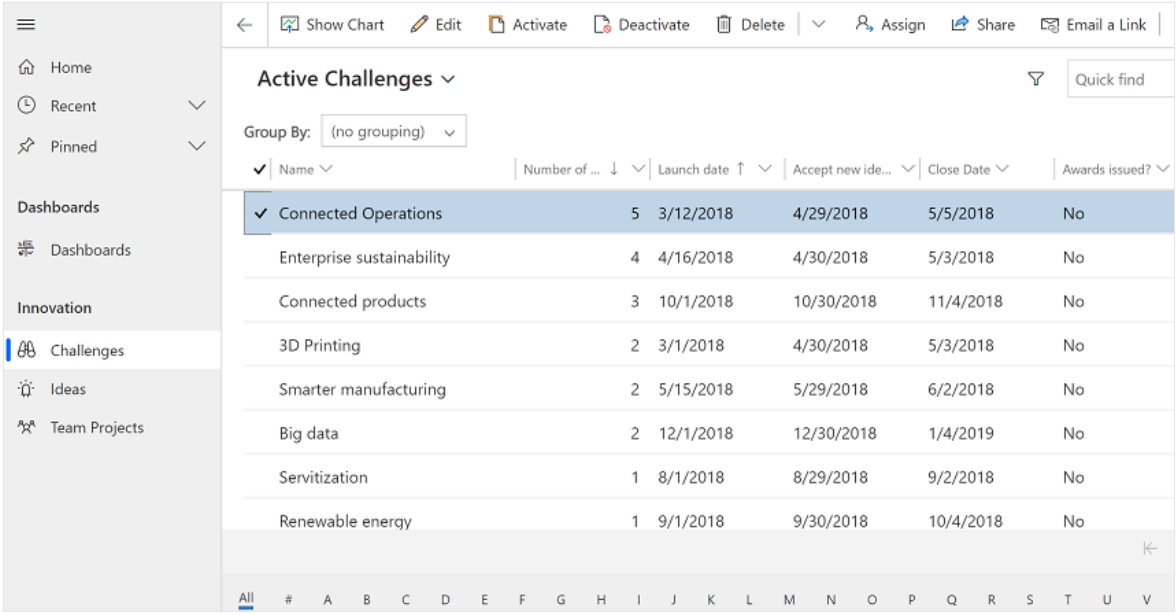
Share a row with someone else

If you want to keep ownership of a row but let someone else work on the row with you then use the share option.

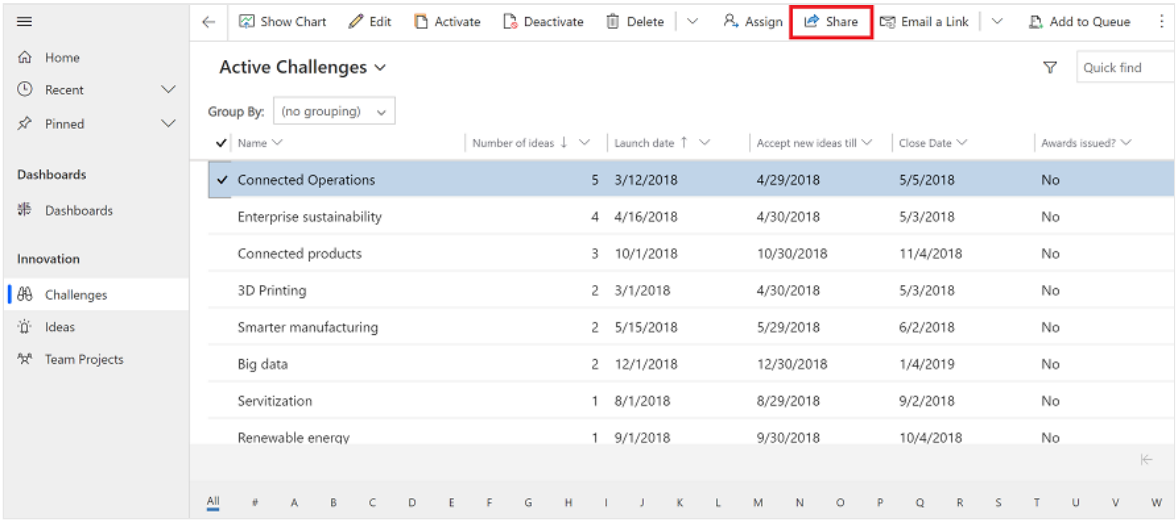
> ⓘ Note

For users on **early access** the sharing feature has been updated for 2021 release wave 2. For more information, see **Share a row with someone else**.

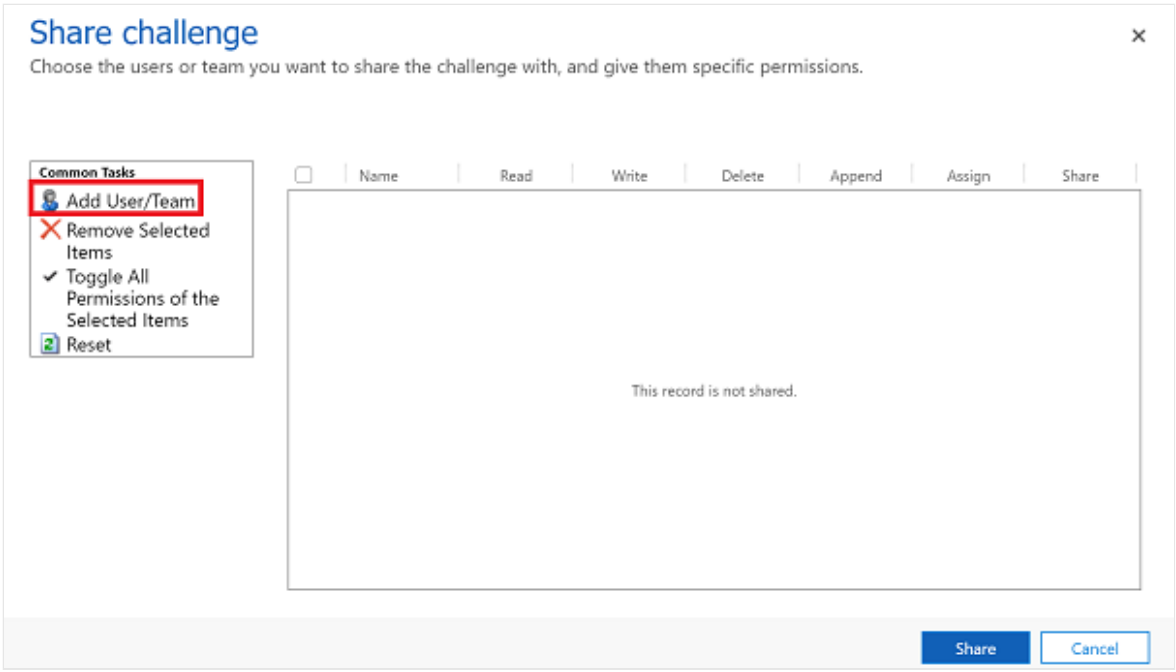
1. From a list of rows, select the row that you want to share with someone else. You can select multiple rows.



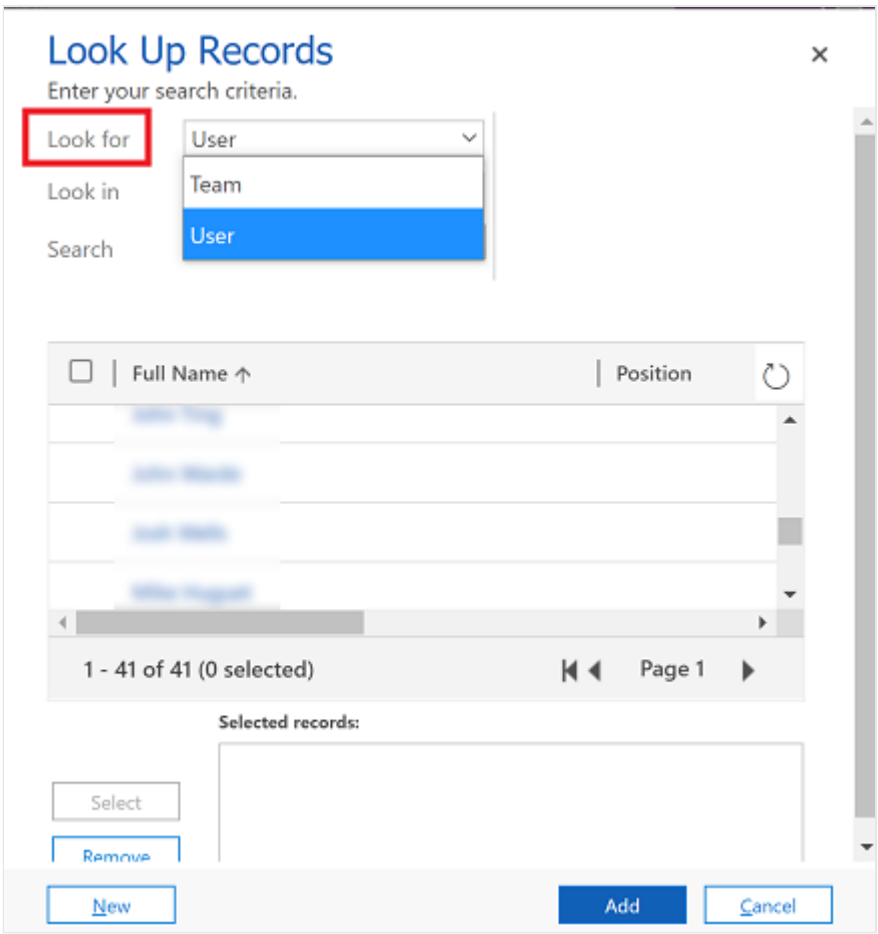
2. On the command bar, select **Share**.



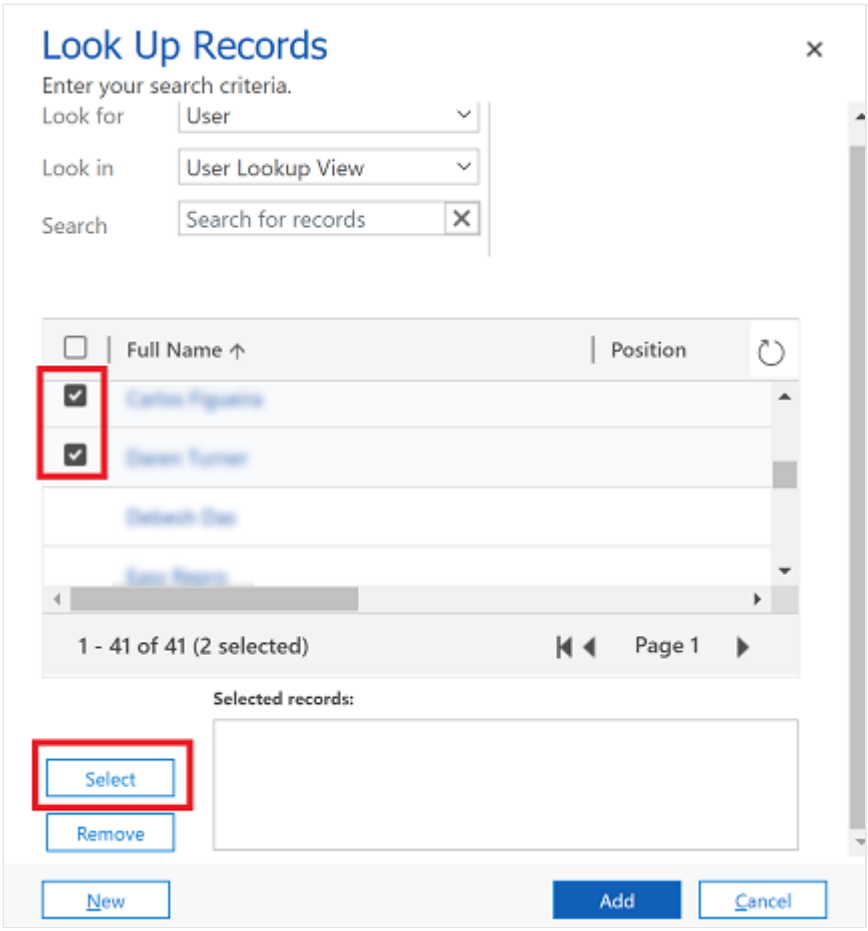
3. On the share dialog box, select **Add User/Team**.



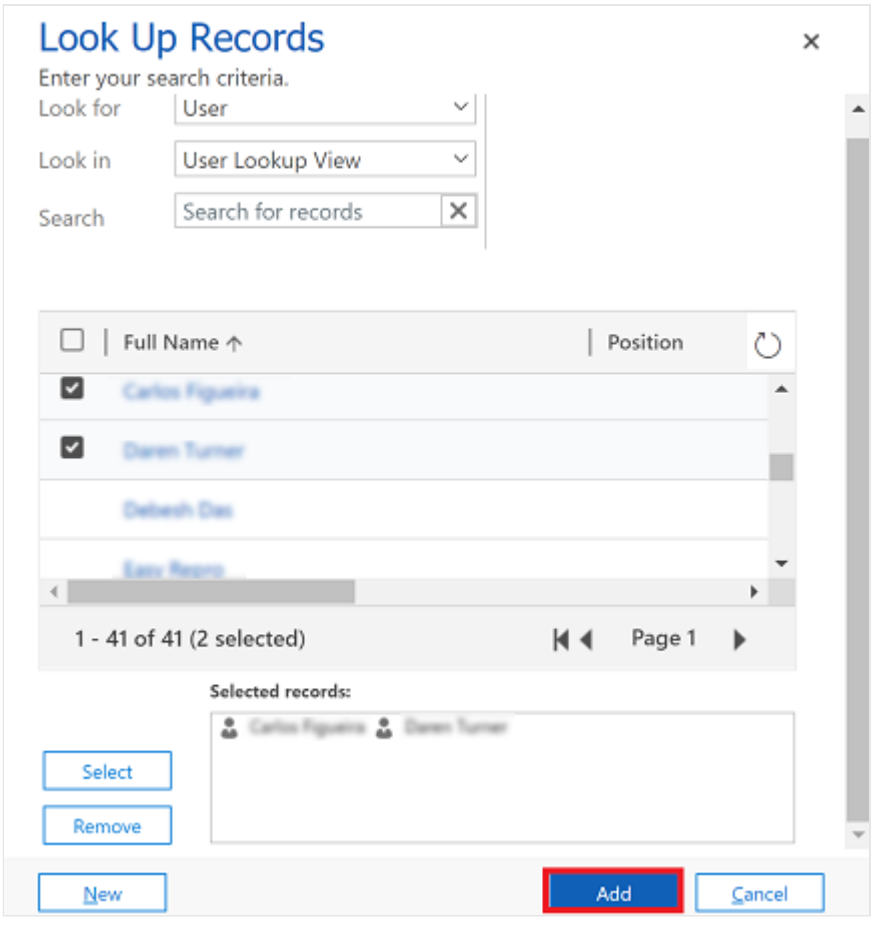
4. On the **Look up Rows** dialog box, select the **Look for** menu and choose **User** or **Team**.



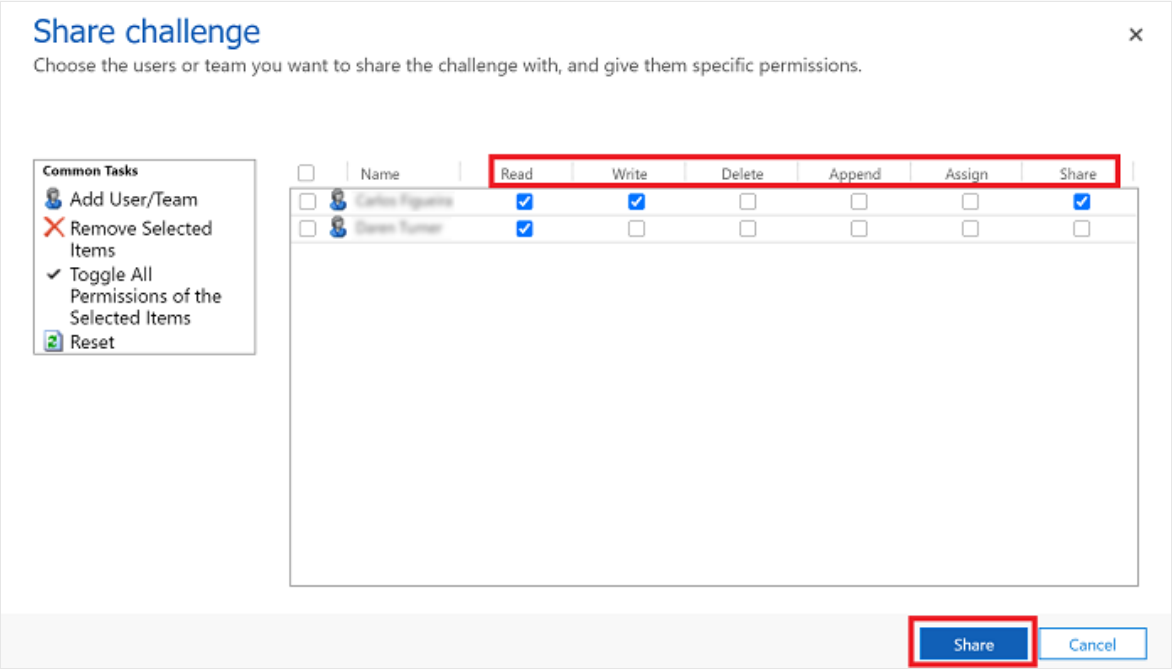
5. Use the lookup to find the user or team and select the name and then choose **Select**.


Look Up Records
Enter your search criteria.
Look for
User
Look in
User Lookup View
Search
Search for records
Full Name
Position
1 - 41 of 41 (2 selected)
Page 1
Selected records:
Select
Remove
New
Add
Cancel

6. Select **Add**.


Look Up Records
Enter your search criteria.
Look for
User
Look in
User Lookup View
Search
Search for records
Full Name
Position
1 - 41 of 41 (2 selected)
Page 1
Selected records:
Select
Remove
New
Add
Cancel

7. On the share dialog box, select the type of permissions the user or team has for the row. When you're done, select **Share**



Remove someone from a shared row

When you are the assigned owner of a row, you can remove another user the row is shared with.

1. From a list of rows that you own, select the row that you want to remove someone from the shared row.
2. On the command bar, select **Share**.
3. On the share dialog box, select the user or team who you want to remove sharing from.
4. Select the **Remove Selected items**.
5. Select the **Share** button.

Print quote, invoice, or other records

Article • 03/30/2022

Take a printed copy of a quote, invoice, or other records in Dynamics 365 Sales by exporting the records to PDF.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Print a sales record

1. Go to the record you want to print. For example, to print an invoice, go to Sales > Invoices and select a record.
2. On the command bar, select **Export to PDF**, and then select the template you want to use to create the PDF. More information: Create PDF files from sales records

   > **Note**
   >
   > If you don't see the **Export to PDF** option, contact your administrator to **Enable PDF file generation from sales record**.

3. Download the PDF file to your local drive.
4. Open the downloaded PDF file, and print it.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create PDF files from sales records

Export sales records to PDF

Article • 03/30/2022

Create PDF files of sales records that look professional and read-only using your standard word templates and share it with your customers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Export to PDF

Use the PDF generation capability to create and share read-only, professional-looking PDF files for Dynamics 365 records with your customers. The PDF file is generated by using a standard Word template from your organization. The capability to create PDF files is available for the following entities: Account, Contact, Lead, Opportunity, Order, Quote, and Invoice.

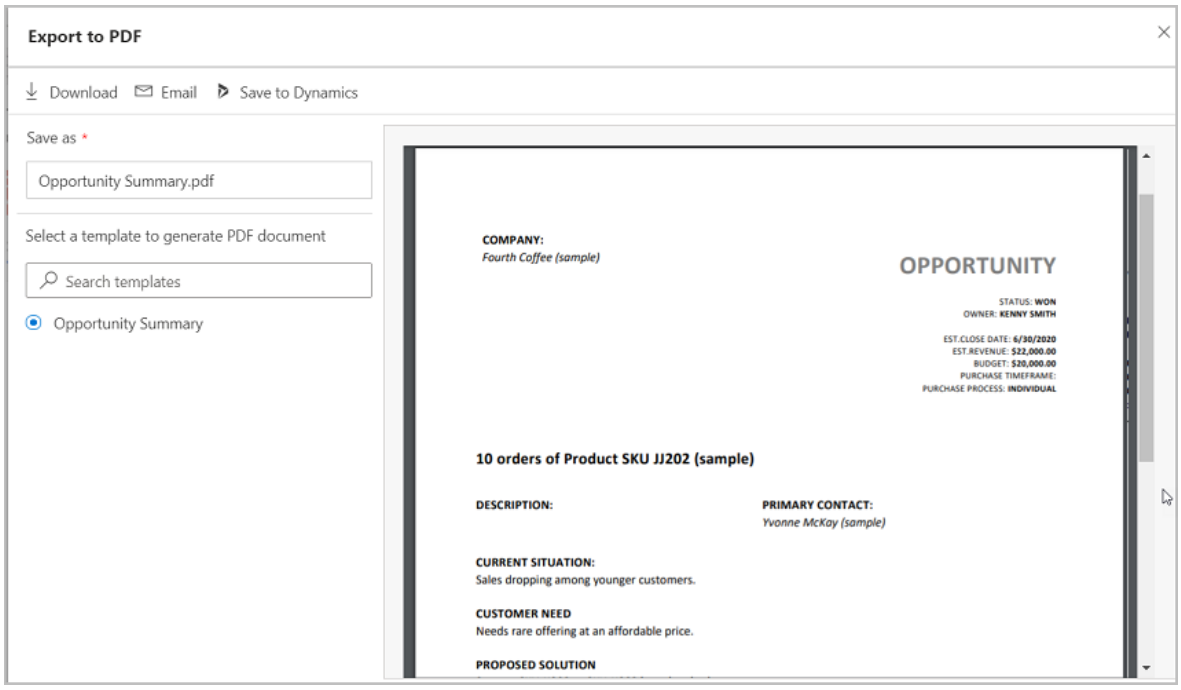
> **Important**
>
> With the 2020 release wave 2, the PDF generation capability is enhanced to support all custom entities. The PDF enhancements are limited to the web experience and aren't available in the mobile app. If you haven't opted in, or you're using Sales Hub on a mobile app, you'll see the old experience.

1. Open the entity record for which you want to create a PDF file—in this example, a record for the Opportunity entity.
2. On the command bar, select **Export to PDF**.

> **Note**

If you don't see the **Export to PDF** option, contact your administrator to enable PDF file generation from sales record.

The **Export to PDF** dialog box appears.



A preview based on the selected template is shown, and the PDF file name is populated. If you'd like to use a different template than the one selected, search for and select it in the **Select a template to generate PDF document** box. After you select the template, the preview will be refreshed.

> **ⓘ Important**
>
> - Templates are available out of the box for the Account, Opportunity, Order, Quote, and Invoice entities. For entities that don't have out-of-the-box templates, you can create new templates. You can't create a PDF file for an entity record if there's no template available for that entity. To learn more about using Word templates, see **Create and manage Word templates in Dynamics 365 Sales**.
> - If there are multiple Word templates available for the entity, by default the first template in the list is selected.
> - If the setting to view or download a PDF file automatically is disabled in your browser settings, the preview functionality won't work.

3. In the **Save as** field, change the PDF file name if you want.

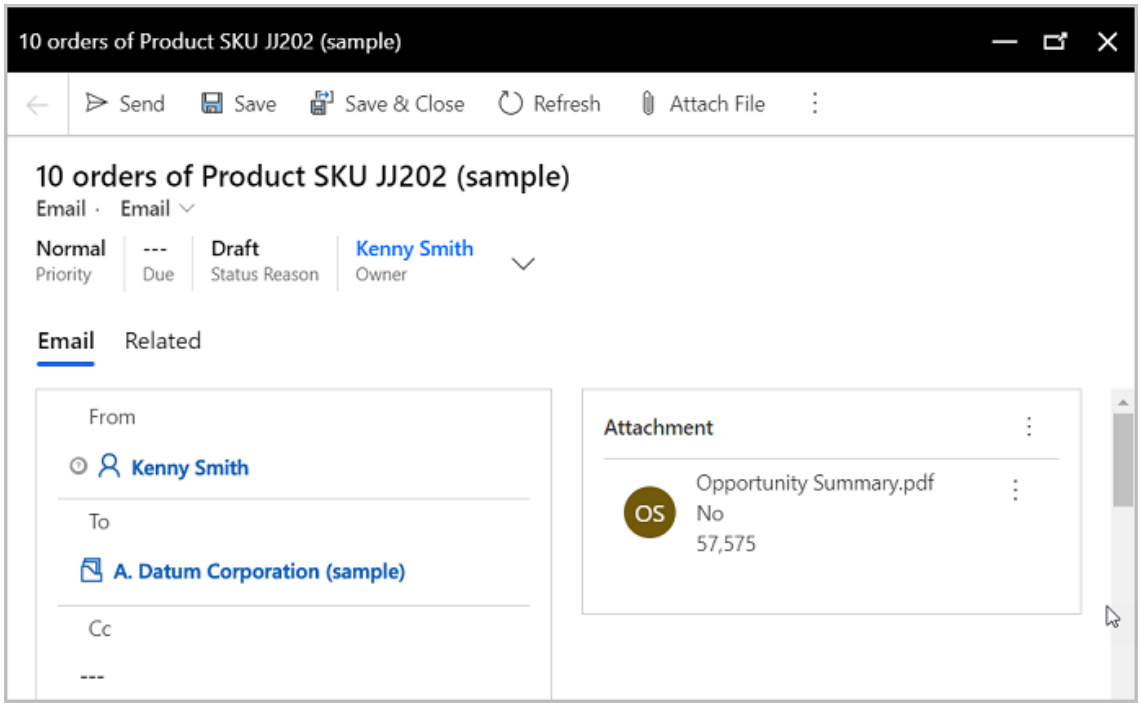
4. Do one of the following:

   a. To download the PDF file to your computer, select **Download**.

   b. To send the PDF file to your customer in email, select **Email**.

      In the email form that opens, the following information is automatically populated.

Field	Populated with
To	Potential customer, if applicable
From	The current user
Attachments	The generated PDF file, added as an attachment
Regarding	The record from which the email was triggered
Subject	The title of the record



> **Note**
>
> The **Regarding** field isn't populated if the **Sending email** flag in the primary entity isn't enabled in the **Customization** area. For more information about this flag, see **Entity options that can only be enabled**.

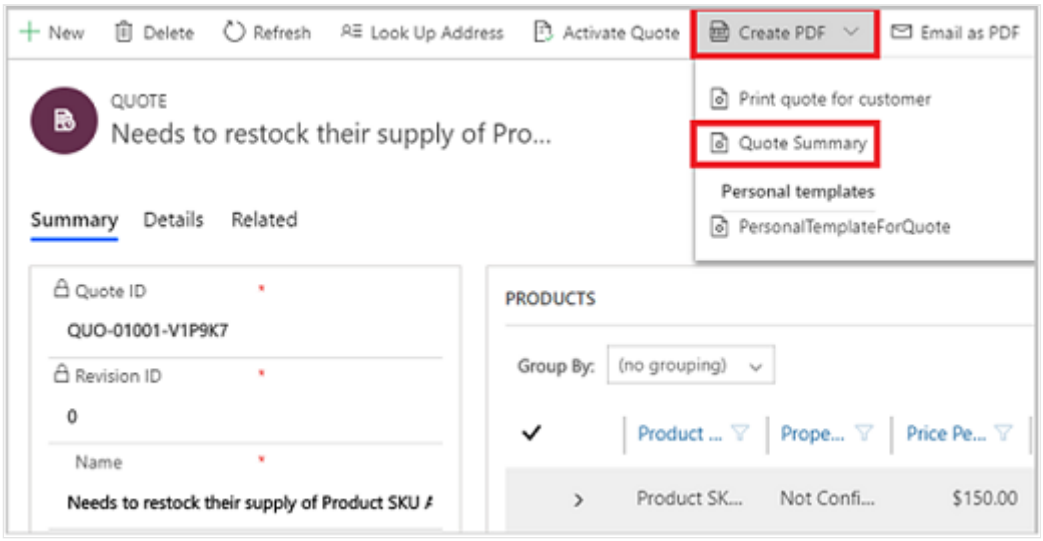
   c. Select **Save to SharePoint** or **Save to Dynamics**.

- Use **Save to SharePoint** to save the PDF file to a SharePoint site. This button is available when SharePoint integration is enabled for your organization and the **Document Management** check box is selected on the entity page in the **Customization** area. If you don't see this button, contact your system administrator.
- If SharePoint integration isn't enabled, you'll see the **Save to Dynamics** button. This command saves the PDF file as a note to the primary record. The **Save to Dynamics** button is available if notes are enabled for the primary entity. If you don't see this button, contact your system administrator.

Steps for creating a PDF file if you're using Dynamics 365 for phones on a mobile device

If you're using Dynamics 365 for phones on a mobile device, the capability for generating PDF files is limited to the following entities: Account, Contact, Lead, Opportunity, Order, Quote, and Invoice.

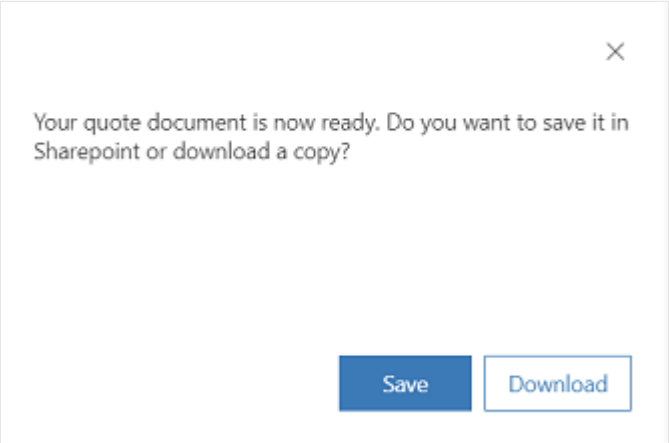
1. Open the entity record for which you want to create a PDF file—in this example, a record for a Quote entity.
2. On the command bar, select **Create PDF**, and then select the template you want to use to create the PDF.



> **Important**
>
> Templates are available out of the box for the Account, Opportunity, Order, Quote, and Invoice entities. For entities that don't have out-of-the-box templates, you can create new templates. You can't create a PDF file for an entity record if there's no template available for that entity.

> **Tip**
>
> To learn more about using Word templates, see **Create and manage Word templates in Dynamics 365 Sales**.

3. In the dialog box that appears, save or download the PDF.

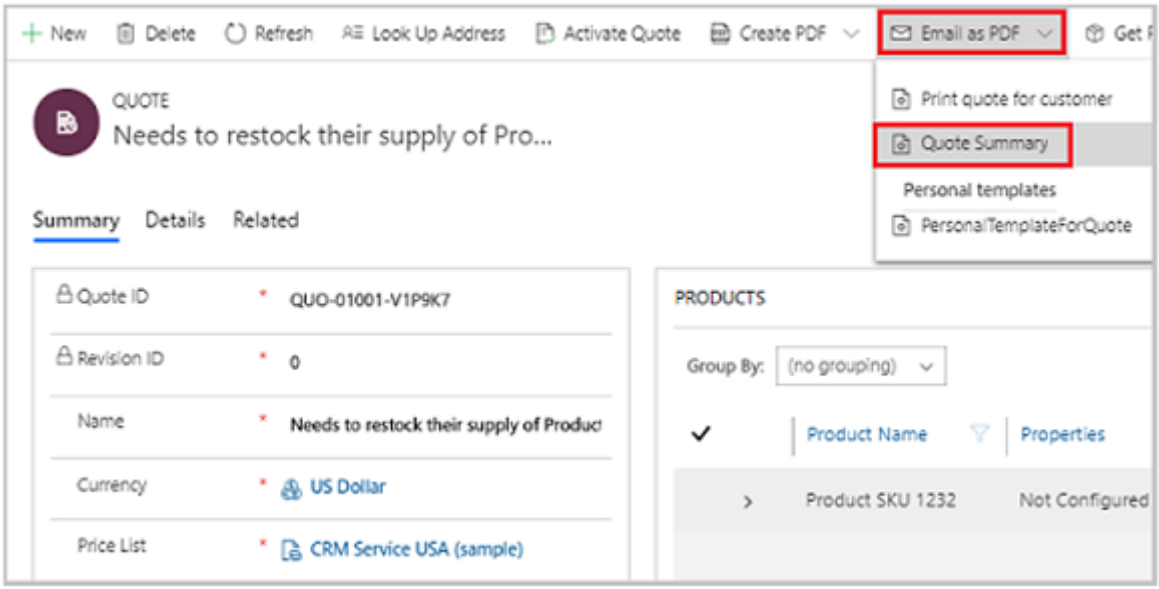


- If you select **Save**, the PDF file is stored in the default SharePoint site if SharePoint is configured and enabled for the primary entity. If SharePoint isn't configured, the PDF is saved as a Notes attachment to the primary entity record in Dynamics 365 Sales.
- If you select **Download**, the PDF is downloaded to your local drive. After it's downloaded, you can add this file to a note, send it as an attachment in an email, or upload it to SharePoint.

Steps for emailing a PDF file if you're using Dynamics 365 for phones on a mobile device

You can also generate a PDF file and directly email it to a customer.

1. Open an entity record—in this example, a record for a Quote entity.
2. On the command bar, select **Email as PDF**, and then select a document template.



In the email form that opens, the following information is automatically populated.

Field	Populated with
To	Potential customer, if applicable
From	The current user
Attachments	The generated PDF, added as an attachment
Regarding	The record from which the email was triggered
Subject	The title of the record

3. Verify or change any details in the email form as necessary, and then select **Send**.

> **ⓘ Important**
>
> The time taken to generate the PDF file and download or send the email depends on the size of the file. You'll see optimum performance when the file size is less than 2 MB. Larger files can require considerably more response time.

FAQ

Question: What happens if more than one SharePoint document location is associated with a record?
Answer: Regardless of the number of SharePoint document locations that exist for a record, the generated PDF file is always saved to the default location: [<record_name>_<record_id>].

Question: Can I specify a different name for the PDF file before generating it?
Answer: Yes. You can specify a different file name if you are not using Dynamics 365 for phones on a mobile device.

Question: Can I choose to save the PDF file to the Sales app as notes or to SharePoint?
Answer: No. If SharePoint is enabled for the entity for which you're generating a PDF, the PDF file will be saved to the SharePoint location by default.

Question: Is the PDF generation capability available on all entities?
Answer No. The PDF generation capability is available only on seven out-of-the-box entities: Account, Contact, Lead, Opportunity, Quote, Order, Invoice. With 2020 release wave 2, the PDF generation capability is enhanced to support custom entities.

Question: Does the generated PDF file support custom fonts?
Answer: The fonts in the generated file are limited to the fonts installed on the server that generates the PDF files. Here's a list of supported fonts:

- Microsoft-Windows-Font-Bitmap-Courier
- Microsoft-Windows-Font-Bitmap-Fixed
- Microsoft-Windows-Font-Bitmap-MS_Sans_Serif
- Microsoft-Windows-Font-Bitmap-MS_Serif
- Microsoft-Windows-Font-Bitmap-OEM
- Microsoft-Windows-Font-Bitmap-Small
- Microsoft-Windows-Font-Bitmap-System
- Microsoft-Windows-Font-Bitmap-Terminal
- Microsoft-Windows-Font-FMS
- Microsoft-Windows-Font-RegistrySettings
- Microsoft-Windows-Font-StaticCache
- Microsoft-Windows-Font-TrueType-Arial
- Microsoft-Windows-Font-TrueType-ArialBlack
- Microsoft-Windows-Font-TrueType-Bahnschrift
- Microsoft-Windows-Font-TrueType-Calibri
- Microsoft-Windows-Font-TrueType-Cambria_Regular
- Microsoft-Windows-Font-TrueType-ComicSansMS
- Microsoft-Windows-Font-TrueType-Consolas
- Microsoft-Windows-Font-TrueType-CourierNew
- Microsoft-Windows-Font-TrueType-Ebrima
- Microsoft-Windows-Font-TrueType-EbrimaBold
- Microsoft-Windows-Font-TrueType-FontsRegistrySettingsMigration
- Microsoft-Windows-Font-TrueType-Gadugi
- Microsoft-Windows-Font-TrueType-Georgia
- Microsoft-Windows-Font-TrueType-Inkfree

- Microsoft-Windows-Font-TrueType-JavaneseText
- Microsoft-Windows-Font-TrueType-LeelawadeeUI_Regular
- Microsoft-Windows-Font-TrueType-LeelawadeeUI
- Microsoft-Windows-Font-TrueType-LucidaConsole
- Microsoft-Windows-Font-TrueType-MalgunGothic
- Microsoft-Windows-Font-TrueType-MicrosoftHimalaya
- Microsoft-Windows-Font-TrueType-MicrosoftJhengHei
- Microsoft-Windows-Font-TrueType-MicrosoftYaHei
- Microsoft-Windows-Font-TrueType-MongolianBaiti
- Microsoft-Windows-Font-TrueType-MVBoli
- Microsoft-Windows-Font-TrueType-MyanmarText
- Microsoft-Windows-Font-TrueType-NewTaiLue
- Microsoft-Windows-Font-TrueType-NirmalaUI_Regular
- Microsoft-Windows-Font-TrueType-NirmalaUI
- Microsoft-Windows-Font-TrueType-PhagsPa
- Microsoft-Windows-Font-TrueType-SegoePrint
- Microsoft-Windows-Font-TrueType-SegoeUI_Regular
- Microsoft-Windows-Font-TrueType-SegoeUI
- Microsoft-Windows-Font-TrueType-SimSun
- Microsoft-Windows-Font-TrueType-TaiLe
- Microsoft-Windows-Font-TrueType-TimesNewRoman
- Microsoft-Windows-Font-TrueType-TrebuchetMS
- Microsoft-Windows-Font-TrueType-Verdana
- Microsoft-Windows-Font-TrueType-Webdings
- Microsoft-Windows-Font-TrueType-Wingdings
- Microsoft-Windows-Font-TrueType-YiBaiti
- Microsoft-Windows-Font-TrueType-YuGothicMedium
- Microsoft-Windows-Font-Vector
- Microsoft-Windows-Type1-Fonts

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Enable or disable PDF generation from sales records

View and manage records in focused view

Article • 10/13/2023

The focused view allows you to view and manage account, contact, lead, and opportunity records and their associated activities on one page. This view makes it easier for you to stay focused on your tasks and reduces the need to navigate between multiple screens. It also allows you to better organize and prioritize your tasks.

> **Note**
>
> Focused view is now available for all entities, including custom entities. However, your administrator must enable it for you to access it. More information: **Enable focused view and set it as the default view**

The focused view is similar to the Sales accelerator workspace view. Learn how to prioritize your sales pipeline through the work list.

Open the focused view

The focused view is a centralized place to view all your open records that have activities that are due or pending, without having to navigate through multiple screens.

1. In the site map, select an entity and do one of the following actions depending on the entity:

    - For Account, Contact, Lead, and Opportunity entities, select **Focused view** on the command bar.
    - For all other entities, select **Show as** > **Focused view** on the command bar.

> **Note**
>
> - The **Focused view** option isn't displayed if a record is selected.
> - Focused view is not available for the Activities entity.
> - The records display all active activities that are created in the last 120 days.

Understand the focused view

The focused view consists of three sections.

- **Search, filter, sort, and switch view**: These options are displayed at the top of the work list item view.
  You can search, filter, and sort the records that you want to view in the list to quickly identify only the records that you want to work with. You can also switch between the focused view and the list view.

  Filters and sorting that are available here are similar to the list view. The attributes that are available in the view are displayed as filter. If you want to add more filters to the view, you can create an advanced filter.

  Create an advanced filter option using the expression builder to refine the content displayed in the work list. You can have only one advanced filter defined for an entity in focused view. Select **Edit filters** to open the expression builder. In the expression builder, create the conditions as required and then select **Apply**. When the advanced filter is applied, you will observe the filter icon is filled with a blue color, and the advanced filter tag is displayed under the filter options.

- **Records list**: All records, including records with no associated activities, for the selected entity are displayed in a card format. You can perform and complete the activities, whether manual or automated, on these cards from the current date and from previous dates. Each card displays information such as the name of the record, the primary contact name, and the next best action.

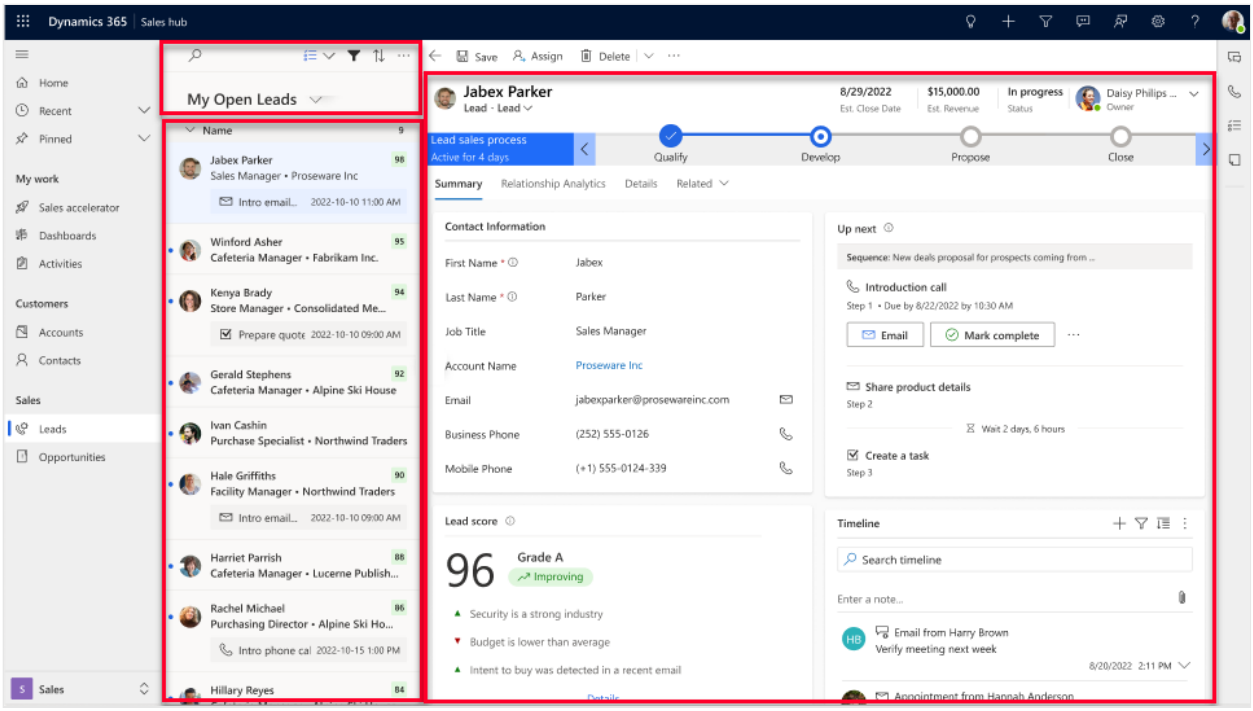
  Next best actions, include the top two activities with the latest due date. To complete the next best action, hover over the action and then select the action icon.

  When no action items are available for the record, the record displays information such as the name and contact details.

  When predictive scoring is enabled in your organization, the list also displays the score for that lead or opportunity at the top-right corner of the card. Learn more about prioritizing leads through scores and prioritizing opportunities through scores.

- **Record details**: Select a record in the work list to open a detailed view of the record on the same page.

The following image is an example of the focused view for the Lead entity:

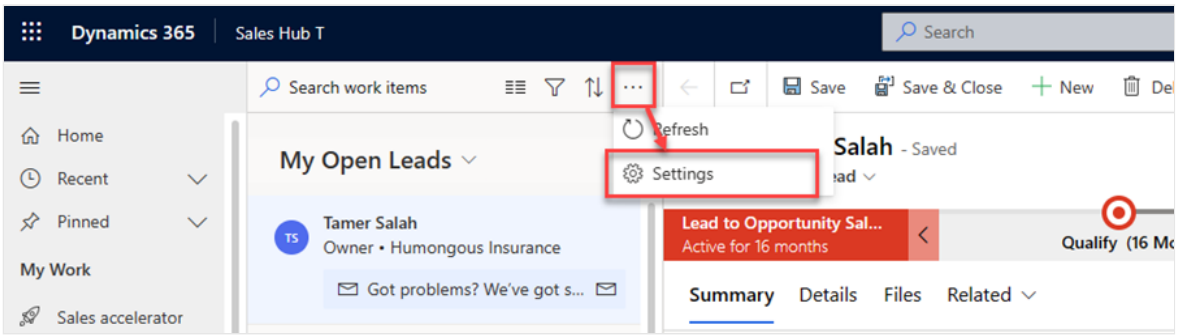


Customize the work list card

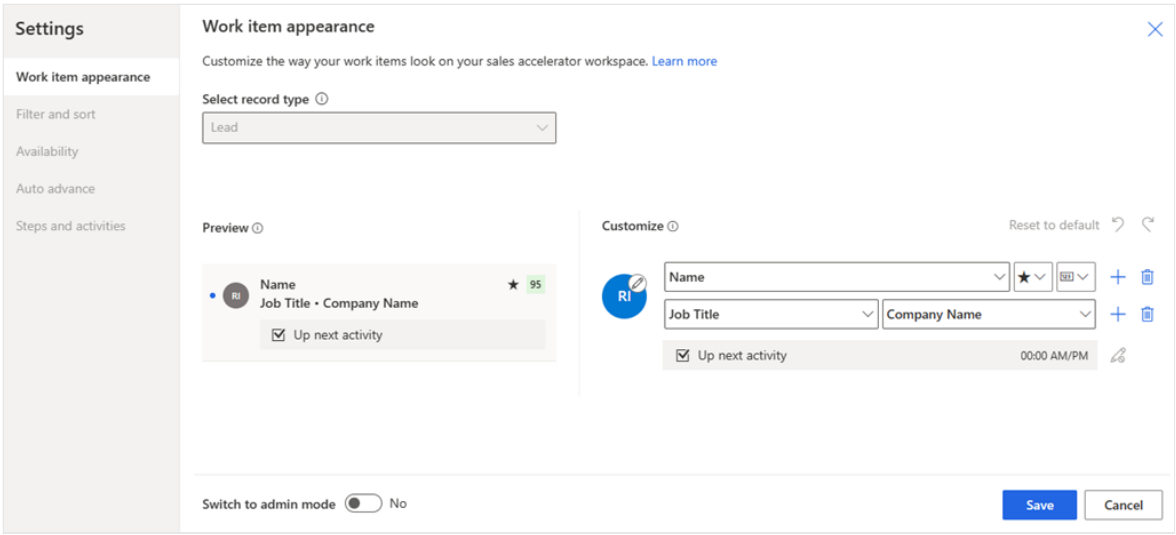
You can customize the work list card to display the information that you want to see. When sales accelerator is enabled, the customizations you make here are also reflected in the sales accelerator worklist items. More information: Customize the appearance of work items in sales accelerator

The customization that you make to the work list card is specific to the entity type. For example, if you customize the work list card for the Lead entity, the customization is applied only to the Lead entity. The customization isn't applied to the Account, Contact, Opportunity, or other entities. These customizations also effects the sales accelerator workspace view.

1. In the focused view page, on the work list pane, select **More options** and then select **Settings**.



2. In the **Settings** dialog box, select **Work item appearance**.



The following are the considerations to keep in mind when customizing the work list card in focused view:

- The **Switch to admin mode** and **Lock customization** options are available only for administrators.
- If the customization is disabled, contact your administrator to turn off the customization lock.
- When admin mode is turned on, you can customize work items for all users within your organization. When turned off, you can customize work items only for yourself. If admin mode is turned off, contact your administrator to turn it on. More information: Lock or unlock customization for other user roles
- You can't customize the action items in the work list card. Also, in preview mode, the **More options** icon isn't visible to select action items that are configured in the sales accelerator workspace view.

3. Under the **Customize** section use the following options to customize:

- To change the icon that appears on a work item, select the pencil icon, and then choose one of the following options:
  - **Record image**: A photo of the contact, if one is available
  - **Record initials**: The contact's first and last initials
  - **Record type**: The icon associated with the record type
  - **Activity type**: The icon associated with the current activity on the record
- To change the content of work items, select the fields or attributes to display:
  - To change an existing attribute, select a different one in its place from the list.
  - To add an attribute in the same row, hover over an existing attribute and select **More options** > **Add a field**. You can show up to three fields in a row.

    - To add an icon in the same row, hover over an existing attribute and select **More options** > **Add an icon**. You can show up to three icons in a row.
    - To add a row, select the add icon (+). You can show up to four rows of information in a work item.
    - To delete a field or an icon, hover over it and select **More options** > **Remove**.
  - To remove all customizations and restore work items to their original appearance, select **Reset to default**.

  The **Preview** section displays a preview of the work list card based on the customizations that you make.

4. Select **Save**.

See also

Set focused view as the default view
Prioritize your sales pipeline through the work list
Work with opportunities in the Kanban view
Customize work items
Focused view FAQs

Enable focused view and set it as default

Article • 08/07/2023

In the focused view, sellers can view and manage their CRM records and their associated activities, on one page. This view makes it easier for sellers to stay focused on their tasks and reduces the need to navigate between multiple screens. It also allows sellers to better organize and prioritize their tasks.

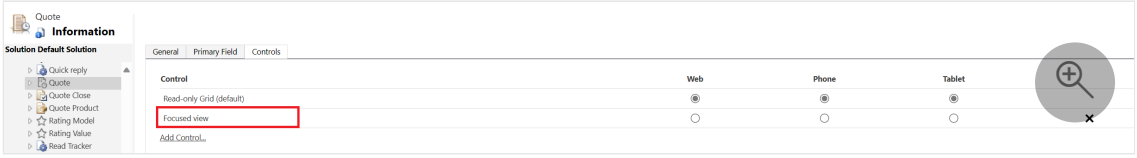
To enable focused view and set it as default

The focused view is enabled by default for contact, account, lead, and opportunity entities. However, you must enable it manually for all the other entities. You can also set it as the default view for any entity so that sellers don't have to switch to the focused view each time they access their entity list.

> **Note**
>
> - When you set the focused view as the default view, users can't switch to the list view. If users must be able to use both views, set the list view as the default view.
> - Focused view is not available for the Activities entity.

Use the following steps to enable the focused view or to set it as default.

1. In the Sales Hub app, select **Settings** > **Advanced Settings**.
2. On the **Settings** menu, select **Customizations** > **Customize the system**.
3. On the Power Apps Default Solution page, select **Entities** > ***Entity name***. For example, select **Entities** > **Quote**.
4. To add the control for entities other than contact, account, lead, and opportunity, follow these steps:
   a. On the **Controls** tab, select **Add Control**.
   b. In the **Add Control** dialog box, select **Focused view**, and then select **Add**.



5. To set the focused view as the default view, select **Focused view** for web, phone, and tablet on the **Controls** tab.

6. Save and publish your changes. The focused view is now enabled and set as the default view for quotes.

See also

View and manage records in focused view
Focused view FAQs

Work with views (lists)

Article • 03/30/2022

Use grids (views) and lists to browse and manage various data sets in Dynamics 365 Sales to improve your productivity.

License and role requirements

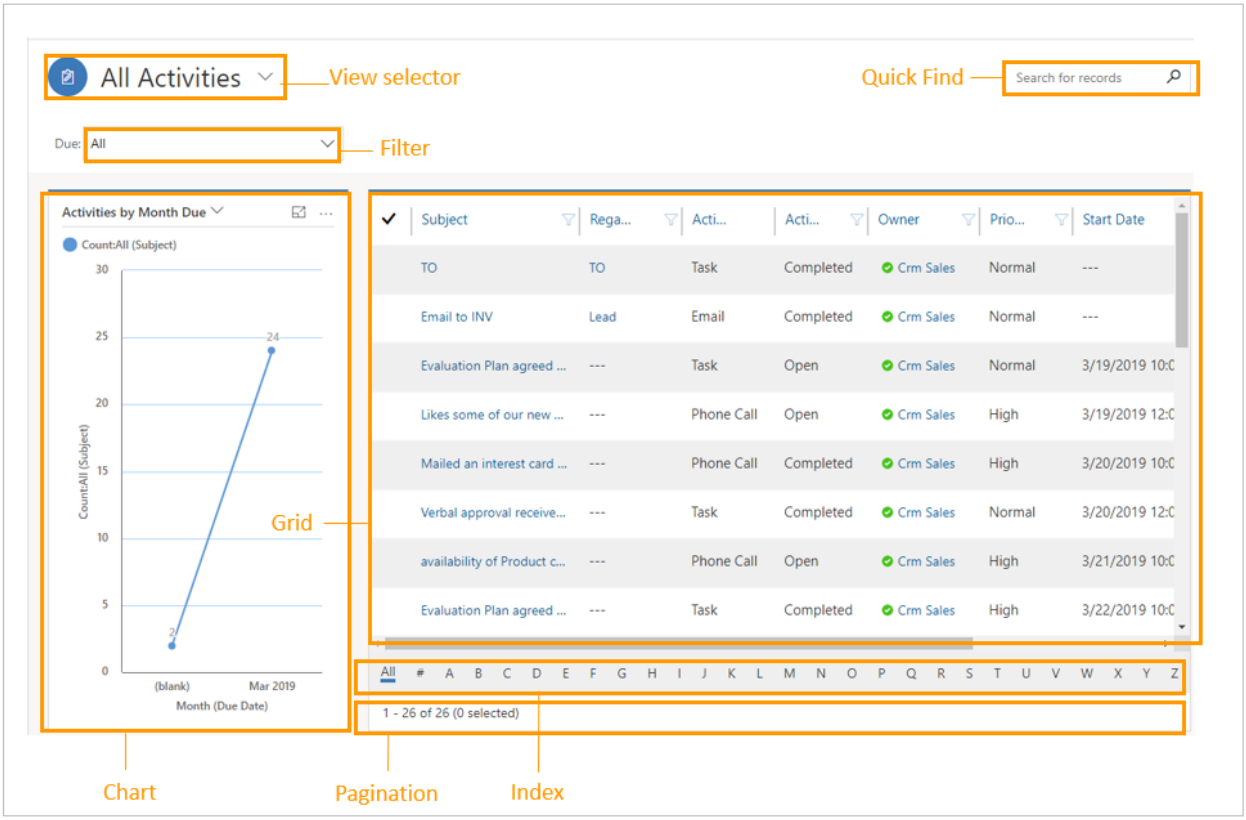
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What can you do in a view?

You can perform some common interactions in a view, such as:

- Switching views, for example switching from My Open Opportunities to Opportunities Closing Next Month.
- Finding a specific record by using Quick Find.
- Filtering data by using charts.
- Creating a new record.
- Exporting views to a Microsoft Excel workbook.

The following image shows how a view is displayed:



A typical view page contains these components:

- **Command bar:** You can perform actions on records by using commands such as Refresh and Delete.
- **View selector:** When you select a view such as Accounts, My Activities, or Contacts, records in the grid change based on the view you've selected.

  More information: Create and edit public or system views.

  > **Note**
  >
  > To configure a view as the default, select the pin icon next to the view.

- **Quick Find:** Get quick results by entering simple queries. Quick Find displays all active records that match your query.
- **Filters:** Filter data to display only what you're interested in. For example, in the Activities view, you can filter data by due date by selecting a filter from the **Due** drop-down list.
- **Charts:** Use charts to display data for quick, high-level visual analysis. Charts wrap huge amounts of data in one easy-to-understand visual snapshot.
- **Column headings and sorting:** In a grid, column headings display the names of columns that were defined in the layout. For example, when you select contacts,

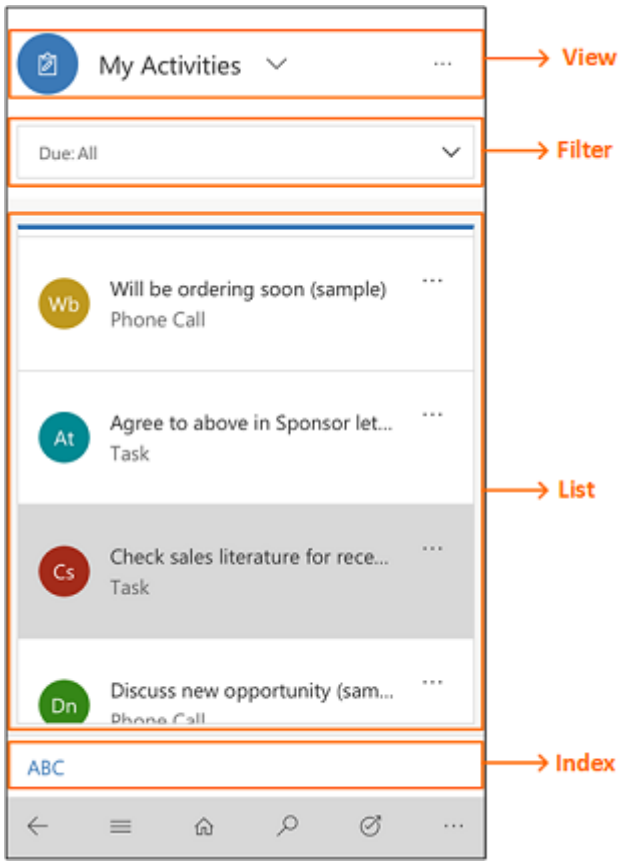
the names of each column, such as Full Name, Email, and Company Name, are displayed in each column heading, depending on the layout.

  - The **Select All** check box appears next to the first column heading. When you select the check box, all the rows on the current page in the grid are selected.
  - You can also sort records by selecting the column heading. When the records are sorted, an arrow in the column heading indicates the sort direction.
  - You can sort multiple columns at once: Select the heading of the column that you want to sort first, select the Shift key, and then select the heading of the other column to further sort the records. For example, if you want to sort contact records first by company and then by name, select the Name column heading, select and hold the Shift key, and then select the Company column heading.

- **Index:** You can select a character in the index to filter records in the grid or list that start with that character. For example, to display records that start with the letter *U*, select *U* on the index, and records that start with *U* are displayed. When the page is resized to a list, the index appears as a button. Select the button to view the complete list of characters.
- **Pagination:** The pagination section shows the number of pages that the records span. The number of pages varies depending on the number of records per page. For example, if you have 50 records and the view shows 25 records per page, the page count in the pagination section is 2.

  > ⓘ **Note**
  > - You can define the number of records that you want to view on a page. When you reach the end of the records on the current page, the grid automatically shows the next page of records and starts scrolling again from there. The pagination control will change to show the current page number.
  > - You can navigate across pages by using the left and right arrows.

The view page is responsive. As the size of the container decreases—for example, on phones and smaller viewports—the view is transformed into a list. A list can be rendered in a compact manner that is suitable for viewing at a smaller width. For example, in a list, the index is displayed as a button. By default, a list displays an image or initials for each record. In addition, the command bar is minimized to a **More Actions** (...) icon.



You can perform different actions such as sort, delete, and refresh on items in lists by using the command bar as you do in grids. To open the command bar, select **More Actions** (...) in the header pane of the view selector.

> ⓘ Note
>
> If you want to perform any action on an individual item, select the **More Actions** (...) icon that corresponds to the item.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and edit public or system model-driven app views

What's new or changed in Dynamics 365 Sales

Article • 10/06/2023

Wondering about upcoming and recently released capabilities in Dynamics 365 Sales? Check out the release planner site. We've captured all the details, end to end, top to bottom, which you can use for planning.

See the release plans for what's coming. Choose the following links to learn about the latest versions of Dynamics 365 Sales.

- 2023 release wave 1
- 2022 release wave 2

Keep track of changes on the Dynamics 365 Sales release planner site, or download the release plan as a single PDF.

Explore the app at the Dynamics 365 Sales Capabilities site.

This article summarizes early access, public preview, and general availability features that were released in the last three months.

September 2023 release

No new features or enhancements were released in September 2023. We'll be back in October with more updates.

August 2023 release

Feature area	Feature	Description	Resources	Enabled by	Availability
Copilot	Email summary	Use copilot to summarize email conversations into concise and easily understandable summaries, which you can then copy as a note to a record.	Documentation	Enabled by admins	Public preview

July 2023 release

Feature area	Feature	Description	Resources	Enabled by	Availability
Copilot	Opportunity summary	Use the AI-generated opportunity summaries to get a quick and comprehensive view of the opportunity and catch up on updates, without reading through the history of the opportunity.	Documentation	Enabled by admins	Public preview
Copilot	Lead summary	Get AI-generated lead summaries that are enriched with data from CRM, Bing news and LinkedIn. Catch up on updates without reading through the history of the lead.	Documentation	Enabled by admins	Public preview
Copilot	Meeting preparation notes	Prepare better for customer meetings with AI-generated preparation notes and avoid the need to search through multiple sources for up-to-date information prior to each meeting.	Documentation	Enabled by admins	Public preview
Copilot	Contextual news	Get the latest news about an account or company contextually within Dynamics 365 Sales.	Documentation	Enabled by admin	Public preview
Copilot	Email compose and reply	Use Copilot to generate email drafts based on your input, recent emails, and related information.	Documentation	Enabled by admins	Public preview
Copilot	Email follow ups	Let Copilot identify action items from	Documentation	Enabled by	Public preview

Feature area	Feature	Description	Resources	Enabled by	Availability
		your incoming emails and suggests those that need a follow-up but aren't replied to yet.		admins	
Sales engagement	Support for custom SMS channel	Bring in your own provider to use the SMS capability.	Documentation	Enabled for admins	GA
Sales engagement	Support for SMS from the Activities pane	Start SMS conversation from the ribbon within the Activities page, similar to other communication channels such as email and call.	Documentation	Enabled by default	Public preview
Sales execution	Modern and refreshed user experience	Experience the new and refreshed UI that's more intuitive, effective, and visually appealing.	Not applicable	Enabled by default	Public preview

Get the latest version

New customers automatically get the latest version. If you're an existing partner/customer, check your email for notifications about updates.

For the latest available version in your region, see Released Versions of Dynamics 365 Sales Enterprise.

Sign up for a free Dynamics 365 Sales trial

Article • 05/15/2023

Dynamics 365 Sales offers a 30-day free trial with the Sales Premium license. After a quick sign-up, you'll have access to many of the app's key features. The trial allows you to test the app with sample data and even try out your own customer data. Learn more about Dynamics 365 Sales features.

> **Tip**
>
> Images that include an icon that looks like this: may be expanded to show more detail. Select the image to expand it. To close it, press the Esc key.

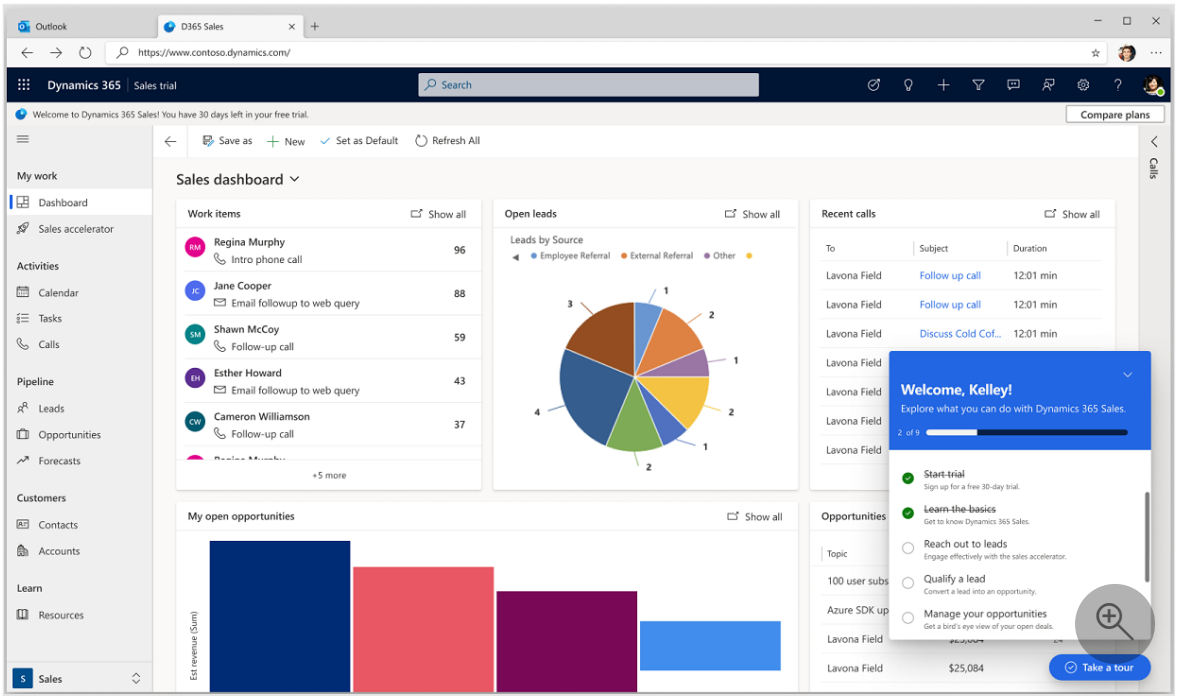
To sign up for the trial:

1. Go to the Sales overview page and select **Try for free**.
2. Enter your work email ID or personal email ID.

   > **Note**
   >
   > **Conversation intelligence** requires a work account.

3. Follow the onscreen guidance to provide additional information about your account.
4. When the trial is ready, select **Launch Trial** to sign in to the Sales Trial app.

   The Sales Trial app opens the **Dashboards** page with helpful sales insights based on sample data. A product tour assistant also launches.



What to try

Your trial environment includes many of the same features as the paid version. The following links guide you through some of the key features:

- Accelerate your sales
  - Prioritize your sales pipeline through the work list
  - Manage sequences
- Nurture your sales from lead to order
  - Preview: Manage opportunities using pipeline view
  - Create an opportunity
- Project your revenue
  - Configure forecasting
  - View a forecast
- Digital selling

Additional resources

- Dynamics 365 Sales free trial sign-up page
- Explore Microsoft Learn training
- Watch videos on the product playlist
- Trial FAQ

What are preview features

Article • 05/15/2023

This article describes what preview features are, what limitations apply to them, and how to identify them in your Dynamics 365 Sales trial. Explore the features included in the trial.

Preview features are features that aren't complete, but are made available on a "preview" basis so that customers can get early access and provide feedback.

Preview features come with some disclaimers. Preview features:

- Are subject to separate Supplemental Terms of Use.
- Aren't meant for production use.
- Aren't supported by Microsoft Support for production use. Microsoft Support is, however, eager to get your feedback on the preview functionality, and might provide best-effort support in certain cases.
- May have limited or restricted functionality.
- May not be available in all geographic areas.

How to identify a preview feature

You get access to some preview features as part of your Dynamics 365 Sales trial. These features have a **Preview** label in the app and in the documentation. For example, refer to the Preview: Manage opportunities using pipeline view article.

See also

Sign up for a free Dynamics 365 Sales trial
Explore features included in the trial

Explore features included in the trial

Article • 05/15/2023

The Microsoft Dynamics 365 Sales trial includes the following features to help you manage your pipeline, accelerate sales, project revenue, analyze your sales conversations through AI-powered conversation intelligence, and more:

- Pipeline management
- Sales accelerator
- Sales forecasting
- Conversation intelligence
- Teams collaboration
- Mobile app

> **Important**
>
> During your trial, you'll have access to the Sales Trial app. In the documentation links listed in this article, assume that any references to the Sales Hub app refer to the Sales Trial app.

Pipeline management

Managing a sales pipeline using leads and opportunities is one of the basic and key functions of any sales organization. Watch this brief video to understand how Dynamics 365 Sales helps you manage your pipeline:
https://www.microsoft.com/en-us/videoplayer/embed/RWONpe?postJsllMsg=true

Want to learn more? Read this article:

- Preview: Manage opportunities using the pipeline view

Sales accelerator

The sales accelerator in Dynamics 365 helps you to:

- Prioritize your customer list quickly by using an intelligent work list. The work list helps you reach out to the next best lead or opportunity by displaying relevant sales information and customer context.
- Define sequences for different scenarios that your sales team is likely to encounter. Scenarios help sales teams to be consistent because they know the steps they

need to take to move the deal forward.
- Create rules to automatically assign leads and opportunities to your sellers.

Watch this brief video to get a sneak peek into the sales accelerator:
https://www.microsoft.com/en-us/videoplayer/embed/RWCQ3Q?postJsllMsg=true

Want to learn more? Read these articles:

- Configure the sales accelerator
- Prioritize your sales pipeline by using the work list
- Manage sequences
- Create and activate an assignment rule

Sales forecasting

Project accurate revenue with sales forecasting. A forecast helps your organization predict how much revenue your sales team will generate in a given time frame.

Watch this brief video to get a sneak peek into forecasting:
https://www.microsoft.com/en-us/videoplayer/embed/RWCXou?postJsllMsg=true

Want to learn more? Read these articles:

- Configure forecasts in your organization
- Project accurate revenue with sales forecasting

Conversation intelligence

Conversation intelligence uses analytics and data science to gather data from sellers' call recordings and Dynamics 365 Sales.

Watch this brief video to get a sneak peek into conversation intelligence:
https://www.microsoft.com/en-us/videoplayer/embed/RWCYPO?postJsllMsg=true

Want to learn more? Read these articles:

- First-run setup experience of Microsoft Teams for conversation intelligence
- Improve seller coaching and sales potential with conversation intelligence

Teams collaboration

Engage in a Teams conversation inside your trial app. While working on a sales record, you can start a new Teams chat or link an existing chat to the record to collaborate

without switching contexts.

Watch this brief video to get a sneak peek into the Teams collaboration feature in Dynamics 365:
https://www.youtube-nocookie.com/embed/h7BjrM2UkMs

Want to learn more? Read these articles:

- Configure Microsoft Teams chat in Sales Hub (preview)
- Use Microsoft Teams chat in Sales Hub (preview)

Mobile app

The Dynamics 365 Sales mobile app is optimized for core field seller scenarios to help sellers use the time that they spend traveling on the road to meet customers.

Watch this brief video to get a sneak peek into the mobile experience:
https://www.microsoft.com/en-us/videoplayer/embed/RWCZDG?postJsllMsg=true

Want to learn more? Read these articles:

- Overview of the Dynamics 365 Sales mobile app
- Install the app on iOS and Android

Dynamics 365 Sales trial FAQ

Article • 03/20/2023

The Sales trial offers a straightforward experience for sign-up, login, and usage. However, if you're stuck or have questions about the trial, check out this page for answers.

To sign up for the trial, go to the Sales overview page and select **Try for free**.

Sign-up

What are the system requirements for the trial?

This app is a cloud-based service that doesn't require special software other than an up-to-date web browser, though some restrictions apply. For the best trial experience, avoid accessing the trial site in incognito mode. Learn more about web application requirements.

How do I sign up for the trial without a Microsoft 365 tenant?

You can enter a non-work email address and we will create an account and tenant for you.

Can I sign up for trial using a personal email ID that's not associated with a Microsoft account?

You can use a personal email ID. But you won't be able to access Power Platform admin center to add more users to the trial, change security roles, or extend the trial period.

Can I sign up for multiple Dynamics 365 apps such as Sales, Marketing, and Customer Service?

Yes, you can. To view all available trials, visit the trial hub page. You can use the same email account to sign up for different trials. However, it is not possible to have multiple apps on the same trial site. Each trial will be on a different tenant and URL. The trial data won’t be shared across apps.

Trial app

I didn't receive the trial details email after signing up, what should I do?

When you sign up for the trial, you'll receive an email with the trial details. If you don't see the email in your inbox, check your spam folder. Alternatively, use the following steps to access your app:

1. Go to trial site and select Try for free.
2. Enter the email ID that you used, to sign up for the trial. You'll be redirected to your trial app.

How do I add more users to a trial?

To add users, go to the Microsoft 365 admin center using the trial admin account. Follow the admin center guidance to add users up to the trial license limit. If the user you are adding already has a Microsoft 365 account, assign them an appropriate security role in the trial org. For more information, see Assign a security role to a user.

How many users can I add to my trial environment?

You can add an unlimited number of users to the trial environment.

How do I reset the trial environment?

You can't reset the trial environment. However, you can wait for the trial period to end and then sign up again for a new trial.

How do I extend the trial?

You can extend the trial for another trial period in the admin center. For instructions, see Extend your trial. You can extend your trial once.

How do I cancel the trial?

If you have signed up for the trial using a managed Azure Active Directory account, you can request your Power Platform admin to delete the trial environment. If you have signed up using your personal account, you cannot cancel the trial manually. The trial

will expire after the 30-day trial period and the trial environment will be automatically deleted.

Can I convert the trial to a paid license?

Yes, you can purchase licenses through direct, credit card purchase at admin.microsoft.com. Or, you can work with sales to establish a volume licensing or enterprise agreement. Visit our Pricing page for more information on pricing and purchasing.

To purchase the license using an existing account, work with the administrator of the account to apply for licenses.

After you have applied for the license to your tenant, you can publish your environment to production. You can remove the sample data. However, you have to manually reset the configuration and remove any test data that you've added. We recommend that you create a fresh environment to use for your production environment and add the configurations you'd like to move forward with.

What are the trial limits and quotas?

The following limitations apply for the trial:

- The trial is available to you for 30 days. After that, you can request for an extension for another 30 days, buy a paid license, or sign up for a new trial.
- You can have only one active trial per app at a time. You can sign up again after your current trial for the app ends.

Dynamics 365 Sales-specific questions

This section contains answers to the following questions:

- How do I start using the trial?
- What features are available in the trial?
- Why am I not able to use conversation intelligence features?
- Why can't I find the features and options mentioned in the documentation?
- What should I do if I don't see any apps in the mobile app
- Why is the sample data not available to all trial users?
- How do I remove sample data from the trial?
- How do I add or restore sample data?
- Is the Sales trial available in all geographical regions?

How do I start using the trial?

When the trial is ready, you can get started with the following resources:

Explore product tours and videos for key capabilities

The trial comes with product walkthroughs and videos, highlighting the important scenarios that you could try in the app and get the maximum value in minimal time. Select **Take a tour** at the lower-right corner to follow a guided tour that gets you started quickly on the salient features.

Once you understand how different entities are connected to offer value, try the scenarios with sample data or with your own data.

Play around with the mobile app

Install the Sales mobile app and explore the functionalities that you can access on the move. Open the **Resources** page and scroll down to the **Explore the mobile app** section to download the app. For more information on using the app, see Use the Dynamics 365 Sales mobile app. If you run into issues, see What should I do if I don't see any apps in the mobile app.

Deep dive into more scenarios

If you want to test scenarios beyond the ones covered in the product tour, go ahead and take a plunge. To browse through other capabilities, select the **Sales trial** link at the top of your trial app and select **Sales Hub** from the list of apps. Visit the Help Hub for more information on all the capabilities.

What features are available in the trial?

Your trial includes a simplified Trial app with a few important capabilities to get you started quickly. However, you can access the fully functional, Dynamics 365 Sales Premium environment. Select the **Sales trial** link at the top of your trial app and select **Sales Hub** from the list of apps.

The following licenses and capabilities pre-installed in the trial app:

Dynamics 365 Sales Premium

- Manage sales pipeline using leads and opportunities
- Forecast sales

- Use sales insights features (Sales accelerator, conversation intelligence, and predictive scoring) with limited monthly capacity. More information: Digital selling capabilities in Sales Enterprise
    - Sell smartly using Sales accelerator that builds a strong and prioritized pipeline, offers context, and surfaces automated recommendations.
    - Improve seller coaching and sales potential with conversation intelligence.

      > **Note**
      >
      > Conversation intelligence is only supported for work accounts.

    - Get the AI-powered assistant to stay on top of your activities.
    - Prioritize leads and opportunities using predictive scoring.
    - Analyze revenue outcome by using predictive forecasting.

To get started with the Sales Insights functionalities, see Sales Insights Add-in for Dynamics 365 Sales Help & Training. To enable Sales Insights, see Enable and configure standard Sales Insights features.

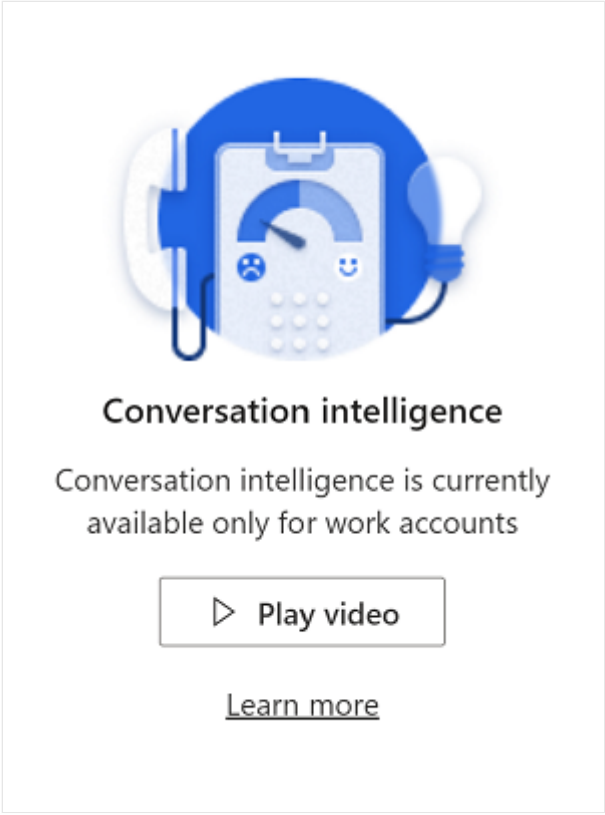
> **Note**
>
> Sales Insights functionalities are restricted to specific regions. For information on supported regions, see **In which region is Sales Insights available?**. If you are not in a supported region, you can only access the Sales Enterprise functionalities.

Microsoft Power Platform

- Administer and customize the Power Platform environment that hosts Dynamics 365 Sales to fit your needs.

Why am I not able to use conversation intelligence features?

Conversation intelligence is only supported for work accounts with a Microsoft tenant. For other accounts, conversation intelligence options in the app will display a message as shown in the following screenshot:



Why can't I find the features and options mentioned in the documentation?

The trial is designed to give you the optimum experience. Though the Trial includes a premium license, the Sales trial app includes only a few important features. If you would like to explore other features, select the **Sales trial** link at the top of your trial app and select **Sales Hub** from the list of apps. Also, the Trial app sitemap is organized differently than the production apps. Hence, the navigation mentioned in the documentation will not match for the Trial app.

What should I do if I don't see any apps in the mobile app

When you log into the Dynamics 365 mobile app for the first time, you might encounter the following message:

`You currently have no apps`

To view your trial apps,

1. Select your avatar on the mobile app and select **Settings**.
2. Enable the **Show non-production apps** option.
   You can now see all the apps that you've access to.
3. Select **Sales trial** to log into your trial.

Why is the sample data not available to all trial users?

Sample data related to forecasting and Sales accelerator are only available to the user who signed up for the trial.

To give access to other trial users:

1. Select **Leads** in the sitemap (left pane).
2. Select the sample data and select **Assign** in the command bar.
3. In the **Assign to** field, select **User or Team** and then pick the user or team name. If you haven't created the team yet, you can select **New Record** in the **User or Team** drop-down to create a team and add the trial users. You can then come back and perform steps 1 to 3.

How do I remove sample data from the trial?

Sample data resembles real life data and helps you learn how the product works if it was deployed in an organization. In some cases, you may want to remove sample data. For example, the sample data is interfering with the scenarios you want to try out.

To remove sample data:

1. In the Sales sitemap, select the **Resources** page.
2. Scroll down to the **More resources** section and select **Add or remove sample data**.
3. Select **Remove sample data**. After you confirm, it takes a few seconds to remove the sample data.

> **Note**
>
> This action doesn't delete the data that you have added in the trial app.

How do I add or restore sample data?

If you have modified the sample data and want to restore it back to original, then remove the existing sample data and add the fresh dataset.

To restore the sample data:

1. To remove the existing sample data, see How do I remove sample data from the trial?

After the sample data is removed completely, you'll see the **Add sample data** button.

2. Select **Add sample data** to add the fresh sample data.

Is the Sales trial available in all geographical regions?

Though you can sign up for the trial from any region, the Sales Insights functionalities are restricted to specific regions. For information on supported regions, see In which region is Sales Insights available?. If you are not in a supported region, you can only access the Sales core functionalities.

See also

- Sign up for a free trial

Buy Dynamics 365 Sales

Article • 07/28/2023

You can buy one of the following licenses depending on your organization's needs:

- Sales Professional
- Sales Enterprise
- Sales Premium
- Microsoft Relationship Sales (Sales Enterprise + LinkedIn Sales Navigator Enterprise)
- Microsoft Sales Copilot (formerly known as Viva Sales)

Before you buy

- Review the features included with each of the licenses and identify the one that best meets your needs. More information: Choose the offering that fits your needs
- Review the licensing guide to:
  - Identify the number of users you need to license. Dynamics 365 Sales is typically used by sales people who connect with customers to manage their engagements. Account teams, business development executives, internal and external sales staff along with sales managers and operations are all great candidates for using the application.
  - Identify the number of team member licenses you'd need for your sales support staff.

Buy Dynamics 365 Sales directly

1. Open the Dynamics 365 Sales pricing page.
2. Select **Buy now** for the edition you want.
3. Provide information to make the purchase, and then open the Microsoft 365 admin center to assign the licenses to your users. Learn more.

Buy Dynamics 365 Sales through Microsoft 365

If your organization already has Microsoft 365 subscription, you can buy Dynamics 365 Sales subscription from the Microsoft 365 admin center.

1. Browse to the Microsoft 365 admin center.
2. On the left navigation pane, select **Billing -> Purchase services**.
3. Search for **Dynamics 365 Sales**.
4. Review the available subscriptions and select **Details** for the one you want to buy.
5. Specify the license quantity and billing frequency, and then select **Buy**.
6. Provide the billing and payment information to complete the purchase.
7. Open the Microsoft 365 admin center to assign the licenses to your users. Learn more.

Buy Dynamics 365 Sales from an authorized Microsoft Partner

Microsoft partners offer the technical expertise, services, and solutions that help you transform your business. They can also help you with volume licensing.

- Find a partner
- Learn about buying through volume licensing

Install Dynamics 365 Sales apps

Article • 05/29/2023

Depending on your license, you can install the Sales Hub or Sales Professional app to get started with Dynamics 365 Sales immediately. If you've bought the team member licenses, use the Sales Team member app.

System requirements

Review the system requirements before installing Dynamics 365 Sales apps. System requirements for Sales Hub and Sales Professional apps

Install and use the sales apps

Your Dynamics 365 Sales subscription comes with free apps that are either pre-installed or can be installed separately. The following table lists the apps and the license required to use them.

App name	License required	Install instructions
Sales Hub app	Sales Premium or Sales Enterprise	Link
Sales Professional app	Sales Professional	Link
Sales Team member app	Team member	Link

System requirements for Sales Hub and Sales Professional apps

Article • 01/02/2023

Sales Hub and Sales Professional apps are free Dynamics 365 Sales apps from Microsoft. The Sales Hub app is preinstalled in your Dynamics 365 Sales environment and comes with several core and premium features to help you quickly get started with Dynamics 365 Sales. The Sales Professional app includes features and configurations that the Sales Professional customers are entitled to.

This article lists the licensing and system requirements for these out-of-the-box sales apps.

System and license requirements

The system and license requirements to use the sales apps are as follows:

Area	Requirements
License	- **Sales Hub app**: Dynamics 365 Sales Premium or Sales Enterprise - **Sales Professional app**: Dynamics 365 Sales Professional
Operating systems and browsers for web and mobile apps	The Sales Hub and Sales Professional apps are model-driven apps built using Power Apps. For a list of supported operating systems and browsers for Power Apps applications, see System requirements for Power Apps
Network	The embedded Teams dialer in the Sales Hub app uses Azure Communication Services (ACS) and hence needs the same network requirements as ACS. For the exact requirements, see Prepare your organization's network for Azure Communication Services
Storage	Azure or Teams storage for storing call recordings

Supported regions

For a list of regions supported for product availability and data location, see Infrastructure and availability PDF.

Note

Sales Premium features are supported only in specific regions. For more information, see **In which region is Sales Premium available?**.

Supported languages

For a list of languages supported by the Sales Hub and Sales Professional apps, see the Language availability report for Dynamics 365 Sales.

> **Note**
>
> Sales Premium features are supported only in specific languages. For more information, see **What languages are supported now?**.

Use the Sales Hub app to access Dynamics 365 Sales features

Article • 05/04/2023

Sales Hub is a free app from Microsoft that's preinstalled. It comes with several core and premium features to help you quickly get started with Dynamics 365 Sales. From the Sales Hub app, you can access Sales Premium features—such as sales accelerator, conversation intelligence, and predictive scoring—even if you have a Sales Enterprise license. Premium features are subject to monthly capacity limits for Sales Enterprise customers. For more information, go to Digital selling capabilities in Sales Enterprise.

We recommend that you use the Sales Hub app unless your organization follows unique sales practices that warrant a custom app. For a comparison, refer to Sales Hub app versus custom app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

> **Important**
>
> The Sales Hub app is only for the Sales Enterprise and Sales Premium users. Sales Professional users must use the Sales Professional app.

Access the Sales Hub app

Visit the Apps page on office.com, select **Business Apps**, and then select **Sales Hub**.

If you don't see the app, contact your administrator to grant you access. For more information, refer to Grant or revoke access to the Sales Hub app.

To use the app on mobile devices, go to Use the Dynamics 365 Sales mobile app.

What's in the Sales Hub app?

The Sales Hub app has a modern interface that's designed to simplify your day-to-day sales activities. All the information you need is in one place, so you can focus on the activities that need your attention.

Sales Hub is based on the Unified Interface framework, which offers the following benefits:

- A modern, seamless, and intuitive user interface
- An adaptive UI that renders content according to the device it runs on
- An accessible UI
- A built-in mobile app that lets you complete tasks on the go

Why should you use the Sales Hub app?

Sales Hub is a Microsoft first-party app that's designed for ideal seller experiences. Use the Sales Hub app to:

- Harness the power of data and intelligence to forecast, compare annual projections, and measure performance using predictive scoring
- Collaborate using Teams in Dynamics 365 to accelerate your pipeline while managers track team performance and provide coaching to increase customer satisfaction
- Access standard (and premium, if licensed) sales features almost instantly
- Access preview features with minimal setup
- Access premium features with a limited monthly capacity (Sales Enterprise users only)
- Customize the app and configure features as required

Use the Microsoft documentation to train your sales organization, too. The documentation is based on the Sales Hub app, so there's no need to create custom documentation.

The Sales Hub app can coexist with any custom sales apps that you might have in your organization. Learn the benefits of using the Sales Hub app versus custom apps.

Grant or revoke access to the Sales Hub app

Article • 04/26/2022

As an administrator, you decide which users or security roles should have access to the Sales Hub app. The app will honor the access permissions defined in the user's security role. For example, if the security role allows access to only opportunities and quotes, the app will display only those entities for the user.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

If your organization has opted in to early access updates, Sales Hub is turned on by default for the following roles:

- System Administrator
- System Customizer
- Sales, Enterprise app access
- Salesperson
- Sales Manager
- Vice President of Sales

Important

A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to

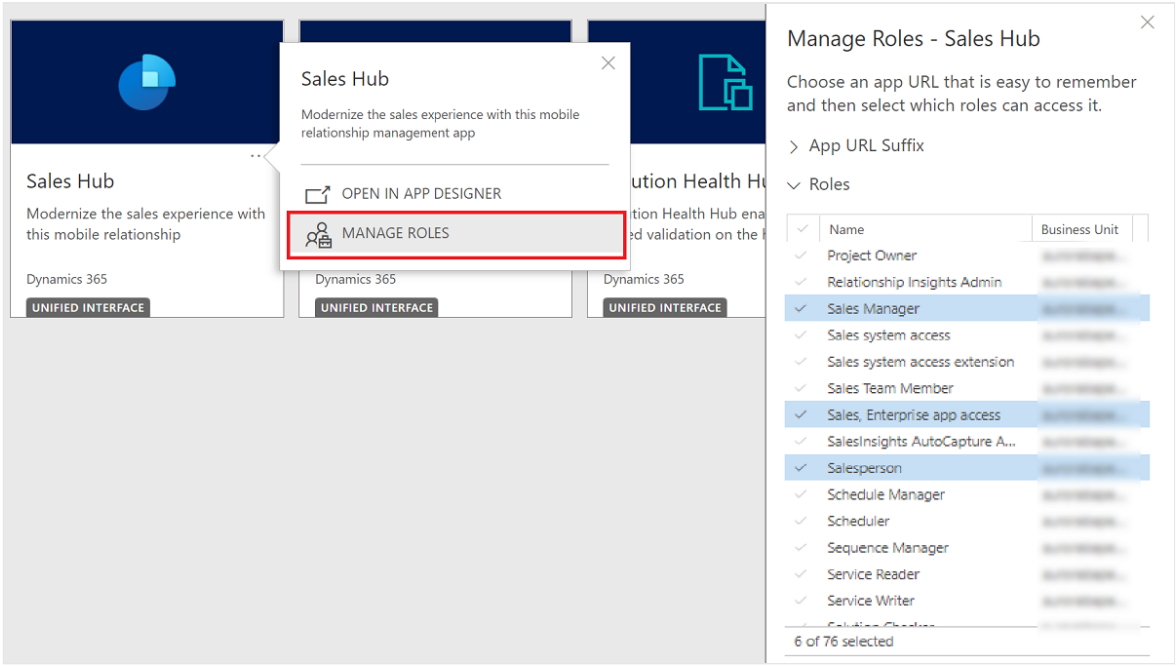
heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

To hide the app from all users and roles, follow the instructions in Hide a model-driven app from users.

Grant or revoke access

As an administrator, you can either grant or revoke access to a security role or to specific users.

1. On the **Published Apps** page, locate the **Sales Hub** card. Select **...** (**More options**), and then select **Manage Roles**.



   The security roles that already have access are highlighted in blue.

2. Take one of the following actions:

   - To grant or revoke access to all the users of a security role, select the security role.
   - To grant access to specific users, assign the **Sales, Enterprise app access** role to them.

- To revoke access for specific users, remove the role from them.

For more information on adding and removing users from a security role, see Assign security roles to users.

Users to whom you've granted access see the Sales Hub app on their **Published Apps** page. Users for whom you've revoked access don't see the app on that page.

See also

- Why should you use the Sales Hub app?
- Access the Sales Hub app

Sales Hub app versus custom app

Article • 04/26/2022

Sales Hub is a Microsoft first-party app that's designed around the sales processes that most organizations follow. If your organization has unique selling processes, you can customize the Sales Hub app or create a custom app from scratch. Use the following table to help you decide when to use Sales Hub and when to create a custom app:

Factors to consider	Sales Hub	Custom app
Time to value and ROI	Faster time to value and greater ROI as the app is available right after setting up the product.	Slower start as the custom app has to be built from scratch.
Accessibility and adaptability	Built in, and the UI adapts to multiple devices	The customer's responsibility
Navigate to forms, entities, and views right after purchasing the product	Start using the app almost instantly with out-of-the-box forms, entities, and views	If the out-of-the-box objects don't serve your purpose, custom forms, entities, and views must be created
Time and expertise required	Minimal	Extensive experience and time required to plan, develop, test, and implement
App maintenance	Microsoft takes responsibility for maintenance, and all updates are tested for quality and performance before deployment	The customer is responsible for evaluating, testing, and implementing new features
Customizations	Customizations aren't overwritten by updates	The customer has full control of customizing the app, including navigation and user experience
New feature availability	Instant	Adding UI elements and controls required for new features is solely the customer's responsibility, and some new features may not be available immediately

When to customize the Sales Hub app and when to create custom app

Every sales implementation has unique considerations that influence the application strategy.

Customize first-party apps such as Sales Hub when:

- your organization follows standard sales practices with the need for little to no customization
- you want to combine specific components and processes from two or more first-party apps, such as Sales Hub and Customer Service Hub

In the second case, assess which application is primary for the persona it caters to. For example:

- For a salesperson, who needs to access all the sales module components and the customer assets entity from the customer service module, include the customer assets entity in Sales Hub.
- For a customer service manager, who needs to access the case management module and the opportunities pipeline, include the opportunity entity in Customer Service Hub.

Create a custom app when:

- you want an app for roles that fall outside of the sales org. Examples include senior executives, who just need to see Power BI dashboards and a handful of entities, or an audit supervisor, who only needs to see won opportunities.
- your organization has a custom sales process, and the built-in sales module doesn't meet your needs
- you've created many custom entities and you want to remove all or many of the built-in components
- you want to build a solution that combines multiple work streams and isn't focused on Sales Hub or Customer Service
- you want to keep the application lean without many of the built-in first-party components

How Sales Hub app releases handle customizations

To help make sure that app updates don't overwrite Sales Hub customizations:

- Microsoft automatically pushes weekly updates that contain bug fixes and performance improvements.
- Microsoft doesn't automatically push weekly updates that can occasionally contain new features or UI-disruptive updates. Instead, they're isolated behind an admin toggle. Administrators can test whether an update affects customization, and then turn it on when they're ready.
- Quarterly releases that have new and innovative features have an early access period. It’s important for all customers to test and validate their applications and core use cases on the new build.
- Updates to the Sales Hub site map or objects such as forms, entities, and views don't overwrite any customizations that you've made to these items. Instead, the changes are merged. For more information, see:
  - Understand how managed solutions are merged
  - Best practices and guidance for developers

How to revert changes to Sales Hub app

You can't automatically revert changes to the Sales Hub app. You have to manually undo them.

For example, let's say you've removed an entry (such as Cases) from the site map and you want to add it back. You have to manually add the entry to the sitemap. For more information, see Customize the app.

See also

- Use the Sales Hub app to access Dynamics 365 Sales features
- Build your first model-driven app

Install the Sales Professional app

Article • 09/09/2022

The Sales Professional app provides essential sales force automation for organizations that have straightforward sales processes. With Sales Professional, your sellers can automate common, repetitive, daily tasks and focus on what matters. Before your organization can start using Sales Professional, you need to install the app in a Power Platform environment that has Dynamics 365 apps enabled.

- If you have a Power Platform environment, install the Sales Professional app.
- If you don't have a Power Platform environment already, create one and install the Sales Professional app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator You must be a global administrator of your Microsoft 365 org (tenant) More information: Predefined security roles for Sales

Install the Sales Professional app in an existing environment

You can install the Sales Professional app in any Power Platform environment that has Dynamics 365 apps enabled. For example, if you already have Dynamics 365 Customer Service, you can install Sales Professional in the same environment.

Install the Sales Professional app in a Power Platform environment.

After the app is installed, open the environment URL and select the **Sales Professional** app.

> **Important**
>
> If you see the **Sales Hub** app in your **Published Apps** list, **hide** or **delete** the Sales Hub app as it's only applicable for Sales Enterprise and Sales Premium licenses. Sales Professional users are entitled to use only the Sales Professional app.

Create an environment for Sales Professional

1. In the Power Platform admin center, create an environment with a database.
2. After the environment moves to the **Ready** state, install the Sales Professional app in the environment.
3. After the app is installed, open the environment URL and select the **Sales Professional** app.

> **Important**
>
> If you see the **Sales Hub** app in your **Published Apps** list, **hide** or **delete** the Sales Hub app as it's only applicable for Sales Enterprise and Sales Premium licenses. Sales Professional users are entitled to use only the Sales Professional app.

See also

Overview of Dynamics 365 Sales
Overview of admin settings
Learn the basics of Dynamics 365 Sales

Sales Team Member app for users with Team Member license

Article • 05/29/2023

The Sales Team Member app is designed for the lightweight sales scenarios where users don't need the full capabilities of an enterprise application.

Sales Team Member app installation and access

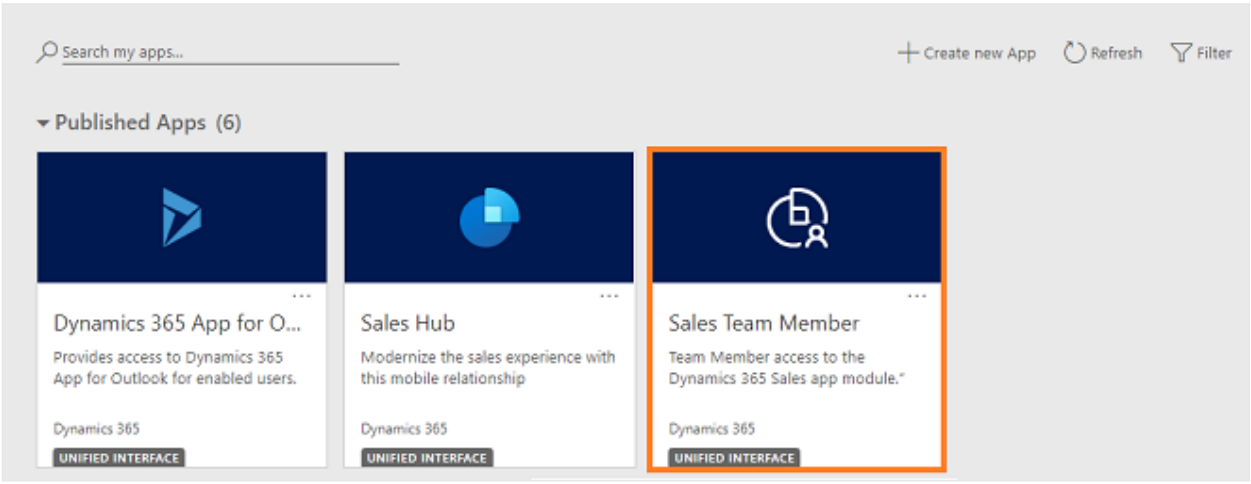
The Sales Team Member app is included with the Team Member license and is preinstalled in all Sales environments that have the Sales Hub app. System administrators can use security roles to control the visibility of the app, if required.

Assign the Sales Team Member role to the users who will access the app. If you want to give customized permissions to your users, we recommend that you clone the Sales Team Member app role, and give the required permissions in alignment with the Microsoft Dynamics 365 Licensing Guide.

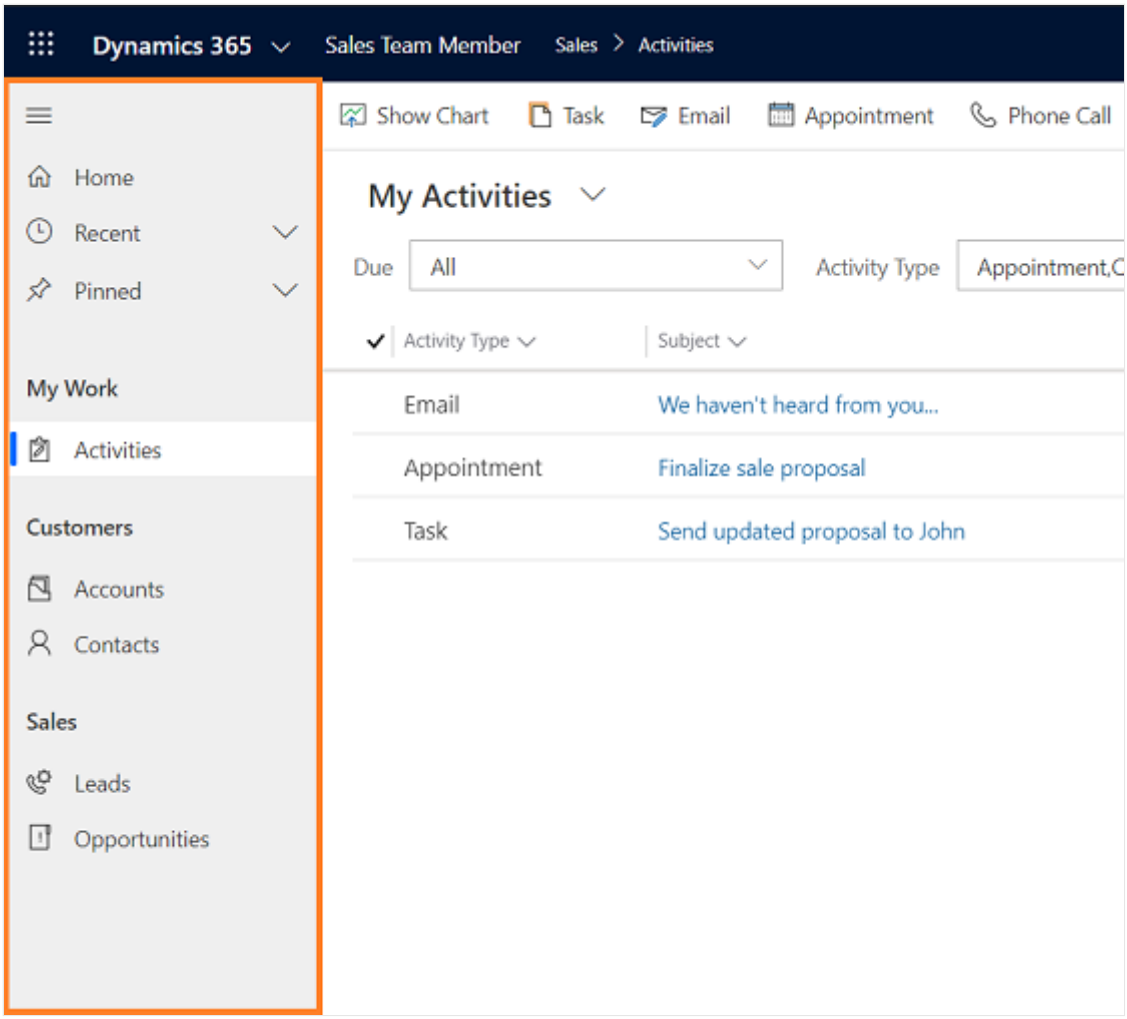
To learn about assigning the role, see Assign a security roles to a user in the Power Platform documentation.

Access the Sales Team Member app

Users with the Team Member license can go to Dynamics 365 apps page and select the **Sales Team Member** app.



When users open the Sales Team Member app, in the site map, they'll see the available entities.



Features available in the Sales Team Member app

During the early access phase of the Team Member license enforcement, users with the Team Member license can use the designated app modules alongside all existing apps.

The designated app modules are:

- Customer Service Team Member
- Sales Team Member
- Project Resource Hub

At a high level, users with the Team Member license can perform the following tasks in the Sales Team Member app:

- Customer management: work with contacts or see accounts.
- Lead and opportunity management: see leads or opportunities linked with accounts or contacts, or see other sales-related data.
- Add notes and activities, such as tasks.

Administrators can configure the app for additional scenarios, but not beyond those listed in the Microsoft Dynamics 365 Licensing Guide. For more information about the user rights for the Team Member license, see the Microsoft Dynamics 365 Licensing Guide.

See also

Dynamics 365 Team Members license

Add or remove sample data

Article • 08/29/2022

Sample data gives you something to experiment with as you learn customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation), and helps you see how data is organized in the system. At some point, you'll probably want to remove the sample data.

Or, if sample data isn't installed on your system, you may want to add it for training purposes. Later, when you're ready, you can remove it.

> **ⓘ Important**
>
> Use sample data to learn and play around with system features. However, to avoid unwanted results, don't associate it with any data you actually need.

In the Power Platform admin center

1. Make sure you have the System Administrator security role or equivalent permissions.

   Check your security role

   - Follow the steps in View your user profile.
   - Don’t have the correct permissions? Contact your system administrator.

2. Sign in to the Power Platform admin center

3. Select **Environments** in the left navigation pane, select your environment, and then select **Settings** on the top menu bar.

4. Select **Data management** to expand the category, then select **Sample data**.

5. A message appears that tells you whether the sample data is installed.

6. Select an action at the bottom of the screen:

   - **Remove Sample Data**, and then select **Close**.
   - **Install Sample Data**, and then select **Close**.
   - To close the screen without making changes, just select **Close**.

In a Unified Interface app

Follow these steps for Unified Interface apps.

1. Make sure you have the System Administrator security role or equivalent permissions.

   Check your security role

   - Follow the steps in View your user profile.
   - Don't have the correct permissions? Contact your system administrator.

2. Sign in to Power Apps.

3. Select your environment from the top-right corner, and select **Settings** ( ) > **Advanced Settings** > **Settings** > **Data Management** > **Sample Data**.

4. A message appears that tells you whether the sample data is installed.

5. Select an action at the bottom of the screen:

   - **Remove Sample Data**, and then select **Close**.
   - **Install Sample Data**, and then select **Close**.
   - To close the screen without making changes, just select **Close**.

Explore the sales accelerator with sample data

Article • 08/11/2022

Sample data helps you visualize a product and its features. Learn how to add or remove sample data to explore sales accelerator.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add sample data

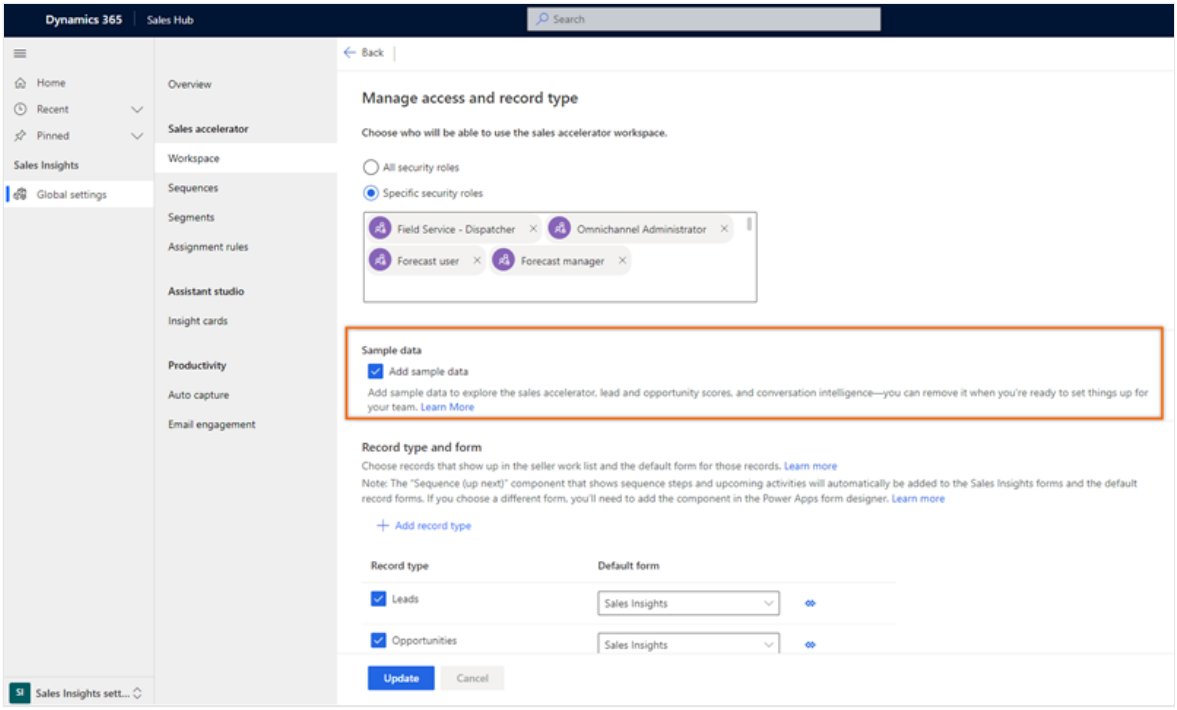
You can add sample data any time you need, during or after the configuration of the sales accelerator.

> **Note**
>
> - The sample data adds basic Dynamics 365 Sales and Sales Premium record types. More information: **Record types updated with sample data**
> - To prevent unwanted results, sample data is available only in non-production environments.
> - You can also add sample data from the quick setup panel (with the Dynamics 365 Sales Enterprise license). More information: **Set up sales accelerator**

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. Under **Sales accelerator**, select **Workspace**.
3. On the **Sales accelerator workspace** page, under the **Manage access and record type** section, select **Configure**.

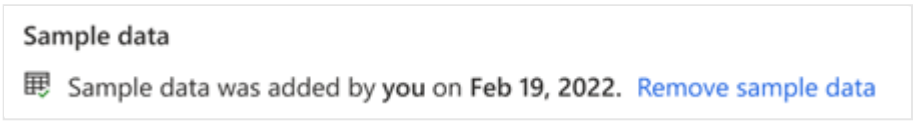
> **Note**
>
> If you're add the sample data during the first-run set up, on the **Sales accelerator quick setup** pane, select **Add sample data**. More information: First-run set up

4. From the **Sample data** section, select **Add sample data**.



5. Select **Update**.

Adding of sample data may take few minutes. You can continue to work on the application while the sample data is being added. After the sample data is added, a confirmation message is displayed with the date and time it was added.



Sample data availability

By default, sample data is available for the administrator who adds it. The administrator can assign the records that are associated with sample data for other users to explore.

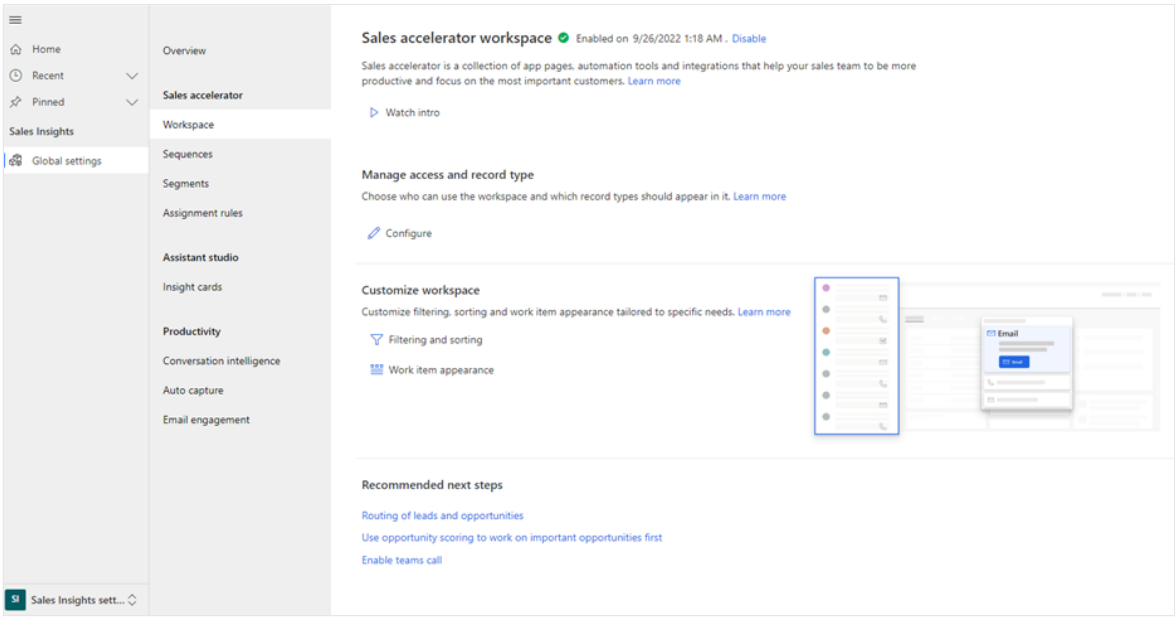
Remove sample data

As an administrator, you can remove sample data that your organization no longer needs.

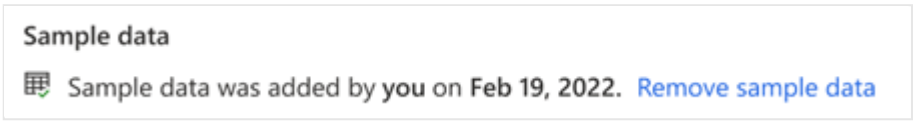
> **Note**
>
> You can always add the sample data again, whenever you need it.

To remove sample data

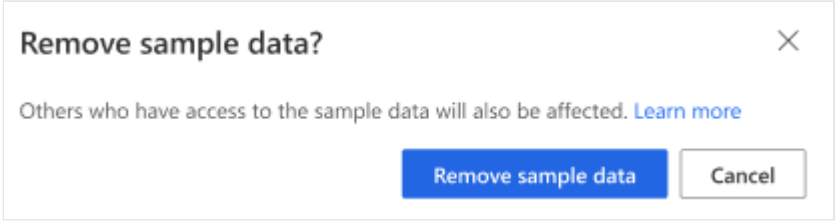
1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insight settings**.
3. Under **Sales accelerator**, select **Workspace**.
4. On the **Sales accelerator workspace** page, under the **Manage access and record type** section, select **Configure**.



5. Under the **Sample data** section, select **Remove sample data**.



6. On the confirmation message, select **Remove sample data**.



7. Select **Update**.

The application takes a few minutes to remove the sample data from your organization.

Record types updated with sample data

When sample data is added to your organization, the following record types are updated with sample data:

- Account
- Action Card
- Appointment
- Competitor
- Contact
- Lead
- Opportunity
- Phone Call
- Price List
- Price List Item
- Product
- Sequence
- User

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure sales accelerator

Add or remove sample data in Dynamics 365 Sales Professional

Article • 02/17/2022

> **ⓘ Important**
>
> This capability is introduced in the Dynamics 365 Sales Professional app version 9.1.0.0.

Sample data gives you something to experiment with as you learn Dynamics 365 Sales Professional and helps you see how data is organized in the system. At some point, you'll probably want to remove the sample data.

Or, if sample data isn't installed on your system, you might want to add it for training purposes. Later, when you're ready, you can remove it.

> **ⓘ Important**
>
> Use sample data to learn and play around with system features. However, to avoid unwanted results, don't associate it with any data you actually need.

1. Make sure you have the System Administrator security role in Dynamics 365 Sales Professional.
2. In the site map, select **Sales Settings**. Under **Standard settings**, select **Import data**.
3. On the **Import Data** page, under **Explore with sample data**, select **Install sample data**.

   -OR-

   If sample data is already installed, select **Remove Sample Data**.

See also

Learn the basics of Dynamics 365 Sales

Uninstall Sales Insights Add-ons

Article • 02/17/2023

You can uninstall the Sales Insights Add-ons for Dynamics 365 Sales if you don't want to use it in your organization.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

How to uninstall Sales Insights

1. As an administrator, sign in to your sales app.
2. Go to **Advanced settings**, and then select **Settings** > **Customization** > **Solutions**.
3. On the **Solutions** page, select each of the following solutions one at a time in the order they're specified, and then select **Delete**.

    - SalesInsightsAddOn
    - msdynce_RelationshipAssistantAddOn
    - msdyn_connectiongraph

Although you've deleted the solutions, your organization data might still be stored in Azure Data Lake Storage. To completely remove data and reclaim the data storage, contact Dynamics 365 support.

What happens to data

After you uninstall Sales Insights, Dynamics 365 won't keep any Sales Insights data for your organization in the storage locations where it's hosted.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Introduction

Set up sales basics

Article • 05/29/2023

As part of your initial set up, configure the basic resources and customize the app for needs specific to your organization.

Configure the basics

Before your sales organization can use Dynamics 365 Sales, you need to set up certain basic resources. For example, the currencies you use for transactions, territories you cover, your fiscal periods, and your product catalog.

Use the references in the following table to set up the basics for your sales organization.

What to set up	Learn more
Create business units to group your departments logically.	Create business units
Create your sales teams	Create or manage teams
Set up sales territories to organize business markets by geographical area	Set up sales territories
Set your fiscal period and how it should appear	Work with fiscal year settings
Transact in multiple currencies	Manage transactions with multiple currencies
Define your product catalog with pricing and discounts	Set up a product catalog

Customize the app

After you've configured the basic resources, you can customize your set up for your organizational requirements such as branding and theming on the sales app, business process flows, forms, views, and so on.

Use the references in the following table to set up the basics for your sales organization.

What to customize	Learn more
Create a custom look and feel for your app	Set up branding and theming
Customize the tables, dashboards, business processes, and so on	Customize the Sales app

What to customize	Learn more
Customize forms to meet the specific needs of your organization.	Customize forms
Customize view to meet the specific needs of your organization.	Customize views

System Settings dialog box - Sales tab

Article • 03/30/2022

Define global sales settings for products, pricing, and discounts.

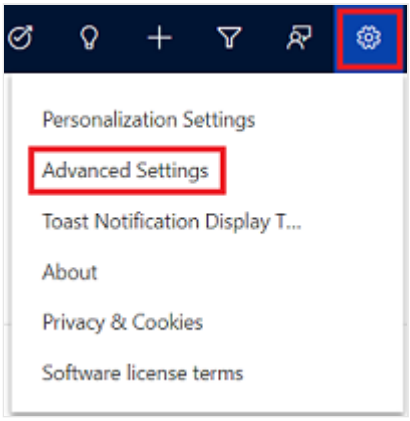
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or System Customizer More information: Predefined security roles for Sales

System settings for Sales

Learn about the system-level settings for Dynamics 365 Sales.

1. Make sure that you have the System Administrator or System Customizer security role or equivalent permissions.
2. In your app, select the **Settings** icon, and then select **Advanced Settings**.



   The **Business Management settings** page opens in a new browser tab.

3. On the navigation bar, select **Settings**, and then under **System**, select **Administration**.
4. Select **System Settings**.

Settings	Description

Settings	Description
Select whether products should be created in the active state	
Create products in active state	To set the products to active state by default after creation, click **Yes**. This option applies only to products that don't have a parent product family. To create products in the Draft state, click **No**.
Set whether the default pricelist for an opportunity should be selected via an inbuilt rule	
Allow selection of default pricelist for opportunity via inbuilt rule	Click **Yes** if you want the default price list to be selected for an opportunity based on the inbuilt rule (based on the default price lists defined for territories). Otherwise, click **No**.
Set maximum number of products in a bundle	
Maximum number of products in a bundle	Type the maximum number of products a bundle can have.
Set pricing calculation preference	
Use system pricing calculations	Click **Yes** to use the pricing calculations of Customer Engagement (on-premises). To use custom pricing by using a plug-in, click **No**. When set to **No**, the default pricing calculations won't be done on opportunity, quote, order and invoice records.
Set whether a discount is applied as a line item or per unit	

Settings	Description
Discount calculation method	Select **Per unit** if you want the pricing engine to calculate the discount based on the prices per unit instead of a line item. By default, the calculations are done on a line item-basis. *See the table below that shows the difference between the two calculations.
Set maximum number of properties allowed for a product or bundle	
Maximum number of properties that are allowed for a product or bundle	Type the maximum number of properties (specifications) a product or bundle can have. Product properties are added to a product family record, and all the child products and bundles under the product family inherit the properties added to the parent product family. The number specified in this setting is applied only when you publish a product or a bundle with the associated properties.

*Table: Difference between calculations

Discount method	Product	Price per unit	Quantity	Discount	Amount
Line item	Product 1	100	11	10	(100*11)-10=1090
Per unit	Product 2	100	11	10	(100-10)*11=990

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create price lists and price list items to define pricing of products

Set up a discount list

Create product bundles to sell multiple items together

Use properties to describe a product

Administrator and Sales Manager Guide

Create or edit business units

Article • 10/20/2023

A business unit is a logical grouping of related business activities.

If your organization is structured around departments or divisions that have separate products, customers, and marketing lists, you might want to create business units. Business units are mapped to an organization's departments or divisions. Users can securely access data in their own business unit, but they can't access data in other business units unless they are assigned a security role from that business unit.

Business units, security roles, and users are linked together in a way that conforms to the role-based security model. Use business units together with security roles to control data access so people see just the information they need to do their jobs.

Keep the following in mind when creating business units:

- The organization (also known as the root business unit) is the top level of a business unit hierarchy. The customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation), automatically create the organization when you install or provision customer engagement apps. You can't delete the organization name. The organization name is derived from the domain name when the environment was provisioned. You cannot change the organization name using the Business Unit form but it can be changed using the Web API.
- Each business unit can have just one parent business unit.
- Each business unit can have multiple child business units.
- Security roles and users are associated with a business unit. You must assign every user to one (and only one) business unit.
- You cannot add a user into a business unit directly. All newly provisioned users are assigned to the root business.
- You can change the user's business unit at anytime. Once the business unit is changed, the user will show up as a member of the business unit automatically.
- Each business unit has a default team. You cannot update the default team's name nor delete the default team.

- You cannot add or remove users from the business unit's default team. However you can change the user's business unit to the business unit and the user will automatically be added to the business unit's default team.
- You can assign a security role to the business unit's default team. This is done to simplify security role management where all your business unit team members can share the same data access.
- You can assign additional team to a business unit but there can only be one business unit per team.
- A team can consist of users from one or many business units. Consider using this type of team if you have a situation where users from different business units need to work together on a shared set of records.
- To allow your users to access data in a business unit, you can assign the user a security role from that business unit. The users can remain in the root business unit.
- A user can be assigned to security roles from any business unit regardless of what the business unit the user belongs to.

Create a new business unit

These settings can be found in the Microsoft Power Platform admin center by going to **Environments** > [select an environment] > **Settings** > **Users + permissions** > **Business units**.

Make sure you have the System Administrator permission to update the setting.

- Follow the steps in View your user profile.
- Don't have the correct permissions? Contact your system administrator.

1. Select an environment and go to **Settings** > **Users + permissions** > **Business units**.

   For Unified Interface, select Settings ( ) in the upper-right corner > **Advanced Settings** > **Settings** > **Security** > **Business Units**.

2. On the Actions bar, select **New**.

3. In the **Business Unit** dialog box, type a name for the new business unit. Customer engagement apps automatically fills in the **Parent Business** field with the name of the root business unit.

4. If you want to change the parent business unit, select the **Lookup** button ( ), **Look Up More Records**, and then do one of the following:

    - Select an existing business unit from the list.
    - Create a new parent business unit:

        a. Choose **New**, and then add the information for the new parent business unit in the **Business Unit** dialog box.

        b. When you're done adding information, select **Save and Close**.

        c. In the **Look Up Record** dialog box, select **Add**.

5. In the **Business Unit** dialog box, fill in any of the other optional fields, such as the Division, Website, contact information, or addresses.

6. When you're done making entries, select **Save and Close**.

Change the settings for a business unit

1. Select an environment and go to **Settings** > **Users + permissions** > **Business units**.

    For Unified Interface, select Settings ( ) in the upper-right corner > **Advanced Settings** > **Settings** > **Security** > **Business Units**.

2. Select a business unit name.

3. In the **Business Unit** dialog box, do one or more of the following:

    - Modify the data in one or more fields.
    - Select a record type under **Organization** to see a list of related records. For example, select **Users** to view a list of users in the selected business unit.

4. When you're done making changes select **Save and Close**.

Change the business unit for a user

> **Important**
>
> By changing the business unit for a user, you can remove all security role assignments for the user. At least one security role must be assigned to the user in the new business unit.

1. Select an environment and go to **Settings** > **Users + permissions** > **Users**.

   For Unified Interface, select Settings ( ) in the upper-right corner > **Advanced Settings** > **Settings** > **Security** > **Users**.

2. Select the checkbox for a user name.

3. On the menu bar, select **Change Business Unit**.

4. In the **Change Business Unit** dialog box, select a business unit. Enable **Move records to new business unit** to move to a new business unit. Select **OK**.

   In the legacy web client, in the **Change Business Unit** dialog box, use the **Lookup** button ( ) to select a business unit.

> **Note**
>
> If you have enabled **Record ownership across business units**, you can use the following **environment database settings** to manage your user security role and how you want to move the user's records when you are changing the user's business unit.
>
> 1. **DoNotRemoveRolesOnChangeBusinessUnit** default = false (the user's assigned security role is removed) You can set it to true, and the user's assigned security role for the from-Business unit is not removed.
> 2. **AlwaysMoveRecordToOwnerBusinessUnit** default = true (user owned records are moved to the new user's business unit) You can set it to false, and the user owned records' Business unit is not moved to the new user's business unit. Note that the user will not be able to access these records unless a security role from the old business unit is assigned to the user.

Change the business unit for a team

> **Important**
>
> By changing the business unit for a team, you can remove all security role assignments for the team. At least one security role must be assigned to the team in the new business unit.

1. Select an environment and go to **Settings** > **Users + permissions** > **Teams**.

2. Select the checkbox for a team name.

3. On the menu bar, select **Change Business Unit**.

4. In the **Change Business Unit** dialog box, select a business unit. Enable **Move records to new business unit** to move to a new business unit. Select **OK**.

> ⓘ **Note**
>
> If you have enabled **Record ownership across business units**, you can use the following **environment database settings** to manage your team security role and how you want to move the team's records when you are changing the team's business unit.
>
> 1. **DoNotRemoveRolesOnChangeBusinessUnit** default = false (the team's assigned security role is removed) You can set it to true, and the team's assigned security role for the from-Business unit is not removed.
> 2. **AlwaysMoveRecordToOwnerBusinessUnit** default = true (team owned records are moved to the new team's business unit) You can set it to false, and the team owned records' Business unit is not moved to the new team's business unit. Note that the team will not be able to access these records unless a security role from the old business unit is assigned to the team.

See also

Delete a business unit
Assign a business unit a different parent business

Predefined security roles for Sales

Article • 10/18/2023

Predefined security roles define permissions and access levels specific to different sales personas. Assign users to appropriate security roles to grant them adequate access to the system.

Predefined security roles

Security roles control users' access to data through a set of access levels and permissions. The combination of access levels and permissions that are included in a specific security role defines a user's access to data and their interactions with that data. For more information, go to Security roles and privileges

The predefined security roles for Dynamics 365 Sales include permissions and access levels that the default sales personas will need. For example, the Sales Manager and Salesperson security roles can be associated with those respective users in your organization. As a system administrator, you can verify the permissions and access levels granted for each role and modify them to suit your needs. For more information, go to Create or edit a security role.

The predefined security roles are divided into the following categories:

- Administration and customization roles
- Primary sales roles
- Functional roles
- App access roles
- Internal roles

Administration and customization roles

The following table lists the roles that you should assign to administrators and customizers in your organization.

Security roles	Who needs it?	Applies to	Access includes but not limited to
System Administrator	Users who have full permission to install, configure, upgrade, customize, or administer the environment, including creating, modifying, and assigning security	Sales Premium, Sales Enterprise, and Sales Professional	Install, configure, customize, manage permissions, and access all the features in the application.

Security roles	Who needs it?	Applies to	Access includes but not limited to
	roles. Can view all data in the environment.		
System Customizer	Users who have full permission to customize the environment. Users with this role have organization-level access to custom entities and user-level access to system entities.	Sales Premium, Sales Enterprise, and Sales Professional	Create, read, write, delete, and customizations across all features in the application.

Primary sales roles

The following table lists the roles that you can assign to users who need to perform primary sales tasks:

Security roles	Who needs it?	Applies to	Access includes but not limited to
Vice President of Sales	Users who typically manage the sales organization for several business units or the entire organization	Sales Enterprise and Sales Premium	Same permissions as the Sales Manager, except that their scope of access is broader
Sales Manager	Users who manage a team of sellers and are responsible for the team's performance. They're also responsible for creating and managing products, setting sales targets, and projecting sales forecasts.	Sales Enterprise and Sales Premium	Access to product management, sales management, sales forecasting, and goal management, along with the privileges of the Salesperson role.
Sales Professional Manager	Users who manage a team of sellers and are responsible for the team's performance. They are also responsible for creating and managing products, price lists, and unit groups.	Sales Professional	Access to product, account, and contact management, along with the privileges of the Sales Professional Person role
Sales Professional Person	Sellers who work on opportunities, quotes, orders, and invoices.	Sales Professional	Access to everything from lead to invoice – Lead, Opportunities, Quote, Order, Invoice. Create accounts and contacts, and track goals
Salesperson	Sellers who work on opportunities, quotes, orders, and invoices.	Sales Enterprise and	Access to everything from lead to invoice – lead, opportunities, quote, order,

Security roles	Who needs it?	Applies to	Access includes but not limited to
		Sales Premium	invoice. Create accounts and contacts, and track goals.

Functional roles

The following table lists the roles that you can assign to users who need to perform specific functions such as forecasting and sequence management:

Security roles	Who needs it?	Applies to	Access includes but not limited to
Forecast Manager	Sales manager or an equivalent role who's responsible for configuring forecasts in the organization.	Sales Enterprise and Sales Premium	Configure, clone, deactivate, adjust, or delete a forecast.
Forecast User	Any user in the organization who needs access to the forecast data for tracking and analysis	Sales Enterprise and Sales Premium	View forecast and drill-down forecast data
Sequence Manager	Sales manager or an equivalent role who creates and manages sequences, segments, and assignment rules for the organization.	Sales Enterprise and Sales Premium	Create, edit, delete, and deactivate the following features in the sales accelerator • Sequences • Segments • Assignment rules

App access roles

The following table lists the roles that you can assign to users who need to access the out-of-the-box Dynamics 365 Sales apps:

Security roles	Who needs it?	Applies to	Access includes but not limited to
Sales team member	Users who need to access the Sales Team Member app. This includes users who don't need the full capabilities of an enterprise application. These users will have a dedicated license, use a	Sales Enterprise and Sales Premium	Access to the Sales Team Member App. Read access to contacts, accounts, leads, and

Security roles	Who needs it?	Applies to	Access includes but not limited to
	dedicated app, and get the Sales Team member security role to support their scenario. More information: Sales Team Member app for users with Team Member license.		opportunities. Add notes and activities, such as tasks.
Sales Professional app access	Users who need to access the Sales Professional app.	Sales Professional	Access to the Sales Professional app.
Sales, Enterprise app access	Users who need to access the Sales Hub app.	Sales Enterprise and Sales Premium	Access to the Sales Hub app.

Internal roles

Some roles are internally used by the product to perform certain operations. For example, the Forecast Appuser role is used to perform the forecast calculations.

> ⓘ **Note**
>
> Don't assign these roles to any users.

The following roles are examples of internal roles:

- Forecast Appuser
- Sales system access
- Sales system access extension
- SalesInsights AutoCapture

Assign security roles to users

Associate one or more security roles to a user depending on their roles and responsibilities. For example, if a Sales Manager is also responsible for enforcing best practices using sequences, assign the Sales Manager and Sequence Manager security roles to that user.

Follow these steps:

1. In the Sales Hub app, select the Settings icon in the top-right corner, and select **Advanced Settings**.
2. Select **Settings** in the Business Management interface, and go to **Security** under **System**.
3. Select **Users**, and then select the user account.
4. Select **Manage Roles**, and choose the roles that you want to assign to the user.
5. Notify the user and ask them to verify that they have the permissions they need.

See also

Create users and assign security roles

Create users

Article • 10/06/2023

You use the Microsoft 365 admin center to create user accounts for every user who needs access to apps, flows, or chatbots. The user account registers the user with Microsoft Online Services environment.

Create a user account

When you create a user account in the Microsoft 365 admin center, the system generates a user ID and temporary password for the user. You have the option to let the service send an email message to the user as clear text. Although the password is temporary, you might consider copying the information to send to the user through a more secure channel, such as from an email service that can digitally encrypt the contents.

For step-by-step instructions for creating a Microsoft Online Services user account, see Add users individually or in bulk.

> **Note**
>
> When you create a user and assign a license in the Microsoft 365 admin center, the user is also created in customer engagement apps. It can take a few minutes to complete the synchronization process between the Microsoft 365 admin center and customer engagement apps.
>
> By entering a user ID and password, a user can access the Microsoft 365 admin center to view information about the service. However, the user won't have access to customer engagement apps until the user has a security role assigned either directly or indirectly as a member of a **group team**.

> **Tip**
>
> To force an immediate synchronization between the Microsoft 365 admin center and customer engagement apps, do the following:
>
> - Sign out of the customer engagement app and the Microsoft 365 admin center.

- Close all open browsers used for the customer engagement app and the Microsoft 365 admin center.
- Sign back in to the customer engagement app and the Microsoft 365 admin center.

User types

Regular users

These are the regular synchronized users from Azure Active Directory (Azure AD).

Application users

Identified by the presence of ApplicationId attribute in the system user record. To check the Azure AD application ID, see View or edit the details of an application user.

Non-interactive users

- License specific provisioning business rules does not apply to these users after they are marked as non-interactive. Note: security group specific rules still apply.
- Cannot access Microsoft Dataverse web interface or admin portals.
- Can only access Dataverse via SDK/API calls.
- There is a maximum limit of 7 non-interactive users per instance.

Support user

See System and application users.

- Not synchronized with Azure AD, and created by Dataverse out of the box.
- Placeholder user record for all of the internal Microsoft support users.
- Key identifiers:
  - UPN value is crmoln@microsoft.com.
  - Access mode value is 3.
- All Microsoft support users will be mapped to this well-known record at runtime.

Delegated administrator

See the following:
For partners: the Delegated Administrator

System and application users

- Not synchronized with Azure AD, and created by Dataverse out of the box.
- Placeholder user record for all of customer's delegated admin partner users to access Dataverse as delegated administrators.
- Key identifiers:
  - UPN value is crmoln2@microsoft.com.
  - Access mode value is 5.
- All the delegated admin partner users will be mapped to this well-known record at runtime.

User profile information

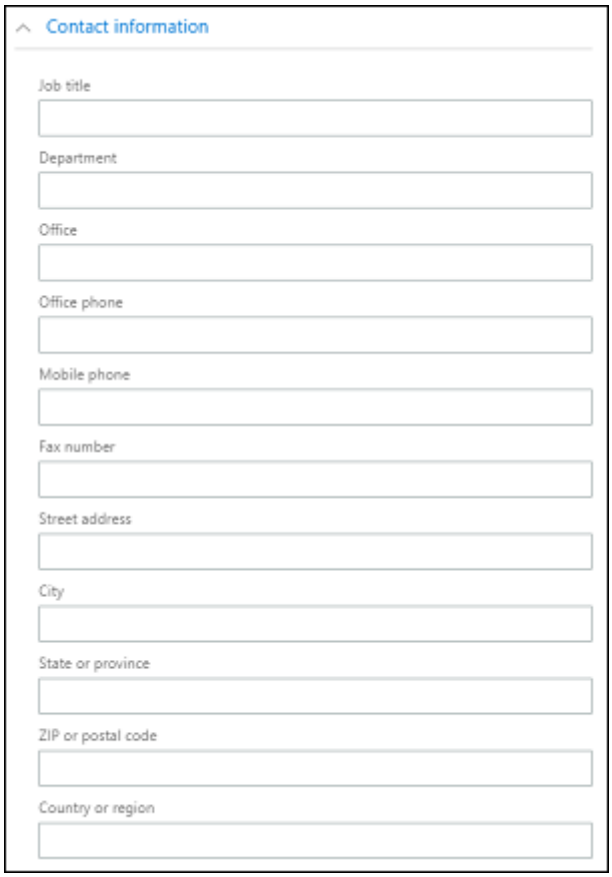
Some user profile information is maintained and managed in the Microsoft 365 admin center. After you create or update a user, these user profile fields are automatically updated and synchronized in your Microsoft Power Platform environments.

The following table shows the fields that are managed in the **Users** section of the Microsoft 365 admin center.

Customer engagement apps user form	**Microsoft 365/Azure AD user**
User Name	Username
Full Name*	Display Name
Title	Job title
First Name	First Name
Last Name	Last Name
Primary Email**	Email
Main Phone	Office phone
Mobile Phone	Mobile phone
Fax	Fax number
Address	Street address
Address	City
Address	State or province
Address	Country or region

Customer engagement apps user form	Microsoft 365/Azure AD user
AzureActiveDirectoryObjectId***	ObjectId
* Full Name isn't automatically updated and synchronized with customer engagement apps. ** To prevent data loss, the Primary Email field isn't automatically updated and synchronized with customer engagement apps. *** object ID of a user or a service principal in Azure Active Directory.	

The following image shows Microsoft 365 user contact fields.

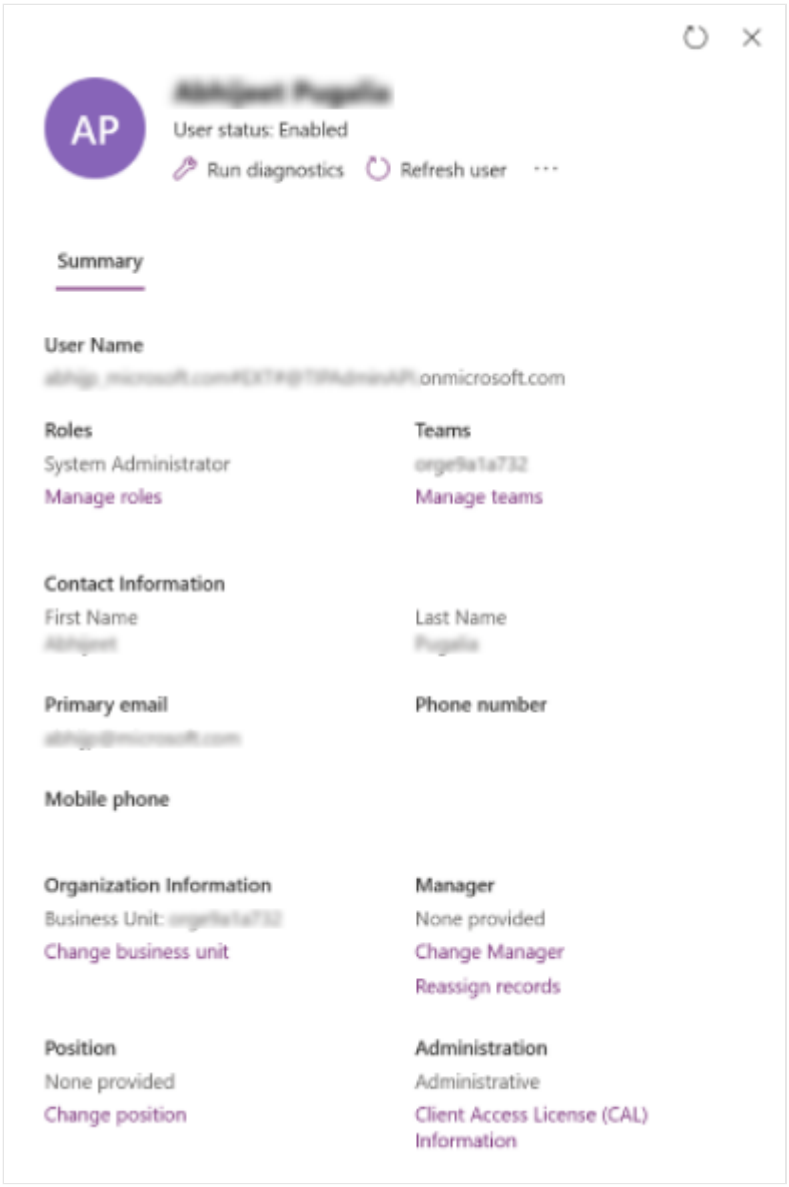


View and edit a user profile

To view and edit a user's profile in the Power Platform admin center:

1. Select an environment and go to **Settings** > **Users + permissions** > **Users**.
2. Select a user in the list.

On the user profile page you can view and make changes to important user profile information such as Security Roles, Team membership, Business Unit, Manager, Position, and more. You can also **Run diagnostics** to troubleshoot access issues or **Refresh User** to re-sync from Azure Active Directory.



Add a license to a user account

You can license the user when you create the user account, or you can license the user later. You must assign a license to every user account that you want to access the online service. See Assign licenses.

Assign a security role

Security roles control a user's access to data through a set of access levels and permissions. The combination of access levels and permissions that are included in a specific security role sets limits on the user's view of data and on the user's interactions with that data. See Assign a security role to a user.

Enable or disable user accounts

User enablement and disablement only applies to environments that have a Dataverse database. To enable a user in an environment that has a Dataverse database, ensure that they're allowed to sign in, assign a license to the user, and then add the user to the security group that's associated with the environment. These are the same criteria used to add users to an environment.

To enable a user, assign a license to the user and add the user to the security group that's associated with an environment. If you enable a user account that was disabled, you must send a new invitation for the user to access the system.

To disable a user account, remove a license from the user or remove the user from the security group that's associated with an environment. Removing a user from the security group doesn't remove the user's license. If you want to make the license available to another user, you have to remove the license from the user account that was disabled.

> **Note**
>
> You can also remove all security roles from a user to prevent the user from signing in to and accessing customer engagement apps. However, this doesn't remove the license from the user, and the user will remain in the list of enabled users. We don't recommend using this method to remove access from a user.
>
> When you use a security group to manage enabling or disabling users or provisioning access to an org, nested security groups within the selected security group aren't supported and will be ignored.
>
> You can **assign records** to a disabled user account and also **share reports** and accounts with them. This can be useful when migrating on-premises versions to online. If you need to assign a security role to users who have a Disabled status, you can do so by enabling the allowRoleAssignmentOnDisabledUsers in **OrgDBOrgSettings**.
>
> A Global admin, Power Platform admin, or a Dynamics 365 admin does not need a license to be enabled in an environment. See: **Global admins and Power Platform admins can administer without a license**. But since they are unlicensed, they will be set in the **Administrative access mode**.

You must be a member of an appropriate administrator role to do these tasks. More information: Assign admin roles

Enable a user account in an environment

To enable a user in an environment that has a Dataverse database, you enable sign-in for the user, assign a license to the user, and then add the user to a security group.

To enable sign-in

1. Sign in to the Microsoft 365 admin center.
2. Select **Users** > **Active users**, and then select the user.
3. Ensure that under the user's display name, you see **Sign in allowed**. If you don't, select **Block this user**, and then unblock sign in.

To assign a license

1. Sign in to the Microsoft 365 admin center.
2. Select **Users** > **Active users**, and then select the user.
3. Select the **Licenses and Apps** tab, and then select the licenses you want to assign.
4. Select **Save changes**.

To add a user to a security group

1. Sign in to the Microsoft 365 admin center.
2. Select **Teams & groups** > **Active teams & groups**.
3. Select the security group that's associated with your environment.
4. Select the **Members** tab.
5. Under **Members**, select **View all and manage members** > **Add members**.
6. Choose users from the list or search for users, and then select **Save**.

Disable a user account in an environment

To disable a user account in an environment that has a Dataverse database, you can either remove the user from the security group or remove the license from the user.

To remove a user from a security group

1. Sign in to the Microsoft 365 admin center.
2. Select **Teams & groups** > **Active teams & groups**.
3. Select the security group that's associated with your environment.
4. Select the **Members** tab.
5. Under **Members**, select **View all and manage members**
6. Select the users in the list to remove them, and then select **Save**.

To remove a license from a user

1. Sign in to the Microsoft 365 admin center.
2. Select **Users** > **Active users**, and then select the user.
3. Select the **Licenses and Apps** tab, and then select the licenses you want to remove.
4. Select **Save changes**.

Note that removing a license from a user might not always result in disabling the user account, though the license will be freed up for assigning to another user. The recommended approach to disabling a user account in an environment is to remove them from the security group that's associated with the environment.

> **Note**
>
> You can also delete users in the Microsoft 365 admin center. When you remove a user from your subscription, the license assigned to that user automatically becomes available to be assigned to a different user. If you want the user to still have access to other applications you manage through Microsoft 365—for example, Microsoft Exchange Online or SharePoint—don't delete them as a user. Instead, simply remove the license you've assigned to them.
>
> When you sign out of the Microsoft 365 admin center, you aren't signing out of customer engagement apps. You have to do that separately.

> **Tip**
>
> To force an immediate synchronization between the Microsoft 365 admin center and customer engagement apps, do the following:
>
> - Sign out of the customer engagement app and the Microsoft 365 admin center.
> - Close all open browsers used for the customer engagement app and the Microsoft 365 admin center.
> - Sign back in to the customer engagement app and the Microsoft 365 admin center.

Add users to Dataverse

For users to have access to applications and data in an environment, at a minimum the SystemUser table in Dataverse must have a record corresponding to the respective user

identity. There are different mechanisms to add users in Dataverse, either automatic or on demand:

> **Tip**
>
> Check out the following video: **Adding users to Dataverse**.

1. A system background process runs periodically to synchronize changes from Azure AD and updates the SystemUser records in Dataverse based on pre-determined set of requirements. The time taken to synchronize all changes into Dataverse is dependent on total number of users must be added or updated. For large organizations with thousands of users in Azure AD, we recommend creating security groups associated with each environment, so only the required subset of users is added into Dataverse.

   > **Note**
   >
   > Not all users added in Azure AD will be pickup by the automatic synchronization process. **This section** details the eligibility criteria the system background process applies to add a user from Azure AD into Dataverse.

2. If users already exist in Azure AD, they are automatically added to SystemUsers table at first attempt to access the environment. Note that if a user already exists in Dataverse, but in a disabled state, attempting to access the environment will result in the user's state to be updated to "enabled", assuming they are entitled at the time of access.

3. Users that have the necessary permissions, can use the API to add or update users in Dataverse on demand.

4. Administrators can leverage the Power Platform admin center user management experience to add users in Dataverse on demand.

Categories of users not added automatically in Dataverse

In certain conditions, the above-mentioned system background process is not adding users automatically into Dataverse. In these cases, users will be added on demand either when they first attempt to access the environment or by an administrator using the API or the Power Platform admin center. These conditions are:

1. Users are part of a Dataverse for Teams environment type.
2. Users are part of an environment with a Dataverse database and have a free Dataverse service plan from Microsoft 365 licenses.
3. Users are part of an environment with a Dataverse database and environment level app-pass license type.

> ⓘ **Note**
>
> Users cannot be added to SystemUser table either automatically or on demand in case of environments without Dataverse database.

Requirements for successfully adding users in Dataverse

Below criteria must be met for successfully adding the user in the Dataverse table:

1. User must be enabled and not deleted or soft-deleted in Azure AD. User must be enabled in Azure AD to be enabled in a Dataverse database. If user is added to Dataverse and then deleted in Azure AD, the state in the Dataverse table will be updated to “disabled”.

2. User must have a valid license with these exceptions:
   a. Admin users do not require a license. Unlicensed Azure AD admins are enabled in the systems as “Setup user” and have administrative only access mode.
   b. Individual users do not need to have a license when the environment has app pass capacity. This only applies to adding users on demand (either at first attempt to access the environment or through API/Power Platform admin center).
   c. Individual users do not need to have a license when the tenant they are part of has a tenant level Marketing license. This only applies to adding users on demand (either at first attempt to access the environment or through API/Power Platform admin center).
   d. Non-interactive users do not need a license
   e. Free Dataverse plans from Microsoft 365 license are honored when users added on-demand (either at first attempt to access the environment or through API/Power Platform admin center)

> ⓘ **Note**

Guest users should also have a license from the environment's tenant. License from Guest user's tenant is NOT considered as valid license.

3. If the environment has a security group defined, user must be part of the respective security group, unless the user is a Tenant or Power Platform Administrator. Non-admin users or Dynamics 365 service admin must be in the security group to access the system. When the owner of the security group is added to Dataverse through an on-demand action, the user will be considered a valid member of the security group and will be added to Dataverse successfully.

Adding users to Dataverse has different implications depending on the environment type:

1. If users are part of a trial environment, then they will not need email approval for being added to Dataverse. Users will only be added to Dataverse on demand. The background sync process will still run to keep the users in the environment up-to-date, but will not add users automatically.

2. Only the initial user that created the developer environment type will be added to Dataverse.

3. Users that are part of a Dataverse for Teams environment will only be added to Dataverse's SystemUser table as result of the user's first attempt to access the environment.

Create a Read-Write user account

By default, all licensed users are created with an access mode of **Read-Write**. This access mode provides full access rights to the user based on the security privileges that are assigned.

To update the access mode of a user

1. In the Power Platform admin center, select an environment, and go to **Settings** > **Users + permissions** > **Users**.
2. Select **Enabled Users**, and then open a user from the list.
3. On the user pane command bar select **...** > **Manage user in Dynamics 365**.
4. In the user form, scroll down under **Administration** to the **Client Access License (CAL) Information** section. In the **Access Mode** list, select **Read-Write**.
5. Select the **Save** icon.

Create an Administrative user account

An Administrative user is a user who has access to the Settings and Administration features but has no access to any of the functionality. Use this account to assign administrative users to perform day-to-day maintenance functions (create user accounts, manage security roles, and so on). Because an administrative user doesn't have access to customer data nor any functionality, the user doesn't require a license (after setup).

You need to have the System Administrator security role or equivalent permissions to create an administrative user. First, you'll create a user account in Microsoft 365, and then in to the customer engagement app, select the **Administrative** access mode for the account.

> ⓘ **Note**
>
> Any admin user with the Global admin, Power Platform admin, or Dynamics 365 Service admin role will receive the **Administrative** access mode as long as there are no user licenses assigned. This is true regardless of enabling app-passes or pay-as-you-go use at the tenant level.
>
> See **Create an administrative user and prevent elevation of security role privilege** for an example of how an Administrative user account can be used.

1. Create a user account in the Microsoft 365 admin center.

   Be sure to assign a license to the account. You'll remove the license (in step 12) after you've assigned the **Administrative** access mode.

2. In the **Optional settings** form, expand **Roles**.

3. Clear the **User (no administrator access)** check box.

4. Scroll down the form, and then select the **Show all** link.

5. Select the **service administrator** check box. **Note:** If you've selected **Global Administrator**, you don't need to select this option.

Wait for the user to sync to the environments.

6. In the Power Platform admin center, select an environment, and go to **Settings** > **Users + permissions** > **Users**.

7. Select **Enabled Users**, and then open a user from the list.

8. On the user pane command bar select **...** > **Manage user in Dynamics 365**.
9. In the user form, scroll down under **Administration** to the **Client Access License (CAL) Information** section. In the **Access Mode** list, select **Administrative**.

   Now you need to remove the license from the account.
10. Go to the Microsoft 365 admin center.
11. Select **Users** > **Active Users**.
12. Select the Administrative user account, and then select the **Licenses and Apps** tab.
13. Clear the license box(es), and then select **Save changes**.

Create a non-interactive user account

The non-interactive user isn't a "user" in the typical sense—it doesn't represent a person, it's an access mode that's created by means of a user account. It's used for programmatic access to and from customer engagement apps between applications. A non-interactive user account lets these applications or tools—such as a connector from customer engagement apps to ERP—authenticate and access customer engagement apps without requiring a license. For each environment, you can create up to seven non-interactive user accounts.

You need to have the System Administrator security role or equivalent permissions to create a non-interactive user. First, you'll create a user account in Microsoft 365. Then, in customer engagement apps, select the non-interactive access mode for the account.

1. Create a user account in the Microsoft 365 admin center.

   Be sure to assign a license to the account.
2. In the Power Platform admin center, select an environment, and go to **Settings** > **Users + permissions** > **Users**.
3. Select **Enabled Users**, and then open a user from the list.
4. On the user pane command bar select **...** > **Manage user in Dynamics 365**.
5. In the user form, scroll down under **Administration** to the **Client Access License (CAL) Information** section. In the **Access Mode** list, select **Non-interactive**.

   You then need to remove the license from the account.
6. Go to the Microsoft 365 admin center.

7. Select **Users** > **Active Users**.
8. On the **Licenses and Apps** tab, select the non-interactive user account.
9. Clear the license box(es), and then select **Save changes**.
10. Go back to the customer engagement app and confirm that the non-interactive user account **Access Mode** is still set for **Non-interactive**.

Create an application user

You can use server-to-server (S2S) authentication to securely and seamlessly communicate between Dataverse and your web applications and services. S2S authentication is the common way that apps registered on Microsoft AppSource use to access the Dataverse data of their subscribers. All operations performed by your application or service by using S2S will be performed as the application user you provide, rather than the user who's accessing your application.

All application users are created with a non-interactive user account, however they aren't counted toward the limit of seven non-interactive user accounts. In addition, there's no limit on how many application users you can create in an environment.

> **⊗ Caution**
>
> For an application user, the system adds a "#" as the First Name for the Application User you create. This is by design.

For step-by-step information about creating an application user, see Create an application user.

Enable or disable application users

When application users are created, they're automatically enabled. The default **Application User** form shows the status in the form footer; the **Status** field can't be updated.

You can customize the default **Application User** form to allow updates to the **Status** field so that you can enable or disable application users, if required. For step-by-step information about customizing the default **Application User** form, see Enable or disable application users.

> ⊗ **Caution**
>
> Disabling an application user will break all the integration scenarios that use the application user.

Manage application users in the Power Platform admin center

We are in the process of moving application user management from the legacy web client as documented in Enable or disable application users. See the following topic for managing application users from the Power Platform admin center: Manage application users in the Power Platform admin center.

How stub users are created

A stub user is a user record that has been created as a placeholder. For example, records have been imported that refer to this user but the user doesn't exist in customer engagement apps. This user can't sign in, can't be enabled, and can't be synchronized to Microsoft 365. This type of user can only be created through data import.

> ⊗ **Caution**
>
> To prevent creating duplicate user records with the same UPN or throw errors during data import workflows, synchronize the users from Entra ID to Dataverse before running data import.

A default security role is automatically assigned to these imported users. The **Salesperson** security role is assigned in an environment and the **Basic User** security role is assigned in a Power Apps environment.

> ⓘ **Note**
>
> By default, a security role can only be assigned to users with an Enabled status. If you need to assign a security role to users who have a Disabled status, you can do so by enabling the allowRoleAssignmentOnDisabledUsers **OrgDBOrgSettings**.

Update a user record to reflect changes in Azure AD

When you create a new user or update an existing user in Dynamics 365 Customer Engagement (on-premises), some fields in the user records, such as name and phone number, are populated with the information obtained from Active Directory Domain Services (AD DS). After the user record is created, no further synchronization occurs between Azure AD user accounts and customer engagement apps user records. If you make changes to the Azure AD user account, you must manually edit the user record to reflect the changes.

1. In the Power Platform admin center, select an environment, and go to **Settings** > **Users + permissions** > **Users**.
2. In the list, select the user record you want to update, and then select **Edit**.

The following table shows the fields that are populated on the user form (user record) from the Azure AD user account.

User form	Active Directory user	Active Directory object tab
User name	User logon name	Account
First name	First name	General
Last name	Last name	General
Main Phone	Telephone number	General
Primary Email	Email	General
Address*	City	Address
Address*	State/province	Address
Home phone	Home	Telephones
* The Address field comprises the values from the City and State/province fields in Azure AD.		

FAQ

If a user that is added to Dataverse SystemUser table becomes disabled or unlicensed in Azure AD, how is that reflected in Dataverse?

User record is not deleted, but its state in Dataverse will be updated to “disabled”.

Are all users in Azure AD being added to Dataverse?

Users from Azure AD are added to Dataverse only if they meet the criteria. If already existing users do not meet the criteria, their state will be updated to “disabled”,

How can the admin increase the performance of adding users in Dataverse?

Assigning an Azure AD security group to the environment is a best practice in general, that can also result in a performance increase as regard to adding users that are part of the security group to Dataverse.

See also

User settings
Get started with security roles in Dataverse
Assign a security role to a user
Opt-out of automatic license-based user roles management

Create or manage teams

Article • 03/30/2022

A team is a group of users who share and collaborate on business records. A user can be associated with multiple teams.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Create a team

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium or Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.
2. Follow the instructions in Microsoft Dataverse teams management to create and manage teams.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Admin settings overview

Set up sales territories

Article • 09/13/2023

Improve sales potential and revenues by creating territories for customer and market segments in Dynamics 365 Sales. Then assign appropriate salespeople to handle the sales and revenue opportunities for those territories.

Sales territories improve the sales potential because the members of a territory are focused on the sales within that territory. You can associate the financials directly with a territory and its members, which simplifies business analysis. Also, based on the sales territory type and size, you can define sales methodologies and the training required for those locations.

Organizations can create a model and visualize their sales territories in a hierarchical format using out-of-the-box territory hierarchical relationships.

> **Important**
>
> - For a new organization that provisions Dynamics 365 Sales, the territory hierarchical relationship will be available and enabled by default.
> - For existing customers upgrading to the latest release, if the organization doesn't already have a hierarchical relationship created for the Territory table, the hierarchical relationship will be available and enabled. If the organization has a hierarchical relationship created for territory, the new out-of-the-box territory hierarchical relationship will be available but not enabled.

License and role requirements

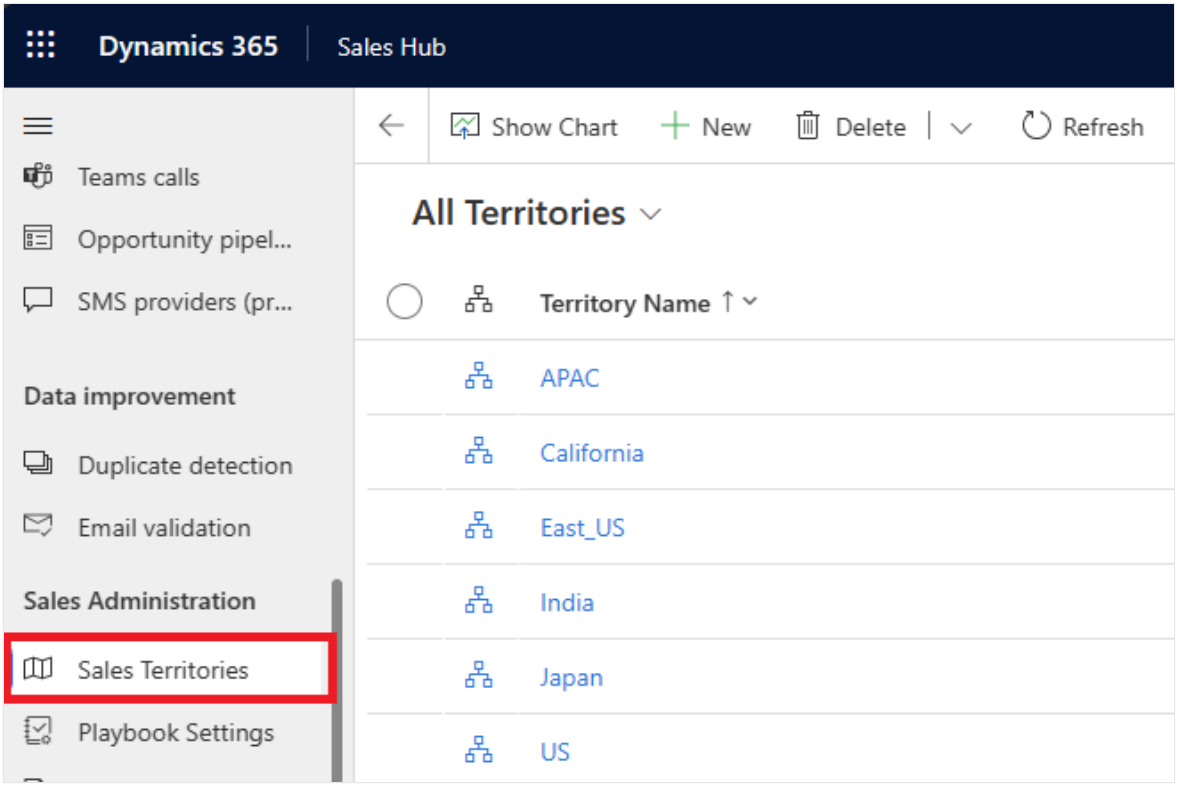
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Vice President, CEO-Business Manager, System Administrator, or System Customizer More information: Predefined security roles for Sales

Create a sales territory

Create a sales territory to define a geographical area for your business. For example, you can create a sales territory for a city, state, or country/region. You can also create a sales territory for a specific industry or product line.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **App settings**.

2. Under **Sales Administration**, select **Sales Territories**.



3. Select **New** on the command bar.

4. In the sales territory form, fill in your information.

   a. **Name**. Enter the geographical name for the territory such as the name of a city, country/region, or state.

   b. **Manager**. Select the user who manages the territory. This person would typically assign leads to salespeople.

> **ⓘ Important**
>
> You can't allocate the same user to multiple territories. If you need to assign a user to a larger area (more than one existing territory), create a new territory that includes the existing territories, and then assign the user to that new territory.

c. **Parent**. Select a parent territory. The current territory will be added as a child territory to the selected territory. For example, If you are creating sales territories for California and Washington, you can add the United States of America as a parent so that a parent-child relationship is created between the sales territories and the parent territory.

d. **Description**. Enter any details that you'd like to include for this territory, for example, "Sales territory created for education and training."

5. Save the changes.

Add members to a territory

Add salespeople as members of a territory to assign them the sales and revenue opportunities for that territory.

1. Open the territory record that you want to add members to.
2. Select the **Related** tab, and then select **Members**.
3. On the **Members** tab, select **Add members**.
4. In the **Lookup Records** pane, search and select users who are members of this territory, and then select **Add**.
5. To add sub-territories to this territory, select the **Sub-territories** tab, and select **Add New Territory**.
6. Enter the necessary information and select **Save**. This territory will be added as a sub-territory in the Sub-territories grid.
7. Select **Save**.

> **Tip**
>
> To make your salesperson's job easier, you can also set a default price list for a territory. More information: **Define product pricing with price lists and price list items**

See also

Configure forecasts in your organization
Define and track your sales goals

Hierarchy security to control access

Article • 09/11/2023

The hierarchy security model is an extension to the existing security models that use business units, security roles, sharing, and teams. It can be used with all other existing security models. Hierarchy security offers a more granular access to records for an organization and helps to bring the maintenance costs down. For example, in complex scenarios, you can start with creating several business units and then add the hierarchy security. This provides more granular access to data with far less maintenance costs that a large number of business units may require.

Manager hierarchy and position hierarchy security models

Two security models can be used for hierarchies, the *manager hierarchy* and the *position hierarchy*. With the manager hierarchy, a manager must be within the same business unit as the report, or in the parent business unit of the report's business unit, to have access to the report's data. The position hierarchy allows data access across business units. If you're a financial organization, you may prefer the manager hierarchy model, to prevent managers' accessing data outside of their business units. However, if you are a part of a customer service organization and want the managers to access service cases handled in different business units, the position hierarchy may work better for you.

> **Note**
>
> While the hierarchy security model provides a certain level of access to data, additional access can be obtained by using other forms of security, such as security roles.

Manager hierarchy

The manager hierarchy security model is based on the management chain or direct reporting structure, where the manager's and the report's relationship is established by using the **Manager** field on the system user table. With this security model, managers are able to access the data that their reports have access to. They are able to perform work on behalf of their direct reports or access information that needs approval.

Note

With the manager hierarchy security model, a manager has access to the records owned by the user or by the team that a user is a member of, and to the records that are directly shared with the user or the team that a user is a member of. When a record is shared by a user who is outside of the management chain to a direct report user with read-only access, the direct report's manager only has read-only access to the shared record.

When you enabled the **Record ownership across business units** option, managers can have direct reports from different business units. You can use the following **environment database settings** to remove the business unit restriction.

ManagersMustBeInSameOrParentBusinessUnitAsReports

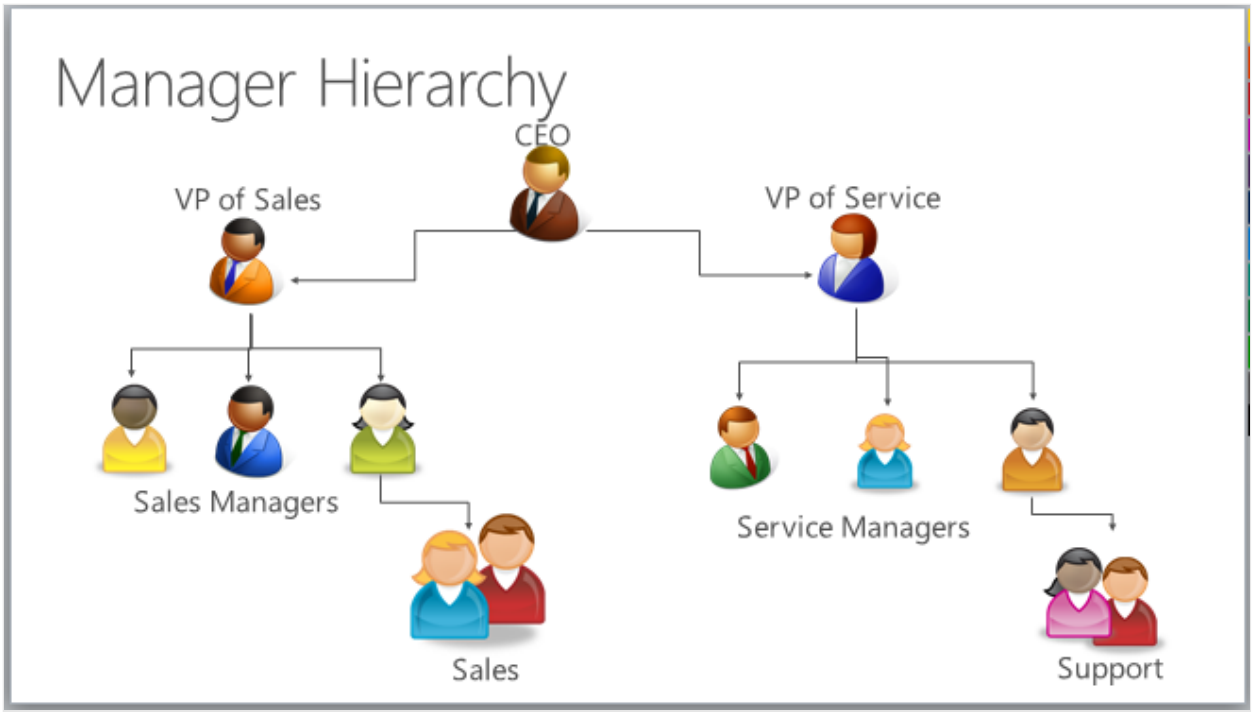
default = false

You can set it to true, and a manager's business unit does not need to be the same as the direct report's business unit.

In addition to the manager hierarchy security model, a manager must have at least the user level Read privilege on a table, to see the reports' data. For example, if a manager doesn't have Read access to the Case table, the manager can't see the cases that their reports have access to.

In order for the manager to see all the direct report's records, the direct report user must have an **Enabled** user status.

For a non-direct report in the same management chain of the manager, a manager has read-only access to the non-direct report's data. For a direct report, the manager has Read, Write, Append, AppendTo access to the report's data. To illustrate the manager hierarchy security model, let's take a look at the following diagram. The CEO can read or update the VP of Sales data and the VP of Service data. However, the CEO can only read the sales manager data and the service manager data, as well as the sales and support data. You can further limit the amount of data accessible by a manager with *depth*. Depth is used to limit how many levels deep a manager has read-only access to the data of their reports. For example, if the depth is set to 2, the CEO can see the data of the VP of Sales, VP of Service, and sales and service managers. However, the CEO doesn't see the sales data or the support data.



It is important to note that if a direct report has deeper security access to a table than their manager, the manager may not able to see all the records that the direct report has access to. The following example illustrates this point.

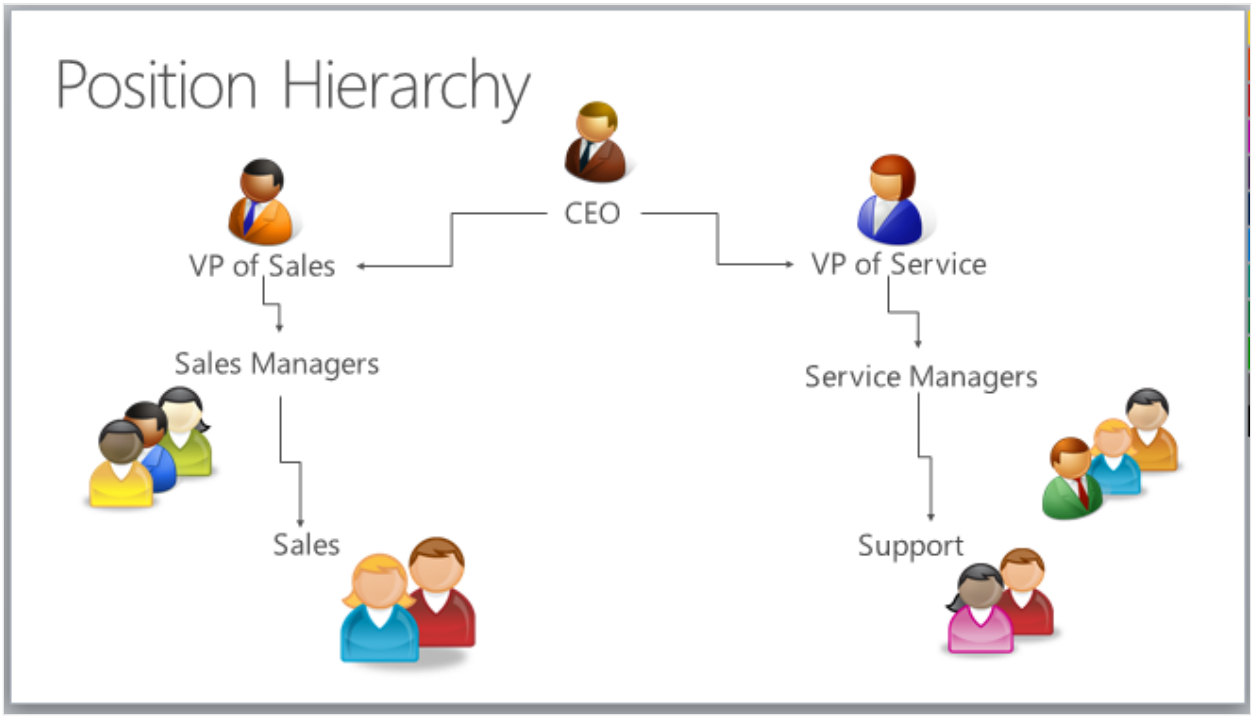
- A single business unit has three users: User 1, User 2 and User 3.
- User 2 is a direct report of User 1.
- User 1 and User 3 have user-level read access on the Account table. This access level gives users access to records they own, the records that are shared with the user, and records that are shared with the team the user is a member of.
- User 2 has business unit-read access on the Account table. This allows User 2 to view all of the accounts for the business unit, including all of the accounts owned by User 1 and User 3.
- User 1, as a direct manager of User 2, has access to the accounts owned by or shared with User 2, and any accounts that are shared with or owned by a team that User 2 is a member of. However, User 1 doesn't have access to the accounts of User 3, even though their direct report may have access to User 3 accounts.

Position hierarchy

The position hierarchy is not based on the direct reporting structure, like the manager hierarchy. A user doesn't have to be an actual manager of another user to access user's data. As an administrator, you define various job positions in the organization and arrange them in the position hierarchy. Then, you add users to any given position, or, as

we also say, *tag* a user with a particular position. A user can be tagged only with one position in a given hierarchy, however, a position can be used for multiple users. Users at the higher positions in the hierarchy have access to the data of the users at the lower positions, in the direct ancestor path. The direct higher positions have Read, Write, Append, AppendTo access to the lower positions' data in the direct ancestor path. The non-direct higher positions, have read-only access to the lower positions' data in the direct ancestor path.

To illustrate the concept of the direct ancestor path, let's look at the following diagram. The sales manager position has access to the sales data, however, it doesn't have access to the support data, which is in the different ancestor path. The same is true for the service manager position. It doesn't have access to the sales data, which is in the sales path. Like in the manager hierarchy, you can limit the amount of data accessible by higher positions with *depth*. The depth limits how many levels deep a higher position has read-only access, to the data of the lower positions in the direct ancestor path. For example, if the depth is set to 3, the CEO position can see the data all the way down from the VP of Sales and VP of Service positions, to the sales and support positions.



Note

With the position hierarchy security, a user at a higher position has access to the records owned by a lower position user or by the team that a user is a member of, and to the records that are directly shared to the user or the team that a user is a member of.

In addition to the position hierarchy security model, the users at a higher level must have at least the user-level read privilege on a table to see the records that the

users at the lower positions have access to. For example, if a user at a higher level doesn't have read access to the Case table, that user won't be able to see the cases that the users at a lower positions have access to.

In order for the user at the higher position to see all the lower position user's records, the lower position user must have an **Enabled** user status.

Set up hierarchy security

To set up hierarchy security, make sure you have the System Administrator permission to update the setting.

- Follow the steps in View your user profile.
- Don't have the correct permissions? Contact your system administrator.

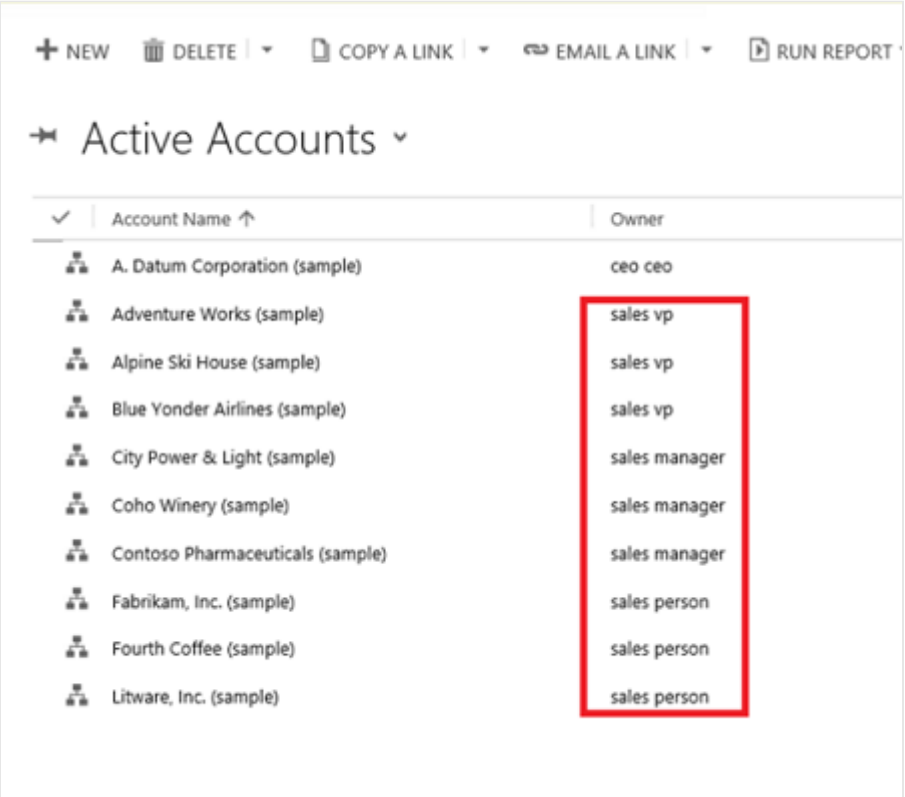
The hierarchy security is disabled by default. To enable hierarchy security, complete the following steps.

1. Select an environment and go to **Settings** > **Users + Permissions** > **Hierarchy security**.
2. Under **Hierarchy Model**, select either **Enable Manager Hierarchy Model** or **Enable Position Hierarchy Model** depending on your requirements.

   > ⓘ **Important**
   >
   > To make any changes in **Hierarchy security**, you must have the **Change Hierarchy Security Settings** privilege.

3. Set the **Depth** to a desired value to limit how many levels deep a manager has a read-only access to the data of their reports.

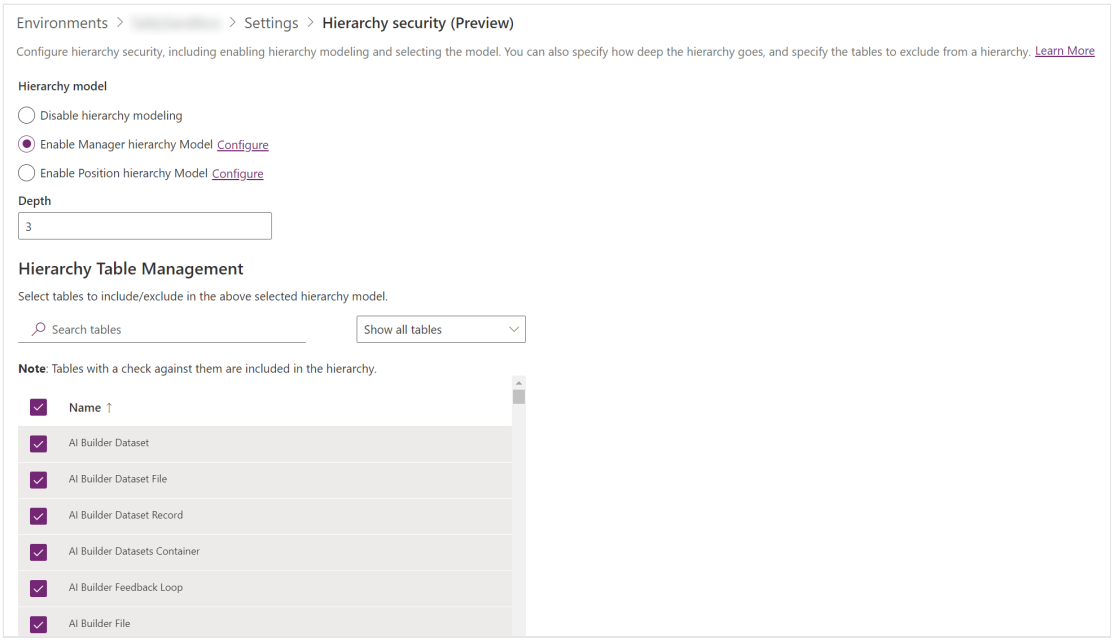
   For example, if the depth equals to 2, a manager can only access their own accounts and the accounts of the reports two levels deep. In our example, if you log in into customer engagement apps, not as an administrator, who can see all accounts, but, as the VP of Sales, you'll only be able to see the active accounts of the users shown in the red rectangle, as illustrated:



> **Note**
>
> While, the hierarchy security grants the VP of Sales access to the records in the red rectangle, additional access can be available based on the security role that the VP of Sales has.

4. In the **Hierarchy Table Management** section, all system tables are enabled for hierarchy security, by default. To exclude a specific table from the hierarchy model, clear the check mark next to the table name and save your changes.

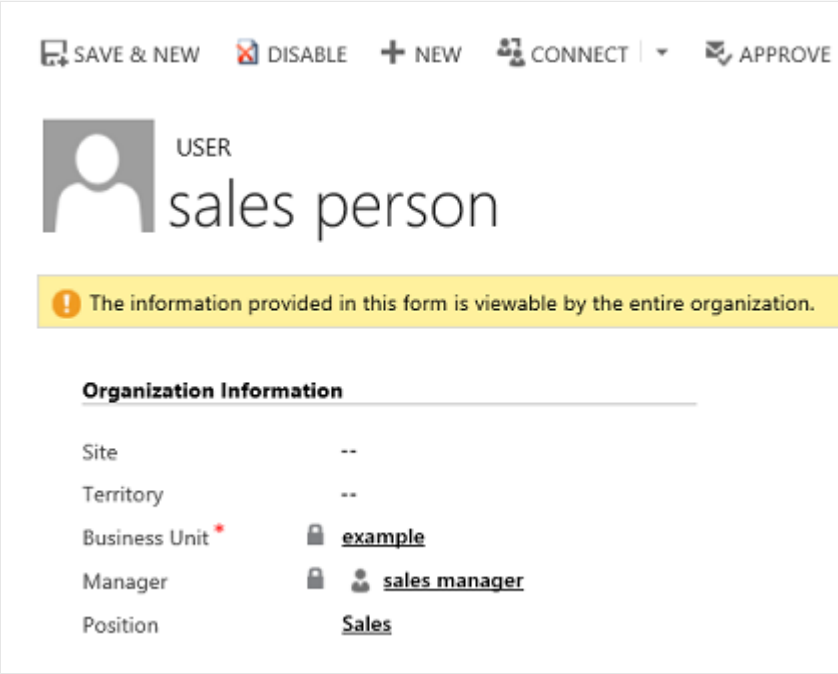
New, modern UI in preview



> **Important**
>
> - This is a preview feature.
> - Preview features aren't meant for production use and may have restricted functionality. These features are available before an official release so that customers can get early access and provide feedback.

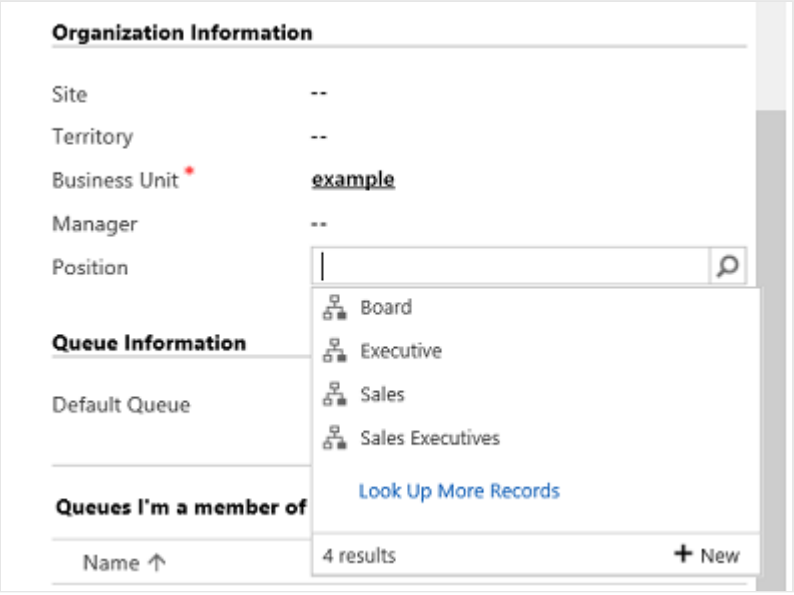
Set up manager and position hierarchies

The manager hierarchy is easily created by using the manager relationship on the system user record. You use the Manager (**ParentsystemuserID**) lookup field to specify the manager of the user. If you have already created the position hierarchy, you can also tag the user with a particular position in the position hierarchy. In the following example, the sales person reports to the sales manager in the manager hierarchy and also has the sales position in the position hierarchy:

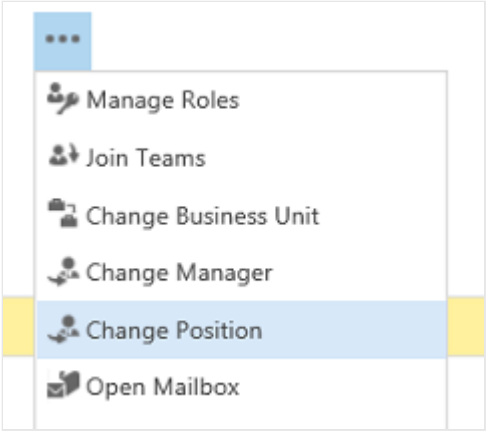


To add a user to a particular position in the position hierarchy, use the lookup field called **Position** on the user record's form.

> **ⓘ Important**
>
> To add a user to a position or change the user's position, you must have the **Assign position for a user** privilege.



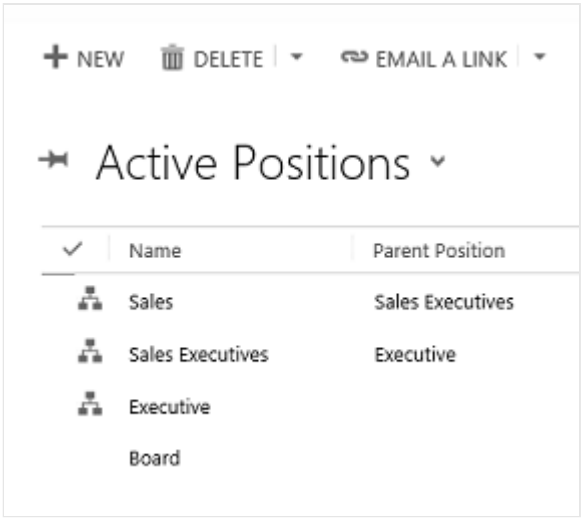
To change the position on the user record's form, on the navigation bar, choose **More** (...) and choose a different position.



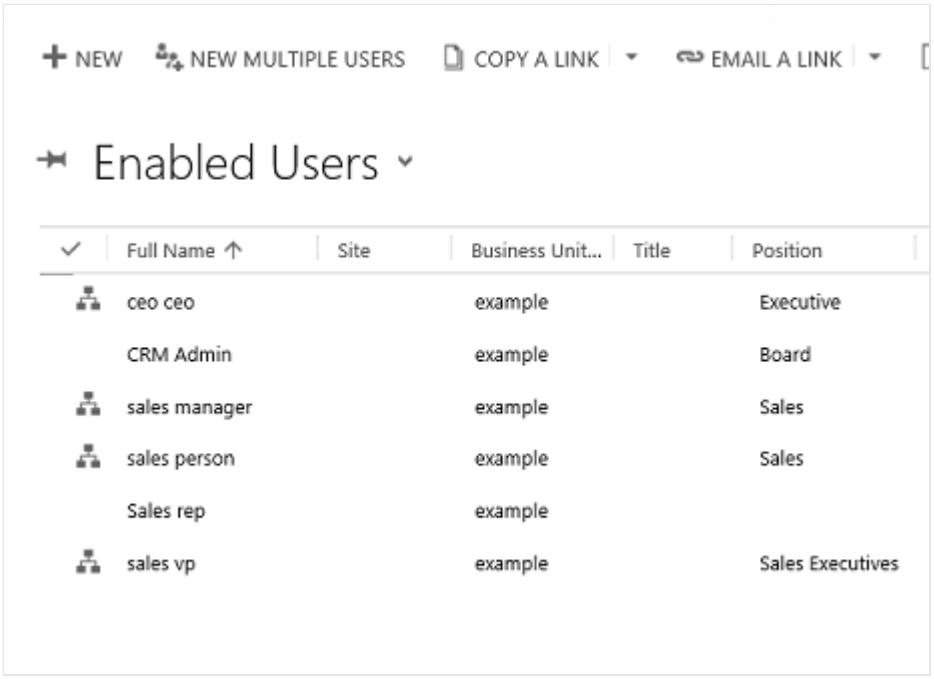
To create a position hierarchy:

1. Select an environment and go to **Settings** > **Users + Permissions** > **Positions**.

   For each position, provide the name of the position, the parent of the position, and the description. Add users to this position by using the lookup field called **Users in this position**. The following image is an example of position hierarchy with the active positions.

   The example of the enabled users with their corresponding positions is shown in the followin image.



Performance considerations

To boost the performance, we recommend:

- Keep the effective hierarchy security to 50 users or less under a manager or position. Your hierarchy may have more than 50 users under a manager or position, but you can use the **Depth** setting to reduce the number of levels for read-only access and with this limit the effective number of users under a manager or position to 50 users or less.
- Use hierarchy security models in conjunction with other existing security models for more complex scenarios. Avoid creating a large number of business units, instead, create fewer business units and add hierarchy security.

See also

Security in Microsoft Dataverse
Query and visualize hierarchical data

Manage transactions with multiple currencies

Article • 02/15/2022

Currencies determine the prices for products in the product catalog and the cost of transactions, such as sales orders. If your customers are spread across geographies, add their currencies to manage your transactions. Add the currencies that are most appropriate for your current and future business needs.

Add a currency

1. Make sure you have the System Administrator security role or equivalent permissions in Microsoft Dynamics 365.

   Check your security role

   - Follow the steps in View your user profile.
   - Don't have the correct permissions? Contact your system administrator.

2. In the Power Platform admin center, select an environment.
3. Select **Settings** > **Business**.
4. Select **Currencies**.
5. Select **New**.
6. Fill in the information, as required.

Field	Description
Currency Type	- **System** - Select this option if you want to use the currencies available in customer engagement apps (such as Dynamics 365 Sales and Customer Service). To search for a currency, select the **Lookup** button next to **Currency Code**. When you select a currency code, **Currency Name** and **Currency Symbol** are automatically added for the selected currency. - **Custom** - Select this option if you want to add a currency that's not available in customer engagement apps. In this case, you must manually enter the values for **Currency Code**, **Currency Precision**, **Currency Name**, **Currency Symbol**, and **Currency Conversion**.
Currency Code	Short form for the currency. For example, **USD** for United States Dollar.

Field	Description
Currency Precision	Type the number of decimals that you want to use for the currency. You can add a value between 0 and 4. **Note:** If you've set a precision value in the **System Settings** dialog box, that value will appear here. More information: System Settings dialog box - General tab.
Currency Name	If you selected a currency code from the list of available currencies in customer engagement apps, the currency name for the selected code is displayed here. If you selected **Custom** as the currency type, type the name of the currency.
Currency Symbol	If you selected a currency code from the list of available currencies, the symbol for the selected currency is displayed here. If you selected **Custom** as the currency type, enter the symbol for the new currency.
Currency Conversion	Type the value of the selected currency in terms of one US dollar. This is the amount at which the selected currency converts to the base currency. **Important:** Make sure you update this value as frequently as required to avoid any inaccurate calculations in your transactions.

7. When you're done, on the command bar, select **Save** or **Save and Close**.

> **Tip**
>
> To edit a currency, select the currency, and then enter or select the new values.

Delete a currency

1. In the Power Platform admin center, select an environment.
2. Select **Settings** > **Business**.
3. Select **Currencies**.
4. From the list of currencies displayed, select the currency to delete.
5. Select **Delete** ✕.
6. Confirm the deletion.

> **Important**

You can't delete currencies that are in use by other records; you can only deactivate them. Deactivating currency records doesn't remove the currency information stored in existing records, such as opportunities or orders. However, you won't be able to select the deactivated currency for new transactions.

See also

System Settings dialog box - General tab

Work with fiscal year settings

Article • 09/14/2023

You can set the fiscal year period, and how it's displayed, for your organization.

> **ⓘ Important**
>
> Fiscal year options affect the way in which your organization's data is stored in customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation), such as Dynamics 365 Sales and Customer Service.

1. Make sure you have the System Administrator security role or equivalent permissions in Microsoft Dynamics 365.

   Check your security role

   - Follow the steps in View your user profile.
   - Don’t have the correct permissions? Contact your system administrator.

2. In the web app, go to **Settings** ( ) > **Advanced Settings**.

3. Select **Fiscal Year Settings**.

4. Type information in the text boxes.

   - In the **Start Date** box, select the date to start the fiscal year.
   - In the **Fiscal Period Template** drop-down list, select how your fiscal year is divided.
   - In the **Fiscal Year** drop-down list, select how you want to display the fiscal year.
   - In **Name Based On** drop-down list, select whether the fiscal year name is displayed on the start or end of the fiscal year.
   - In the **Fiscal Period** drop-down list, select how you want to display the fiscal period.
   - In the **Display As** drop-down list, select how you want the fiscal year abbreviation and the year to appear.

5. Select **OK**.

Import data into Dynamics 365 Sales

Article • 03/30/2023

Bring customer and sales data quickly into your app by importing it. Dynamics 365 Sales processes import in the background. After an import completes, you can review which records succeeded, failed to import, or were partially imported. To fix the records that failed to import, export them into a separate file, fix them, and then try to import them again. You can delete all records associated with an import.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Supported file types and sources

You can import data from the following file types and sources:

- Comma-separated value (CSV) files.
- Microsoft Excel templates available in Dynamics 365 Sales.
- XML (Supported only for Sales Premium and Sales Enterprise)
- Exchange

Import data

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.
2. Follow the instructions in How to import data to import data into Dynamics 365.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Export data to Excel
Export sales records to PDF

Enable and configure Sales Insights features

Article • 06/29/2023

Enabling and configuring the Dynamics 365 Sales Insights features helps sellers to build stronger relationships with their customers, save time, and stay on top of their deals with real-time AI-based insights. In Sales Insights, some features are available for free along with Dynamics 365 Sales and some require an additional Sales Insights license to use in your organization. More information: Overview

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise and Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What you can configure

As an administrator, you can enable and configure the Sales Insights features as required in your organization:

- Enable and configure standard Sales Insights features
- Get started with premium Sales Insights features
- Enable and configure premium Sales Insights features
- Administer conversation intelligence

Enable and configure standard Sales Insights features

The standard Sales Insights features—assistant (standard), Auto capture (standard), and email engagement (standard)—are available for you along with Dynamics 365 Sales. You can configure these standard features as required in your organization.

Note

The standard Sales Insights features aren't available with the Sales Professional app.

1. Review requirements and prerequisites.
2. Enable standard Sales Insights features.
3. Configure standard features as required.

Requirements and prerequisites

Review the following requirements and prerequisites to enable standard Sales Insights features:

- Some feature restrictions apply depending on which combinations of Dynamics 365 and Exchange you're running, as detailed in the following table.

Product version	Available standard Sales Insights features
Dynamics 365 with Microsoft Exchange Online	◦ Assistant (standard cards) ◦ Email engagement ◦ Auto capture
Dynamics 365 with Microsoft Exchange (on-premises)	◦ Assistant (all cards except cards based on Exchange information) ◦ Email engagement
Dynamics 365 (on-premises)	Assistant (standard cards)
Dynamics 365 (on-premises) with Microsoft Exchange Online	Assistant (standard cards)

- The assistant, email engagement, and auto capture features are available for Dynamics 365 Sales with an Enterprise or Sales Premium license.

Enable standard Sales Insights features

Before you can configure these features, you must accept the privacy notice. To accept the privacy notice, follow the steps listed here.

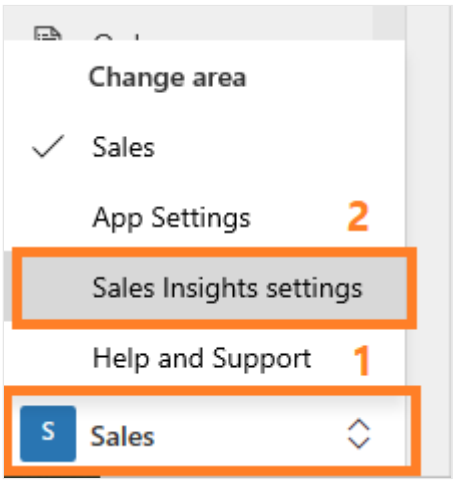
Note

By default, the standard assistant is enabled.

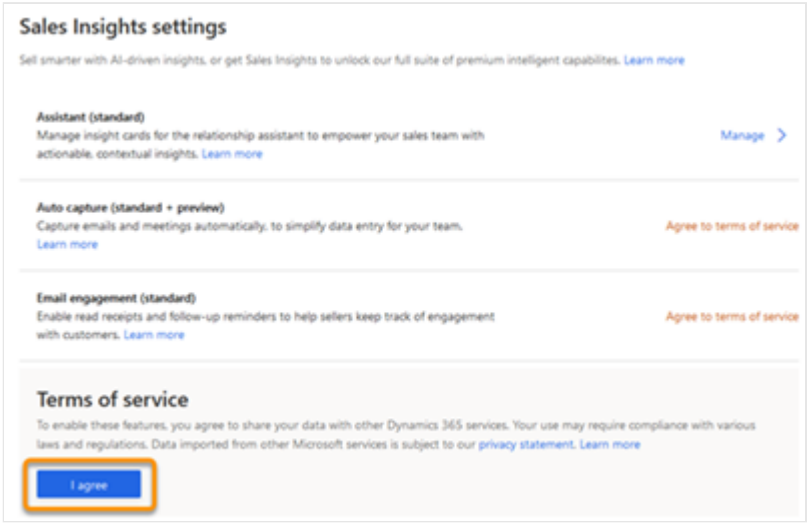
Important

Dynamics 365 Sales Insights provides features that track behavior and collect information about contacts. Make sure you understand the related privacy issues that these features raise and enable the features only if you're certain that they don't violate any privacy policies already in place in your organization. Always take steps to protect the privacy of your contacts. More information: **Privacy notice**

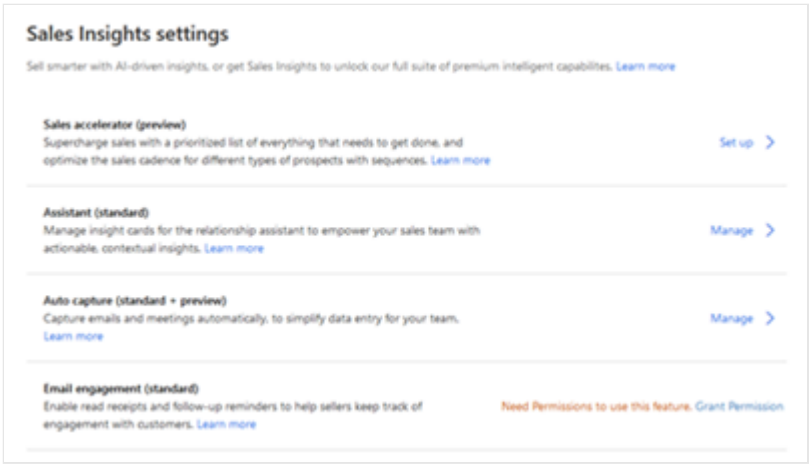
1. Sign in to Dynamics 365 Sales, and go to the Sales Hub app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.



3. In the **Terms of service** section, select **I agree**.



The standard Sales Insights features are enabled for your organization and you can configure features such as the standard assistant, auto capture (standard), and email engagement (standard).



Configure standard Sales Insights features

After you enable the standard Sales Insights features, you can configure the features for your organization.

- To configure the standard assistant, see Configure and manage insight cards for the standard assistant.
- To configure standard auto capture, see Configure and enable auto capture.
- To configure standard email engagement, see Configure and enable email engagement.
- To configure sales accelerator for assignment rules, see Configure assignment rules in Sales Enterprise

Get started with premium Sales Insights features

With your Dynamics 365 Sales Enterprise license, you can set up and experience Sales Premium features such as Sales accelerator, conversation intelligence, and predictive scoring with a limited monthly capacity. More information: Digital selling capabilities in Sales Enterprise

Enable and configure premium Sales Insights features

The premium Sales Insights features provide intelligent insights about sales data that help sellers take timely actions to close deals and generate revenue. The premium Sales Insights features include the premium assistant with assistant studio, notes analysis, relationship analytics, who knows whom, predictive lead scoring, predictive opportunity

scoring, premium forecasting, and sales accelerator and sequence. You can configure these features as required in your organization.

1. Review privacy and personal data requirements.
2. Review the prerequisites.
3. Enable premium Sales Insights.
4. Configure premium Sales Insights features.

Review privacy and personal data requirements

To learn about requirements related to safeguarding customers' privacy and personal data, go to Privacy and personal data for Microsoft Dynamics 365.

You can perform the following tasks in the auto capture, relationship analytics, and conversation intelligence features to ensure that you are complying with privacy and personal data requirements.

Task	Supported Feature	Topic
View KPI data stored for a contact, lead, and opportunity by using system views, and export it to Excel.	Relationship Analytics	View and export KPI data
Retrieve data for a contact, lead, opportunity, and system user from Azure service that is used to compute and store data by using a custom action.	Relationship Analytics and Introduction to Conversation Intelligence	Retrieve insights data using msdyn_RetrieveKPIValuesForGDPR action

Review the prerequisites

Review the following requirements before you install and configure the premium Sales Insights features:

- You must be a Dynamics 365 Sales administrator.
- You must have a Sales Premium, Sales Insights, or a Sales Enterprise license.

> **Note**
> - You can also start a free trial to use the Sales Premium features. More information: **Sign up for a free Dynamics 365 Sales trial**

- If you have a Dynamics 365 Sales Enterprise license, you can install and configure three premium features (sales accelerator, conversation intelligence, and predictive scoring) with a limited monthly capacity. More information: **Digital selling capabilities in Sales Enterprise**

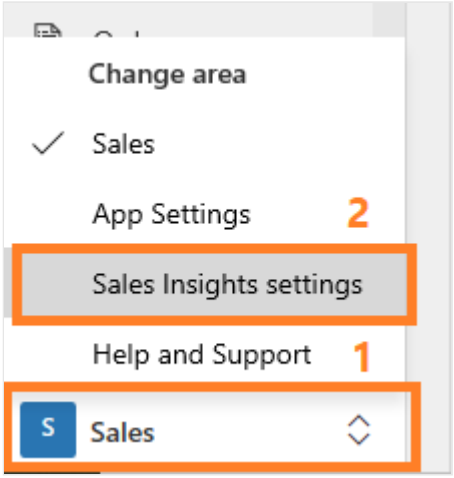
- Assign licenses to each individual to use the features. This is executed within the Microsoft 365 admin center. More information: Assign licenses to users.
- Exchange email server is configured, and a mailbox is enabled using **Email Configurations** in **Settings**. More information: System Settings dialog box - Email tab.

Enable premium Sales Insights

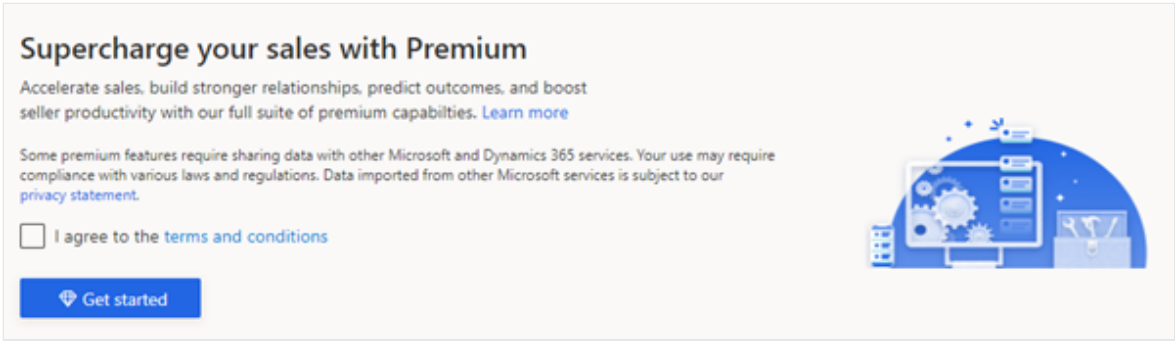
> **Note**
>
> To install and configure three premium features (sales accelerator, conversation intelligence, and predictive scoring) that are available with the Sales Enterprise license, you must go to the **Get started with digital sales page** under **App Settings**. More information: **Digital selling capabilities in Sales Enterprise**

The premium Sales Insights features aren't available by default. You must install these features by accepting the terms and conditions for your organization. To accept the terms and conditions, follow these steps:

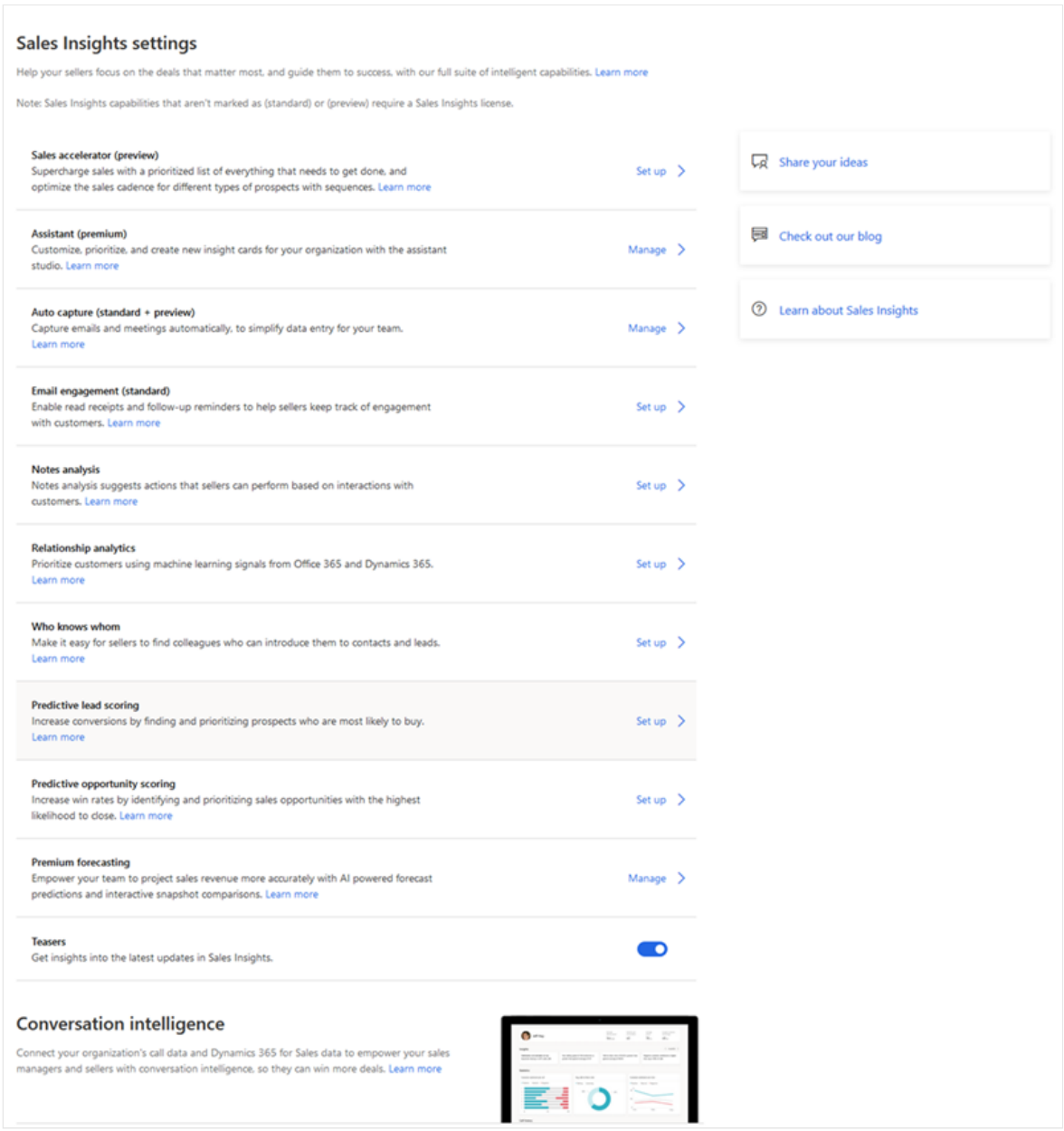
1. Sign in to Dynamics 365 Sales, and go to the Sales Hub app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.



3. In the **Supercharge your sales with Premium** section, select the terms and conditions and then select **Get started**.



The installation may take a few minutes to complete, and the progress is displayed in a dialog. After the installation is complete, you're ready to configure the premium Sales Insights features.



Configure premium Sales Insights features

After installing the premium Sales Insights features, you can configure the premium features as required:

- To configure the premium assistant, see Configure and manage insight cards for the premium assistant.
- To configure notes analysis, see Configure notes analysis.
- To configure relationship analytics, see Configure Relationship analytics.
- To configure who knows whom, see Configure who knows whom.
- To configure predictive lead scoring, see Configure predictive lead scoring.
- To configure predictive opportunity scoring, see Configure predictive opportunity scoring.
- To configure premium forecasting, see About premium forecasting.
- To configure sales accelerator and sequence (preview), see Enable and configure sales accelerator.

Administer conversation intelligence

Conversation intelligence assists the sales managers and sellers in your organization to get an overview of the conversation with customers. Conversation Intelligence helps:

- Sales managers drill down to get call statistics for individual sellers, such as customer sentiment, keywords used, and competitors mentioned in the conversation. Sales managers can use this data to give smarter coaching to sellers and improve the business.
- Sellers analyze their conversation data and identify improvements in the conversation style to enhance sales and generate revenue.

As an administrator, when you sign in to the application for the first time, you can set up the application. After you complete the setup, sales managers and sellers in your organization can sign in and use the application seamlessly. More information: First-run setup experience of Sales Insight application

You can also update each setting later as required. The following configurations are available:

- Connect your Sales environment to gather data and display on KPIs. More information: Connect conversation intelligence to an environment
- Define keywords and competitors that will be tracked in conversations. More information: Configure keywords and competitors to track
- Define how long you want to retain the data in the application, and remove seller-specific data. More information: Data retention and deletion through Privacy
- Enable preview features. More information: Enable preview features

For effective use of Sales Insights

- Use the out-of-the-box entities (Contact, Opportunity, Lead, Account, and Case) while creating records in the application. If changes to the entity are required in your organization, customize only these out-of-the-box entities to meet your requirements. This helps the application to analyze the records, and generate models and predictions effectively.

- Ensure that the **Change Tracking** option for the following entities are enabled: Account, Contact, Lead, Opportunity, System User, Team, Queue, Organization, Email, Phone Call, Task, Appointment, Activity Party, Connection, Business Unit, Metric, Opportunity Product, Product, Opportunity Sales Process, Process Stage, Connection Role, Workflow, Goal, Role, System User Roles, Note, Auto Capture Settings, Auto Capture Rule, and Lead To Opportunity Sales Process.

    1. Go to **Settings** > **Customizations** > **Customize the System**.
    2. On the **Default Solution** page, expand **Entity**, and then select an entity.
    3. On the **General** tab, under **Data Services**, verify that the **Change Tracking** option is enabled.

- Ensure that you do not delete the **Sales Insights MDL Config** solution from the solutions. If this solution is deleted, the Sales Insights features give inaccurate results and might be disabled.

    However, if you want to delete the **Sales Insights MDL Config** solution due to storage issues, uninstall the **SalesInsightsAddOn** solution too. This ensures that the **Sales Insights MDL Config** solution won't be automatically reinstalled when future updates are pushed to your organization.

Privacy notice

For specific privacy information about Dynamics 365 Sales Insights capabilities, see Privacy notice.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales

Hub and Sales Professional apps.

See also

Overview of Dynamics 365 Sales
Improve seller coaching and sales potential with conversation intelligence
Sales Insights privacy notice

Customize forms

Article • 05/15/2023

In Dynamics 365 Sales, sellers use forms to interact with the data they need to do their work. It's important that the forms they use are designed to allow them to find or enter the information they need quickly. Use the form designer to customize the forms included with Dynamics 365 Sales to meet your sales organization's specific needs.

> **Important**
>
> You should only customize forms in the Sales app. Don't customize forms outside the app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

How do forms relate to entities?

A form is a set of fields, or table columns, that match the information your organization tracks for an entity. For example, your organization might have columns in an Orders table that track customers' orders and their requested reorder dates. In this example, Orders is the entity and OrderNumber, Quantity, and ReorderDate are fields in a form that sellers use to manage reorders.

When you publish a customized form, you're publishing an updated version of the entity that's associated with the form.

What forms can you customize?

You can customize any of the following forms in Dynamics 365 Sales:

- Account
- Contact
- Invoice
- Lead
- Opportunity
- Quote

Customize the forms

Select the appropriate tab for your license:

Sales Premium and Sales Enterprise

1. Sign in to Power Apps.
2. Follow the instructions in Create and customize a model-driven app form to create or customize a form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Customize views
Customize business process flows
Column-level security to control access

Customize views

Article • 03/30/2022

In Dynamics 365 Sales, use views to define how a list of records for a specific entity is displayed.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What's a view

A view defines:

- The columns to be displayed.
- The width of columns displayed.
- How the list of records is sorted by default.
- What default filters are applied to restrict which records will appear in the list.

The records that are visible in individual views are displayed in a list, sometimes called a grid, which frequently provides options so that people can change the default sorting, column widths, and filters to more easily see the data that's important to them. Views also define the data source for charts that are used in the application.

Types of views

There are two types of views in Dynamics 365 Sales:

- **System or public views**

System or public views are views that are included with the app or that are created by customizers and made available to some or all users. As a system administrator or system customizer, you can edit the views. System or public views are special views the application depends on, which exist for system entities or are automatically created when you create custom entities. These views have specific purposes and some additional capabilities.

- **Personal views**

  Personal views are created by individual users. They are visible only to that user or to other users they choose to share their personal views with. As a user, you can create a new personal view based on a system or public view. You can't create a system or public view based on a personal view.

Create a system view

Depending on the license you have, select one of the following tabs for more information:

Sales Premium and Sales Enterprise

1. Sign in to Power Apps.
2. Follow the instructions in Create and edit public or system model-driven app views to create views.

Create a personal view

Create personal views with columns and filters that are relevant for you. You can open an existing view and modify the columns, apply filters, and save it as a personal view.

More information:

- Edit columns in the view
- Apply filters
- Create a personal view

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Customize forms
Customize business process flows

Set up branding and theming

Article • 03/30/2022

You can create a custom look and feel (a theme), for your app by making changes to the default colors and visual elements provided in the uncustomized system. For example, you can create your personal product branding by adding a company logo and providing table-specific coloring. The theme colors are applied globally throughout the application.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium or Sales Enterprise

You can apply or create a theme in the Sales Hub app by selecting the **Settings** icon , and then **Advanced settings** > **Customizations** > **Theme**. For more information on how to apply and create a new theme, go to Use a theme to create a custom look for your app.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Admin settings overview

Customize the Dynamics 365 Sales app

Article • 03/30/2022

The Dynamics 365 Sales application is a modular app built to provide capabilities tailored for sales professionals and sales managers. As an administrator or customizer, you can easily customize the tables, dashboards, forms, views, charts, and business processes included in the Sales application using the app designer, without having to write any code.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator or System Customizer More information: Predefined security roles for Sales

Customize the app

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium or Sales Enterprise

To customize the app:

1. Select the app at the upper-right corner of the screen.
2. Go to the **Sales Hub** tile, select **More Options** (...), and then select **Open in App Designer**.
3. Add or edit components to the app, as required. More information: Add or edit app components

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Move from Dynamics 365 Sales Professional to Dynamics 365 Sales Enterprise

Article • 06/27/2022

Learn the steps to upgrade from Sales Professional to Sales Enterprise.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Move from Sales Professional to Sales Enterprise

Dynamics 365 Sales Professional is targeted at businesses that have simpler sales needs and do not require the full sales capabilities. However, if at any point you find your requirements growing, you can easily upgrade to Dynamics 365 Sales Enterprise.

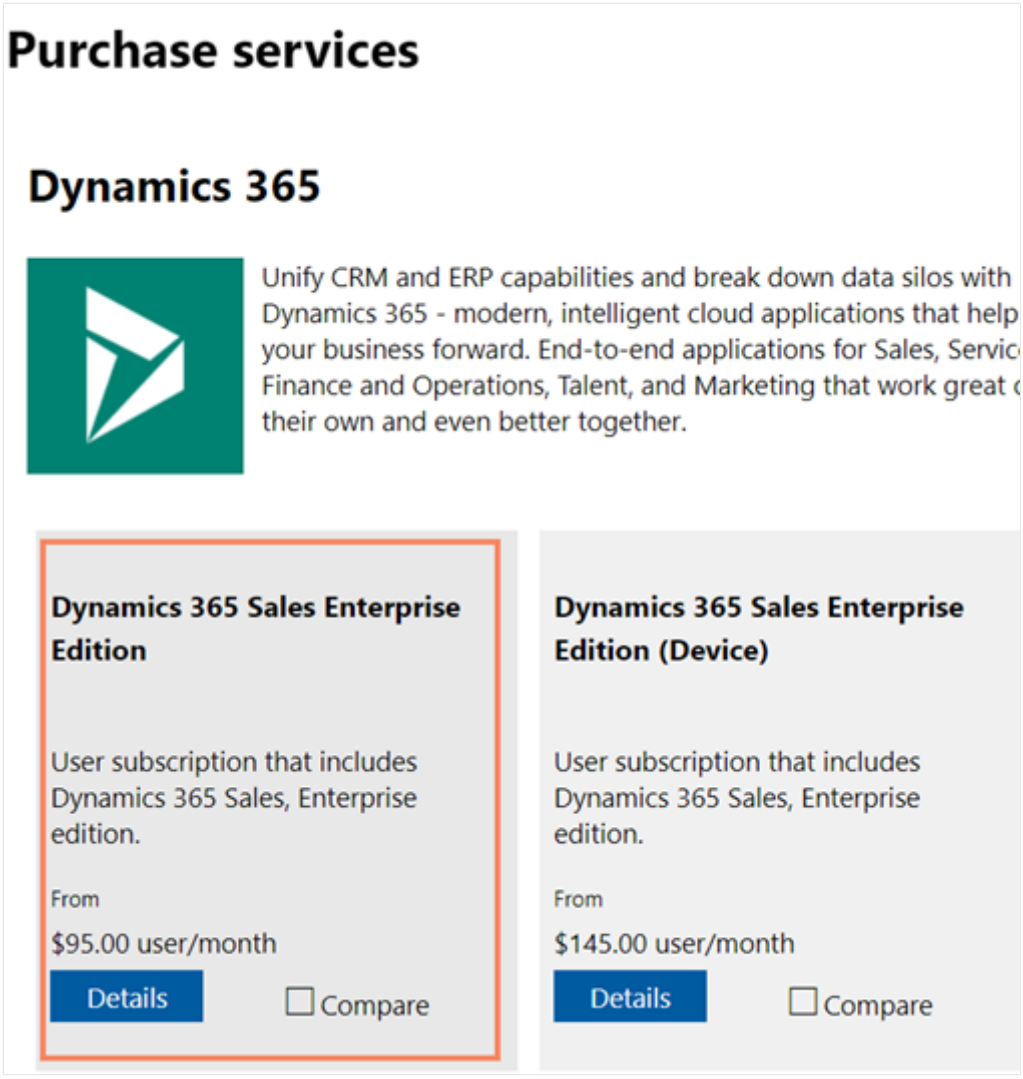
The upgrade process involves the following steps:

1. Purchasing a Dynamics 365 Sales Enterprise subscription.
2. Assigning Dynamics 365 Sales Enterprise licenses to the users.
3. Installing the Dynamics 365 Sales Enterprise edition solution.
4. Deleting the Dynamics 365 Sales Professional solution.

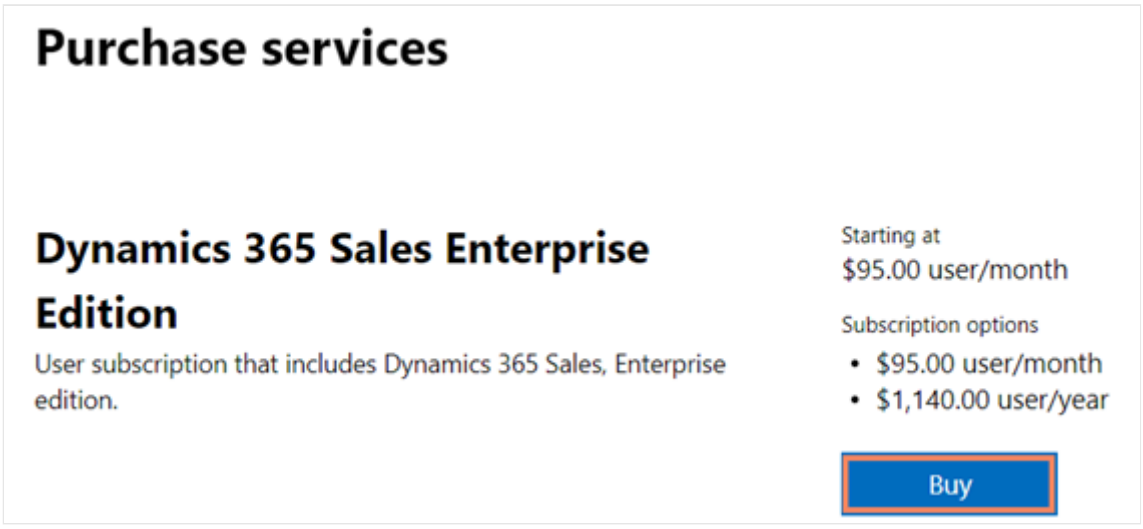
Purchase Dynamics 365 Sales Enterprise Edition subscription

1. Sign in to Microsoft 365 admin center with the Dynamics 365 account that has admin permissions.

2. In the navigation pane, select **Purchase Services**, and then select the Dynamics 365 Sales Enterprise Edition tile.



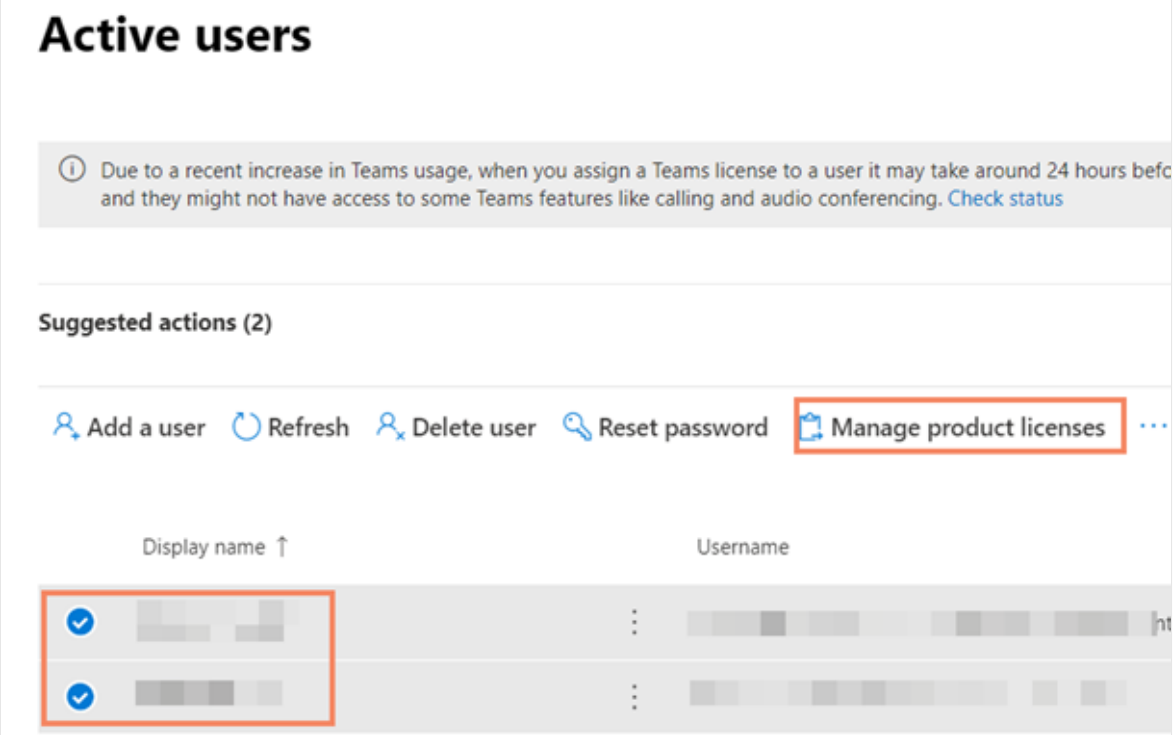
3. Select **Buy**, and then follow the steps to purchase new licenses.



Assign licenses to your users

After you've purchased the licenses, assign the licenses to users.

1. Go to Microsoft 365 admin center, and in the navigation pane, select **Users** > **Active users**.
2. Select multiple users, and then select **Manage product licenses**.

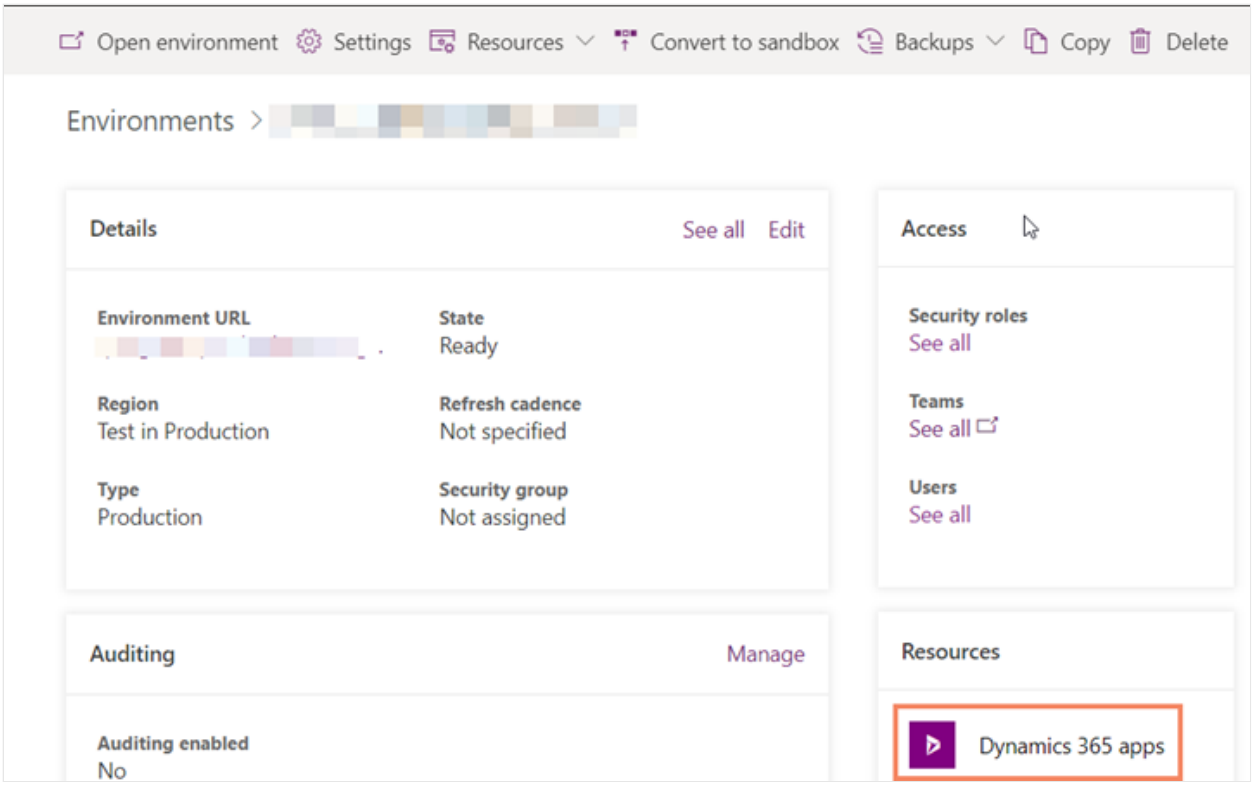


3. Select **Replace existing product license assignments**, and then select **Next**.
4. Turn on the license for your Dynamics 365 Sales plan.
5. Select **Replace**, and then select **Close** twice.
6. Review the license status on the **Active users** page and make other assignments as needed.

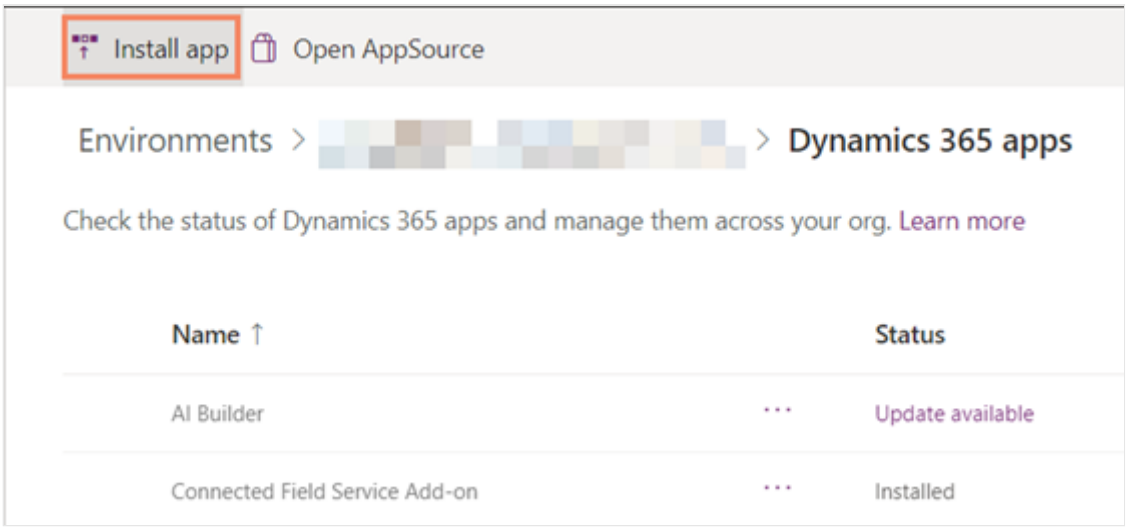
Install Dynamics 365 Sales Enterprise solution

To install the Sales Enterprise solution on a Power Platform environment with Dynamics 365 apps enabled:

1. Sign in to the Power Platform admin center at https://admin.powerplatform.microsoft.com as an admin (Dynamics 365 admin, Global admin, or Power Platform admin).
2. In the navigation pane, select **Environments**.
3. Open the environment in which you want to install the Sales Enterprise solution, and select **Dynamics 365 apps**.



4. On the command bar, select **Install app**.



5. In the **Install Dynamics 365 apps** panel, select 'Dynamics 365 Sales, Enterprise Edition app', and select **Next**.

6. Agree to the terms of service, and then select **Install**.

After you complete these steps, your organization will be effectively upgraded to Dynamics 365 Sales Enterprise.

Delete the Dynamics 365 Sales Professional solution

1. Make sure that you have the System Administrator or System Customizer security role or equivalent permissions.
2. Sign in to Dynamics 365.
3. Select **Settings** > **Solutions**.
4. Select the Dynamics 365 Sales Professional solution and select **Delete**.

> **Note**
>
> When you delete this solution, the Sales Pro app module is deleted, and any configuration specific to this app module such as its site map and form preferences are also lost.

> **Important**
>
> As per contractual agreement, you can't mix and match Enterprise and Professional users on the same instance. If you plan to keep Professional licenses, make sure you abide by the contractual requirements. More information: **Microsoft Dynamics 365 Licensing Guide**

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Dynamics 365 Licensing Update

Move from Dynamics 365 Sales Enterprise edition to Dynamics 365 Sales Professional

Article • 03/30/2022

Learn how to purchase, assign, and install Sales Professional license so that you can switch from Sales Enterprise to Sales Professional.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Move from Sales Enterprise to Sales Professional

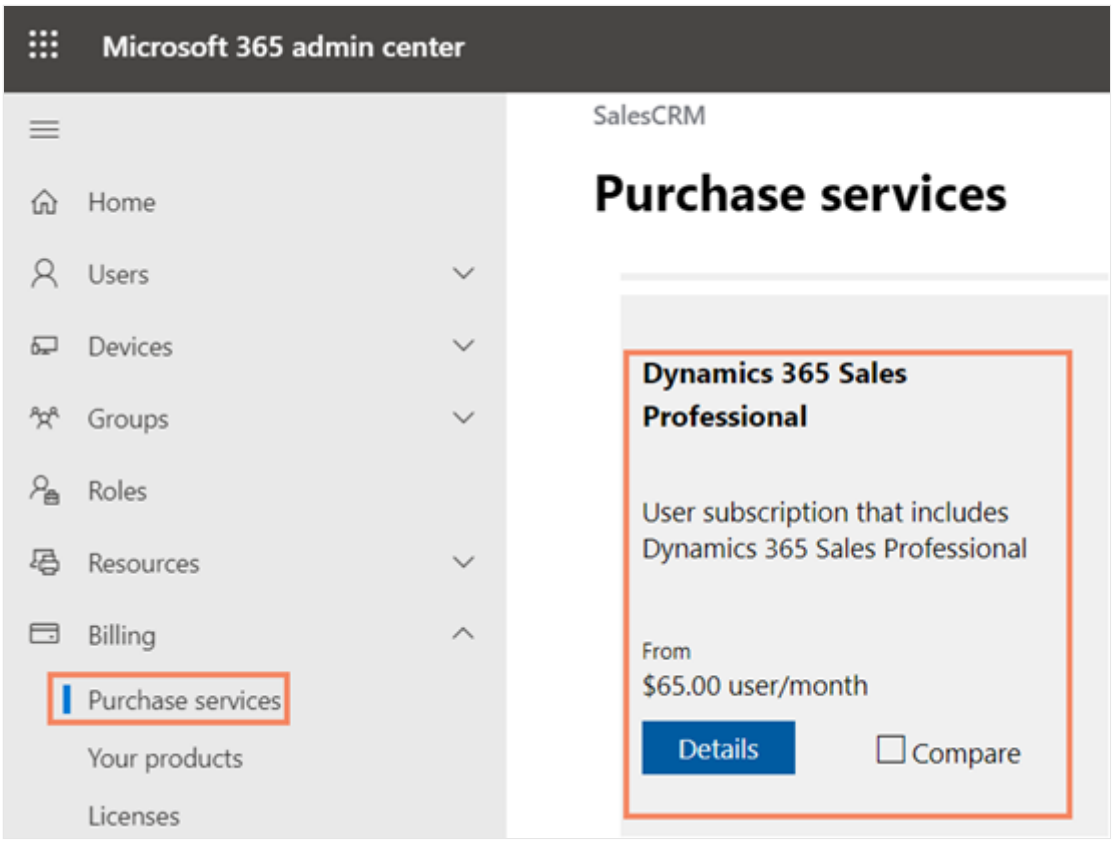
Dynamics 365 Sales Professional is targeted at businesses that have simpler sales needs and do not require the full sales capabilities. If you ever want to switch from Dynamics 365 Sales Enterprise to Dynamics 365 Sales Professional, do the following:

1. Purchase a Dynamics 365 Sales Professional subscription.
2. Assign Dynamics 365 Sales Professional licenses to the users.
3. Install the Dynamics 365 Sales Professional edition solution.
4. Delete the Dynamics 365 Sales Enterprise edition solution.

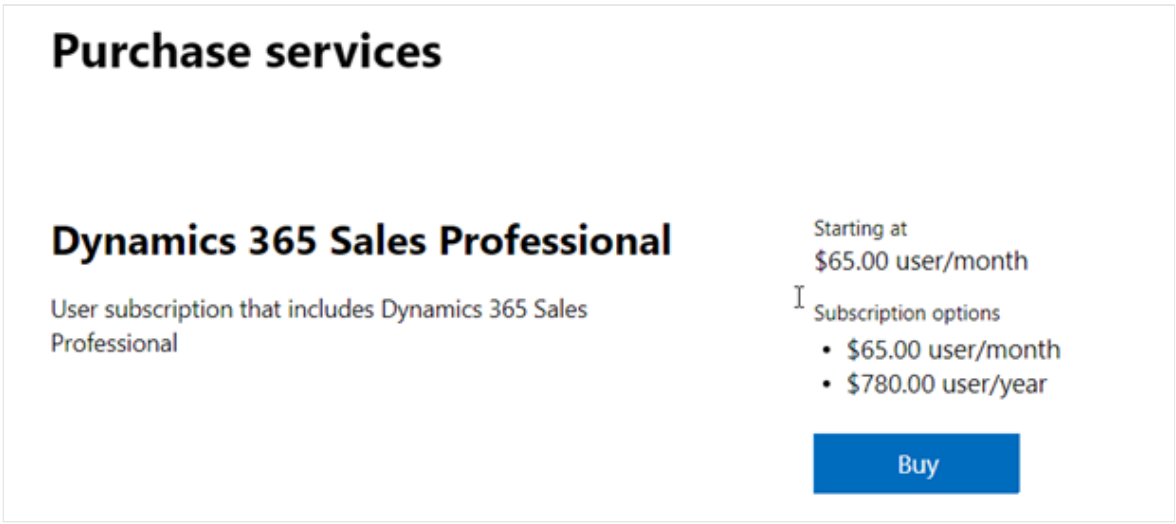
Purchase Dynamics 365 Sales Professional subscription

1. Sign in to Microsoft 365 admin center with the Dynamics 365 account that has admin permissions.

2. In the navigation pane, select **Purchase Services**, and then select the Dynamics 365 Sales Professional tile.



3. Select **Buy**, and then follow the steps to purchase new licenses.

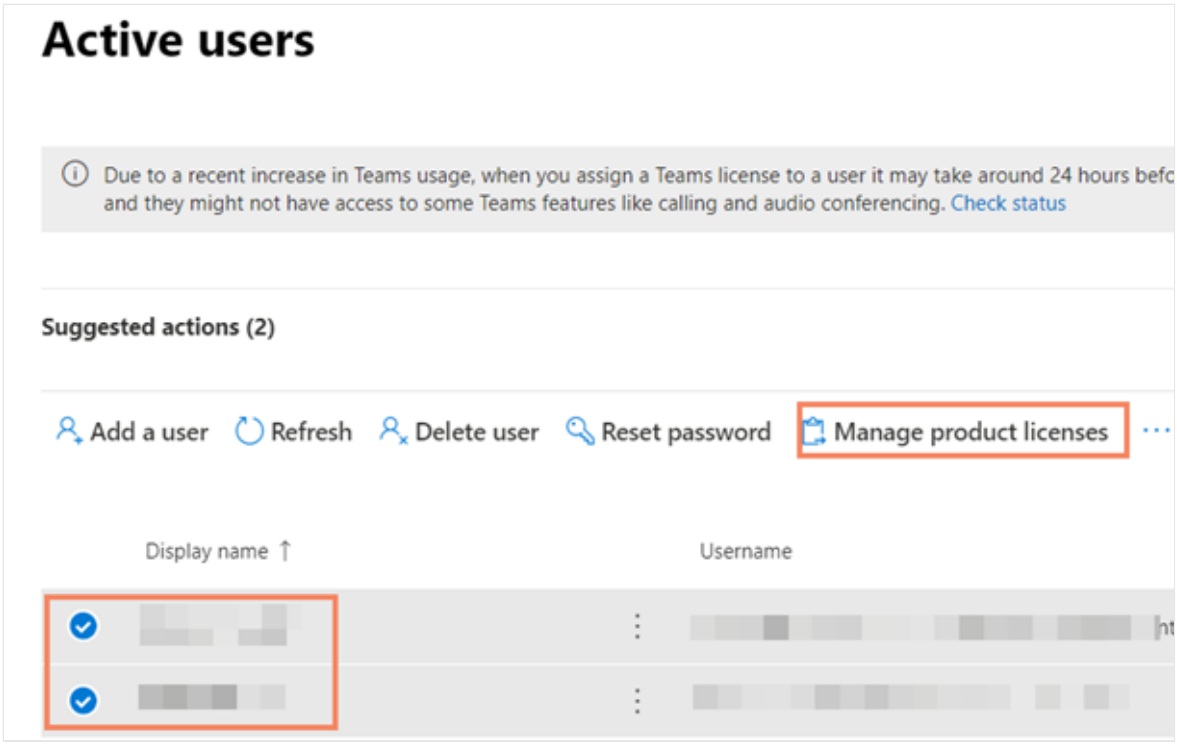


Assign licenses to your users

After you've purchased the licenses, assign the licenses to users.

1. Go to Microsoft 365 admin center, and in the navigation pane, select **Users** > **Active users**.

2. Select multiple users, and then select **Manage product licenses**.



3. Select **Replace existing product license assignments**, and then select **Next**.
4. Turn on the license for your Dynamics 365 Sales plan.
5. Select **Replace**, and then select **Close** twice.
6. Review the license status on the **Active users** page and make other assignments as needed.

Install Dynamics 365 Sales Professional solution

Go to the Microsoft 365 admin center to install Dynamics 365 Sales app (solution) to your production environment. For more information, see Install Dynamics 365 Sales Professional

After you complete these steps, your organization will be effectively moved to Dynamics 365 Sales Professional.

Delete the Dynamics 365 Sales Enterprise solution

1. Make sure that you have the System Administrator or System Customizer security role or equivalent permissions.
2. Sign in to Dynamics 365.

3. Select **Settings** > **Solutions**.
4. Select the Dynamics 365 Sales Enterprise solution and select **Delete**.

> **Note**
>
> When you delete this solution, the Sales Enterprise app module is deleted and any configuration and customization specific to this app module such as its site map or form preferences are also lost.

> **Important**
>
> As per contractual agreement, you can't mix and match Enterprise and Professional users on the same instance. If you plan to keep Professional licenses, make sure you abide by the contractual requirements. More information: **Microsoft Dynamics 365 Licensing Guide**

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Dynamics 365 Licensing Update

Upgrade to Dynamics 365 Sales Premium

Article • 05/11/2023

Learn how to upgrade from Dynamics 365 Sales Enterprise to Dynamics 365 Sales Premium.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Benefits of upgrading to Dynamics 365 Sales Premium

Sellers achieve more with Dynamics 365 Sales Premium as they align to new customer engagement expectations and transformational business opportunities. With Sales Premium, sellers:

- Spend their time on the activities that make them more productive
- Build stronger relationships with their customers
- Stay on top of their pipeline

Using data from Dynamics 365 and the entire Microsoft 365 ecosystem, the Sales Insights add-in for Dynamics 365 Sales offers a comprehensive set of intelligent capabilities, including AI-powered insights and recommendations, to help sellers work less and sell more.

The Sales Premium license includes both Sales Enterprise and Sales Insights. If you've previously used digital selling capabilities with limited capacity, upgrade to get the full capacity of sales accelerator, conversation intelligence, and predictive scoring, along with the following Sales Insights benefits:

- **Guided selling** guides sellers on their next course of action with timely and actionable insights.
- **Productivity intelligence** frees up sellers' time by minimizing manual data entry with contextual, real–time suggestions, making sure your data is always up to date.
- **Relationship intelligence** uses AI-guided selling to build stronger relationships with customers and move relationships forward. Take preemptive steps to mitigate risks with a relationship health score.
- **Predictive models** increase conversion and win rates by using AI to prioritize leads and opportunities with the highest likelihood to convert and buy.

Dynamics 365 Sales Premium licensing and pricing

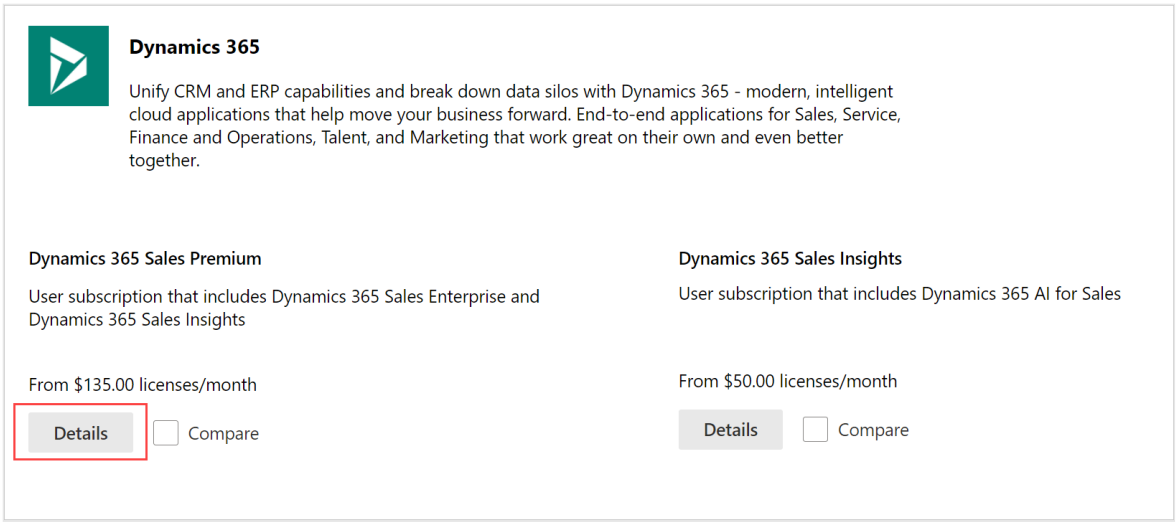
You can upgrade your existing Dynamics 365 Sales Enterprise license to Sales Premium or purchase Sales Insights separately. Information about licenses and Sales Insights pricing is available from your Microsoft account team and partner service provider, or at https://dynamics.microsoft.com/pricing/#Sales .

Upgrade a Sales Enterprise license

- Contact us to upgrade a Dynamics 365 Sales Enterprise or Sales Professional license with the purchase of Sales Insights for Dynamics 365 or a Dynamics 365 Sales Premium package.
- Contact your Microsoft business partner or your Microsoft account manager.
- Buy a full license from Dynamics 365.
- Purchase a license from the Microsoft 365 admin center.

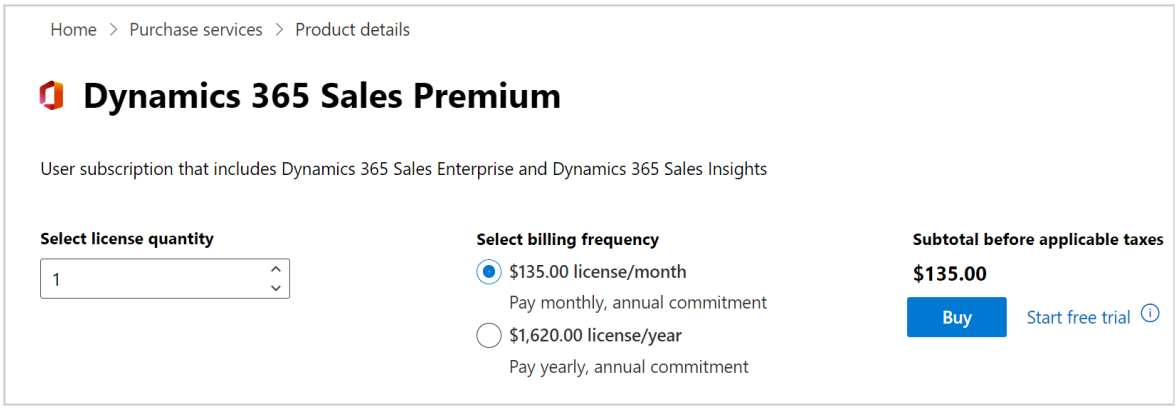
Purchase a Sales Premium license from the Microsoft 365 admin center

1. Go to the Microsoft 365 admin center .
2. In the left pane, select **Billing**, and then select **Purchase services**.
3. Find **Dynamics 365 Sales Premium**, and then select **Details**.



4. In **Select license quantity**, select or enter the number of licenses to purchase.

5. Select **Buy**, and then complete the purchase process.



See also

Dynamics 365 licensing update

Dynamics 365 Sales pricing

Frequently asked questions about Sales Premium

Resources for administrator and sales manager

Navigate to the administration and configuration documentation based on what you want to do.

User and team management

HOW-TO GUIDE

Create users and assign security roles

Create a team template to control access rights for automatically created teams

Security roles and privileges

Create or edit business units

Sales & product catalog setup

HOW-TO GUIDE

Set up sales territories to organize business markets by geographical area

Set up a product catalog

Set up discount lists

Create a unit group and add units

Set up a product families

Define product pricing with price lists

Sales settings

Sales Copilot

CONCEPT

Sales Copilot overview

HOW-TO GUIDE

Enable and set up Sales Copilot

Configure Sales Copilot

Sales Copilot data movement across geographies

Sales premium

CONCEPT

About premium forecasting

First-run setup experience for conversation intelligence

HOW-TO GUIDE

Configure the sales accelerator

Configure the assistant

Configure predictive lead scoring

Configure predictive opportunity scoring

Configure relationship analytics and health

Upgrade/downgrade

HOW-TO GUIDE

Upgrade from Dynamics 365 Sales Professional to Dynamics 365 Sales Enterprise

Move from Dynamics 365 Sales Enterprise edition to Dynamics 365 Sales Professional

Goal management

HOW-TO GUIDE

Goals settings

Create or edit goals

Define goal rollup queries

Define a goal metric

Troubleshooting

HOW-TO GUIDE

Dynamics 365 Sales troubleshooting guide

Security

OVERVIEW

Enhance security by encrypting your data

Support for customer lockbox

Support for customer-managed key

HOW-TO GUIDE

Manage encryption key

Dynamics 365 Sales mobile app

HOW-TO GUIDE

Prerequisites for the mobile app

Modify quick view forms

Create custom push notifications

Overview of admin settings

Article • 03/24/2023

Admin settings provide an organized and unified experience for administrators to easily configure the sales app from a single place.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Access admin settings

System administrators in Dynamics 365 Sales are the users who have the System Administrator role or equivalent permissions assigned. Dynamics 365 Sales offers an organized and unified experience to administrators so that they can quickly and easily configure their sales app from a single place.

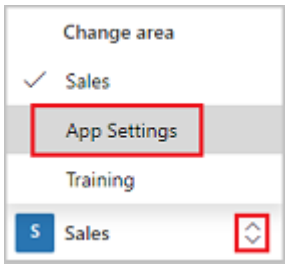
Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

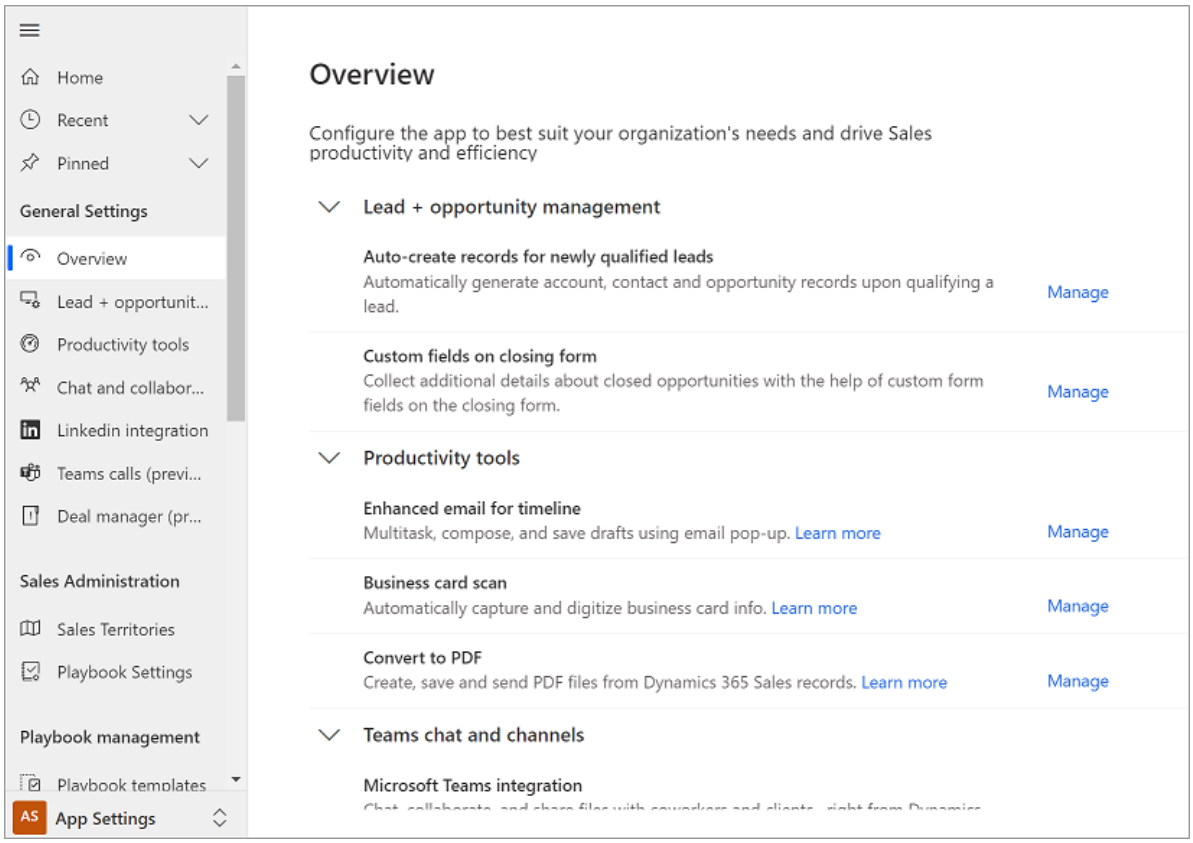
Sales app settings

The Sales app settings include settings for core sales areas such as lead, opportunity, and product management, productivity tools, Teams and LinkedIn integration, goals and forecasts, and so on.

To open the app settings, select **Change area** at the bottom of the site map, and then select **App Settings**.



The settings for different product areas are categorized as such.



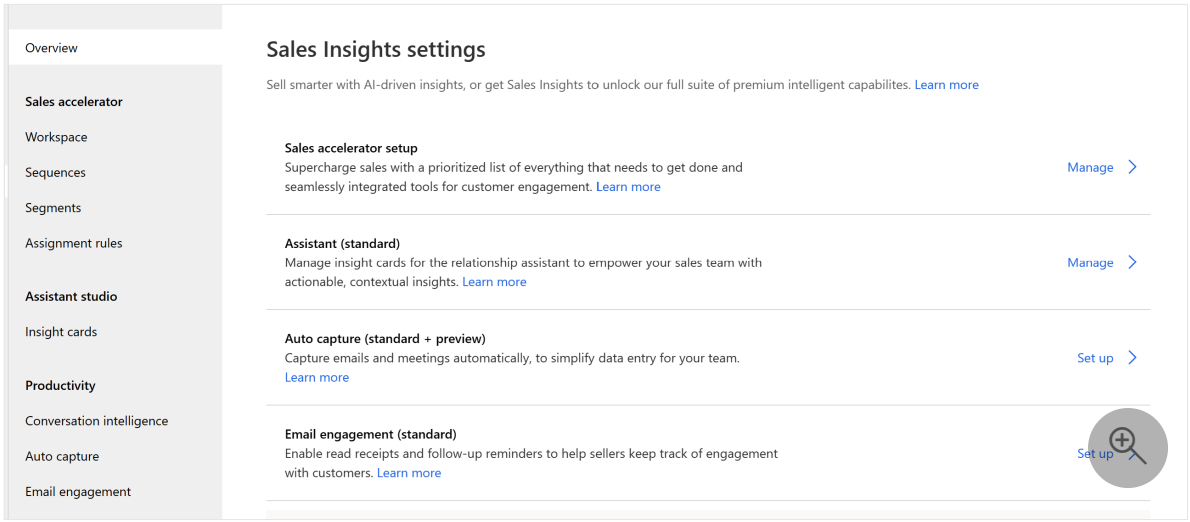
> **Note**
>
> These settings are also available in the legacy web client but have been consolidated in one place in the Sales Hub app for ease of use.

> **Tip**
>
> By default, this new unified settings experience is available only in the Sales Hub app. To learn how to enable this experience in custom applications, see **Leverage the unified settings experience in a custom sales application** in the **Simplified system configuration in Dynamics 365 Sales** blog.

Sales Insights settings

The Sales Insights settings include settings for standard and premium sales insights features such as, sales accelerator, email engagement, relationship intelligence, predictive scoring, sales accelerator, and so on.

To open the Sales Insights settings, select **Change area** at the bottom of the site map, and then select **Sales Insights Settings**. More information: Install and administer Sales Insights features



To configure and use the premium sales insights features, you must have a Dynamics 365 Sales Premium license. For more information, see Dynamics 365 Sales pricing.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Define lead qualification experience
Enable customization of the Opportunity Close form
Set up enhanced email

Enable or disable saving of business card image

Enable or disable PDF generation from sales records

Digital selling capabilities in Sales Enterprise

Article • 09/13/2023

Use selected Dynamics 365 Sales Premium features—sales accelerator, conversation intelligence, relationship intelligence, and predictive scoring—with the Dynamics 365 Sales Enterprise license.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

Dynamics 365 digital selling capabilities spearhead the digital transformation of sales organizations and constitute the data and productivity first revolution. You can enhance your digital selling programs with Sales Premium features such as the sales accelerator, conversation intelligence, relationship intelligence, and predictive scoring that are available with the Dynamics 365 Sales Enterprise license. The premium features are available with a limited monthly capacity. If you'd like access to all the premium features, upgrade to Dynamics 365 Sales Premium.

In the Sales Hub app, you can set up digital selling capabilities from the **Get started with digital sales** page under **App Settings**.

> **Note**
>
> If you have a Dynamics 365 Sales Premium license, you can still use this page to quickly set up the features. The only difference would be that there's no monthly capacity limit.

https://www.microsoft.com/en-us/videoplayer/embed/RWQCj0?postJsllMsg=true

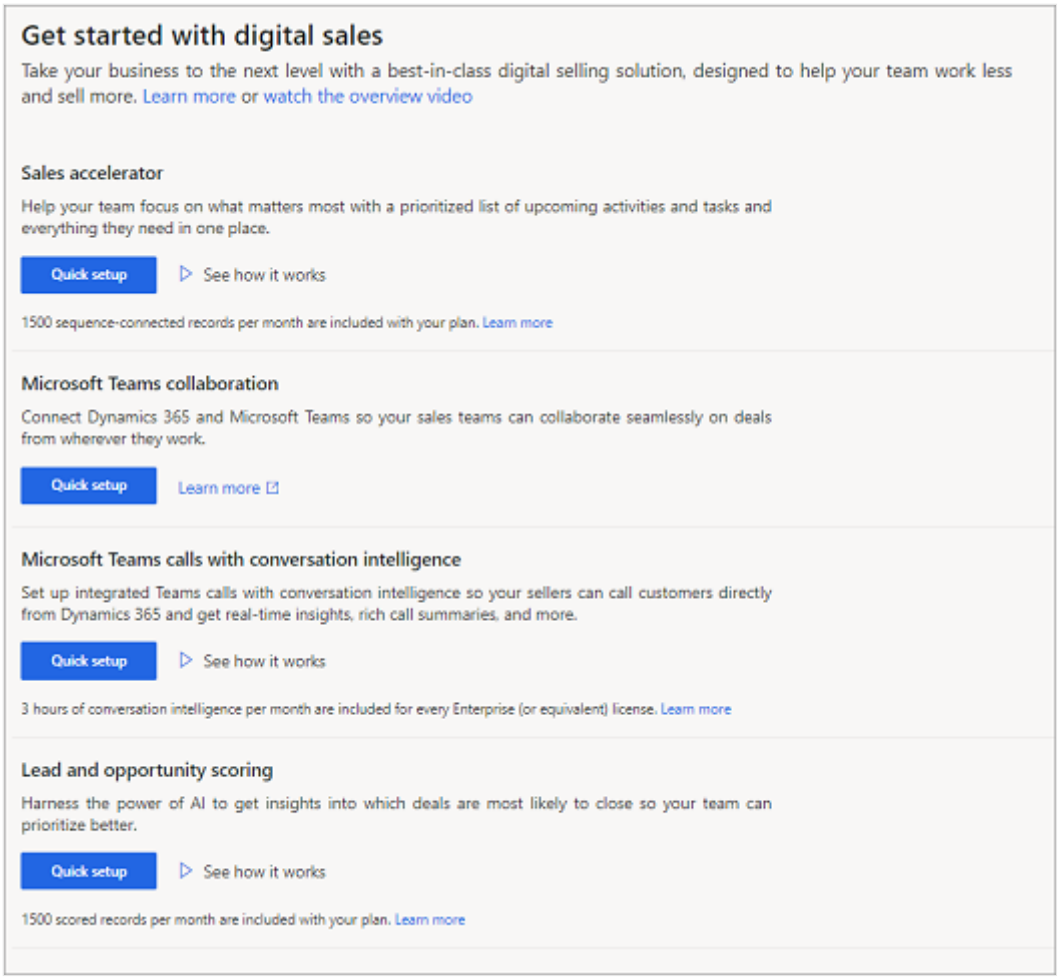
Licensing options

When you set up digital sales with Sales Enterprise license, you get to explore Sales Premium features such as the sales accelerator, conversation intelligence, relationship intelligence, and predictive scoring with a limited monthly capacity. If you need more capacity or would like access to all the premium features, you must upgrade to Dynamics 365 Sales Premium. The following table contains information about the capacity available with the Sales Enterprise and Sales Premium licenses.

Feature	Sales Enterprise license	Sales Premium license
Sales accelerator	1,500 sequence-connected records per month	No limit
Conversation intelligence	No limit	No limit
Predictive lead and opportunity scoring	1,500 records per month	No limit
Relationship intelligence	Basic relationship insights and who knows whom information, generated from Dynamics 365 data.	Advanced relationship insights and who knows whom information, generated from Dynamics 365 and Exchange data.

1. In the lower-left corner of the screen, select **Change area** and then select **App Settings**.

   The **Get started with digital sales** page is displayed.

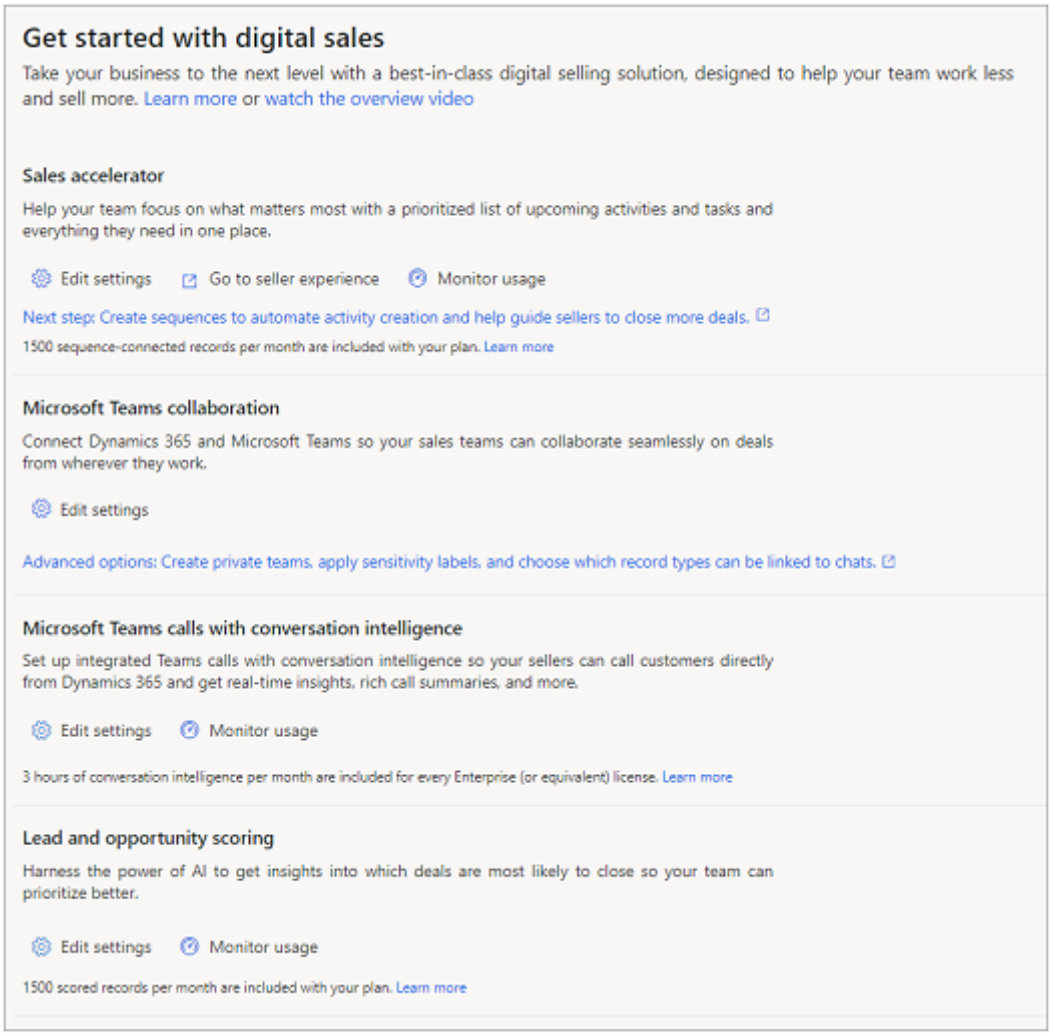


2. Use the **Quick setup** button to quickly set up the features as described in the following sections:

   - Sales accelerator
   - Microsoft Teams collaboration
   - Microsoft Teams calls with conversation intelligence
   - Lead and opportunity scoring

   > **Note**
   >
   > Basic relationship insights and who knows whom information are available for early access to Sales Enterprise customers out-of-the-box and does not require any setup. More information: **View relationship analytics and KPIs**.

   After you've set up the features, the **Quick setup** button changes to **Edit settings**. Select **Edit settings** to update the settings as required.



> **Note**
>
> If you need to make advanced configurations, you can go to the advanced settings page for each of the Sales Premium features. The settings you update in one place will be reflected in both quick setup and advanced settings.

See also

Configure the sales accelerator for Sales Premium
Install and set up Microsoft Teams integration
First-run setup experience of Microsoft Teams for conversation intelligence
Configure predictive lead scoring
Configure predictive opportunity scoring

Sales accelerator

Article • 05/10/2022

Help your team focus on what matters most with a prioritized list of upcoming activities and tasks.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

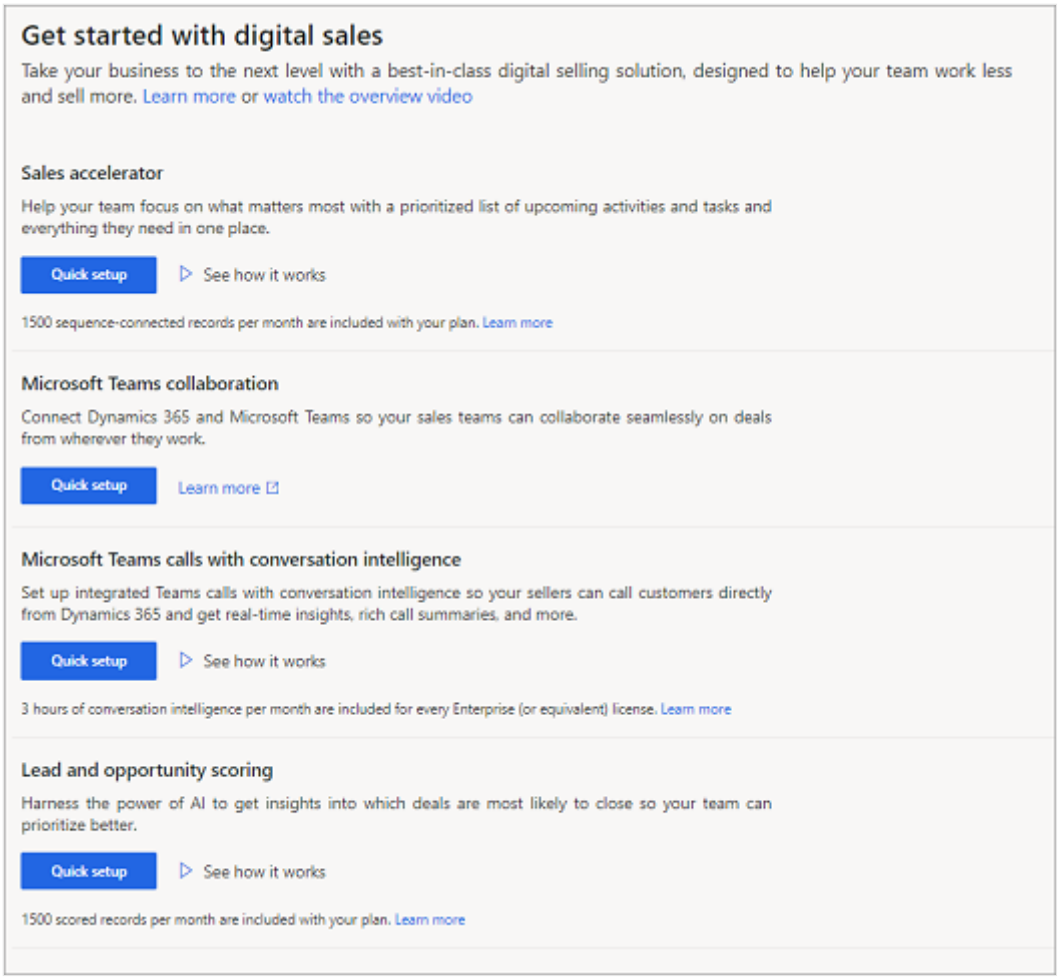
The sales accelerator is an engagement platform that helps you understand your customers' needs and respond in meaningful ways. It allows your sellers to engage with your customers by using multiple channels within one workspace. The sales accelerator in Dynamics 365 provides a tailored experience for sellers by minimizing the time they spend on their search for the best next customer to reach out to. It gathers information from multiple sources and lets sellers focus on how to best approach their customers. It helps sellers to sell smartly, by building a strong and prioritized pipeline, offering context, and surfacing automated recommendations throughout a sales sequence that helps to speed the sales process. More information: What is the sales accelerator?
https://www.microsoft.com/en-us/videoplayer/embed/RWQCjf?postJsllMsg=true

Licensing options

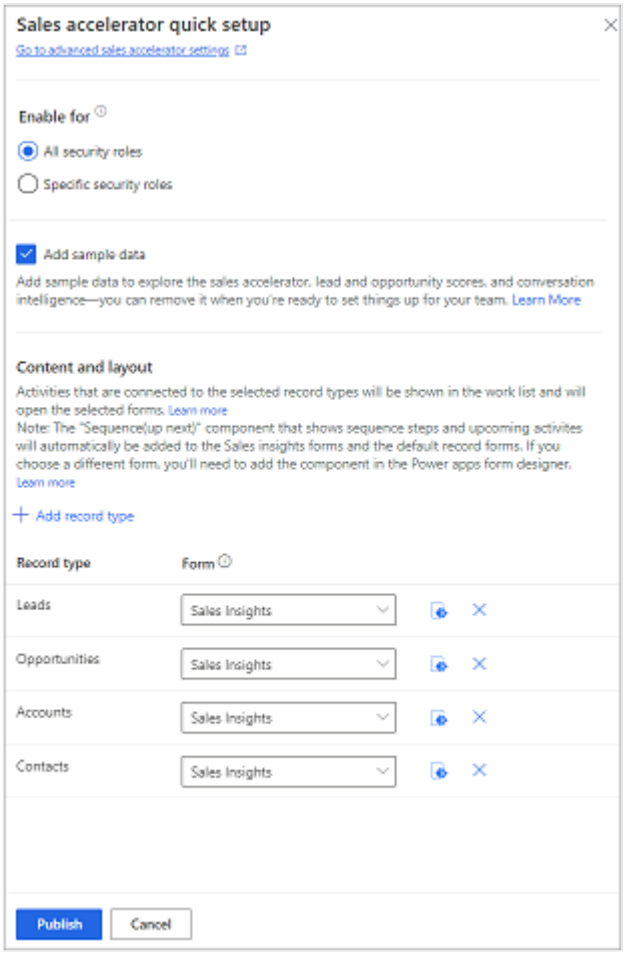
When you set up the sales accelerator with the Dynamics 365 Sales Enterprise license, you get 1,500 sequence-connected records per month. If you need more than 1,500 sequence-connected records per month, upgrade to Dynamics 365 Sales Premium.

Set up the sales accelerator

1. On the **Get started with digital sales** page, under **Sales accelerator**, select **Quick setup**.



The **Sales accelerator quick setup** panel is displayed.



2. In the **Enable for** section, choose one of the following options to grant permissions to use sales accelerator features:

    - **All security roles**: Select this option to give access to view the sales accelerator in the Sales Hub app to all the security roles in your organization.
    - **Specific security roles**: Select this option to specify security roles to give access to view the sales accelerator in the Sales Hub app to just a few users. Use the lookup box to add the security roles.

3. To add sample data for exploring the feature, select **Add sample data**.

    > ⓘ Note
    >
    > The capability to install sample data is available only in your sandbox or trial environments. When you add sample data, you'll also see predictive lead and opportunity scoring on the **Sales Insights** form. Adding the sample data might take a few minutes. If you choose to ignore sample data installation at this point, you can add it later when you need it.

4. In the **Content and layout** section, select the record types and their corresponding related forms that are required in your organization.

    a. To add more record types, select **Add record type**, and then select a record from the dropdown list. The selected record type will display the **Sequence (up next)** widget. You can select out-of-the-box tables—such as **Accounts**, **Contacts**, **Leads**, and **Opportunities**—or custom tables.

    > ⓘ Note
    >
    > - Ensure that the record types you select are the ones that activities are usually connected to. Sales managers use the record types to configure the sequence that will be assigned to records to be displayed in the app.
    > - To view the custom record types in the list, go to **Settings** > **Customizations** > **Customize the System** > **Components** > **Entities**. Under **Communication & Collaboration**, enable the options **Activities**, **Connections**, and **Sending email (If an email field does not exist, one will be created)**.
    > - To add the **Up next** widget to your custom entity form, go to **Add the Up next widget to an entity form**.

b. Select a form for the selected record.

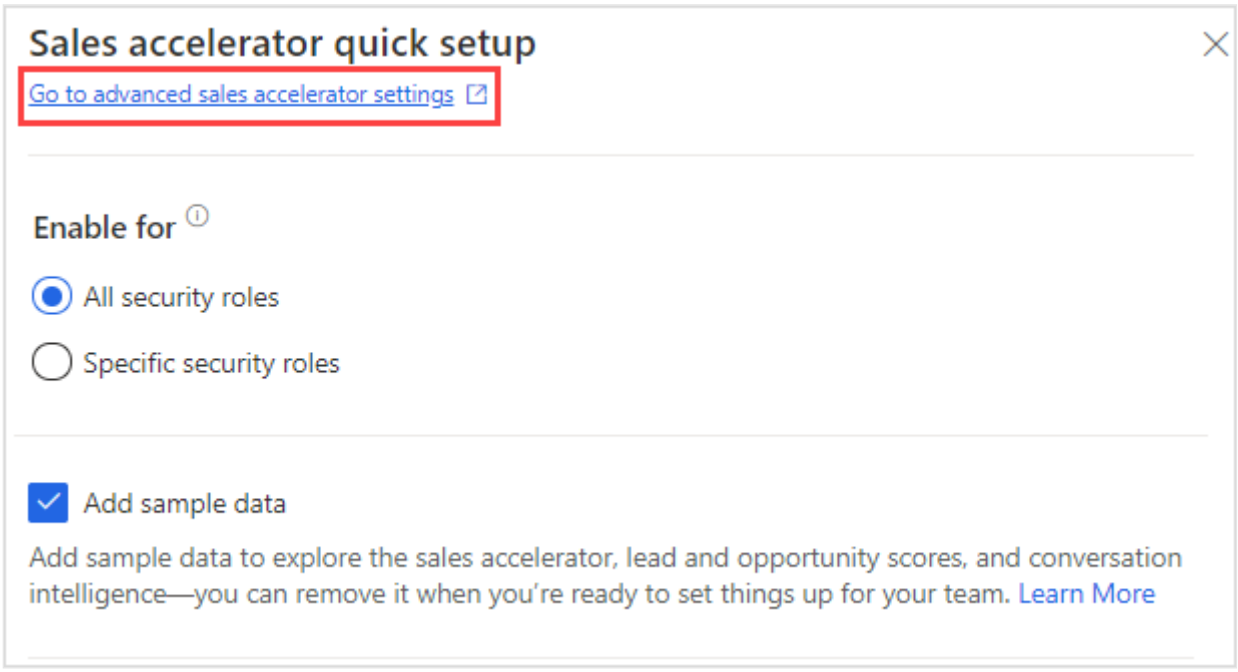
> **Note**
>
> - You can remove the record types that no longer need to have automated activities associated with them. Select the **X** icon next to the record type to remove it from the list. Note that if the records in the deleted record type are associated with a sequence, these records will continue to be associated with the sequence.
> - To know how records are populated in the work list, go to **View my records by using the work list**.

5. To publish the changes, select **Publish**.

After the settings are published, you can open the seller's interface for the sales accelerator by selecting **Go to seller experience** under **Sales accelerator** on the **Get started with digital sales** page. Sellers can immediately use the sales accelerator for manually created activities. However, you can also guide your sellers by creating sequences. For information about creating sequences, go to Manage sequences.

Advanced settings

If you want to make advanced configurations for sales accelerator, select **Go to advanced sales accelerator settings** at the top of the quick setup panel. For information about advanced configurations, go to Configure the sales accelerator for Sales Premium.



Add the sales accelerator to a custom app

If you've created a custom app, you can add the sales accelerator to it from the app designer. More information: Add the sales accelerator site map entry to custom app

Monitor usage

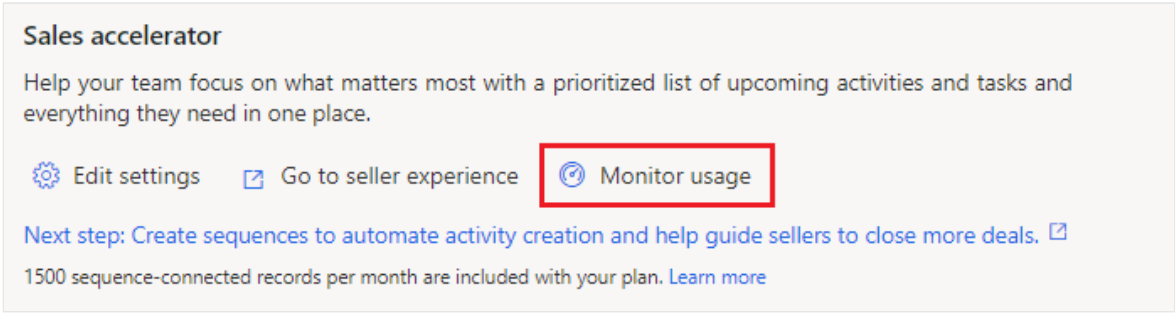
As an administrator, you can monitor the number of records that have been connected to sequences over a period of seven months.

If you're using the sales accelerator with your Sales Enterprise license, you get 1,500 sequence-connected records per month. A warning symbol is displayed whenever the usage exceeds the monthly limit. Hover over the symbol to see the message. In such a case, you must upgrade to the Sales Premium license to enjoy full benefits with no monthly limit.

> **Important**
>
> - The data in the usage panel is refreshed every 24 hours.
> - Usage metrics are powered by the Power Automate flow **Sales insights sequence daily usage flow**. Without this flow, the usage report won't reflect the correct data. If the Power Automate flow is disabled, you must enable the flow to reactivate usage metrics. For information on enabling the flow, go to Turn flows on.

To monitor the usage of the sales accelerator

- On the **Get started with digital sales** page, under **Sales accelerator**, select **Monitor usage**.



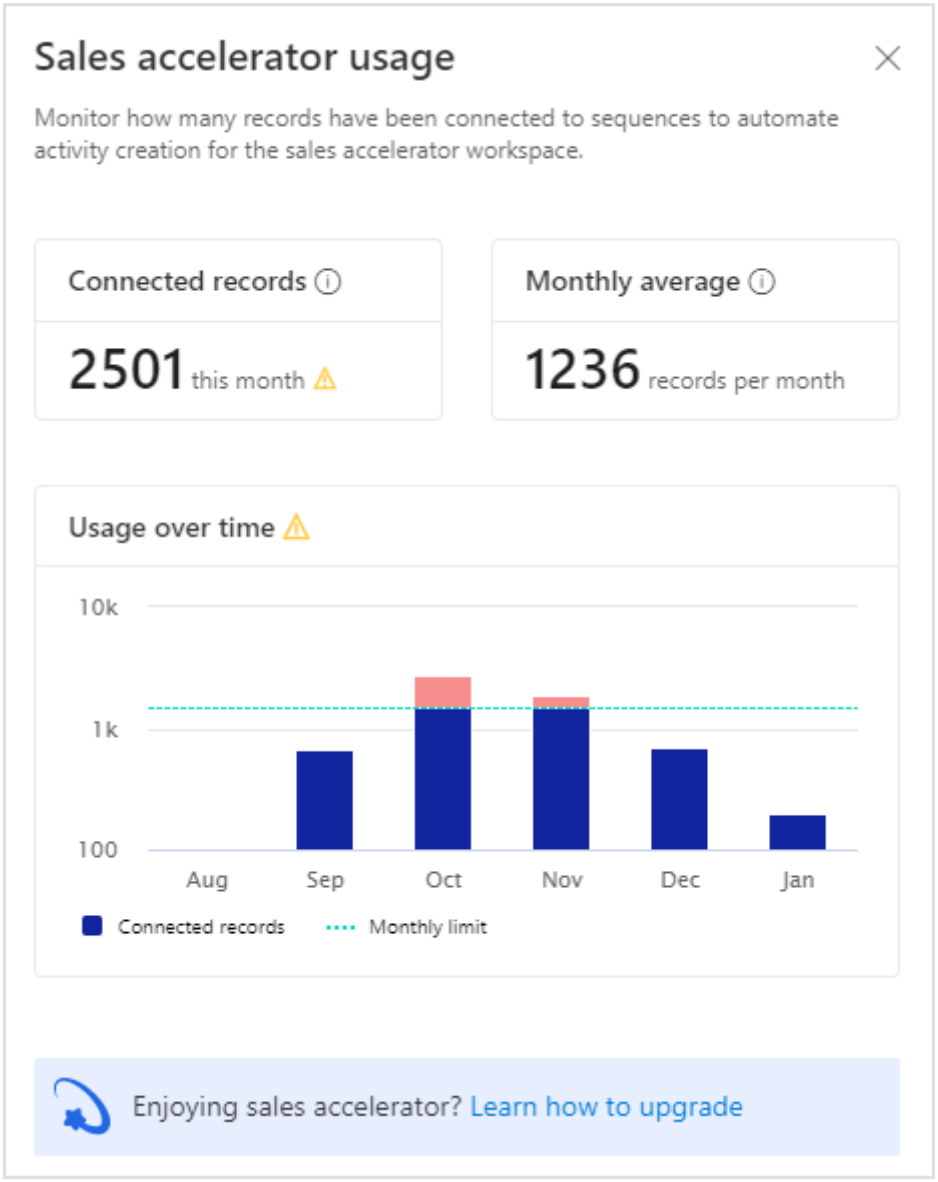
  The **Sales accelerator usage** panel is displayed with the following information:

  - **Connected records**: Displays the total number of records connected to sequences so far in the current month. If the monthly limit is exceeded in a

month (for Sales Enterprise license users), a warning symbol is displayed.

- **Monthly average**: Displays the average number of records connected to sequences over the last six full months of usage.
- **Usage over time**: Displays the monthly usage of the sales accelerator for the last six months in a graphical format. If the monthly limit is exceeded in a month (for Sales Enterprise license users), a warning symbol is displayed.

  The monthly limit is shown with a blue line in the graph. When the limit is exceeded in a month, the number of records in excess of 1,500 are shown in red.

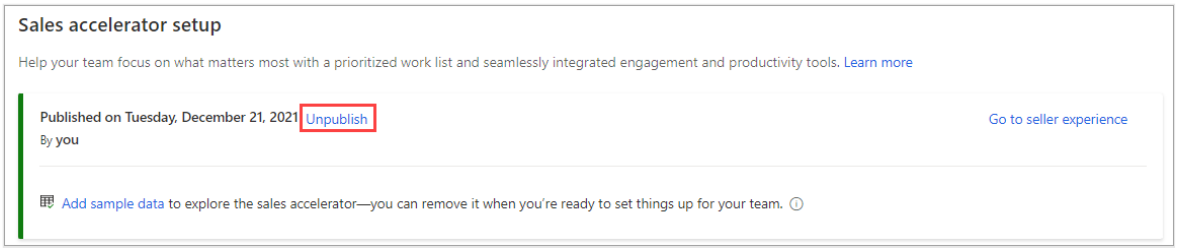


Turn off the sales accelerator

If you want to turn off the sales accelerator, you can do it from the advanced settings.

1. Select **Go to advanced sales accelerator settings** at the top of the quick setup panel.

2. On the **Sales accelerator setup** page, select **Unpublish**.



3. In the confirmation dialog, select **Unpublish**.

Add the sequence (Up next) widget to a custom form

By default, the **Up next** widget is available only in the out-of-the-box Sales Insights, lead, and opportunity forms. If you're using customized forms, you can display the Up next widget on your custom forms. For information about adding the **Up next** widget to a custom form, go to Add the Up next widget to a custom form For information about using the **Up next** widget, go to Connect with customers through a record or the Up next widget.

See also

Microsoft Teams collaboration
Microsoft Teams calls with conversation intelligence
Lead and opportunity scoring

Microsoft Teams collaboration

Article • 05/10/2022

Connect Dynamics 365 and Microsoft Teams so your sales teams can collaborate seamlessly on deals from wherever they work.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

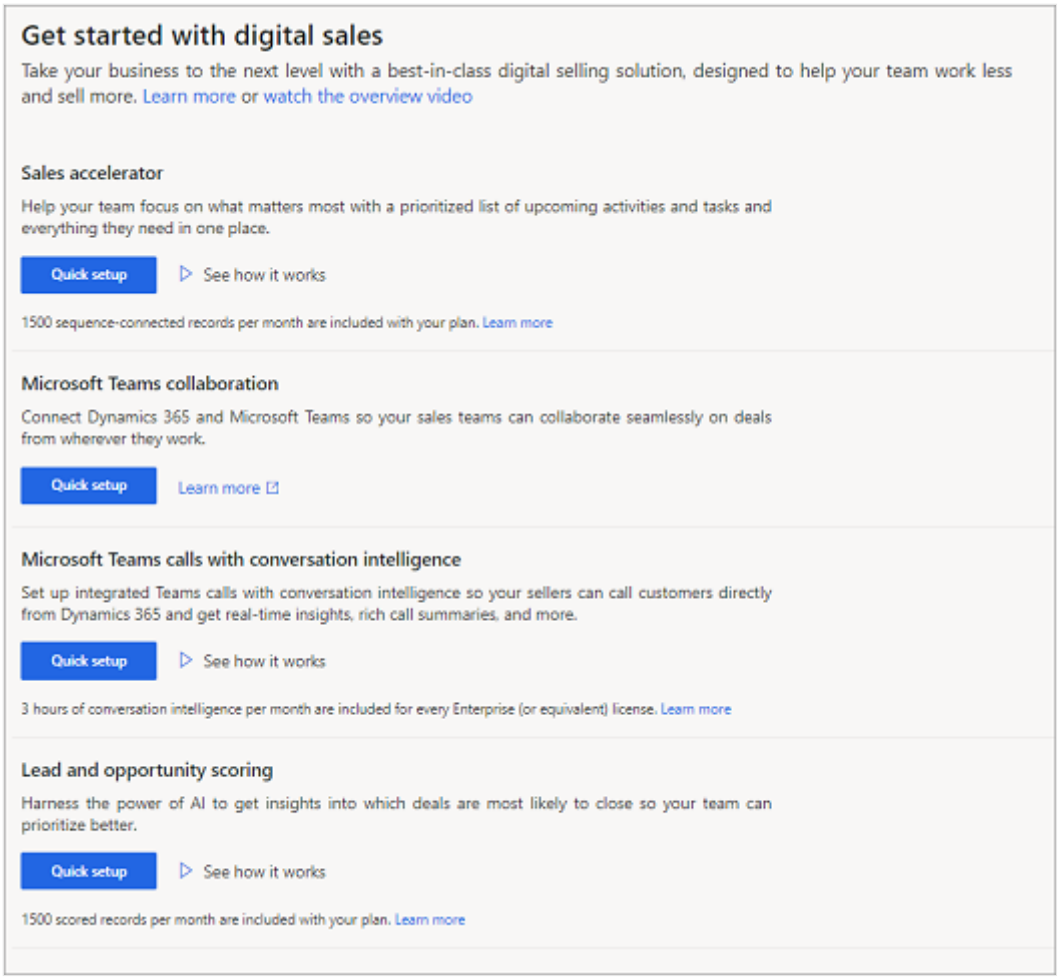
Overview

Connect Dynamics 365 and Microsoft Teams so your sales teams can collaborate seamlessly on deals from wherever they work. Dynamics 365 and Microsoft Teams integration allows you to speed up the flow of work, enabling anyone in an organization to view and collaborate on Dynamics 365 records, from within the flow of work with Teams—at no additional cost. More information: Overview of Microsoft Teams integration

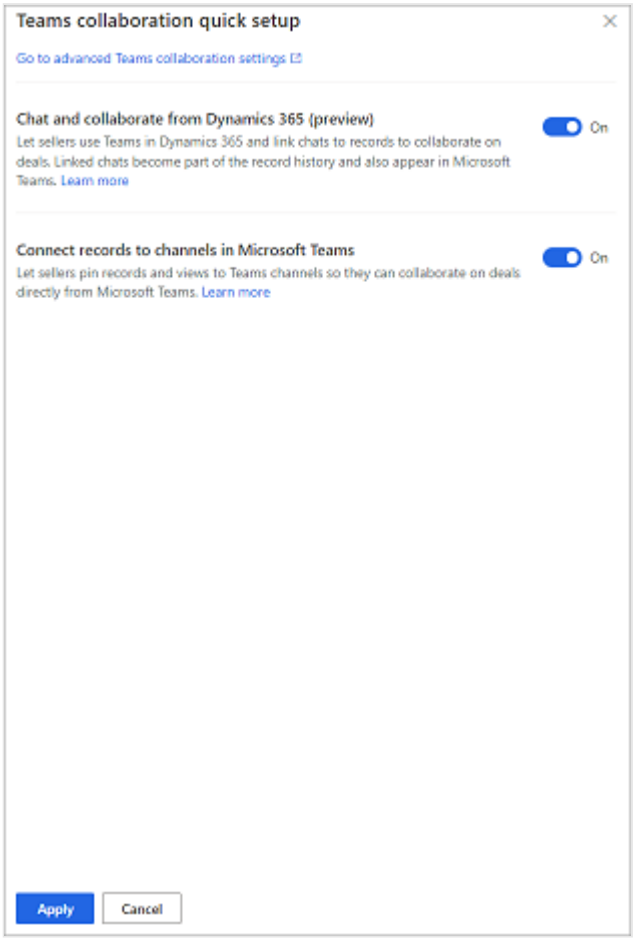
https://www.microsoft.com/en-us/videoplayer/embed/RWQEPI?postJsllMsg=true

Set up Teams collaboration

1. On the **Get started with digital sales** page, under **Microsoft Teams collaboration**, select **Quick setup**.



The **Teams collaboration quick setup** panel is displayed.



2. Turn on the **Chat and collaborate from Dynamics 365 (preview)** toggle to enable the embedded Teams chat capability.

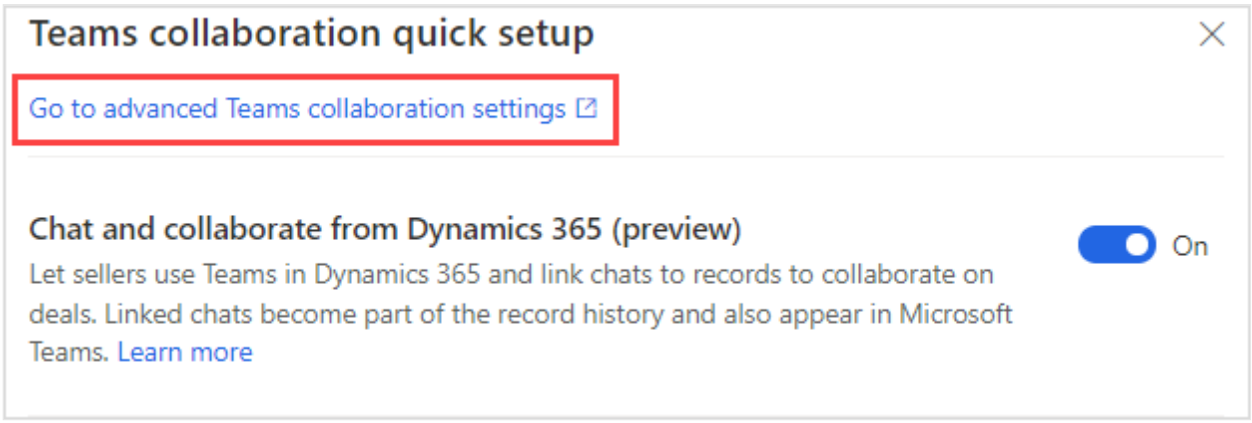
3. Turn on the **Connect records to channels in Microsoft Teams** toggle to enable basic Teams integration.

4. Select **Apply**.

After the settings are enabled, your sellers can use Teams in Dynamics 365 and link chats to records to collaborate on deals. They can also pin records and views to Teams channels so they can collaborate on deals directly from Microsoft Teams.

Advanced settings

If you want to make advanced configurations for Teams collaboration, select **Go to advanced Teams collaboration settings** at the top of the quick setup panel. For information about advanced configurations, go to Install and set up Microsoft Teams integration.



Turn off Teams collaboration

1. Select **Go to advanced Teams collaboration settings** at the top of the quick setup panel.

2. Turn off the **Chat and collaborate from Dynamics 365 (preview)** and **Connect records to channels in Microsoft Teams** toggles.

3. Select **Apply**.

See also

Sales accelerator
Microsoft Teams calls with conversation intelligence

Lead and opportunity scoring

Microsoft Teams calls with conversation intelligence

Article • 09/13/2023

Set up integrated Teams calls with conversation intelligence so your sellers can call customers directly from Dynamics 365 and get real-time insights, rich call summaries, and more.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

Microsoft Teams dialer helps sellers to be more productive and get work done more effectively by calling customers directly from within the Dynamics 365 Sales Hub app. More information: Call using Microsoft Teams

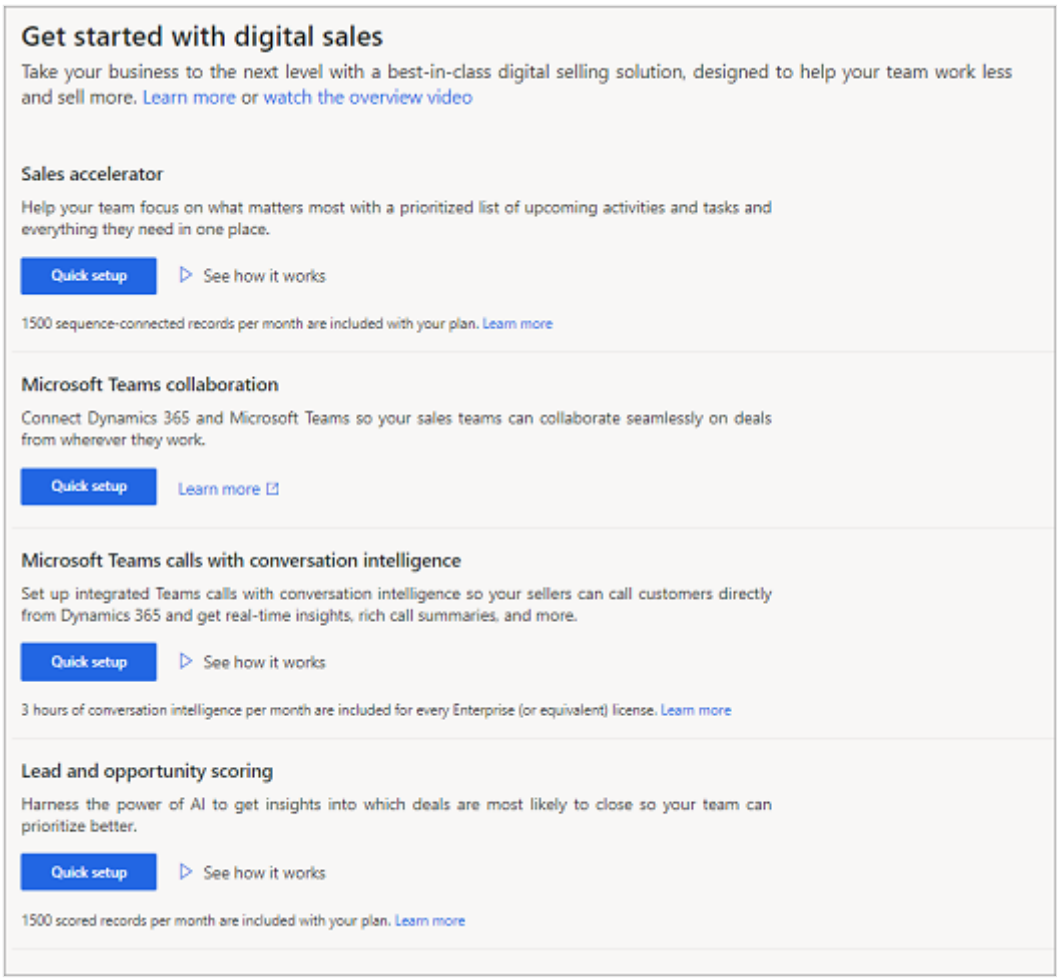
Conversation intelligence uses analytics and data science to gather data from sellers' call recordings and Dynamics 365 Sales. Conversation intelligence analyzes the data to provide you with the information and insights to intelligently manage your sales team and proactively coach sellers. More information: Overview of Conversation Intelligence
https://www.microsoft.com/en-us/videoplayer/embed/RWQzQl?postJsllMsg=true

Licensing options

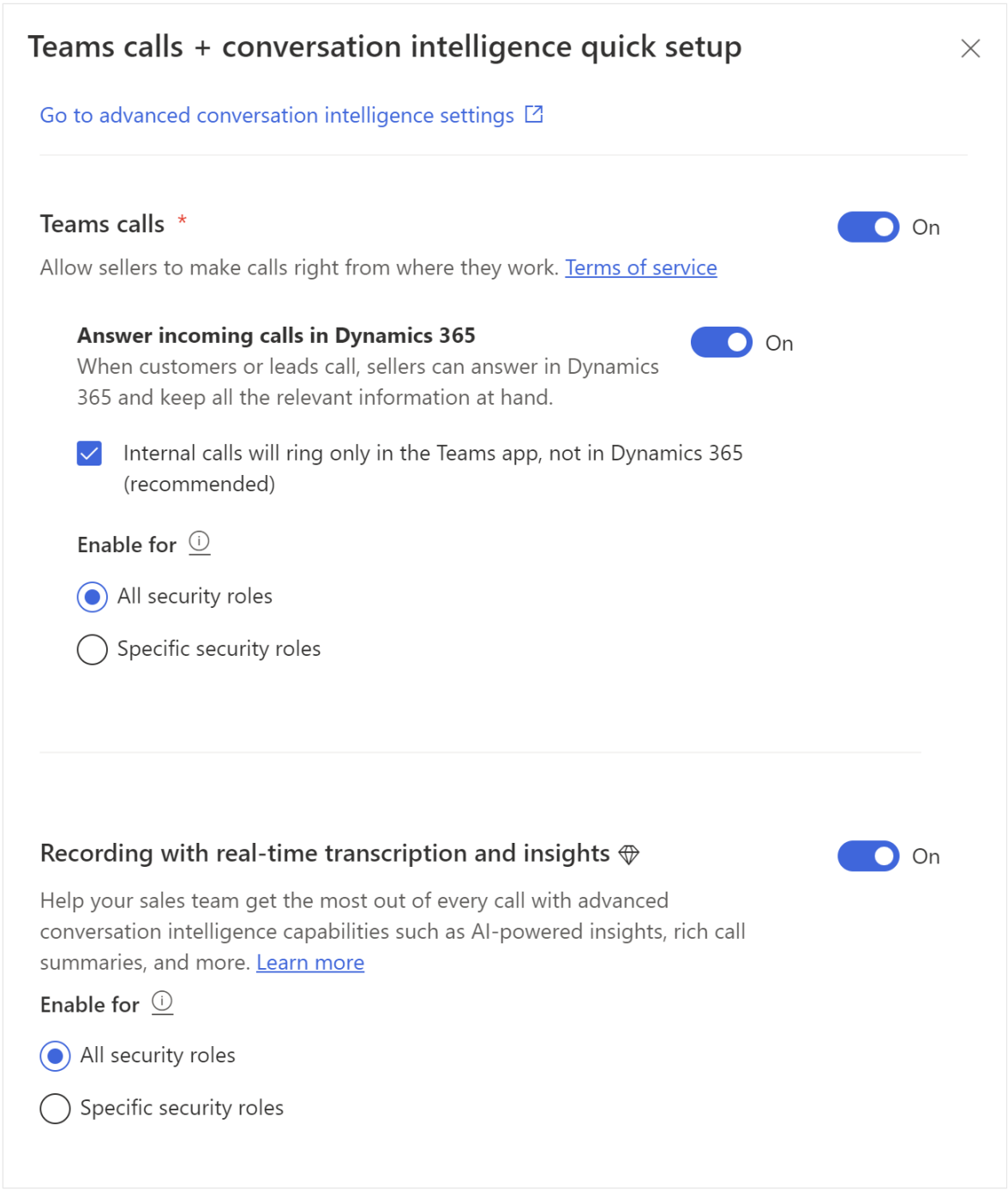
With the Sales Enterprise license, you get unlimited number of conversation intelligence hours (call processing and recording) and Teams calling hours.

Set up Microsoft Teams calls with conversation intelligence

1. On the **Get started with digital sales** page, under **Microsoft Teams calls with conversation intelligence**, select **Quick setup**.



The **Teams calls + conversation intelligence quick setup** panel is displayed.



> **Note**
>
> To use Teams calls, sellers will need valid licenses for Microsoft Teams, Phone System, and Calling Plan or Direct Routing, in addition to assigned phone numbers. **Learn more**

2. Turn on **Teams calls**.

   By default, the following options are turned on:

   - **Answer incoming calls in Dynamics 365** Allows sellers to receive Teams calls in Dynamics 365 Sales. If you turn it off, sellers can only make outgoing Teams calls from within Dynamics 365.

- **Internal call will ring only in the Teams app, not in Dynamics 365** Indicates that calls from internal users won't ring and won't be tracked in Dynamics 365. In this case, calls from external contacts will ring in Dynamics 365 and internal calls will ring only in Teams. You can clear the checkbox if you want sellers to receive both external and internal calls in Dynamics 365.

- In the **Enable for** section, select one of the following options to provide permissions to users to view Microsoft Teams dialer:
  - **All security roles**: Select this option to provide access to view Microsoft Teams dialer to users in all the security roles in your organization.
  - **Specific security roles**: Select this option to specify security roles when you want to give access to view Microsoft Teams dialer to specific users.

3. Turn on the **Recording with real-time transcription and insights** toggle to allow sellers to record calls by using the Teams dialer and get the most out of every call with advanced conversation intelligence capabilities such as AI-powered insights, rich call summaries, and more.

   - In the **Enable for** section, select one of the following options to provide permissions to users to record calls:
     - **All security roles**: Select this option to allow call recording by all the security roles in your organization.
     - **Specific security roles**: Select this option to allow call recording only by specific security roles.

   > **Tip**
   >
   > - To implement the call recording capability in your entire organization, select **All security roles**.
   > - For a phased implementation in your organization, create different security roles for each group of users and then assign the security role accordingly.

4. Select **Update**.

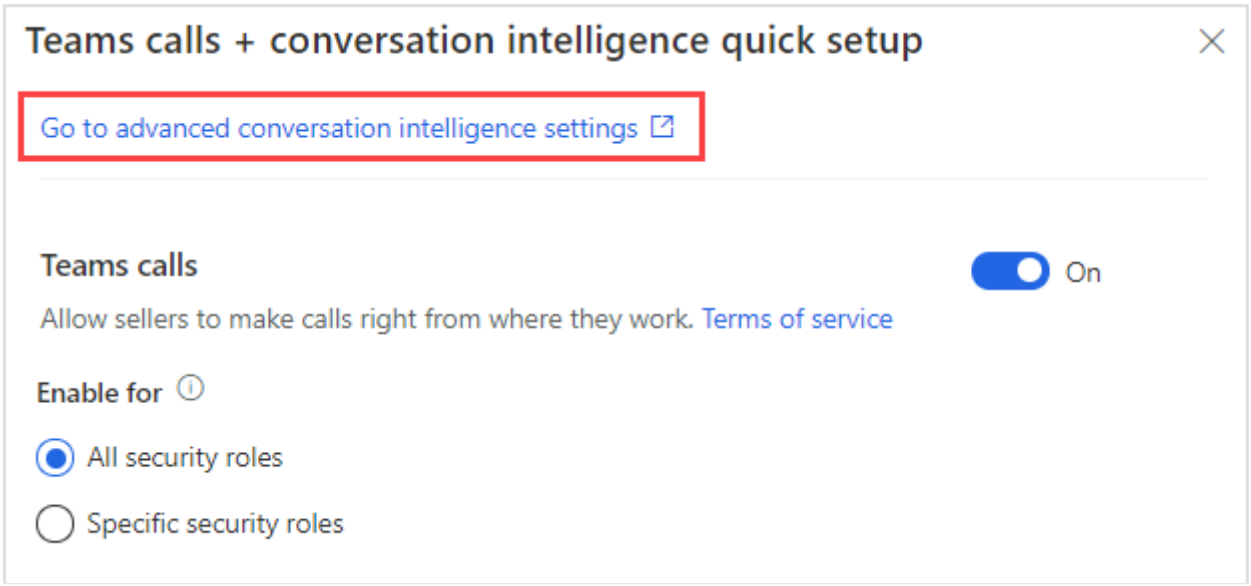
After settings are enabled, sellers can make Teams calls to their customers from within the Dynamics 365 Sales Hub app. They can also record the calls and apply conversation intelligence capabilities to get the most out of every call.

> **Note**

You can also enable Teams calling for other apps from the **Advanced settings** option on the **Microsoft Teams calls** setup page. More information: **Configure Microsoft Teams dialer**

Advanced settings

If you want to make advanced configurations for Teams calls and conversation intelligence settings, select **Go to advanced conversation intelligence settings** at the top of the quick setup panel. For information about advanced configurations, go to First-run setup experience of Microsoft Teams for conversation intelligence.



Turn off Teams calls and conversation intelligence

1. Select **Go to advanced conversation intelligence settings** at the top of the quick setup panel.
2. Turn off the **Teams calls** and **Recording with real-time transcription and insights** toggles.

   > **Note**
   >
   > If you turn off **Teams calls**, **Recording with real-time transcription and insights** will also be turned off. However, you can turn off only conversation intelligence (call recording) and leave the Teams calling option on.

3. Select **Update**.

See also

Sales accelerator
Microsoft Teams collaboration
Lead and opportunity scoring

Lead and opportunity scoring

Article • 11/30/2022

Harness the power of AI to get insights into which deals are most likely to close so your sales team can more effectively prioritize their work.

> **Note**
>
> Lead scoring requires a minimum of 40 qualified leads and 40 disqualified leads, all of which have been created in the past two years. Opportunity scoring requires a minimum of 40 won opportunities and 40 lost opportunities, all of which have been created in the past two years.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

Predictive lead scoring allows your sales teams to prioritize leads based on scores and achieve higher lead qualification rates.

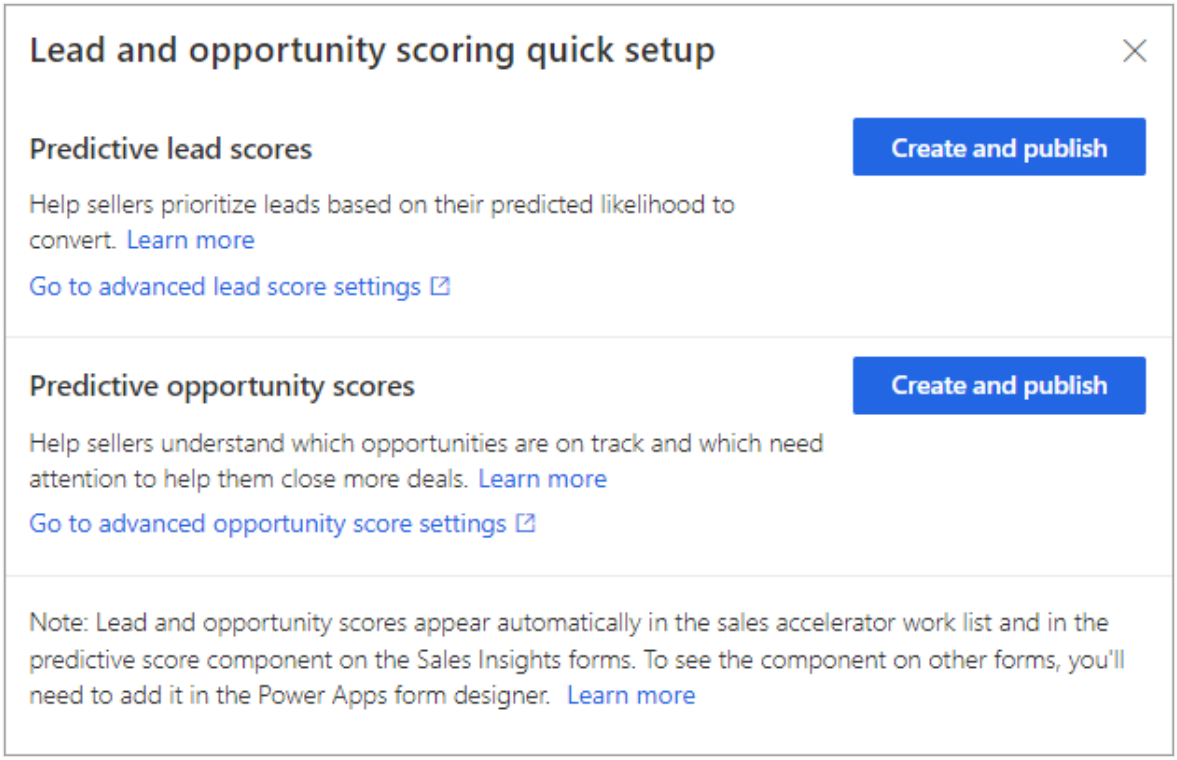
Predictive opportunity scoring allows your sales teams to prioritize opportunities based on scores and achieve higher opportunity win, close, or convert rates.
https://www.microsoft.com/en-us/videoplayer/embed/RWQjwl?postJsllMsg=true

Licensing options

When you set up lead and opportunity scoring with the Dynamics 365 Sales Enterprise license, you get 1,500 scored records per month. If you need to score more than 1,500 records per month, upgrade to Dynamics 365 Sales Premium.

Set up lead and opportunity scoring

1. In the **Get started with digital sales** page, under **Lead and opportunity scoring**, select **Quick setup** to open the **Lead and opportunity scoring quick setup** panel.



2. To enable predictive lead scoring, select **Create and publish** in the **Predictive lead scores** section.

3. To enable predictive opportunity scoring, select **Create and publish** in the **Predictive opportunity scores** section.

After the models are generated, they're published automatically. **Lead score** and **Opportunity score** widgets are added to the **Sales Insights** form of lead and opportunity records, respectively.

> **Note**
>
> To explore predictive scoring without using your company data, publish sales accelerator with sample data.

Advanced settings

You may want to modify the lead and opportunity scoring configurations. For example, you may want to ensure the model is trained on fields that are most relevant to your organization or add a separate model for a different line of business.

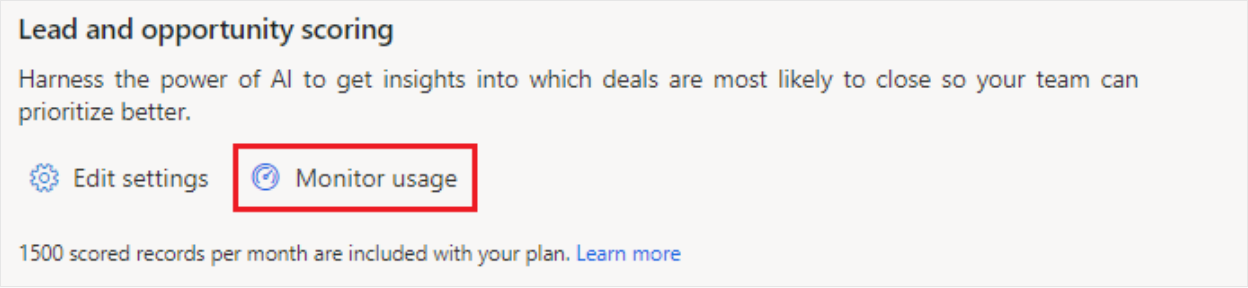
To do so, select **Go to advanced lead score settings** and **Go to advanced opportunity score settings** in the **Lead and opportunity scoring quick setup** panel. For information about advanced configurations, go to Configure predictive lead scoring and Configure predictive opportunity scoring.

Monitor usage

As an administrator, you can monitor the number of lead and opportunity records that have been scored over the past seven months. The data in the usage panel is refreshed every 24 hours.

If you have a Sales Enterprise license, you get 1,500 scored records per month. The app displays a warning symbol if your usage exceeds the monthly limit. Hover over the symbol to view the message. You must upgrade to the Sales Premium license to enjoy the full benefits of predictive scoring with no monthly limit.

On the **Get started with digital sales** page, under **Lead and opportunity scoring**, select **Monitor usage**.



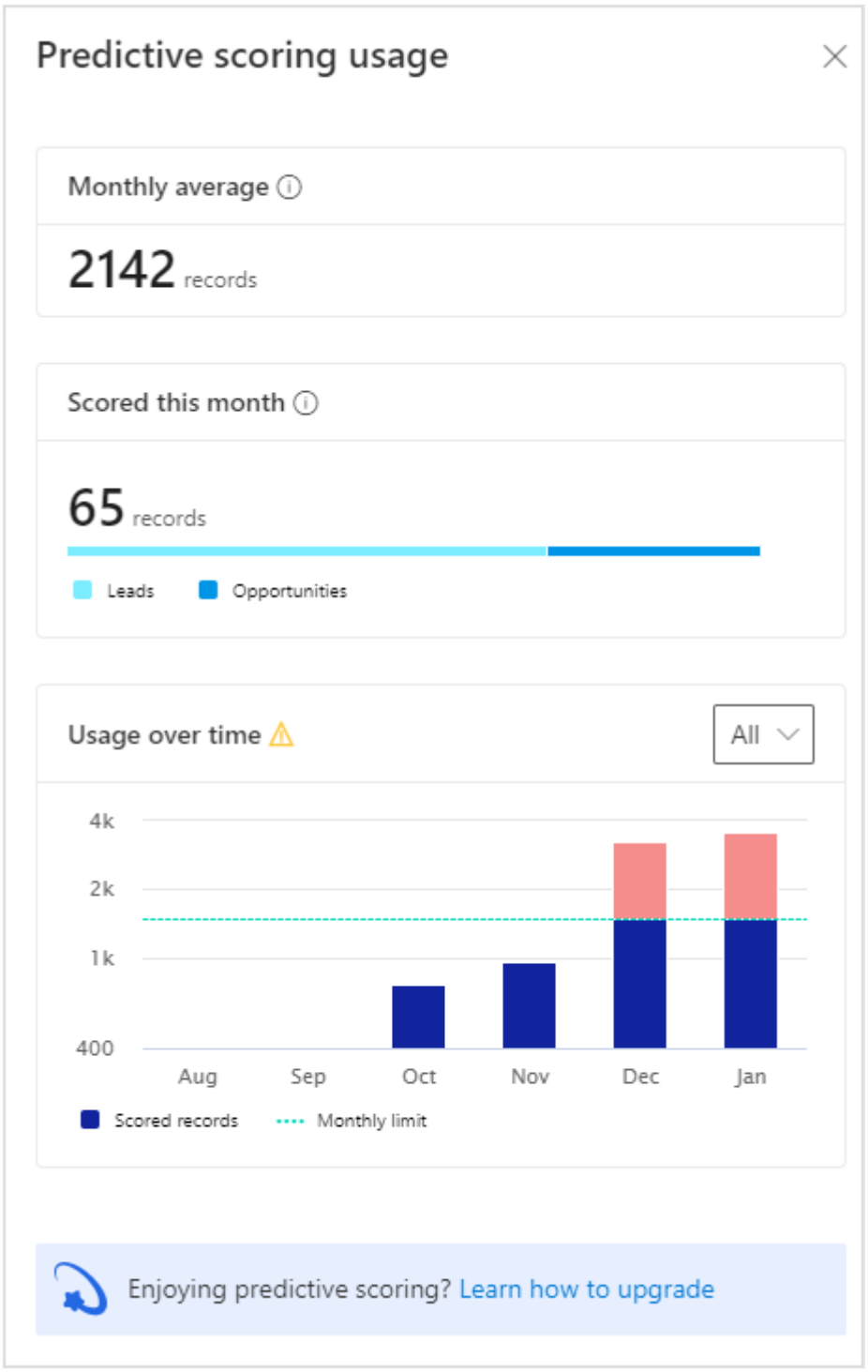
The **Predictive scoring usage panel** displays the following information:

- **Monthly average**: The average number of records scored over the last six full months
- **Scored this month**: The total number of records scored so far in the current month. If you have a Sales Enterprise license, a warning symbol indicates if you've exceeded your monthly limit.
- **Usage over time**: The monthly usage of predictive scoring over the last six months in a graphical format. If you have a Sales Enterprise license, a warning symbol indicates if you've exceeded your monthly limit.

  The monthly limit is shown with a blue line in the graph. When the limit is exceeded in a month, the number of records in excess of 1,500 is shown in red.

  By default, the usage of both lead and opportunity scoring (if both are enabled) is displayed in the graph. To display the usage only for leads or only for

opportunities, select **All** and then select the filter you want.



Turn off lead and opportunity scoring

1. In the **Lead and opportunity scoring quick setup** panel, select **Go to advanced lead score settings** or **Go to advanced opportunity score settings**.

2. On the **Predictive lead scoring** page or the **Predictive opportunity scoring** page, select **Delete model**.

3. When you're asked to confirm, select **Delete**.

Add lead and opportunity scoring widgets to a custom form

By default, the lead and opportunity scoring widgets are available only in the out-of-the-box **Sales Insights** form. If you're using a custom form for leads and opportunities, you can add the scoring widgets to it. For more information, go to Add the lead scoring widget to a form and Add the opportunity scoring widget to a form.

See also

Sales accelerator
Microsoft Teams collaboration
Microsoft Teams calls with conversation intelligence

Enable or disable saving of business card image

Article • 03/30/2022

By default, any business card that is scanned is stored as an image and associated with the **Lead** or **Contact** record. A system administrator can configure this option to enable or disable this setting.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable or disable saving

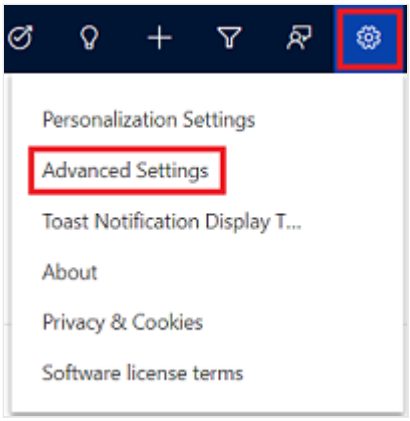
You can enable or disable this option from the **App Settings** page in Sales Hub or **System Settings** page in Power Platform.

To enable or disable from the App settings page

1. In the Sales Hub app, select the **Change area** icon in the lower-left corner and then select **App Settings**.
2. Under **General Settings**, select **Overview**.
3. Select **Manage** next to **Business card scan**.
4. Set **Scan and digitize business cards** to **Yes** or **No** depending on whether your organization wants to save and associate the business card images with the contact or lead record.
5. Save the changes.

To enable or disable from the System Settings page

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



The **Business Management** page opens.

2. On the navigation bar, select **Settings**, and then under **System**, select **Administration**.
3. Select **System Settings**.
4. On the **Sales** tab, set the **Always retain business card images after scanning option** to **Yes** or **No** depending on whether your organization wants to save and associate the business card images with the contact or lead record.
5. Save the changes.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Scan business cards
Customize the business card scanner control

Enable email validation (preview)

Article • 07/07/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Enable email validation in Dynamics 365 Sales to remove invalid email addresses from your lead and contact records. You'll reduce email bounce rates, improve engagement, and get a better return on your sellers' time.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisite

Before you enable the email validation feature, ensure that the **AI Builder preview models** option is enabled in your organization. More information: How do I enable a Preview feature?

In which regions is email validation available?

Email validation is available in the following regions:

- Asia Pacific (APAC)
- Canada (CAN)
- Europe (EUR)
- France (FRA)
- Great Britain (GBR)
- India (IND)
- Japan (JPN)

- North America (NAM)
- Oceania (OCE)
- South America (SAM)
- Switzerland (CHE)
- United Arab Emirates (UAE)

What is email validation?

Email validation analyzes the primary email address in lead and contact records to identify the ones that can't receive email. You must enable the feature. It's turned off by default.

Email address validation looks for the following issues:

- **Incorrect syntax**: An address that doesn't contain both a username and an email domain
- **Disposable domain**: An address that contains a known disposable or temporary email domain
- **Test or spam email addresses**: An address that contains known indicators of a test or spam address in the email header or metadata, IP address, HTML code of the email, and email content and formatting
- **Expired email addresses**: An email account that has expired and can no longer receive or send email
- **Emails that bounce back**: An address that can't receive a message for any reason

Sellers can view invalid email addresses on record forms, work list items, and the **Up next** widget in sales accelerator. More information: Work with invalid email addresses

Difference between Dynamics 365 Sales and Power Apps

The email validation feature in Dynamics 365 Sales and Power Apps works on the same principles. However, there are some differences as listed below:

Scenario	Dynamics 365 Sales	Power Apps
Validation	The validation process runs dynamically and targets only the primary email address in lead and contact records. The feedback is displayed each time the form is loaded.	The validation process dynamically runs on all email address fields, providing immediate feedback. Also, validations are not

Scenario	Dynamics 365 Sales	Power Apps
	More information: View invalid email addresses	performed on addresses that are bulk imported.
Actions	Users can mark the invalid email addresses as valid. More information: Send an email to an invalid address	Users can't mark the invalid email addresses as valid.
Both features enabled in an organization	Only the primary email addresses of leads and contacts are validated according to the Dynamics 365 Sales implementation.	All other email addresses are validated based on the Power Apps implementation.

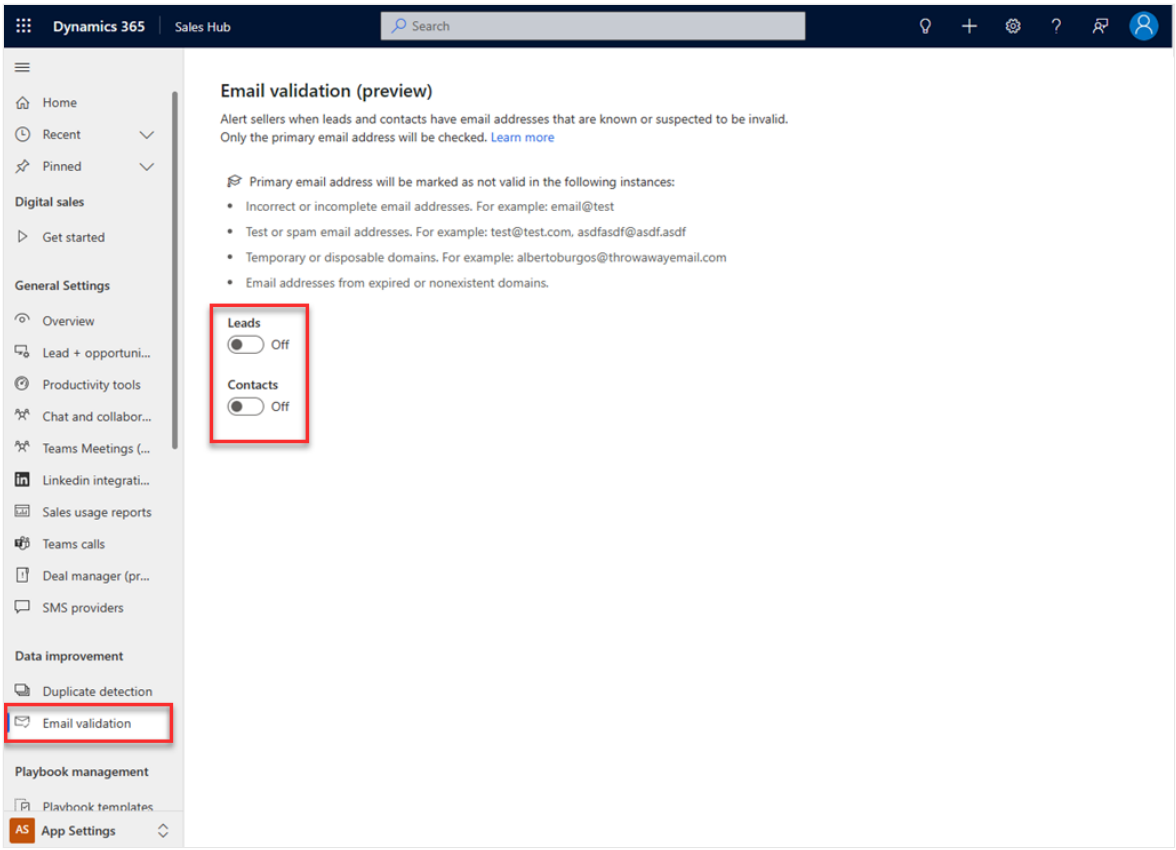
> **Note**
>
> To know more about the email validation feature in Power Apps, see **Email address validation for email columns**.

Limitations of email validation

- Email validation works only for lead and contact records.
- It checks only the primary email address in lead and contact records.
- Leads and contacts that are older than 180 days aren't validated.

Enable email address validation

1. In the Sales Hub site map, select **Change area** > **App settings** > **Data improvement** > **Email validation**.



2. Turn on email validation for leads and contacts, according to your requirements.

Email validation runs immediately on the primary email address in lead and contact records. A red envelope icon indicates an invalid email address.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Work with invalid email addresses
Enable email validation for custom forms

Enable email validation for custom forms

Article • 05/20/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

The email validation feature in Dynamics 365 Sales helps validate the primary email address of contact and lead records. By default, this feature is enabled for the main lead and contact forms in the Sales Hub app. However, if you've customized the main lead form, you must manually enable email validation.

> **Note**
>
> These customizations can be applied only to main forms of the `Contact` and `Lead` tables.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable email validation

You can add the following customizations for email validation:

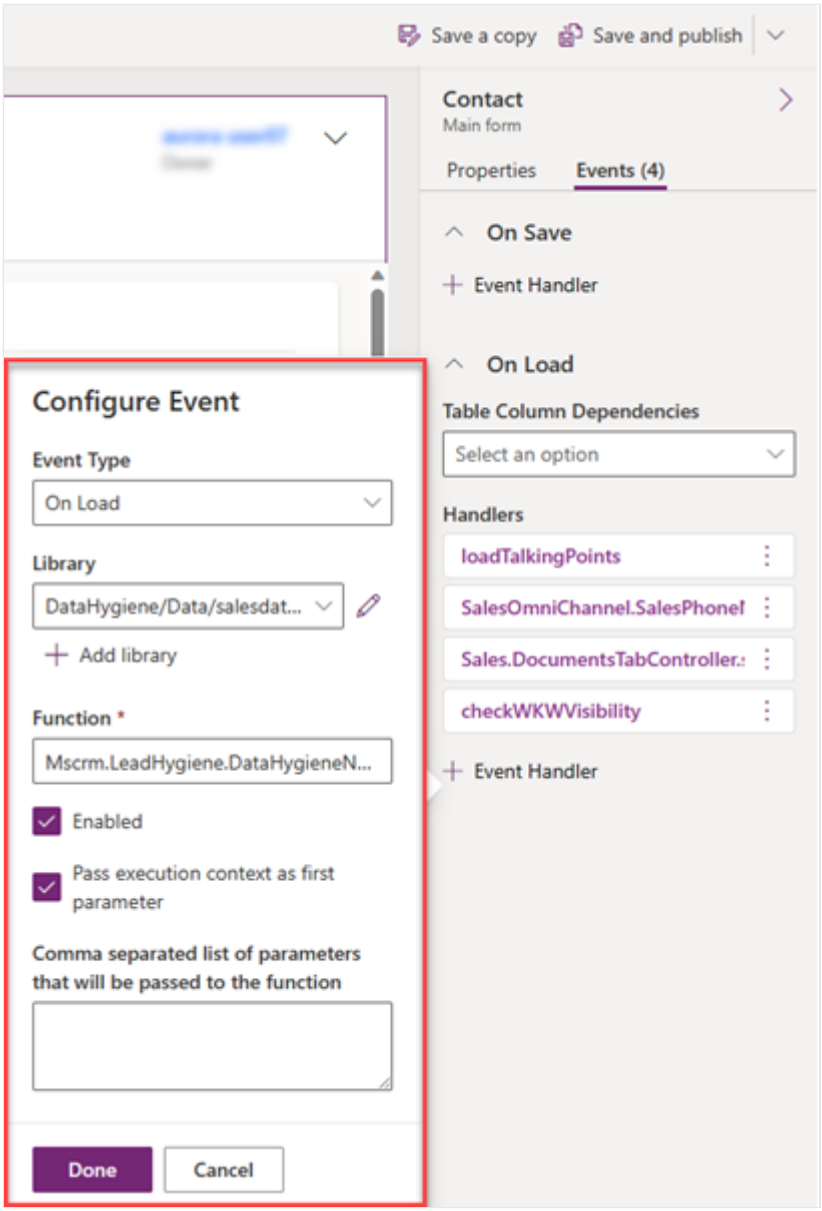
- To validate email addresses while an email is being composed, add an event handler to the OnLoad event. If an email address isn't valid, a validation message is displayed.

- To add an email validation icon to the email address field, add the email control to the custom form.

Add an event handler to the OnLoad event

> **Note**
>
> This example uses the `Contact` table. Use the same basic steps to add an event handler to the `OnLoad` event for the main lead form.

1. Sign in to the Power Apps portal.
2. Search for and select your organization's environment.
3. In the site map, select **Tables**, and then select the `Contact` table.
4. In the **Data experiences** section, select **Forms**, and then select your custom contact form of the *Main* type.
5. In the **Main form** pane that opens on the right, select the **Events** tab.
6. In the **On Load** section, select **+ Event Handler**.
7. In the **Configure Event** dialog box, select **+ Add library**.
8. Add the `DataHygiene/Data/salesdatahygiene_form_notification_library.js` library, and then select it in the list.
9. In the **Function** field, enter *Mscrm.LeadHygiene.DataHygieneNotificationLibrary.emailAddressValidationFormOnLoad*.
10. Select the **Pass execution context as first parameter** checkbox.
11. Select **Done**.



12. Save and publish the form.

    In the **Handlers** section, notice that the required event handler has been added to the form. Ensure that the email validation feature is enabled. Learn how to enable email validation.

Add the email control

You must add the email control only to the primary email address field.

> **Note**
>
> This example uses the `Contact` table. You can use the same steps to add the email control for the main lead form.

1. Open the contact form as described in the Add an event handler to the OnLoad event section.
2. In the **New Contact** form, in the **Contact Information** section, select **Email**.
3. On the **Properties** tab, in the **Components** section, select **+ Component**.
4. In the **Add component** dialog box, add the **ValidatedField_Control** component, and then select it.
5. Select the options for web, mobile, and tablet, and then select **Done**.

   > **Note**
   >
   > Verify that the **Show component on** options for **Email address (default)** are removed.

6. Save and publish the form.

The email control is added to the email address field. Ensure that the email validation feature is enabled. Learn how to enable email validation.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable email validation
Work with invalid email addresses

Enable address suggestions

Article • 09/06/2023

Enable the address suggestion feature in Dynamics 365 Sales to help sellers save time and reduce errors when they enter the addresses of their contacts, leads, and accounts. When a seller starts typing in the address field, Bing Maps suggests a list of addresses that match what the seller is typing. When the seller selects an address in the list, the address fields in the form are filled automatically. You need to enable Bing Maps before you can enable address suggestions.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable Bing Maps

When you enable Bing Maps in the Sales settings, sellers can see the address of their accounts, contacts, and leads on a map and get directions. You must enable Bing Maps before you can enable the address suggestion feature in Sales.

Bing Maps is enabled by default in new environments that are located outside the European Union (EU). To opt in to use Bing Maps, EU customers must view the privacy notice and consent to share data with an external system.

> **Important**
>
> By connecting to a mapping service, you consent to allow the system—including systems in Government Cloud environments—to share your data. "Mapping service" refers to Bing Maps or any other third-party mapping service that's designated by you or your operating system. Data that's shared with external systems outside of your Microsoft Dynamics 365 environment includes, but is not limited to, addresses and coordinates. Your use of the mapping service is also

subject to the service's separate terms of use. Data imported from external systems into Microsoft Dynamics 365 are subject to the Microsoft privacy statement.

1. In the Sales Hub app, select **Settings** (the gear icon in the upper-right corner of the window) > **Advanced Settings**.
2. Select **Administration** > **System Settings**.
3. In the **General** tab, under **Enable Bing Maps**, select **Yes**.
4. Save the changes.

Enable the address suggestion feature

1. In the Sales Hub app at the bottom of the left side panel, select **App Settings**.
2. Go to **General Settings** > **Productivity tools** > **Enable address suggestions**.
3. Turn on the toggle and select **Save**.

To verify the changes, open a contact, lead, or account form. You should see a new **Address** field and a Bing map after all the individual address fields. The field suggests addresses as you type and populates address fields when you select an address

> **Note**
>
> If your organization is using Dynamics 365 Field Service and has **enabled address suggestions**, then the address suggestions for the main contact and account forms are controlled by the Field Service settings.

Customize the business card scanner control

Article • 08/30/2023

Customize how the data from the scanned business cards maps to the fields in the **Contact** and **Lead** forms.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

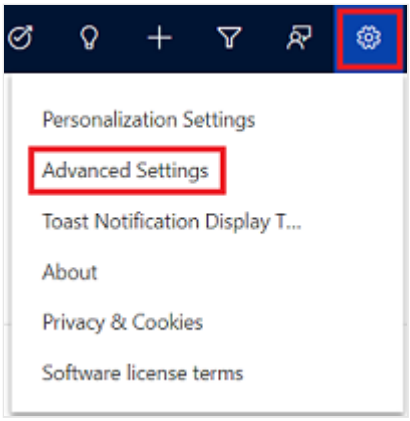
Customize the mapping

Dynamics 365 Sales comes with an out-of-the-box business card control that defines the mapping of what information from the business card goes in which fields of the **Contact** or **Lead** forms. If you have custom fields on your **Contact** or **Lead** form and you want the data from the business card to be populated in these fields, edit the default mappings of the business card control.

> **Important**
>
> - To learn about the availability of the business card feature in a region, see **Feature availability by region**.
> - To know about the business card scan limits with your user license, see the **Microsoft Dynamics 365 Licensing Guide**.

To customize the mappings:

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



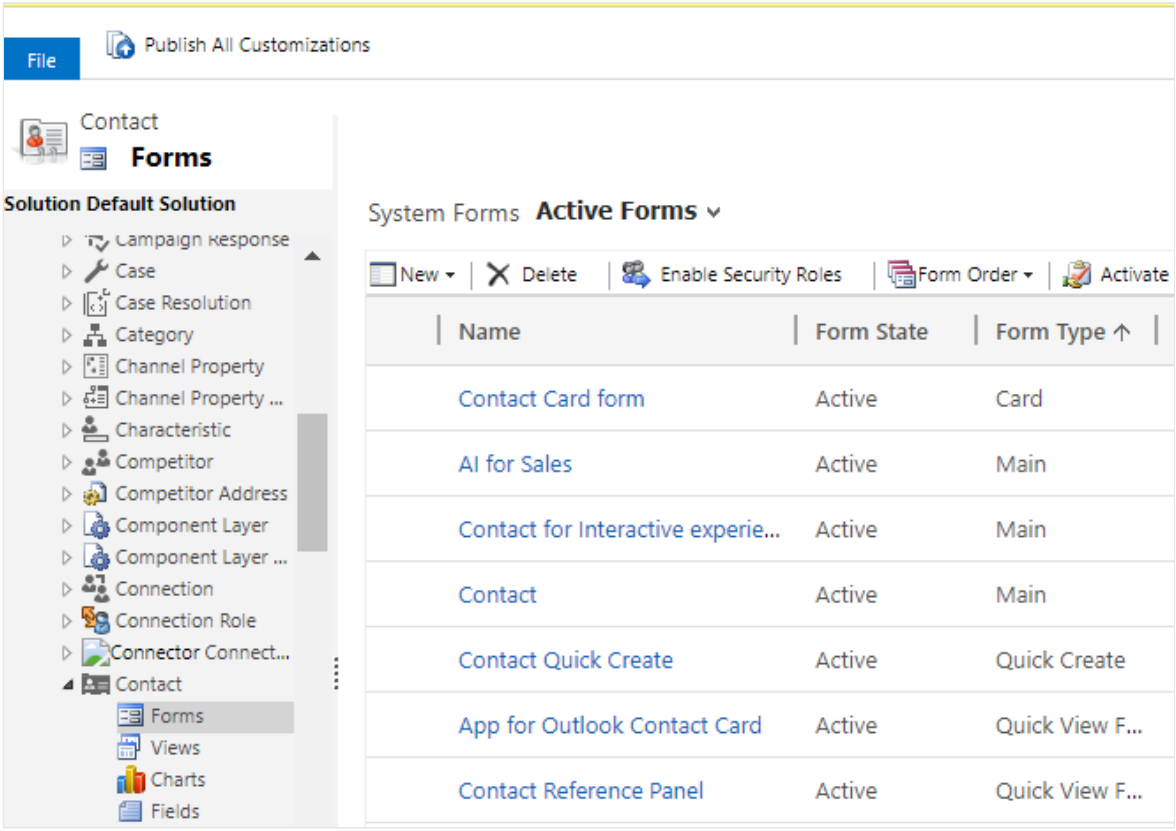
The **Business Management** page opens.

2. On the navigation bar, select **Settings**, and then under **Customization**, select **Customizations**.

3. Select **Customize the System**.

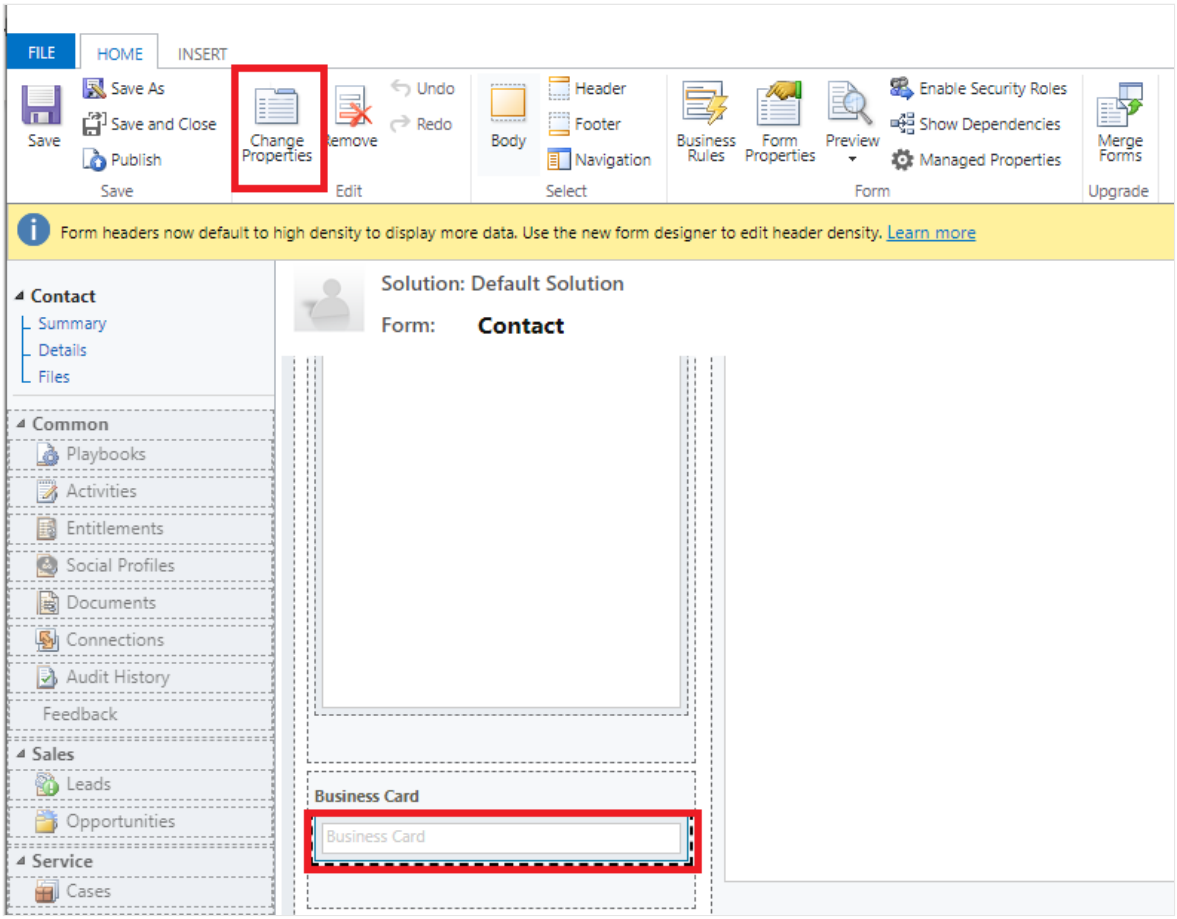
4. Under **Components** in the solution explorer, expand **Entities**, and then expand the **Contact** or **Lead** entity.

5. Select **Forms**.

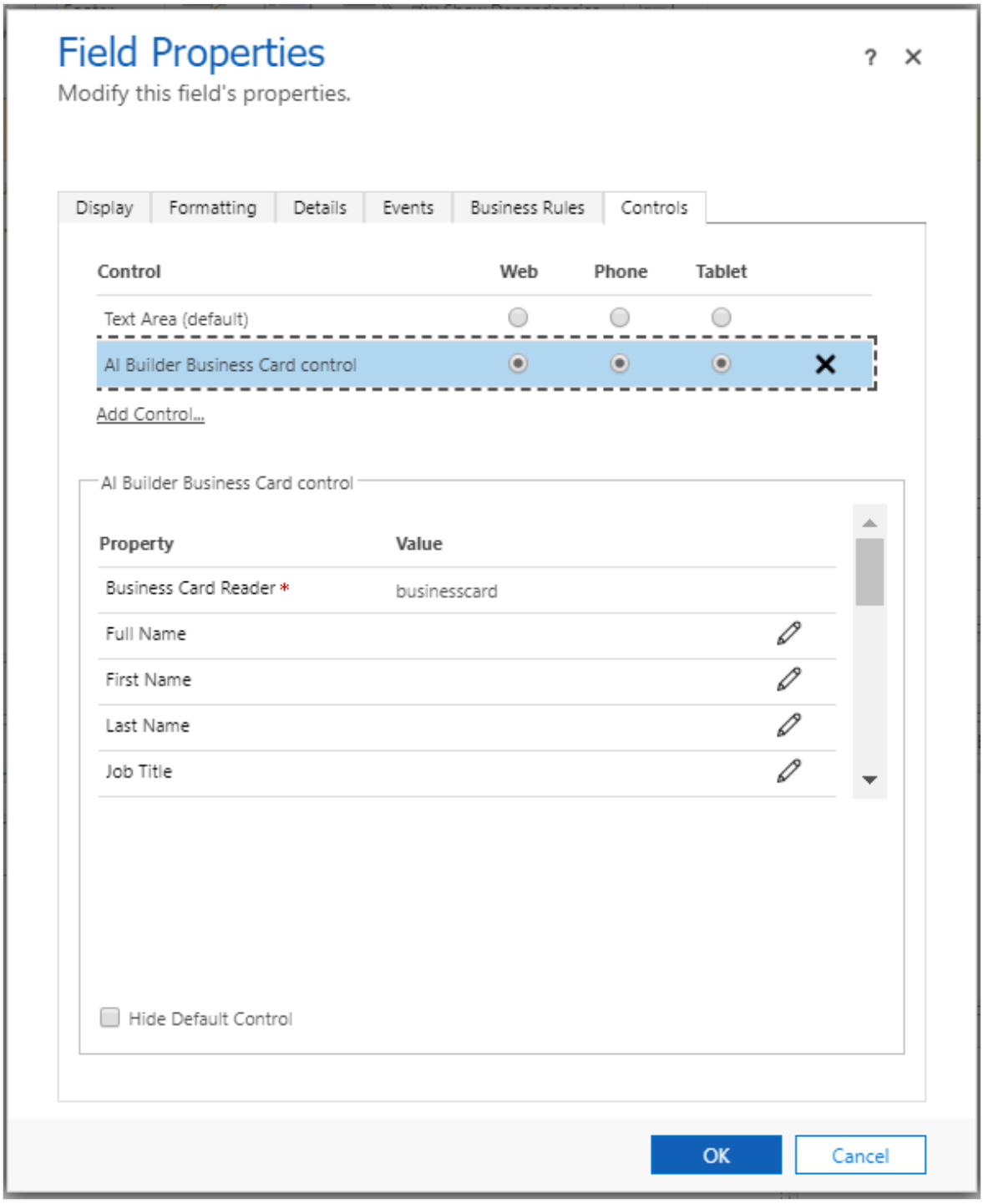


6. Open the form of type **Quick Create**.

7. Locate and select the **Business Card** field on the form, and select **Change Properties** in the **Edit** group.



8. In the **Field Properties** dialog box, select **AI Builder Business Card control** on the **Control** tab.



9. Select the property that you want to change the mapping for, and select the **Edit** icon ✎ to change the value the field maps to.

10. When done, select **OK**.

11. Assign the **Basic User** security role in Power Platform to the salespeople who will use the business card scanner control. For more information, see Assign security roles to users in a Dataverse environment or Assign security roles to users in non-Dataverse environment.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Scan business cards
Use the business card reader in model-driven apps

Install LinkedIn Sales Insights

Article • 03/30/2022

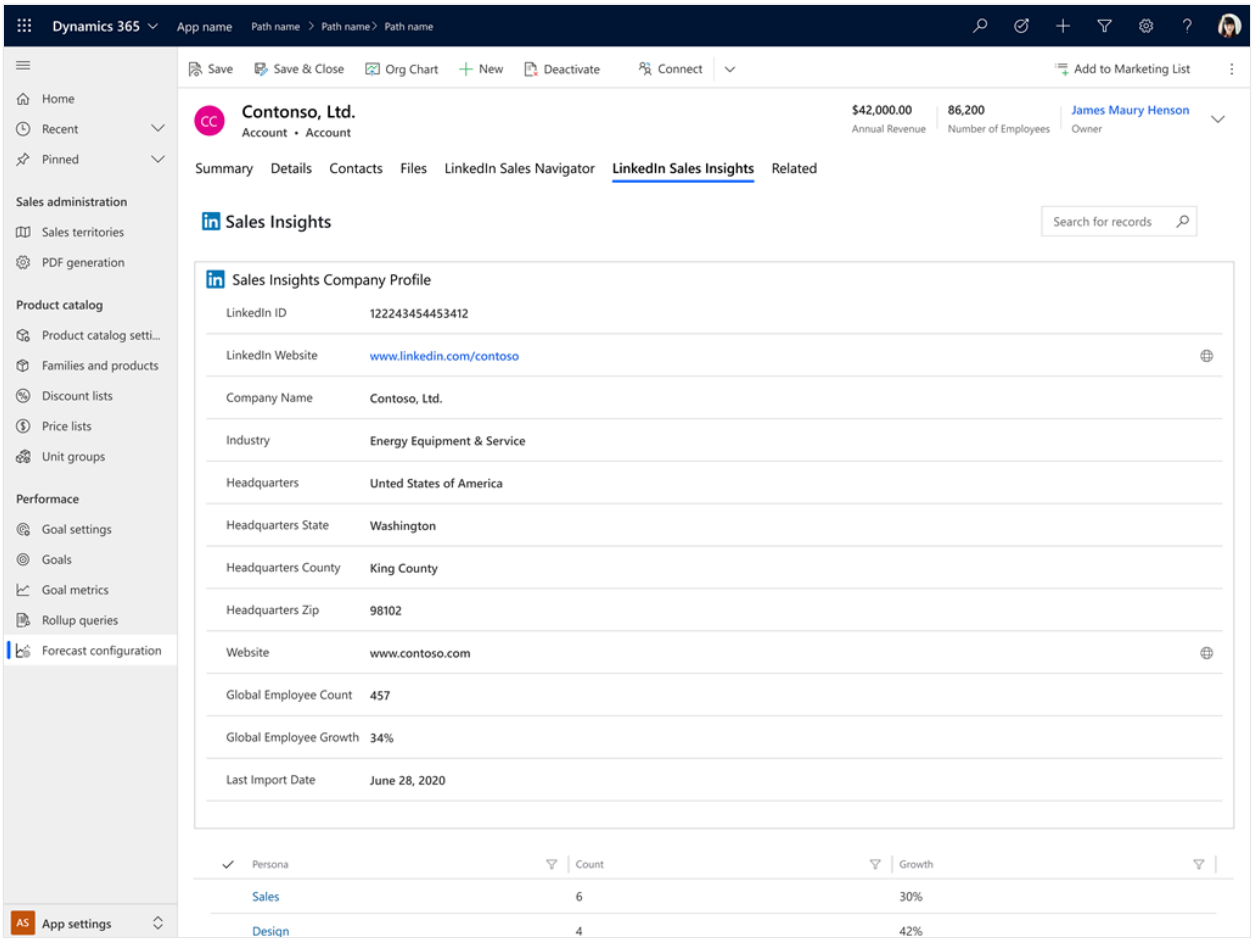
Import the latest company profile data—such as personas, number of employees, and company URL—from LinkedIn Sales Insights into a matched account in Dynamics 365 automatically. Importing this data reduces the manual effort required to match company profiles between the two products, enter the details in Dynamics 365 Sales and frequently update data as LSI updates them.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

How LinkedIn Sales Insights helps

As an administrator, you can install LinkedIn Sales Insights and make it available for your sales teams to use. When installed, all the accounts that are available in your organization will display the **LinkedIn Sales Insights** tab in **Account** forms. Those accounts that have a matching LinkedIn Sales Insights company profile will show data from LinkedIn Sales Insights.



Review the prerequisites

Before you install LinkedIn Sales Insights, be sure you meet the following requirements:

- You have a **System Administrator** security role in Dynamics 365.
- You have a Microsoft Relationship Sales subscription for Dynamics 365 and have signed up for LinkedIn Sales Insights.
  or
  You've **LinkedIn Sales Navigator Team** or **LinkedIn Sales Navigator Enterprise** license, and have signed up your team for **LinkedIn Sales Insights**. More information: LinkedIn Sales Solutions

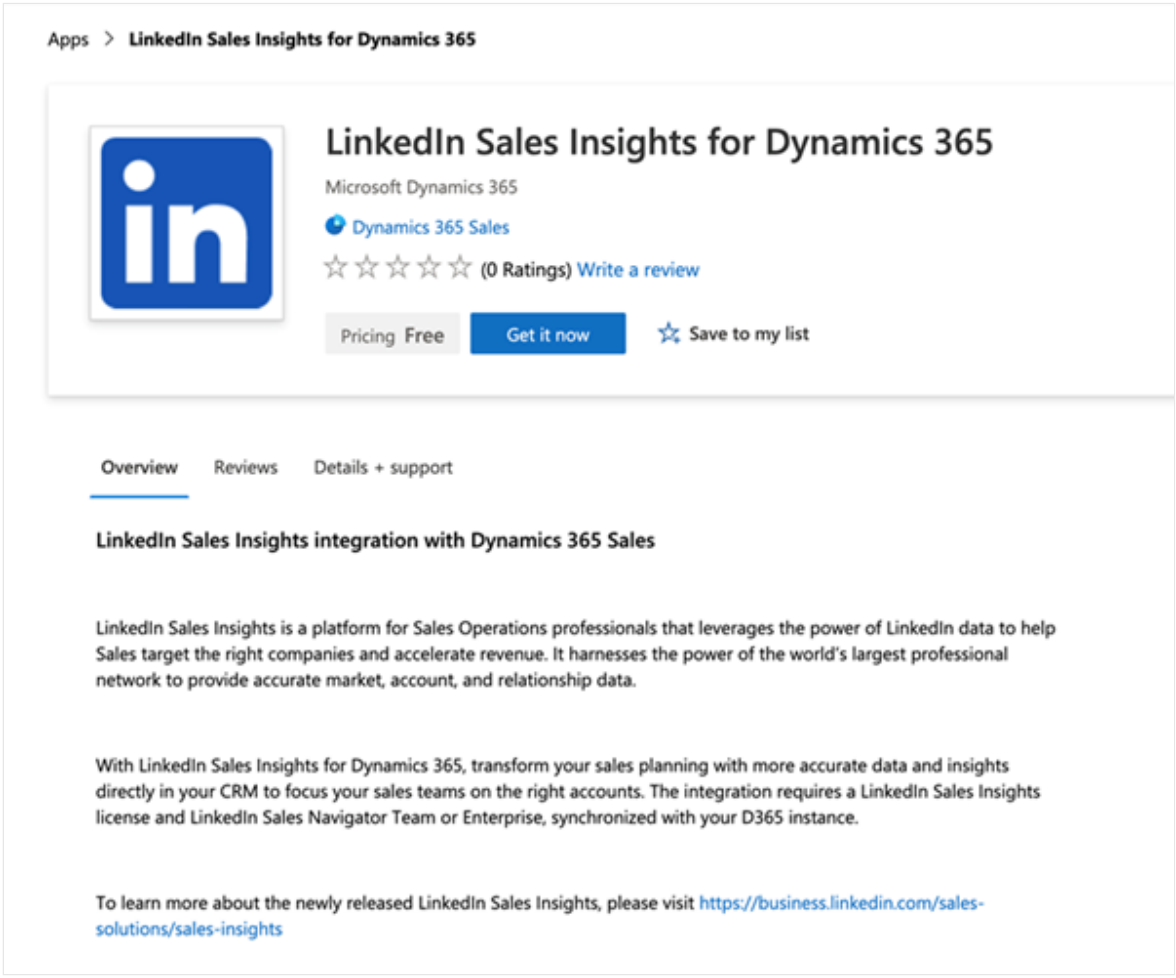
  > **Note**
  >
  > We recommend having a Microsoft Relationship Sales solution Plus license. To learn more, see the Dynamics 365 Sales section in the **Microsoft Dynamics 365 Licensing Guide**.

- You've enabled JavaScript in your browser.
- You've disabled your pop-up blocker for the Dynamics 365 domain.

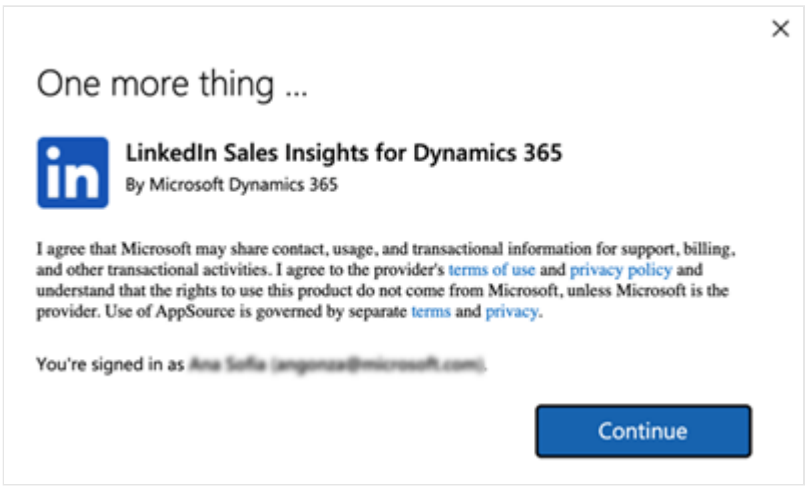
- CRM sync is enabled for your organization. More information: Enable Sales Navigator CRM Sync & Activity Writeback for Dynamics 365

Install the solution

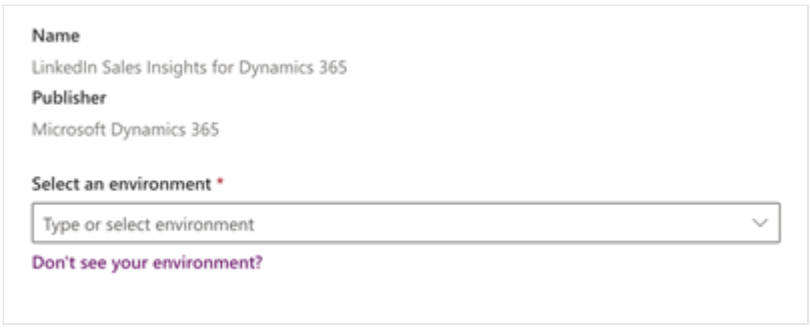
1. Go to the LinkedIn Sales Insights for Dynamics 365 page, and then select **Get it now**.



2. Read the terms and conditions, and then select **Continue**.



A Power Platform admin center page opens where you can select the organization to install LinkedIn Sales Insights for Dynamics 365.

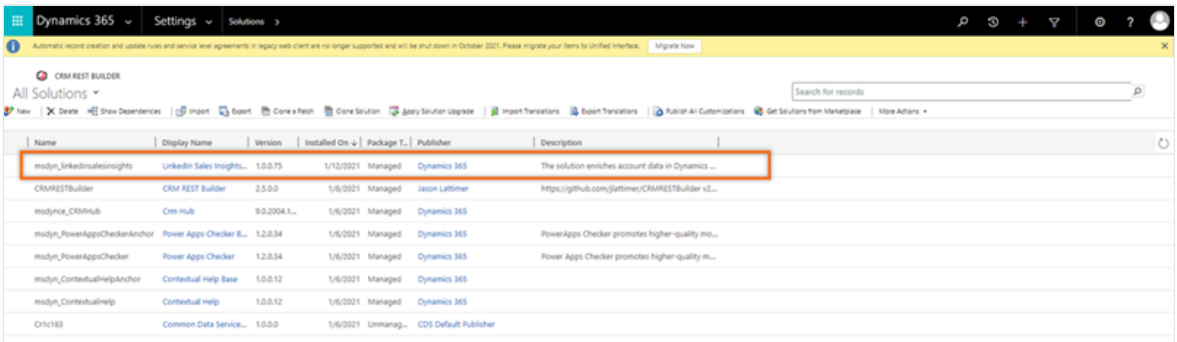


3. In the **Select an environment** list, select your organization, select the check boxes for Microsoft and Dynamics 365 legal terms and privacy statements, and then select **Install**. On the **Manage your solutions** page, you can see the status of the installation.

To verify that the installation is complete, perform the steps in the following procedure.

Validate the installation

1. In your app, select **Settings**, and then select **Advanced Settings**.
2. Go to **Settings** > **Customizations** > **Solutions**.
3. Verify that the **msdyn_linkedinsalesinsights** solution is installed in your organization.



Uninstall the solution

1. In your app, select **Settings**, and then select **Advanced Settings**.
2. Go to **Settings** > **Customizations** > **Solutions**.
3. Select the **msdyn_linkedinsalesinsights** solution, and then select **Delete**.
4. In the confirmation message that appears, select **OK**.

The solution is removed from your organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Understand the LinkedIn Sales Insights tab
LinkedIn Sales Insights for Dynamics 365 Sales - Installation Guide

Install ZoomInfo app

Article • 03/30/2022

The ZoomInfo app for Dynamics 365 helps the sales teams accelerate business growth with accurate contact and account information in their preferred Dynamics 365 Sales workflows.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

Before you start, be sure you've a license to use the ZoomInfo app.

Install the app

As a Dynamics 365 administrator, you install the ZoomInfo app for administrators to configure export and mapping settings, and for sellers to search for and export ZoomInfo data to Dynamics 365 Sales workflows.

1. Go to the Microsoft commercial marketplace and search for the **ZoomInfo** app.
2. Open the **ZoomInfo** app page and select **Contact me**.
3. Sign in with the email address of the account you want to use when acquiring apps on AppSource.
   ZoomInfo will send a solution package for installation.
4. After you receive the solution package, download it to your local computer.
5. Sign in to the Power Apps portal and choose the organization in which you want to install the ZoomInfo app.
6. On the home page, select **Solution** from the left navigation pane.
7. On the solutions page, select **Import** and browse to where you downloaded the solution package.
8. Select the package and then select **Install**.

> **Note**
>
> Installation of the solution package may take up to 15 minutes to complete.

9. Upon successful completion, the ZoomInfo app appears on the Dynamics 365 apps page.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure export preferences
Match fields between Dynamics 365 and ZoomInfo
Customize the ZoomInfo app
Use ZoomInfo app data
Dynamics Native Application

Configure export preferences

Article • 06/27/2022

Use the export preference to choose which record types you want to export and limit the number of records to export in each record type.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

To configure export preferences

As an administrator, you configure the export preference to choose which record types (accounts, contacts, and leads) to export and limit the number of records that you export in each record type. You can also enable the creation of new records, allow record duplicate creation, and update existing records for each record type.

To configure export preferences. do the following steps:

1. Review the prerequisites
2. Enable email engagement

Prerequisites

Before you start, be sure you've met the following prerequisites:

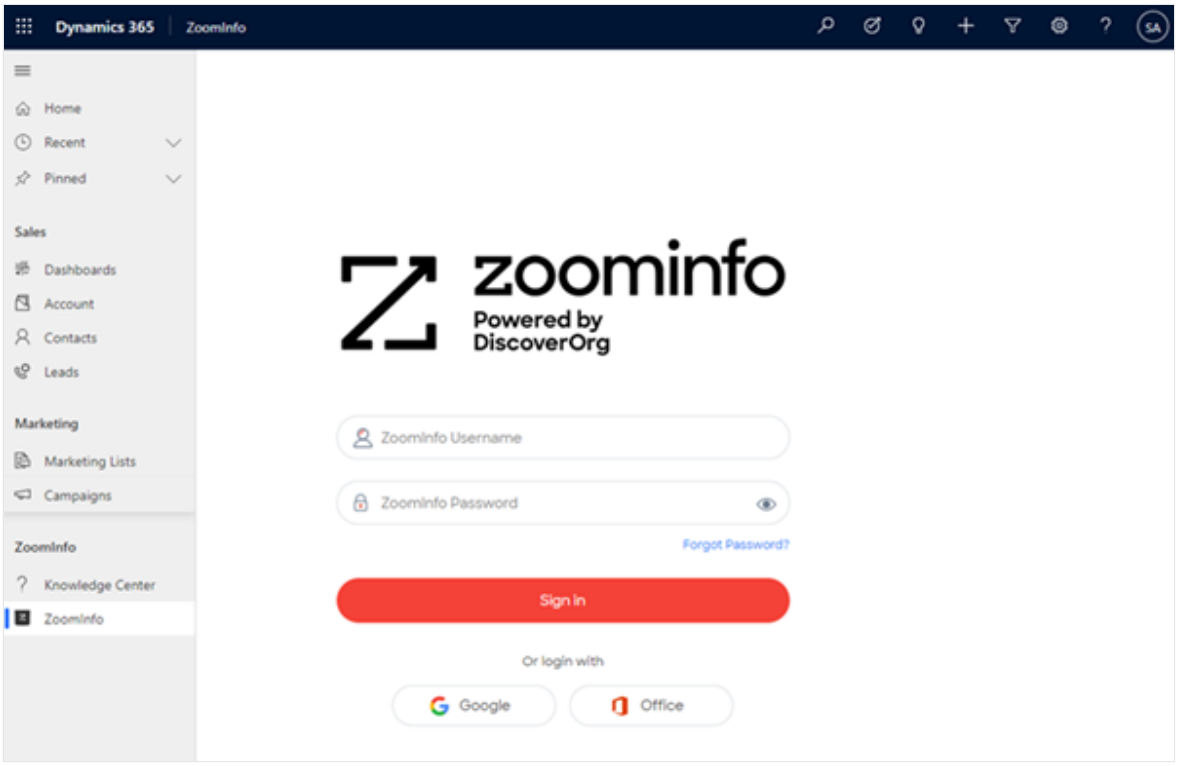
- The ZoomInfo app is installed on your Dynamics 365 Sales organization. More information: Install ZoomInfo app.
- You have a license to use the ZoomInfo app.

Configure the preferences

1. Open your Dynamics 365 Apps page and then open the ZoomInfo app.

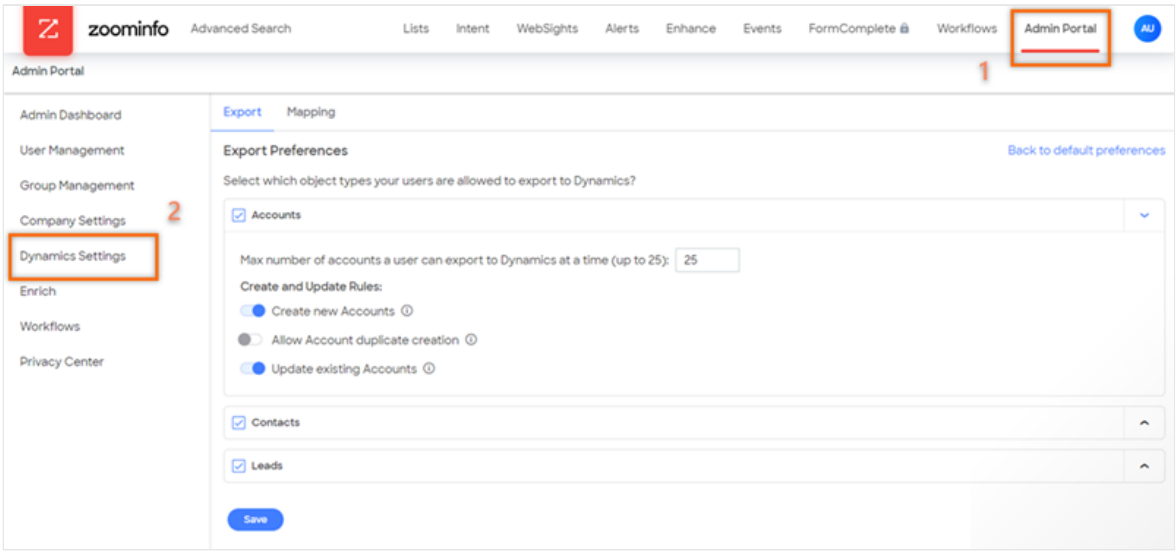
2. On the left navigation pane, select **ZoomInfo** > **ZoomInfo**.

> **Note**
>
> The app might prompt you to enter credentials. Select either Google, Office, or enter your ZoomInfo credentials if you have an account with ZoomInfo.



3. On the top-right corner of the page, select **More** > **Admin Portal**.

4. On the **Admin Portal** page, select **Dynamics Settings**.



5. From the **Export** tab, select each record type (accounts, contacts, and leads) that you want your sales teams to be able to export to your Dynamics 365 Sales organization.

- Enter the maximum number of records (up to 25) that a seller can export to your Dynamics 365 Sales organization.
- Enable the following options as required:

  > **Note**
  >
  > In this example, we're using the **Accounts** record type.

  - **Create new Accounts**: To create an account in your Dynamics 365 Sales organization from ZoomInfo.
  - **Allow Account duplicate creation**: To create a duplicate account even if the same account exists in your Dynamics 365 Sales organization.
  - **Update existing Accounts**: To update an existing account with the latest information from the ZoomInfo app.

6. Select **Save**.

   The changes are saved and applied to the ZoomInfo app for your Dynamics 365 Sales organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Install ZoomInfo app

Match fields between Dynamics 365 and ZoomInfo

Article • 06/27/2022

When you try to export data from the ZoomInfo app to your Dynamics 365 Sales organization, certain corresponding fields may not match and won't display updated values. To avoid these mismatches, you can map the corresponding fields between Dynamics 365 and ZoomInfo for accounts, contacts, and leads.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

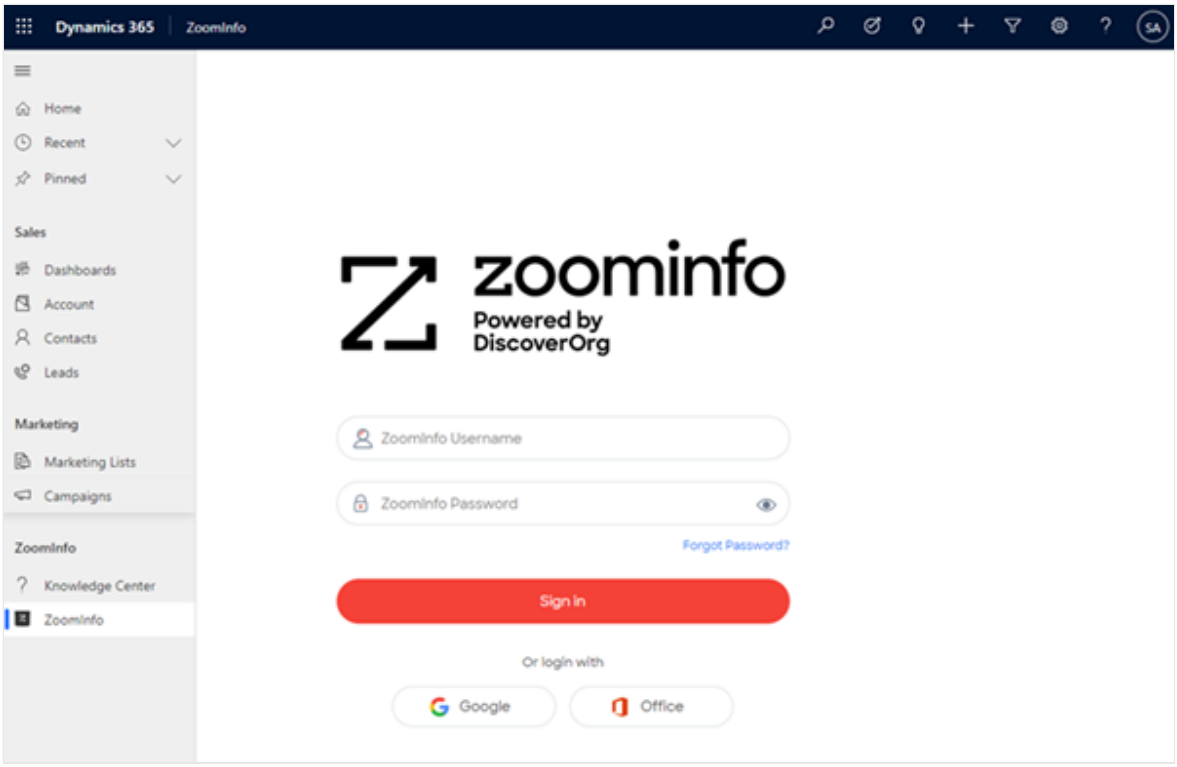
Before you start, be sure you've met the following prerequisites:

- The ZoomInfo app is installed on your Dynamics 365 Sales organization. More information: Install ZoomInfo app.
- You have a license to use the ZoomInfo app.

Map the fields

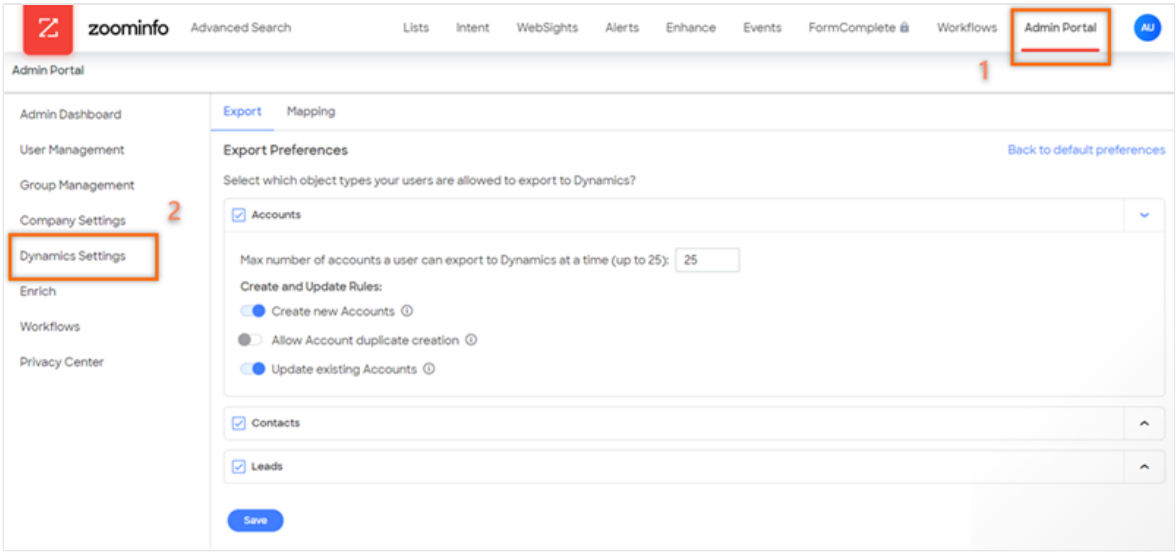
1. Open your Dynamics 365 Apps page and then open the ZoomInfo app.
2. On the left navigation pane, select **ZoomInfo** > **ZoomInfo**.

> **Note**
>
> The app might prompt you to enter credentials. Select either Google, Office, or enter your ZoomInfo credentials if you have an account with ZoomInfo.



3. On the top-right corner of the page, select **More** > **Admin Portal**.

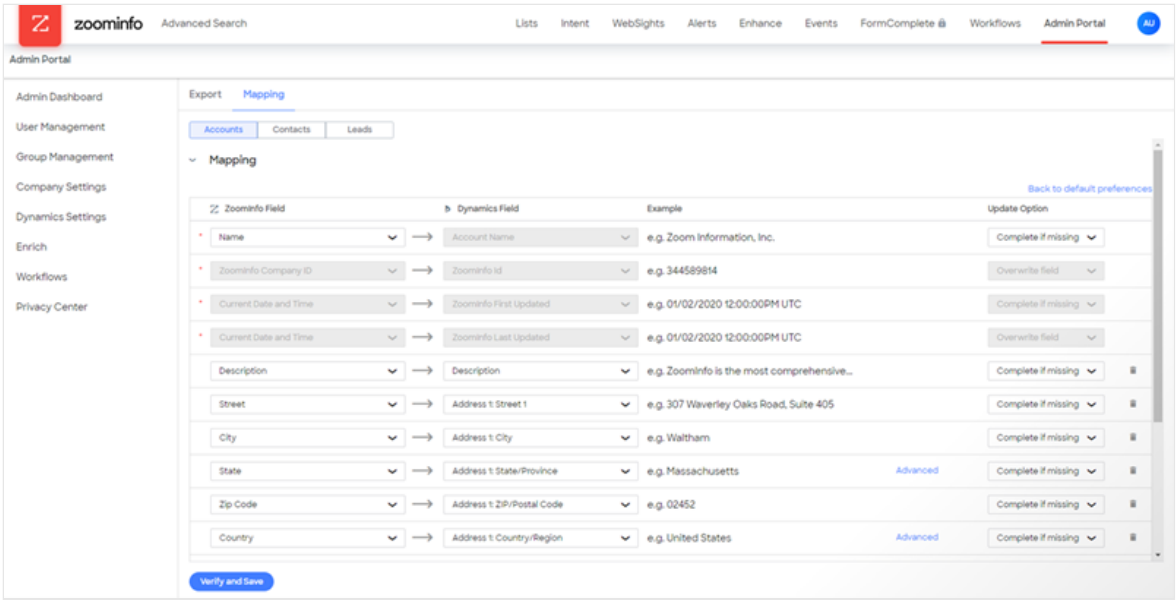
4. On the **Admin Portal** page, select **Dynamics Settings**.



5. Select the **Mapping** tab and then choose the **Accounts**, **Contacts**, or **Leads** tab to map the fields.

> ⓘ Note
>
> In this example, we're using **Accounts**.

You can view the default or configured corresponding field between the ZoomInfo app and Dynamics 365.



6. Map the fields as required. Each column is described with its functionality in the following table:

Column name	Description
ZoomInfo Field	Displays a list of ZoomInfo fields that are available for you to map with Dynamics 365 fields.
Dynamics Field	Displays a list of Dynamics 365 fields that are available for you to map. The list also includes your custom fields.
Example	Displays an example of value for the selected ZoomInfo field.
Update Option	Select one of the following options for the field: • **Complete if missing**: Choose this option to only complete with ZoomInfo data if nothing exists in Dynamics 365. By default, this option is selected. • **Overwrite field**: Choose this option to overwrite existing data in Dynamics 365 with ZoomInfo data.

> ⓘ Note
>
> - Select **Add Rows** to add more fields to the mapping table.
> - To set the mapped values to default, select **Back to default preferences**.

7. Select **Verify and Save**.

   The ZoomInfo app validates the corresponding mapped values and saves the mappings. If there are any mismatches in the mapping, an error is displayed to resolve the issue.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Install ZoomInfo app

Customize the ZoomInfo app

Article • 06/27/2022

After you install the ZoomInfo app, it's available as a standalone app, so every time sellers must come back to the app selection area and choose ZoomInfo to view the required information.

As an administrator, you can customize the ZoomInfo app in the following ways:

- **Add ZoomInfo entry to the site map**: You can add the ZoomInfo entry to your Dynamics 365 Sales app on the left navigation site map and provide easy access to ZoomInfo, including the Admin Portal and ZoomInfo Knowledge Center. More information: Add ZoomInfo entry to site map.
- **Add ZoomInfo form to table entities**: You can add the ZoomInfo form to standard or custom Account, Contacts, and Leads table entities to provide sellers with inline access to ZoomInfo data. More information: Add ZoomInfo form to entities.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

Before you start, be sure you've met the following prerequisites:

- The system administrator role is assigned to you. More information: Assign a security role to a user.
- The ZoomInfo app is installed on your Dynamics 365 Sales organization. More information: Install ZoomInfo app.

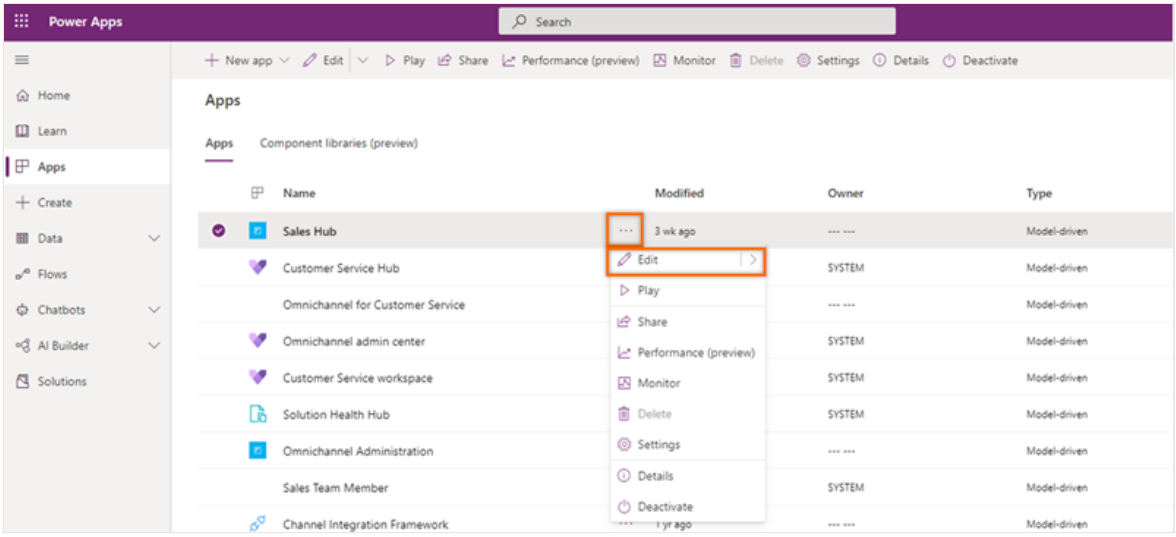
Add ZoomInfo entry to site map

By adding ZoomInfo entry to the left navigation site map of your Dynamics 365 Sales app, you allow sales teams to perform searches and administrators to access the Admin

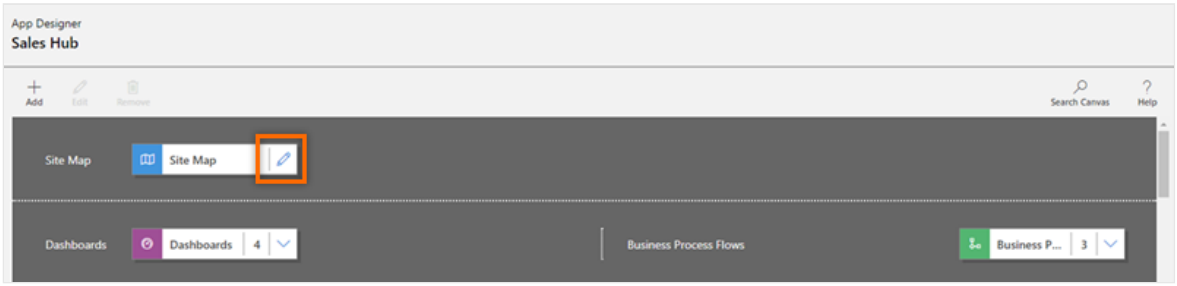
Portal in order to configure export preferences, custom mapping, and other settings. You can also add site map entry to the ZoomInfo Knowledge Center.

To add the entry to the site map:

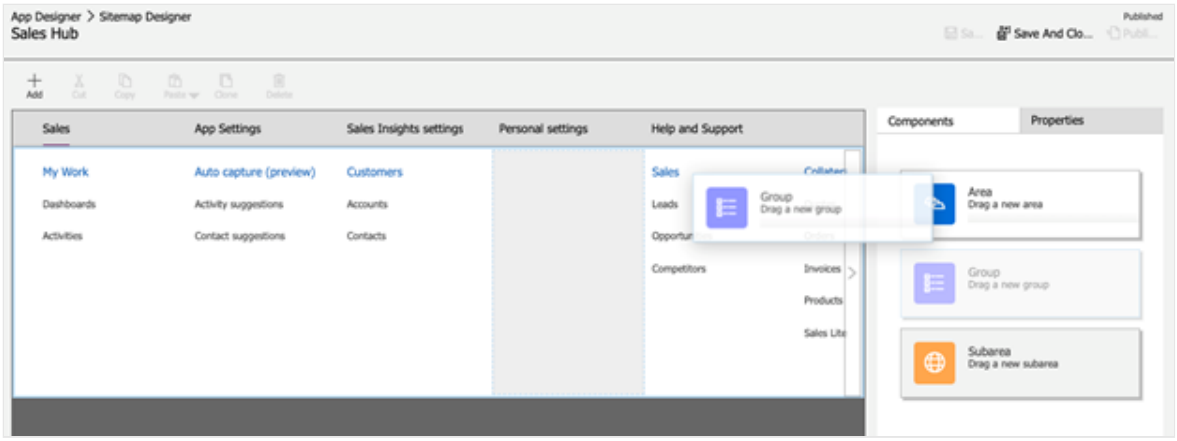
1. Sign in to the Power Apps portal and choose the organization in which you've installed the ZoomInfo app.
2. On the left navigation pane, select **Apps**. A list of apps that are available in the environment is displayed.
3. Select the **Sales Hub** app and then select **More options** (...) > **Edit**.



4. On the App Designer page, under **Site Map**, select the pencil icon.

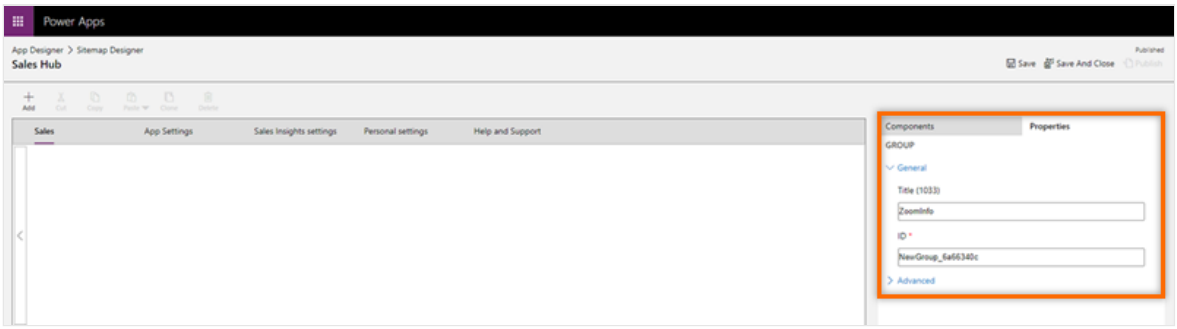


5. Choose an existing area or add a new area to the site map and then, from the **Components** tab, drag and drop **Group**.



6. On the **Properties** tab, under the **General** section, add the following group information:

Field	Description
Title	Specifies the name of the group. Enter **ZoomInfo** as the title.
ID	Specifies the unique identification number for the group. Use the default value.

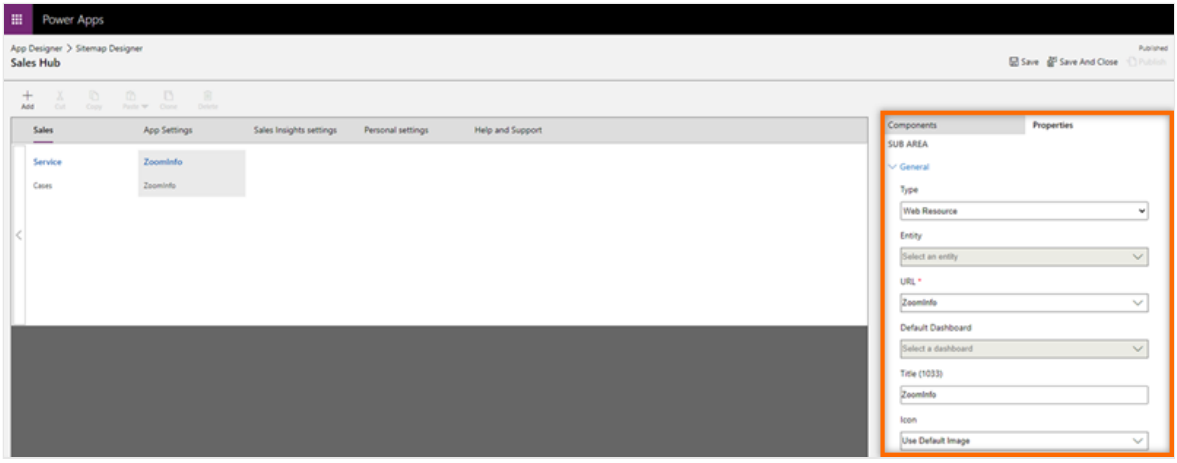


7. Select the added ZoomInfo group and then, on the right pane under the **Components** tab, drag and drop the **Subarea**.

8. Select the added subarea and then, on the right pane under the **Properties** tab, enter the following information to add **ZoomInfo** site map entry:

Field	Description
Type	Web Resource
URL	ZoomInfo

Field	Description
Title	ZoomInfo

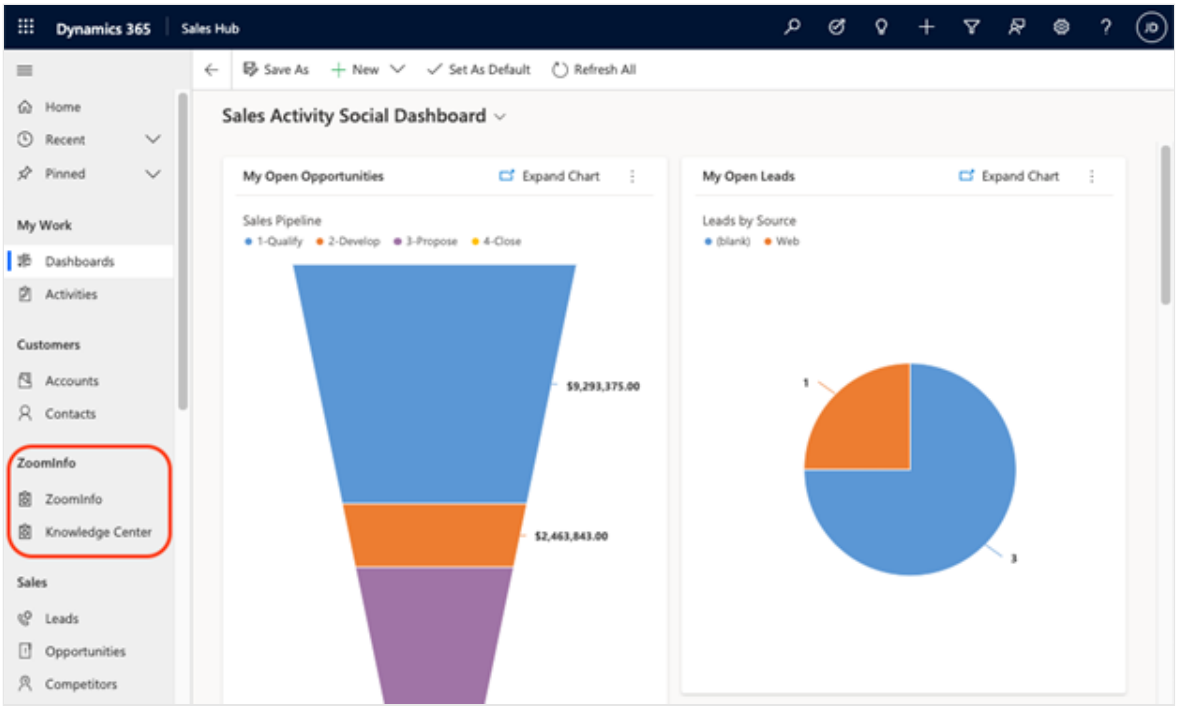


9. Repeat **steps 7 and 8** to add site map entry to the **ZoomInfo Knowledge Center**. Enter the following information to the subarea:

Field	Description
Type	URL
URL	`https://university.zoominfo.com/pages/knowledge-center-zoominfo-for-sales-home`
Title	Knowledge Center

10. Save and publish the changes.

11. (Optional) To verify the successful addition of the ZoomInfo site map, open the Dynamics 365 Sales Hub app. The ZoomInfo Group you added should be shown in the left navigation pane.



Add ZoomInfo form to table entities

You can add the ZoomInfo form to standard or custom Account, Contacts, and Leads table entities. This allows sellers to access the ZoomInfo data without moving away from records.

To do this, follow this sequence of steps:

1. Create a solution
2. Add solution components to table entity
3. Add form to table entity
4. Customize form components

Create a solution

Create a solution to locate and work with the components you've customized and then apply them to the Power Platform environment that hosts your Dynamics 365 apps. This makes it easier to return to your custom solution to make future changes.

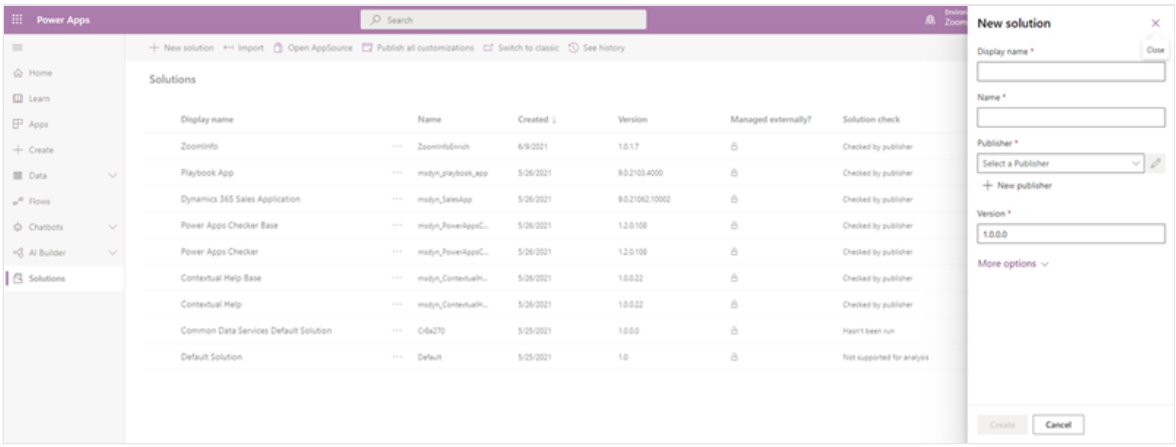
To create a solution:

1. Sign in to the Power Apps portal and choose the organization in which you've installed the ZoomInfo app.

2. On the left navigation pane, select **Solutions**.

3. Select **New solution** and on the **New solution** pane, enter the information as described in the following table:

Field	Description
Display Name	The name shown in the list of solutions. You can change this later.
Name	The unique name of the solution. This is generated using the value you enter in the Display Name column. You can edit this before you save the solution, but you can't change it once it's been saved.
Publisher	You can select the default publisher or create a new publisher. We recommend creating a publisher for your organization to use consistently across the Power Platform environments where you'll use the solution.
Version	Enter a number for the version of your solution. This is only important if you export your solution, as the version number will be included in the file name.



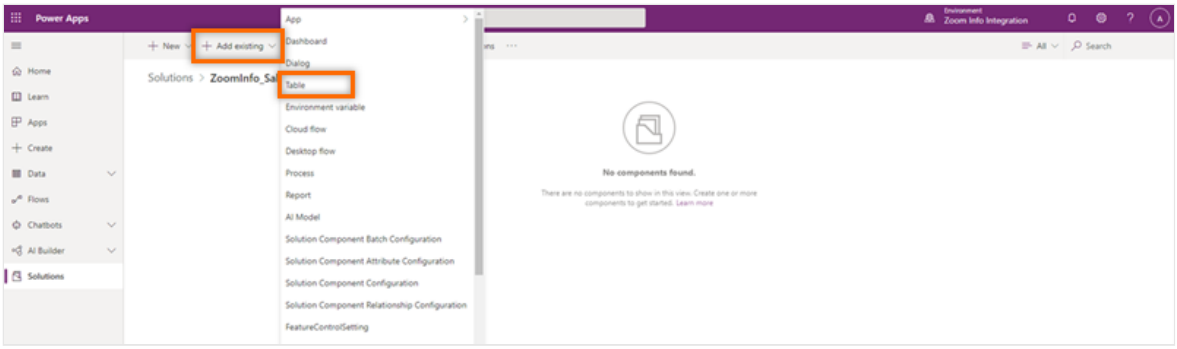
4. Select **Create**.

   The new solution is created and listed in the solutions.

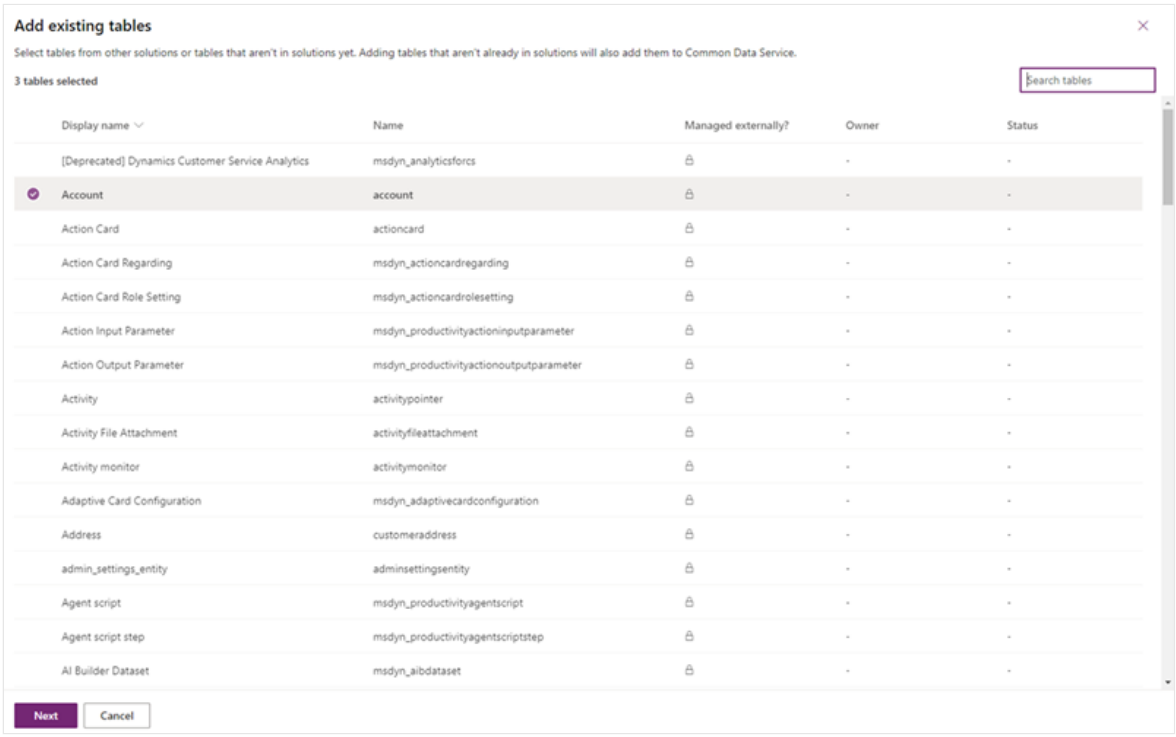
Add solution components to table entity

You can now add components that aren’t available in the solution. In this example, we're adding a table component to Account, Contacts, and Leads entities.

1. Open the solution you've created and select **Add existing** > **Table**.



2. On the **Add existing tables** pane, add the tables **Account**, **Contacts**, and **Leads**.



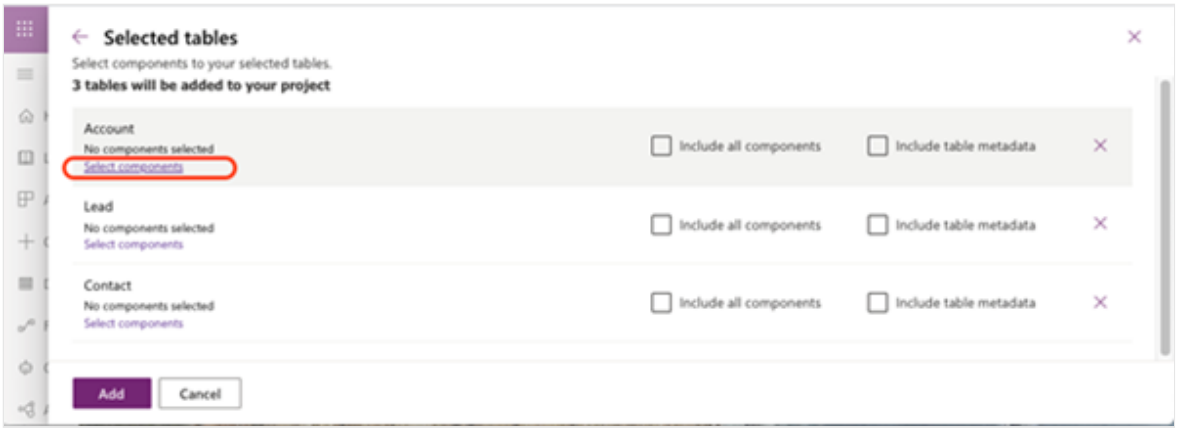
3. Select **Next**.

   The three tables you selected are displayed.

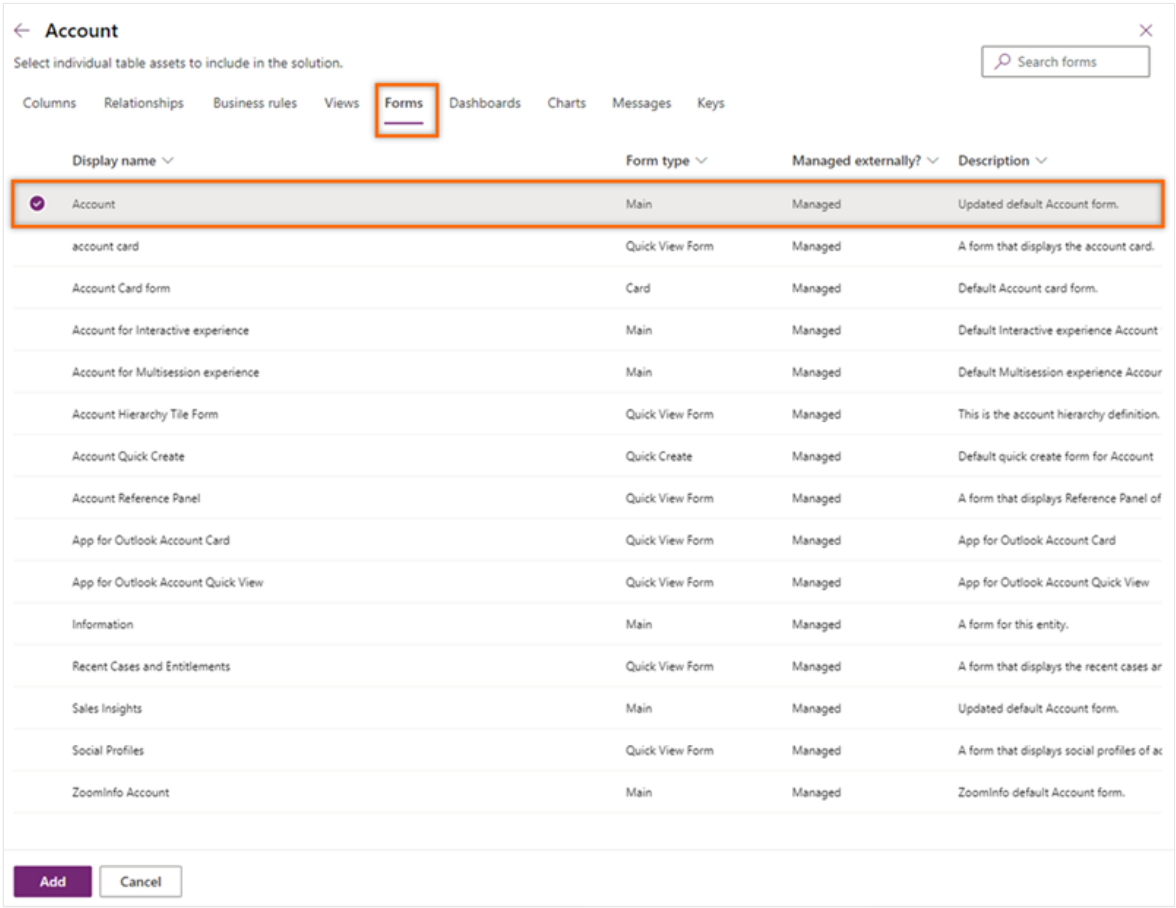
Add form to table entity

Now that you've added the Account, Contacts, and Leads table entities to the solution component, add the form component for each table entity.

1. Under the **Account** section, select **Select components**.

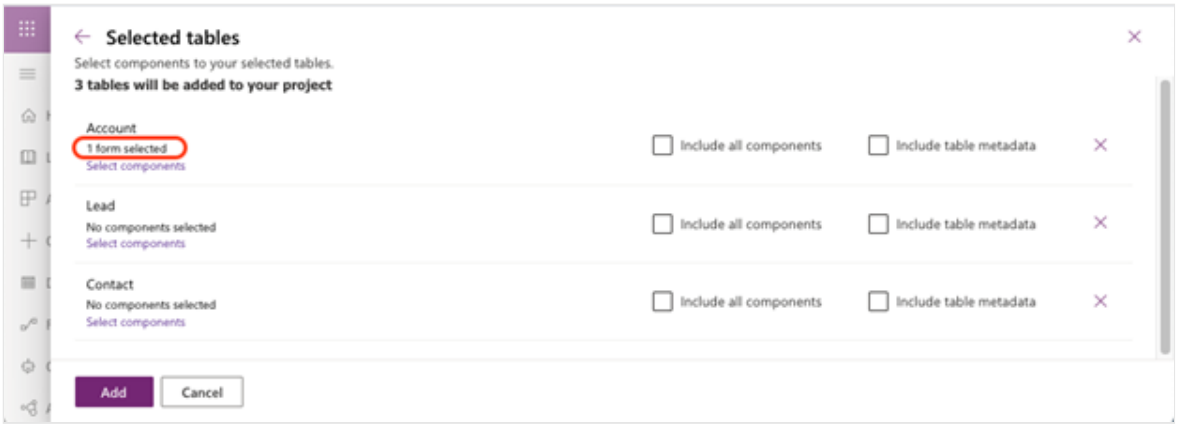


2. On the **Account** pane, select the **Forms** tab and then select **Account**.



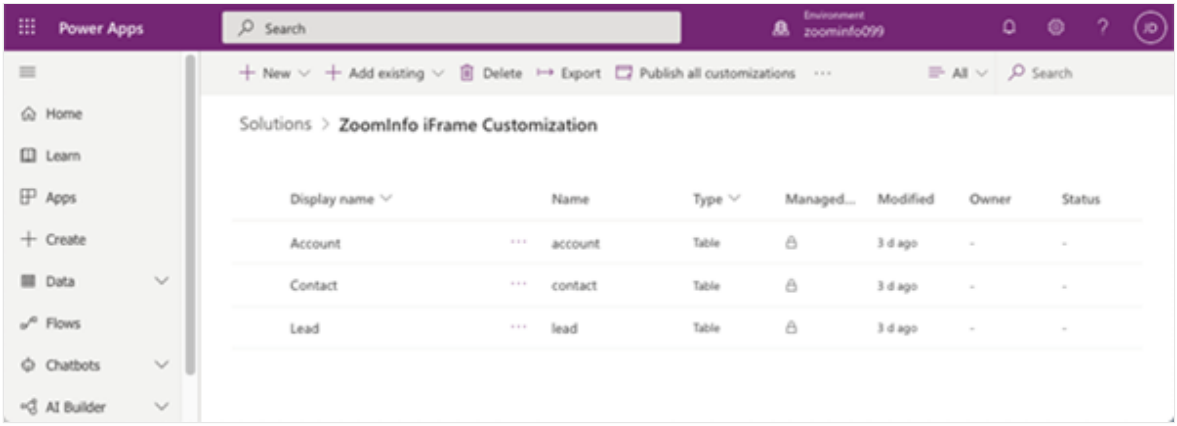
3. Select **Add**.

   Under the **Account** section, you will see the message **1 form selected**, indicating that you've added the account form to the **Account** table.



4. Repeat **steps 1 through 3** for the **Contact** and **Lead** table entities to add the corresponding contact and lead form to each.

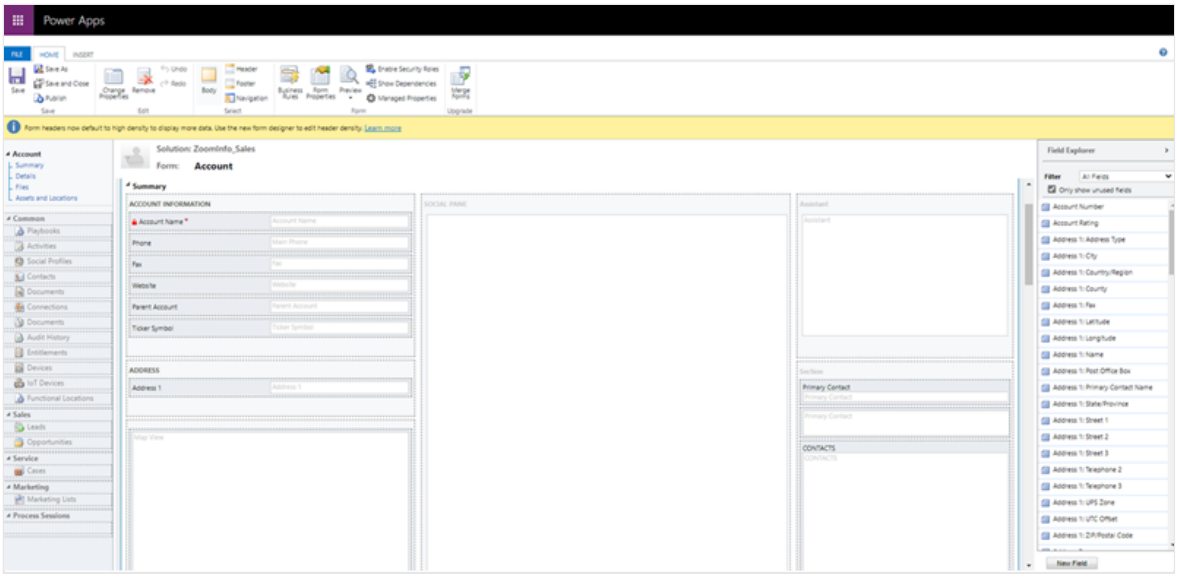
5. Select **Add**.



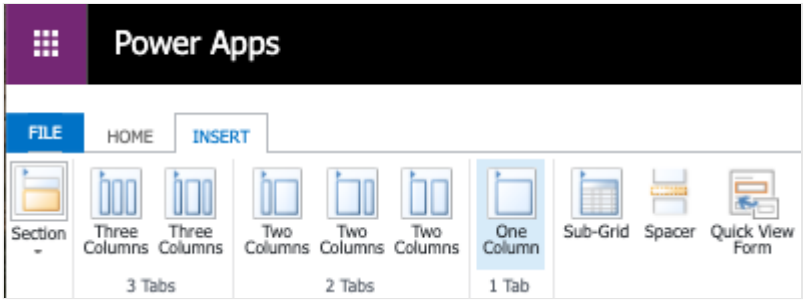
Customize form components

Now that you've added the forms to the table entities, you can customize how the ZoomInfo inline pages will display within the standard form component used with your Account, Leads, and Contacts pages. Perform the customization in classic mode.

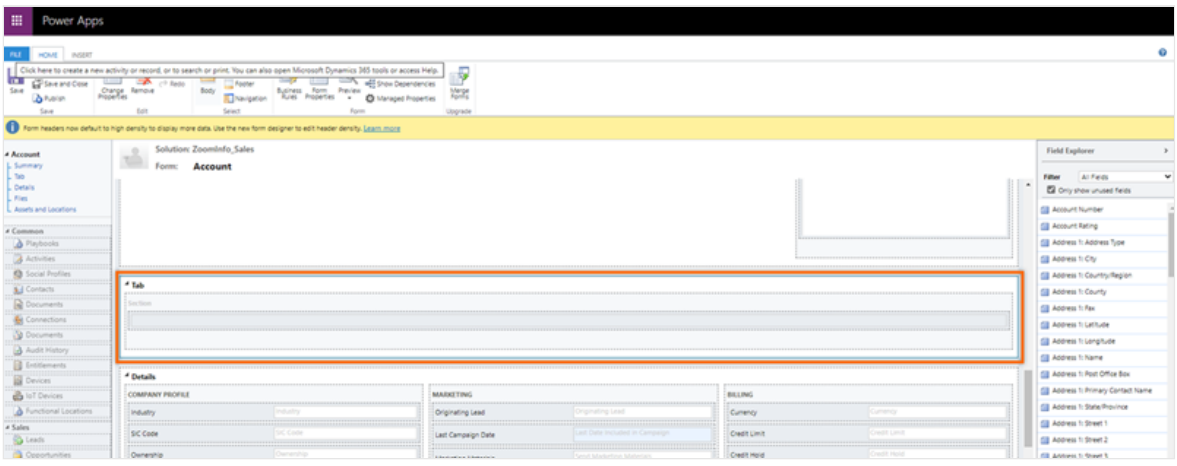
1. From the form page of the **Account** form, select **Switch to classic**.



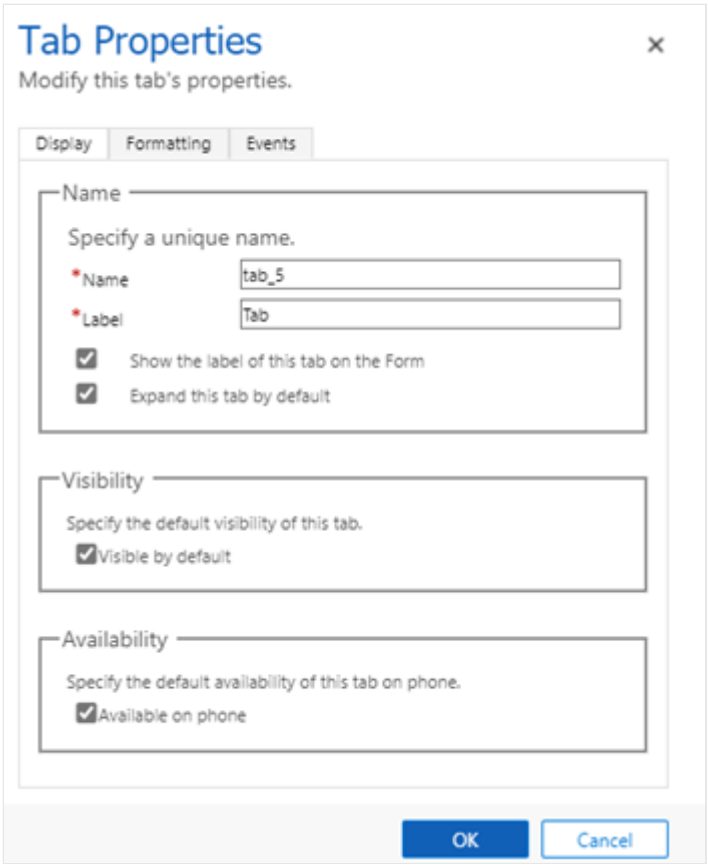
2. Select the **Insert** tab and then select **One column**.



A new column is added as a **Tab**.

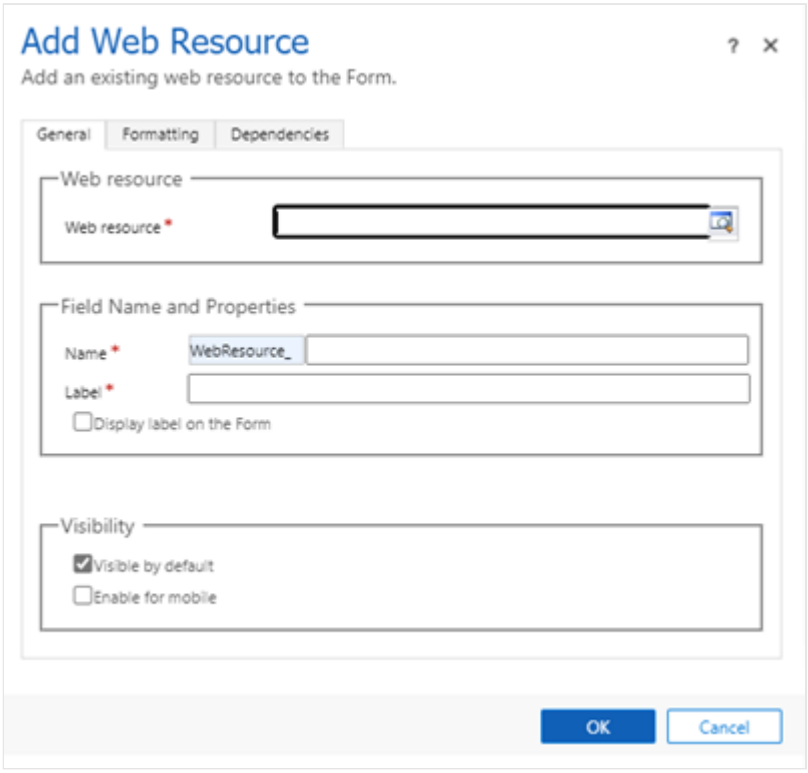


3. Select the **Tab** and then select **Change Properties**. The **Tab Properties** dialog opens.



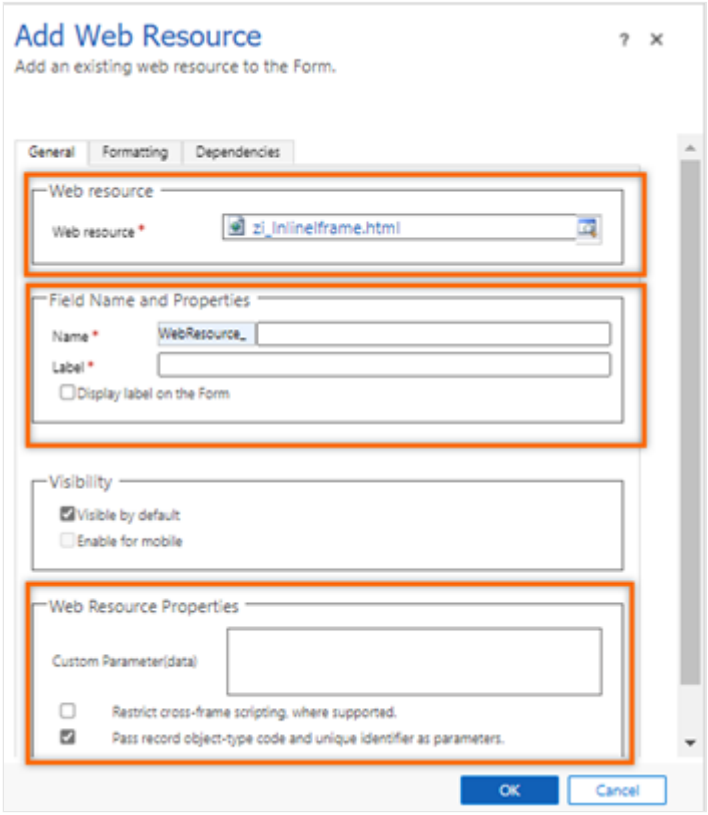
4. Enter the values for **Name** and **Label** as **ZoomInfo**, and then select **OK**. The tab is then renamed as **ZoomInfo**.

5. Go to the **INSERT** tab in the **ZoomInfo** tab. Select the **Section** area and then select **Web Resource**. The **Add Web Resource** dialog opens.

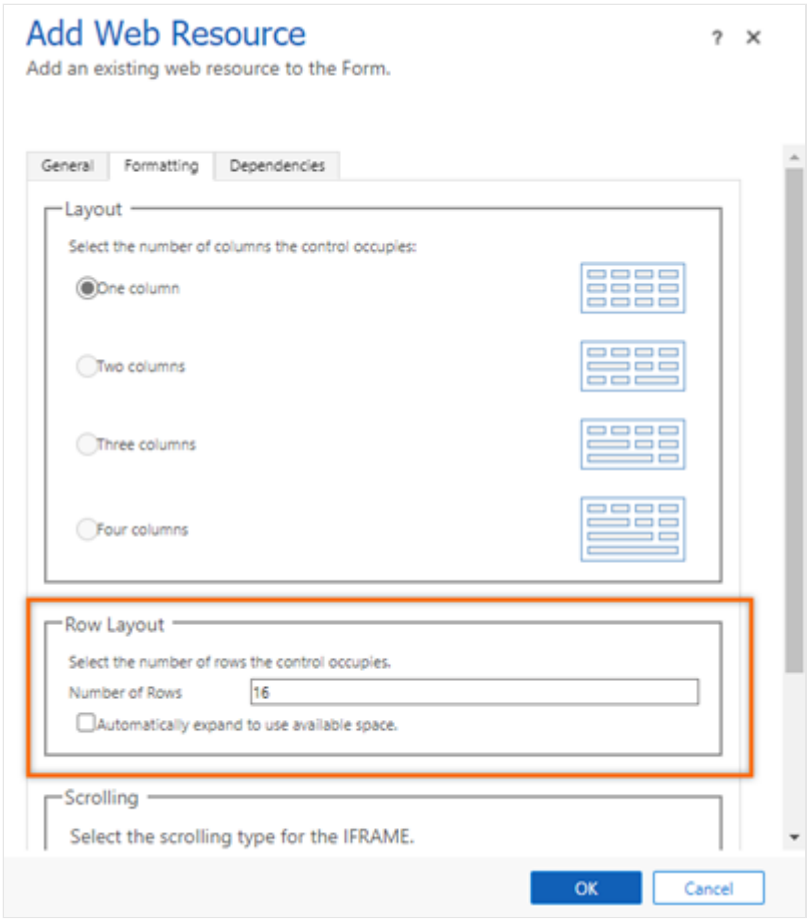


6. Under the **General** tab, enter the following information:

- In the **Web resource** section, search and add the `zi_InlineIframe.html` file that is built into the ZoomInfo for Dynamics 365 app.
- In the **Field Name and Properties** section, enter the **Name** and **Label** as **ZoomInfo**.
- In the **Web Resource Properties** section, check to select the **Pass record object-type code and unique identifier as parameters** option. This option helps ZoomInfo with the object type passed to perform data matches.



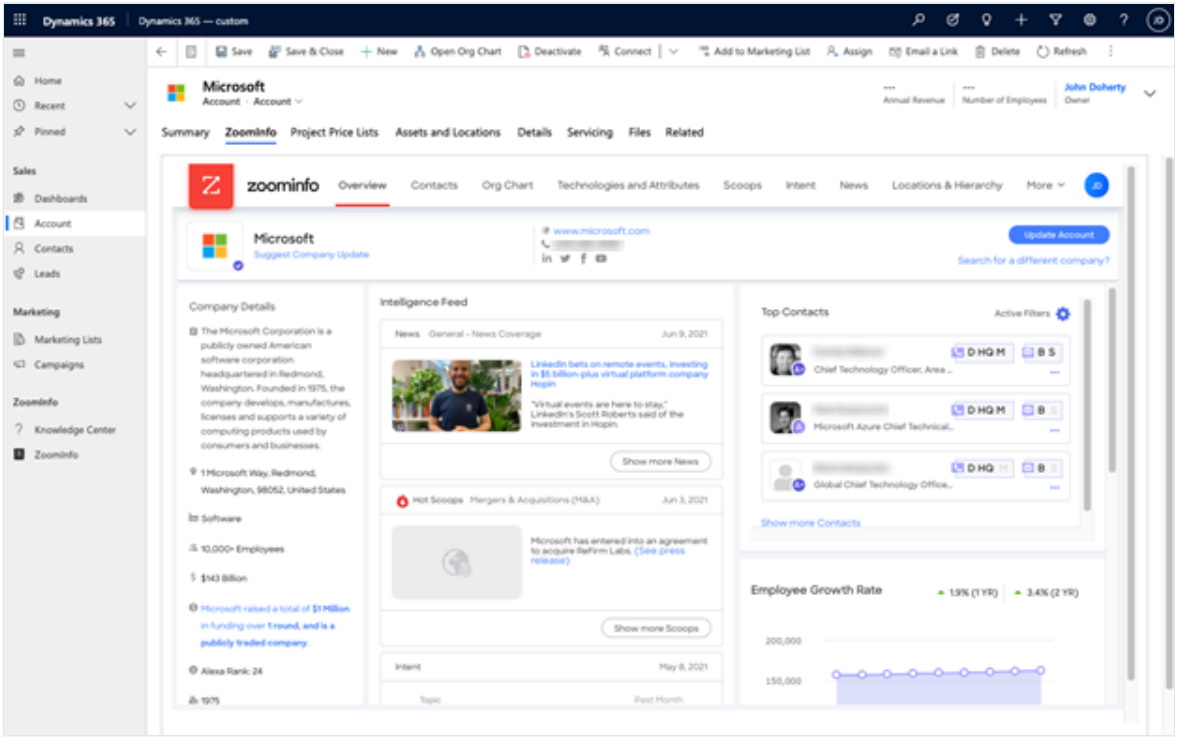
7. Under the **Formatting** tab, in the **Row Layout** section, change the **Number of Rows** value to **16** to accommodate the ZoomInfo data.



8. Select **OK**.

9. Save and publish the form.

   The **ZoomInfo** tab is added to the **Accounts** form. To verify, go to Dynamics 365 Sales Hub app and open the standard account page for a company. The **ZoomInfo** tab should be added to the account.



10. Repeat **steps 1 through 9** for the **Contact** and **Leads** forms.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Install ZoomInfo app

Enable focused view and set it as default

Article • 08/07/2023

In the focused view, sellers can view and manage their CRM records and their associated activities, on one page. This view makes it easier for sellers to stay focused on their tasks and reduces the need to navigate between multiple screens. It also allows sellers to better organize and prioritize their tasks.

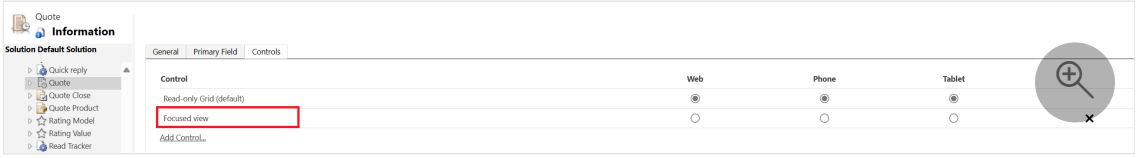
To enable focused view and set it as default

The focused view is enabled by default for contact, account, lead, and opportunity entities. However, you must enable it manually for all the other entities. You can also set it as the default view for any entity so that sellers don't have to switch to the focused view each time they access their entity list.

> **Note**
>
> - When you set the focused view as the default view, users can't switch to the list view. If users must be able to use both views, set the list view as the default view.
> - Focused view is not available for the Activities entity.

Use the following steps to enable the focused view or to set it as default.

1. In the Sales Hub app, select **Settings** > **Advanced Settings**.
2. On the **Settings** menu, select **Customizations** > **Customize the system**.
3. On the Power Apps Default Solution page, select **Entities** > ***Entity name***. For example, select **Entities** > **Quote**.
4. To add the control for entities other than contact, account, lead, and opportunity, follow these steps:
   a. On the **Controls** tab, select **Add Control**.
   b. In the **Add Control** dialog box, select **Focused view**, and then select **Add**.



5. To set the focused view as the default view, select **Focused view** for web, phone, and tablet on the **Controls** tab.

6. Save and publish your changes. The focused view is now enabled and set as the default view for quotes.

See also

View and manage records in focused view
Focused view FAQs

Copilot in Dynamics 365 Sales overview

Article • 10/05/2023

This article was partially created with the help of AI. An author reviewed and revised the content as needed. **Read more**.

Copilot is an AI assistant that helps sales teams be more productive and efficient in their daily work. It has a chat interface that sellers can use to get a quick summary of their opportunity and lead records, catch up on updates, prepare for meetings, and so on. Copilot is enabled by default for orgs in North America region. It's enabled for all the sales apps with lead and opportunity entities in this region. If your org is in a different region, you need to enable Copilot manually. Learn more about enabling and setting up Copilot.

> **Note**
>
> Copilot is also available as an add-in and an integrated app in Outlook and Teams respectively, allowing you to capture, access, and update your CRM data from the apps you use every day. It also has generative AI capabilities such as record summarization and email content generation. Learn more about **Microsoft Sales Copilot** and its **generative AI capabilities**.

Copilot capabilities

Copilot offers the following capabilities:

- Record summarization
- Record catch up
- Meeting preparation
- Email assistance
- News updates

Record summarization

Record summarization helps you get a quick summary of your opportunity and lead records. By default, the summary is generated from your default opportunity and lead views. However, a system administrator can configure the fields that are used to generate the summary. Ensure that your entire sales team agrees on the top seven fields that are most relevant for your business.

More information:

- Summarize an opportunity or a lead
- Configure fields for summarization

Record catch up

Stay on top of the changes to your opportunities and leads. Copilot summarizes the changes to your records since the last seven days or your last login. Copilot generates this information from the audit history of the record. A system administrator can configure the fields that you want to catch up on. Ensure that your entire sales team agrees on the top 10 fields that are most relevant for your business.

More information:

- Catch up with an opportunity or lead
- Configure fields for summarization

Meeting preparation

Meeting preparation helps you prepare for your upcoming meetings effortlessly using Copilot. Copilot identifies your upcoming meetings for the day and summarizes the relevant information from the opportunity or lead records that are associated with the meeting.

More information: Prepare for upcoming meetings

Email assistance

Use Copilot to compose professional-looking emails, respond to emails, and get email follow up reminders. Copilot uses natural language processing (NLP) algorithms to help creating emails messages. Trained on vast text data, Copilot generates personalized, high-quality emails tailored to specific needs. Dynamics 365 Sales uses Copilot capabilities to help sellers in creating emails that effectively engage customers, ensuring clarity, conciseness, and compelling content. Using the email assistance capabilities, you can do the following tasks:

- Compose and send email messages using Copilot (preview)
- View and copy email summary
- Show emails that are not replied

News updates

News updates help you stay current with the latest news about your account. These news updates can be great conversation starters and help you understand the current dynamics in your customers' organization. Ask Copilot to get you the latest news related to an account and get a list of articles featuring or mentioning the account, curated from Bing. Ensure to read through the news article thoroughly to confirm that it's from an authentic source and it's indeed about the customer.

More information: Show latest news for an account

Region availability and languages supported

Copilot is available in all regions and is supported only in English. However, if you're enabling the feature for orgs outside of North America, you'll need to opt in to share relevant data with the Azure OpenAI Service outside of your default geography. To learn more, see Copilot data movement across geographies.

Enable and set up Copilot in Dynamics 365 Sales

Article • 10/05/2023

Enable Copilot on apps that your sales team uses and grant them access. After you do, sellers can use Copilot to summarize records, catch up on updates, prepare for meetings, and so on.

> **Note**
>
> Copilot is enabled by default for orgs in North America region. It's enabled for all the sales apps with lead and opportunity entities in this region. If your org is in a different region, you need to enable Copilot manually.

License and role requirements

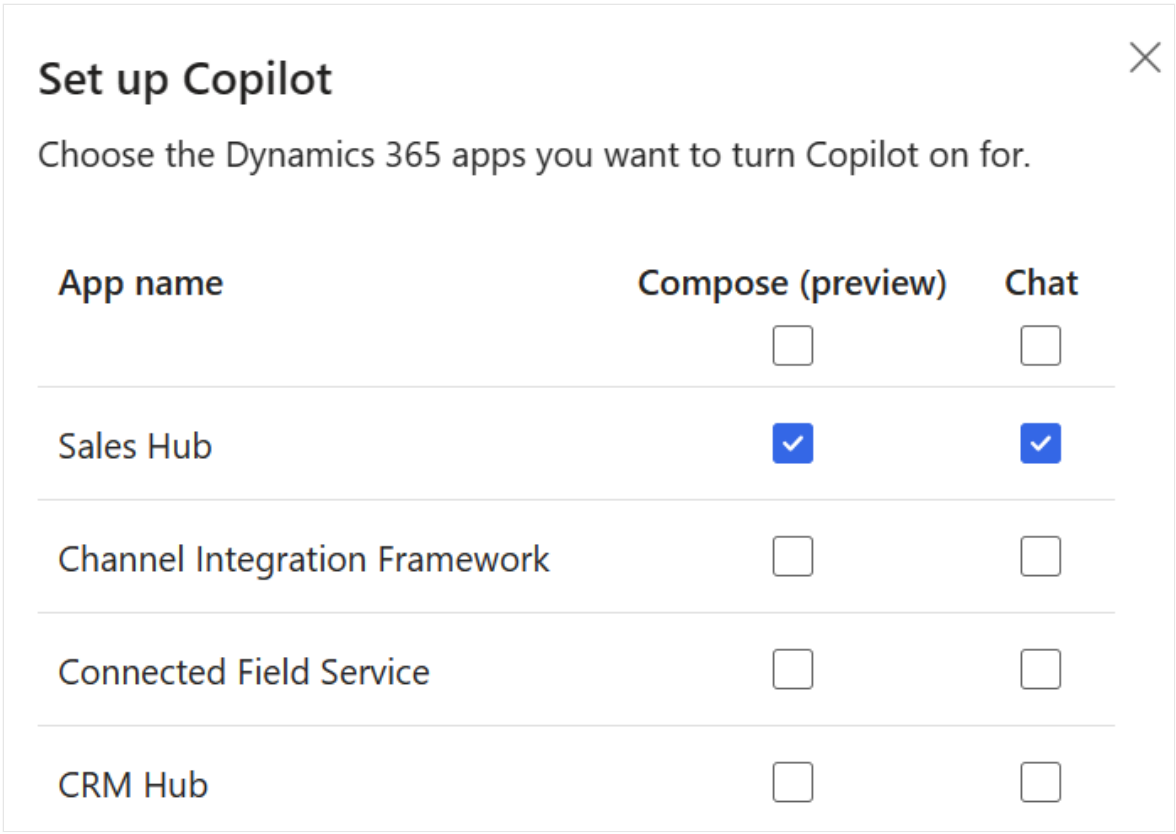
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable or disable Copilot in Dynamics 365 Sales

Select the apps and the copilot features that you want to enable on the apps. You can enable copilot only from the Sales Hub app. If you're using a custom sales app, you need to switch to the Sales Hub app to enable Copilot for the custom app.

1. From the Change area in the Sales Hub app, select **App Settings**.
2. Under **General Settings**, select **Copilot**. If this is the first time you're setting up copilot, you'll see **Set up Copilot**. If you've already set up copilot, you can enable or disable apps or copilot features by selecting **Manage apps**.
3. Select **Set up Copilot** or **Manage apps** depending on what you see.

The side panel displays the list of apps installed in your organization.



4. Select the following copilot feature to enable it:

   - **Compose**: Select this checkbox to enable the copilot features that help sellers get content suggestions while composing or responding to emails, and get email summaries. To learn more, see Compose and send email messages using Copilot and View and copy email summary
   - **Chat**: Select this checkbox to enable the copilot features that help sellers chat with copilot to get contextual insights and suggestions. For example, sellers can ask copilot to summarize an opportunity or lead, help them prepare for a meeting, and so on. Learn more about chat with copilot.

   After you save the changes, you'll see the Copilot icon ( ) in the right most bar. Select the icon to open the copilot panel.

Grant audit access to users

Catch up information in Copilot is generated from the audit history. Hence, users need to have access to view audit history and audit summary to be able to view lead and opportunity catch ups.

1. Allow users to access the audit:

   a. In the Sales Hub app, select **Settings** > **Advanced Settings**.

b. Select **Settings** > **Administration** > **System Settings**

c. Select the **Auditing** tab and select **Audit user access**.

> **Note**
>
> Alternatively, you can turn on audit access from the **Copilot settings page**.

2. Grant users access to view audit history and audit summary:

a. In the Sales Hub app, select **Settings** > **Security** > **Security Roles**.

b. Select the security role that you want to edit and select the **Core Records** tab.

c. Under **Miscellaneous Privileges** and select the following privileges:

- **View Audit History**
- **View Audit Summary**

d. Save the changes.

Next step

Configure Copilot in Dynamics 365 Sales

Configure Copilot in Dynamics 365 Sales

Article • 10/05/2023

You can configure the fields that copilot should use to generate summaries and catch up information.

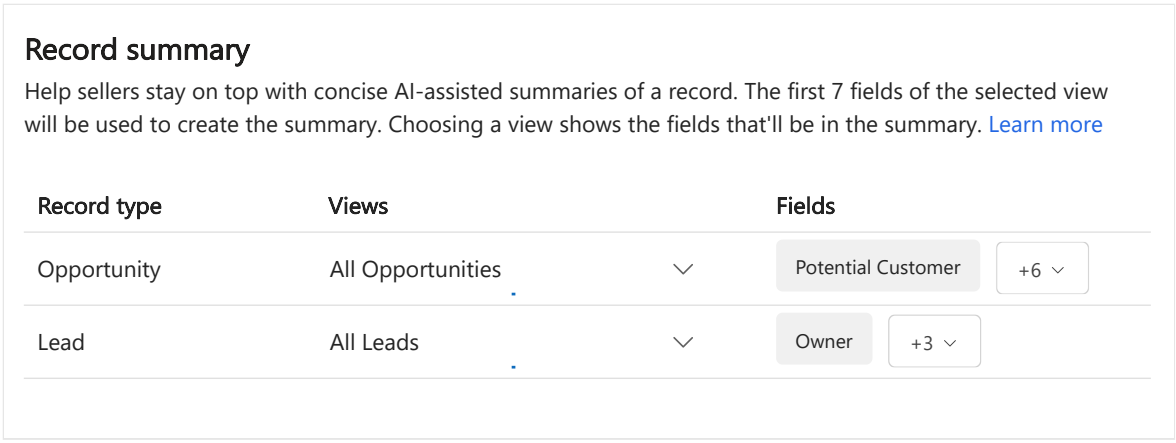
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure record summary and catch up fields

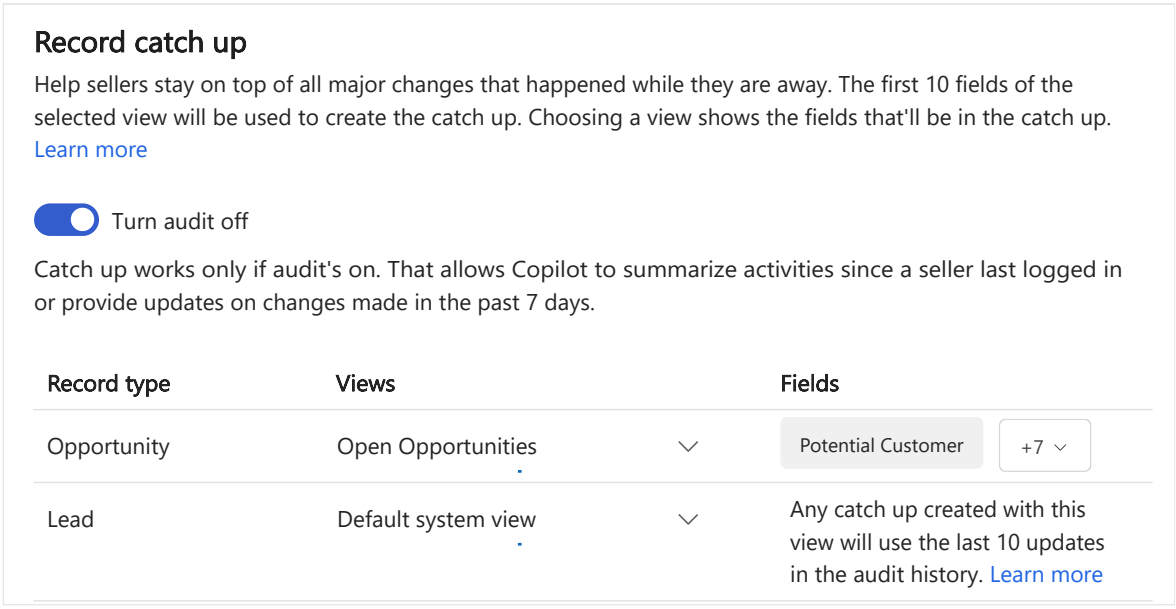
By default, Copilot uses the first seven fields in the default lead and opportunity view to generate summaries and last 10 updates in the audit history of the record to generate catch ups. You can configure a view with fields that are most relevant for your business and have Copilot use it for generating summaries and catch ups. You can configure different views for summary and catch up.

1. In the Sales Hub app, create a system view with the fields that you want to use for generating summaries and catch up information.
2. Go to the Change area and select **App Settings**.
3. Under **General Settings**, select **Copilot**.
4. Select **Record summary**, and then select the view you'd like to use for generating summaries for leads and opportunities.
   You'll see the first seven fields listed under the **Fields** column. These fields will be used to generate summaries.



5. Select **Record catch up**, and then select **Turn audit on**.
   As catch up summaries are generated from the audit history, you must turn on auditing to use this feature. Ensure to enable user access to the audit history and audit summary. For more information, see Grant audit access to users.

6. Select the view you'd like to use for generating catch up information for leads and opportunities.
   You'll see the first 10 fields listed the under **Fields** column. Changes to these fields are only reported in the catch ups. If you select the **Default system view**, the last 10 updates in the audit history of the record are used to generate catch ups.



7. Save the changes.

> **Important**
>
> If you update or remove fields in any of the selected views, open the **Copilot** settings page, select a different view, save the changes, and then select the updated view. Ensure that you see the updated fields listed under the **Fields** column.

See also

Use Copilot in Dynamics 365 Sales

Copilot data movement across geographies

Article • 10/20/2023

Copilot in Dynamics 365 Sales includes AI features that use the Microsoft Azure OpenAI Service. Azure OpenAI Service is currently available only in the North America region. If your Dynamics 365 environment is in any other geography, your data will be moved outside of your geography to handle copilot requests.

You'll see the opt-in terms when you enable the Copilot feature for regions other than North America. The opt-in terms mention about the transfer of relevant data outside of your default geography.

> **Note**
>
> The opt-in terms aren't applicable to organizations in the North America geography and therefore won't be visible to customers in this region.

When you use any copilot feature in an organization that's outside the North America or Europe regions, your data, including personal data, used in prompts or returned in completions, might be transmitted outside of the geographic locations that you've selected for your primary data residency.

> **Note**
>
> - If your environment is hosted in North America, users will use an Azure OpenAI endpoint in North America.
> - If your environment is hosted in Europe, users will use an Azure OpenAI endpoint in Europe.
> - If your environment is hosted anywhere else, users will use an Azure OpenAI endpoint outside of the region in which they are hosted.

To learn more about how Azure OpenAI protects your data, read Data, privacy, and security for Azure OpenAI Service.

See also

- Enable and set up Copilot in Dynamics 365 Sales

- Configure Copilot in Dynamics 365 Sales

FAQs about Copilot in Dynamics 365 Sales

Article • 10/05/2023

This article includes frequently asked questions about Copilot in Dynamics 365 Sales.

How does the data flow between Dynamics 365 and Azure OpenAI endpoints?

When you type a question in the Copilot pane, we pass the relevant data to Azure OpenAI Service through our plug-ins and services. We'll release a high-level architecture document around the GA timeframe.

Does Copilot have abuse monitoring and human review?

No. Our Azure OpenAI resources have opted out of abuse monitoring and human review. This helps us ensure that we don't retain any of your data outside the Dynamics 365 data boundary. We use other techniques to monitor and filter out abusive content at runtime.

What data is included in the requests?

The data included in the requests varies based on the type of request made. For example, when you attempt to summarize an opportunity, the relevant fields of the opportunity and associated metadata are pushed to the Azure OpenAI endpoint to generate a summary.

Is any of my data stored outside of Dynamics 365?

No, we don't save any of your data in any new data store. You can read more about the Azure OpenAI data and privacy commitments.

How does Copilot encrypt data?

All data exchanges in Copilot are handled according to Microsoft data management guidelines.

What privacy controls apply to the data received by Azure OpenAI Service?

All data continues to be handled according to Microsoft privacy guidelines. You can read more about the Azure OpenAI data and privacy commitments at Data and Privacy.

Where are the Azure OpenAI endpoints hosted?

Currently, the Azure OpenAI resources are only available in the North America and Europe regions. If your Dynamics 365 environment is in any other geography, your data will be moved outside of your geography to handle copilot requests. You'll be prompted to consent to this data movement when you enable Copilot in Dynamics 365 Sales. More information: Sales Copilot data movement

Do you use my company data to train any of the models?

No. We don't use any customer data to train Azure OpenAI or any other language models.

What's the difference between Microsoft Sales Copilot and Copilot in Dynamics 365 Sales?

Microsoft Sales Copilot is a seller experience application that's available in Microsoft 365 and Microsoft Teams applications. It lets sellers capture, access, and update CRM data from within Microsoft 365 and Microsoft Teams applications. It also has generative AI capabilities such as record summarization and email content generation. Microsoft Sales Copilot works with Dynamics 365 Sales and Salesforce CRM. Learn more about Microsoft Sales Copilot.

Copilot in Dynamics 365 Sales refers to the AI assistant that uses generative AI to summarize opportunities and leads, and generate meeting preparation notes. It's integrated with Dynamics 365 Sales apps. Learn more about Copilot in Dynamics 365 Sales.

Configure Microsoft Teams chat in Dynamics 365 Sales

Article • 09/07/2023

Enable Teams chat to help users effectively collaborate on their sales records without having to leave the application.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

As an administrator, you can configure the ability for sellers to chat in Microsoft Teams from within the Sales Hub app and custom apps. This helps with effective collaboration on the sales records without having to leave the application.

> **Note**
>
> Teams settings apply across all customer engagement apps. So, whether you enable the feature from Sales Hub or a custom app, it'll be enabled for all supported customer engagement apps.

When the feature is enabled, while working on sales records, sellers can start a new chat or connect an existing chat to a record, and thus collaborate efficiently without switching context or leaving the application. Connecting all the associated chats to a record can help sellers maintain all the chats related to the record in one place. You can also configure an optional introduction message that sellers can use to provide further context when collaborating on Teams.

This feature requires certain permissions to access Teams data. Review the Permissions required and Data security and privacy sections to know more.

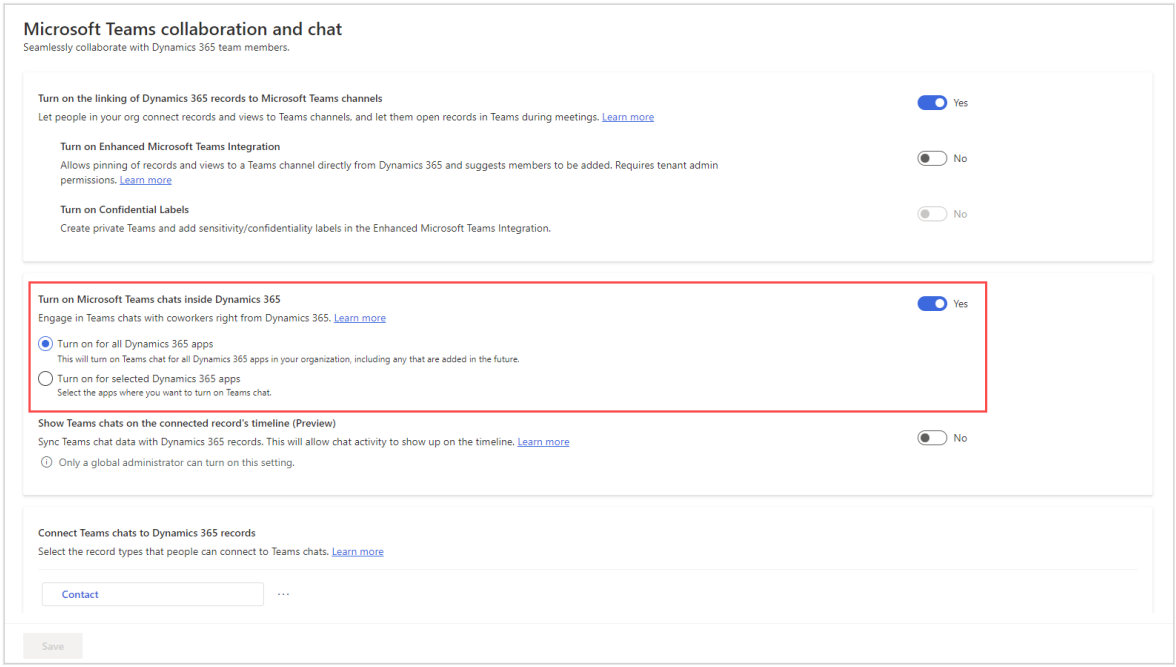
Permissions required

Permission	Type	What the app does with the permission
Chat.ReadWrite.All	Delegated	Reads a user's chats and recent messages to display in the chat list.
Directory.Read.All	Delegated	Reads the display names for user's teams and channels.
Presence.Read.All	Delegated	Reads presence information for all users to be displayed on the user avatars in the chat list.
User.Read.All	Application	Reads the display name and licenses of users to validate whether the suggested participants have a Teams license assigned. This permission is used by the **Suggested chats & contacts** section in the chat list. The permission is set at the application level, because it's used by a background service for better performance.
User.ReadBasic.All	Delegated	Reads users' photos.

Enable or disable Teams chat

1. In the Sales Hub app, select **Change area** in the lower-left corner, and then select **App Settings**.
2. Under **General Settings**, select **Chat and collaborate**.
3. Turn on the toggle for **Turn on Microsoft Teams chats inside Dynamics 365**.
4. Select one of the following:
    - **Turn on for all Dynamics 365 apps** – Enables Teams chat for all supported Dynamics 365 apps in your organization, including any that you add in the future.

- **Turn on for selected Dynamics 365 apps** – Enables Teams chat for the apps you choose. If your organization already uses Teams, the selection you made previously remains.



5. Save the changes.

Teams chat is now enabled for all Dynamics 365 apps of the apps you selected. You can open a record and verify whether you're able to view the chats and channels related to the record. More information: Open Teams chats and channels related to a record

> **Note**
>
> Teams chat is enabled by default for the Customer Service workspace and Customer Service Hub apps.

Add the Teams settings page to the sitemap of a custom app

1. Sign in to Power Apps.
2. Select the environment, and then select **Apps**.
3. Select your custom app, and then select **Edit**.
4. In the **App Designer**, edit the **Site Map**.
5. To add the Teams **Chat and collaborate** settings page, add a subarea component, and then from the **Type** list, select **URL**.

6. Copy the following value and paste it into the **URL** field:

   ```
   /main.aspx?pagetype=control&controlName=MscrmControls.TeamsCollaborationAdmin.TeamsCollaborationAdmin
   ```

7. Save and publish the changes.

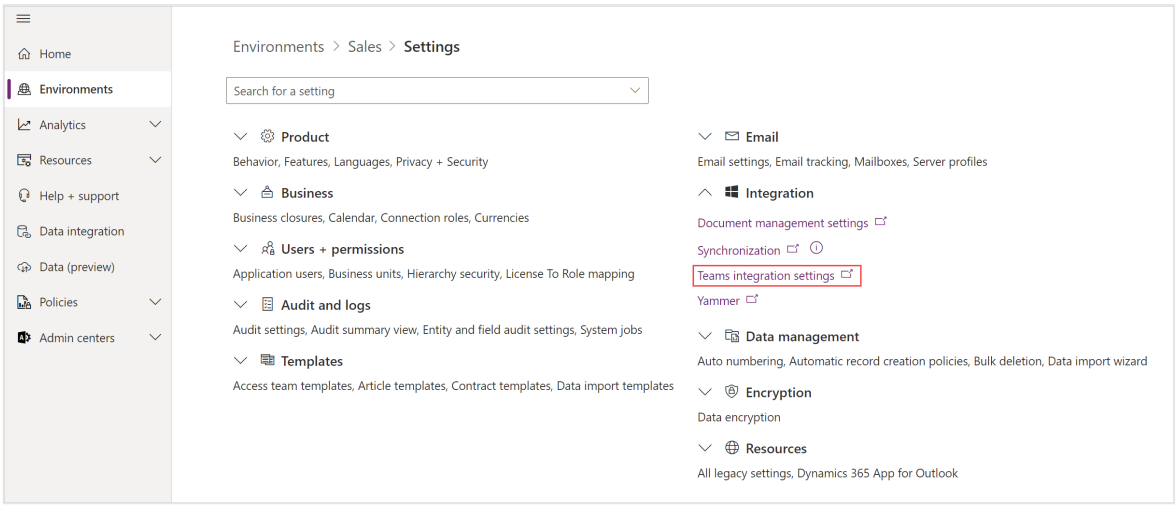
Enable Teams chat from Power Platform admin center

1. Sign in to Power Platform admin center.

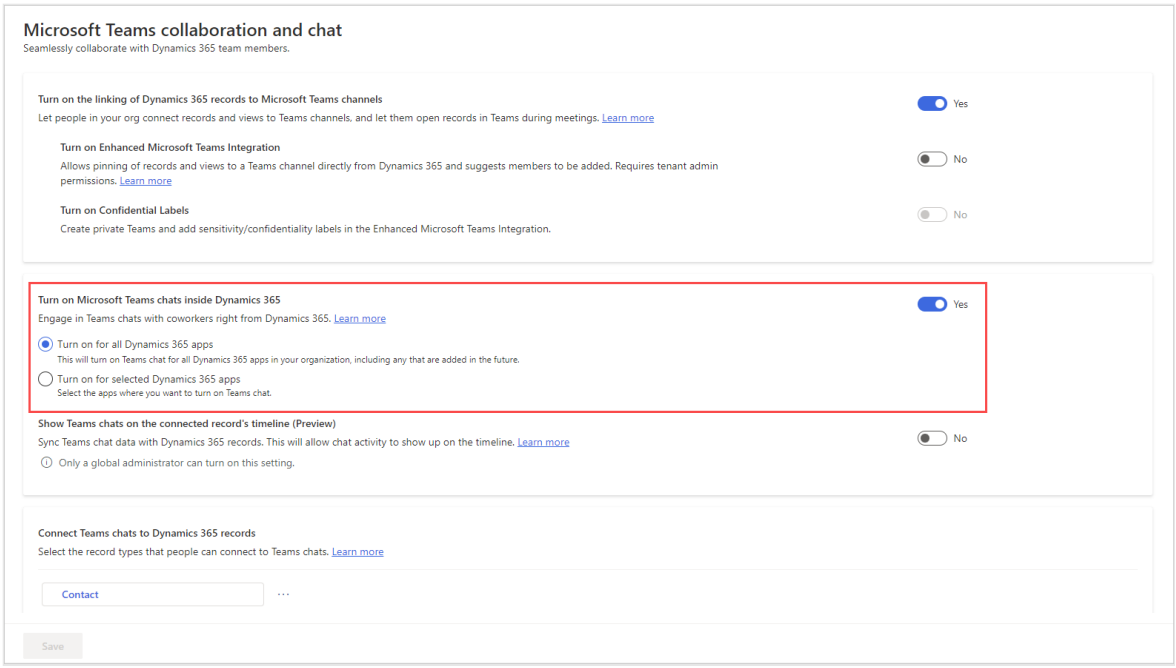
2. Go to the **Environments** tab, select an environment in which you want to enable Teams chat.

3. On the **Environments** page, select **Settings**.

4. On the **Settings** page, expand **Integration**, and then select **Teams integration settings**.



5. On the **Microsoft Teams collaboration and chat** page, turn on the **Turn on Microsoft Teams chats inside Dynamics 365** toggle.

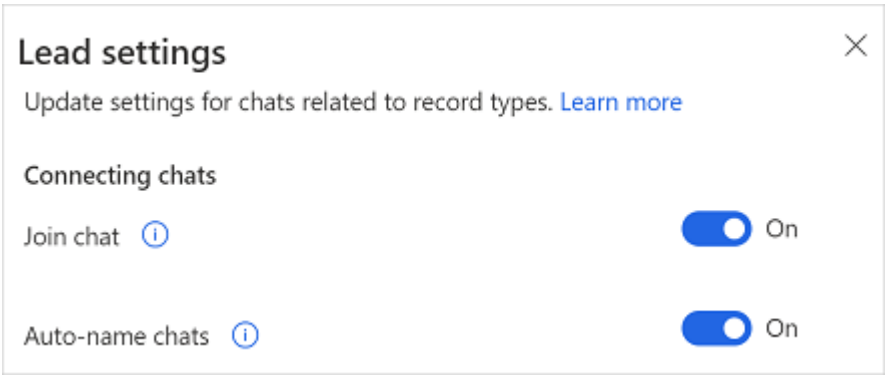


6. Save the changes.

Set the default name for connected chats

As an administrator, you can set the chat title to be used as the record title by default. Users can later change the title if they want.

1. In the Sales Hub app, select **Change area** in the lower-left corner, and then select **App Settings**.
2. Under **General Settings**, select **Chat and collaborate**.
3. Under **Connect chats to Dynamics 365 records**, select the record type (for example, Lead).
4. In the settings panel, turn on the **Auto-name chats** toggle.



Data security and privacy

The following data security and privacy considerations apply for Teams chat functionality in Dynamics 365:

- Dynamics 365 doesn't store any Teams data, except for the mapping between the record ID and the connected chat ID. No data from Teams is duplicated in Dynamics 365, unless the user manually adds it to the record notes or tasks.
- The communication between the applications is secured through TLS.
- Policies that apply both to Teams and Dynamics 365 are honored by the integration. For example, confidential files shared in a connected chat can only be accessed by permitted users. Similarly, a record shared in a Teams chat in Dynamics 365 can only be accessed if the user has permissions to view it.
- The app requires certain permissions to start a chat, display suggested contacts, show presence, and so on. For more information, go to What are the privileges and type of permissions required by the integration?.

See also

Use Microsoft Teams chat in Sales Hub

Configure the ability to use suggested contacts

Article • 10/07/2022

Configure the ability to use suggested contacts when starting a Teams chat.

License and role requirements

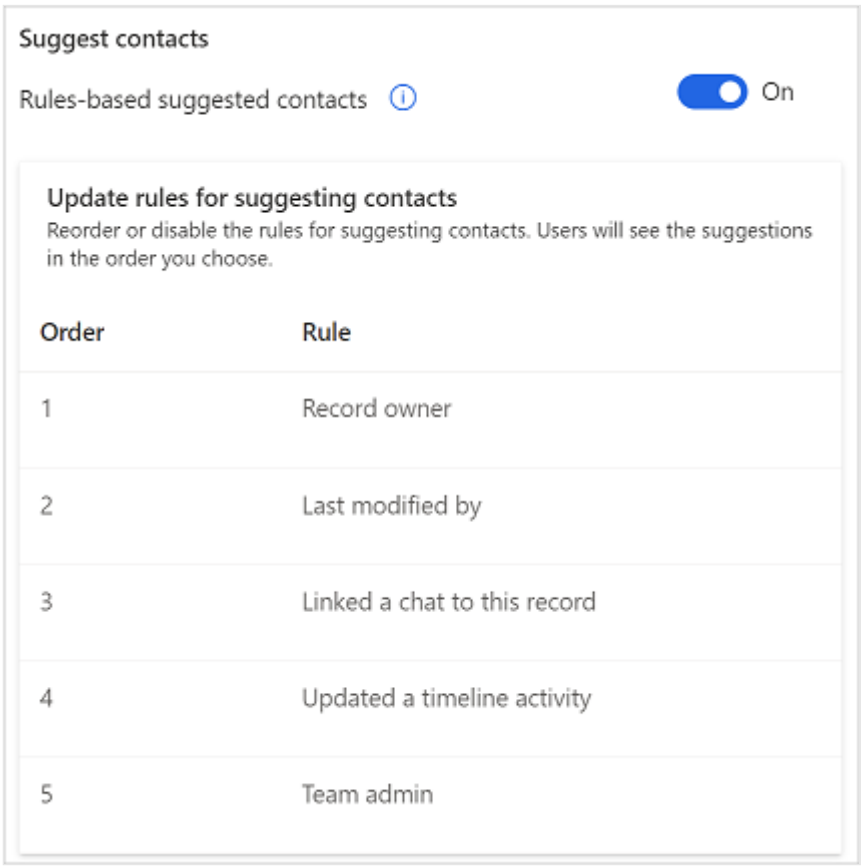
Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Turn on the suggested contacts capability for a record type

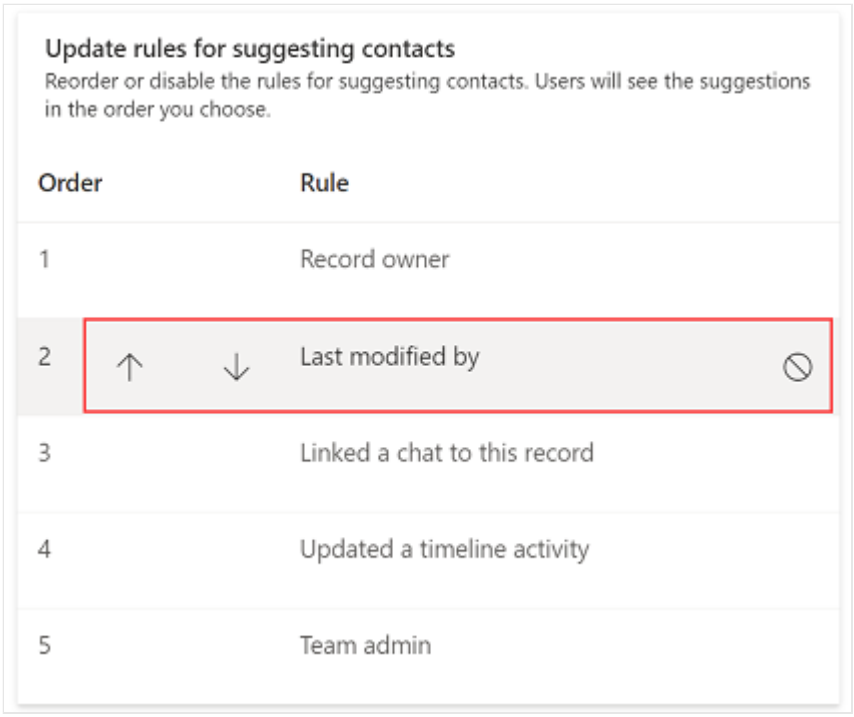
As an administrator, you can enable the suggested contacts to be displayed when a seller starts a new connected chat. It helps the sellers to quickly find the right coworkers to collaborate with.

> **Note**
>
> For the case record type, there are two types of contact suggestions: AI and rules-based. Other record types enabled for connected chats may only have rules-based suggestions.

1. In the Sales Hub app, select **Change area** in the lower-left corner, and then select **App Settings**.
2. Under **General Settings**, select **Chat and collaborate**.
3. Under **Connect chats to Dynamics 365 records**, select the record type (for example, Lead).
4. In the settings panel, turn on the **Rules-based suggested contacts** toggle.



5. In the **Update rules for suggesting contacts** section, reorder or disable the rules for suggesting contacts. Users will see the suggestions in the order you choose.
    - To reorder the rules, hover over a rule, and then select the up or down arrow to move the rules up or down respectively.
    - To disable a rule, hover over a rule, and then select . When the rule is disabled, is displayed when you hover over the disabled rule.



6. Select **Save**.

See also

Enable or disable Microsoft Teams chat in Sales Hub

Use Microsoft Teams chat in Sales Hub

Configure the ability for users to join chats

Article • 10/07/2022

Configure the ability for users to join existing connected chats.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Turn on join chat

As an administrator, you can enable users to view and easily join chats that are connected to records they have write access to, even if they weren't originally part of those chats. You can configure the ability for users to join connected chats at a record-type level. This functionality can help you tailor the user experience for your business processes.

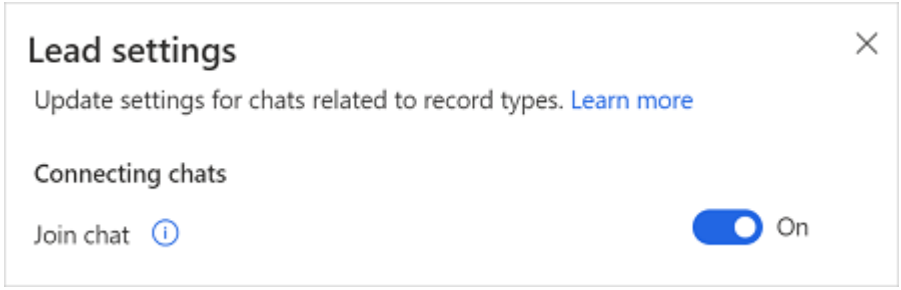
> **Note**
>
> The join chat feature only works for connected chats, and it's on by default only for the case record type. For other record types, you must enable it.

The ability for users to join existing chats is especially useful for the following scenarios:

- **Opportunity or lead transfers**: If a new seller has onboarded to an opportunity or a lead that was previously handled by another seller, they can join existing connected chats to better understand the context and continue to collaborate with their relevant colleagues.
- **Sales manager scenario**: A subject-matter expert can read and participate in the relevant conversations.

To turn on the join chat capability for a record type:

1. In the Sales Hub app, select **Change area** in the lower-left corner, and then select **App Settings**.
2. Under **General Settings**, select **Chat and collaborate**.
3. Under **Connect chats to Dynamics 365 records**, select the record type (for example, Lead).
4. In the settings panel, turn on the **Join chat** toggle.



5. Select **Save**.

See also

Enable or disable Microsoft Teams chat in Sales Hub
Join an existing connected chat

Enable Microsoft Teams meeting integration (preview)

Article • 06/22/2023

Important

This topic is pre-release documentation and is subject to change.

Important

A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

With Microsoft Teams meeting integration, sellers can quickly access and update Dynamics 365 records in Microsoft Teams before, during, and after meetings. As an administrator, enable this feature to empower sellers and accelerate business outcomes with a seamless experience between Dynamics 365 and Microsoft Teams meetings.

Note

- If you have other customer engagement apps installed, and you turn on Teams meeting integration in one customer engagement app, it's turned on in all customer engagement apps in your organization. For example, if this feature is turned on in Sales Hub, it will also be shown as turned on in Customer Service Hub.

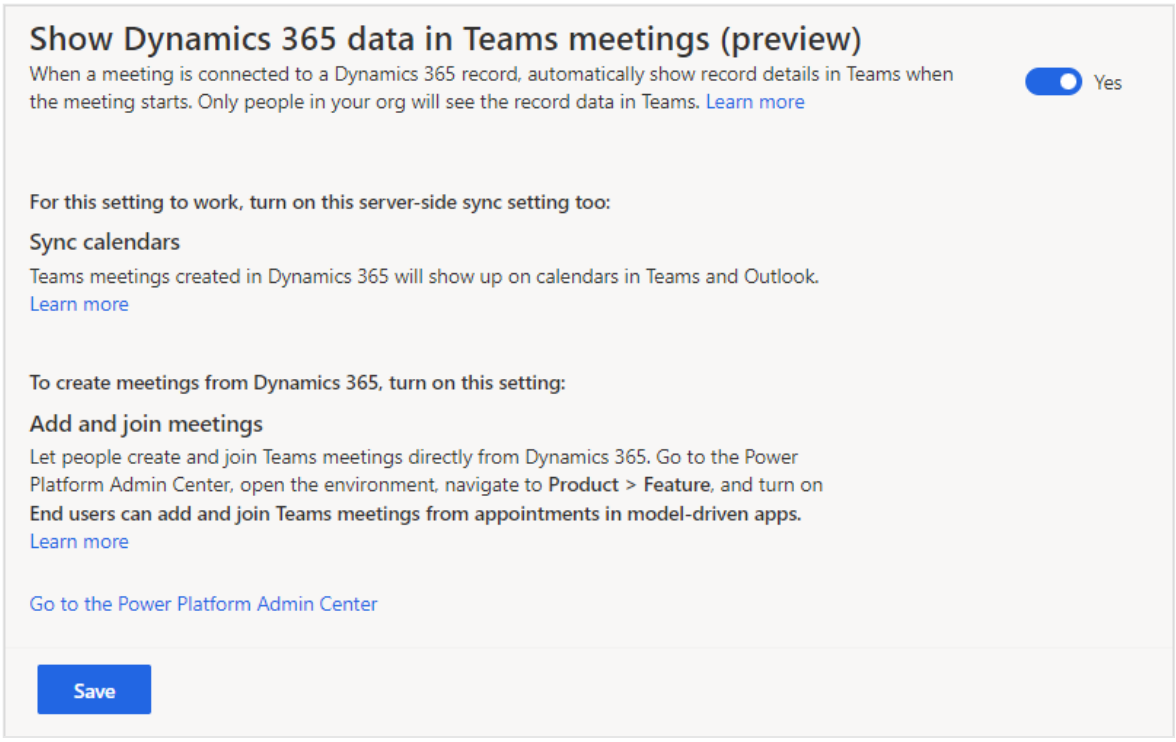
- When you create a Teams meeting from Dynamics 365, the appointment status is set to **Free** and no reminders are sent to the participants.
- Conversation intelligence has been deprecated within the Dynamics 365 app for Teams.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Enable Teams meeting integration

1. In the Sales Hub app, on the lower-left corner of the screen, select **Change area** > **App Settings**.
2. From the site map, select **Teams Meetings (preview)**.
3. Turn on **Show Dynamics 365 data in Teams meetings (preview)**.



4. Select **Save**.

You'll also need to turn on the following settings:

- **Sync calendars**: This setting ensures that the meetings that are created in Dynamics 365 are added to the calendars in Microsoft Outlook and Microsoft Teams. For more information, see Set up server-side synchronization of email, appointments, contacts, and tasks.

  > **Important**
  > - If you don't turn on this setting, meetings you create in Dynamics 365 won't be added to the calendars in Outlook and Teams.
  > - With this setting on, any meetings that are created in Dynamics 365 are added to the calendars in Outlook and Teams and vice versa. Sometimes, there might be a delay of up to 15 minutes before a new meeting appears on synced calendars. For more information, see **Appointments, contacts, and tasks sync frequency**.
  > - If you've turned on server-side synchronization for a user in multiple organizations, only the latest configured organization will have server-side sync enabled. The other organizations will have server-side sync disabled. This applies on per-user basis. For information on testing a mailbox configuration, see **Test the configuration of mailboxes**.

- **Add and join meetings**: This setting ensures that a seller can create and join Teams meetings directly from Dynamics 365. For more information, see Manage feature settings.

See also

Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings

Customize record details in the side panel (preview)

Article • 08/10/2022

> **ⓘ Important**
>
> This topic is pre-release documentation and is subject to change.

> **ⓘ Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Sellers can use the side panel to quickly view and update details of a record during a Teams meeting. It displays notes, tasks, and activities associated with the record.

License and role requirements

Requirement type	You must have

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Customize the record side panel

As an administrator, you can customize record details that should be displayed within the side panel to meet the needs of your users.

> ⓘ Note
>
> - To customize record details in the side panel, edit a table's **In Context Form** form.
> - The side panel supports the Contact, Opportunity, Lead, Account, and Case tables.

The following customizations are supported:

- Add or remove fields in the **(table) info** section.
- Change a field label.
- Set a field requirement (for example, read-only).

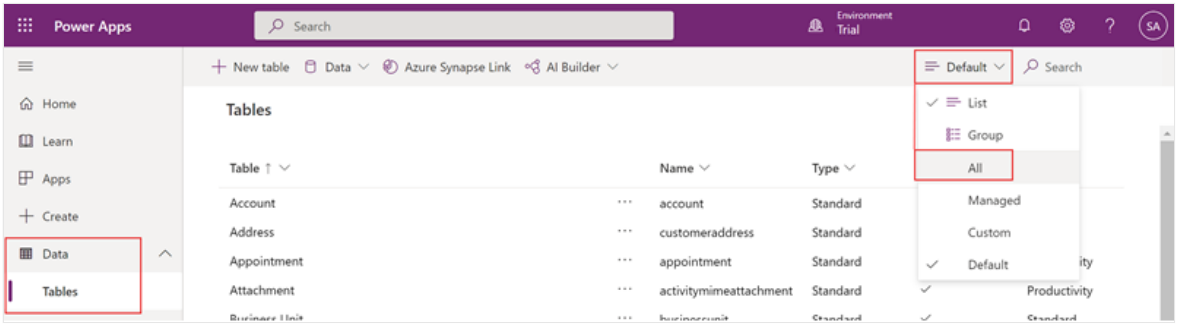
The following customizations are not supported:

- Enable or disable tabs.
- Rearrange tabs.
- Add custom tabs or sections.
- Add sections other than (table) info, Contacts, Notes, Tasks, Collaboration, and Recent Opportunities.
- Add a web resource.

- Add a subgrid.
- Change the format or layout of headers, tabs, sections, and fields.
- Change certain properties of headers, tabs, sections, and fields.

To customize record details in the side panel:

1. Sign in to Power Apps.
2. Select the environment, and then select **Data** > **Tables**.
3. In the upper-right corner, select the views list, and then select **All**.



4. Search for and select the table.
5. Select the **Forms** tab, and then select the **In Context Form** form.
6. Edit the form to choose the fields you want to show in the side panel.

   By default, all the fields in the form are editable. To make a field read-only, select it and turn on the **Read-only** property.

See also

Enable Microsoft Teams meeting integration
Integrate Dynamics 365 and Microsoft Teams meetings

Work with Dynamics 365 records within Teams conversations (production-ready preview)

Article • 05/09/2023

> **Important**
>
> - This topic is prerelease documentation and is subject to change.
> - Preview features designated as production-ready employ privacy and security measures typically present in generally available features, as further explained in our **preview terms**.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

The Dynamics 365 app for Microsoft Teams allows sellers to share and update Dynamics 365 records, as an interactive card, within Teams conversations.

While business users can access the feature themselves by adding, signing in, and setting up the Dynamics 365 app for Teams, you can drive faster and more seamless adoption by:

- Familiarizing yourself with the feature.
- Understanding how the information is displayed in the interactive card.
- Preinstalling and pinning the app for business users who can benefit from the feature.
- Encouraging business users to sign in and set up the app.

Dynamics 365 app for Teams auto-install

In order to enhance the Teams experience for Dynamics 365 users, the Dynamics 365 app for Teams will be automatically installed to all the active Dynamics 365 users.

> **Note**
>
> A user is considered as active after they successfully sign in to one of the Dynamics 365 applications or a model-driven Power Apps app.

With the Dynamics 365 app for Teams, users will have their collaboration in Teams enhanced with:

- Dynamics 365 links will automatically unfurl, showing useful record details.
- Users will be able to view Dynamics 365 data in Teams, while continuing their chats.
- Users can search, connect, and update Dynamics 365 records directly in Teams.

The Dynamics 365 app for Teams will be installed automatically in all environments that have not disabled the installation of the Dynamics 365 app. For infomation to disable auto-install of Dynamics 365 app for Teams, see Disable auto-install of Dynamics 365 app for Teams.

Familiarize yourself with the feature

It's important to become familiar with the feature to understand the nuances of how it works and identify the business users for whom preinstalling and pinning the app will add value.

To familiarize yourself with the feature:

1. Add the Dynamics 365 app for Teams
2. Access and sign in to the Dynamics 365 app for Teams
3. Set up the Dynamics 365 app for Teams

4. Share a record in a Teams chat and channel by pasting its URL
5. Share a Dynamics 365 record through search
6. View and update record details
7. Add chat messages to Dynamics 365 as notes or tasks

How is the information displayed in the interactive card?

The information in the interactive card is displayed using the view of type **Quick Find View** of a table. You must validate and edit the columns in the **Quick Find View** view to ensure that interactive cards display the right information. To change the information that the cards display, you can edit the columns in the **Quick Find View** view of a table as per the requirement.

Preinstall and pin the Dynamics 365 app in Microsoft Teams

Preinstalling and pinning the Dynamics 365 app in Teams increases the discoverability of the app by business users and encourages them to share records in a secure way. It requires creating a custom Teams app policy and assigning the policy to users.

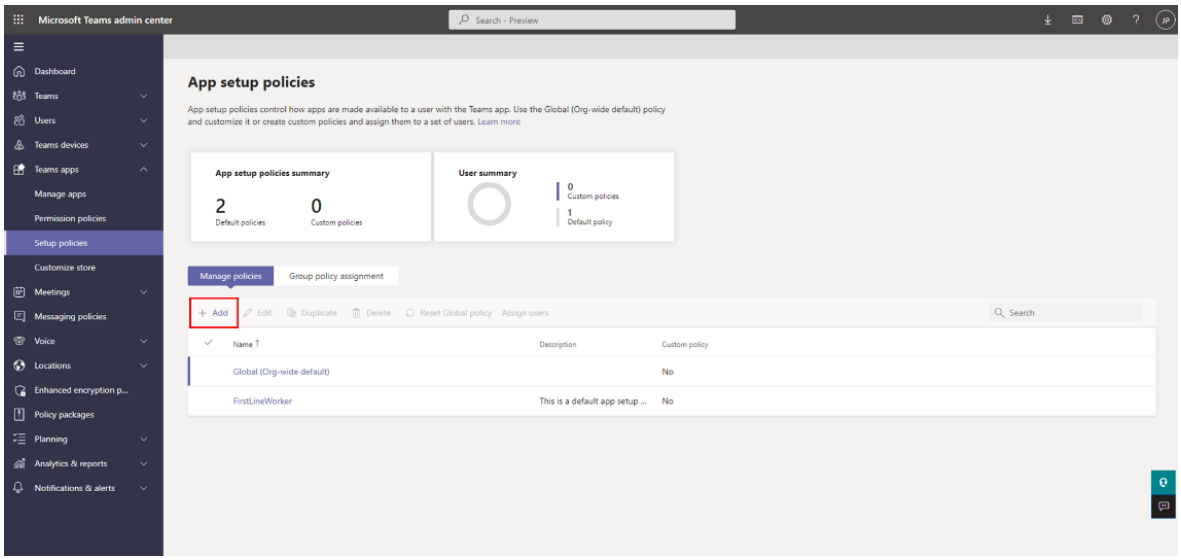
> **Note**
>
> - The ability **to preinstall and pin apps for users by managing app policies** is available as part of Microsoft Teams and is not a feature of Microsoft Dynamics 365. This document details how to use the Microsoft Teams feature to preinstall the Dynamics 365 app for Teams.
> - You need to be a Teams administrator to preinstall and pin the Dynamics 365 app for Teams for business users. For more information on Teams administrator roles, refer to **Use Microsoft Teams administrator roles to manage Teams**.

Create a custom Teams app setup policy

1. Sign in to Microsoft Teams admin center.

2. In the left pane, go to **Teams apps** > **Setup policies**.

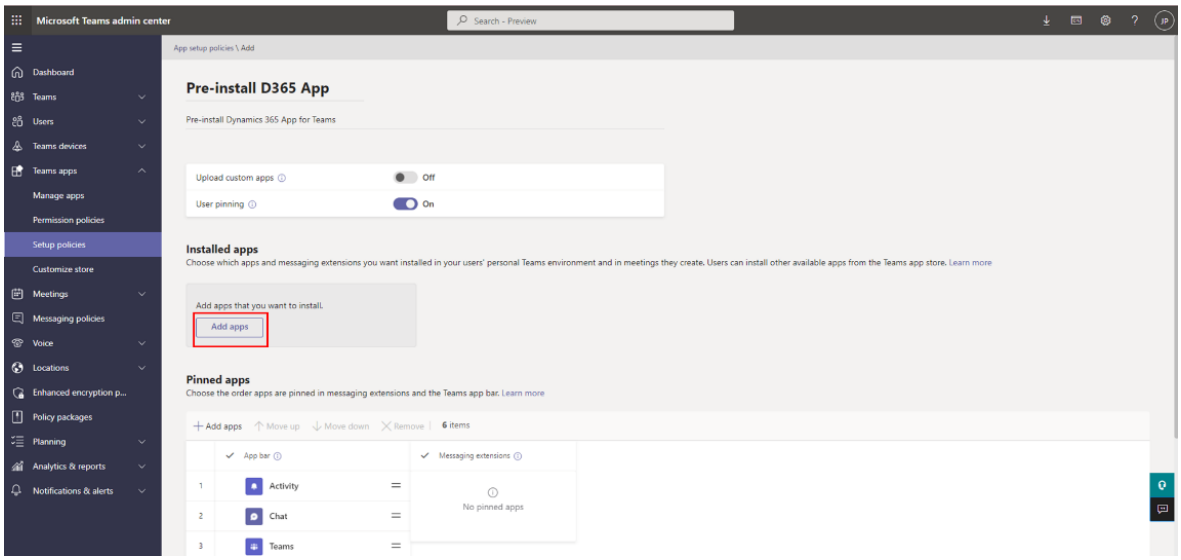
3. Under the **Manage policies** tab, select **Add**.



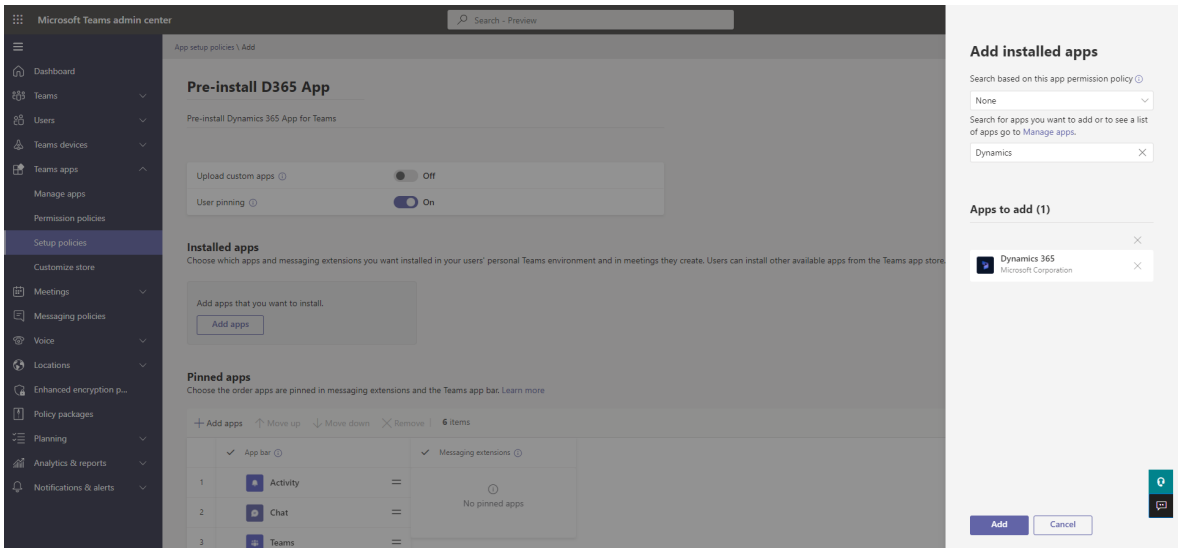
4. Enter a name and description for the policy.

5. Turn on **User pinning**.

6. Under **Installed apps**, select **Add apps**.

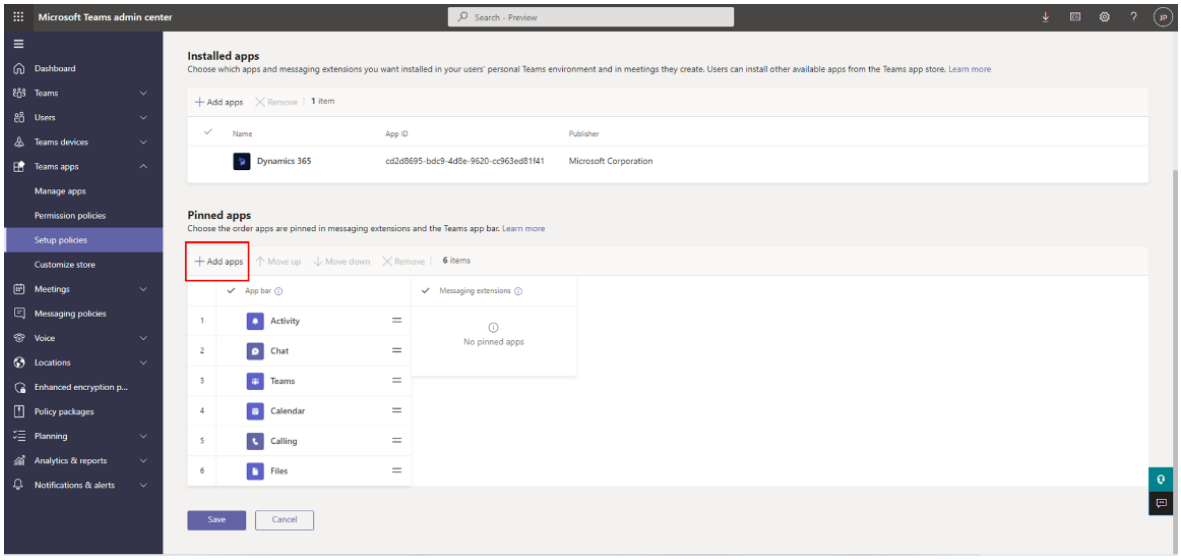


7. In the **Add installed apps** panel, search for the **Dynamics 365** app, and then select **Add**. You can also filter apps by app permission policy.

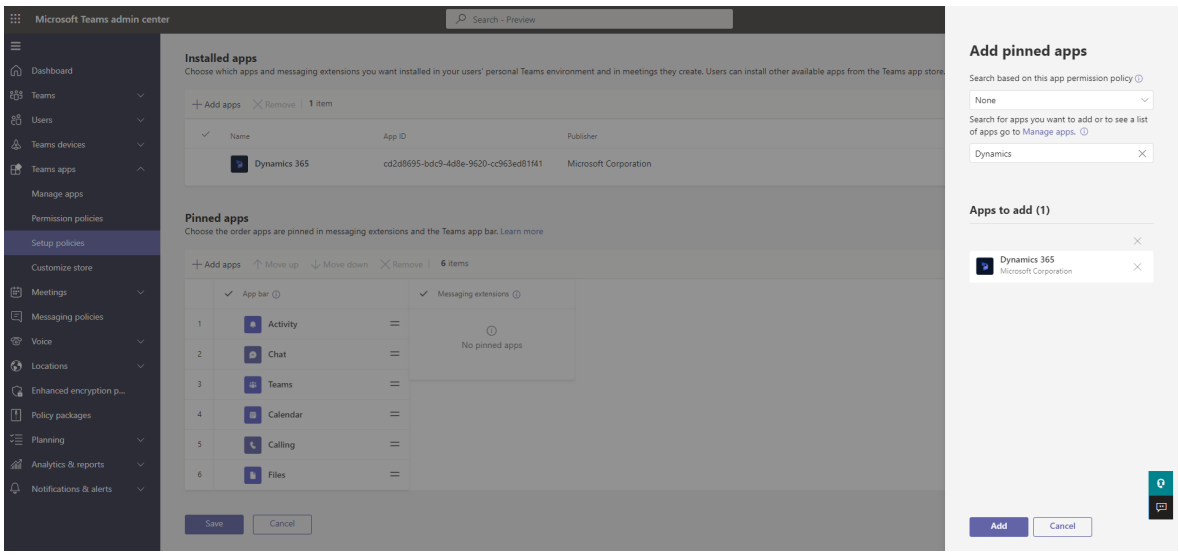


8. Select **Add**.

9. Under **Pinned apps**, select **Add apps**.

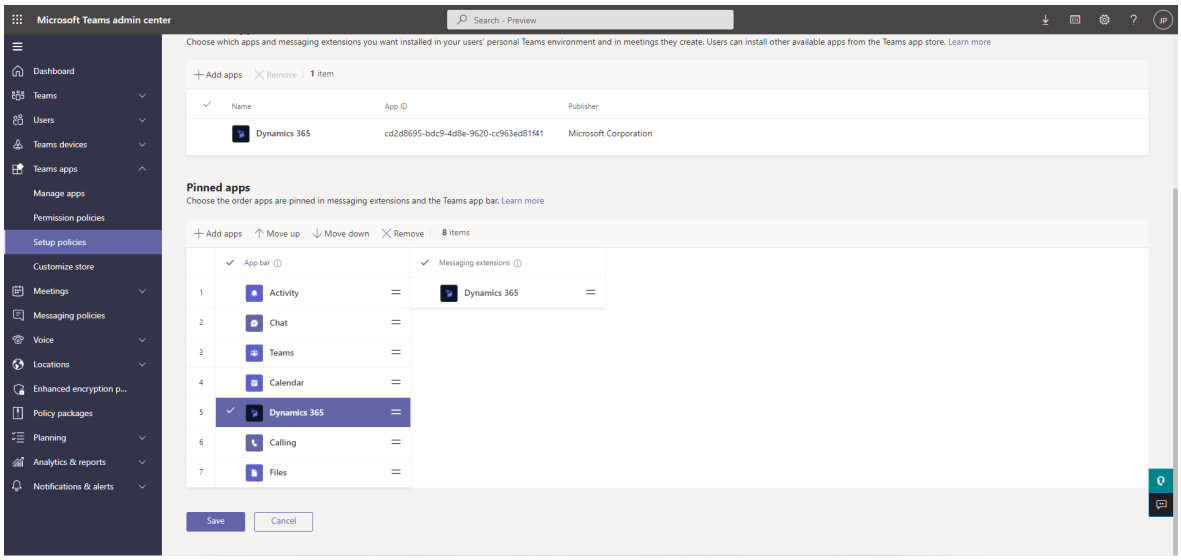


10. In the **Add pinned apps** panel, search for the **Dynamics 365** app, and then select **Add**. You can also filter apps by app permission policy.



11. Select **Add**.

12. Under the **App bar** or **Messaging extensions**, arrange the apps in the order that you want them to appear in Teams.



13. Select **Save**.

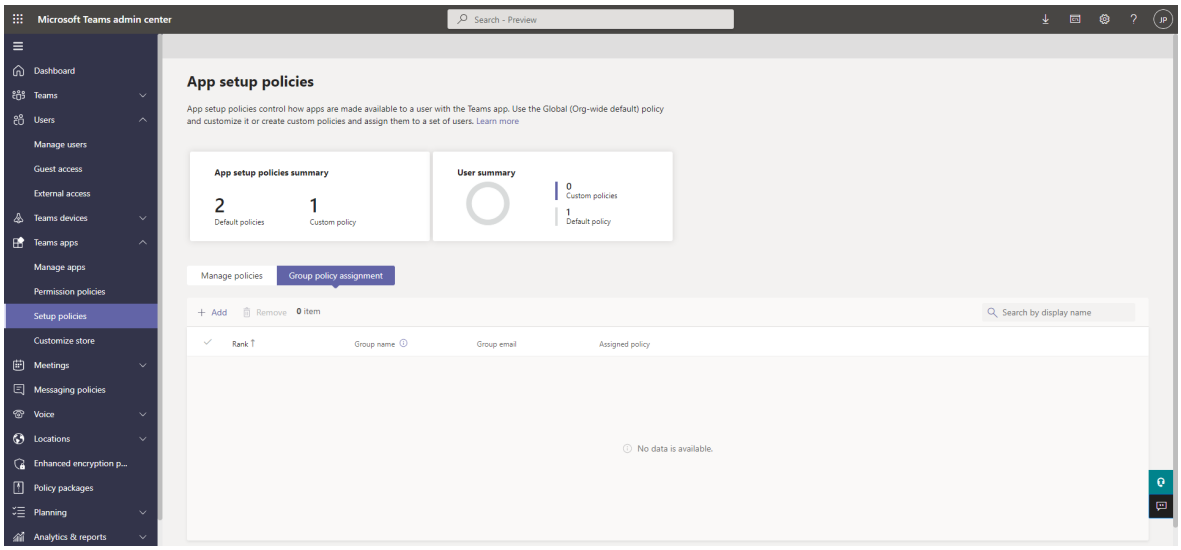
Assign the custom Teams app setup policy to a user group

Policy assignment to groups lets you assign a policy to a group of users, such as a security group, an organizational unit, or a distribution list.

1. Sign in to Microsoft Teams admin center.

2. In the left pane, go to **Teams apps** > **Setup policies**.

3. Under the **Group policy assignment** tab, select **Add**.



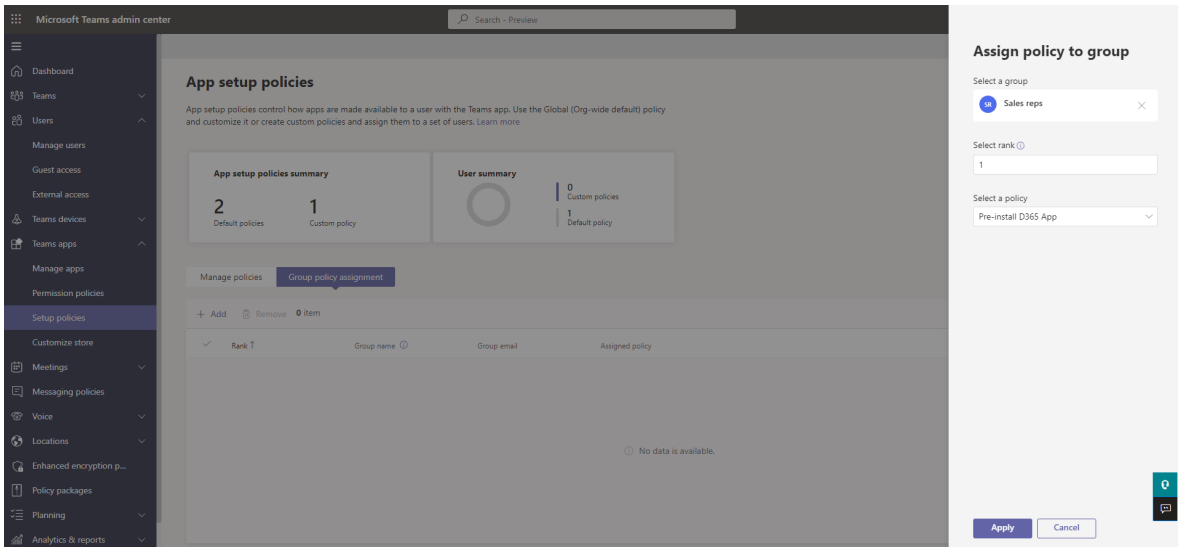
4. In the **Assign policy to group** panel, do the following:

    a. Search for and add the group you want to assign the policy to. Ideally this would be the group to which sellers, service agents, and other Dynamics 365 users belong to. If you have Dynamics 365 users spread across multiple groups, you'll have to create multiple group policy assignments.

    b. Set the ranking for the group assignment.

    c. Select the policy created earlier – to preinstall and pin the Dynamics 365 app for Teams.

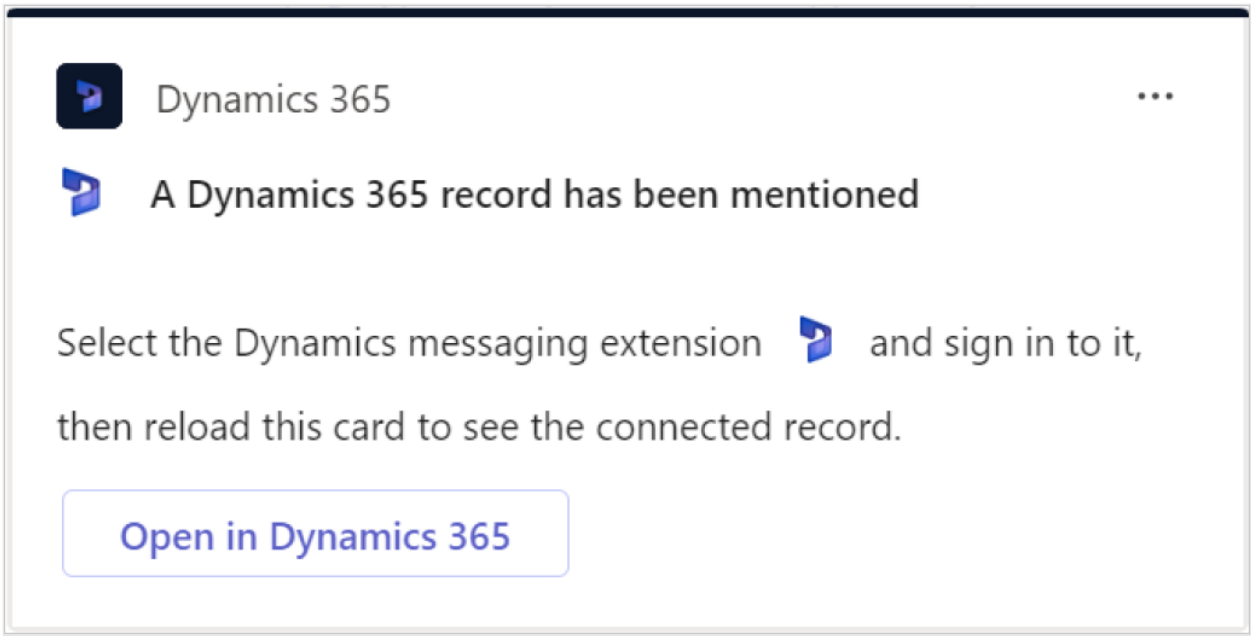
    d. Select **Apply**.



> **Note**
>
> - To learn more about assignment policies on Teams, go to **Assign policies to users and groups**.
> - You can also **assign the policy to individual users**.

Encourage business users to sign in and set up the app

After you create a custom policy and assign it to users, you must encourage your users to sign in to the Dynamics 365 app for Teams to view, share, and update Dynamics 365 records in Microsoft Teams chats and channels. They need to sign in only once. and signing in provides a seamless user experience. When users have the app installed but haven't signed in, they'll see this message displayed in the interactive card when they access the Dynamics 365 record in Teams:



For information on how to sign in to the Dynamics 365 app, see Sign in and set up the Dynamics 365 app for Teams.

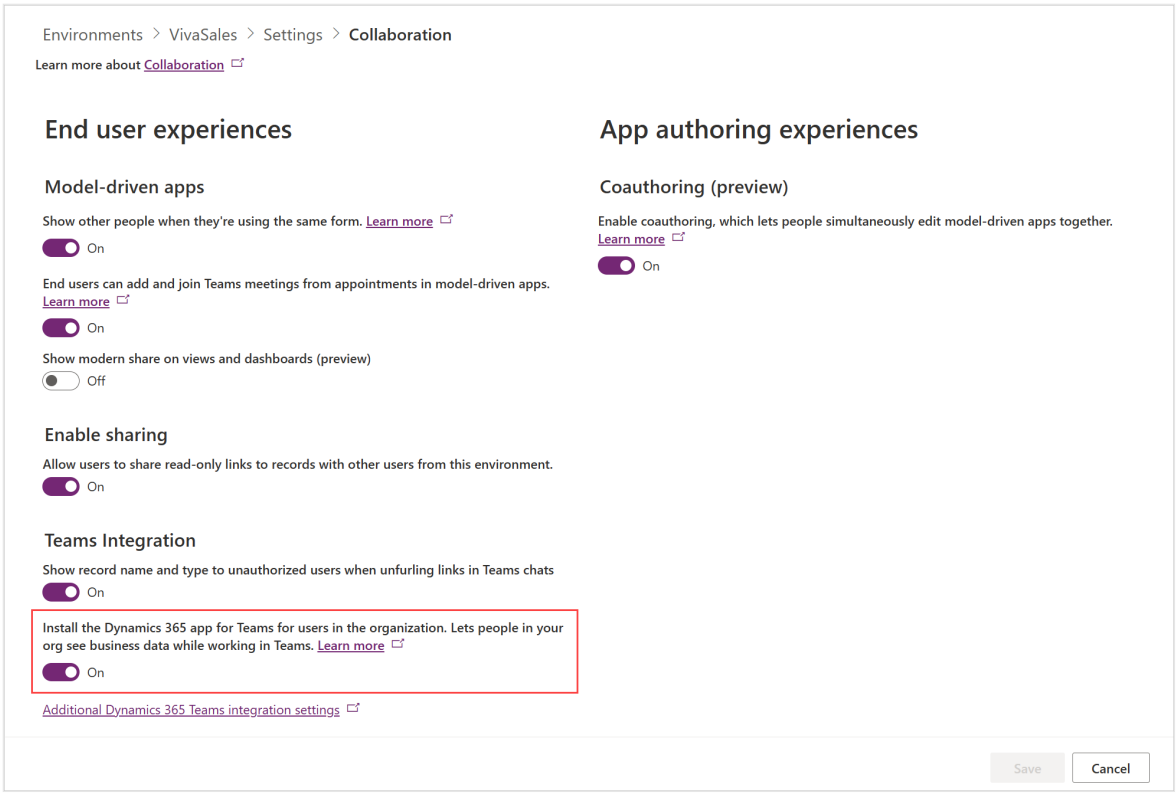
Disable auto-install of Dynamics 365 app for Teams

The installation of the Dynamics 365 app can be disabled from Power Platform admin center or Microsoft Teams admin center.

Power Platform admin center

Power Platform admin center allows you to disable the auto-installation of the Dynamics 365 app in Teams. This will prevent the app from being installed for all users in your organization. However, users can still install the app from the Teams app store.

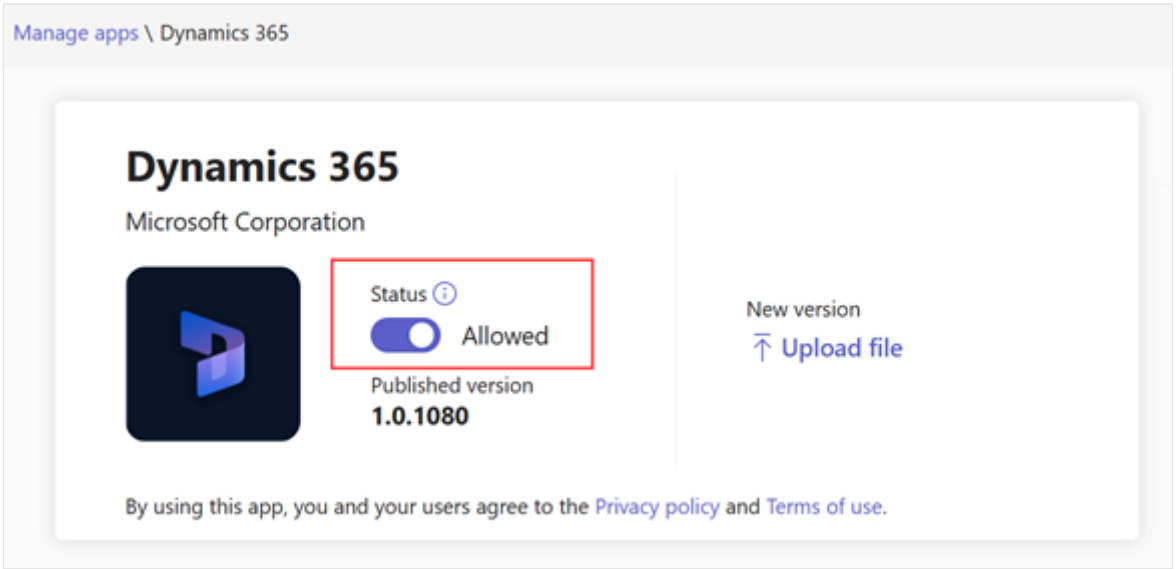
1. Go to **Environments** > **Settings** > **Product** > **Collaboration**.
2. Under **Teams Integration**, turn off the **Install the Dynamics 365 app for Teams for users in the organization. Lets people in your org see business data while working in Teams** toggle.
3. Select **Save**.



Microsoft Teams admin center

Microsoft Teams admin center allows you to disable the auto-installation of the Dynamics 365 app in Teams and prevent users from manually installing it from the Teams app store.

1. In the left navigation pane, go to **Teams apps** > **Manage apps**.
2. Search for the Dynamics 365 app, and select it.
3. Turn off the **Status** toggle.



See also

Share and update Dynamics 365 records within Microsoft Teams conversations

Configure Microsoft Teams dialer

Article • 10/17/2023

Microsoft Teams dialer helps sellers make Teams calls to customers directly from within Dynamics 365 Sales.

> **Note**
>
> You can also enable Teams dialer through quick setup (with the Dynamics 365 Sales Enterprise license). More information: **Microsoft Teams calls with conversation intelligence**

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

How to configure the dialer?

As an administrator, you must configure Microsoft Teams dialer to enable sellers to make and receive calls from Dynamics 365.

1. Review the prerequisites.
2. Configure the dialer.

Review the prerequisites

Ensure that you meet the following requirements before you configure Microsoft Teams dialer in the Sales Hub app:

- A license for using Microsoft Teams. Learn more about Microsoft Teams add-on licenses.

- A phone system installed and configured, with a valid license to use it. Learn more about how to set up a phone system.
- A valid public switched telephone network (PSTN) connection through a Teams calling plan, your own PSTN carrier, or direct routing. Learn more about PSTN connectivity options.
- An assigned phone number. Learn more about how to manage telephone numbers for your organization.

Additionally, you must grant the following permissions to your users:

- If you're planning to enable the dialer for specific security roles, ensure that users who need access to the dialer are assigned to one of those security roles. Learn more about how to assign security roles to users.
- Ensure that the security roles of users who will be accessing the Teams dialer have read privileges to the following records:
  - Under the **Core Records** tab, read access to **Note**
  - Under the **Custom Entities** tab, read access to **Teams Dialer Admin settings**

  For more information about how to verify privileges and edit a security role, see Edit a security role.

  > **Note**
  >
  > When you enable Microsoft Teams dialer, other telephony systems that are connected to the Dynamics 365 app through Dynamics 365 Channel Integration Framework will stop working for users to whom Teams dialer is enabled. As an administrator, you can deactivate or delete the phone system in the Channel Integration Framework app.

Configure the dialer

1. In the Sales Hub app, go to **App settings**, and under **General settings**, select **Teams calls**.

   > **Note**
   >
   > If you are a Sales Professional customer, append the following parameters to your Dynamics 365 org URL to open the Teams calls configuration page:

`pagetype=control&controlName=MscrmControls.TeamsDialerSettings.DialerSettingsHostControl`

Example: `https://contoso.crm.dynamics.com/main.aspx?pagetype=control&controlName=MscrmControls.TeamsDialerSettings.DialerSettingsHostControl`

Alternatively, you can add the configuration page to your Sales Professional app's sitemap by **adding a subarea**.

2. Turn on **Teams calls**.

   By default, the following options are turned on:

   - **Answer incoming calls in Dynamics 365**

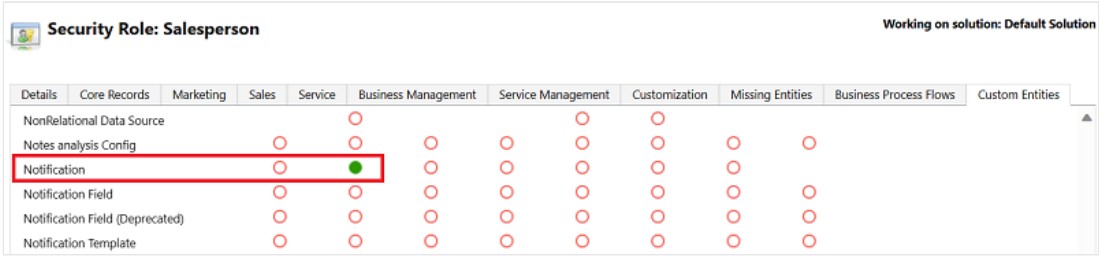
     Allows sellers to receive Teams calls in Dynamics 365 Sales. If you turn it off, sellers can only make outgoing Teams calls from within Dynamics 365.

   - **Internal call will ring only in the Teams app, not in Dynamics 365**

     Indicates that calls from internal users won't ring and won't be tracked in Dynamics 365. In this case, calls from external contacts will ring in Dynamics 365 and internal calls will ring only in Teams. You can clear the checkbox if you want sellers to receive both external and internal calls in Dynamics 365.

   - **Display missed calls in the Dynamics 365 in-app notification center**

     Allows sellers to see missed calls in the in-app notification center in Dynamics 365. Before you enable this feature, complete the following actions:
     - Allow in-app notifications for the app.
     - Grant read permissions for the **Notification** entity under the **Custom entity** tab, for the security roles that need to see the notifications.

   - **Transfer calls (preview)**

     > **ⓘ Important**

> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Allows sellers to transfer a Teams call to another colleague or their phone number, either directly or after consultation with the recipient.

More information:

Transfer a Teams call (preview)
Consult and transfer a Teams call (preview)

3. In the **Security role** section, select one of the following options to provide permissions to users to access Microsoft Teams dialer.

Option	Description
All security roles	Allows all the security roles to access Microsoft Teams dialer.
Specific security roles	Allows only the selected security roles to access Microsoft Teams dialer. **Note**: Ensure that the security roles you've selected are associated with the root business unit (top level in the business unit hierarchy). Otherwise, the users won't see the Teams dialer in the Sales Hub app. More information: Create or edit business units

4. Select **Advanced options**, and in the **Select app** drop-down list, select the apps in which you want to make the dialer available. By default, **Sales Hub** is selected.

> ⓘ Note

Teams dialer is not supported for Dynamics 365 canvas apps.

5. (Optional) Enable call recording and get real-time transcription and insights through conversation intelligence:
   a. Turn on **Recording with real-time transcription and insights**.
   b. Select the security roles for which you want to enable recording.
   c. Select **Go to advanced conversation intelligence settings** to configure more options related call recording, keyword to track, call summary and so on. For more information, see First-run setup in conversation intelligence app.

6. Save and publish the configuration.

   A confirmation message is displayed, and the Microsoft Teams dialer is enabled in your organization for selected security roles in the selected app.

> **Note**
>
> - You must refresh the configuration page to make the changes available in the application. Users must refresh their page to see the dialer.
> - If the dialer doesn't show up in a custom app that you've added it to, remove it from the app, save the changes, and then add the dialer again.
> - The dialer isn't supported for custom entities. Though the phone icon appears on the custom entity forms, the dialer doesn't work.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Microsoft Teams integration
Call using Microsoft Teams
Call a customer
View and understand call summary pages

Enable linking of Dynamics 365 records to Microsoft Teams channels

Article • 09/21/2022

By default, the linking of Dynamics 365 records to Teams channels is disabled for customer engagement apps in Dynamics 365:

- Dynamics 365 Sales
- Dynamics 365 Customer Service
- Dynamics 365 Field Service
- Dynamics 365 Marketing
- Dynamics 365 Project Service Automation

> **Note**
>
> - When the feature is enabled, the collaboration feature is **enabled only for a selected set of system entities**. If you want to enable Microsoft Teams integration for additional entities or custom entities, you can only do it programmatically using the **msdyn_SetTeamsDocumentStatus** Web API action. More information: **Enable or disable Microsoft Teams Integration using code**.
> - If you run into any issues during configuration, see **Troubleshoot configuration issues with Teams integration**.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide

Requirement	You must have
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

Microsoft Teams integration uses SharePoint integration at the backend. Make sure to meet the following prerequisites:

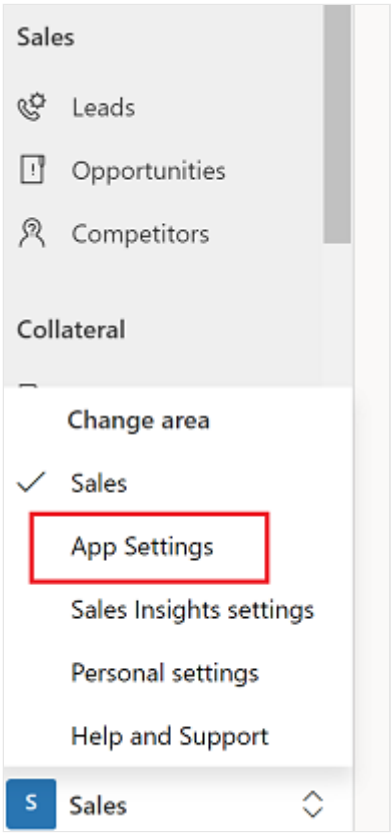
- If SharePoint integration isn't configured, OneDrive integration must be disabled too. If this requirement is not met, you'll receive error code **800503ca** when you try to enable Teams integration with customer engagement apps in Dynamics 365.
- If SharePoint integration isn't configured, there shouldn't be any active SharePoint site in your organization. (Deactivated SharePoint sites shouldn't cause a problem.) If this isn't met, you'll receive error code **800503ca** when you try to enable Teams integration with customer engagement apps in Dynamics 365.
- If SharePoint integration isn't configured, there shouldn't be any SharePoint document locations created with an absolute URL in your organization. Make sure to delete the locations with absolute URL. If this isn't met, you will get error code **800503ca** when you try to enable Teams integration with customer engagement apps in Dynamics 365.
- If you're currently configured to use SharePoint on-premises for document management, you need to set up document management for a customer engagement app to use SharePoint Online. For more information, see Set up apps in Dynamics 365 to use SharePoint Online.
- If SharePoint Online admin has enabled control access from unmanaged devices (conditional access policy) to allow/block SharePoint sites from unmanaged devices, then the same restrictions will be applied for Microsoft Teams integration because Microsoft Teams uses SharePoint sites for document management. These restrictions might block users when they try to access a connected team channel file library on a customer engagement app page. For more information, see Control access from unmanaged devices.
- Enable SharePoint document management for the Dynamics 365 entities that you want to pin in Teams. For more information, see Enable SharePoint document management for specific entities.

If you get an error while configuring Microsoft Teams integration from Dynamics 365, it might be because one or more of the above prerequisites aren't met. For more

information, see Troubleshoot Microsoft Teams integration.

Enable record linking in Sales Hub

1. In the Sales Hub app, at the lower-left corner, select **Change area** > **App Settings**.

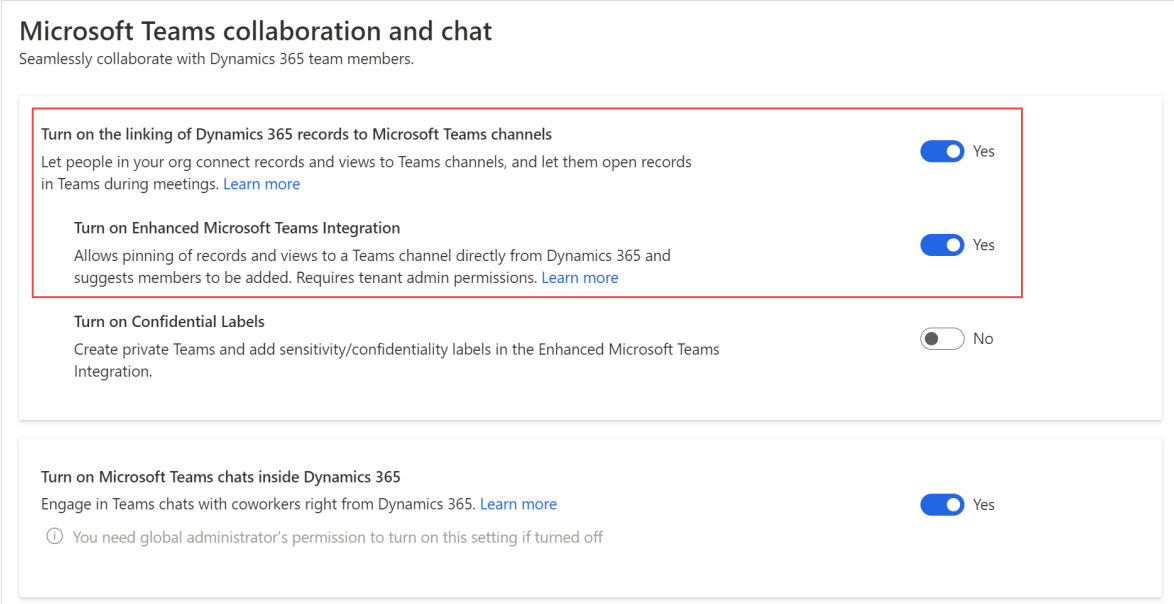


2. Under **General Settings**, select **Chat and collaborate**.

   The **Microsoft Team collaboration and chat** page opens.

3. To enable the Basic Collaboration Experience, select **Turn on the linking of Dynamics 365 records to Microsoft Teams channels**. When Basic Microsoft Teams integration is enabled, the **Collaborate** button appears on customer engagement app records so you can see the connected team channel or set up a new connection in Microsoft Teams. In addition, in the **Documents** tab on the record page, the connected team channel file library will appear.

4. To enable the Enhanced Collaboration Experience, select **Turn on Enhanced Microsoft Teams Integration**. To turn on this option, you need Microsoft 365 tenant admin permissions. When Enhanced Microsoft Teams integration is enabled, the **Collaborate** button appears on the record and view page in customer engagement apps. You can set up a connection with any Microsoft Teams collaboration channel within an app.



5. On the consent dialog, select **Accept**.

> **Important**
>
> When you give your consent on behalf of your organization, the app gets full access to all Teams groups and associated content that the users have access to. Though the app has full access, it does not read or write to any of that data. The app just reads the teams/channels list or creates teams/channels for collaborating on Dynamics 365 data.

> **Note**
>
> If you don't select **Accept**, then when a user tries to pin an entity record or view to Microsoft Teams and shares the tab with another user, they'll receive the following error message: "*The admin has not consented to use user sync feature, you can add them manually.*" If you receive this error message, see **Error when you pin a record or view to Teams channel**.

6. Save the changes.

   You should now be able to the see the **Collaborate** button when you open a record.

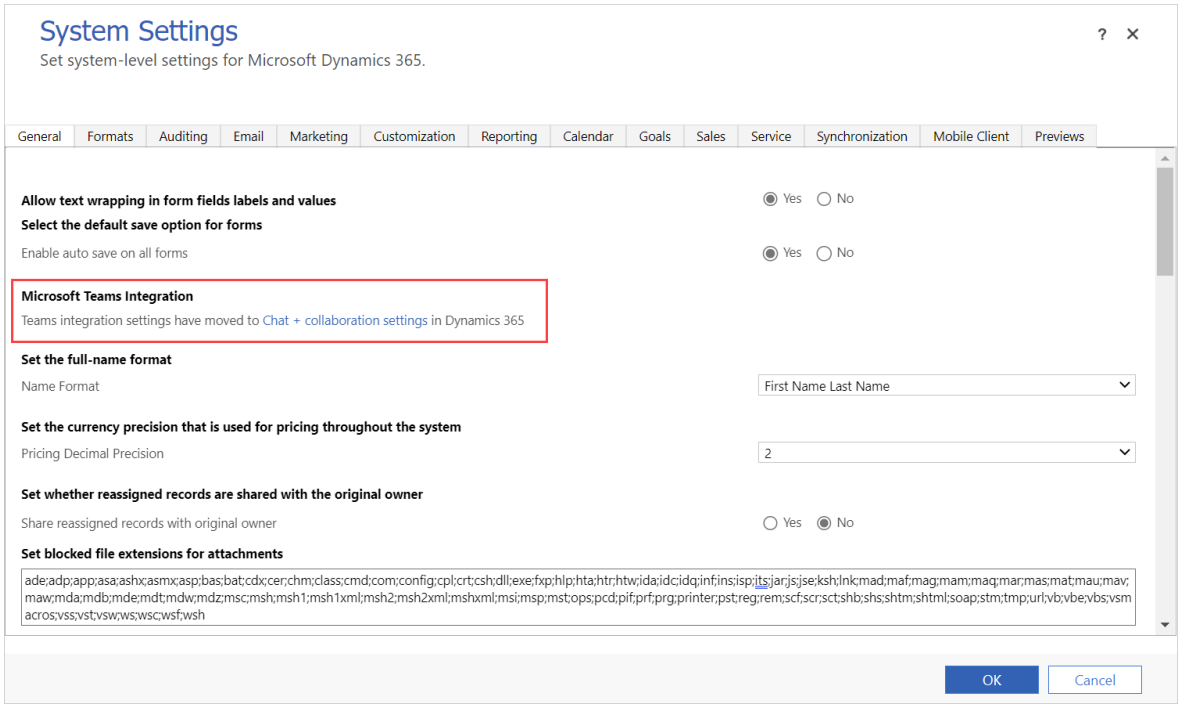
Enable record linking in a custom app

1. Sign in to Power Apps.

2. Select the **Settings** icon at the top-right corner, and then select **Advanced Settings**.

3. Go to **Settings** > **Administration** > **System Settings** > **General** tab.

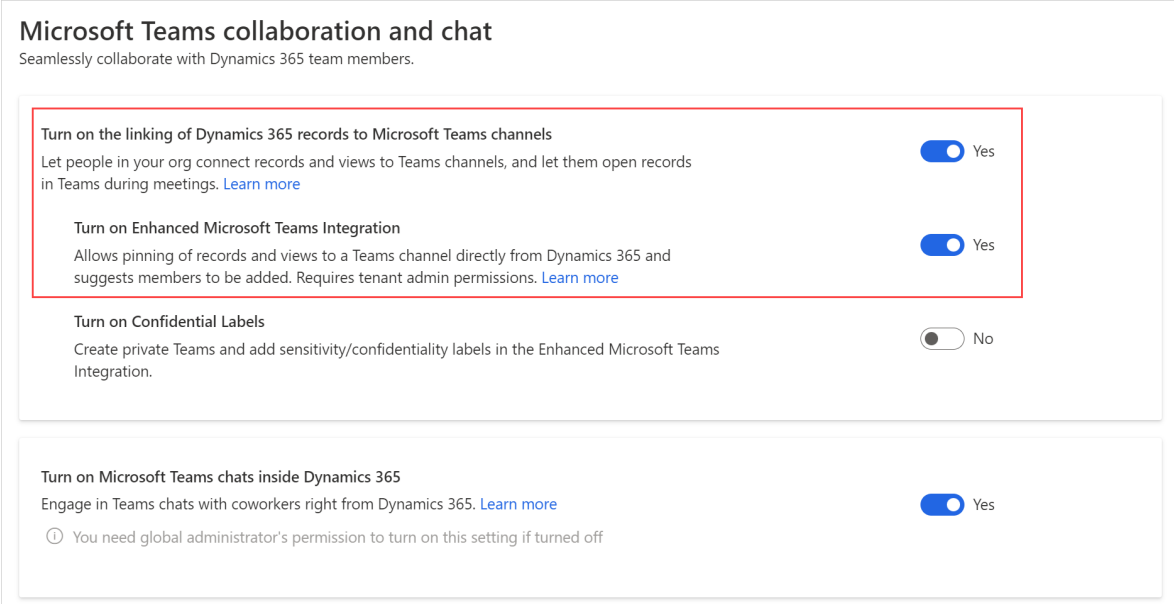
4. Under **Microsoft Teams Integration**, select **Chat + collaboration** settings.



The **Microsoft Team collaboration and chat** page opens.

5. To enable the Basic Collaboration Experience, select **Turn on the linking of Dynamics 365 records to Microsoft Teams channels**. When Basic Microsoft Teams integration is enabled, the **Collaborate** button appears on customer engagement app records so you can see the connected team channel or set up a new connection in Microsoft Teams. In addition, in the **Documents** tab on the record page, the connected team channel file library will appear.

6. To enable the Enhanced Collaboration Experience, select **Turn on Enhanced Microsoft Teams Integration**. To turn on this option, you need Microsoft 365 tenant admin permissions. When Enhanced Microsoft Teams integration is enabled, the **Collaborate** button appears on the record and view page in customer engagement apps. You can set up a connection with any Microsoft Teams collaboration channel within an app.



7. On the consent dialog, select **Accept**.

> **Important**
>
> When you give your consent on behalf of your organization, the app gets full access to all Teams groups and associated content that the users have access to. Though the app has full access, it does not read or write to any of that data. The app just reads the teams/channels list or creates teams/channels for collaborating on Dynamics 365 data.

> **Note**
>
> If you don't select **Accept**, then when a user tries to pin an entity record or view to Microsoft Teams and shares the tab with another user, they'll receive the following error message: "*The admin has not consented to use user sync feature, you can add them manually.*" If you receive this error message, see **Error when you pin a record or view to teams channel**.

8. Save the changes.

   You should now be able to the see the **Collaborate** button when you open a record.

Frequently asked questions

1. Does the tenant admin need to do anything to set up Microsoft Teams Integration?

The tenant admin must provide consent for the enterprise application to be created in Microsoft Entra ID and add delegate permissions for Teams. This happens automatically when the Enhanced Collaboration Experience is enabled in the system settings of your customer engagement app.

2. The documentation refers to *Microsoft 365 tenant admin permissions*. What does this mean?

Microsoft 365 tenant admin permissions means the directory admin or a tenant admin.

3. Is the activation for Dynamics 365 for all environments or per environment?

Consent is given to all instances within a tenant, but the admin needs to manually enable functionality for each instance.

4. What active directory privileges are given to the customer engagement apps?

- **Delegated permissions:** Group.ReadWrite.All and User.Read.All
- **Dynamics 365 Microsoft Teams Collaboration Integration (Enterprise application), permissions:** Group.ReadWrite.All and User.Read.All

5. Is it enough to have only Microsoft Teams admin privileges to activate this Microsoft Teams Integration?

Enabling Microsoft Teams integration has nothing to with Teams admin privileges. You need to have tenant admin permission to enable Microsoft Teams integration.

6. Which Service Principle (App ID) will receive this permission?

The App used for this integration, which is the customer engagement app and Microsoft Teams integration.

7. What happens when the consent is provided?

Apart from consent, a flag is set internally in your customer engagement app that indicates the feature is enabled. The flag is also used to control user interface behavior such as showing a user the **Collaborate** command.

See also

Difference between the Basic and Enhanced Collaboration Experience with Microsoft Teams
Basic Collaboration Experience
Enhanced Collaboration Experience

Enable sensitivity labels to protect content in Microsoft Teams

Article • 09/21/2022

Use sensitivity labels to protect your content in Microsoft Teams so that your users can collaborate securely with others both inside and outside your organization.

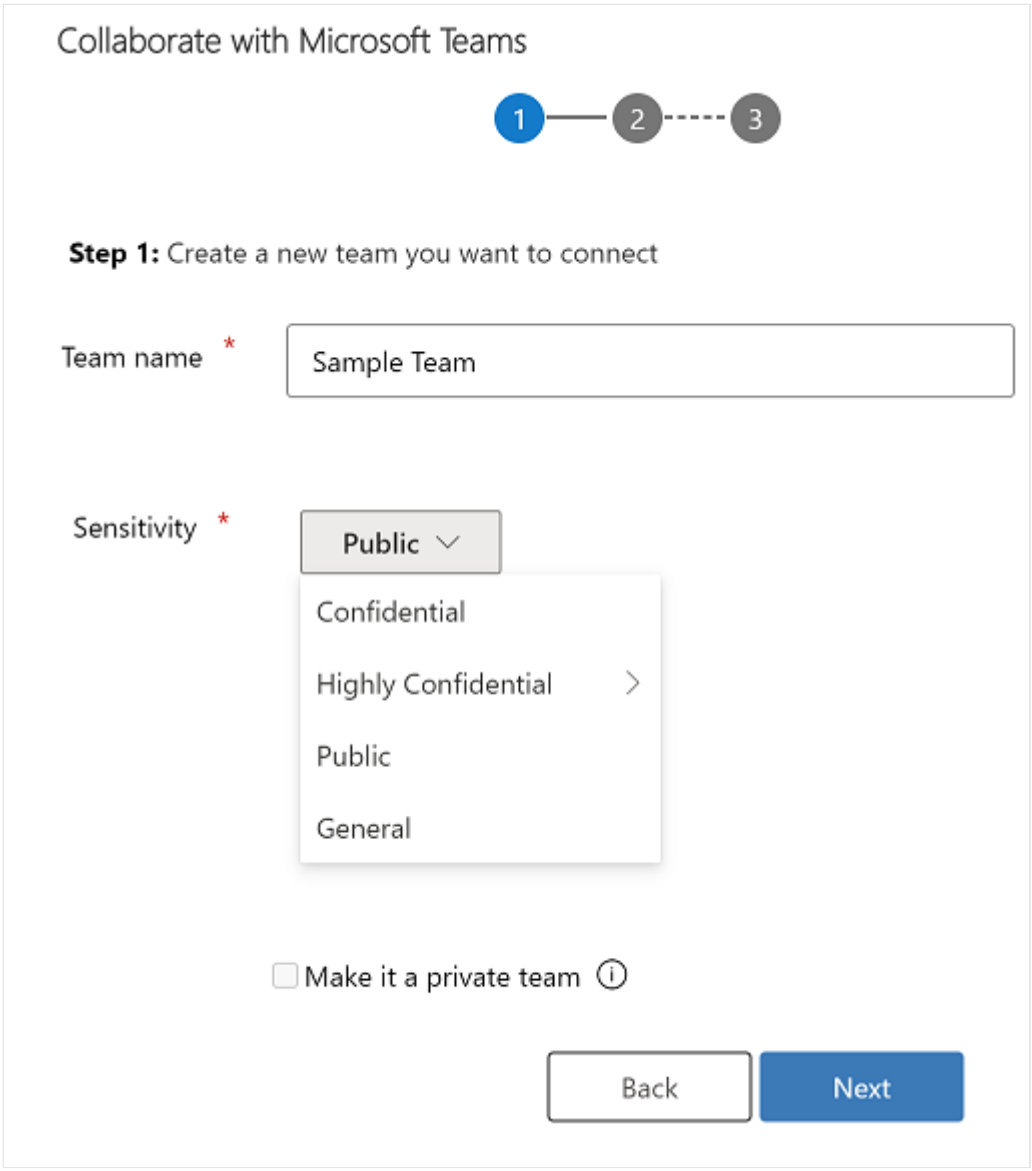
License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Licensing Guide
Security roles	System Administrator More information: Predefined security roles for Sales

About sensitivity labels

Users in your organization collaborate with others both inside and outside the organization. This means that content no longer stays behind a firewall. It can roam everywhere—across devices, apps, and services. And when it roams, you want it to do so in a secure, protected way that meets your organization's business and compliance policies. For more information, see Get started with sensitivity labels.

Microsoft Teams integration with Dynamics 365 customer engagement apps (such as Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation) allows you to create teams with sensitivity labels and make the teams private so that only the owner of each team can add other members.



Prerequisites

The following prerequisites are required before you can turn on sensitivity labels in your app:

- You must have the Azure Information Protection (AIP) P2 Premium license. For more information, see Azure Information Protection
- You must create and configure sensitivity labels in your tenant. For more information, see Create and configure sensitivity labels and their policies.

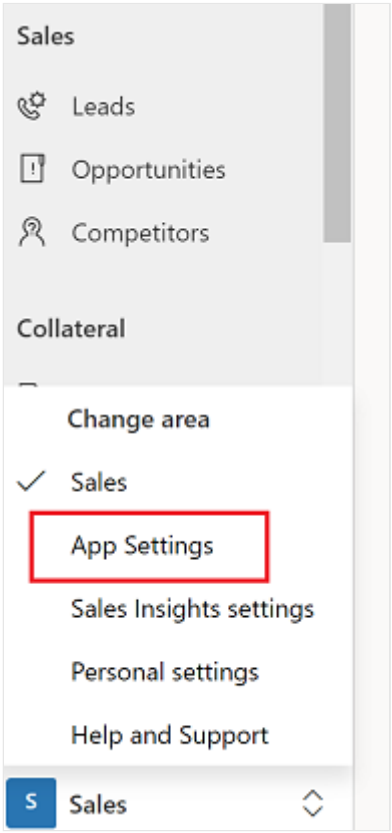
Turn on sensitivity labels

Sensitivity labels are only available when the Enhanced Collaboration Experience is turned on. For more information, see Enable linking of Dynamics 365 records to Teams channels.

> **Note**
>
> If you are still using the group classification labels instead of sensitivity labels, turning on this option will let you use the classification labels in Teams.

To turn on sensitivity labels:

1. In the Sales Hub app, select the **Change area** icon in the lower-left corner and then select **App Settings**.



> **Note**
>
> App Settings is available only in the Sales Hub app. If you don't have the Sales Hub app and want to access the settings from your custom app, add a subarea with the following URL:

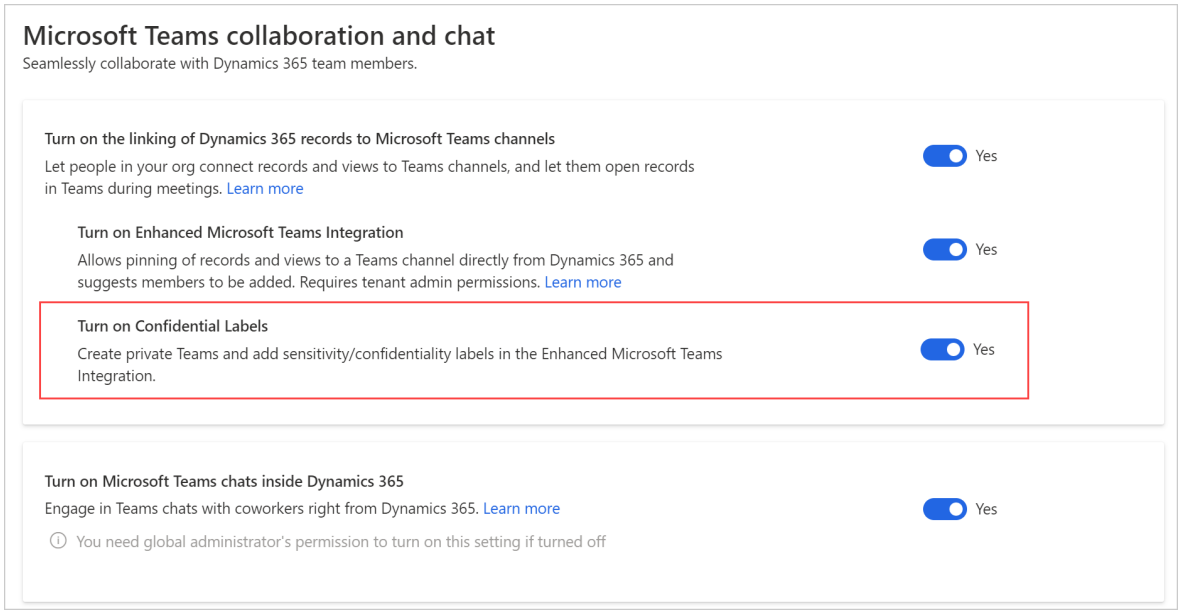
```
/main.aspx?
pagetype=control&controlName=MscrmControls.FieldControls.CCFadminse
ttings&data={"id":"overview","ismanage":"cnc"}
```

> Alternatively, you can suffix your Dynamics 365 domain URL to instantly access the settings page mentioned in Step 3: For example:

```
https://adatum.crm.dynamics.com/main.aspx?
pagetype=control&controlName=MscrmControls.FieldControls.CCFadminse
ttings&data={"id":"overview","ismanage":"cnc"}
```

2. From the site map, under **General Settings**, select **Chat and collaborate**.

3. Turn on the **Turn on Confidential Labels** toggle.



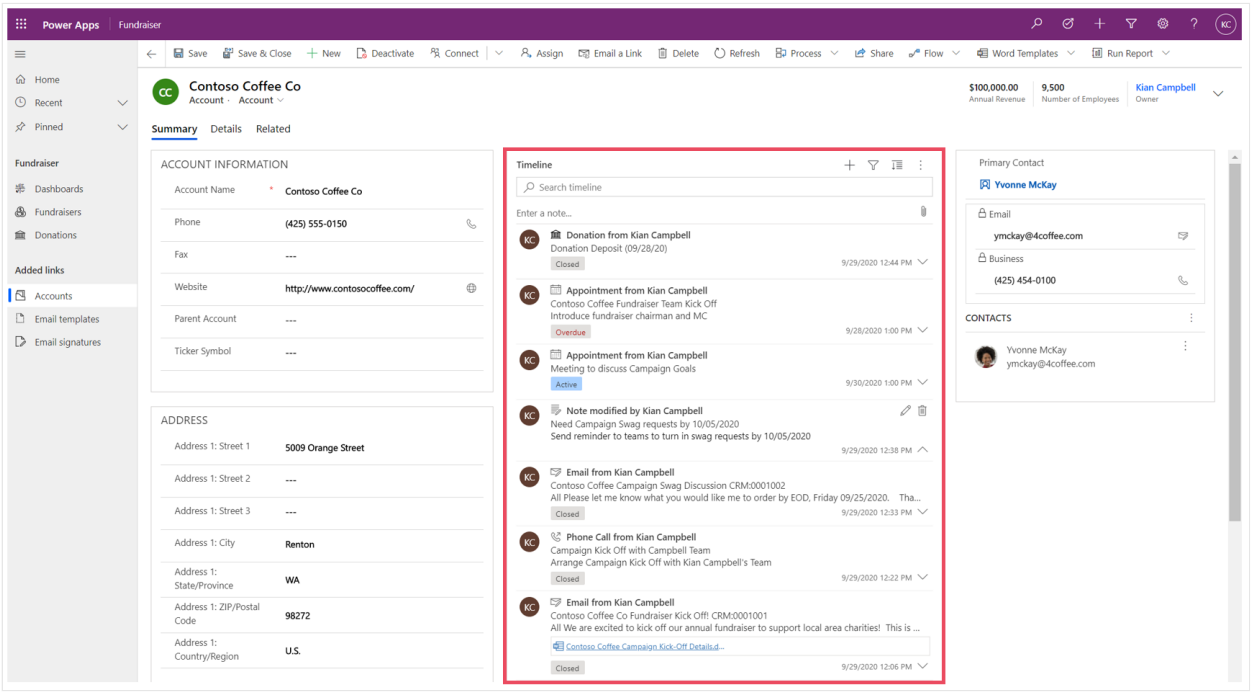
4. Select **Save**.

To learn how to use sensitivity labels, see Enhanced Collaboration Experience with Microsoft Teams.

Set up the timeline control

Article • 10/05/2023

The timeline helps app users see all activity history. The timeline control is used to capture activities like notes, appointments, emails, phone calls, and tasks to ensure that all interactions with the related table are tracked and visible over time. Use the timeline to quickly catch up on all of the latest activity details.



The timeline control provides an easy way to view information related to a table, such as accounts or contacts. This immersive experience helps give users a better understanding of their customer interactions, and helps them deliver more personalized service in an efficient and effective manner.

App makers can configure the information that's displayed on the timeline to help users access information and create new activity records, such as email and tasks, directly from the timeline quickly so they can deliver more personalized service.

Add a timeline

A timeline control is located on a form within a table. Any timeline control that's on a form can be configured. For example, an account table has three standard forms, and each of those forms can have a timeline that can be configured.

Display a custom table in a timeline

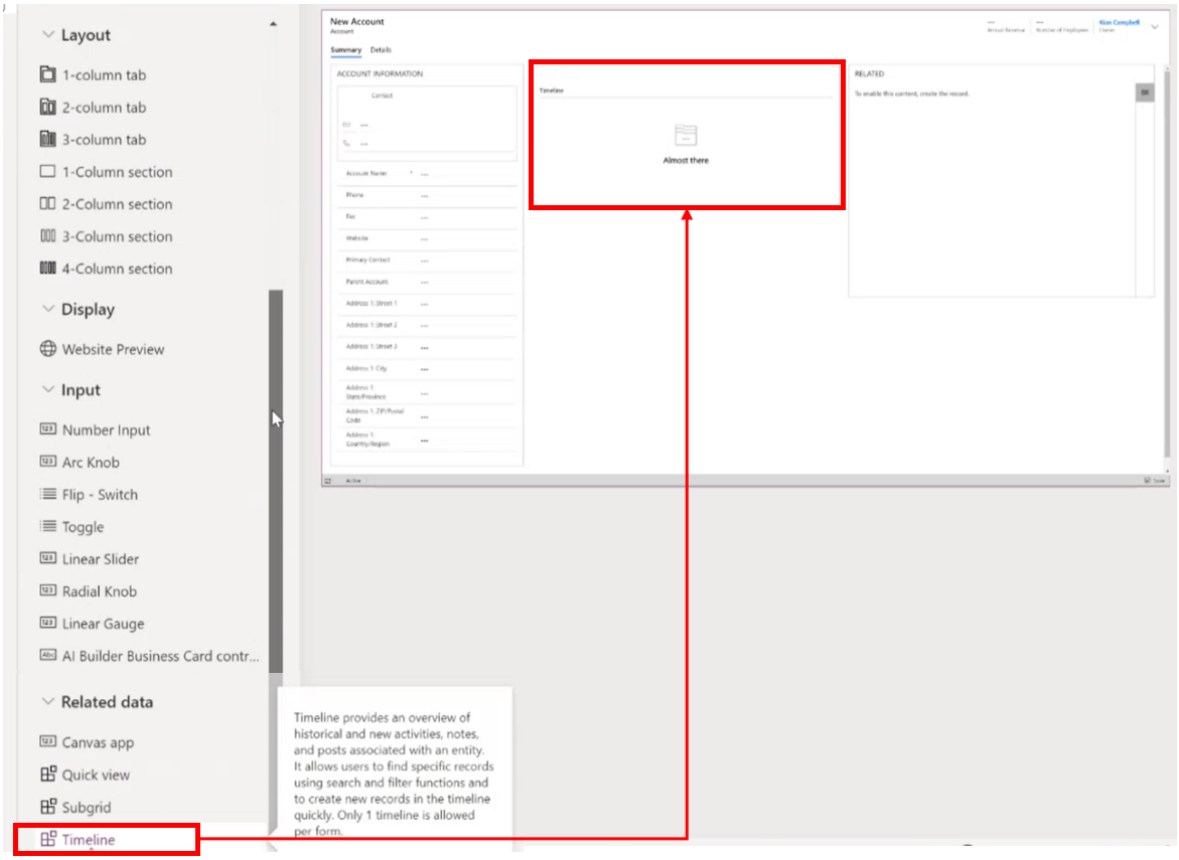
For custom tables to appear in the list of activities that can be added to a timeline control, make sure that when you create the table you configure the following settings:

- Set the table **Type** as **Activity**.
- Check the **Enable attachments** setting if you want app users to be able to add attachments and notes to the custom activity record.

More information: Create a custom table

Add the timeline component to a form

1. Sign in to Power Apps.
2. Select **Tables** on the left navigation pane, and then open the table you want. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Select the **Forms** area, and then open the form where you want to add or configure a timeline.
4. In the form designer, select **Components** from the left navigation, and then scroll down to the **Timeline** component on the left side. Drag and drop it into a section on the form.



5. Make the changes you want to the timeline settings. More information: Configure the timeline component
6. Before you can view any configuration changes on the table form, you must save and publish your updates on the timeline component. Select **Save**, and then select

Publish to make your form changes available on the table form for the environment.

Note the following when you work with the timeline control in the form designer.

- You can add multiple timelines to a form.
- To remove the timeline component from a form, select the **Timeline** component area, and then press the Delete key.
- Since the timeline component relies exclusively on underlying related data, **Almost there** is displayed in the timeline section.
- Because you are in a create and/or edit state on the form, there's no underlying data, so the timeline section is blank in the form designer.

Configure the timeline component

The timeline component is rich in features and functionality that can be configured and tailored to support specific business needs. The timeline is composed of features and functionality that you configure in the timeline component, which is then displayed in the table form.

Display options

This section describes the settings available in the Display options area of the timeline control settings.

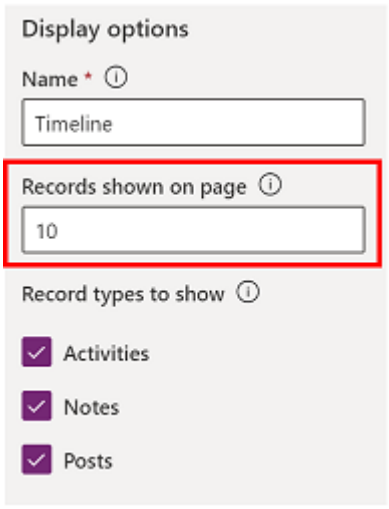
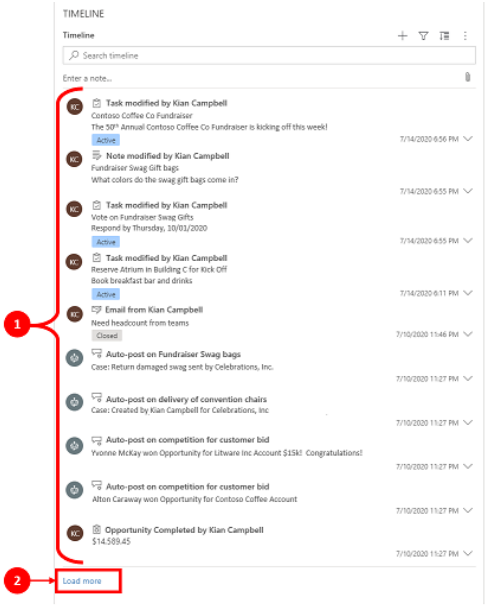
Timeline component name

The **Name** column under the **Properties** tab in **Display options** is the unique name of the timeline control and is only used by the app maker to reference.

> ⓘ Note
>
> - The **Name** column has limitations. For example, you can't use spaces between words. Instead, you must use an underscore (_)
> - You can't change the default heading label that is displayed as **Timeline** on the form during app runtime.

Records shown on page

This section allows you to control the number of records that appear before displaying **Load more** at the bottom of the section.

Form designer configuration View	Form designer display View
	
The default setting on the **Records shown on page** column is set to 10 records, but you can change it to display up to 50 records.	1. Per the default setting shown in this example, the form displays a maximum of 10 records. 2. Once records exceed 10, the **Load more** option appears at the bottom of the form.

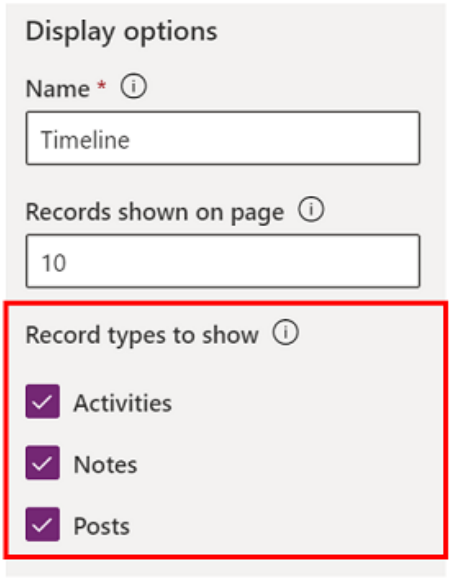
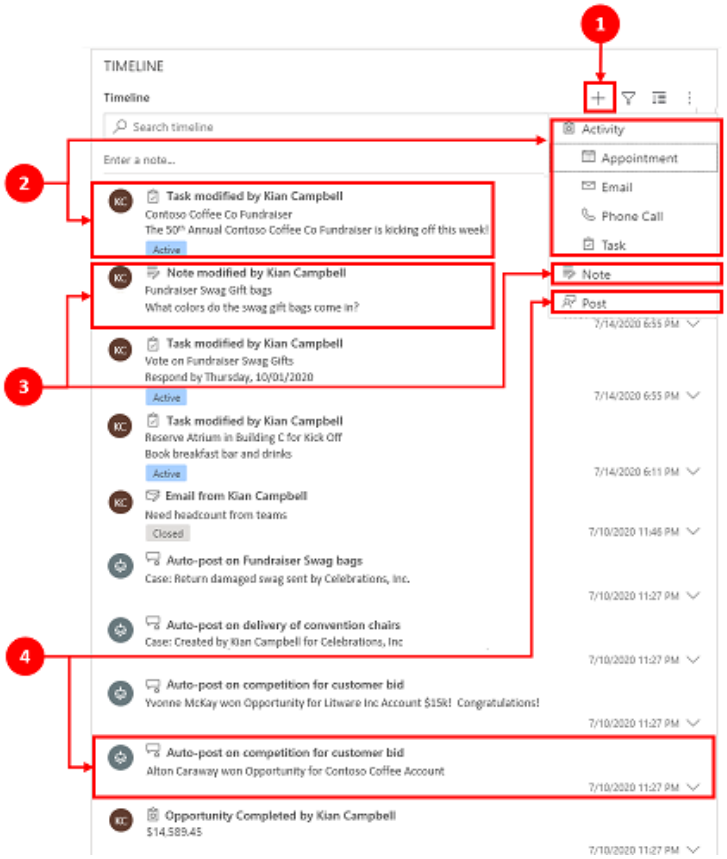
Record types to show

There are three primary record types: Activities, notes, and posts. All record types are enabled by default.

- Activities. Activities can have a large number of customizable subactivity record types to support business needs. Depending on what you've installed, the administrator can create, add, and display many different customized subactivity record types under the **Activity** section of the dropdown menu on the timeline.
- Notes. Notes allow you to capture details related to the table record. For example, you can use notes to capture thoughts, summarize information, and provide feedback on a case, and then update the case details later.
- Posts There are two types of posts: auto and user:
  - **Auto Posts** are system-generated posts that notify you of account activity that has occurred.
  - **User Posts** allow you to leave a message for another user on a record.

> **Note**
>
> Posts require a Dynamics 365 app, such as an app for Dynamics 365 Customer Service.

Enable these record types to be displayed in the timeline

Form designer configuration view	Form designer display view
	
To enable **Record types shown** for **Activities**, **Notes**, and **Posts** on a form, check the box next to the record type.	1. To confirm that the record type is displaying on the form, select **Create a timeline record** + in the top-right nav in the timeline, and a dropdown menu that displays the list of enabled record types appears. 2. When **Activities** are enabled, you see **Activity** record types for appointments, email, phone calls, and tasks. 3. When **Notes** are enabled, you see the note record types on the form. 4. When **Posts** are enabled, you also see the post record types on the form.

> **Note**

Activities and notes are standard entities. If additional solutions have been imported into the environment, other tables may also be displayed.

Activity, notes, post icons, and date / timestamp display on timelines

The timeline shows a simple icon before the activity, note, post, and custom table, making it easy for you to identify the record type.

Dates and timestamps always appear on each record on the bottom-right side of the preview, and are always viewable.

> **Note**
>
> When a custom table has a custom icon, activities related to the custom table are displayed using the default custom table icon not the custom icon.

Advanced

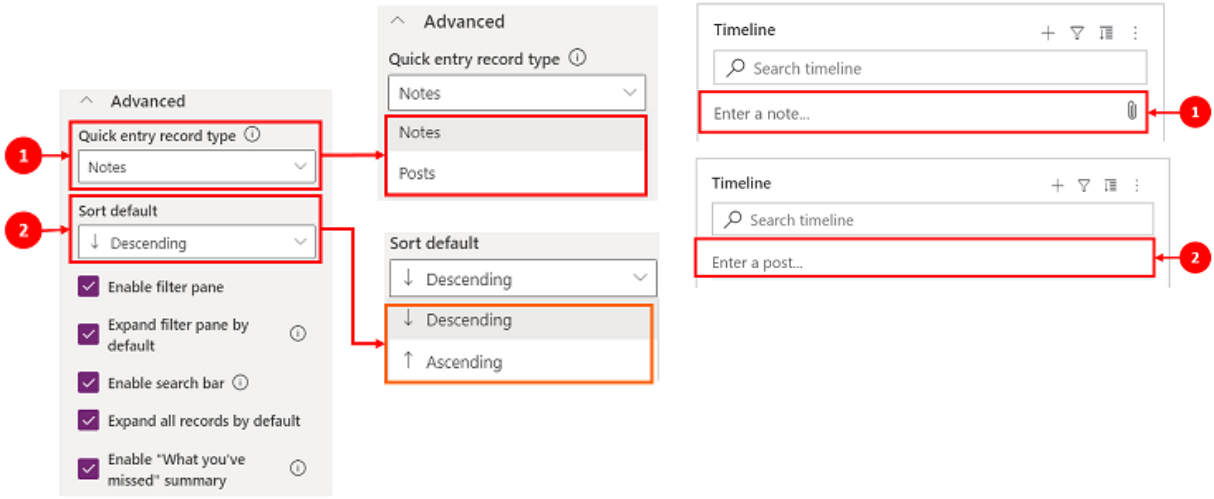
This section describes the settings available in the Advanced area of the timeline control settings. The **Advanced** settings apply to all record types.

When enabling and disabling **Advanced** features, you aren't able to view updates (even though it may appear that there's activity occurring on the timeline component) until you save and publish your configuration updates and refresh the table form.

Advanced covers common settings that span across an activity, note, or post, which are the three primary record types that appear in the timeline section.

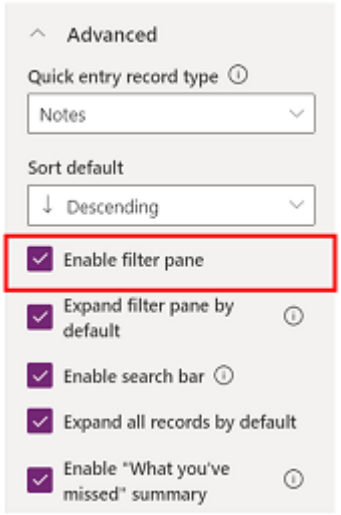
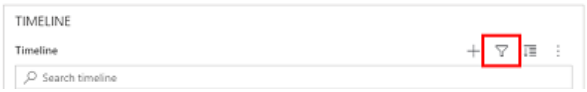
Quick entry record type and sort order default

The following is a detailed overview of the **Advanced** configuration options, starting with selecting your **Quick entry record type**:

Form designer configuration View	Form designer display View
	
1.Select **Advanced** to expand this area in the configuration view. The **Quick entry record** type provides you with quick access to create either a **Note** or a **Post**. The default setting for this setting is set to **Notes**. 2.The **Sort order default** setting controls the order of how all data is sorted on the timeline. The default setting for this setting is set to Descending.	1. When you select **Notes**, it displays under the **Search** bar in the timeline. Also, you see a paperclip icon that allows you to attach files. You can only attach files to Notes. 2. If you select **Posts**, it also displays under the **Search** bar in timeline.

Enable filter pane

Filters provide a quick option to sort and look for specific data quickly.

Form designer configuration View	Form designer display View
	
The **filter pane** setting allows you to enable or disable filter functionality on timeline. It's enabled by default.	Enable the **filter pane** by checking the box next to the setting. This enables the filter icon to display on the timeline.

Form designer configuration View	Form designer display View
	To disable the **filter pane**, clear the box next to the setting and the filter icon no longer appears on the timeline.

Filter records on timeline

Filters are valuable for sorting data. You can quickly filter activities, notes, and posts with multiple options to see what matters to you. The filter is available for the activities, notes, posts, and custom tables that are present in the timeline. The timeline filters and displays the records and the count that are present in the timeline.

When you select filters based on an activity status then those activities, notes, and posts are displayed in your timeline. You can customize data using data filters and either choose to keep filters in place or clear them when you're done.

- When the **Filter** icon is transparent on the table form, it means no items have been selected, therefore the filter pane is empty.
- When the **Filter** icon is dark, it means filters have been set. To view which filters have been designated, select the **Filter** icon and the filter pane displays the filters that have been set.
- Choose how you want to filter data by selecting the box next to the filter.
- Clear filters by selecting the **Clear all filters** icon on the filter pane.

The following category and subcategory options are available on the filer menu:

Category	Subcategory
Record type	• Notes • Activities • Posts
Activity type	• Appointment • Campaign Activity[1] • Campaign Response[1] • Email • Fax • Case Resolution[1] • Letter • Opportunity Case[1] • Order Case[1] • Phone Call • Quote Close[1]

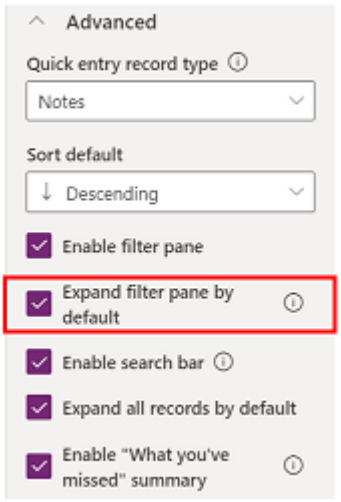
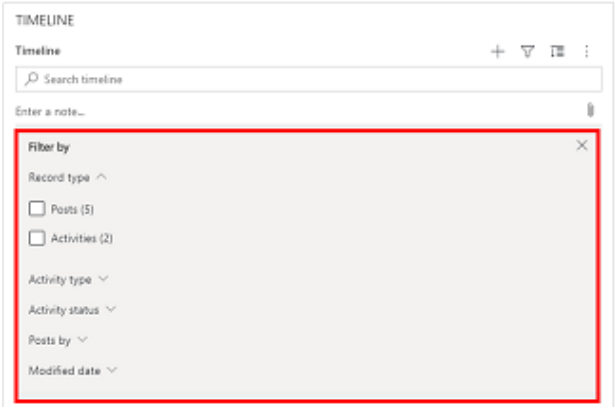
Category	Subcategory
	• Recurring Appointment • Social Activity • Task • Project Service Approval[1] • Booking Alert[1] • Conversation • Session • Customer Voice survey invite[1] • Customer Voice survey response[1] • Custom activities (made available by imported solutions)
Activity status	• Active • Overdue • Closed
Activity status reason	Allows you to filter using specific status reasons. The values are a unique list of all of the status reasons from the activities in the timeline. The status reasons change depending on the activity. If there are multiple activities on the timeline that have the same status reason, it reflects once, but then the number next to it indicates how many occurrences of that status reason appear in the timeline.
Activity due date (active)	• Next 30 days • Next seven days • Next 24 hours • Last 24 hours • Last seven days • Last 30 days
Posts by	• Auto post • Users
Modified date	• Last 24 hours • Last seven days • Last 30 days

> **Note**
>
> By default, the fax and letter records are disabled on the timeline.

[1] Requires a Dynamics 365 app

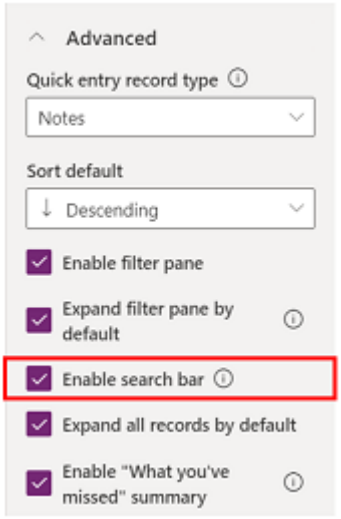
Expand filter pane

The **Expand filter pane** setting provides quick access to sorting options within the timeline. It's enabled by default.

Form designer configure view	Form designer display view
	
The **Expand filter pane by default** setting displays an expanded filter pane at the top of the form anytime it's opened and refreshed. It's disabled by default.	Enable the **Expand filter pane** by checking the box next to the setting. This enables the filter pane to appear at the top of the form anytime the form is opened and refreshed. To disable the **Expand filter pane**, clear the box next to the setting and the filter pane doesn't appear on the timeline.

Enable search bar

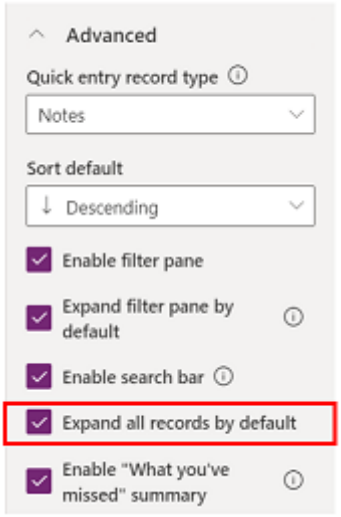
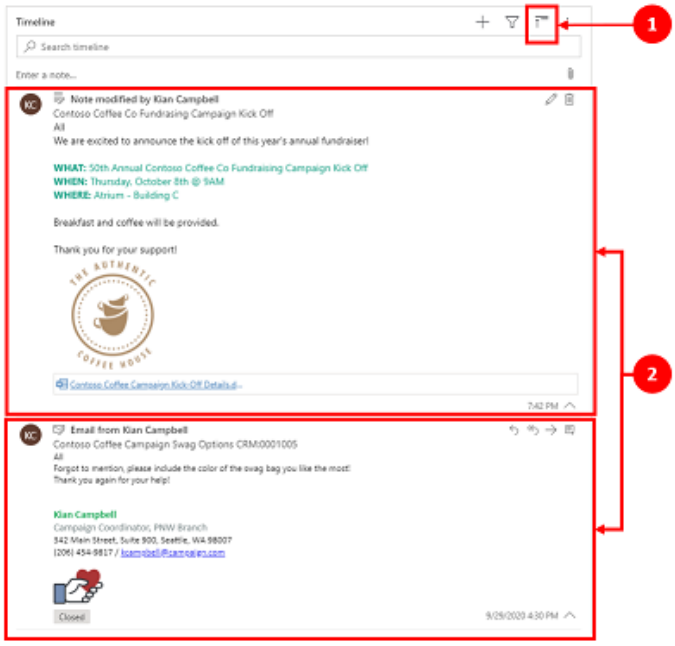
You can search for records in the timeline. When you search for a phrase in the timeline, it searches in the title of the record or body and description column of the record then displays the record for you.

Form designer configure view	Form designer display view
	

Form designer configure view	Form designer display view
Select **Enable search bar** to enable the **Search timeline** bar functionality. It's enabled by default.	Enable the search bar setting to display a **search bar** at the top of the timeline. Disable the search bar by clearing the box next to the setting and the search bar doesn't appear on the timeline.

Expand all records in timeline

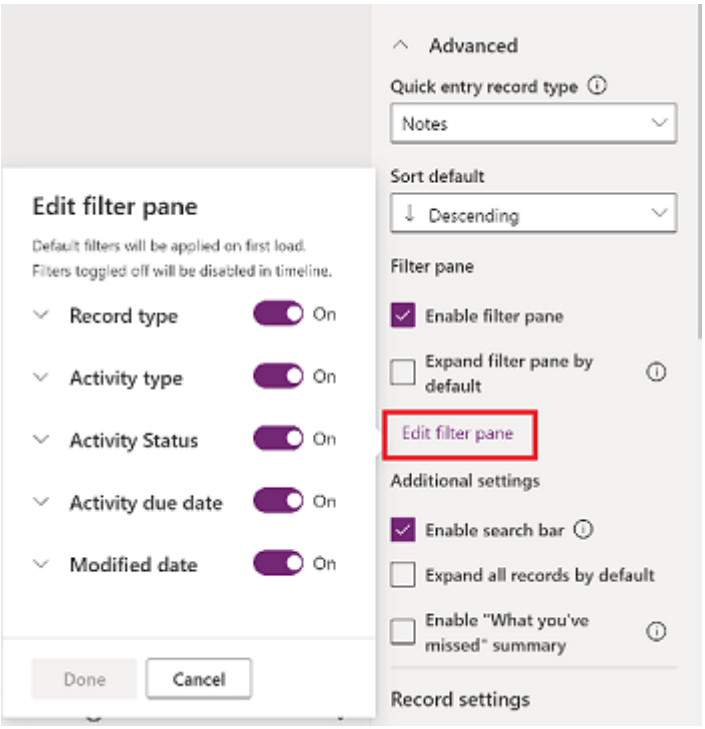
Expand all records by default displays all activities in an expanded view in timeline.

Form designer configure view	Form designer display view
	
Select **Expand all records** to set the default view to display all records in the expanded view format in the form each time the timeline is opened. **Expand all records** is disabled by default.	1. When enabled, the **Expand all records** icon is displayed in the top-right corner of the timeline nav. 2. Records can be expanded or collapsed by using the **Expand all records** icon. When expanded, all records are displayed in the expanded view in the form each time it's opened. When you clear **Expand all records**, it no longer displays activities in an expanded view. When disabled, the **Expand all records** icon doesn't display in the top-right nav of the timeline. Records are always be displayed in a collapsed view.

Edit filter pane

You can configure the default filters that are applied when a form loads or is refreshed using **Edit filter pane**. Remove filter groups by turning the setting **Off**. Users can remove

the default filters to see all the records unless **Enable filter pane** is disabled.

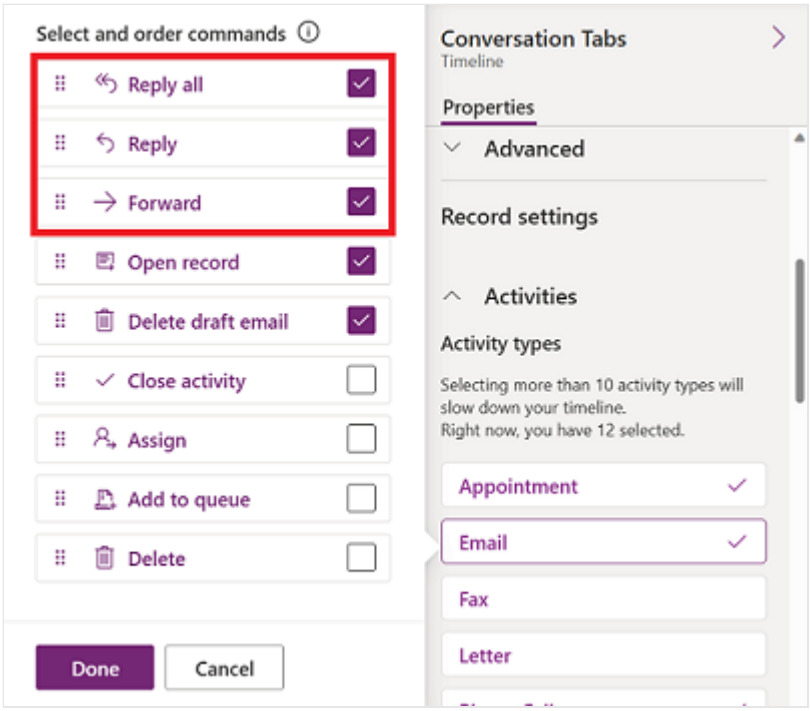


Configure email commands for timeline

You can configure email options for the timeline so that users can reply, reply-all, and forward messages. You can select the order in which the options are displayed for users, and exclude them if they're not needed. Reply-all is the default order setting.

1. Select the form for which you want to apply the email settings, and then in **Properties** in **Conversation Tabs**, select the **Email** activity type. The **Email** properties pane is displayed.

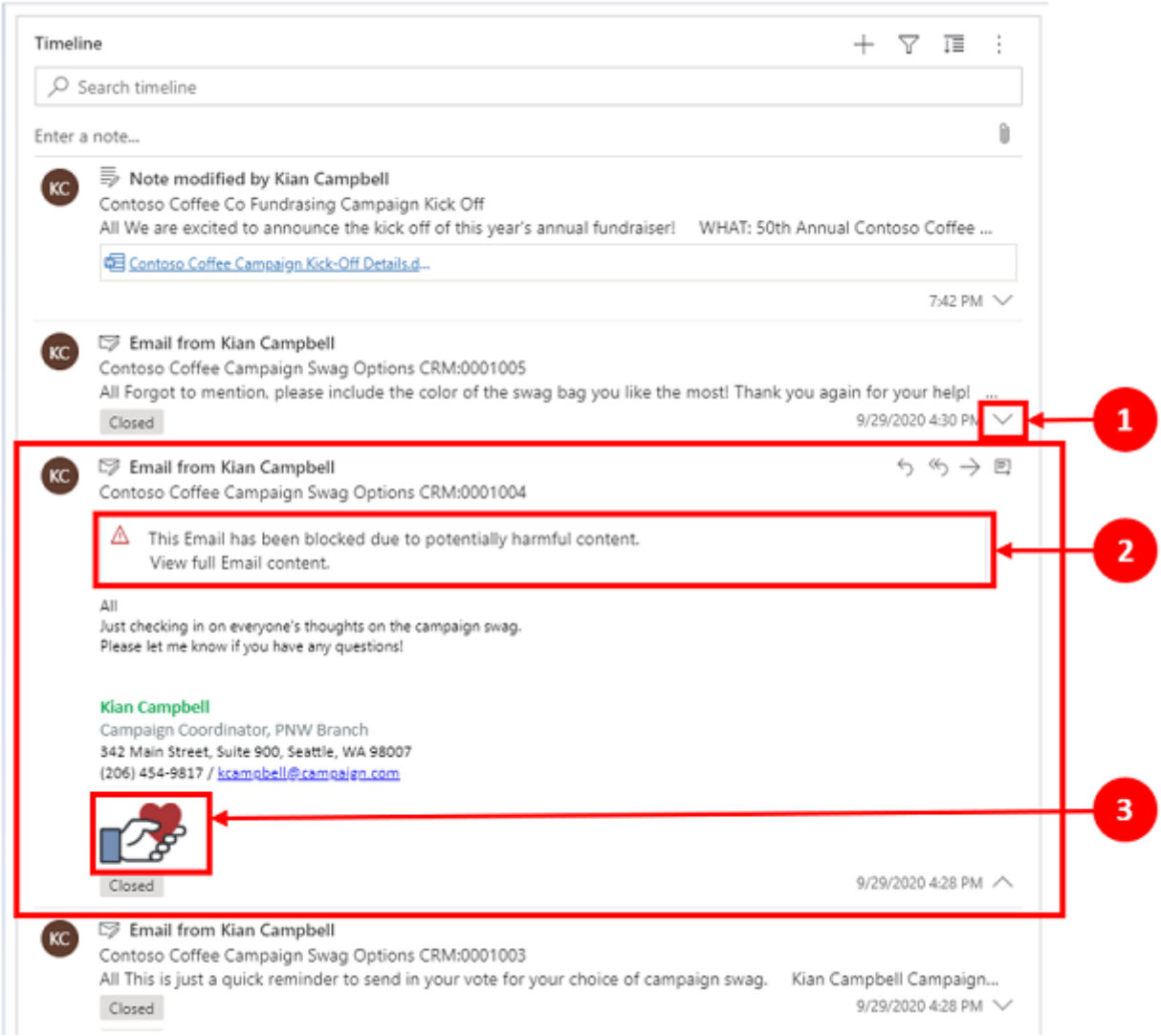
2. In **Select and order commands**, check the boxes for the email commands you want to configure for users. You can drag and drop the options to choose the order in which you want each option to display.



3. Select **Done**, and then save and publish your changes.

Expand records with images in timeline

You can send and receive records with images, but they don't display when the record is collapsed. Records with images must be expanded to be viewed.



1. Records when collapsed provide a visual summary. To expand an individual record, select anywhere on the timeline record to expand and collapse a record view. In the bottom-right corner of the record, there's a caret:

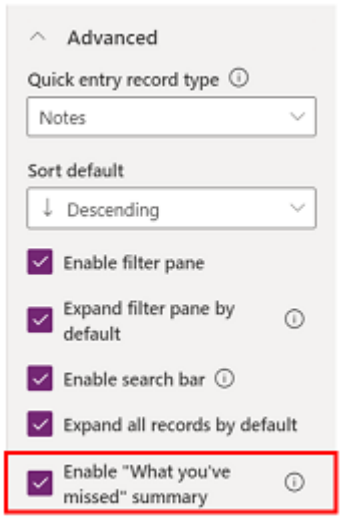
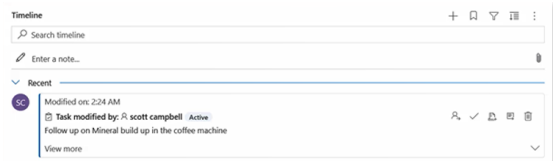
    - When the caret is facing downward (v), the record is collapsed.
    - When the caret is facing upward (^), the record is expanded.

2. Records with images might display the following notice:
   This email has been blocked due to potentially harmful content. View full email content.

3. When you select the message, the warning goes away, and the image appears.

Enable "What you've missed" summary

What you've missed helps you stay on top of updates and changes made to records by displaying updates at the top of the timeline when you access a record.

Form designer configure view	Form designer display view
	
The **What you've missed** setting displays new records you haven't seen. It's enabled by default. To disable it, clear the box next to the setting.	When enabled, when you view an account record, the newest activities appear at the top of the list.

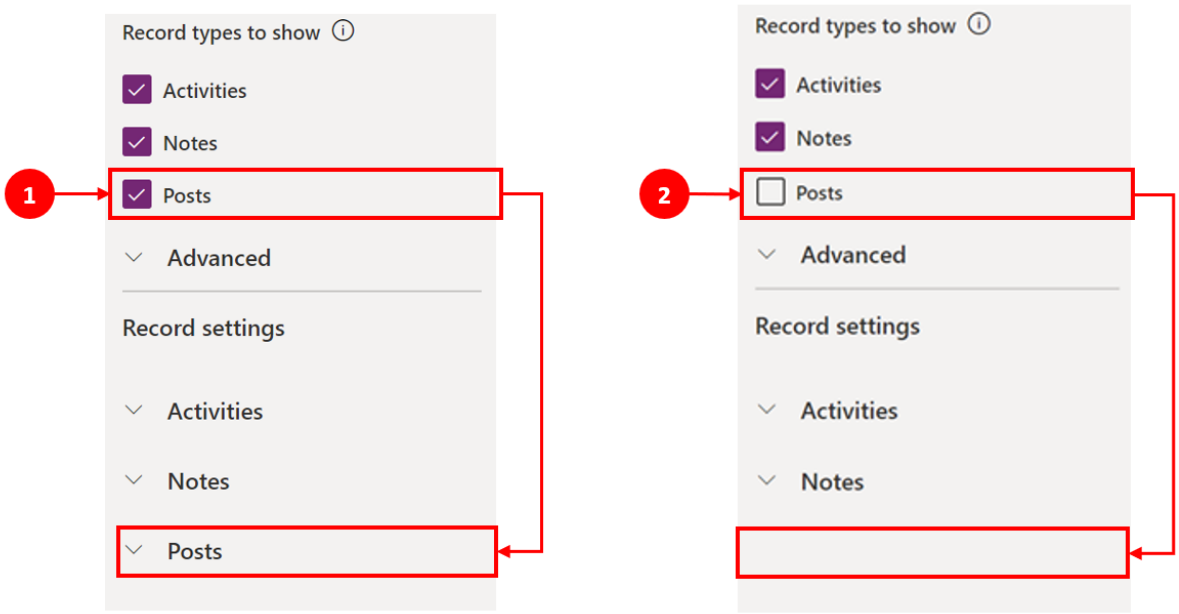
Record settings

This section describes the settings available in the Record settings area of the timeline control settings. The **Record types to show** setting determines the record types that are affected by the **Record settings** described here.

Record settings let you manage the settings within the record types.

- The **Activities** record type is tied to **Activities** in record settings.
- **Notes** record type is tied to **Notes** in record settings.
- **Posts** record type is tied to **Posts** in record settings.

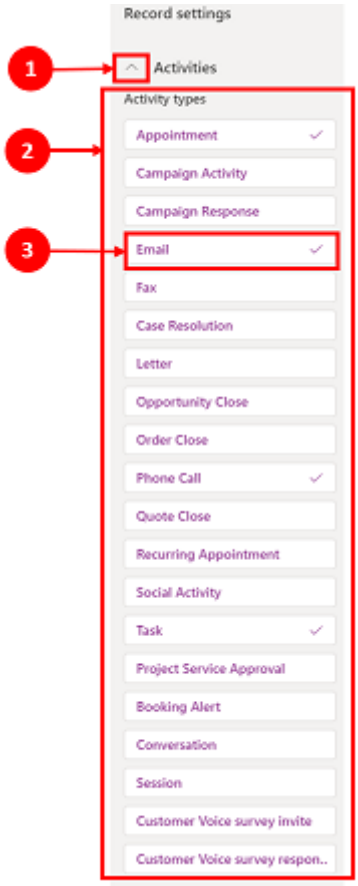
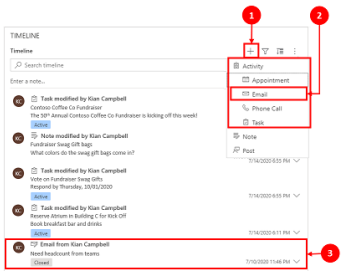
To enable or disable a record type, select or clear the checkbox. Then, that record type either displays or no longer appears in the **Record settings** section.



1. When **Posts** is checked in the **Record types to show** section, it's enabled in the **Record settings** section.
2. When **Posts** is cleared in the **Record types to show** section, it's disabled in the **Record settings** section.

Configure activity record types

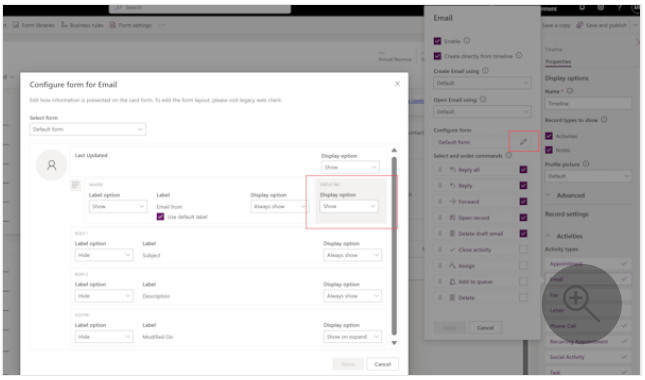
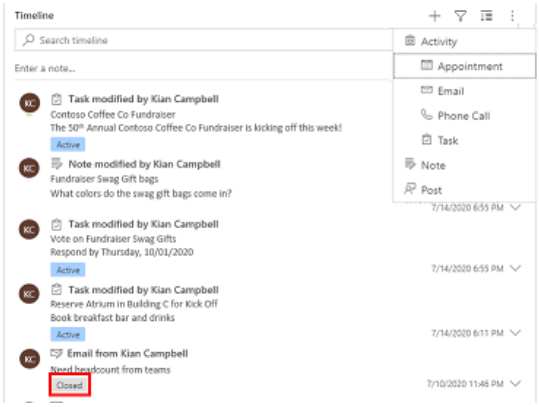
When you expand the **Activities record settings** on the timeline component section, a list is displayed that shows all the activity types that can be either enabled or disabled on the table form.

Form designer configuration view	Form designer display view
	
1. Expand and view **Activities** under the **Record settings** section using the caret (^). 2. A list of **Activity types** is displayed in the expanded view. 3. You can enable or disable an activity by selecting an activity type. For example, enable **Email**. To enable an **Activity type**, check the box next to **Enable** and select **Done**. To disable an **Activity type**, clear the box next to **Enable**, and then select **Done**. This action disables all other items in the box and disables the activity type from displaying on the timeline. This action also disables the activity type from being created or viewed in the timeline.	1. When enabled, an **Activity type** appears under the **Create a timeline record** +. 2. The activity type is displayed as an option the user can choose from the dropdown menu. 3. Also, the **Activity type** record is displayed in the body of the timeline.

> **Note**
>
> A check mark appears to the right, next to enabled **Activity types**. Additional record type settings are disabled until they're enabled under that specific record type.

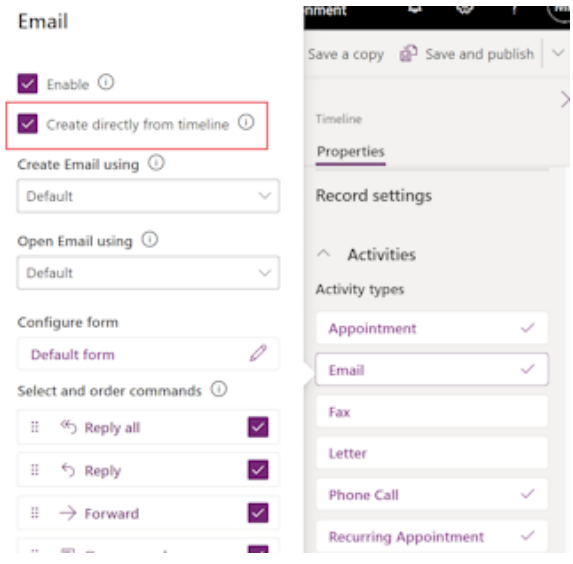
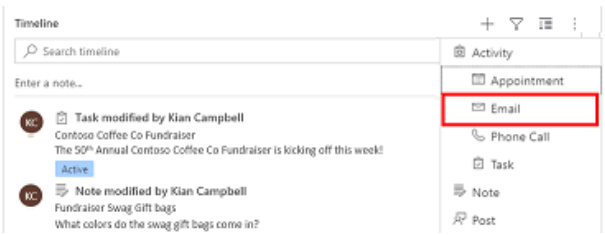
Show status tags on activity record types

Status tags match the status filter that display in the timeline to help you to see at a glance if the state of an activity record is **Active**, **Overdue**, or **Closed** on an activity, such as a task, appointment, or email. Makers enable or disable status tags for any **Activity type** in the default form configuration. Status tags are enabled by default.

Form designer configuration view	Form designer display view
	
To display email status tags, select **Default form** (pencil icon) > **Show** in the **Display option** dropdown list under **STATUS TAG**.	When enabled, status tags such as **Active**, **Overdue**, or **Closed** appear in the timeline next to that activity record.

Enable the ability to create directly from timeline

App makers have the ability to enable activity types so they can be created directly on the timeline. Having the ability to quickly select and create an activity, such as email, tasks, and appointments, helps to streamline productivity.

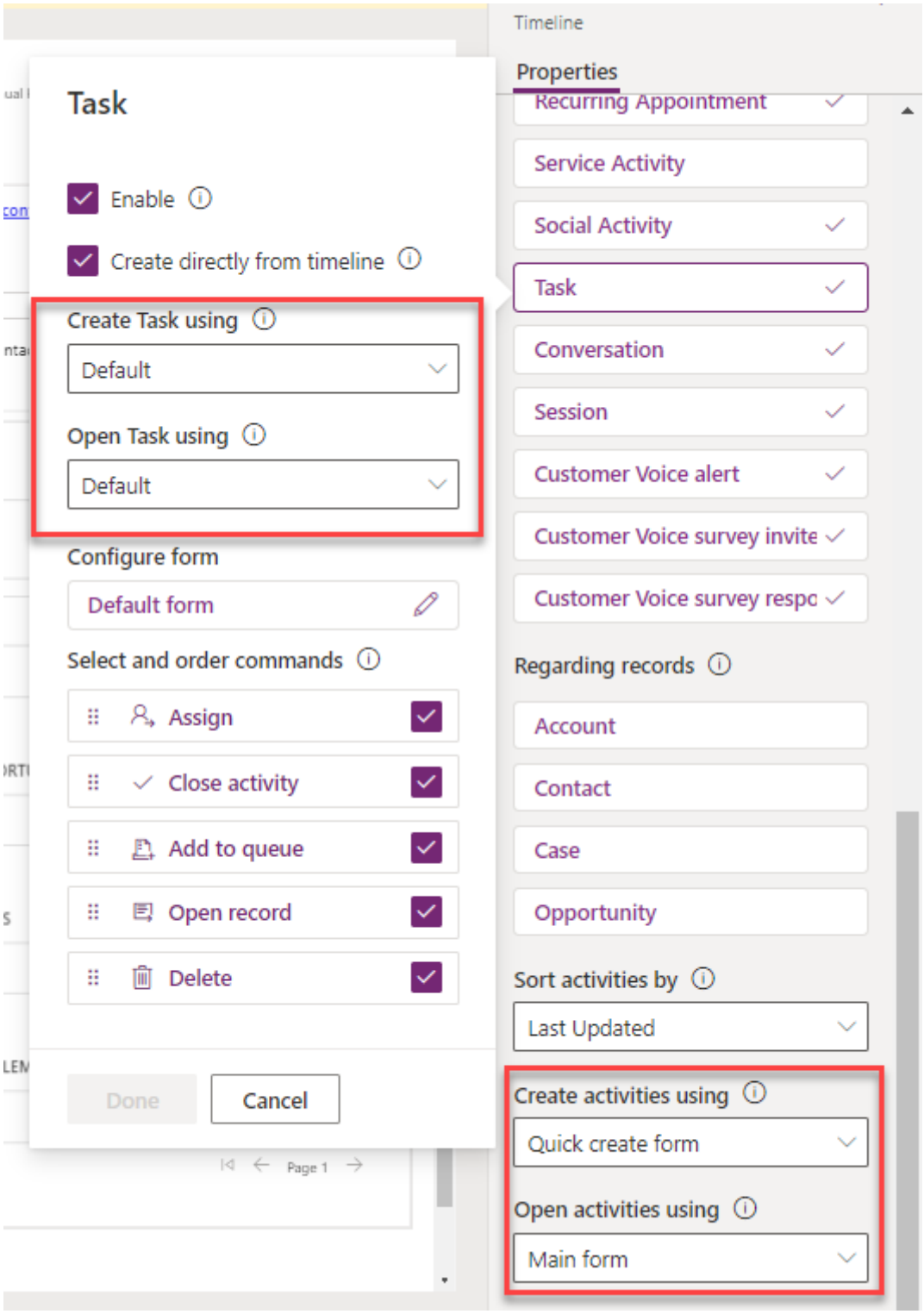
Form designer configuration view	Form designer display view
	

Form designer configuration view	Form designer display view
To allow users to create activity types directly from the timeline, check the box next to **Create directly from timeline**.	When enabled, the activity type appears in a dropdown box on the **Create a timeline record** + icon in the top-right of the timeline.

Set form types to create and open activities

Set the **Create activities using** and **Open activities using** individually for an activity type or for all activity types to set the form type users use based on your business needs. You can set these fields as follows:

- Select an activity type in **Activities** and specify the values.
- Specify the value for these fields in the **Activities** pane.



If you set the following form type for a specific activity, the application considers the following settings:

- **Default**: The form type in the **Create activities using** or **Open activities using** in **Activities**.
- **Quick create form**, **Main form**, or **Main form dialog**: The activity specific setting irrespective of the form type set in **Create activities using** or **Open activities using** in **Activities**.

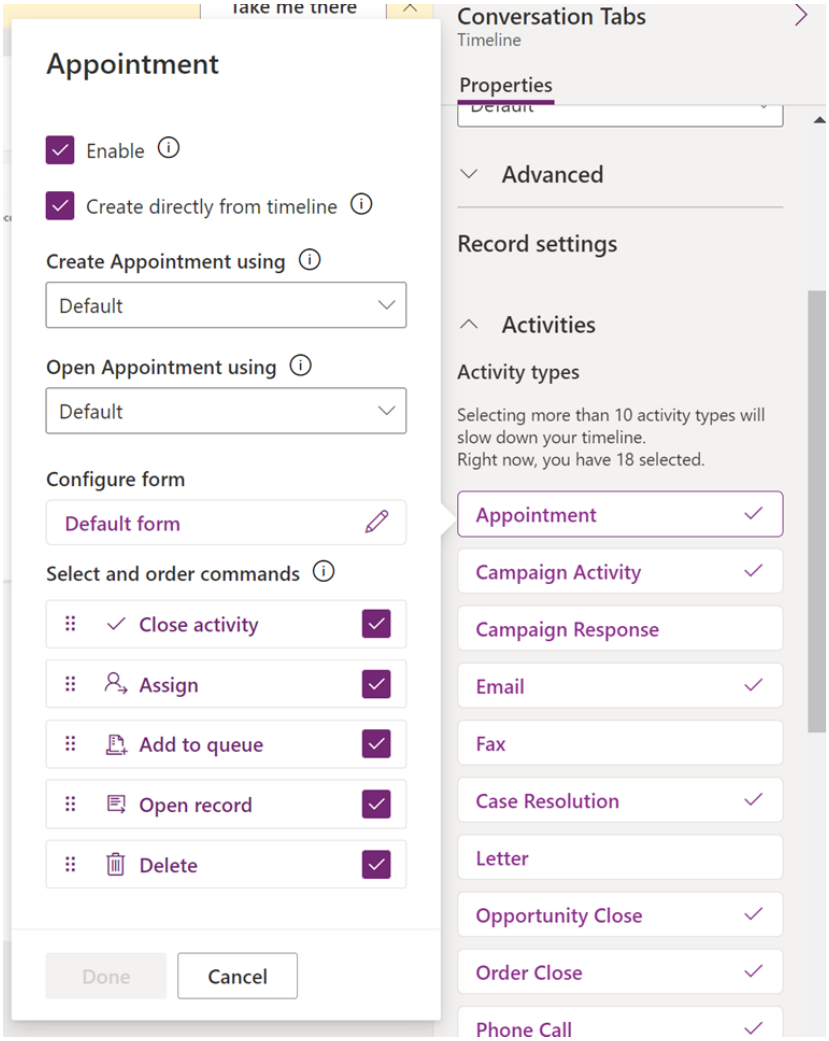
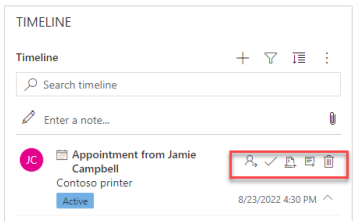
When the user selects the activity from the create a timeline record or opens an activity from the timeline, the activity is either created or opens in the selected form type.

Enable command actions on activity record types (Preview)

> **Note**
>
> These features are part of an early access release. You can opt in early to enable the features in your environment, which allows you to test them and then adopt them across your environments. For information about how to enable these features, see **Opt in to early access updates**.

Command actions allow users to assign, close, delete, open a record, or add a record to a queue for activities from the timeline. You can enable or disable the command actions for a specific activity type.

Based on the activity type, you can also enable other command actions. For example, for an email you can also enable actions such as Reply, Reply All, and Forward.

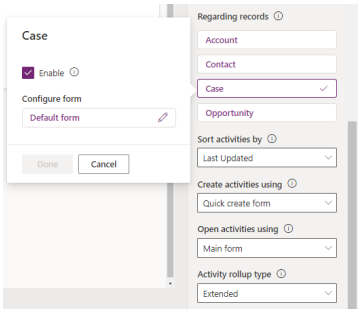
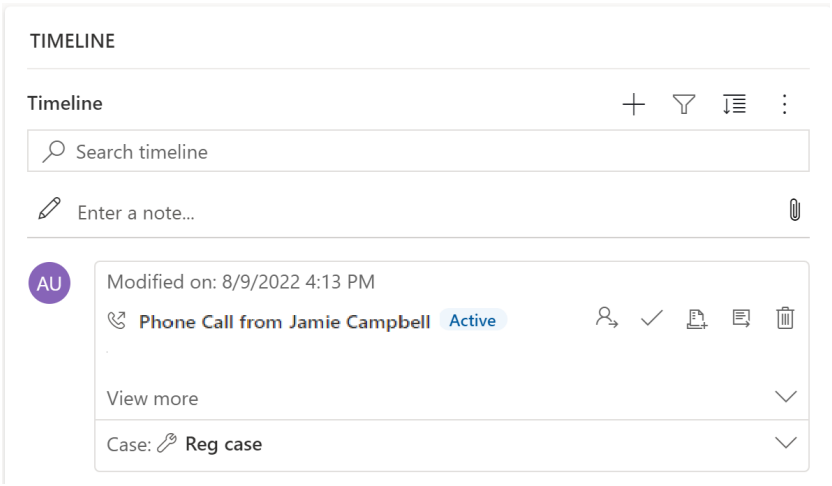
Form designer configuration view	Form designer display view
	

To allow users to enable command actions for an activity directly from the timeline, check the box next to command action in **Select**

Form designer configuration view	Form designer display view
and order commands. You can only enable five command actions for an activity.	
You can also move the position of the command actions to change the order in which they're displayed on the timeline.	When enabled, the command action appears on the activity record in the timeline.

Display related records on the timeline

Accounts, contacts, cases, and opportunities linked to an activity are displayed on the timeline record. The administrator can enable or disable the records in **Regarding records**.

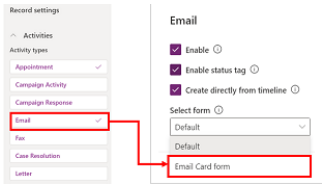
Form designer configuration view	Form designer display view
	
1. Expand and view activities under the **Record settings** section using the caret (^). 2. A list of records are displayed in **Regarding records**. 3. To enable records, select the box next to **Enable** and select **Done**.	When the checkbox is enabled, users can view the linked records to an activity. The record linked to the activity is then displayed on the timeline. The linking of the record is not manual and it occurs due to the rollup of the record. More information: Set the activity rollup type in timeline

> **Note**

A check mark appears next to the enabled record. Disabling the table type only disables the linked record for the Timeline records rolled up for that table.

Create and use card forms in timeline

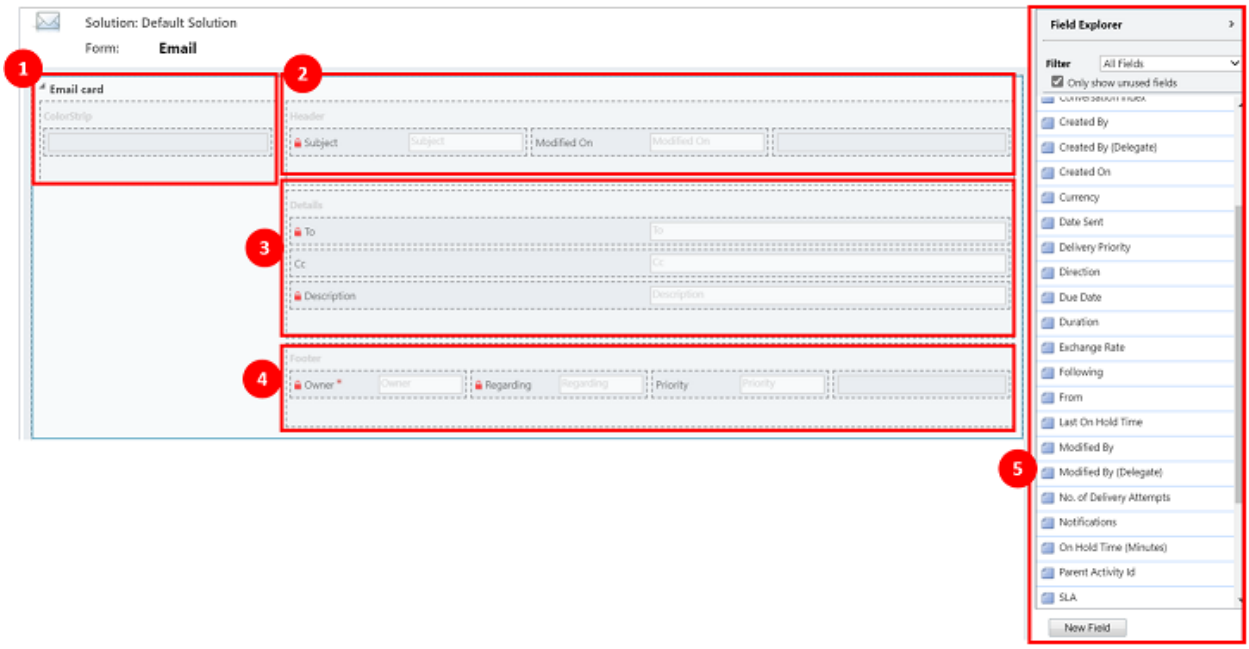
Records are displayed using the default setting for each activity type. However, if you want to display record information for an appointment or email, for example, you can either edit the existing card form, use a different card form from record settings, or customize your own.

Form designer configure view	**Form designer display view**
	
You can change the default card settings to a different card form if one has been created.	If you create a new card form, you must go to the parent table and add the new form of card type there before it appears in the timeline list for configuration. If **Default** is displayed, you aren't using the card form. You can't use the **Email card form** in a timeline unless you select and publish it first.

> **Note**
>
> Not all activity types allow you to create card types, so the default selection is your only option for those records.

Customize a card from within timeline

All card forms are separated into the following four sections:



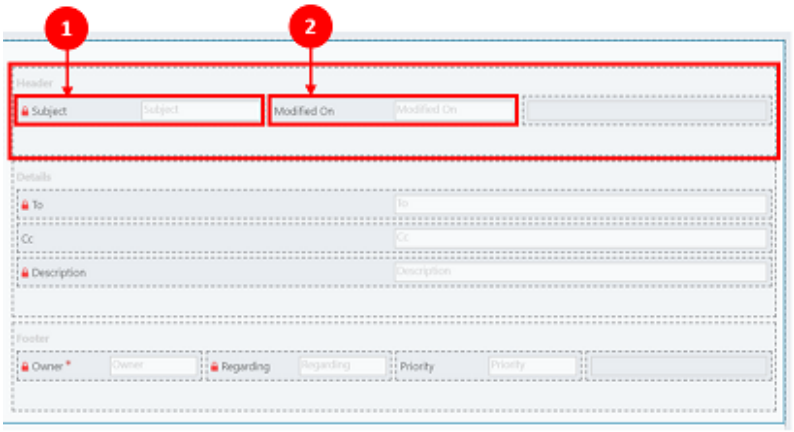
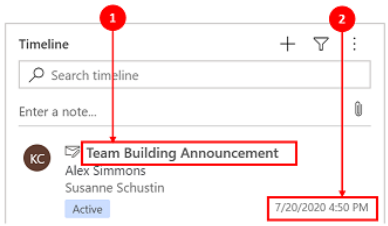
Legend

1. **ColorStrip**: This section doesn't appear on the timeline record. The **ColorStrip** is located on the left of the card form.
2. **Header**: This section is displayed on the timeline record; however, only the first two columns are displayed on the timeline record. For this example, only the **Subject** and **Modified On** columns are visible.
3. **Details**: This section is displayed on timeline record; however, only the first three columns are displayed on the timeline record. For this example, only the **To**, **CC**, and **Description** columns are visible on the timeline record.
4. **Footer**: This section isn't displayed on the timeline record.
5. **Table columns**: You can select which columns you want to add to your card form from the column options listed. You can customize your card form by dragging and dropping the columns you want to use into the sections you want that column to appear in on the timeline record.

Each individual card form must be customized for each activity record, such as email, tasks, posts, and so forth.

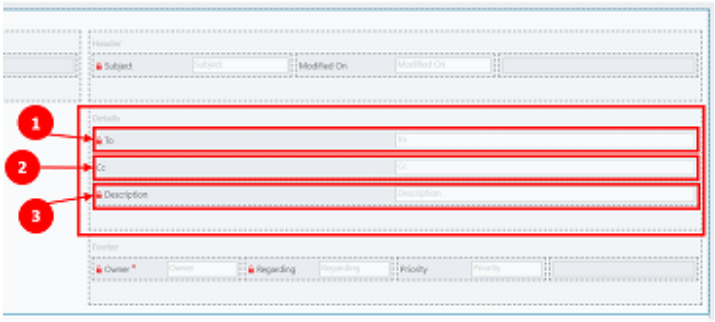
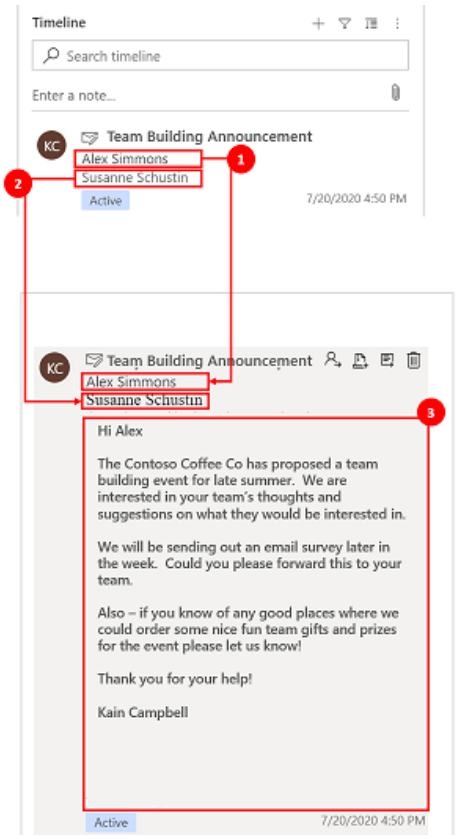
Header section

The card **Header** displays the title/subject in your timeline email form. You can have up to six columns in the **Header** section, but only the first two columns are seen on the timeline record. The form ignores empty columns in all sections.

Form designer configuration view	Form designer display view
	
Column 1 1. Regardless of the column you choose for this section, it appears as a bold header at the top of your timeline record. For this example, we selected **Subject** for this column. **Column 2** 2. Again, regardless of the column you choose for this section, this column always appears in the bottom-right corner of the timeline record. For this example, **Modified On** is selected for this column.	**Column 1** 1. Column 1 from the card header is always displayed in this section of the timeline record. **Column 2** 2. Column 2 from the card header is always displayed in this section of the timeline record.

Details section

The card **Details** section displays in the body of your timeline email record. You can have up to four columns in the **Details** section, but only the first three columns are viewable on the timeline record.

Form designer configuration view	Form designer display view
	

The card details always appears below the header regardless of the column you choose.

Column 1

1. In the card details Column 1 acts as a subheader on the timeline record. For this example, **To** is selected for this column.

Column 2

2. This column only displays one line of text in a summary view on the timeline record. When you expand your timeline record, content in this column is fully displayed and formatted. For this example, **CC** is selected for this column.

Column 3

3. This column follows the content of Column 2 and is part of the main body of your timeline record that is only viewable when you expand the record. For this example, **Description** is selected for this column.

Column 1

1. This column always displays in this section and acts as a subheader on the timeline record.

Column 2

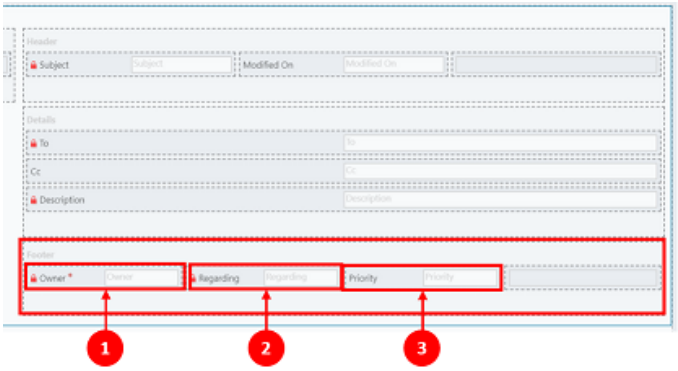
2. This column always displays in this section and only displays one line of text in the summary view but when expanded, content is fully displayed.

Column 3

3. This column always displays in this section and is only viewable when the record is expanded.

Footer section

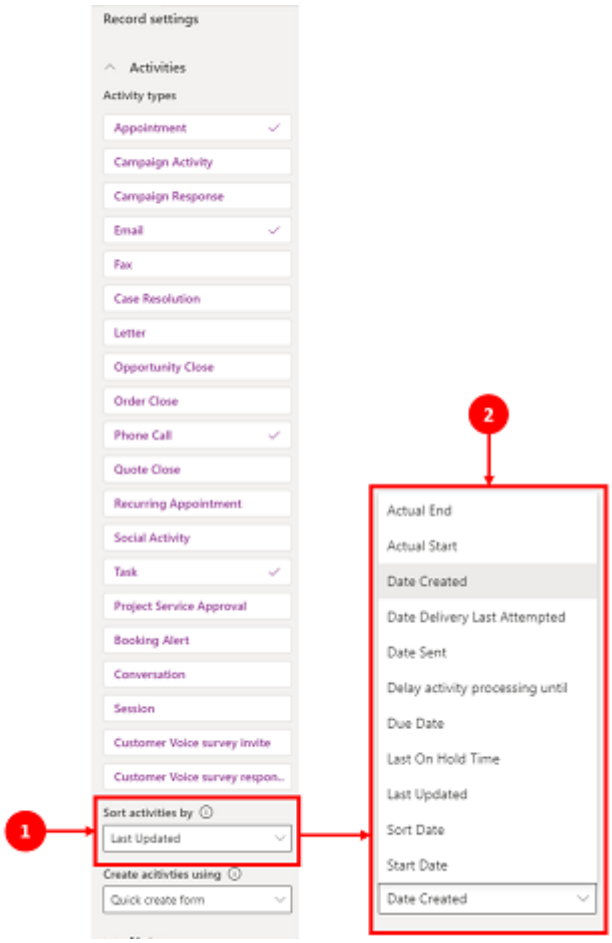
This section isn't visible on the timeline record.

Form designer configuration view	Form designer display view
	
Column 1 1. For this example, we selected **Owner** for this column. **Column 2** 2. For this example, we selected **Regarding** for this column. **Column 3** 3. For this example, we selected **Priority** for this column.	These columns aren't visible on the timeline record

> **Note**
>
> Records *Modified On* are all updated to the same time by which the modification occurred and & *Modified By* is assigned to one user when the table is assigned to a new user. This occurs due to the cascading behaviour. More information: **Configure table relationships cascading behavior**

Set the date to use when sorting activities in timeline

How users view data is important, and setting a default display view of the data varies based on the needs of your business. App makers can choose how data is sorted and create a default setting for **Activity types** in **Record settings**. **Last Updated** is on all activities, which is why it's set as the default in ascending order.



Legend

1. The **Sort activity by** setting in the **Activities record settings** allows you to control how data is sorted in timeline.
2. The **Sort activities by** column displays a list when selected. You can select from this list how you want your data to be sorted and displayed on timeline in the form.

Sort date

Some dates can only exist on specific types of activities. For example, **Date sent** or **Date delivery last attempted** only apply to email. If you sort by such dates, then non-email activities end up grouped together without any ordering. You can't create a custom date column, but if you need more flexibility, you can use **Sort date**, which is empty by default and requires that you populate it for each activity record with the date you want to use for sorting. Some of the ways you can populate the date are by using Microsoft Power Automate, business rules, or JavaScript.

When using Sort date, keep in mind the following:

- If you set a value in **Sort date**, you can use it for more customized sorting, but you have to populate it for every activity record or it doesn't work. The sort date has to

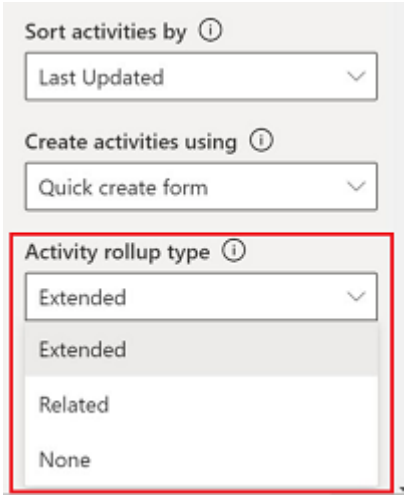
be configured for each timeline instance, and must be set up for all three main forms in the account table.

- If the **DateTime** column is on the same calendar day, the date doesn't display if **DateTime** was earlier in the day compared to the current time.
- The sort date isn't based on a 24-hour period, but rather, compares the **DateTime** column value with the current date and time (based on the user's preferred time zone). If the value entered occurred earlier in the day, the date isn't displayed.

Set the activity rollup type in timeline

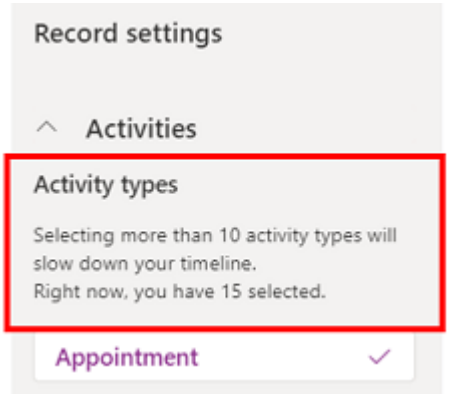
The activity rollup type can be configured for timelines on forms for the account and contact tables. The available types of rollups are **Extended**, **Related**, and **None**. Activity rollup only affects accounts and contacts in Dynamics 365 apps, such as Dynamics 365 Customer Service applications. To only show activities that are directly related to the table in timeline, select **None**.

More information on rollup types is available from RollupType EnumType.

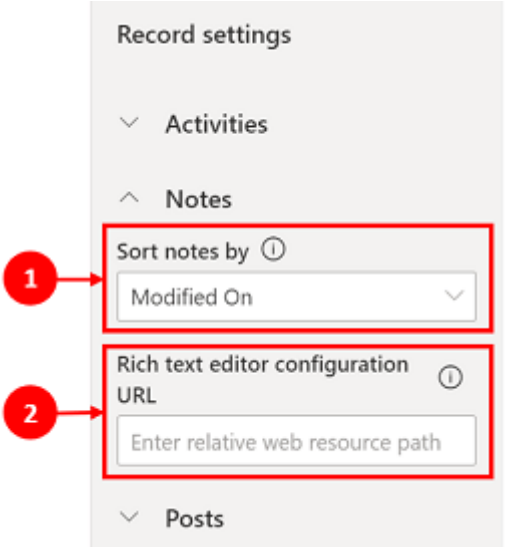
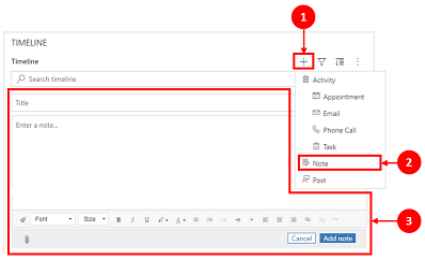


Timeline performance

Only enable the activities that you need on the form. If you select more than 10 **Activity types**, a warning notice displays to let you know that the number of activity types you have selected impacts the performance of your timeline. To improve timeline performance, consider limiting activity types to 10 or less.



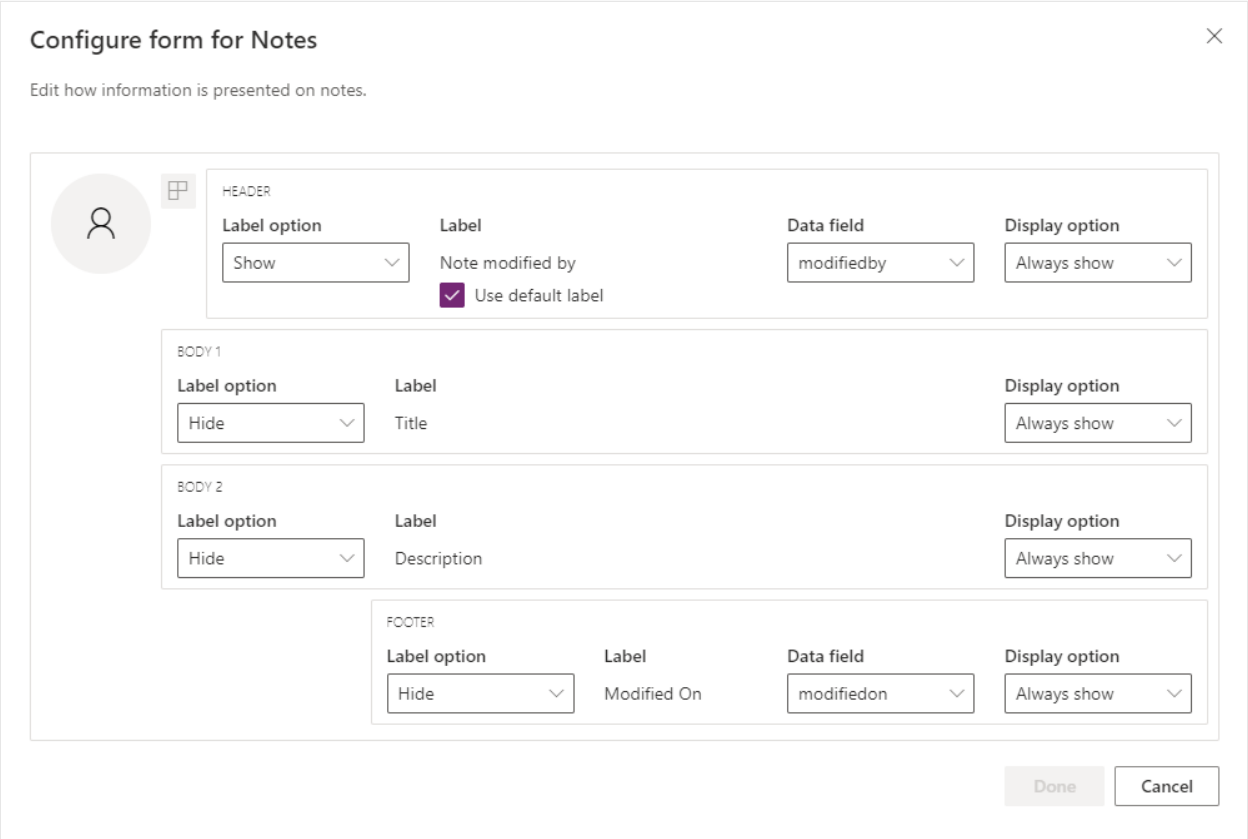
Notes on timeline

Form designer configuration view	Form designer display view
	
The **Notes** section expands when enabled and allows you to: 1. **Sort notes by** date created or date modified. The **Modified On** date is the default setting. 2. Add a relative web resource path in the **Rich text editor configuration URL** column for customized note capability. More information: Add the rich text editor control to a model-driven app	1. When enabled, Notes can be access via the **Create a timeline record** + icon. 2. A dropdown list appears where you can access **Notes**. 3. Use **Notes** to create a note to add to a record using rich text editing. You can set the font and size for the notes from the timeline, without having to set it multiple times.

Configure the form for notes

In the **Notes** area, under **Configure form**, select **Default form** to configure how information is displayed in notes, such as relevant users and dates, and whether or not

to include labels. This setting lets you increase or reduce the number of timeline records that display.



- Header
  - Label option: Hide, show, or show on hover the label, "Created by" or "Modified by".
  - Label: Select the **Use default label** checkbox label to display the label "Note modified by". Clear the checkbox to display the label "Modified by".
  - Data column: Select to show either the user who created the note or the user who modified the note. The label changes to match the data column you selected.
  - Display option: Always show, show on expand, or hide this header containing the user who created or modified the note.
- Body1
  - Label option: Show or hide the label of the note.
  - Display option: Always show, show on expand, or hide the body text.
- Body2
  - Label option: Show or hide the label of the note.
  - Display option: Always show, show on expand, or hide the body text.
- Footer
  - Label option: Show or hide the label, "Created on", "Modified on", or "Overridden on".
  - Data column: Select to show the createdon, modifiedon, or overridenon date.

- Display option: Always show, show on expand, this footer containing the createdon, modifiedon, or overridenon date.

Set the notes rollup type in timeline

> **Note**
>
> This is an early access feature. You can opt in early to enable these features in your environment, which allows you to test these features and then adopt them across your environments.

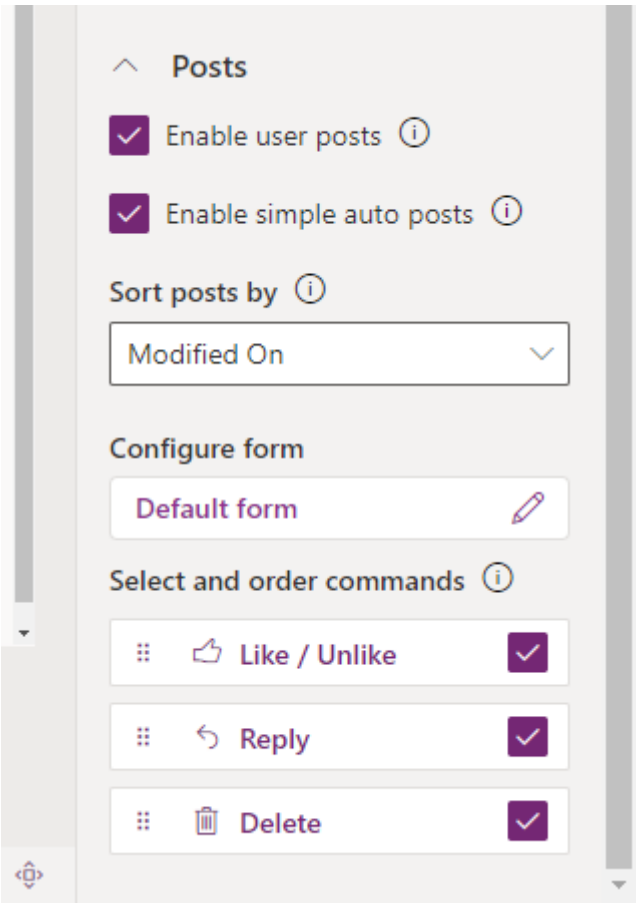
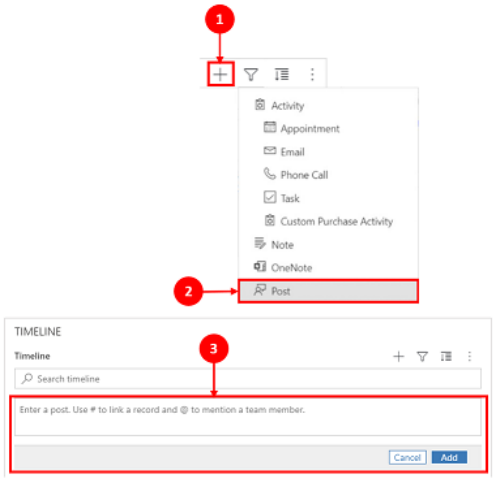
The rollup type can be configured for timelines on forms for notes. The available types of rollups are **Extended**, **Related**, and **None**. To show those records only that are directly related to the notes in timeline, select **None**.

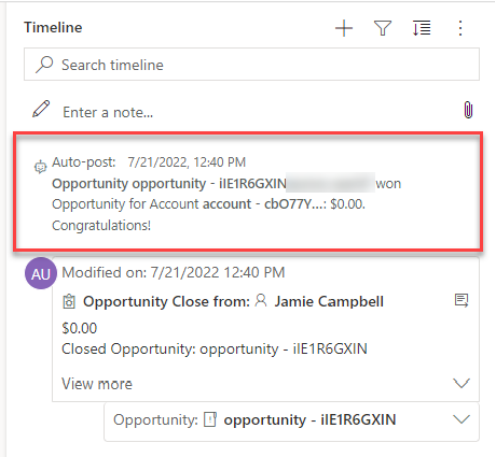
More information on rollup types is available at RollupType EnumType.

Posts on timeline

To enable rich text posts on the timeline, contact Microsoft Support.

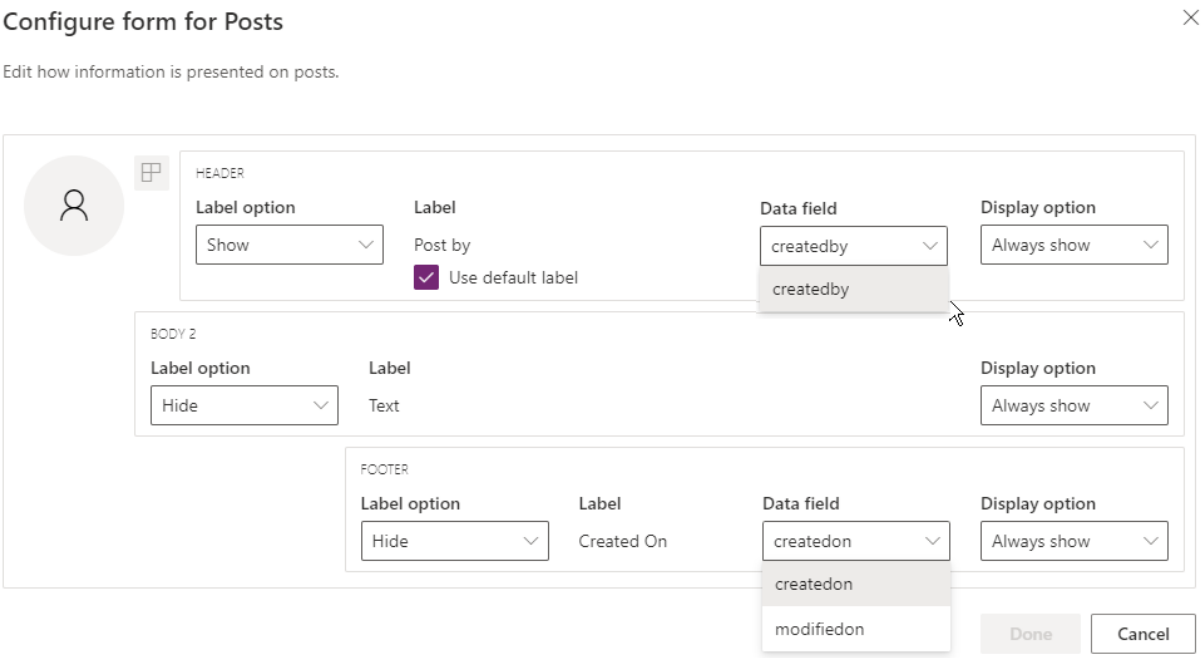
> **Note**
>
> Posts are only available with certain Dynamics 365 apps, such as apps for Dynamics 365 Customer Service.

Form designer configuration view	Form designer display view
	
The **Posts** section expands when enabled and allows you to: - Select **Enable user posts** enabling users to leave a message on the record - **Sort posts by** date created or date modified. The **Created On** date is the default setting. - The **Select and order commands (Preview)** section allows users to display the command actions that can be performed on posts displayed on the timeline. You can also move the position of the commands to change the order in which they're displayed on the timeline.	1. When enabled, posts can be accessed by selecting **Create a timeline record** +. 2. A dropdown menu displays, and you can access **Posts**. 3. Use **Posts** to create a post to add to a record. When date **Created On** is used to sort posts on the timeline, the location in the timeline remains constant even when there are responses to that post. When date **Modified On** is used to sort posts on the timeline, the location in the timeline adjusts to the top when there are responses to that post. **NOTE**: The timeline doesn't automatically refresh when post replies are added.

Form designer configuration view	Form designer display view
The **Enable simple auto posts (Preview)** allows auto posts to be displayed either in the existing card format or as a simple post. Clear the checkbox to display the posts in the existing card format. The checkbox is selected by default.	
	When the **Enable simple auto posts (Preview)** checkbox is enabled, the posts aren't displayed in card form. Command actions can't be performed on auto posts from the timeline.

Configure the form for posts

You can configure how information is displayed in posts, such as relevant users and dates, and whether or not to include labels. This enables you to increase or reduce the number of timeline records that appear onscreen.



Go to your timeline configuration in make.powerapps.com, scroll down to the **Posts** section containing the **Configure form** column, and edit the following column in the default form:

- Header
  - Label option: Hide, show, or show on hover the label, "Created by" or "Modified by".
  - Label: Select the **Use default label** checkbox label to display the label.
  - Data column: Select to show the user who created the post. The label changes to match the data column you selected.
  - Display option: Always show, show on expand, or hide this header containing the user who created the post.
- Body2
  - Label option: Show or hide the label of the post.
  - Display option: Always show, show on expand, or hide the body text.
- Footer
  - Label option: Show or hide the label, "Created on", "Modified on", or "Overridden on".
  - Data column: Select to show the createdon or modifiedon date.
  - Display option: Always show, show on expand, this footer containing the createdon or modifiedon date.

Configure mentions in notes and posts on timeline

To enable mentions in notes and posts, contact Microsoft Help + support. You can also temporarily try out this feature before asking Microsoft to enable it by appending the following text string to your current browser session URL:

```
&flags=FCB.TimelineWallRichTextPosts=true,FCB.TimelineNotesRichTextMentions=true
```

When the rich text editor is enabled, users can mention other users and entities in notes and posts using the @ and # symbols. Configuration for the rich text editor is available in the maker experience in **Power Apps**: make.powerapps.com. The users and entities that are displayed are pulled from the configuration file provided in the **Rich text editor configuration URL** column. More information: Use the rich text editor control in Power Apps

By default, the @ symbol returns matches with the first name, family name, or email address of system users starting with the search string.

By default, the # symbol returns matches with the account and contact name table records starting with the search string.

As an administrator, you can configure other entities to appear when a user types these symbols. Adding more entities to the default configured entities may result in slower load times, so only add the entities your organization requires. You can add the following entities:

- "systemuser"
- "contact"
- "competitor"
- "lead"
- "account"
- "incident"
- "opportunity"
- "knowledge article"

To configure more entities, add and modify the following code to the configuration file you're using for rich text notes and posts:

```
"defaultSupportedProps": {
   "pcfmentions" : {
       "markerMap" : {
           "@" : ["systemuser"],
           "#" : ["account", "contact"]
       },
       "calloutWidthInpx" : "300px",
       "debounceInms" : 250
   }
 }
```

The "systemser" table persists for @ and the "account" and "contact" entities for # regardless of how the file is edited.

> **ⓘ Important**
>
> The mentions feature doesn't work with Power Platform environments that were created with the **Enable Dynamics 365 apps** option set to **Yes**. For more information about this option, go to **Create an environment with a database**.

Configure autopost messages to display on the timeline

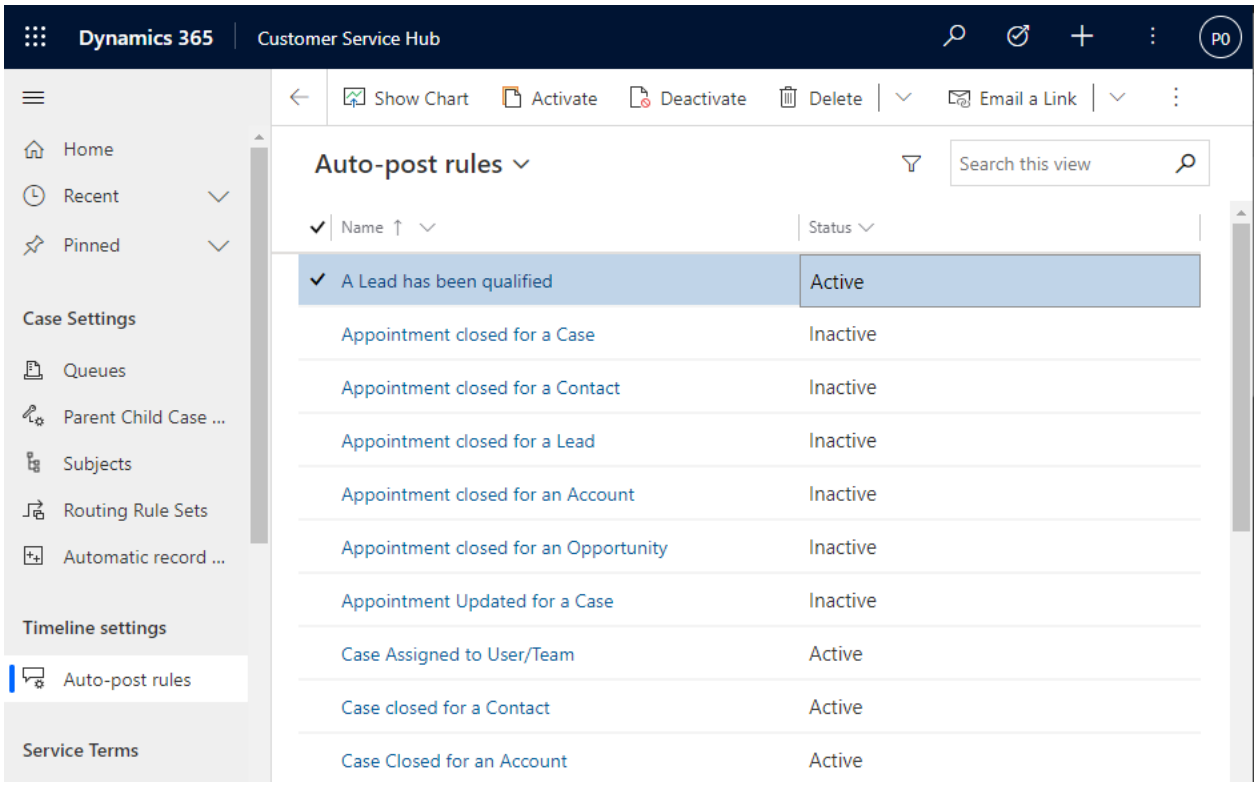
> **Note**
>
> - The autopost functionality is only available with environments that are configured for **Enable Dynamics 365 apps**.
> - Dynamics 365 incudes autopost rules for some standard tables such as account, contact, lead, and case. It is not possible to create new autopost rules. However, you can use other options such as Power Automate or a custom plug-in to create a post record based on the desired conditions.

You can configure which autopost messages appear on the timeline when a system event occurs. The autopost configuration replaces the legacy Activity Feed Configuration and Activity Feed Configuration Rules.

To configure the autopost messages that should be displayed:

1. In Customer Service Hub, go to **Service Management**, and under **Timeline settings**, select **Auto-post rules**.
2. Select which autopost rules to make active using the grid and **Activate** and **Deactivate** buttons at the top.

When a system event corresponding to an active rule occurs, an autopost message displays on the timeline.



If you're using a Dynamics 365 app other than Customer Service Hub or Customer Service workspace, you need to add your own sitemap. To add your own sitemap in your app:

1. Open your app in the app designer in **Power Apps**: make.powerapps.com
2. On the app designer command bar, select **Add page**, select **Table based view and form**, and then select **Next**.
3. In the **Table** list, select **Post Rule Configuration**, and then select **Add**.

   > **Note**
   >
   > If you don't have the Post Rule Configuration table, you're environment doesn't have the required Dynamics 365 app installed.

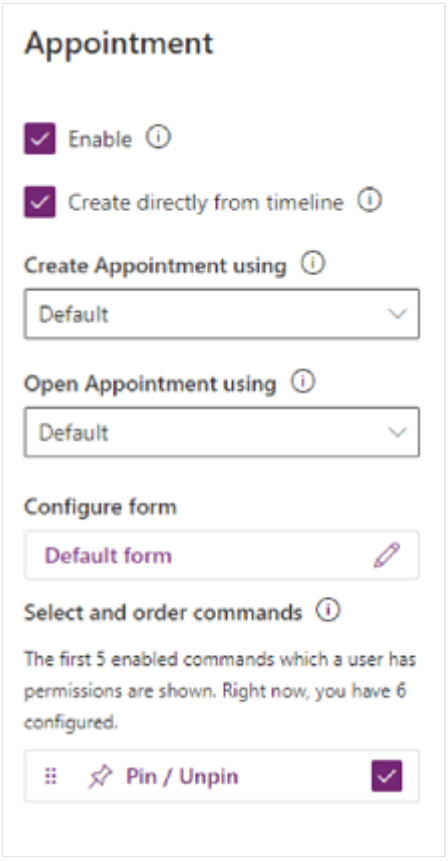
4. Select **Save**, and then select **Publish**.

Let users pin and unpin activities to the top of timeline

You can configure the ability for users to pin or unpin activities, such as notes, to the top of the timeline so that they're easily accessible. Pinning activities helps users save time by not requiring them to scroll an entire timeline to find the information they need.

By default, notes are enabled for pinning. When you click on the activity type such as a task, appointment, and so forth, the pin and unpin option appears in the list of

commands. Select the **Pin / Unpin** checkbox for each activity you want users to be able to pin or unpin.



Create and add custom activities to timeline

You can create custom tables that display on a timeline. More information: Display a custom table in a timeline

Configure blocked attachment file types

Power platform administrators can configure the file types that are blocked from being added as file attachments to records, including records in a timeline.

1. Find the **Set blocked file extensions for attachments** systems setting. More information: Open the System Settings dialog box General tab
2. In the text box of blocked file attachments, type the file extension type you want to block for attachments (for example, ".pdf"). Separate file types with a semi-colon.
3. Select **OK**.

Set file size limits for attachments

Power platform administrators can restrict the file size of attachments users can upload in the rich text editor.

> ⓘ **Note**
>
> File sizes for attachments generally can be any size under 90 MB, but for optimal system performance, smaller file sizes are recommended.

1. Go to **Advanced Settings**, and then on the Settings menu, select System > Administration.
2. On the **Administration page**, select **System Settings**.
3. On the **System Settings** dialog, select the **Email** tab, and then scroll down to find the **Set file size limit for attachments** value.
4. Enter the desired size limit for attachments, and then select **Save**. 131,072 KB is the maximum allowed value.

Known issues

Duplicate posts are shown when sorting records by older to newer

The API the timeline uses to fetch posts doesn't support sorting by older to newer posts. When you sort this way, the timeline receives the wrong posts to display. When sorting the timeline by older to newer, use notes instead.

Notes can only have one attachment added from the attachment button

This is by design, with plans to allow more attachments in the near future. Multiple attachments can be added inline by dragging and dropping them into the note.

Timeline fails to load with error `code:"0x8004430d","message":"Number of link entity: <number> exceed limit 15`

There's a limit of 15 different tables that can be associated with a timeline. Either disable some of the activities associated with the timeline, or follow one of the workarounds

described in this article: Timeline doesn't render and shows "Records couldn't be loaded"

When you create a note in a timeline, the character string "$&" is converted to "{3}amp;"

This is a configuration issue for the rich text editor control. To resolve this, add `"removePlugins": "stickystyles"` to your RTE config file. More information: Rich text editor properties

See also

FAQs for timeline control

Use the timeline control

Set up enhanced email

Article • 03/30/2022

Set up the enhanced email experience so sales reps can compose and send email without leaving the context of what they are working on.

> **Important**
>
> The enhanced email experience is available only for email activities created from the **Timeline** section of any model-driven app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

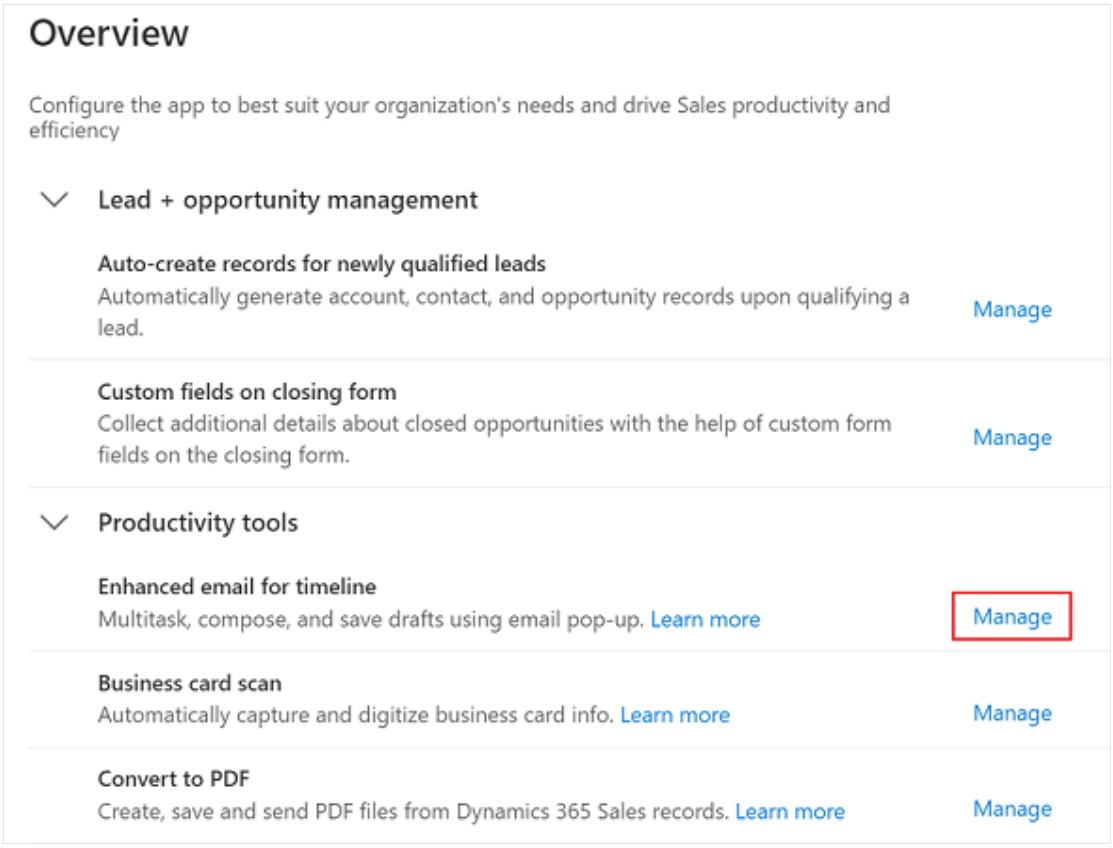
Enable the enhanced email

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

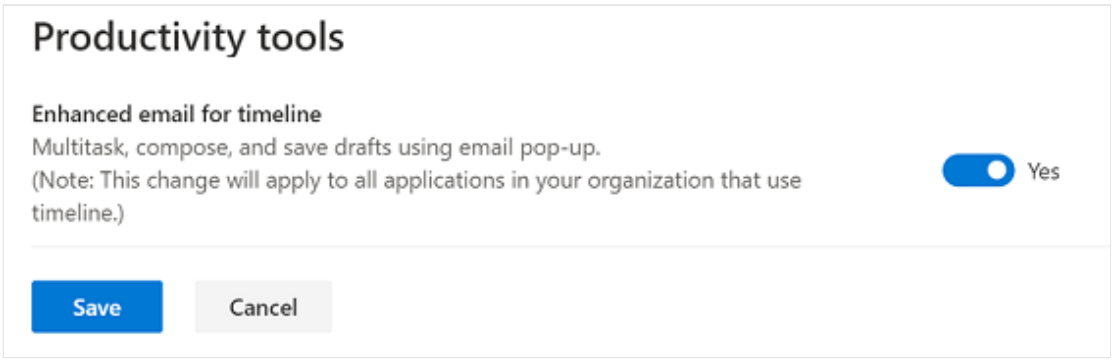
Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Platform.

1. At the bottom of the site map, select **Change area** and then select **App Settings**.
2. In the site map, select **Overview**.
3. On the **Overview** page, under **Productivity tools**, select **Manage** for **Enhanced email for timeline**.



4. On the **Productivity tools** page, move the **Enhanced email for timeline** toggle to **Yes**.



5. Select **Save**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Send email using the enhanced email experience

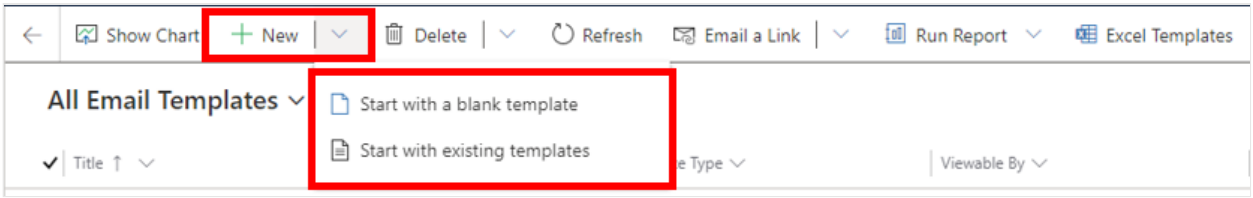
Create email templates

Article • 04/01/2023

Email templates are a fast and easy way to send consistent, professional, preformatted email messages to your customers. To create email templates, the legacy email template editor is available by default. However, the enhanced email template editor is displayed as a choice if it is enabled by your administrator.

You can create email templates by using one of the following options:

- **Start with a blank template**: Create a template from scratch. The editor that's displayed depends on wether the enhanced email template editor option is enabled.
- **Start with an existing template** : Create a template by choosing an existing template. The editor that's displayed depends on the editor in which the existing template was created.



Start with a blank template

When you start with a blank template, nothing is provided for you. You must add everything you want customers to see.

1. On the **Email Templates** command bar, select **New**, and then select **Start with a blank template**.

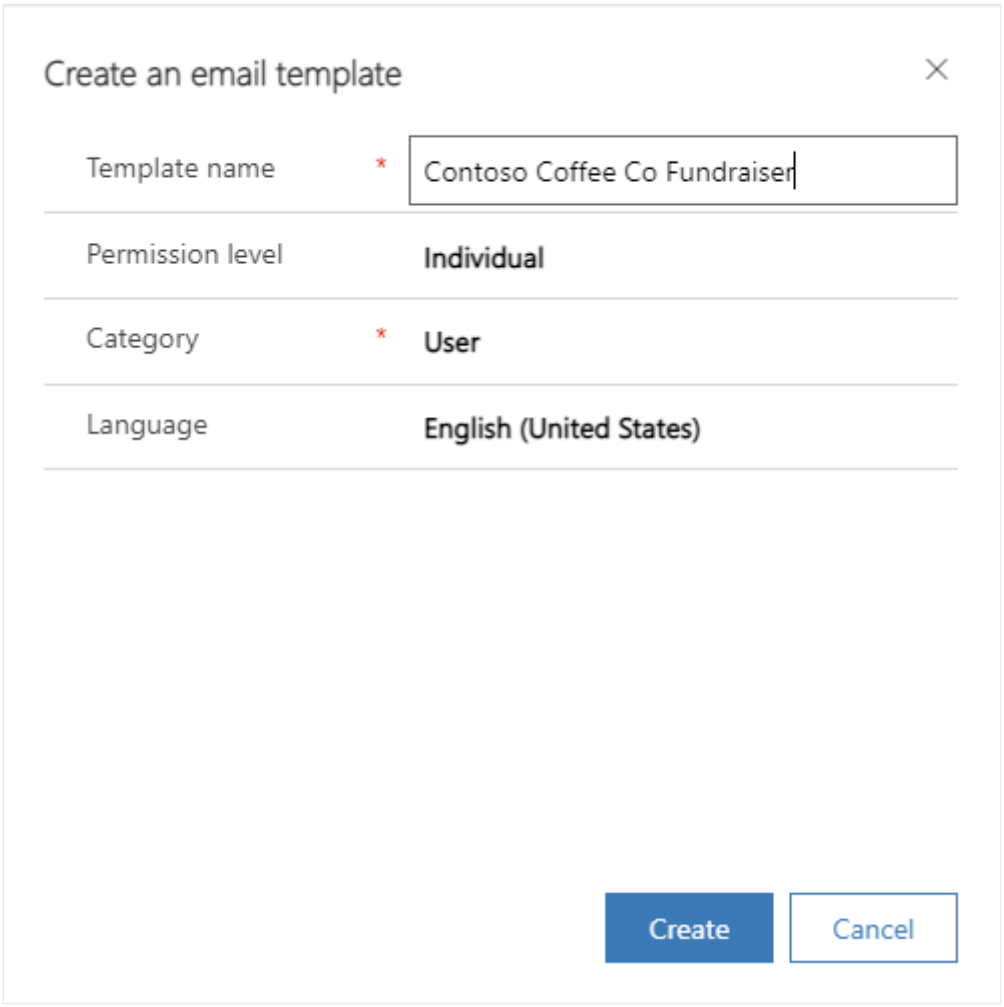
2. Enter the following details:

    - **Template name**: Give your email template a detailed name to help you identify it later.

    - **Permission level**: Select **Organization** to share your template with others or **Individual** for personal use.

    - **Category**: The default value is **User**. Categories determine which dynamic text fields are available for use in your template.

- **Language**: Display installed language packs. **Language** also helps to categorize your templates.
- **Create**: Opens one of two editors where you can build your template.



3. Select **Create**. The template editor is displayed.

The editor page you see depends on whether your administrator has turned on the enhanced email template editor option:

- If yes, you'll use the enhanced email template editor page.
- If not, you'll use the email template editor page.

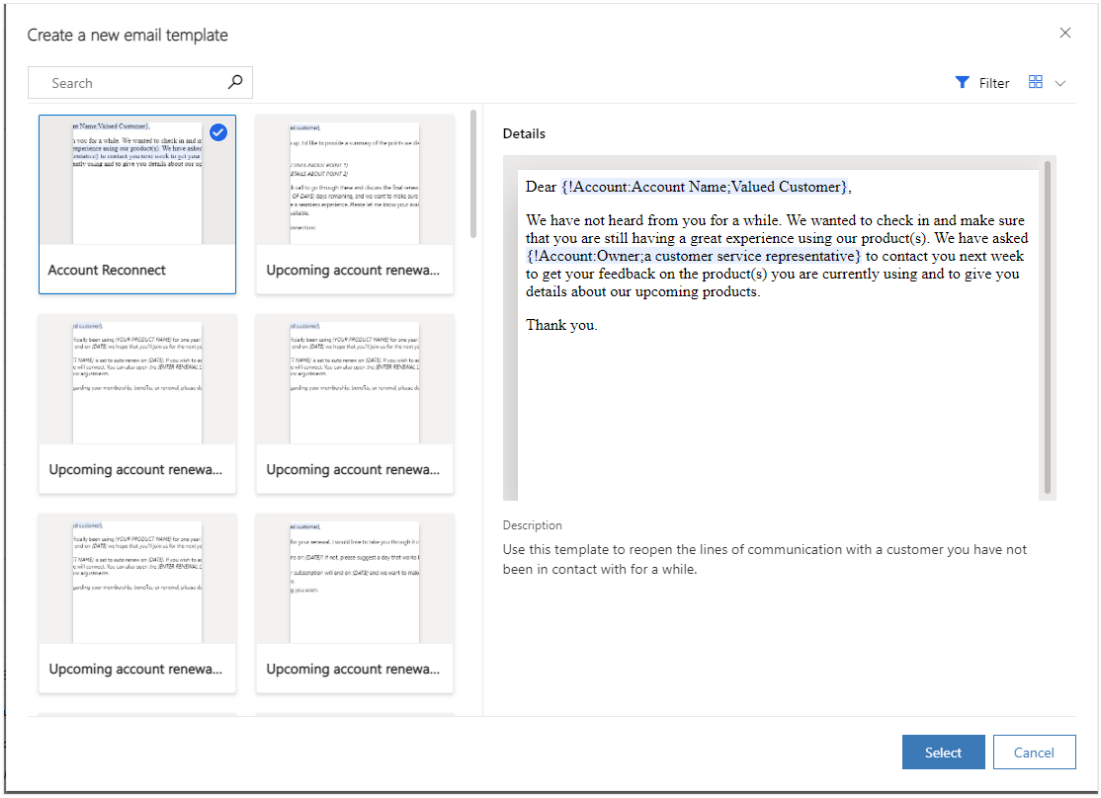
Start with existing templates

Start with an existing template to create an email template faster and with less effort. The template is pre-populated with data. All you need to do is customize it for your needs.

1. On the **Email Templates** command bar, select **New**, and then select **Start with existing templates**.

2. Enter the following details:

    - **Search**: Search for the name of a template to start from. Search doesn't support regular expressions.
    - **Browse** out-of-the-box templates, global and entity-specific, listed in alphabetical order. Global templates are shown as the type User. If you've created custom email templates, they're also listed.
    - **Details**. Preview the templates so that you can pick the one that best meets your needs. You can modify it as needed later.



3. The template editor page is displayed.

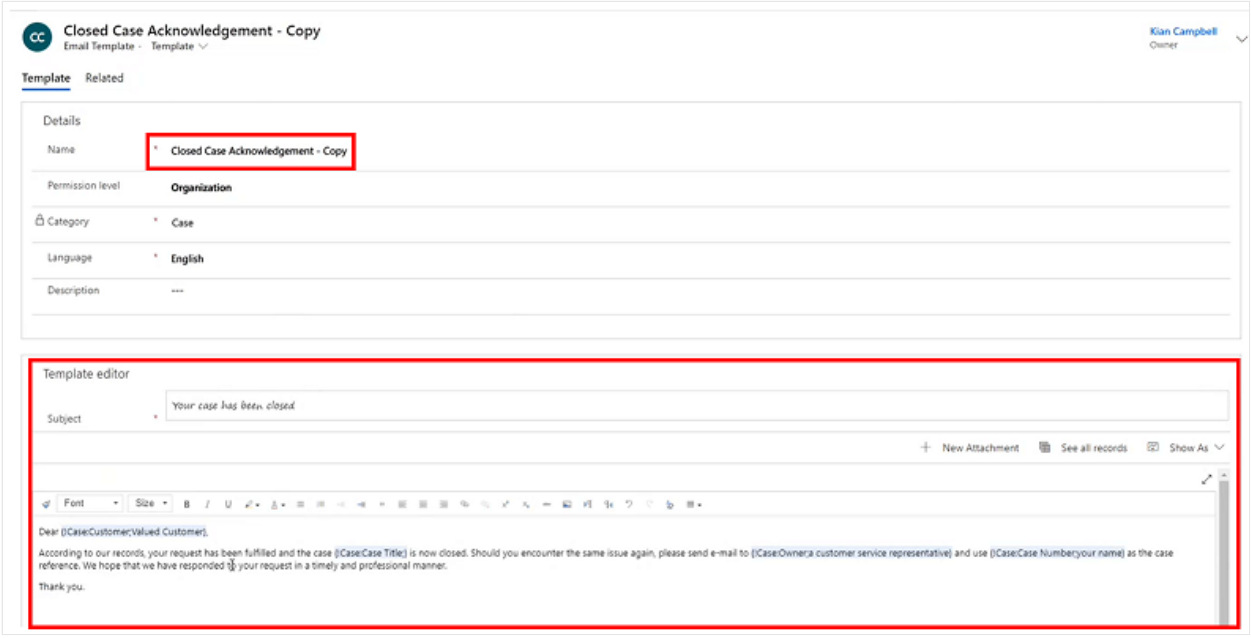
When you create a template from an existing template, irrespective of the enhanced email template editor option setting, the app displays the newly-created email template in one of the following template editors:

- Enhanced email template: If the selected email template was created with the enhanced email template.
- Email template: If the selected template was created with the legacy email template.

> **ⓘ Important**

If you create templates in the enhanced editing environment, don't edit them in the legacy web client. You'll lose any inline images and strip out some of the advanced formatting and functionality.

Work with existing templates



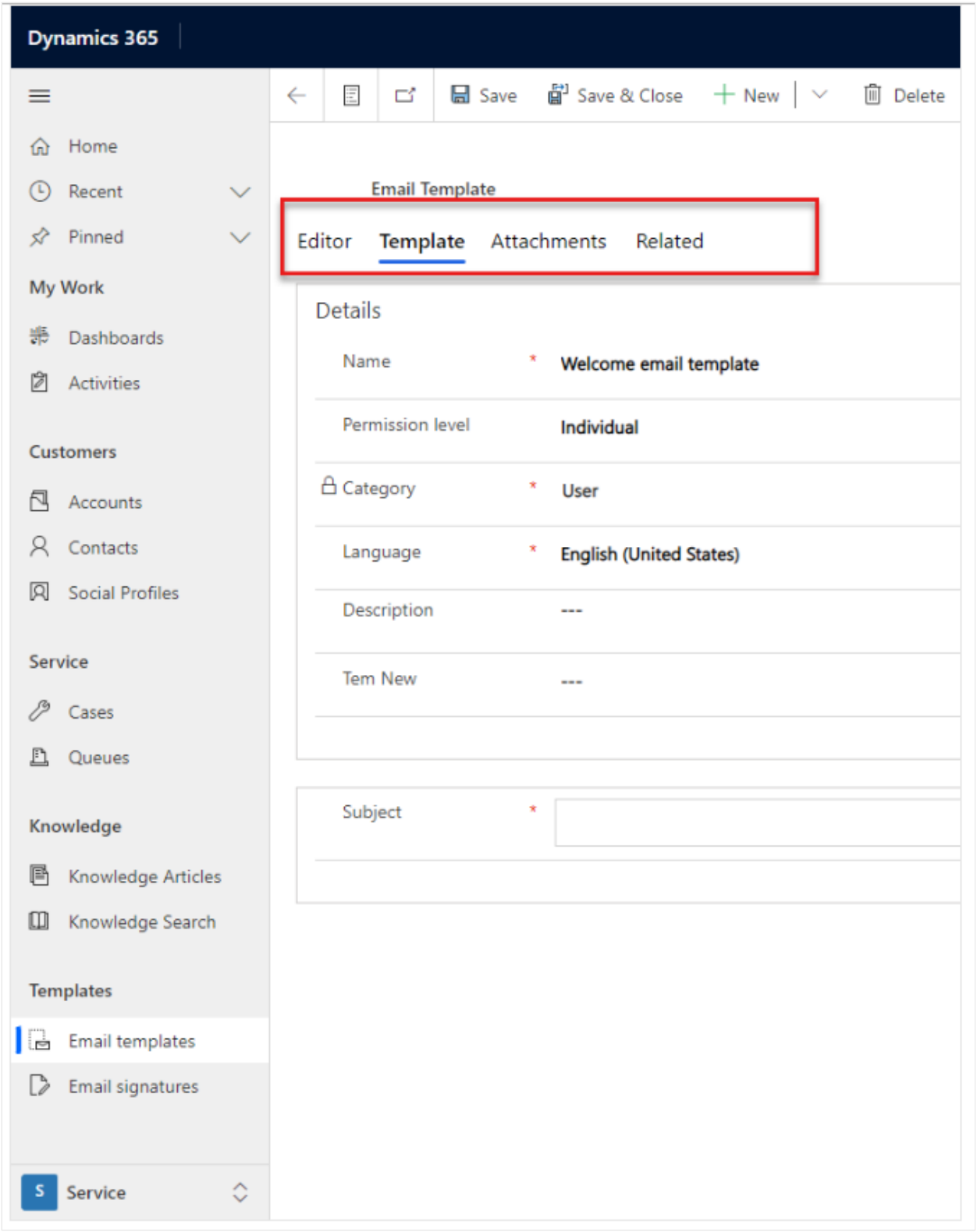
- **Template** tab: Specify or change the template details and the email subject. The name includes **– Copy** at the end to identify this template is a copy of another one.
- **Template editor** section: Design and customize the email template.
- Select **New Attachment** to add attachments to your template if needed.

Email template editor

You can use either the enhanced email template editor or the legacy email template editor to create email templates.

Enhanced email template editor

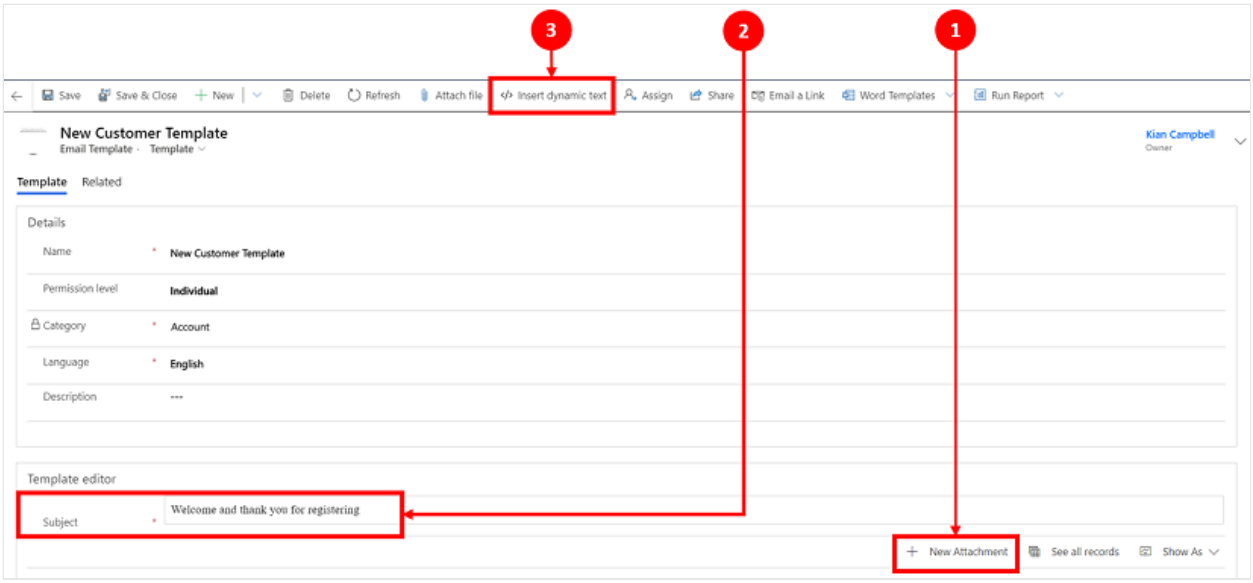
The enhanced email template editor is displayed if the enhanced email template editor option is enabled. However, for Customer Service workspace and Customer Service Hub apps, the enhanced email template editor is displayed by default. More information: Enhanced email template editor option



- **Editor** tab: Use this tab to design and customize your email template. See: Design and customize the email template.
- **Template** tab: Specify or change the template details and the email subject.
- **Attachments** tab: Add attachments to your template if needed.

Email template editor

The email template editor is displayed if the enhanced email template editor option is disabled.



1. **Insert dynamic text**: Use dynamic text in the subject and body of the email.
2. **Subject**: Enter or change the email subject.
3. **New Attachment**: Add one or more attachments to your template, if needed.

See also

Personalize content with Insert dynamic text

Set up enhanced email

Understand the email experience

Set up and customize Dynamics 365 App for Outlook

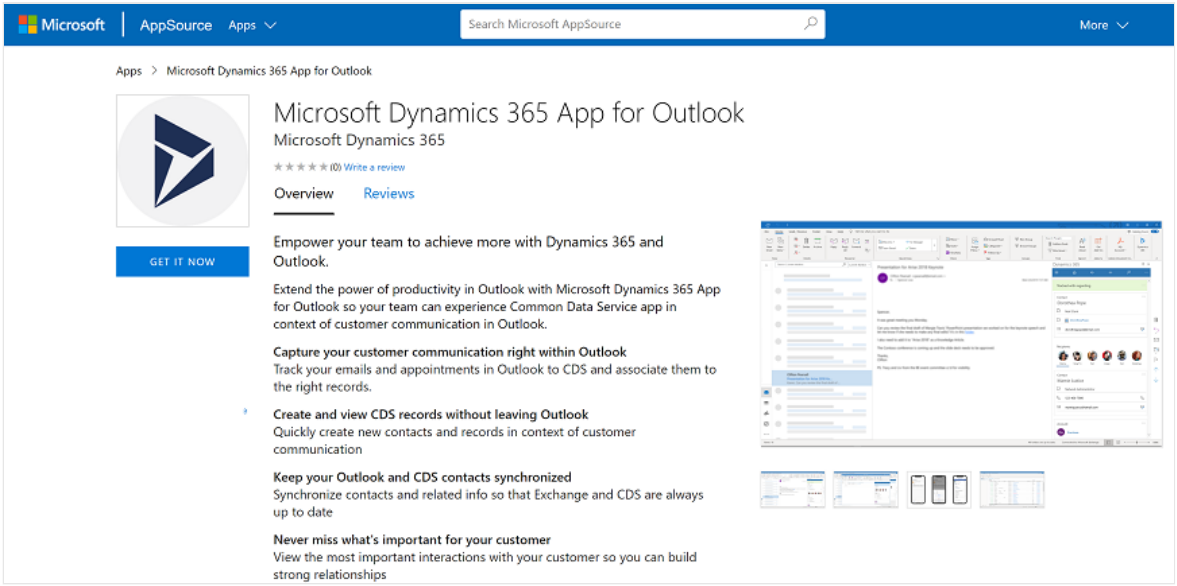
Article • 02/15/2022

Set up and customize the Dynamics 365 App for Outlook to best suit your organization needs.

Deploy the app

Before you can customize the App for Outlook, you must install the solution and then deploy it in your environment.

1. To deploy the app, see, Deploy Dynamics 365 App for Outlook.
2. For environments in Microsoft Dataverse an administrator can get the App for Outlook solution from Microsoft AppSource. Go to go Install Microsoft Dynamics 365 App for Outlook, then choose **GET IT NOW** and follow the steps to select the environment to install it on.



Customize App for Outlook

Once the app has been deployed to your organization, you can then customize it.

- Modify the columns on a contact card that is used to track an email or appointment using Set Regarding: Customize the track regarding contact card
- Enable a table to appear in the create New menu (quick create) in App for Outlook: Add a table to the quick create menu

- Enable Set Regarding lookup: Enable activities to use Set Regarding lookup in App for Outlook
- Enable the quick create auto-populate option for the case table: Customize App for Outlook to auto populate data from an Outlook item to a quick create case table
- Enable columns that Set Regarding lookup searches on: Expand the columns which the Set Regarding lookup searches on
- Expose only the relevant set of tables to your users: Filter tables and views that appear in Dynamics 365 App for Outlook

See also

Basic navigation in App for Outlook

Add the Kanban control to Opportunity or Activity entities

Article • 03/30/2022

Add the Kanban control to create Kanban views that help sellers to manage their opportunities or activities effectively.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

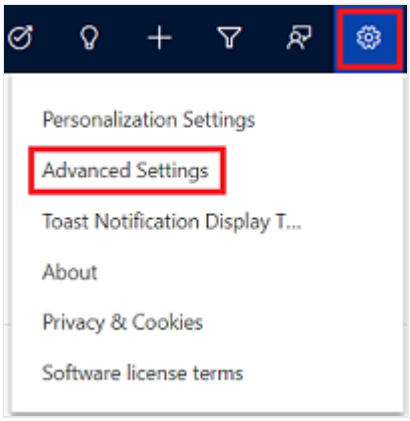
Add the Kanban controls

Kanban views help salespeople to manage their opportunities and activities effectively. Add the Kanban control to the Opportunity and Activity entity so salespeople can use the Kanban views. Similar to other custom controls, Kanban control is supported on all views.

> **Important**
>
> - The Kanban control works only on the Opportunity and Activity entities.
> - The Kanban control is supported only on the main grid. It isn't currently supported on subgrids.
> - The Kanban control is not supported in the **Dynamics 365 for Phones** mobile app.

To add the control:

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



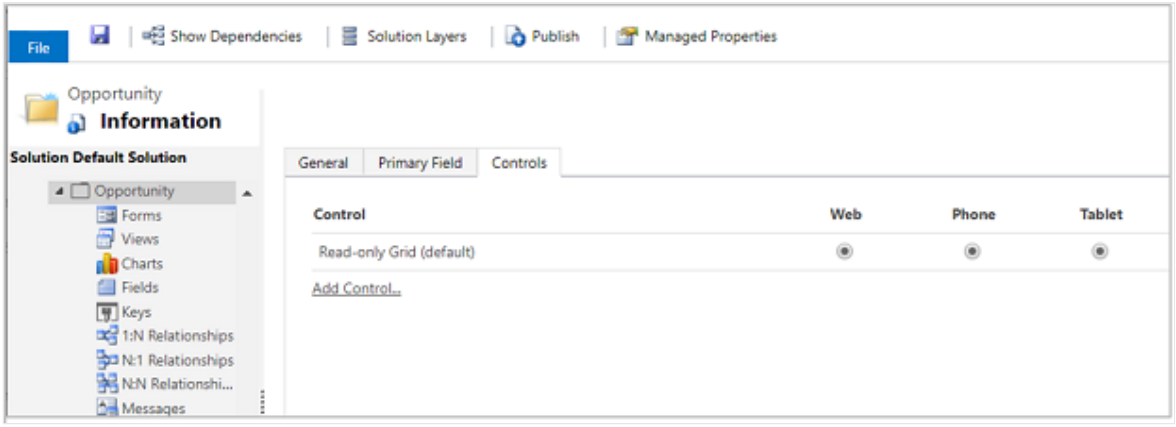
The **Business Management settings** page opens in a new browser tab.

2. On the navigation bar, select **Settings** and then under **Customization**, select **Customizations**.

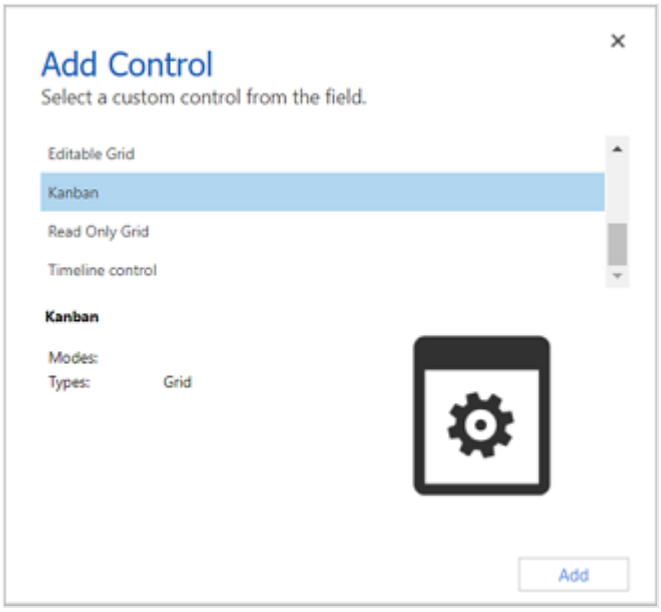
3. Select **Customize the System**.

4. Under **Components** in the solution explorer, expand **Entities** and then select **Opportunity** or **Activity**.

5. Go to the **Controls** tab and select **Add Control**.

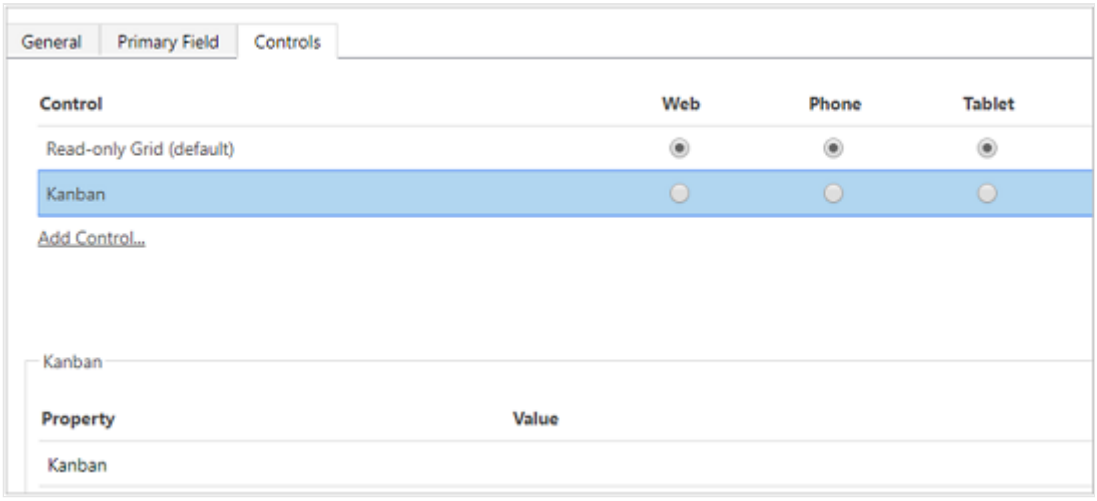


6. In the **Add Control** dialog box, select **Kanban** and then select **Add**.



The Kanban control is added to the list of controls.

7. The Read-only grid is the default option, so when users select **Opportunities** from the site map, they see a read-only grid of opportunities. To make the Kanban view the default view instead, select the radio button for the Kanban control for the corresponding options.



8. Select **Save** to save your changes.

9. To publish the changes you've made, select **Publish**.

What you can't customize?

There are a few customization restrictions that you should be aware of:

- You can't add or remove fields from the cards in the Kanban view swim lanes.
- It isn't possible to have a role-based Kanban view.

- The Activity Kanban view is only available for the Status field. You can't configure the Activity Kanban view for an option set field other than 'Status'.
- For Opportunity Kanban view:
  - While you can customize the out-of-the-box 'Opportunity Sales Process' business process flow, you can't customize the Kanban view to use a business process flow other than the Opportunity Sales Process.
  - The Status-based Opportunity Kanban view is only available for the Status field. You can't configure this Kanban view for an option set field other than 'Status'.
  - In the Opportunity Kanban view, aggregation is supported only for the Estimated Revenue field of the Opportunity entity. You can't configure the Kanban view to have aggregation done on other fields.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Work with opportunities in the Kanban view

Work with activities in the Kanban view

Create and manage Word templates

Article • 03/30/2022

Microsoft Word provides powerful ways to present your Dynamics 365 Sales data in a standardized and well-formatted document. Use Word templates to ensure that all the documents that go out to your customers have a consistent look per your organization's branding. You can easily create and share your template with others.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Create a Word template

Templates help users to generate standardized documents with Dynamics 365 Sales data.

Depending on the license you have, select one of the following tabs to know on how to create word templates for Dynamics 365:

Sales Premium and Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.
2. Follow the instructions in Use Word templates to create standardized documents to create a word template.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

- Export sales records to PDF
- Enable automatic generation of quote and invoice documents in Sales Professional

Create and manage Excel templates

Article • 03/30/2022

Microsoft Excel provides powerful ways to analyze and present your Dynamics 365 Sales data. With Excel templates, you can easily create and share your customized analysis with others in your organization.

You can use Excel templates for:

- Sales forecasting
- Pipeline management
- Leads scoring
- Territory planning
- And much more...

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Create an Excel template

Templates display information from the view defined for a record type (entity). Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.

2. Follow the instructions in Analyze and share your data with Excel templates to create an excel template.

Best practices and considerations for using Excel templates

Here are some things you need to be aware of to create and make the best use of Excel templates in Dynamics 365 Sales.

- **Test your Excel templates.**

  Excel has lots of features. It's a good idea to test your customizations to see that all Excel features work as expected in your templates.

- **Data in templates and privacy concerns.**

  By default, pivot chart data is not updated when a spreadsheet is opened. This can create a security issue if certain pivot chart data should not be seen by users with insufficient permissions.

  Consider the following scenario:

  - A Dynamics 365 Sales administrator creates a template where the view contains sensitive data in a pivot chart which is uploaded into Dynamics 365 Sales.
  - A salesperson who should not have access to the sensitive data in the pivot charts uses the template to create an Excel file to do data analysis.

  The outcome of this scenario is that the salesperson might be able to see the pivot chart data as it is uploaded by the Dynamics 365 Sales administrator, including access to views for which the salesperson does not have permissions.

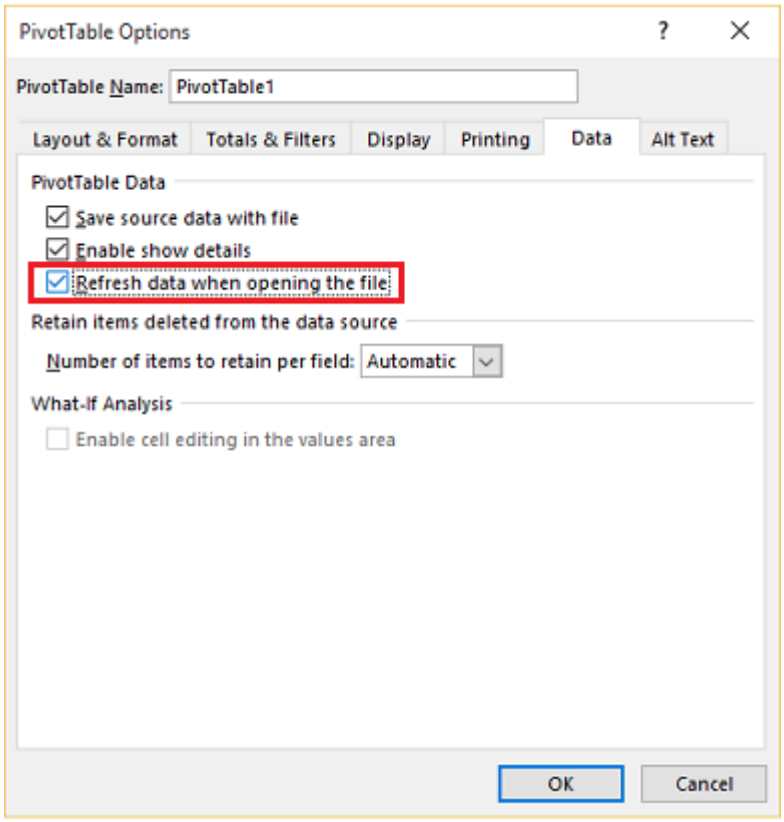
  In addition, iOS does not support updating pivot data and pivot charts when using the Microsoft Excel app on iOS devices.

  > **Important**
  >
  > Sensitive data should not be included in pivot tables and pivot charts.

- **Set pivot chart data to automatically refresh**

By default, pivot chart data does not automatically refresh when you open the spreadsheet. Other types of charts do update automatically.

In Excel, right-click the pivot chart, and then select **PivotChart Options** > **Refresh data** when opening the file.



- **Placing new data**

  If you want to add content to the Excel template, place your data above or to the right of the existing data. A second option is to place your new content on a second sheet.

- **Excel templates with images can cause an error**

  If you attempt to view Dynamics 365 Sales data with an Excel template that has an image saved in it, you might see the following error: “An error occurred while attempting to save your workbook. As a result, the workbook was not saved.” Try removing the image from the template and reloading it into Dynamics 365 Sales.

- **Excel templates and Office Mobile app in Windows 8.1**

  Excel templates will not open in Windows 8.1 devices with the Office Mobile app. You’ll get the following error message: “We’ve recovered as much of your document as we could, but you can’t edit it. Try to open and repair the document on your PC to fix the problem.”

This is a known issue. Use table column names and range names in formulas. When you create Excel formulas, don’t use column titles or cell numbers. Instead, use the table column names, and define names for cells or cell ranges.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and manage Word templates in Dynamics 365 Sales

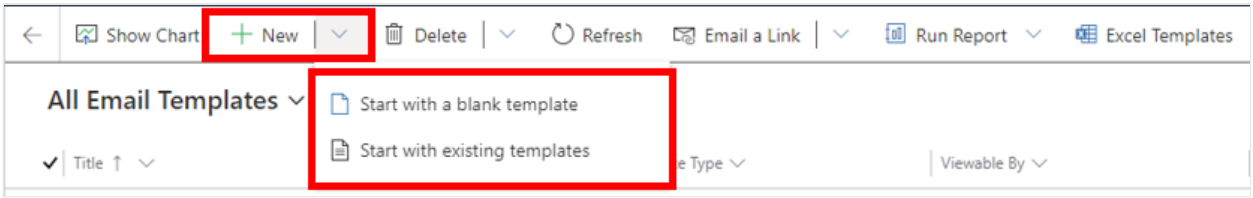
Create email templates

Article • 04/01/2023

Email templates are a fast and easy way to send consistent, professional, preformatted email messages to your customers. To create email templates, the legacy email template editor is available by default. However, the enhanced email template editor is displayed as a choice if it is enabled by your administrator.

You can create email templates by using one of the following options:

- **Start with a blank template**: Create a template from scratch. The editor that's displayed depends on wether the enhanced email template editor option is enabled.
- **Start with an existing template** : Create a template by choosing an existing template. The editor that's displayed depends on the editor in which the existing template was created.



Start with a blank template

When you start with a blank template, nothing is provided for you. You must add everything you want customers to see.

1. On the **Email Templates** command bar, select **New**, and then select **Start with a blank template**.

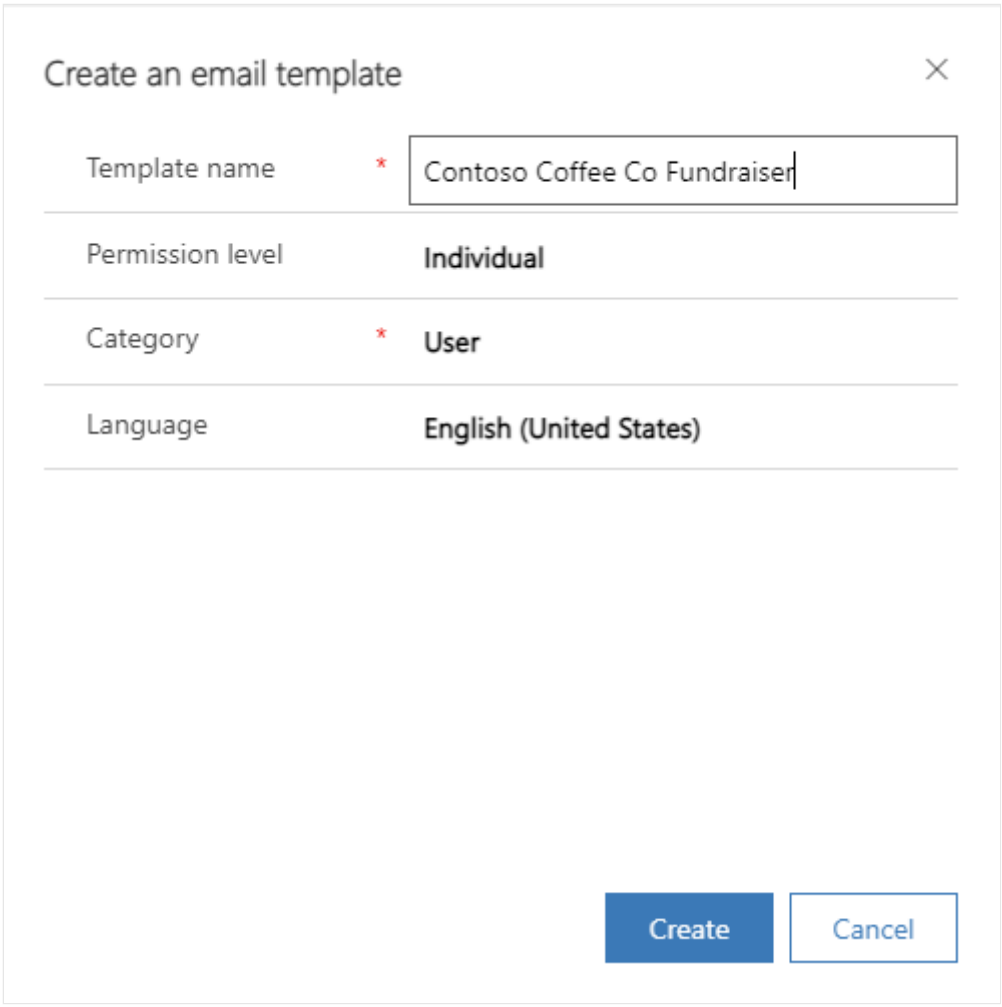
2. Enter the following details:

    - **Template name**: Give your email template a detailed name to help you identify it later.

    - **Permission level**: Select **Organization** to share your template with others or **Individual** for personal use.

    - **Category**: The default value is **User**. Categories determine which dynamic text fields are available for use in your template.

- **Language**: Display installed language packs. **Language** also helps to categorize your templates.
- **Create**: Opens one of two editors where you can build your template.



3. Select **Create**. The template editor is displayed.

The editor page you see depends on whether your administrator has turned on the enhanced email template editor option:

- If yes, you'll use the enhanced email template editor page.
- If not, you'll use the email template editor page.

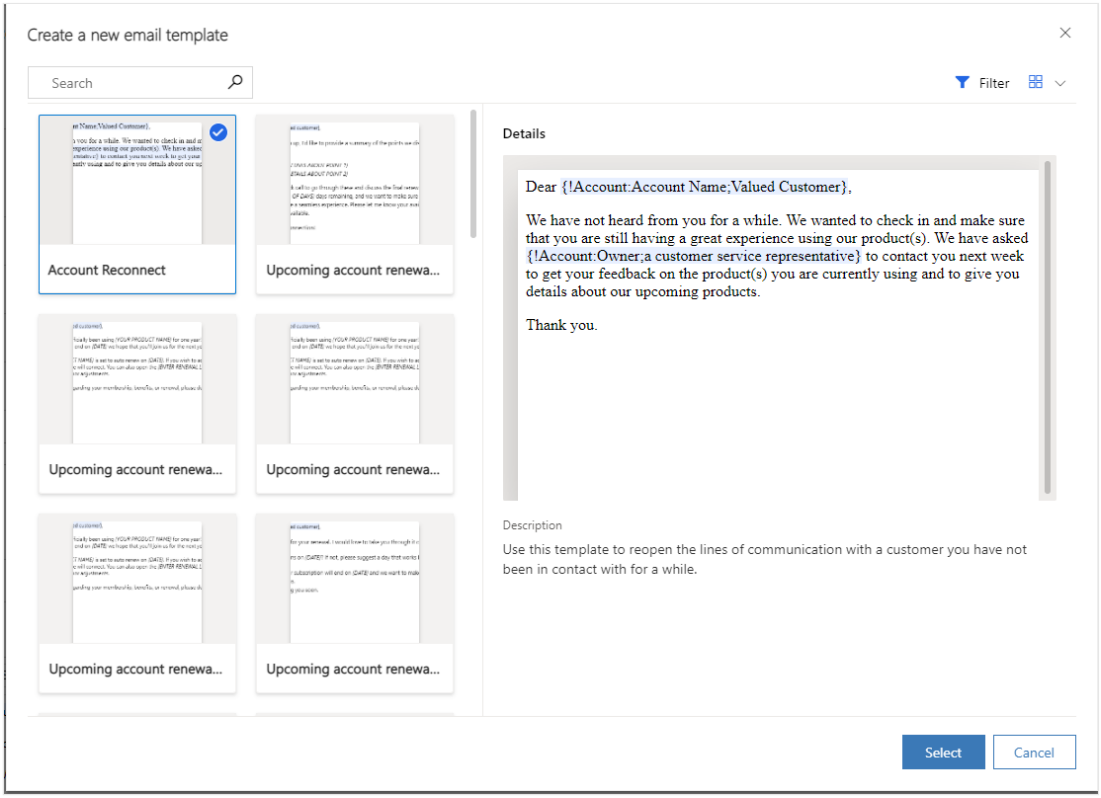
Start with existing templates

Start with an existing template to create an email template faster and with less effort. The template is pre-populated with data. All you need to do is customize it for your needs.

1. On the **Email Templates** command bar, select **New**, and then select **Start with existing templates**.

2. Enter the following details:

    - **Search**: Search for the name of a template to start from. Search doesn't support regular expressions.
    - **Browse** out-of-the-box templates, global and entity-specific, listed in alphabetical order. Global templates are shown as the type User. If you've created custom email templates, they're also listed.
    - **Details**. Preview the templates so that you can pick the one that best meets your needs. You can modify it as needed later.



3. The template editor page is displayed.

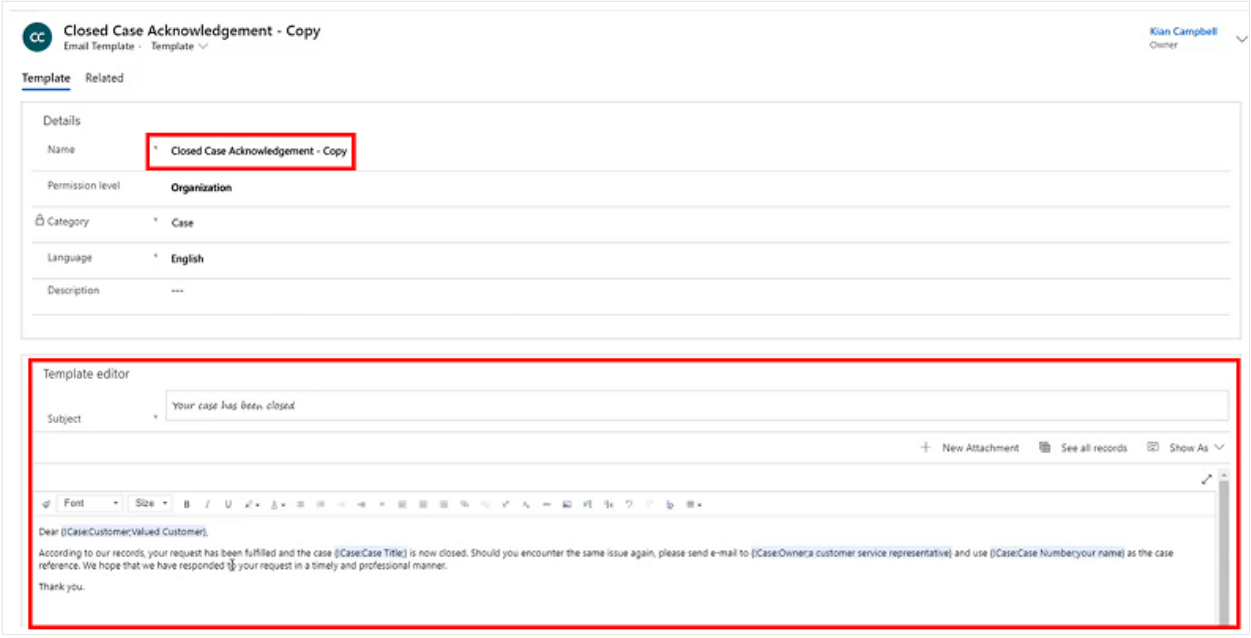
When you create a template from an existing template, irrespective of the enhanced email template editor option setting, the app displays the newly-created email template in one of the following template editors:

- Enhanced email template: If the selected email template was created with the enhanced email template.
- Email template: If the selected template was created with the legacy email template.

> **ⓘ Important**

If you create templates in the enhanced editing environment, don't edit them in the legacy web client. You'll lose any inline images and strip out some of the advanced formatting and functionality.

Work with existing templates



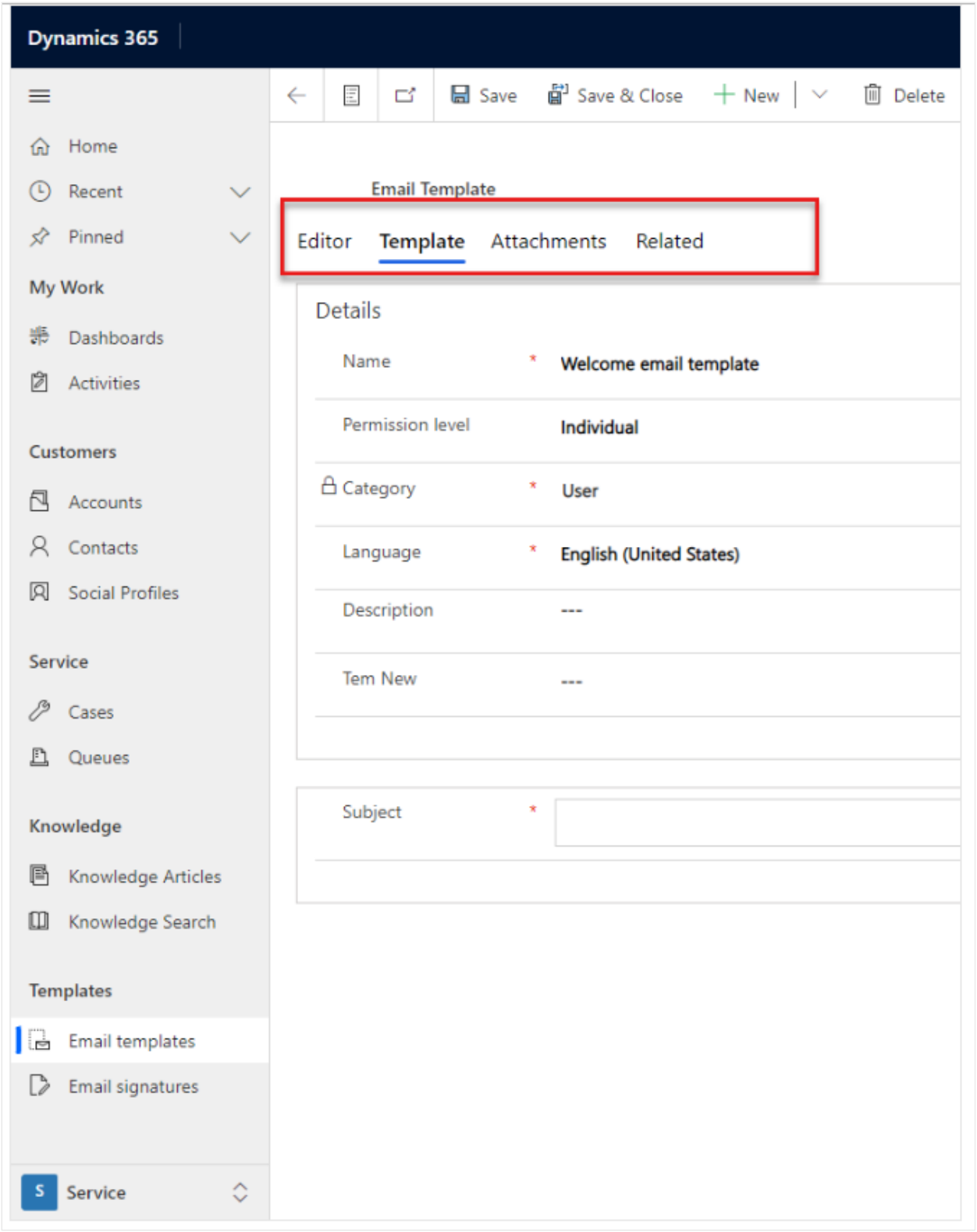
- **Template** tab: Specify or change the template details and the email subject. The name includes **– Copy** at the end to identify this template is a copy of another one.
- **Template editor** section: Design and customize the email template.
- Select **New Attachment** to add attachments to your template if needed.

Email template editor

You can use either the enhanced email template editor or the legacy email template editor to create email templates.

Enhanced email template editor

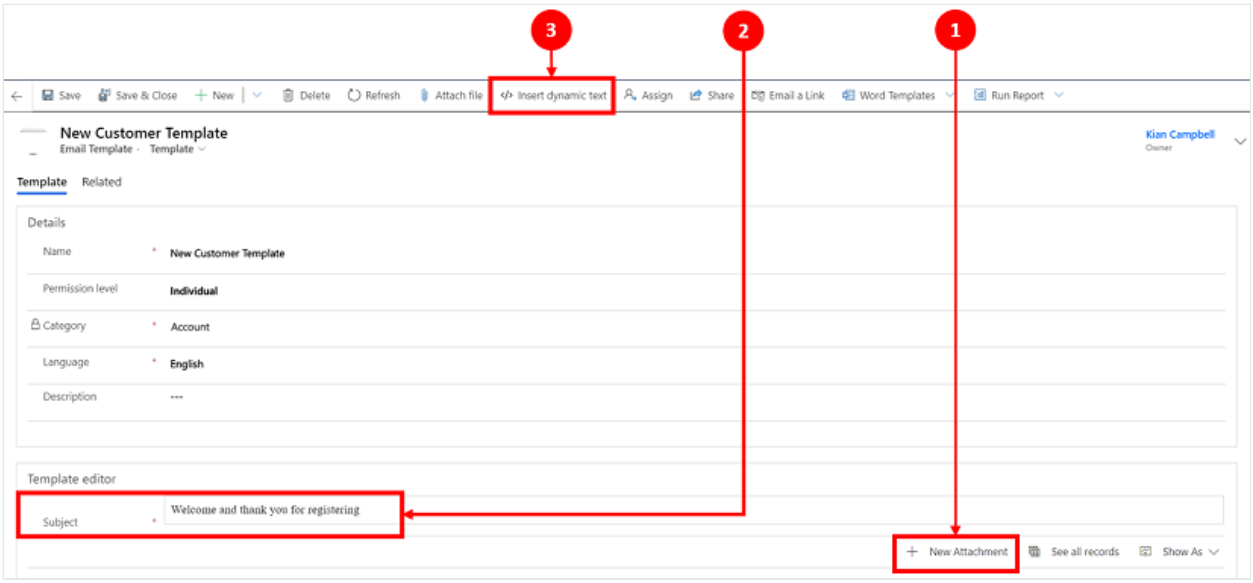
The enhanced email template editor is displayed if the enhanced email template editor option is enabled. However, for Customer Service workspace and Customer Service Hub apps, the enhanced email template editor is displayed by default. More information: Enhanced email template editor option



- **Editor** tab: Use this tab to design and customize your email template. See: Design and customize the email template.
- **Template** tab: Specify or change the template details and the email subject.
- **Attachments** tab: Add attachments to your template if needed.

Email template editor

The email template editor is displayed if the enhanced email template editor option is disabled.



1. **Insert dynamic text**: Use dynamic text in the subject and body of the email.
2. **Subject**: Enter or change the email subject.
3. **New Attachment**: Add one or more attachments to your template, if needed.

See also

Personalize content with Insert dynamic text

Set up enhanced email

Understand the email experience

Enable and configure auto capture

Article • 02/17/2023

Configure auto capture to help your sellers to get suggestions on relevant customer activities by capturing emails and meetings from the user's Exchange account that's in the same tenant as Dynamics 365.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure auto capture

When you enable auto capture, you help salespeople in your organization by suggesting relevant customer activities in Microsoft Dynamics 365 Sales by capturing emails and meetings from Outlook.

> **Important**
>
> By enabling this feature, you consent to share data about your customers' email activity with an external system. Data imported from external systems into Sales Insights are subject to the **Microsoft Privacy Statement**.

How to enable auto capture

Enable auto capture by following these steps:

1. Review prerequisites for auto capture.
2. Enable auto capture.

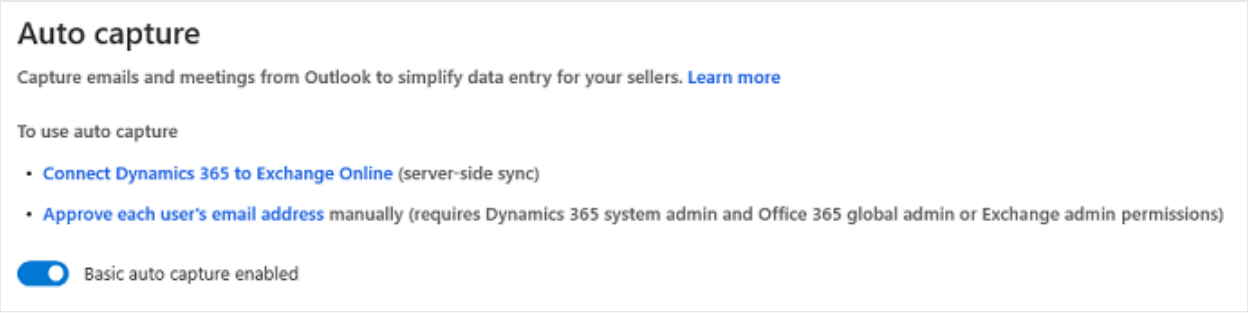
Prerequisites for auto capture

Before you enable auto capture, perform the following tasks:

- Enable Sales Insights. To learn more, see Enable and configure standard Sales Insights features.
- Use Exchange as the server and Outlook as the mail client.
- Approve the email addresses of users to allow queries against their Exchange data (this requires tenant-level admin privileges). To learn more, see Approve email.
- Set up server-side synchronization. To learn more, see Set up server-side synchronization of email, appointments, contacts, and tasks.

Enable auto capture

1. Sign in to the Dynamics 365 Sales Hub app, and go to **Change area** > **Sales Insights settings**.
2. On the site map under **Productivity intelligence**, select **Auto capture**.
3. Turn on the **Enable basic auto capture** toggle.



> ⓘ **Note**
>
> For more information about auto capture and how it can help your users, see **Capture customer-related activities with auto capture**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Introduction to administering Sales Insights
Auto capture FAQs

Configure email engagement

Article • 03/30/2022

Configure email engagement to show sellers and sales managers the insights on customers' engagement with emails to help build customer relationships. Only the emails that are sent from Dynamics 365 are considered for email engagement analysis.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

To enable email engagement

To enable email engagement, do the following steps:

1. Review the prerequisites
2. Enable email engagement

> **Note**
>
> To benefit from the complete experience of email engagement, turn on the email engagement insight cards **Email opened** and **Email reminder**.

> **Important**
>
> By enabling this feature, you consent to share data about your customers' email activity with other Microsoft services. Data imported from external systems into Dynamics 365 is subject to our privacy statement.

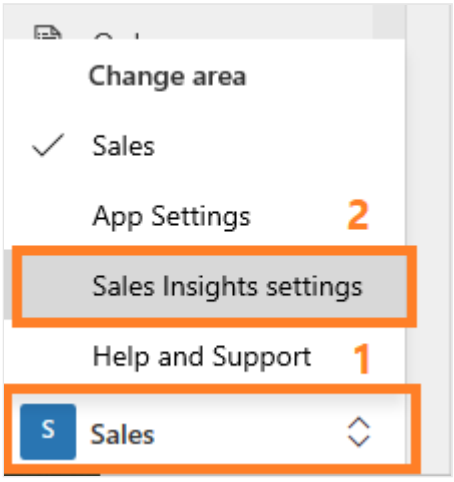
Prerequisites

Verify the following prerequisites before enabling email engagement for your organization:

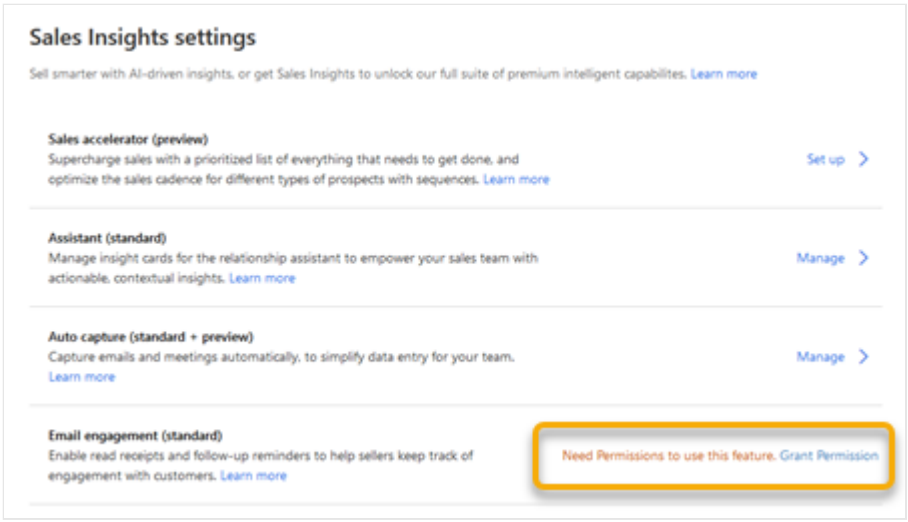
- Enable standard Sales Insights features. More information: Enable and configure standard Sales Insights features
- To use followed email attachments:
  - OneDrive for Business must be available to your Dynamics 365 Sales server. More information: Enable OneDrive for Business
  - Enable document management for email in Sales. More information:Enable SharePoint document management for specific entities
  - Enable SharePoint to be shared externally to anonymous (unauthenticated) users to allow external email recipients to access file attachments. More information: External sharing overview
- To enable delivery-time recommendations based on recipients' time zones, you must enable Bing Maps in Sales. More information: System Settings dialog box - General tab

Enable email engagement

1. Sign in to Dynamics 365 Sales, and go to the Sales Hub app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.



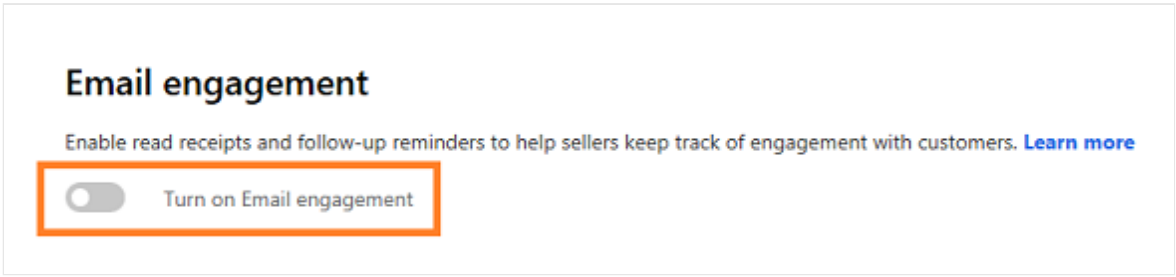
3. In the **Email engagement (standard)** section, select **Grant Permissions**.



A confirmation message is displayed in a tab. Close the tab and proceed to set up email engagement.

> **Note**
>
> If you've already granted permissions, this step will be skipped. You don't have to grant permissions to email engagement again.

4. In the **Email engagement** section, select **Set up** and then turn on the toggle.



Email engagement is enabled and ready to use in your organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Introduction to administer Sales Insights
View message interactions with email engagement

Configure notes analysis

Article • 05/29/2023

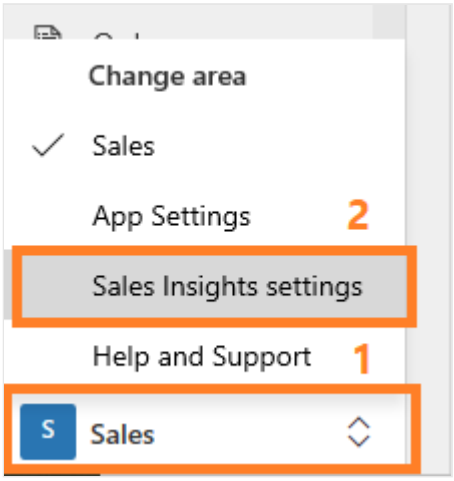
To help users with intelligent suggestions when they enter an activity in the timeline—such as an appointment, email, phone call, task, note, post, or any custom activities—enable notes analysis.

License and role requirements

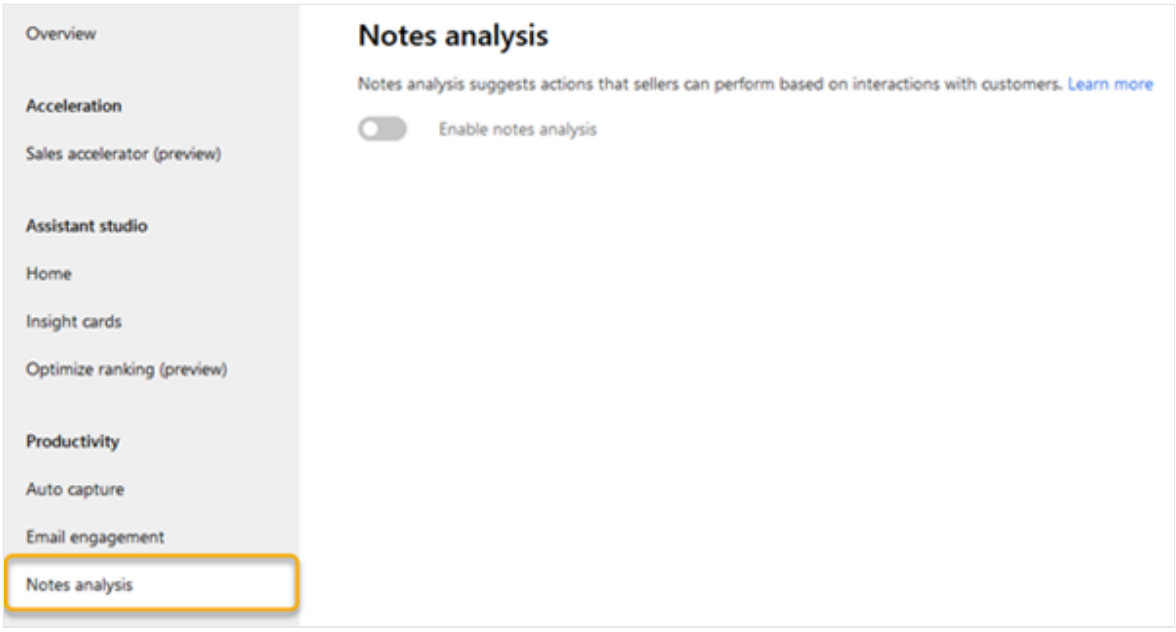
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

To configure notes analysis

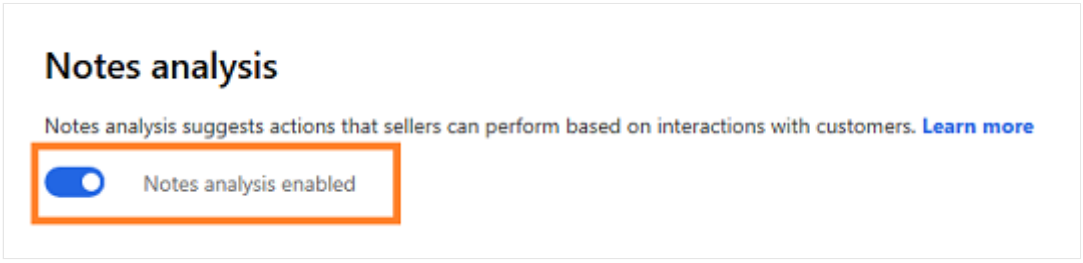
1. Verify that premium Sales Insights features are enabled. More information: Enable and configure premium Sales Insights features
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.



3. On the site map under **Productivity intelligence**, select **Notes analysis**.



4. Turn on the **Notes analysis** toggle.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

How notes analysis assists you with intelligent suggestion
Notes analysis FAQs

Enable or disable PDF file generation from sales records

Article • 03/30/2022

Enable your users to create and share professional-looking PDF files of the sales entity records with customers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable or disable PDF generation

The PDF generation capability allows users to generate PDF files directly from Dynamics 365 records. The capability to create PDF files is supported for the following entities: Accounts, Contacts, Leads, Opportunities, Quotes, Orders, and Invoices, on both web and mobile apps. You can select the entities on which you want to enable PDF generation.

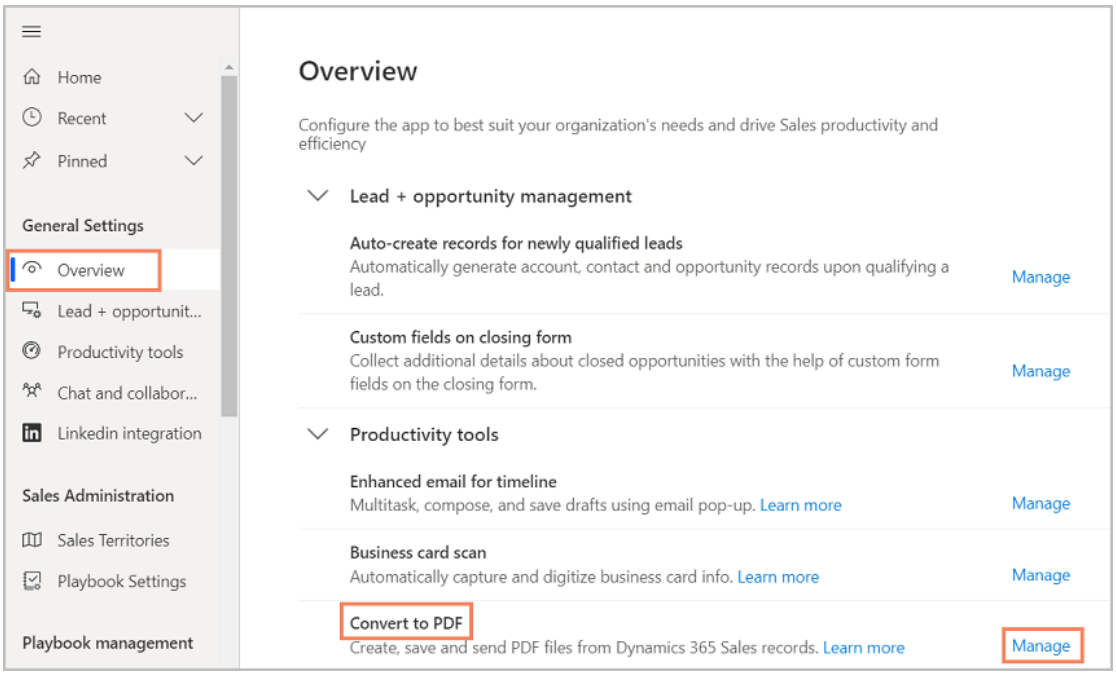
Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

> **Important**
>
> With the 2020 release wave 2, the PDF generation capability is enhanced to support all custom entities. The PDF enhancements are limited to the web experience and aren't available in the mobile app. If you haven't opted in, or you're using Sales Hub on the mobile app, you'll see the old experience.

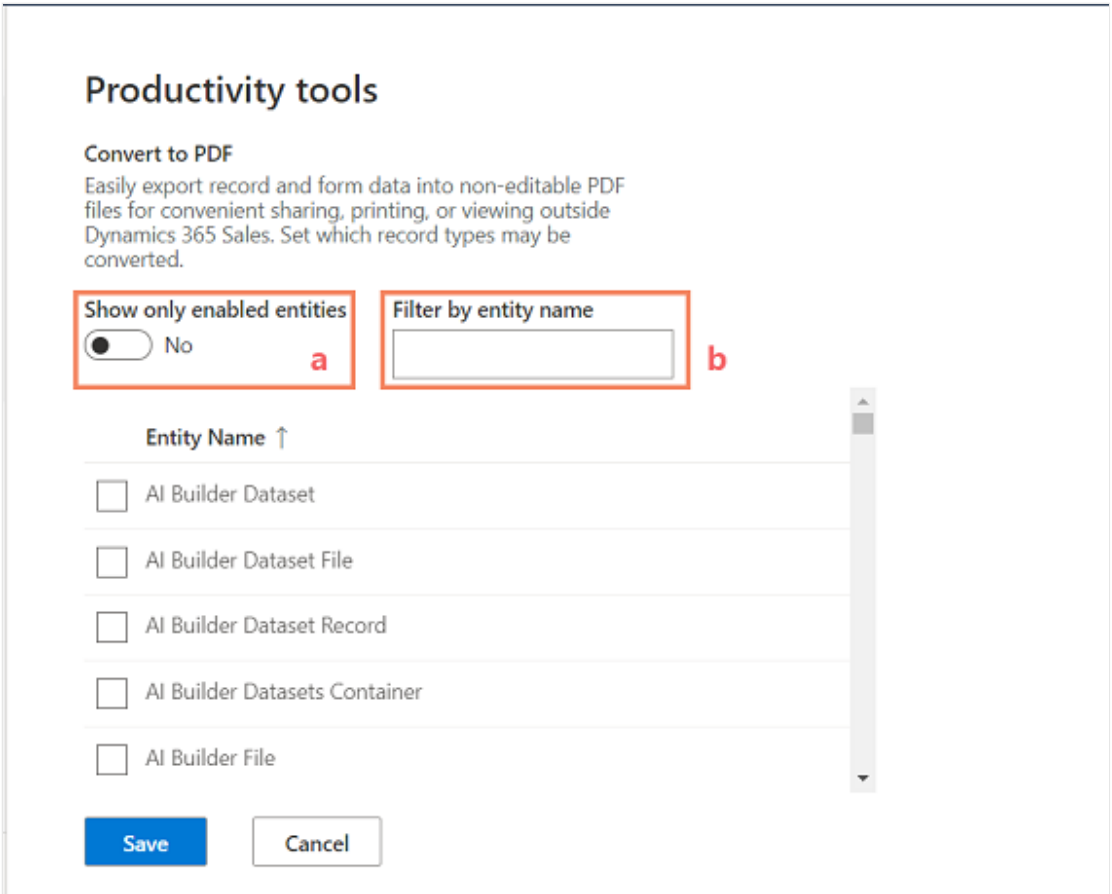
Sales Premium or Sales Enterprise

To enable or disable PDF generation:

1. In lower-left corner of the screen, select **Change area** and then select **App Settings**.
2. In the site map, select **Overview**.
3. On the **Overview** page, under **Productivity tools**, select **Manage** for **Convert to PDF**.



4. On the **Convert to PDF** page, select the entities for which you want to enable the PDF generation capability.



a. To see only the entities on which PDF generation is currently enabled, turn the **Show only enabled entities** toggle to **Yes**.
b. To filter the list of entities and find a specific entity on which you want to enable PDF generation, use the **Filter by entity name** field. For example, to enable PDF generation on the Opportunity entity, enter **opp** and you'll see the entity name list filtered to show the entity names starting with *opp*.

5. Select **Save**. PDF generation is enabled for the selected entities.

6. Review the out-of-the-box templates and create new templates as per your requirement. For more information, see Use Word templates to create standardized documents.

> **Note**
>
> You can't create a PDF file for an entity record if there's no template available for that entity.

After you enable PDF generation, sellers will be able to generate a PDF, download it to their local computer, save it to Dynamics 365 as Notes or save it to SharePoint.

> **Important**

- The **Save to SharePoint** button is available to users when SharePoint integration is enabled for your organization and the **Document management** check box is selected on the entity page. If they don't see the button, make sure that SharePoint integration and document management are enabled. For more information about the **Document Management** check box, see **Enable or disable entity options**.
- The **Save to Dynamics** button is available to users when **Notes** is enabled for the primary entity. If they don't see the button, make sure the **Notes (includes Attachment)** check box is selected on the entity page in the **Customization** area. By default, notes are enabled on all out-of-the-box entities. For more information about the **Notes** check box, see **Entity options that can only be enabled**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create PDF files from sales records

Enable automatic generation of quote and invoice documents

Article • 03/30/2022

Help your sales team to automatically generate quotes and invoice documents with consistent format and branding by using templates.

> **Important**
>
> This feature requires integration with SharePoint as the generated documents are stored in the SharePoint site. For more information, see **Configure Dynamics 365 Sales to integrate with SharePoint**. If you can't integrate with SharePoint, you can manually export the documents to PDF. For more information, see **Export sales records to PDF**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Professional Manager More information: Predefined security roles for Sales

Enable automatic document generation

> **Note**
>
> Automatic document generation is only supported in Sales Professional.

1. In the Sales Professional site map, select **Sales Settings**.
2. Under **Advanced Settings**, select **Quote Settings**.
3. To enable automatic generation of quote documents, in the **Quote to invoice** section, select the **Auto-generate quote as a Word document** check box, and then select the quote Word template from the drop-down list.

4. To enable automatic generation of invoice documents, select the **Auto-generate invoice as a Word document** check box, and then select the invoice Word template from the drop-down list. All the out-of-the-box templates and the custom templates that you've created are available in the drop-down list.
5. Select **Save**.

   The settings are saved.

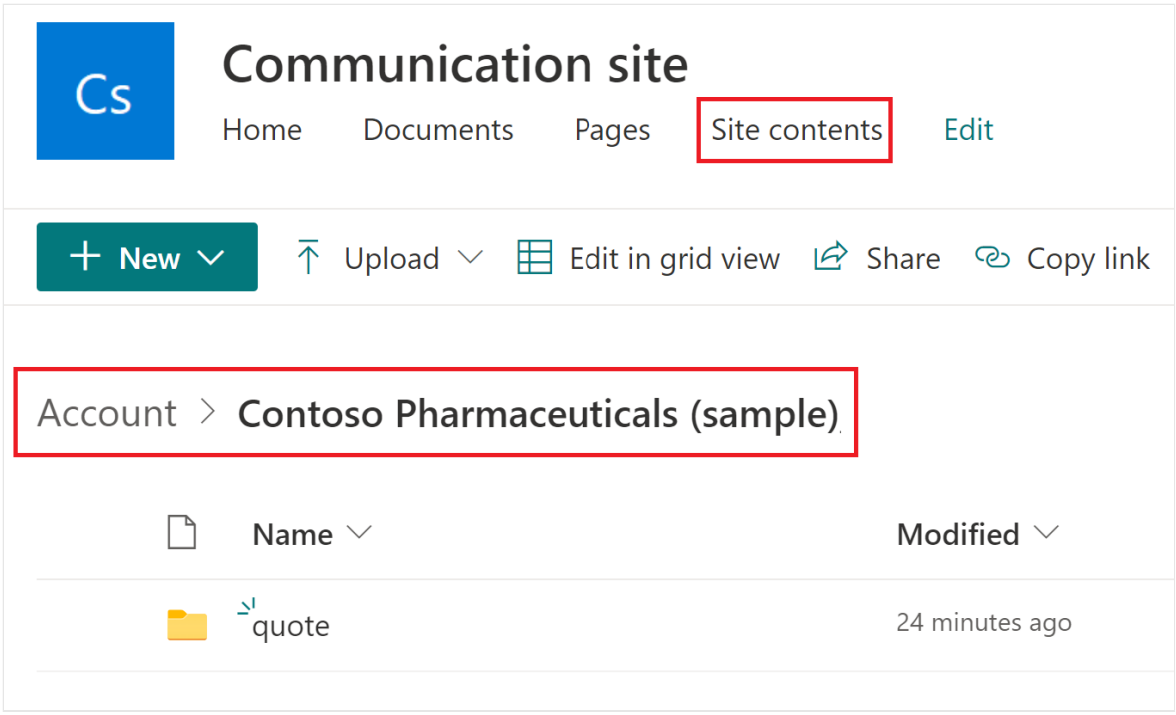
Verify automatic document generation

When you activate a quote or invoice, a word document for the quote or invoice is automatically generated and stored in the SharePoint site that you've integrated with Dynamics 365.

> **Note**
>
> If you haven't integrated with SharePoint, the **Activate Quote** option will activate the quote but will not generate the document.

To verify automatic document generation:

1. In the site map, select **Quotes**.
2. Open a quote in the **Draft** state and select **Activate Quote**.
3. Log into the SharePoint site that is integrated with Dynamics 365 Sales Professional.
4. Go to **Site Contents** and select **Account**.



5. Select the account for which you've activated the quote. You'll find the quote folder with the auto-generated quote document.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Enable creation of orders from quotes

Article • 08/10/2023

Quotes have important data about the customers and the products they're interested in. When you enable the creation of orders from quotes, it allows sellers to quickly create an order from a quote so that most of the details in the order are prefilled from the quote.

License and role requirements

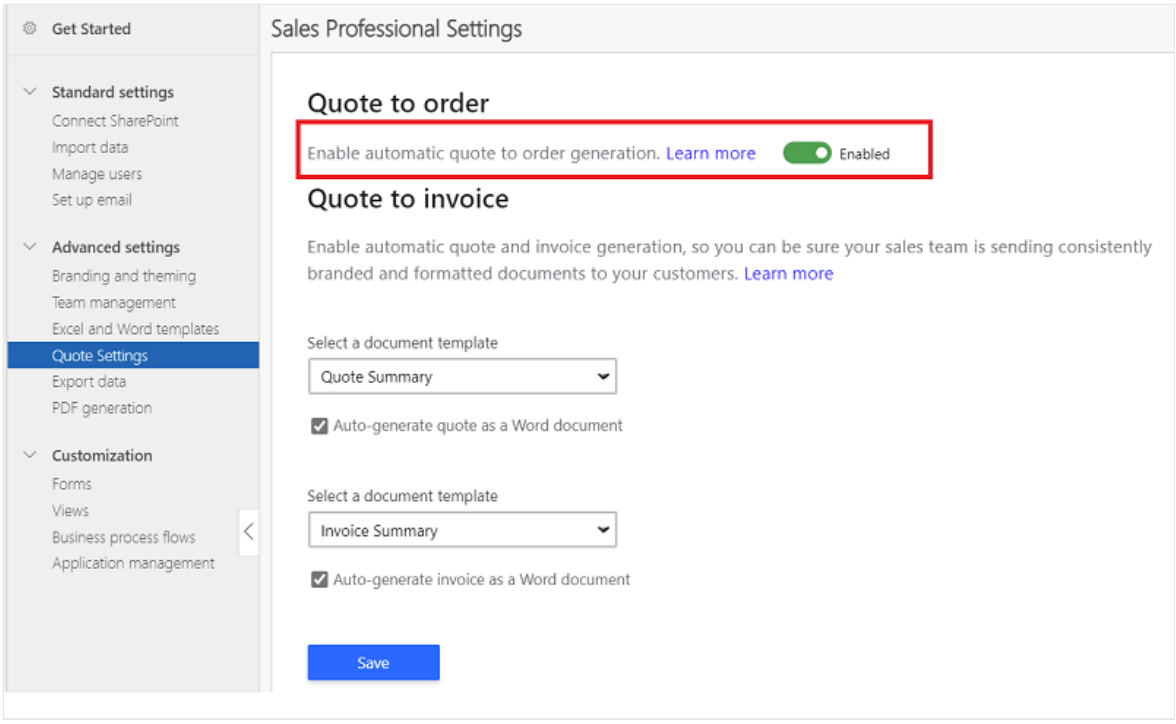
Requirement type	You must have
License	Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Professional Manager More information: Predefined security roles for Sales

Enable quote creation

1. Make sure you have a Sales Professional Manager or System Administrator role.
2. In the Sales Professional app site map, select **Sales Settings**.

   > **Note**
   >
   > This feature is not supported for Sales Enterprise and Sales Premium licenses and hence it's not available in the Sales Hub app.

3. Under **Advanced Settings**, select **Quote Settings**.
4. To enable creation of orders from quotes, set **Enable automatic quote to order generation** to **Enabled**.



5. Select **Save**.

6. Open a quote, activate it, and verify if the **Create Order** option is available on the command bar. You can now select **Create Order** to create an order based on the quote.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create an order from a quote

Set up email by integrating with Exchange

Article • 03/30/2022

To store email and other messaging records in Dynamics 365 Sales, you need to synchronize it with your email system. After you configure Exchange and approve mailboxes of users, they can email contacts from the Dynamics 365 records. For example, a seller can email a contact from an opportunity record and track the conversation in the opportunity timeline. This integration helps keep the conversations in context.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What is server-side synchronization?

Dynamics 365 Sales uses server-side synchronization to synchronize your email system with Dynamics 365 Sales.

Using server-side synchronization makes messaging data available to a web browser, tablet, or smartphone that is running Dynamics 365 Sales.

Server-side synchronization provides direct Dynamics 365 Sales-to-email server synchronization. When you use Microsoft Exchange, you can synchronize email, contacts, tasks, and appointments.

Some features offered by server-side synchronization include the following:

- Email folder tracking. You can simply drag email to a folder to track it. Folder tracking works on any mobile device that supports Exchange, which means you can track email from just about any device.

- Support for Dynamics 365 App for Outlook. You can track incoming email with the new Dynamics 365 App for Outlook. Dynamics 365 App for Outlook works with Outlook on the web. So, all you need is a browser to track incoming email.

Configure the integration

Depending on the license you have, select one of the following tabs for more information:

Sales Premium and Sales Enterprise

1. In the Power Platform admin center, select an environment.
2. Follow the instructions in Set up server-side synchronization of email, appointments, contacts, and tasks to configure the integration.

Enable OneDrive for Business (online)

Article • 02/15/2022

Users can create and manage private documents with OneDrive for Business. Those documents can be accessed in customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation), after the system administrator has enabled OneDrive for Business.

Requirements

> **Note**
>
> This topic applies to organizations deploying online versions of OneDrive for Business and customer engagement apps. For information on integrating OneDrive for Business on-premises with Dynamics 365 apps, or an online/on-premises mix of these products, see: **Enable OneDrive for Business (on-premises)**.

The following are required to use OneDrive for Business with customer engagement apps:

- Set up customer engagement apps to use SharePoint Online.
- A OneDrive for Business license for each user. More information: What is OneDrive for Business?
- A SharePoint license for each user. Users with a SharePoint license can use OneDrive for Business. For SharePoint Online, Microsoft 365 subscriptions come with SharePoint Online licenses.
- For full Microsoft 365 feature integration with Dynamics 365 and Customer Engagement (on-premises), you'll need Microsoft 365 Enterprise E3 or later. Skype for Business PSTN calling and conferencing requires Microsoft 365 Enterprise E5. Other Microsoft 365 plans are not supported. For more information on licensing and pricing, see:
  - Dynamics 365 pricing
  - Dynamics 365 Licensing Guide
- Before using OneDrive for Business in customer engagement apps, the administrator and end users should access OneDrive for Business through the web

interface. For example, if you're using SharePoint Online, go to https://admin.microsoft.com > **app launcher** > **OneDrive**. The site and other information required by customer engagement apps to enable OneDrive for Business integration gets created only when the site is accessed.

Enable OneDrive for Business

You can enable OneDrive for Business as follows.

1. In the Microsoft Power Platform admin center, select an environment.
2. Select **Settings** > **Integration** > **Document management settings**.
3. Select **Enable OneDrive for Business** to enable it, and then select **OK**.

Controlling access to OneDrive for Business

You can toggle availability of OneDrive in customer engagement apps for end users through the **OneDrive for Business** privilege.

1. In the Power Platform admin center, select an environment.
2. Select **Settings** > **Users + permissions** > **Security roles**.
3. Select a security role, and then select the **Core Records** tab.
4. Under **Miscellaneous Privileges**, toggle the **OneDrive for Business** privilege to the desired availability.

See also

Enable OneDrive for Business (on-premises)
What is OneDrive for Business?

Set up OneNote integration

Article • 08/29/2022

Gather your thoughts, ideas, plans and research in one single place with OneNote in model-driven Power Apps and customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation).

When you turn on OneNote integration, you have the benefits of using OneNote to take or review customer notes from within your records.

You can configure OneNote integration when you're also using SharePoint Online. You must have a subscription to Microsoft 365 to use OneNote in model-driven and customer engagement apps.

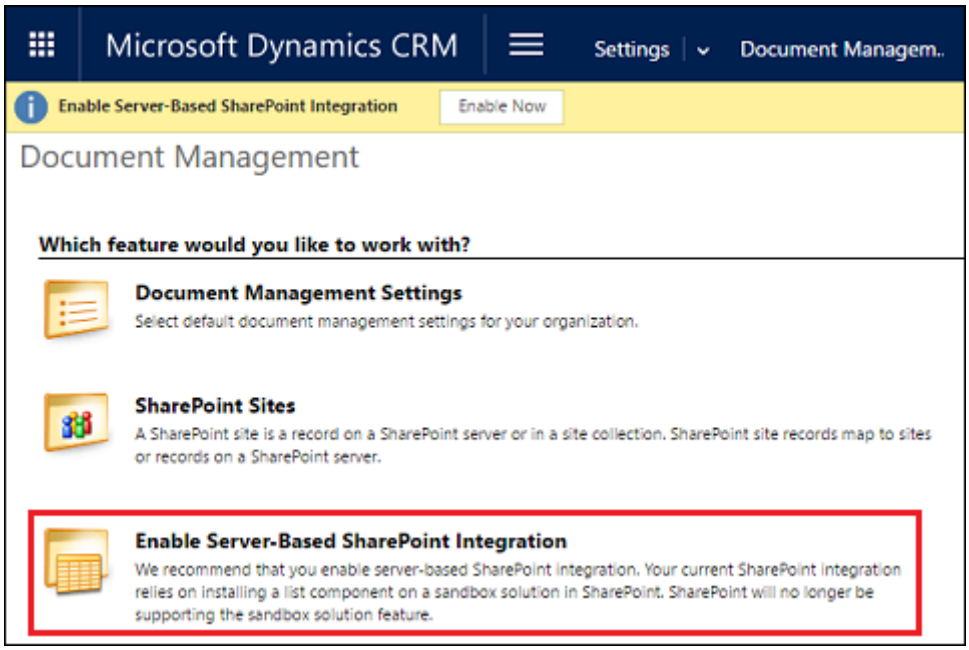
Step 1: Turn on server-based SharePoint integration

Before you can enable OneNote integration, you need to turn on server-based SharePoint integration.

Make sure you have the System Administrator security role or equivalent permissions in Microsoft Dynamics 365. Or, make sure that you have Read and Write privileges on all record types that are customizable.

Check your security role

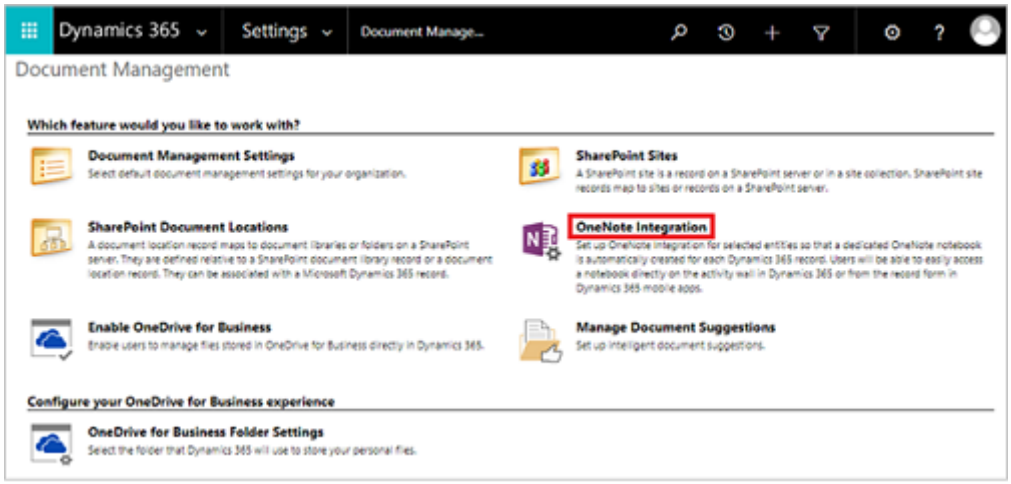
- Follow the steps in View your user profile.
- Don’t have the correct permissions? Contact your system administrator.



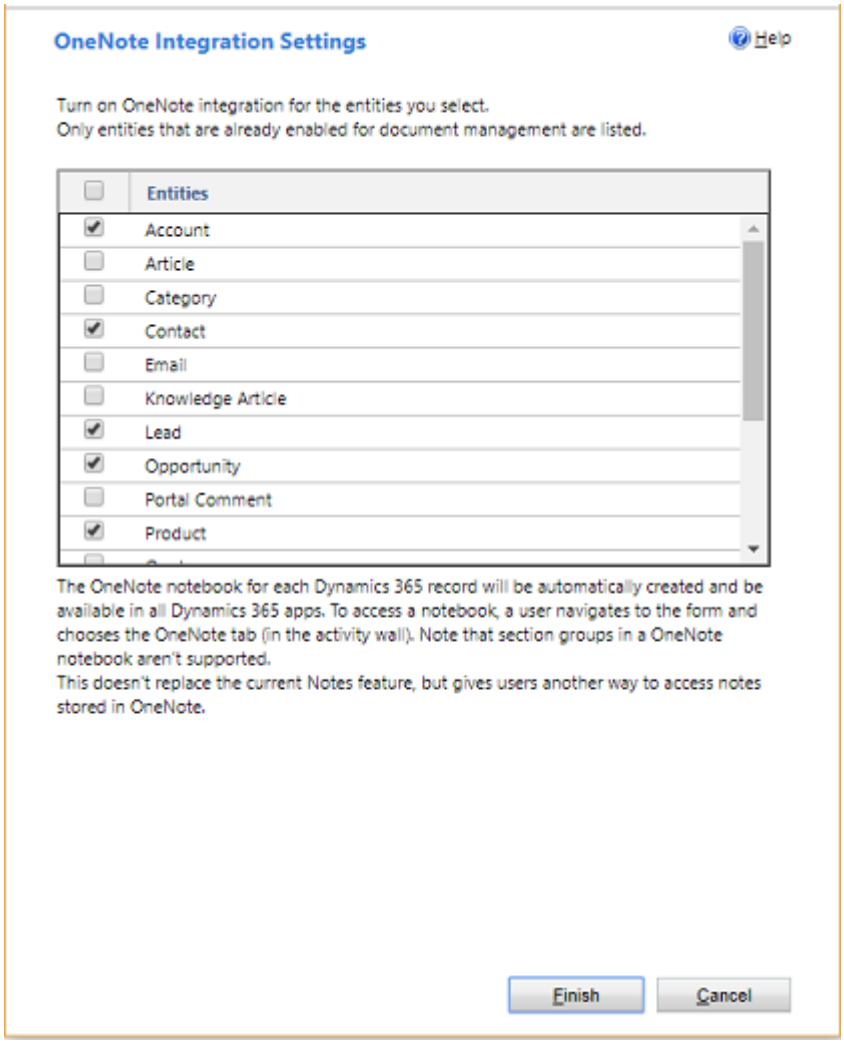
Step 2: Turn on OneNote integration

When server-based SharePoint integration is turned on, **OneNote integration** is listed in **Document Management**.

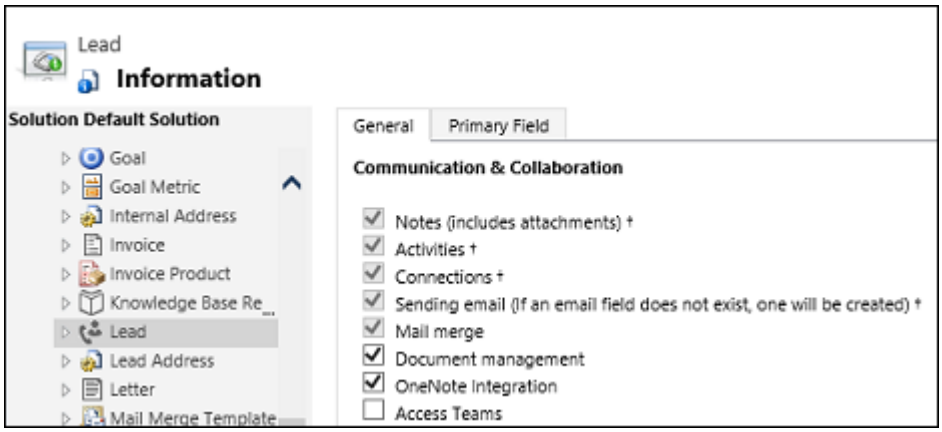
1. In the Power Platform admin center, select an environment.
2. Select **Settings** > **Integration** > **Document management settings**.
3. Select **OneNote Integration**.



4. Follow the instructions in the wizard to turn on OneNote integration for selected entities. Choose entities that need a full notebook per record. Only entities that are already enabled for document management are listed. Select **Finish**.



5. You can also enable OneNote integration for an entity from the customization form, as long as document management has been enabled for that entity.

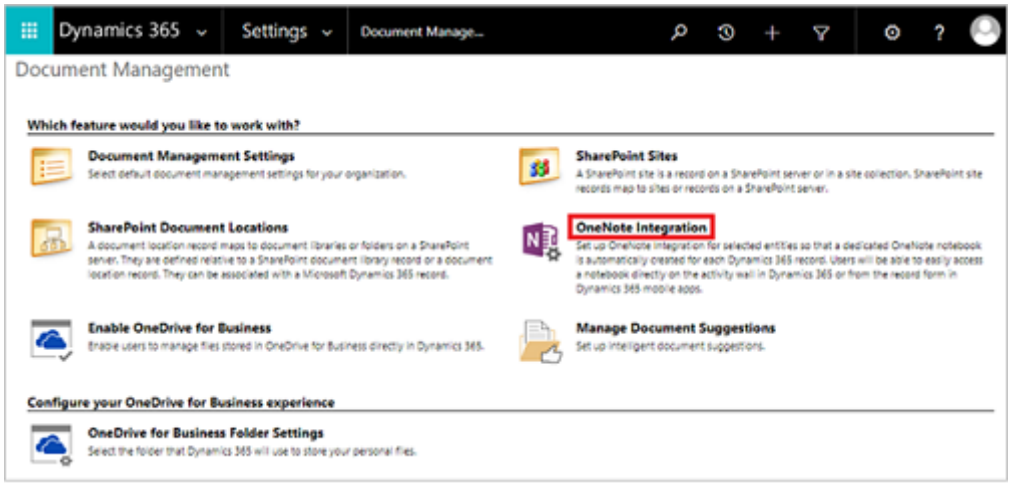


6. A OneNote notebook is automatically created for a record the first time you select the **OneNote** tab in the activities area in model-driven and customer engagement apps. After the dedicated OneNote notebook is created for that record, you can view and navigate to that notebook from any Dynamics 365 apps client.

More information: Take notes by using OneNote

To turn off OneNote integration

1. In the Power Platform admin center, select an environment.
2. Select **Settings** > **Integration** > **Document management settings**.
3. Select **OneNote Integration**.



4. In the **OneNote Integration Setting** dialog box, clear the check boxes for all entities, and then select **Finish**.

Troubleshooting OneNote integration

Why do OneNote files show a folder icon?

This is a known issue. Select the file name to open the OneNote as expected.

Why aren't my OneNote notebooks showing up in the OneDrive documents area?

OneNote notebooks saved to the Microsoft 365 Groups OneDrive won't be shown.

Error message: We can't find the notebook

You receive this error message:

We can't find the notebook. The OneNote notebook might have been removed or moved to another location. Check the notebook location or contact your administrator to update the location record stored in Dynamics 365 Customer Engagement. (Error: 0x80060729)

To resolve the issue, follow these steps:

1. Sign in to the Power Platform admin center, and open the environment you want.
2. Select **Settings** > **Integration**, and then select **Document management settings**.
3. Select **SharePoint Document Locations**, open that document location record, and then change the corresponding URL to match your notebook location.

Can I edit a OneNote file from within a model-driven or Dynamics 365 customer engagement app?

No. This can be done only from the OneNote app that opens when you select the OneNote link.

I can't access my OneNote notebook

Don't delete any OneNote .onetoc2 or .one file types in the OneNote section in the app. If you do, you won't be able to access your OneNote notebooks.

Are section groups supported?

Sections groups that keep related sections together in OneNote aren't supported in model-driven Power Apps or customer engagement apps.

Can I rename a section in OneNote Online?

No. You can only rename a section in the desktop version of OneNote. If you rename a section in OneNote Online, you won't see the updated section name in the app.

Why do I see records that should be in the OneNote tab?

This happens when you have deleted all of the sections in the notebook. It's recommended that you have at least one section in your OneNote notebook. To fix the issue do this:

1. Go to the record where you see the issue. For example, from the main menu select, **Sales** > **Accounts** > select an account record.

2. From the main menu select the drop down menu next to the record name, and then select **Documents**.

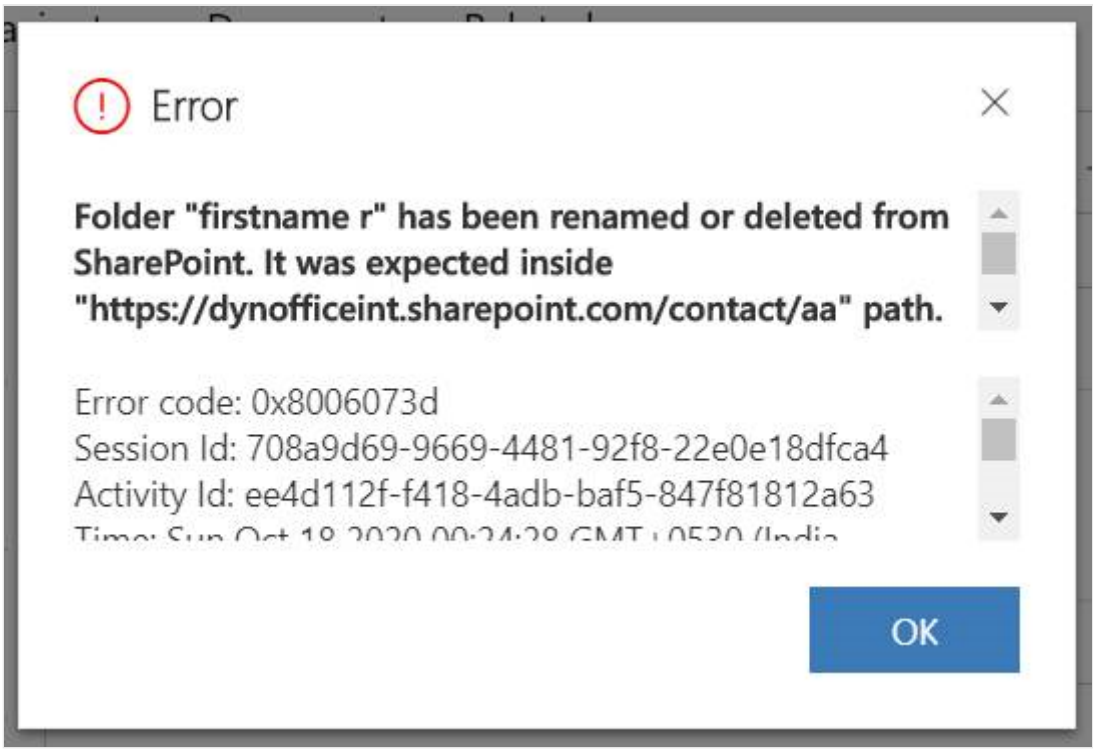
3. Select **Open in SharePoint** and then create a new section using the desktop version of OneNote.

Changing the name of a OneNote file through document grid displays error message

Imagine the following events:

1. User A opens a OneNote note in a Power Apps model-driven app or Dynamics 365 customer engagement app and adds content. For example, **Sales** > **Contacts** > *contact* > **Summary** > **Timeline** section > **+** > OneNote.
2. User A, or another user, such as User B, changes the name of the OneNote file in a document grid. For example, **Sales** > **Contacts** > *contact* > **Related** > **Documents**.
3. User A opens the note in the timeline on a form. For example, **Sales** > **Contacts** > *contact* > **Summary** > **Timeline** section > **+** > **OneNote**.

When this occurs, user A sees the error message "Folder *contact* has been renamed or deleted from SharePoint. It was expected inside *SharePoint folder* path."



Error message: File cannot be found

I get this error message:

File cannot be found. (Error: 0x80060706)

In an on-premises deployment, you can get this error when opening the OneNote tab in an entity enabled for OneNote if you turned off **CreateSPFoldersUsingNameandGuid** using the OrgDBOrgSettings tool. Set this option to **True**. See: OrgDBOrgSettings tool for Dynamics CRM.

Note that OneNote requires SharePoint folders to include the GUID.

I get this error message: List does not support this operation. (Error: 0x80060715)

On subsequent clicks in OneNote, this error message appears: **No sections to display. Note that sections in a section group aren't supported.** To fix this issue, set the file path length to less than 70 characters.

Changing the name of a OneNote file in Dynamics 365 (online), version 9.0 can create a conflict

Consider this scenario:

User A opens a OneNote note in Dynamics 365 Customer Engagement (on-premises) and adds content (For example: **Sales** > **Accounts** > account > **Summary** > Timeline section > **+** > OneNote). User A, or a second user, User B, changes the name of the OneNote file in a document grid (For example: **Sales** > **Accounts** > account > **Related** > **Documents**). User A opens the note using Timeline (For example: **Sales** > **Accounts** > account > **Summary** > Timeline section > **+** > **OneNote**). User A should see the renamed note with the existing content. Instead, a new note is opened.

See also

Turn on server-based SharePoint integration

Integrate with SharePoint

Article • 10/18/2023

Store the documents related to Dynamics 365 Sales entity records in SharePoint. Quickly access, share, and manage these documents from the Sales app by integrating with SharePoint Online.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrtor, Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Configure the integration

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

Prerequisites

To be able to configure SharePoint, you must have:

- Microsoft 365 subscription
- SharePoint Online subscription

Steps to integrate

1. Follow the instructions in Manage your documents using SharePoint to configure the integration.

Integrate a sample softphone

Article • 03/30/2022

Use the sample to learn how to integrate a softphone dialer in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Overview

A softphone dialer provides a simple and integrated way to call customers from within Microsoft Dynamics 365 Sales. The communications that take place are captured as phone call activity in Dynamics 365 Sales.

Organizations can integrate a softphone dialer from their telephony provider in Dynamics 365 Sales using Dynamics 365 Channel Integration Framework. Once integrated, sales reps can quickly call their contacts by selecting a phone number right from their app.

This topic describes how to install a *sample* app and test the calling capabilities.

> **Important**
>
> - This sample code currently has limited availability.
> - The sample code for softphone integration with Dynamics 365 using Dynamics 365 Channel Integration Framework is made available so customers can get early access and provide feedback. The sample code is not meant for production use and might have limited or restricted functionality.
> - Microsoft doesn't provide support for this sample code. Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This is subject to a separate **supplemental terms of use**.

Integrate and configure the sample softphone dialer

To configure the sample:

1. Get Dynamics 365 Channel Integration Framework from Microsoft AppSource. For information on prerequisites and how to get Dynamics 365 Channel Integration Framework, see Get Dynamics 365 Channel Integration Framework.

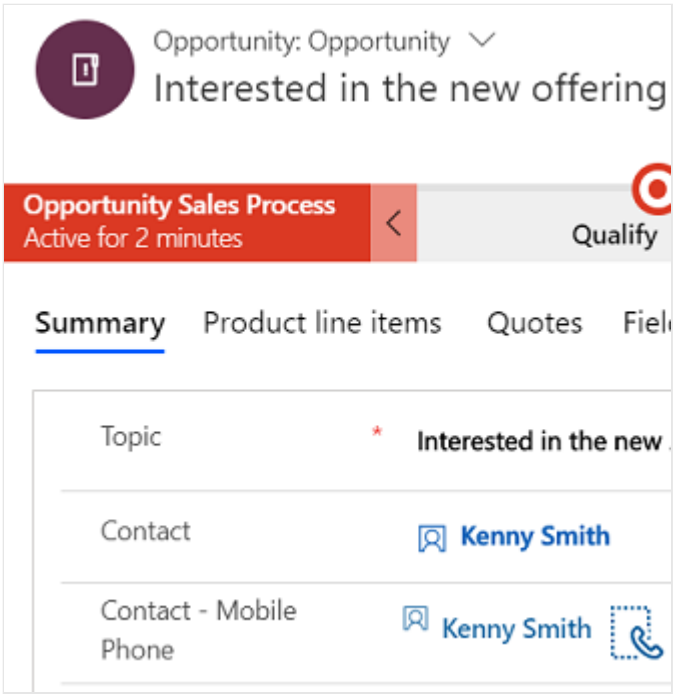
2. Import the **msdyn_CIFramework_managed.zip** managed solution from the Download Center. To learn more about importing a solution, see Import solutions

3. Integrate the sample app available on the Download Center using Dynamics 365 Channel Integration Framework. To learn more about integrating a sample app, see Sample softphone integration using Channel Integration Framework.

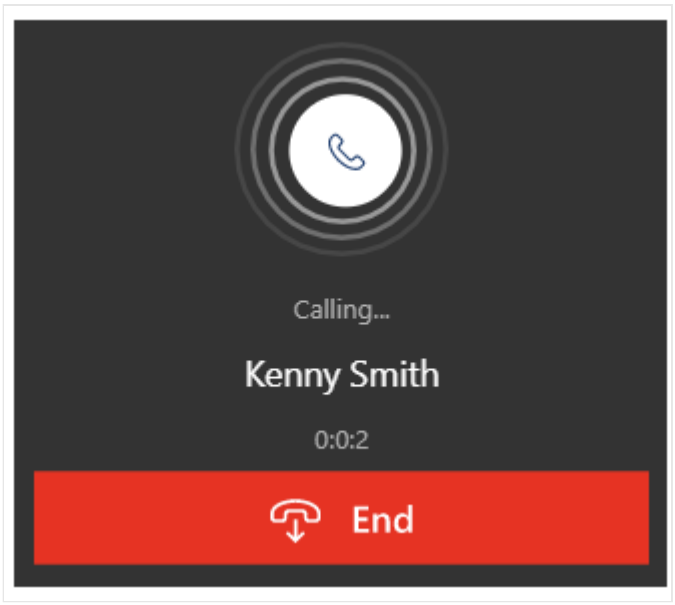
   > **Important**
   >
   > You must use the sample app from the **Download Center** link, and not the one that's mentioned in the **Sample softphone integration using Channel Integration Framework** topic.

4. Configure the channel provider for your Dynamics 365 Sales organization. More information: How to configure a channel provider for your Dynamics 365 organization

After you complete the configuration, you'll see a phone icon next to any contact on an opportunity record who has a defined cell phone number.



When users select this icon, the sample softphone dialer opens and calls the number.



All details regarding the call such as duration, phone number, and notes are automatically captured in the call summary and the phone call activity record, and the record is associated with the opportunity record the call was initiated from.

Call Summary

KS

Contact

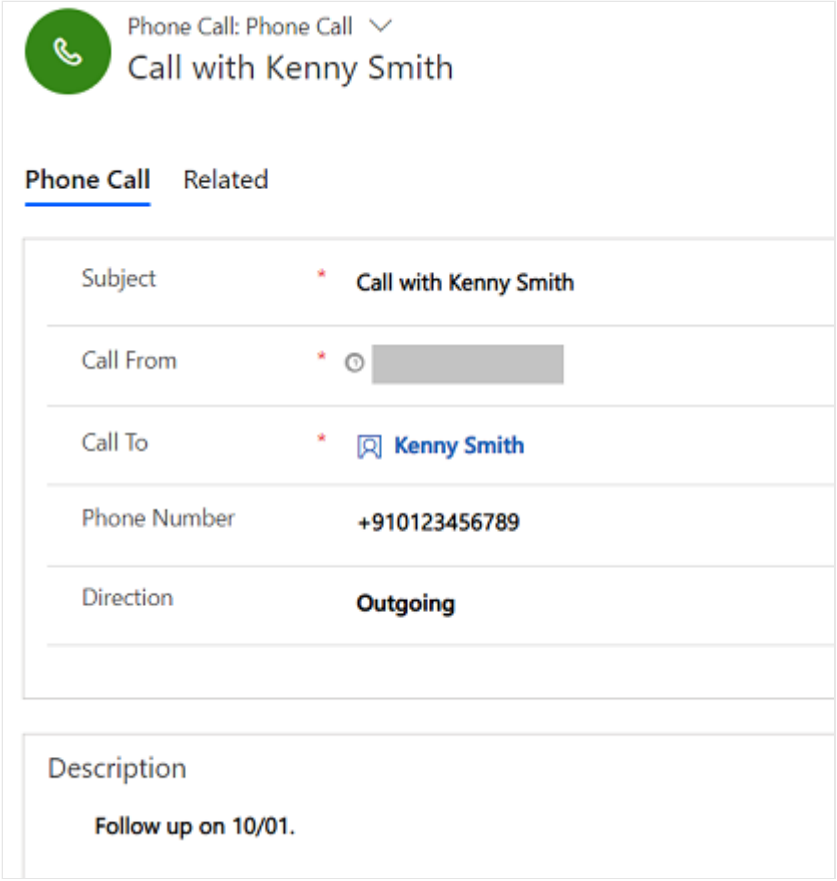
Kenny Smith

Channel	
Time spent	0:0:8
Started On	4:42:10 PM
Activity	Phone call

Call Notes

Follow up on 10/01.

Add Notes



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Get Dynamics 365 Channel Integration Framework
Sample softphone integration using Channel Integration Framework
How to configure a channel provider for your Dynamics 365 organization

Manage leads

Article • 08/10/2023

Leads are potential customers who have shown interest in your products or services. Leads are the first step in the sales process. You can use Dynamics 365 Sales to manage leads and convert them into opportunities.

Configure lead management

As an administrator, you can define the lead assignment rules, qualification experience, duplicate detection rules, lead scoring rules, and so on. These settings help your sales team to follow a streamlined process for managing leads.

- Lead assignment rules: Auto-assign leads to sellers based on certain rules.
- Lead qualification experience: Give your sellers the flexibility to choose which records to create—account, contact, or opportunity—when a lead is qualified.
- Duplicate lead detection: Enable duplicate lead detection to help your sellers identify and address potential duplicate leads.
- Predictive scoring rules: Help sellers increase the probability of winning a deal based on predictions from past data.
- LinkedIn Sales Insights integration: Integrate with LinkedIn Sales Navigator so that your sellers can get the most recent and relevant data of their leads from LinkedIn.

Work with leads

As a seller, you create leads, use predictive scores to improve the lead conversion, and qualify and convert leads to opportunities.

- Create a lead: Use leads to keep track of business prospects.
- Use predictive scores: Use the predictive lead scoring feature to prioritize your leads based on scores.
- Qualify and convert: Qualify a lead to convert it into an opportunity.

Define the lead qualification experience

Article • 10/11/2023

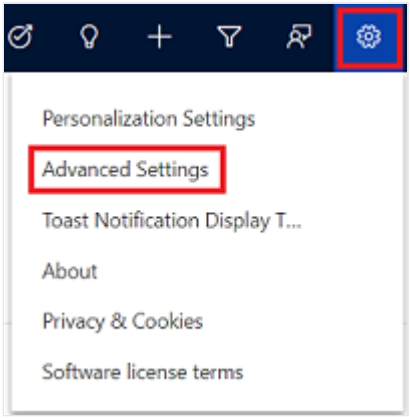
Give your salespeople the flexibility to choose which records to create—account, contact, or opportunity—when a lead is qualified.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Define the experience

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.

   The **Business Management** page opens.

2. Select **Settings**, then **Administration**, and then **System Settings**.

3. Select the **Sales** tab.

4. Under **Qualify lead experience**, set **Create Account, Contact, and Opportunity records by default upon qualifying a lead** to **No**.

This prompts salespeople to select which record types to be created once a lead is qualified.

If you set **Create Account, Contact, and Opportunity records by default upon qualifying a lead** to **Yes**, Account, Contact, and Opportunity records are created by default.

This behavior is applicable on all the leads that are qualified after this setting is updated.

With the April 2020 release, this setting is also available in the **App Settings** area of the Sales Hub app itself.

To go to this setting:

1. At the bottom of the site map, select **Change area** and then select **App Settings**.
2. In the site map, select **Overview**, and on the **Overview** page, select **Manage** for **Auto-create records for newly qualified leads**.

Field mappings to other entities

When a lead is qualified, values of some fields from leads are automatically mapped to the corresponding fields in accounts, contacts, and opportunities.

Fields mapped to opportunity

Field name in lead	Field name in opportunity
Topic	Topic
Contact	Contact
Account	Account

Fields mapped to account

Field name in lead	Field name in account
Company	Account name
Website	Website
Business Phone	Phone
Street 1	Adress 1: Street 1
Street 2	Adress 1: Street 2
Street 3	Adress 1: Street 3

Field name in lead	Field name in account
City	Adress 1: City
State/Province	Adress 1: State/Province
ZIP/Postal Code	Adress 1: ZIP/Postal Code
Country/Region	Adress 1: Country/Region

Fields mapped to contact

Field name in lead	Field name in contact
First name	First name
Last name	Last name
Job title	Job title
Business Phone	Phone
Mobile phone	Mobile phone
Email	Email
Street 1	Adress 1: Street 1
Street 2	Adress 1: Street 2
Street 3	Adress 1: Street 3
City	Adress 1: City
State/Province	Adress 1: State/Province
ZIP/Postal Code	Adress 1: ZIP/Postal Code
Country/Region	Adress 1: Country/Region

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Qualify or convert leads
Create or edit leads
Troubleshoot issues with lead qualification

Enable duplicate lead detection

Article • 04/13/2023

Enable duplicate lead detection to help your sellers identify and address potential duplicate leads.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

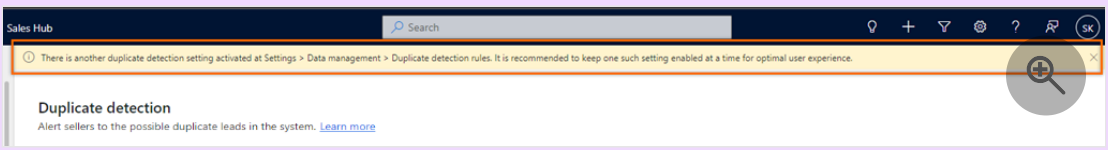
What is duplicate detection?

https://www.microsoft.com/en-us/videoplayer/embed/RE4UpF6?postJsllMsg=true

The duplicate detection capability helps sellers to check for potential duplicate leads in the app. When you enable this capability, the AI model uses the following rules to identify duplicates:

- Same email address
- Same phone number
- Similar lead name and company name
- Similar lead name and the same email domain

Further, sellers can compare and remove the duplicate leads in the organization. More information: Manage duplicate leads

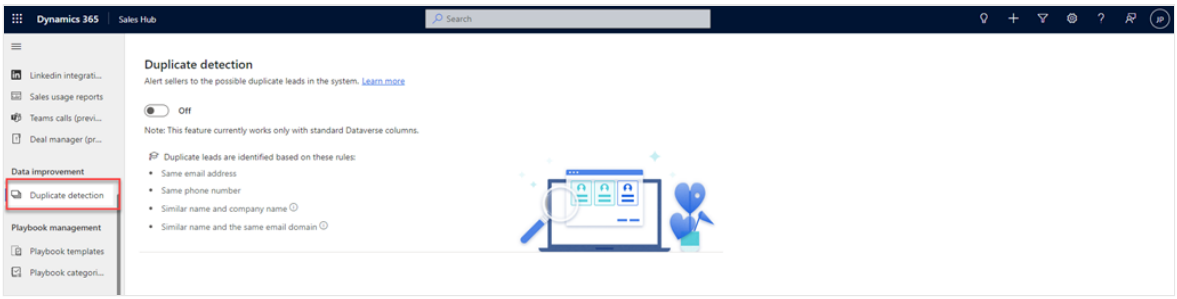
> **Note**
>
> - If the Microsoft Power Platform duplicate detection feature is enabled in your organization, a message is displayed as shown in the following image:
>
> 
>

- To know the difference between the Microsoft Power Platform and Sales duplicate detection features, go to **What is the difference between the duplicate detection capability in Microsoft Power Platform and duplicate detection of leads in Dynamics 365 Sales?**
- For an optimal experience of the duplicate detection of leads in Dynamics 365 Sales, disable the duplicate detection of leads in Microsoft Power Platform. More information **Turn duplicate detection rules on or off for the whole organization**

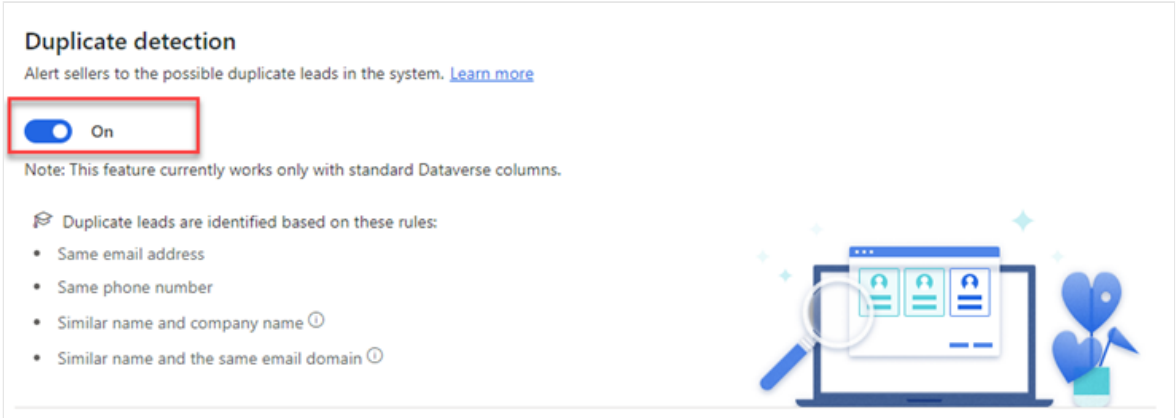
Enable the duplicate detection feature

1. At the lower-left corner of the Sales Hub app, select **Change area** > **App Settings**.

2. On the site map, select **Data improvement** > **Duplicate detection**.



3. Turn on the **Enable rules** toggle.



Trouble in identifying duplicate leads?

If the duplicate detection feature isn't working, do the following steps:

1. Turn off the feature.

2. Ensure that the following requirements are met:

    - Enable Dataverse search
    - Enable the required fields for leads
    - Activate the required processes
    - Provide read permissions for process

3. Turn on the feature.

Enable the Dataverse search

Dataverse search is enabled in your organization. The AI model that detects duplicate leads uses Dataverse search for better results. More information: Configure Dataverse search for your environment

Enable the required fields for leads

The following fields are enabled in the **Quick Find All Leads** view for leads, under the **Find by** section:

- `firstname`
- `lastname`
- `emailaddress1`
- `telephone1`
- `companyname`

> **Note**
>
> If these fields are already enabled, remove and add them back.

To go to the **Quick Find All Leads** view, follow these steps:

1. Sign in to Power Apps.
2. Select an environment

    > **Note**
    >
    > It is best practice to create tables inside a custom solution. More information: **Solution (glossary)**

3. Expand **Dataverse**, select **Tables**, go to the **All** tab and select the **Lead** table.
4. On the **Lead** table page, under the **Data experiences** section, select **Views**. If using a custom solution, open the solution, open the table, and then select the **Views** area.
5. On the **Views** page, select the **Quick Find All Leads** view.

Activate the required processes

Verify the following processes are in active state:

- CheckForDuplicatesAction
- DuplicateDetectionTriggerAction
- GetDuplicatesAction

To go to the **Processes** page, follow these steps:

1. In the web app, go to **Settings** > **Advanced Settings**.
2. On the **Advanced Settings** page, select **Settings** > **Process Center** > **Processes**.

Provide read permissions for process

The security roles who use the feature have at least read permission for **Process** under **Customization**.
More information: Security roles and privileges

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable duplicate lead detection for custom forms
Manage duplicate leads

Enable duplicate lead detection for custom forms

Article • 05/20/2023

The duplicate lead detection feature in Dynamics 365 Sales helps detect duplicate leads. By default, this feature is enabled for the main lead form in the Sales Hub app. However, if you've customized the main lead form, you must manually enable duplicate lead detection.

> **Note**
>
> This customization can be applied only to main forms of the `Lead` table in the custom app.

License and role requirements

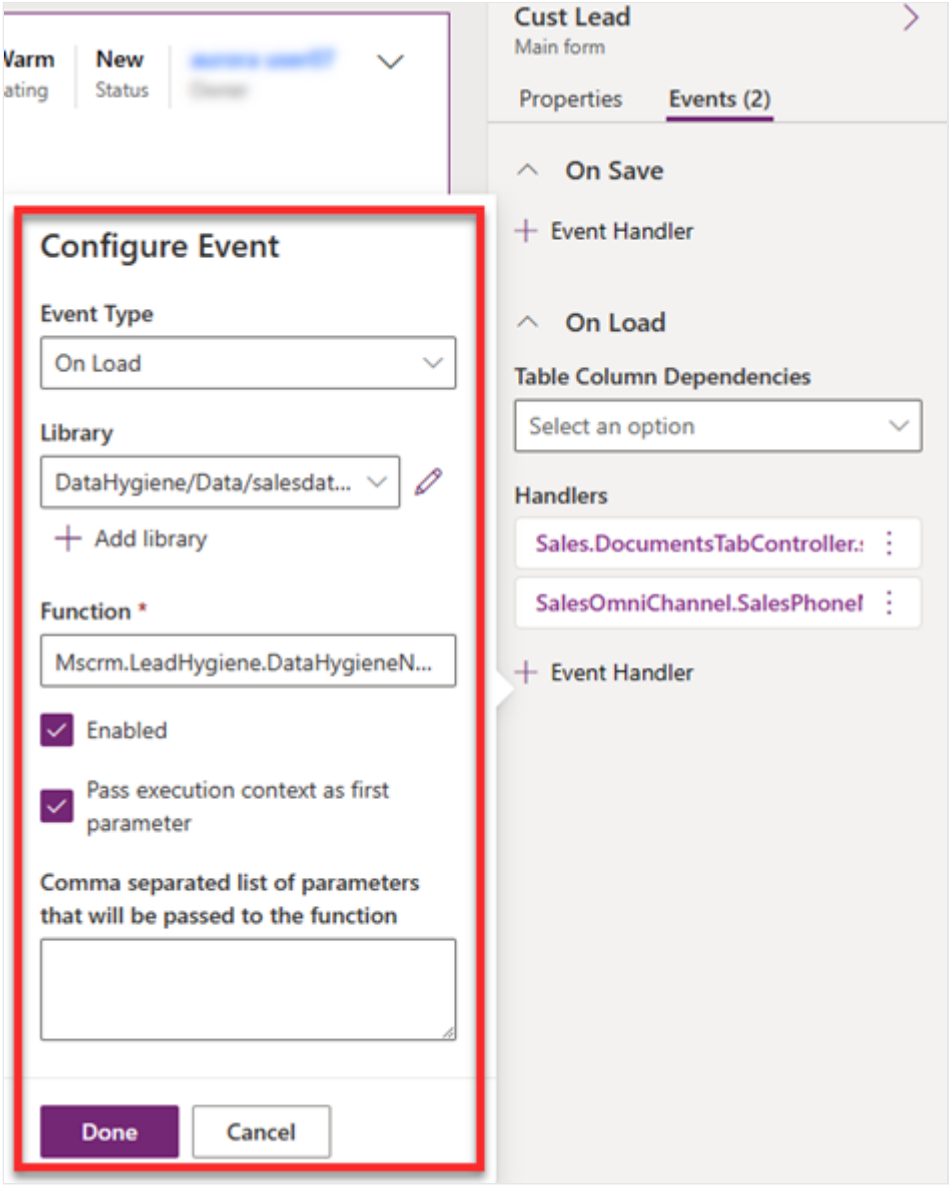
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add an OnLoad event handler to the custom form

Add an event handler to the `OnLoad` event of the main lead form to enable duplicate detection on the form.

1. Sign in to the Power Apps portal.
2. Search for and select your organization's environment.
3. In the site map, select **Tables**, and then select the `Lead` table.
4. In the **Data experiences** section, select **Forms**, and then select your custom lead form of the *Main* type.

5. In the **Main form** pane that opens on the right, select the **Events** tab.
6. In the **On Load** section, select **+ Event Handler**.
7. In the **Configure Event** dialog box, select **+ Add library**.
8. Add the `DataHygiene/Data/salesdatahygiene_form_notification_library.js` library, and then select it in the list.
9. In the **Function** field, enter *Mscrm.LeadHygiene.DataHygieneNotificationLibrary.duplicateDetectionFormOnLoad*.
10. Select the **Pass execution context as first parameter** checkbox.
11. Select **Done**.



In the **Handlers** section, notice that the required event handler has been added to the custom lead form.

12. Save and publish the form.

    Duplicate lead detection is now enabled for the custom form. You must now enable the duplicate lead detection feature from the Sales Hub app. Learn how to enable duplicate lead detection.

See also

Enable duplicate lead detection
Manage duplicate leads

Enable email validation (preview)

Article • 07/07/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Enable email validation in Dynamics 365 Sales to remove invalid email addresses from your lead and contact records. You'll reduce email bounce rates, improve engagement, and get a better return on your sellers' time.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisite

Before you enable the email validation feature, ensure that the **AI Builder preview models** option is enabled in your organization. More information: How do I enable a Preview feature?

In which regions is email validation available?

Email validation is available in the following regions:

- Asia Pacific (APAC)
- Canada (CAN)
- Europe (EUR)
- France (FRA)
- Great Britain (GBR)
- India (IND)
- Japan (JPN)

- North America (NAM)
- Oceania (OCE)
- South America (SAM)
- Switzerland (CHE)
- United Arab Emirates (UAE)

What is email validation?

Email validation analyzes the primary email address in lead and contact records to identify the ones that can't receive email. You must enable the feature. It's turned off by default.

Email address validation looks for the following issues:

- **Incorrect syntax**: An address that doesn't contain both a username and an email domain
- **Disposable domain**: An address that contains a known disposable or temporary email domain
- **Test or spam email addresses**: An address that contains known indicators of a test or spam address in the email header or metadata, IP address, HTML code of the email, and email content and formatting
- **Expired email addresses**: An email account that has expired and can no longer receive or send email
- **Emails that bounce back**: An address that can't receive a message for any reason

Sellers can view invalid email addresses on record forms, work list items, and the **Up next** widget in sales accelerator. More information: Work with invalid email addresses

Difference between Dynamics 365 Sales and Power Apps

The email validation feature in Dynamics 365 Sales and Power Apps works on the same principles. However, there are some differences as listed below:

Scenario	Dynamics 365 Sales	Power Apps
Validation	The validation process runs dynamically and targets only the primary email address in lead and contact records. The feedback is displayed each time the form is loaded.	The validation process dynamically runs on all email address fields, providing immediate feedback. Also, validations are not

Scenario	Dynamics 365 Sales	Power Apps
	More information: View invalid email addresses	performed on addresses that are bulk imported.
Actions	Users can mark the invalid email addresses as valid. More information: Send an email to an invalid address	Users can't mark the invalid email addresses as valid.
Both features enabled in an organization	Only the primary email addresses of leads and contacts are validated according to the Dynamics 365 Sales implementation.	All other email addresses are validated based on the Power Apps implementation.

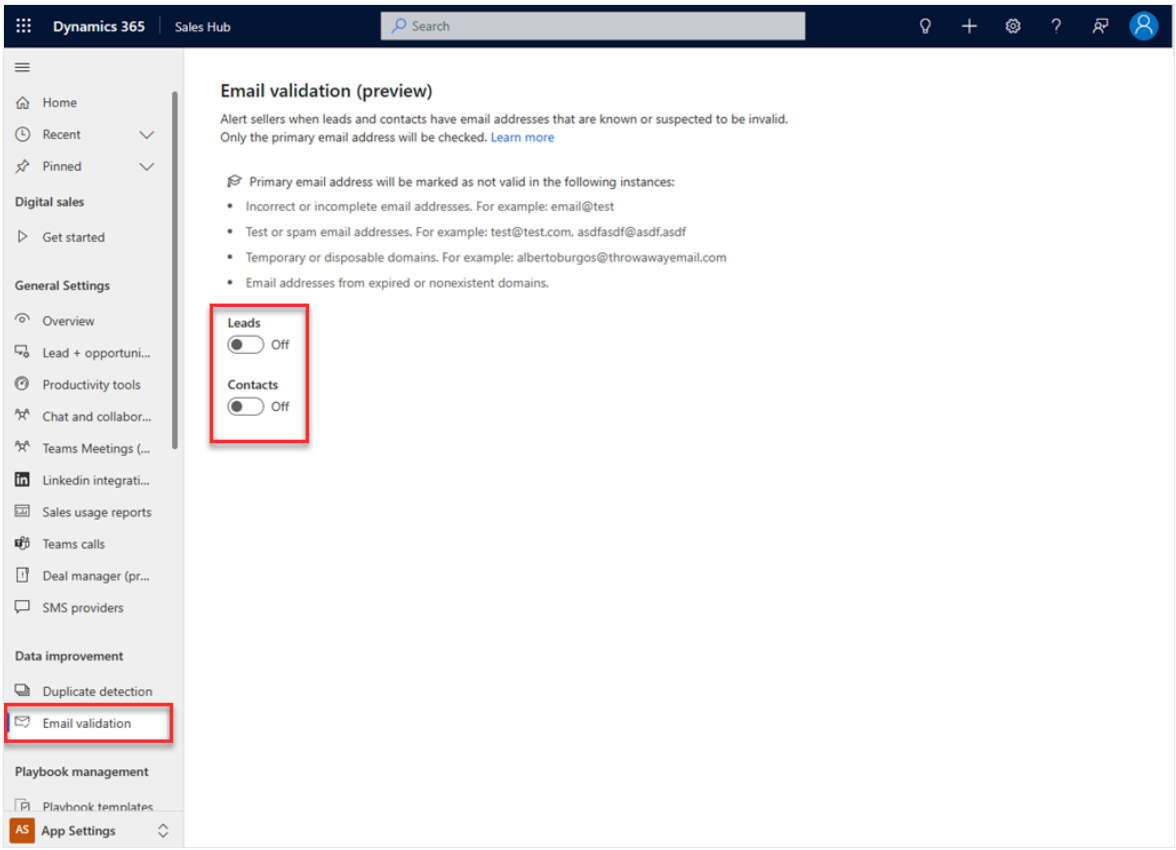
> **Note**
>
> To know more about the email validation feature in Power Apps, see **Email address validation for email columns**.

Limitations of email validation

- Email validation works only for lead and contact records.
- It checks only the primary email address in lead and contact records.
- Leads and contacts that are older than 180 days aren't validated.

Enable email address validation

1. In the Sales Hub site map, select **Change area** > **App settings** > **Data improvement** > **Email validation**.



2. Turn on email validation for leads and contacts, according to your requirements.

Email validation runs immediately on the primary email address in lead and contact records. A red envelope icon indicates an invalid email address.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Work with invalid email addresses
Enable email validation for custom forms

Enable email validation for custom forms

Article • 05/20/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

The email validation feature in Dynamics 365 Sales helps validate the primary email address of contact and lead records. By default, this feature is enabled for the main lead and contact forms in the Sales Hub app. However, if you've customized the main lead form, you must manually enable email validation.

> **Note**
>
> These customizations can be applied only to main forms of the `Contact` and `Lead` tables.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable email validation

You can add the following customizations for email validation:

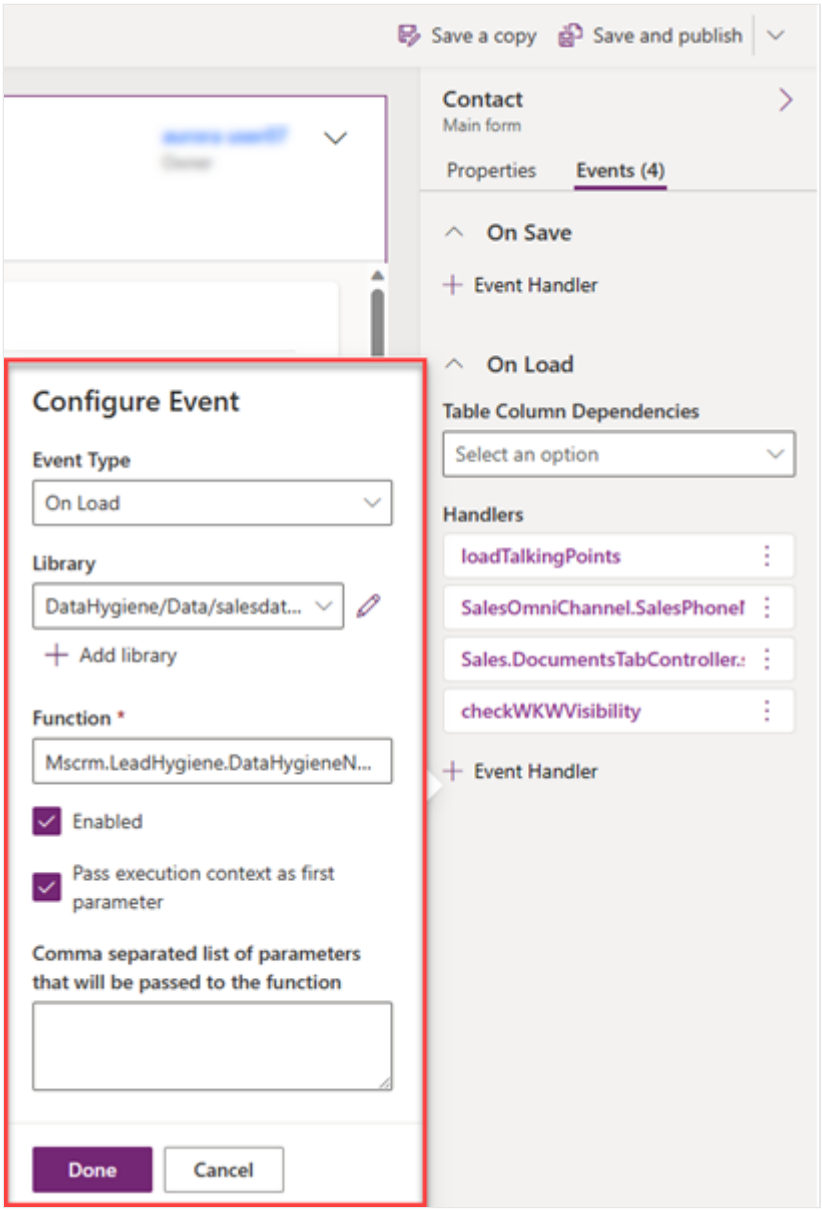
- To validate email addresses while an email is being composed, add an event handler to the OnLoad event. If an email address isn't valid, a validation message is displayed.

- To add an email validation icon to the email address field, add the email control to the custom form.

Add an event handler to the OnLoad event

> **Note**
>
> This example uses the `Contact` table. Use the same basic steps to add an event handler to the `OnLoad` event for the main lead form.

1. Sign in to the Power Apps portal.
2. Search for and select your organization's environment.
3. In the site map, select **Tables**, and then select the `Contact` table.
4. In the **Data experiences** section, select **Forms**, and then select your custom contact form of the *Main* type.
5. In the **Main form** pane that opens on the right, select the **Events** tab.
6. In the **On Load** section, select **+ Event Handler**.
7. In the **Configure Event** dialog box, select **+ Add library**.
8. Add the `DataHygiene/Data/salesdatahygiene_form_notification_library.js` library, and then select it in the list.
9. In the **Function** field, enter *Mscrm.LeadHygiene.DataHygieneNotificationLibrary.emailAddressValidationFormOnLoad*.
10. Select the **Pass execution context as first parameter** checkbox.
11. Select **Done**.



12. Save and publish the form.

    In the **Handlers** section, notice that the required event handler has been added to the form. Ensure that the email validation feature is enabled. Learn how to enable email validation.

Add the email control

You must add the email control only to the primary email address field.

> **Note**
>
> This example uses the `Contact` table. You can use the same steps to add the email control for the main lead form.

1. Open the contact form as described in the Add an event handler to the OnLoad event section.
2. In the **New Contact** form, in the **Contact Information** section, select **Email**.
3. On the **Properties** tab, in the **Components** section, select **+ Component**.
4. In the **Add component** dialog box, add the **ValidatedField_Control** component, and then select it.
5. Select the options for web, mobile, and tablet, and then select **Done**.

   > **Note**
   >
   > Verify that the **Show component on** options for **Email address (default)** are removed.

6. Save and publish the form.

The email control is added to the email address field. Ensure that the email validation feature is enabled. Learn how to enable email validation.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable email validation
Work with invalid email addresses

Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales

Article • 02/02/2023

Digital transformation is real. Across every industry vertical, companies are rethinking their business processes and reorganizing their segments. Use LinkedIn Sales Navigator to enhance key application scenarios by connecting the system of record with the LinkedIn data graph and insights. You can also build custom applications by using LinkedIn Sales Navigator to enhance business processes with data about people, organizations, and relationships.

> **Note**
>
> The LinkedIn Sales Navigator solution is also available for Dynamics 365 Sales Professional.

Unified Interface apps: Sales Navigator Controls for Unified Interface

Two flavors of LinkedIn Sales Navigator controls are available and can be placed on any desktop Unified Interface application form. You can configure your forms to show more than one control at the same time.

The **LinkedIn Sales Navigator Lead** control shows information about a LinkedIn member profile. This control has the following sections, which you can choose to show or hide:

- **Top Card**: shows information about the person like name, headline, and more. Additionally, it provides capabilities to message or save the person as a lead in Sales Navigator.
- **News (Icebreakers)**: shows the person's highlights, activities, conversation starters, and more.
- **Connections (Get Introduced)**: shows the mutual connections and allows for a warm introduction to the person.
- **Related Leads**: shows potential Sales Navigator leads who are similar to the target person and might represent the relevant stakeholders around them. On a sales scenario, this insight is crucial to identify the potential decision-makers for a deal.

The **LinkedIn Sales Navigator Account** control shows information about a LinkedIn company profile. This control has four modules, which you can choose to show or hide:

- **Top Card**: shows information about the company like company name, industry, location, and more. Additionally, provides capabilities to view the related account and save it in Sales Navigator.
- **News**: shows the latest news of this company.
- **Connections**: shows relevant connections for this company that can establish a first contact.
- **Recommended Leads**: shows the recommended potential leads in this company that may be opportunities open for the next deal.

Both controls also provide an alternate version, which takes a lookup (entity reference) attribute instead of the attributes described above.

- **LinkedIn Sales Navigator Lead lookup** control: the name of the referenced entity is used as the member's first name and last name. The string is separated by white spaces and the first component is considered the first name while the remaining components are considered last names.
- **LinkedIn Sales Navigator Account lookup** control: the name of the referenced entity is used as the company name.

The control binds to a field that is used to match the record with LinkedIn member profile or company account. Once a match is found, subsequent loads are done through the record GUID association. If the control does not load the correct profile on the first match, users can resolve the issue by finding the correct match with the provided search interface.

Dynamics CRM 2016 and Dynamics 365 apps: LinkedIn Sales Navigator for Microsoft Dynamics

Two LinkedIn Sales Navigator widgets are available to display on forms in Dynamics 365. Please refer to the link below for more information and detailed steps for installing and setting up the solution.

> ⓘ **Note**

Before April 2019, there were two separate solutions on AppSource. Now there is a single solution included out of box, however there is still some required setup to configure LinkedIn's CRM sync.

Set up the LinkedIn Sales Navigator for Microsoft Dynamics integration

See also

Install and enable LinkedIn Sales Navigator
Customize forms to show Sales Navigator controls
Work with Sales Navigator controls on forms

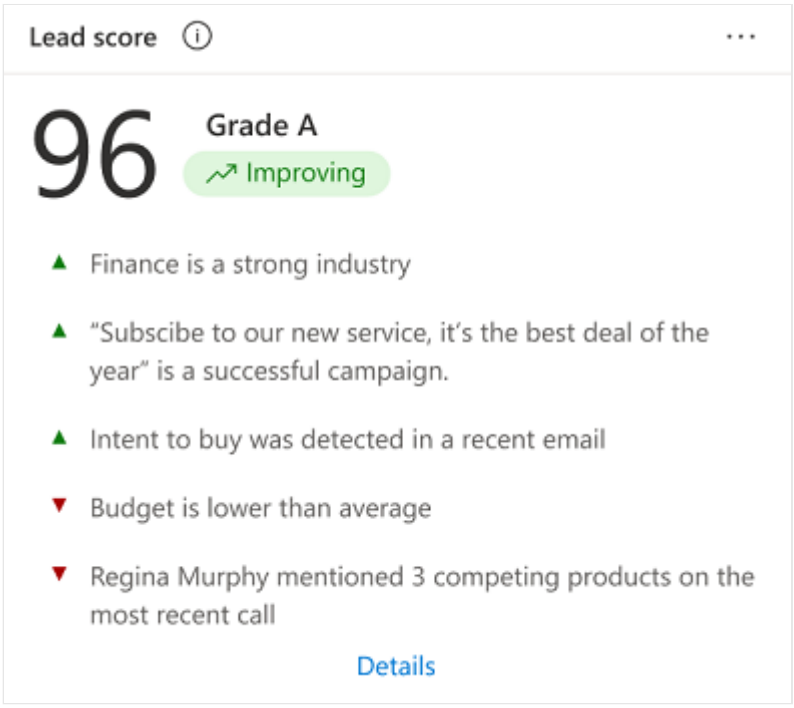
Configure predictive lead scoring

Article • 05/30/2023

Predictive lead scoring uses a predictive machine learning model to calculate a score for open leads based on historical data. The score helps sellers prioritize leads and achieve higher lead qualification rates, and reduces the time it takes to qualify a lead.

For example, say you have two leads, Lead A and Lead B, in your pipeline. The lead scoring model calculates a score of 80 for Lead A and 50 for Lead B. Based on the scores, you can predict that Lead A has a greater chance of being converted into an opportunity. Further, you can review the top influencing factors to analyze why Lead B's score is low and decide whether to improve it.

The following image shows an example of a lead scoring widget:



Historical data collection begins when you create a scoring model. Historical data is stored in the data lake for analysis. If your Dynamics 365 Sales subscription expires or your org is deleted, the historical data is deleted after 30 days.

If you have a Dynamics 365 Sales Enterprise license, you can enable predictive lead scoring in lead and opportunity scoring quick setup. You'll get 1,500 scored records per month.

License and role requirements

Requirement type	You must have

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

- Advanced Sales Insights features must be enabled.
- You need to have enough leads to train the model based on past data. Your organization must have created and closed at least 40 qualified and 40 disqualified leads during the time frame selected in the **Train with leads from the past** field of the scoring model. The time frame ranges from three months to two years. The more leads you can include to train the model, the better the prediction results will be.

  > **Note**
  >
  > If you're planning to use a business process flow for your model, then leads that have abandoned the selected business process flow will not be considered for training, scoring, and for establishing the minimum requirement for model creation.

The system takes about four hours to sync the data with the data lake. If you've closed leads recently, the model won't consider them right away.

Create your first scoring model

> **Important**
>
> - If you're using a model that you created in a version of Dynamics 365 earlier than 2020 release wave 2, **delete the model** before you create a new one. Otherwise, the previous version of the model will be applied to all leads in your organization, and new models won't have any effect on the leads.
> - As of 2020 release wave 2, the application writes the lead scoring data to the **msdyn_predictivescore** table and no longer writes to the lead table. Both lead and opportunity scoring use the **msdyn_predictivescore** table.

A scoring model defines the criteria for choosing leads for training and scoring. If your organization follows different sales practices across different regions or business units, you can create models and unique training sets for each of them.

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.

2. On the site map under **Predictive models**, select **Lead scoring**.

   If your organization doesn't have at least 40 qualified and 40 disqualified leads that were created in the time frame identified in the **Train with leads from the past** field, you can't create a scoring model. If there are enough leads, the app generates a model by default.

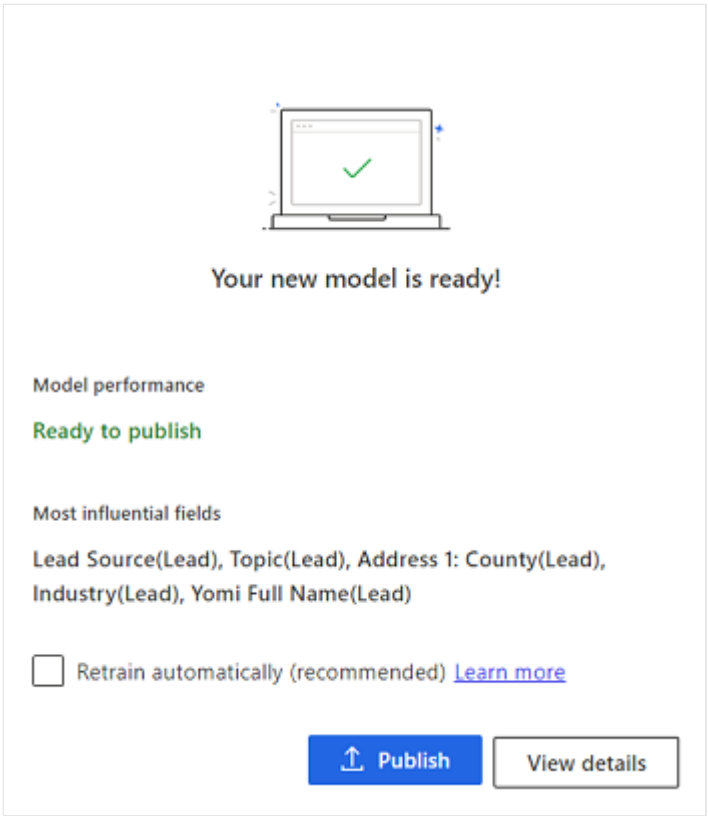
3. On the **Predictive lead scoring** page, change the values for fields such as business process flow, filter column, and so on if needed. For more information about these fields, see the next section Add a model. When you're done, select **Get started**.

Allow a few minutes for the app to train your model. You can leave the page and come back later.

The application uses standard attributes to train the model. You can edit the model later to include custom or intelligent attributes.

Publish your model

1. When your model is trained and ready to publish, the **Predictive lead scoring** page displays a confirmation:



2. If the model is trained but not ready to publish, the **Model performance** field displays **Not ready to Publish**.

3. To retrain the model every 15 days, select **Retrain automatically**.

4. Select **Publish** or **View details**.

    - If the model is ready to publish and you're ready to apply it, select **Publish**.

      The model is applied to leads that match the criteria specified in the model configuration. The lead score appears in the **Lead score** column in views and in a widget in the lead form.

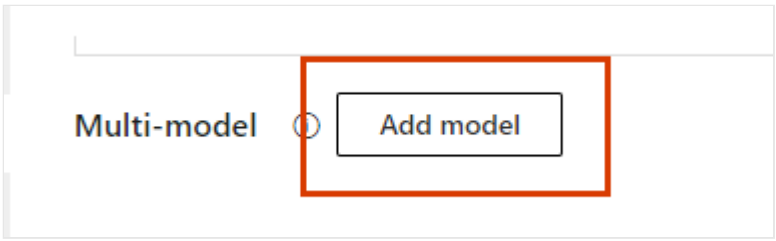
    - To view the model's accuracy and performance before you publish it, or if the model isn't ready to publish and you want to know why, select **View Details**, and then select the **Performance** tab.

      The app determines that the model isn't ready to publish if its accuracy falls below a threshold value, the **Area under curve (AUC) score**. You can still publish the model if you like. However, it will perform poorly.

Add a model

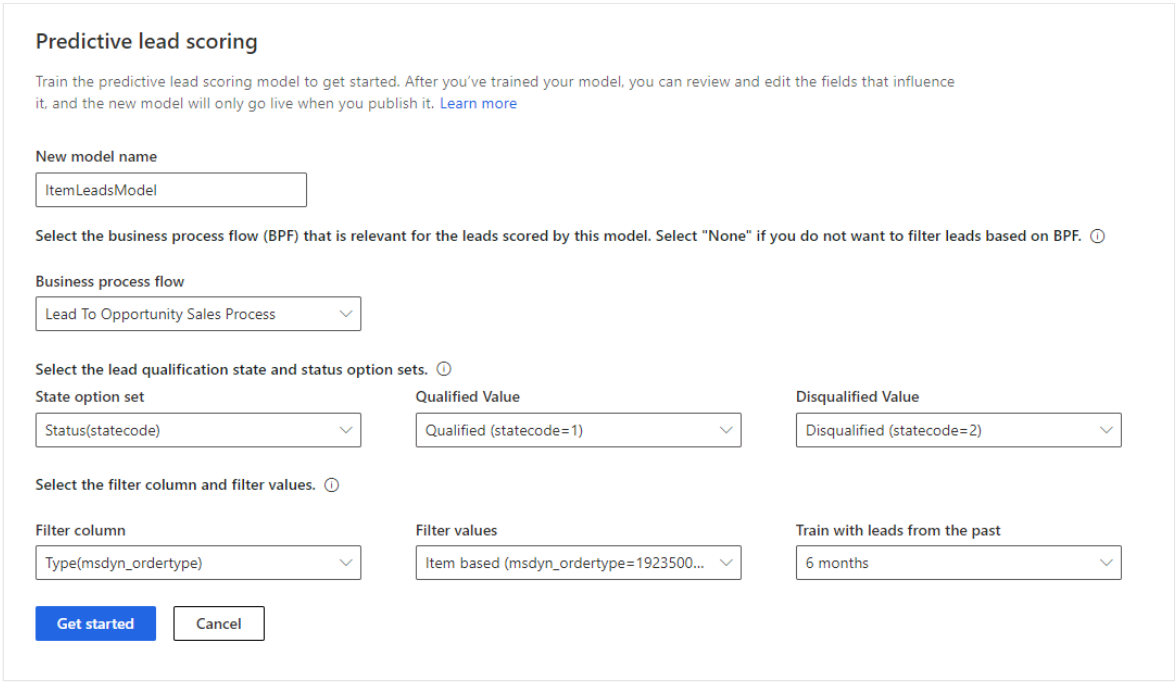
You can create up to 10 models, both published and unpublished, for different sets of leads. The app warns you if you try to create a model that might score the same leads as an existing model.

1. At the bottom of the **Predictive lead scoring** page, select **Add model**.



> **Note**
>
> You won't see the **Add model** button if you haven't created at least one scoring model.

The **Predictive lead scoring** page opens with default values.



2. In the **New model name** box, enter a name that contains alphanumeric characters. Underscores are allowed, but not spaces or other special characters.

   By default, the name is **LeadScoring_<*YYYYMMDD*><*Time*>** (for example, **LeadScoring_202009181410**). The date and time are based on Coordinated Universal Time (UTC).

3. In the **Business process flow** list, select a flow that's relevant for the leads that you're generating the model for. Leads that have abandoned the selected business process flow will not be considered for training, scoring, and for establishing the minimum requirement for model creation.

The list displays all the business process flows that are defined for leads in your organization.

To display custom business process flows in the list, enable **Change Tracking** for the business process flow entity. When you generate the model, custom business processes are automatically enabled to sync the data to the data lake for analysis.

4. In the **State option set** list, select the option set in which the status of the leads is defined.

5. Select the corresponding values in the **Qualified Value** and **Disqualified Value** lists, respectively.

   The out-of-the-box **Status** state option set defines the values as **Qualified** and **Disqualified**. You can select a custom option set if one is defined.

6. Select **Filter column** and **Filter values** to specify the leads that the model must score.

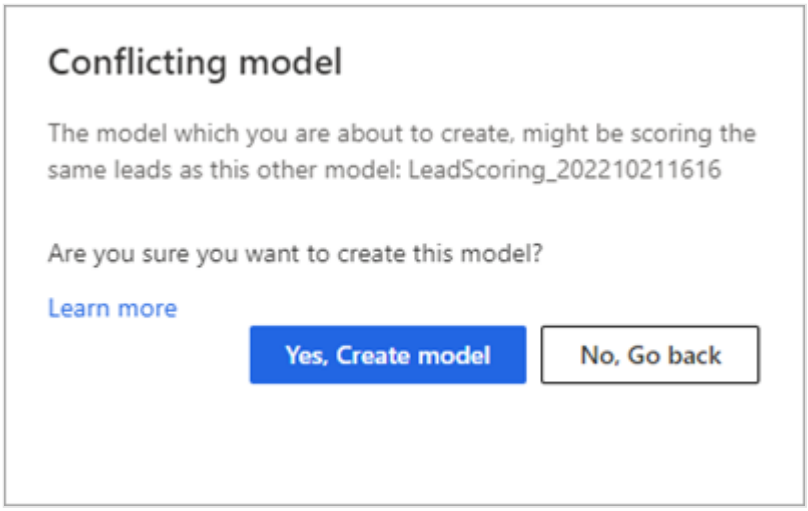
   To filter based on multiple columns, create a calculated field with the required columns, and then select the calculated field in the **Filter column** list.

7. In the **Train with leads from the past** list, select a time period for the training set. The default is two years.

   Your organization must have a minimum of 40 qualified and 40 disqualified leads that were created and closed during the selected period. The model analyzes closed leads from the selected period and uses that data to score open leads from the past two years.

   If you don't have the minimum closed leads in the chosen time period, the **Get started** button is disabled. Select another time period that has enough closed leads to train the model.

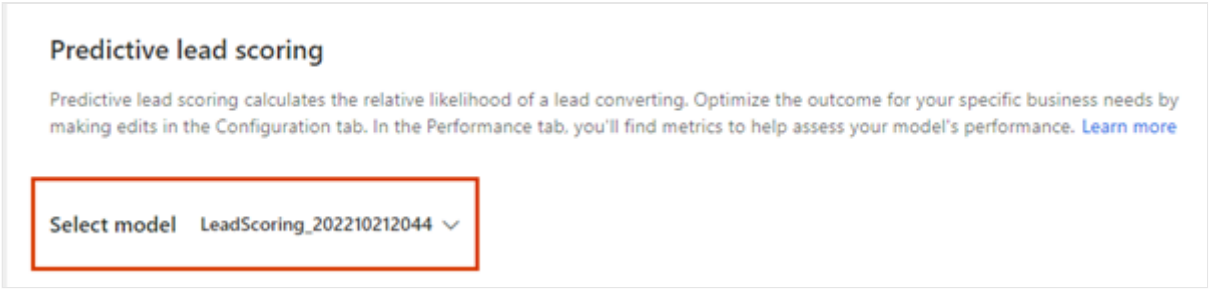
8. Select **Get started**. You'll get a warning message if the model is a duplicate of an existing model and is scoring the same set of leads. You can choose to create the model anyway or change the configurations to let the model score unique set of leads.



The system will take a few minutes to train your model.

9. When your model is trained, publish it or view its details.

If you create multiple scoring models, use the **Select model** list on the **Predictive lead scoring** page to select a model to view.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

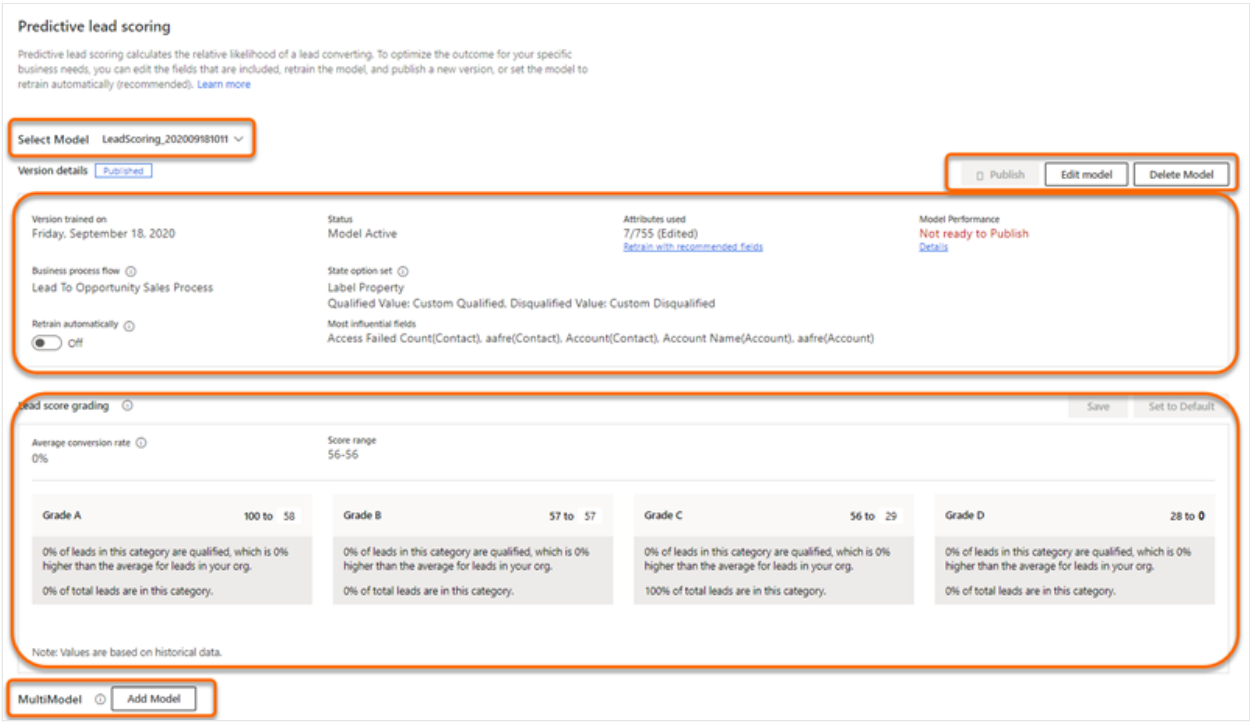
System and application users who can push data to Dataverse
Edit and retrain a lead scoring model
Prioritize leads through scores
Predictive lead and opportunity scoring

Understand the predictive lead scoring configuration page

Article • 11/30/2022

The **Predictive lead scoring** page is where you'll create, edit, publish, and delete lead scoring models. It's organized into the following sections:

- Select a model
- Actions you can perform on the model
- Version details
- Lead score grading
- MultiModel

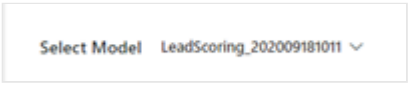


License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Select a model

If you've created two or more scoring models, use the **Select Model** list to select one of them to view, edit, or delete. The list contains both published and unpublished models. The list control doesn't appear if you have one or zero models.

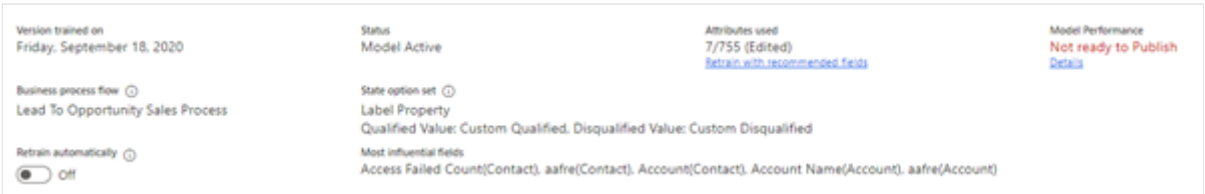


Actions you can perform on the model

- **Publish**: Publish a model so sellers in your organization can access the My Open Leads Scored system view and the Lead score widget on lead forms. After you publish a model, this button appears dimmed and is available only after you retrain or edit the model.
- **Edit model**: Update or add fields that affect the prediction accuracy score. Edit and retrain a model when you want to change the fields to consider or include a unique business process.
- **Revert version**: Return a retrained model to its previous version when it isn't satisfactory or doesn't meet your organization's requirements. This action is only available when you've retrained a model but haven't published it yet.
- **Delete model**: Delete a model your organization no longer requires or that duplicates another model. This button is only available for published models.

Version details

This section shows information about the model's status and performance.

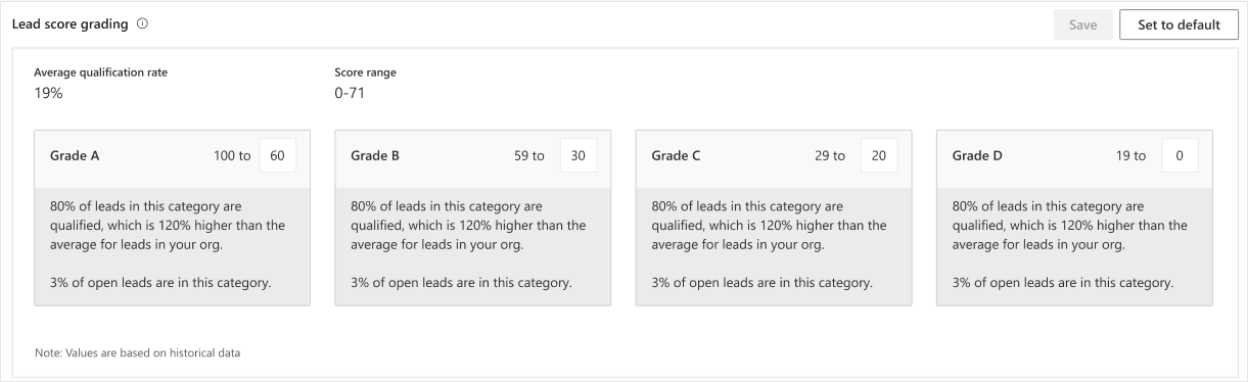


Parameter	Description
Version trained on	The date the model was last trained.
Status	Whether the model is active or inactive.

Parameter	Description
Attributes used	The number of attributes that were used to train the model out of the total number of attributes available. If you're not satisfied with the outcome of the trained model, you can select **Retrain with recommended fields** to retrain the model with the standard (out-of-the-box) attributes. **Edited** appears next to the number if the attributes were custom-selected.
Model performance	The model's accuracy and projected performance are based on the data available and selected to train the model. **Note**: The range of the accuracy score is defined based on the area under the curve (AUC) metric. - **Ready to publish** indicates the model's accuracy is above the range, and you can expect the model will perform well. - **OK to publish** indicates the model accuracy is within range, and you can expect the model might perform reasonably well. - **Not ready to publish** indicates the model's accuracy is below the range, and you can expect the model will perform poorly.
Business process flow	The business process flow that's applied on the leads that are scored by this model.
Filter column and filter values	Which column and which values correspond to the leads that this specific model should score when you have multiple models.
State option set	The option set that's used to qualify and disqualify leads in this model.
Retrain automatically	Sets the model to be automatically retrained every 15 days.
Most influential fields	The top five attributes that most affect the outcome of the prediction accuracy score.

Lead score grading

When you publish a model, it grades the leads that are in your organization's pipeline according to the range defined in this section. Each lead in the pipeline is graded A, B, C, or D, according to the lead score. Leads in the top score range are graded A while leads in the lowest score range are graded D.



You can configure the grading range according to your organizational requirements. When you change the lead score range for a grade, the maximum range value for the adjacent grade changes automatically in accordance with the change in the minimum value. For example, if you change the minimum range value score for **Grade A** to 51, the maximum lead score range for **Grade B** changes to 50.

MultiModel

Select **Add model** to create a model for a line of business that might use different leads than your first model. The **Add model** command is disabled when you reach the maximum limit of 10 models (both published and unpublished).

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

View the accuracy and performance of predictive scoring models

Article • 12/01/2022

Knowing how accurate a predictive scoring model is helps you decide whether the model is ready for use or needs to be fine-tuned for higher accuracy. It also helps you convince your leadership team and sellers to adopt the model for improved business outcomes.

The metrics described in this article apply to both opportunity scoring and lead scoring.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Factors that influence accuracy

A predictive scoring model calculates the likelihood that an opportunity or a lead will result in a sale. The accuracy of the model depends on the following factors:

- The quality and amount of the data available for training the model
- The business process flow and filters that you select
- The stages and attributes you select, if the model uses per stage modeling

The model is trained using 80% of the closed opportunities or leads in the training dataset. It's validated using the remaining 20% as a test dataset, which consists of the most recent records. The model's accuracy is calculated using the validated test dataset based on parameters such as true positives, false positives, and so on.

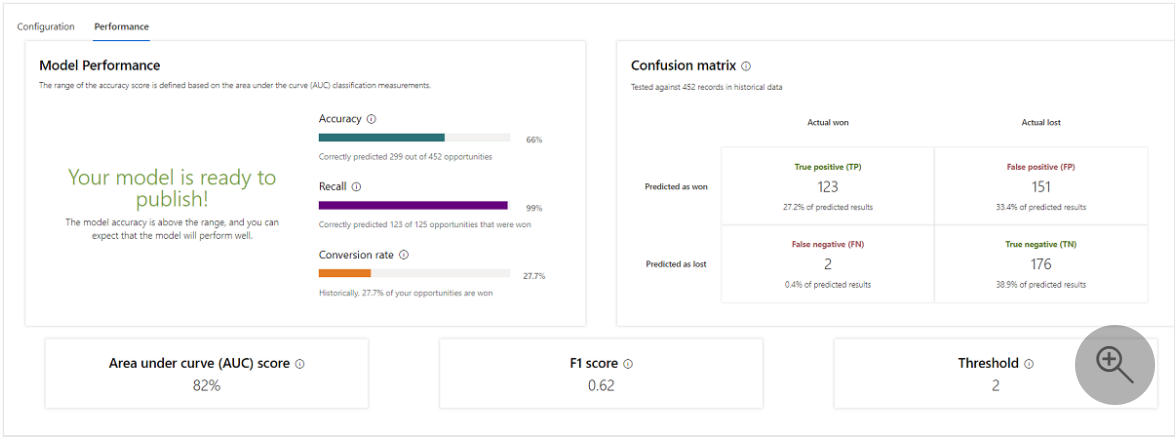
View accuracy and performance metrics

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.

2. On the site map under **Predictive models**, select **Opportunity scoring** or **Lead scoring**.

3. In the **Select model** list, select a model.

4. Select the **Performance** tab.



The **Performance** tab displays the following metrics. If you don't see any metrics in the **Performance** tab, edit and retrain an opportunity scoring model.

- **Model Performance**: Specifies whether the model is ready to publish based on the following parameters:

  - **Accuracy**: How often the model made correct predictions, either positive or negative. This metric is most useful when the dataset is balanced, and the cost of false positives and false negatives is the same. The accuracy score is calculated using the following formula:

    Accuracy = (TP + TN) / (Total number of opportunities or leads scored) *100

  - **Recall**: How often the model predicted a positive outcome correctly compared to the actual positives. A low recall score means the model is predicting fewer true positives. The recall score is calculated using the following formula:

    Recall = TP / (TP + FN) *100

  - **Conversion rate**: The percentage of opportunities or leads that were qualified or won per historical data, or the likelihood that an opportunity or lead will convert. The model uses this value to determine how an attribute will influence the predictive score. The conversion rate is calculated using the following formula:

    Conversion rate = (TP + FN) / (Total number of opportunities or leads scored) *100

- **Confusion matrix**: How well your model predicted the outcomes when it was tested against historical data. The matrix displays the number of true positives, true negatives, false positives, and false negatives.

Metric	Predicted	Actual
True positive (TP)	Yes	Yes
True negative (TN)	No	No
False positive (FP)	Yes	No
False negative (FN)	No	Yes

- **Area under the curve**: The area under the curve (AUC) score of the model. The AUC score determines the probability that a model will rank a randomly chosen positive instance (a won opportunity or a qualified lead) higher than a randomly chosen negative one (a lost opportunity or a disqualified lead). A model with a higher AUC is better at predicting true positives and true negatives.

- **F1 score**: The F1 score calculated based on the model's precision and recall scores. The F1 score determines the quality of the model even when the data is unbalanced.

- **Threshold**: The threshold at which the lead or opportunity is considered qualified or won. For example, if the threshold is 45, opportunities with a score greater than 45 will be predicted as won. The threshold is selected to optimize the F1 score.

Example: Model performance metrics

Let's look at the prediction results for a sample dataset of 1,000 opportunities:

Data	Number of opportunities
True positive	650
False positive	200
True negative	100
False negative	50

The model predicted 850 (TP + FP) opportunities would be won; however, only 650 (TP) opportunities were actually won. Similarly, the model predicted 150 (TN + FN) opportunities would be lost, but only 100 (TN) opportunities were actually lost.

The following table shows the metrics for the data.

Metric	Score
Accuracy	(650 + 100) / 1,000 = 75%
Recall	650 / (650 + 50) = 92%
Conversion rate	(650 + 50) / 1,000 = 70%

Improve model performance

If your model isn't ready to publish or isn't performing well, try the following steps to improve its scores.

- Review the attributes it uses.
- View attribute insights to understand their influence on the model's overall prediction.
- Ignore empty values for attributes that have a higher percentage of empty values and may be contributing to false positives or false negatives.
- Include intelligent fields to help a lead scoring model distinguish between factors that improve or harm the score.
- Use per stage modeling in an opportunity scoring model to choose attributes to apply to each business process stage.
- Refine the filter criteria, time period for training data, or other model configurations. For example, if you've chosen two years as the time period for training data and there are too many test or incorrect records during that period, choose a shorter time period, such as six months or one year, when the quality of your data is better.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure predictive lead scoring
Configure predictive opportunity scoring

Edit and retrain a lead scoring model

Article • 05/11/2023

When the prediction accuracy of a lead scoring model doesn't meet your expectations, or a model duplicates an existing one, you can edit the attributes it uses and retrain it.

> **Note**
>
> Models that were published before the real-time scoring feature was rolled out need to be edited and published again to be used for real-time scoring. The real-time scoring feature is being rolled out in a phased manner across different geographic regions. To verify whether the feature is available in your region, look for version 9.0.22121.10001 in the **Latest version availability** section. The feature will be enabled one week after the feature rollout. Real-time scoring will be available only after its enabled for your region.

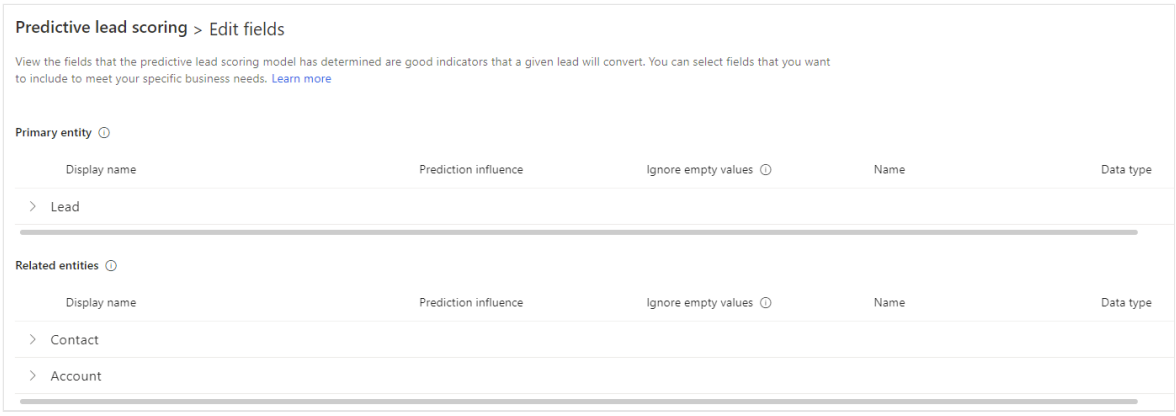
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Edit a model

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.
2. On the site map under **Predictive models**, select **Lead scoring**.
3. On the **Predictive lead scoring** page, open the model and make sure that **Retrain automatically** is turned off.
4. Select **Edit model** and perform any of the following actions:
    - Select an attribute to view insights about its influence on the model.

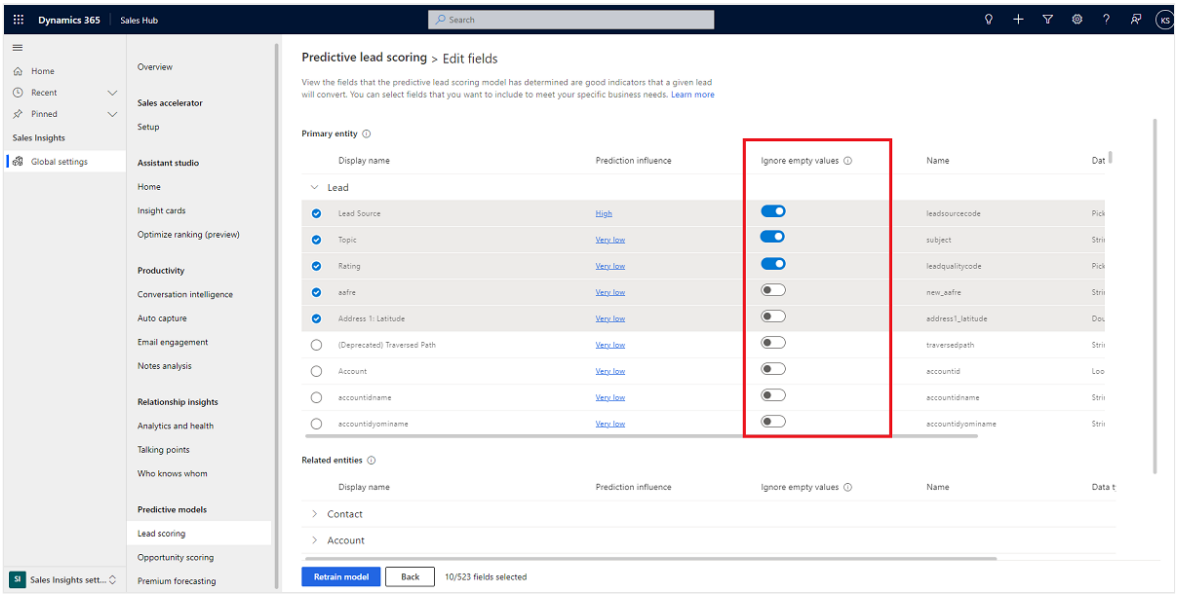
- Select attributes that you want the model to consider—including custom attributes—from the lead entity and its related entities (contact and account) to train the model.
- Select intelligent fields to include in the model.



> **Note**
>
> The scoring model doesn't support the following types of attributes:
>
> - Attributes on custom entities
> - Date and time–related attributes
> - System-generated attributes such as leadscore, leadgrade, version number, entity image, exchange rate, and predictive score ID

5. (Optional) Scroll to the right of the attributes list and turn on **Ignore empty values**.

   By default, empty values in the attribute are included for training the model. If you notice that empty values are acting as detractors or are producing false positives, turn on **Ignore empty values**.



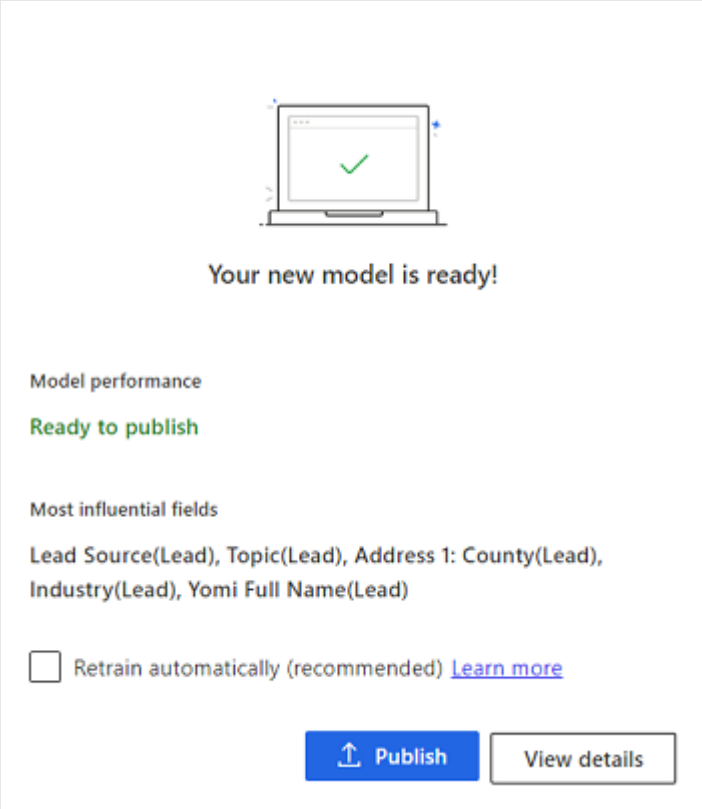
The **Ignore empty values** option is disabled for the following type of attributes:

- Attributes that are automatically validated for empty values, such as firstname_validation_engineered.
- Attributes that affect the score based on whether the value exists or not, such as zipcode or business phone.

When you turn on **Ignore empty values** for an attribute, the scoring widget indicates that the score is calculated after excluding blank values.

6. Select **Retrain model**.

   Allow a few minutes for the model to be retrained. When it's ready, you'll receive a message like this one:



7. If you want the application to automatically retrain the model after every 15 days, select **Retrain automatically**.

8. Perform one of the following actions:

   - If you're ready to publish, select **Publish**. The model is applied to leads that match the criteria specified in the model configuration. Users can see the lead scoring in their views under the **Lead score** column and a widget in the lead form. More information: Convert leads into opportunities

   - If you want to verify the model's accuracy, select **View Details** and then select the **Performance** tab. For more information, see View the accuracy and

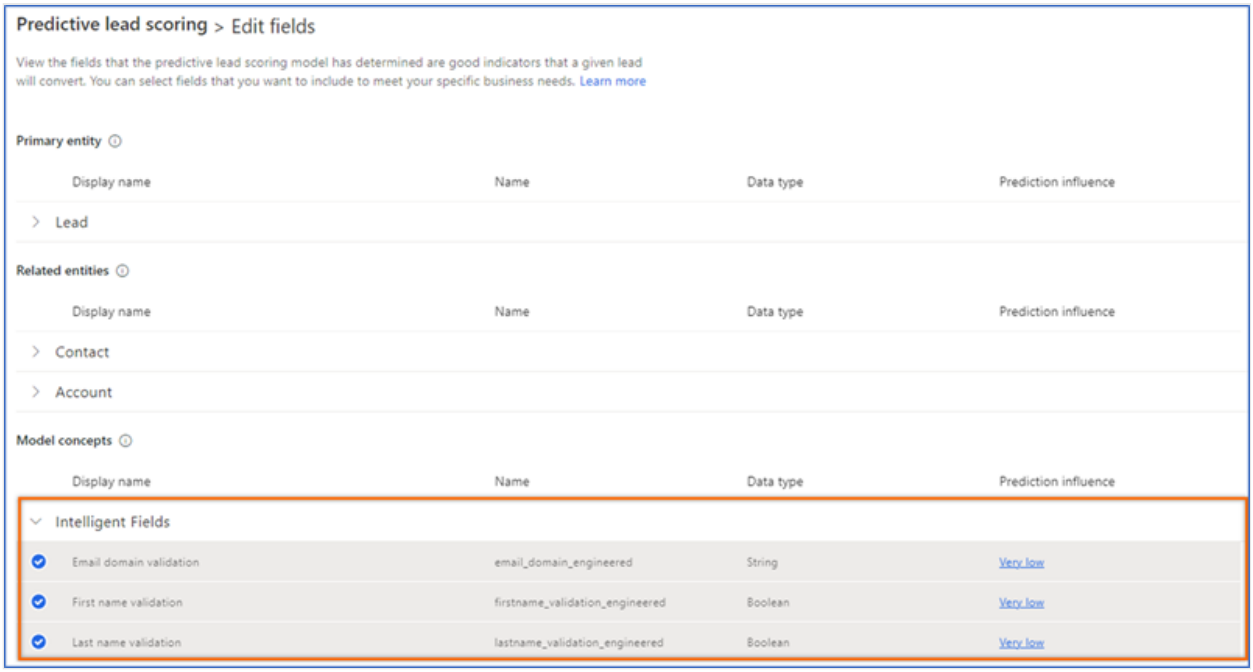
performance of a predictive scoring model.

- If the accuracy of the retrained model aren't satisfactory, edit the attributes and retrain the model. If you want to go back to the previous version, revert to that version.

Select intelligent fields

Intelligent fields help the model better understand records and distinguish between factors that improve score and those that harm it. For example, the model can distinguish between business email addresses and personal email addresses by identifying and grouping email types using data that's available in the application and intelligence that has been added to the model. Through this identification, the model can generate detailed insights about how the groups of fields affect predictive scores.

Edit the model as described in the previous section to choose the intelligent fields that you want your model to use. The following image illustrates how you can select intelligent fields.



Select the link in the **Prediction influence** column to view insights about the field's influence, such as its qualification rate and the most influential factors, both positive and negative, for the rate. Learn how to view the influence of an attribute on the model.

You can select the following fields: **Email domain validation (Email)**, **First name validation (First name)**, and **Last name validation (Last name)**. The model always gives preference to:

- Email addresses that are part of a business domain

- First and last names that contain alphanumeric characters and no special characters

By default, intelligent fields are considered while training a model by using out-of-the-box values. If the outcome of the intelligent fields is satisfactory, the model includes the fields to train; otherwise, the fields are ignored. However, even if the outcome is unsatisfactory, you can still choose to include the intelligent fields to train the model if necessary.

> **Note**
>
> Intelligent fields aren't available in the lead entity or its related entities, contact and account.

Retrain a model

Retrain a model when its prediction accuracy score doesn't meet your organization's standards, or the model is too old. Typically, retraining increases a model's prediction accuracy score. The application uses the latest leads in your organization to train the model so that it can provide more accurate scores to your sellers.

For better prediction accuracy scoring, retrain a model after the data in your organization is refreshed.

You can retrain a model automatically or manually.

Automatic retraining

Automatic retraining allows the application to retrain a model every 15 days. This allows the model to learn from the latest data and improves its prediction accuracy score.

To retrain a model automatically, go to the model's **Predictive lead scoring** page and select **Retrain automatically**. By default, this option is turned on when a model is published.

Depending on the model's accuracy, the application makes an informed decision whether to publish or ignore the retrained model. The application automatically publishes the model in the following scenarios:

- When the accuracy of the retrained model is equal to or greater than 95 percent of the accuracy of the active model.
- When the current model is more than three months old.

Otherwise, the application keeps the current model.

Manual retraining

You can retrain a model manually in the following cases:

- You want to edit the model for better accuracy and retrain it.
- You've turned off **Retrain automatically**.

In both cases, you have to edit the model to trigger manual retraining.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

View the influence of an attribute on the model

Article • 11/30/2022

When you define a predictive scoring model, you'd like to know how each attribute influenced the prediction score. Based on this information, you can understand:

- Why certain attributes carry more prediction influence than others
- How the attribute values compare to the attribute global qualification rate
- How the model harnesses your data to drive predictive scores

Although the following examples refer to leads, this article applies to both opportunity scoring and lead scoring.

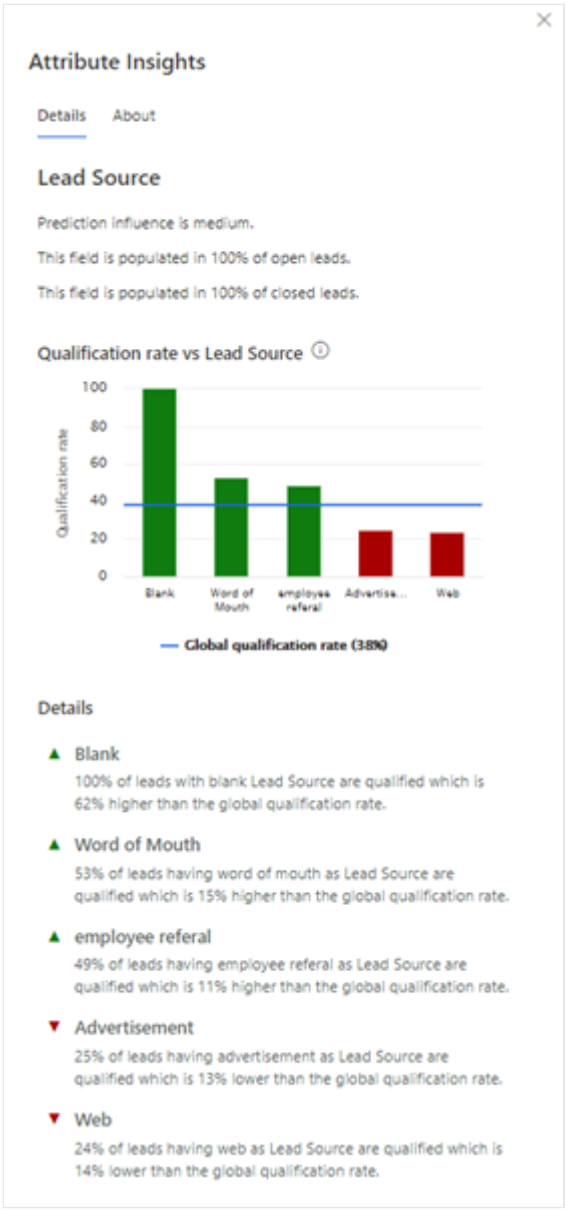
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

View attribute insights and influence

1. Edit a model.
2. On the **Edit fields** page, select the attribute for which you want to view insights, either from **Primary entity** or **Related entities**.

   The **Attribute Insights** pane is displayed on the right side of the page. The following image shows an example of the **Attribute Insights** pane for the **Lead Source** attribute.



The **Attribute Insights** pane displays detailed information about an attribute, such as its qualification rate and the most important reasons—both positive and negative—for that rate. You can also connect the attribute value's relative impact on the score with the data input behaviors of your sellers and how that might affect the accuracy of the predictive score.

The insights displayed on the **Attribute Insights** pane are based on your organization's data and how it correlates to qualified outcomes. For example, when a lead has an attribute value that correlates with a qualification rate above the attribute's global qualification rate, the lead's predictive score increases. When the qualification rate for a lead is below the attribute's average, the predictive score decreases.

The **Attribute Insights** pane is divided into the following sections:

- A summary section with the prediction influence of the attribute, how many times the attribute is populated in open and closed leads or opportunities, and the reason the attribute isn't automatically selected to create the model.

- A graph that illustrates how each value of the attribute contributes to the qualification rate. In the example above, the lead source values **Blank**, **Word of Mouth**, and **Employee referral** perform better than the average, and **Advertisement** and **Web** perform below the average. The average is represented by a blue line and is calculated based on the following formula:

  Global qualification rate for leads = (Total number of leads qualified in your organization) / (Total number of qualified + disqualified leads through this attribute) *100

  Global qualification rate for opportunities = (Total number of opportunities won in your organization) / (Total number of won + lost opportunities through this attribute) *100

  Hover over a bar to view a summary of the value, such as the qualification rate and the number of open and closed leads or opportunities. The qualification rate for a value of the attribute is calculated based on the following formula:

  Qualification rate for a value of the attribute = (Total number of leads or opportunities qualified with the given value in the attribute) / (Total number of closed leads or opportunities with that value in the attribute) *100

  For example, if leads with high budget have a 42 percent qualification rate, the formula is:

  (Total number of leads with high budget that are qualified) / (Total number of leads with high budget that are closed) *100 = 42

  > **Note**
  >
  > Calculations are based on the past two years of data at the time the model is trained and might not represent current data. Also, if the model has filters, calculations are done after the data is filtered.

- A **Details** section that provides reasons why the values are trending as they are in the graph. If there isn't enough data for attributes from related entities, the application doesn't display the insights.

- The **About** tab provides more information about the attribute insights.

> **Note**

Attribute insights are updated when the model is retrained either manually or automatically. Data for attribute insights isn't available for models that were created before March 2021. We suggest that you retrain—or enable the option to automatically retrain—the model to view attribute insights.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Manage duplicate lead scoring models

Article • 11/30/2022

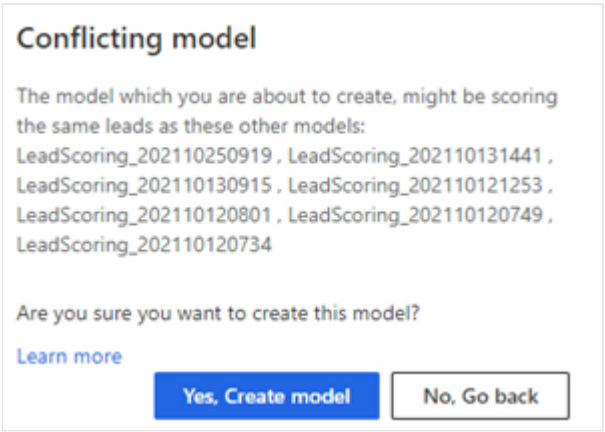
When you create multiple predictive scoring models, it's important to configure them so that they don't score the same leads because it's difficult to identify which model scored a lead. If you create or edit a model that might duplicate an existing one, you'll receive a warning. You can ignore the warning and create the model anyway, or go back and change the model's configuration.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Avoid a duplicate when you're creating a model

When you create a model and select **Get started**, if the model duplicates one or more existing models, you'll receive a warning like this one:



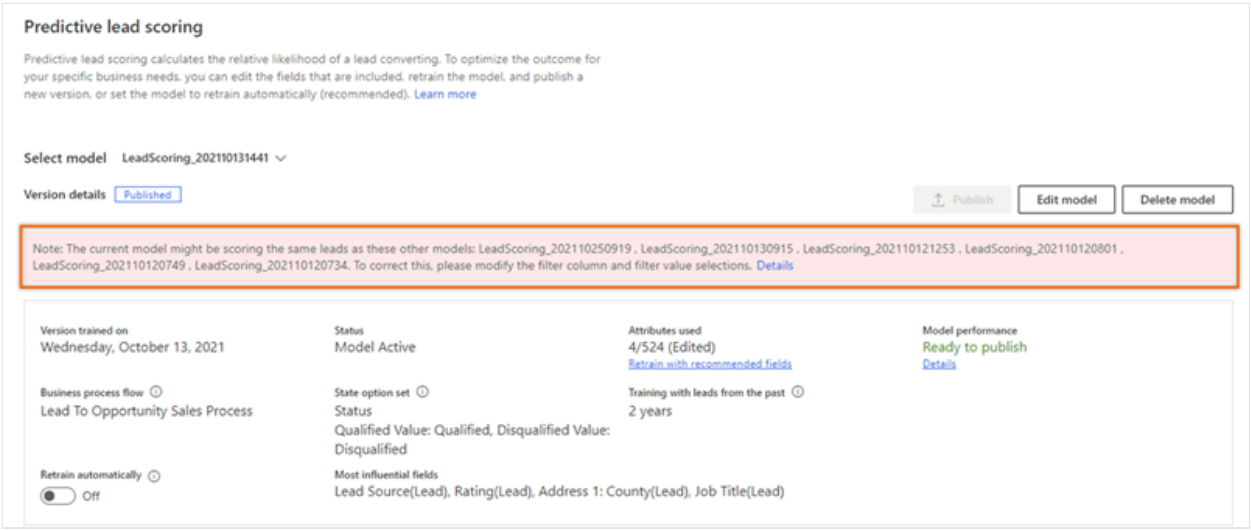
- Select **No, Go back** and change the filter column and values so that the model is scoring unique leads.

  -Or-

- Select **Yes, Create model** with the understanding that it might be harder to identify the leads that are being scored by this model.

Delete a duplicate published model

When you open a published model, if the model duplicates one or more existing models, the page will include a note like this one:



Edit the model so that it scores unique leads or delete it.

Delete a model

You can delete a scoring model when it's no longer required in your organization or it's a duplicate of an existing model. You can have up to 10 models—both published and unpublished—simultaneously.

1. In **Sales Insights settings** > **Predictive models** > **Lead scoring**, open the **Predictive lead scoring** page.
2. Select a model in the **Select model** list. Make sure **Retrain automatically** is turned off.
3. Select **Delete model**.
4. When you're asked to confirm, select **Delete**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

Add the lead scoring widget to a form

Article • 11/30/2022

By default, the predictive lead scoring widget is available only in the out-of-the-box **Sales Insights** form. If you're using a customized form for leads, you can add the predictive lead scoring widget to it.

Important

- You can add a lead scoring widget to a form only in Unified Interface apps.
- You can't use the legacy form designer to add a lead scoring widget to a form.

License and role requirements

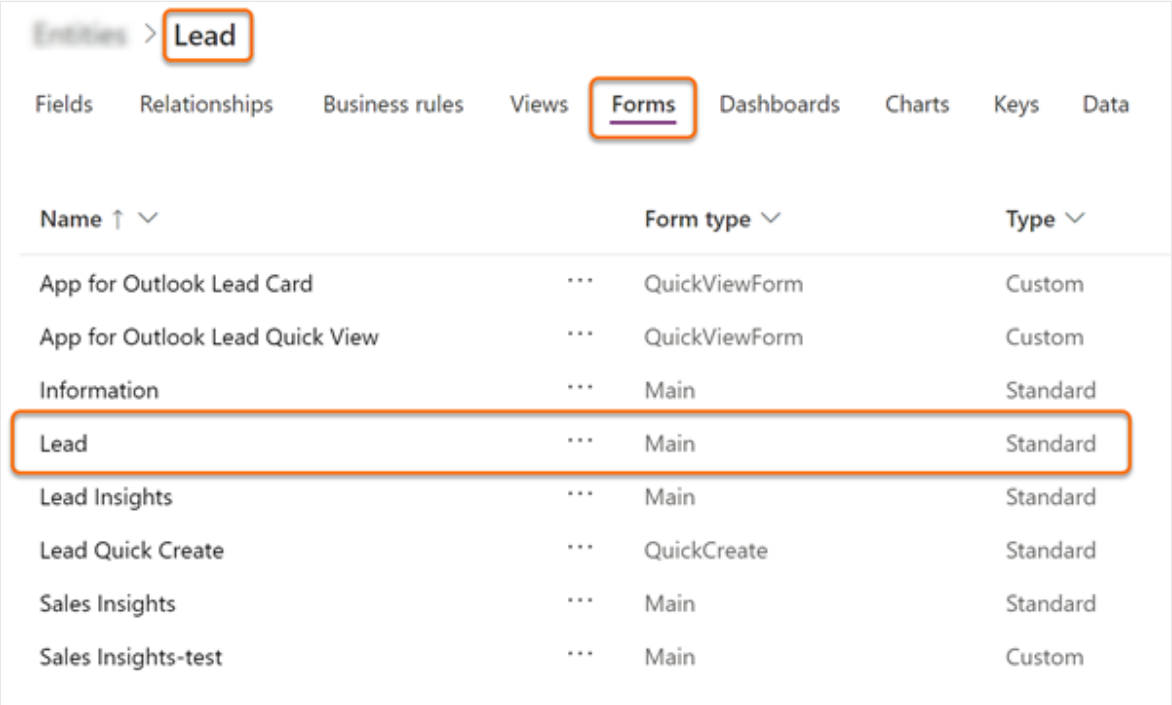
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add the lead scoring widget to a custom form

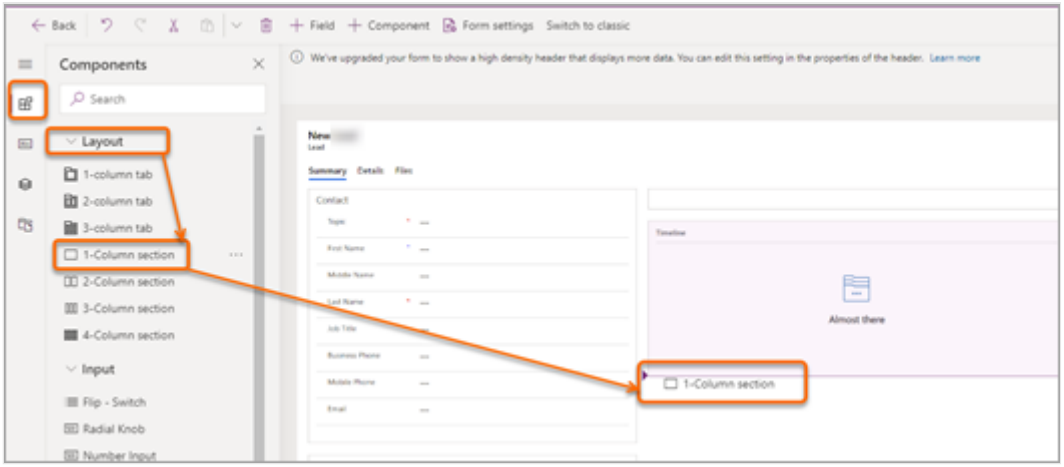
1. Sign in to the Power Apps portal and select an environment.
2. Select **Data** > **Tables**.
3. Open the **Lead** table, select the **Forms** tab, and then select a main form to add the widget to.

   Note

   If the table to which you want to add the widget isn't listed, in the upper-right corner of the page, change the filter to **All**.

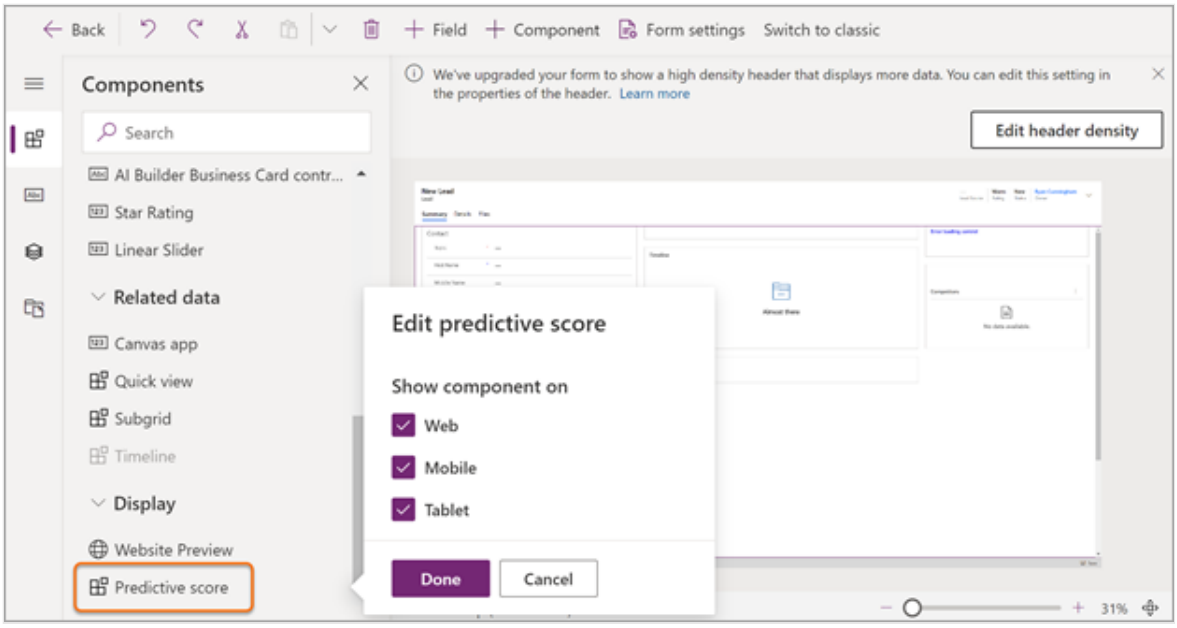


4. In the form designer, select **Component** > **Layout** > **1-Column section** to add a placeholder for the widget.



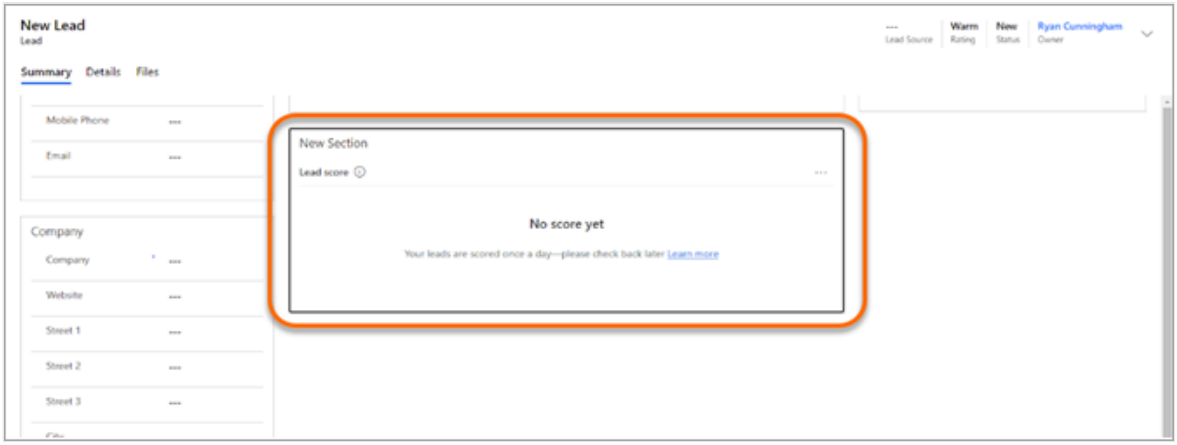
5. With the placeholder column selected, select **Display** > **Predictive score**.

> **Note**
>
> Make sure the placeholder column is selected. If it isn't, the widget will be added at a random place in the form.



6. In the **Edit predictive score** window, select **Done**.

   The predictive score widget is added to the form, as shown in the following image:



7. To hide the **New section** label, select the **Properties** tab of the **New Section** settings pane, and then select **Hide label**.

8. Save and publish the form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Enable focused view and set it as default

Article • 08/07/2023

In the focused view, sellers can view and manage their CRM records and their associated activities, on one page. This view makes it easier for sellers to stay focused on their tasks and reduces the need to navigate between multiple screens. It also allows sellers to better organize and prioritize their tasks.

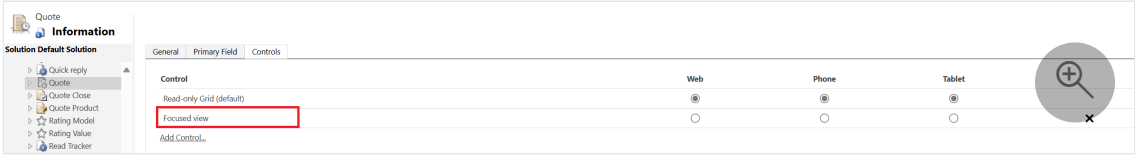
To enable focused view and set it as default

The focused view is enabled by default for contact, account, lead, and opportunity entities. However, you must enable it manually for all the other entities. You can also set it as the default view for any entity so that sellers don't have to switch to the focused view each time they access their entity list.

> **Note**
>
> - When you set the focused view as the default view, users can't switch to the list view. If users must be able to use both views, set the list view as the default view.
> - Focused view is not available for the Activities entity.

Use the following steps to enable the focused view or to set it as default.

1. In the Sales Hub app, select **Settings** > **Advanced Settings**.
2. On the **Settings** menu, select **Customizations** > **Customize the system**.
3. On the Power Apps Default Solution page, select **Entities** > ***Entity name***. For example, select **Entities** > **Quote**.
4. To add the control for entities other than contact, account, lead, and opportunity, follow these steps:
   a. On the **Controls** tab, select **Add Control**.
   b. In the **Add Control** dialog box, select **Focused view**, and then select **Add**.



5. To set the focused view as the default view, select **Focused view** for web, phone, and tablet on the **Controls** tab.

6. Save and publish your changes. The focused view is now enabled and set as the default view for quotes.

See also

View and manage records in focused view
Focused view FAQs

Manage opportunities

Article • 05/29/2023

An opportunity refers to sales deal, which is created when a lead is ready to buy. With an opportunity, you can forecast sales revenue, set a potential close date, and factor in a probability for the sale to occur.

Work with opportunities

To manage opportunities efficiently, administrators can define the seller experiences, define the predictive scoring rules, and so on. Sellers can create opportunities, use predictive scores to improve the opportunity conversion, and win more deals.

The following table lists the tasks that each role performs to manage opportunities.

Use case	Administrator	Seller/Sales Manager
Visualize your sales pipeline, get metrics, manage deals easily	Configure opportunity pipeline view	Manage opportunities using pipeline view
Manage all your sales records and related activities from a single view	Set focused view as the default view	View and manage records in focused view
Prioritize your opportunities based on predictive scoring	Configure predictive opportunity scoring	Prioritize opportunities through scores
Customize the details you want to capture while closing a deal	Customize the Opportunity Close form	Close opportunities as won or lost

Configure the opportunity pipeline view

Article • 08/08/2023

The opportunity pipeline view (formerly known as deal manager) helps your sellers visualize, prioritize, and manage the opportunities in their pipeline. More information: Use the opportunity pipeline view

If you previously configured the deal manager workspace, learn about the differences between the opportunity pipeline view and the deal manager workspace.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Video: Opportunity pipeline view

Watch this short video to know how the opportunity pipeline view helps sellers be more productive and efficient.
https://www.microsoft.com/en-us/videoplayer/embed/RWONpe?postJsllMsg=true

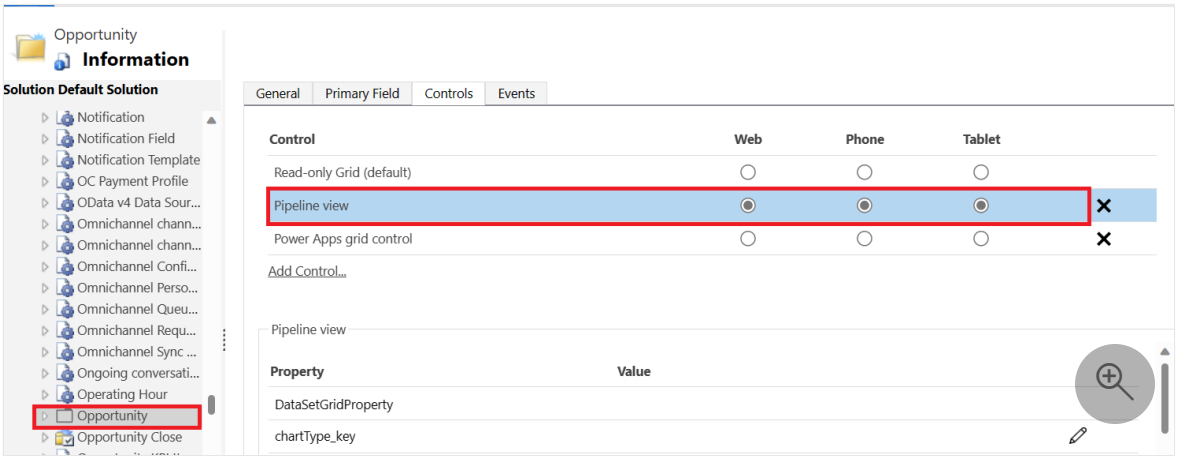
Set the pipeline view as the default opportunities view

The **Read-only Grid view** is the default view for opportunities. You can set the **Opportunities pipeline view** as the default instead, so sellers don't have to switch to it each time they access their opportunities list.

1. In the Sales Hub navigation panel, select **Settings** > **Advanced Settings**.
2. In the **Settings** menu, select **Customizations** > **Customize the system**.
3. From the Power Apps Default Solution page, select **Entities** > **Opportunity**.
4. Select the **Controls** tab, and then select **Pipeline view** for web, phone, and tablet.

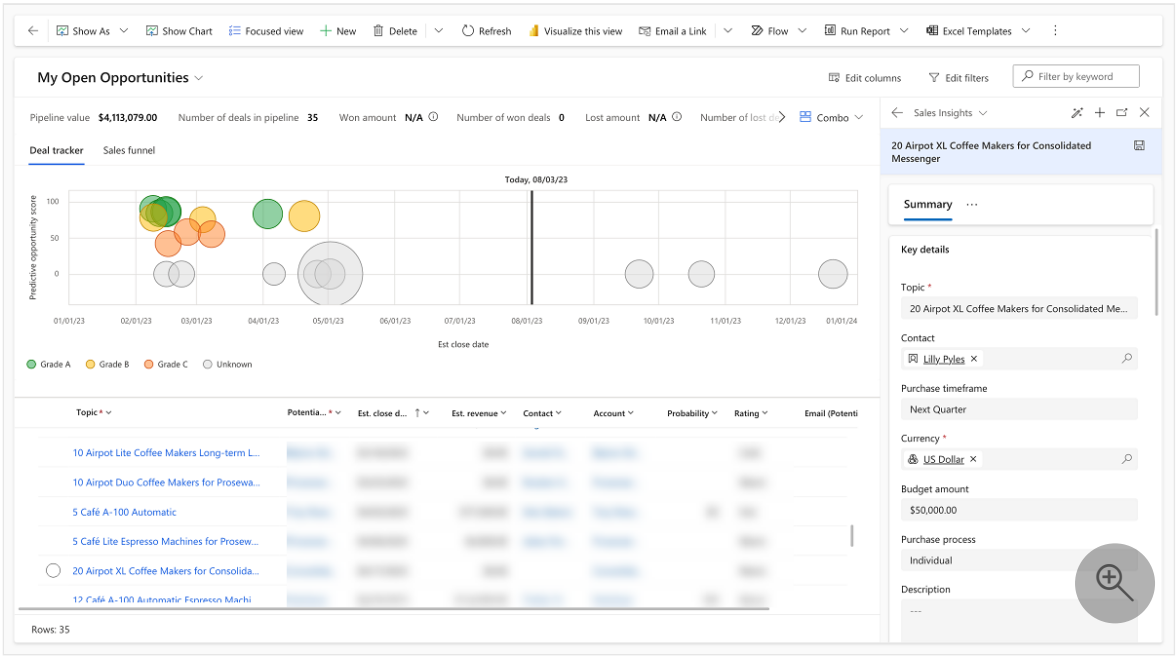
If you don't see **Pipeline view** in the **Control** list, select **Add Control**, then select **Pipeline view**, and then select **Add**.

> **Note**
>
> If you don't see the **Pipeline view** control in the **Add Control** list, look for the **Deal manager workspace** control.



5. Save the changes and select **Publish**.

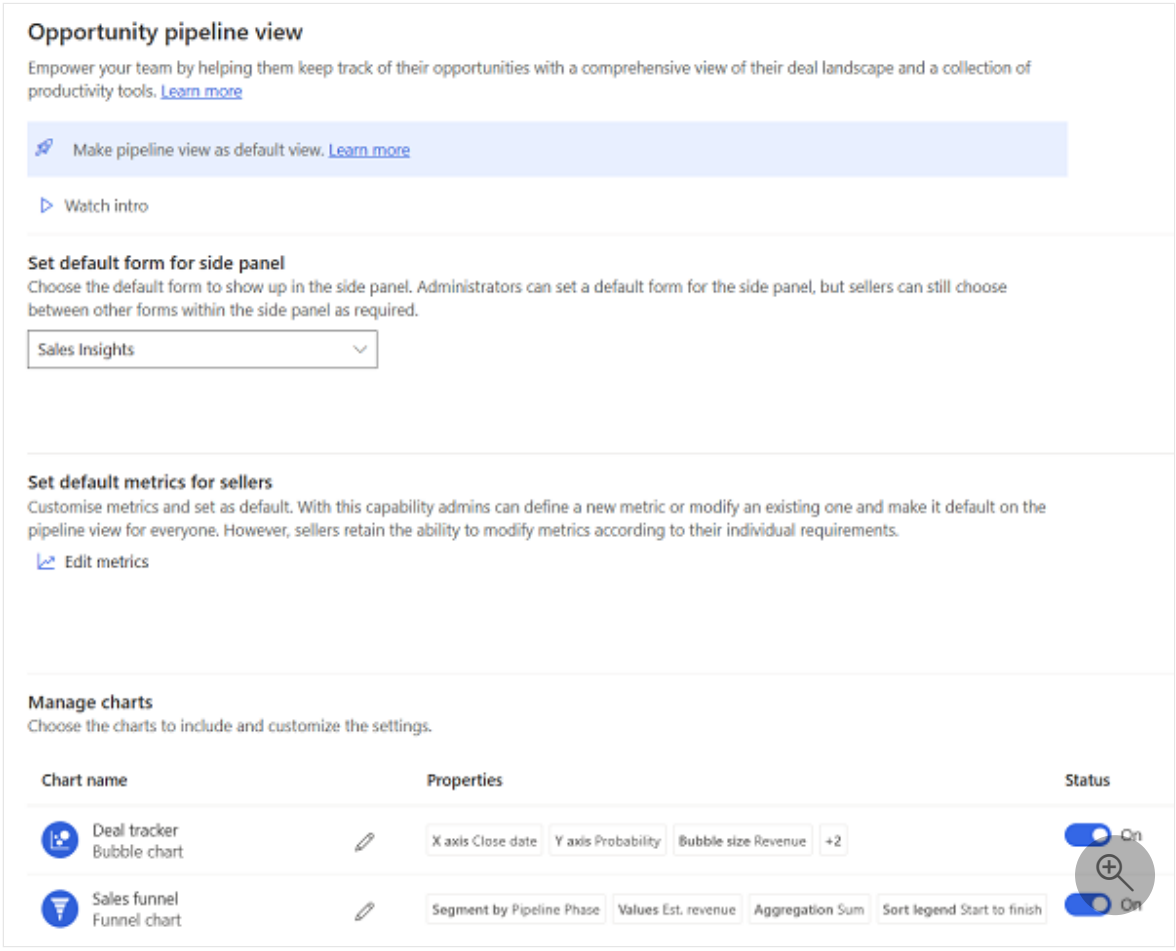
6. From the Sales Hub sitemap, select **Opportunities** to verify that the pipeline view is set as the default view.



Open the opportunity pipeline view settings page

Open the settings page to configure and customize the opportunity pipeline view experience for your sellers. You'll be accessing the settings page in all the procedures explained in this article.

1. In the Sales Hub Change area, select **App Settings**.
2. Under **General Settings**, select **Opportunity pipeline view**.



Set the default form for side panel

When sellers open an opportunity from the pipeline view, the side panel displays the opportunity details in the Sales Insights form. You can change the default form to the main opportunity form or a custom form for your organization. For example, you can create a custom form specifically for the side panel and set that as default. Sellers can switch to a different form if they prefer and their selection will be remembered and set as a default for them.

1. Open the opportunity pipeline view settings page.
2. In the **Set the default form for side panel** section, select the form that you want to set as the default for your organization.

Set the default metrics for sellers

The opportunity pipeline view lists important metrics related to the sales pipeline at the top of the view. You can customize this space to view metrics that you want sellers to track. Sellers will see these metrics by default; they can personalize them if required.

1. Open the opportunity pipeline view settings page.
2. In the **Set default metrics for sellers** section, select **Edit metrics**.

   Create, update, remove, or delete a metric in the **Edit metrics** side panel.

   - To create a metric:

     a. Select **Create a Metric**.

     b. Select the field and the aggregate function that you want to use for calculating the metric. The **Field** list displays all the numerical fields in the opportunity entity.

     c. (Optional) Add filters to calculate metrics from specific records. For example, if you want to view the estimated revenue of all opportunities created this year and are in the **Develop** stage, create a metric with the following values:
        - **Field:** Est. Revenue
        - **Aggregate function:** Sum
        - **Filters**
          - **Created On**: This year
          - **Sales Stage**: Develop

   - To edit a metric, hover over the metric in the **Edit metrics** side panel, and select the **Edit** icon.

   - To remove a metric temporarily, clear the checkbox against the metric in **Edit metrics** side panel.

Customize charts

The charts in the pipeline view help sellers visualize their pipeline. You can customize elements of the bubble chart and the funnel chart to change the information that sellers see. You can also hide the charts if you don't want sellers to see them.

Customize the bubble chart

1. Open the opportunity pipeline view settings page.
2. In the **Manage charts** section, edit **Deal tracker**.

> ⓘ Note
>
> You can turn off the corresponding **Status** toggle to hide the bubble chart.

3. Customize the following elements:

   - **Horizontal (x) axis**
     Select any field of type `DateTime`. For example, you can plot the chart based on the delivered date instead of the closed date.
   - **Vertical (y) axis**
     Select any numerical field.
   - **Segment by**
     Select what the color codes signify. For example, select **Pipeline Phase** to color-code the bubbles based on which phase an opportunity is in.
   - **Size**
     Select a numerical field to indicate the size of the bubble.
   - **Sort legend**
     Select how to sort the chart legend. Legends indicate the color used for each segment. For example, if you select **Opportunity grade** as the segment, the legends will be sorted based on the chronological order of the grades.
   - **Tooltips**
     Select the details that you want users to see displayed as tooltips when they hover over a bubble.

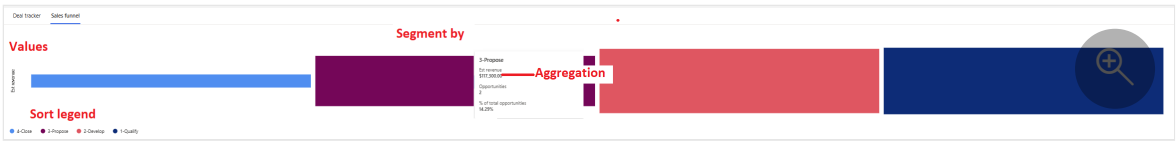
4. Save the changes and select **Publish**.
5. Open the opportunity pipeline view to verify the changes.

Customize the funnel chart

1. Open the opportunity pipeline view settings page.
2. In the **Manage charts** section, edit **Sales funnel**.

> ⓘ Note
>
> You can turn off the corresponding **Status** toggle to hide the funnel chart.

The following screenshot illustrates the parts of the funnel chart that you can customize:



3. Customize the following elements:

   - **Segment by**
     Select the field for segmenting the funnel chart. **Default:** Pipeline phase
   - **Values**
     Select the field for sizing the bars in the funnel. **Default:** Est. revenue
   - **Aggregation**
     Select the aggregate function to use for the **Values** field. This field determines the height of the bar. The aggregate value is displayed when you hover over a segment in the funnel chart.
   - **Sort legend**
     Specify how to sort the segments. For example, selecting Finish to start for a funnel chart segmented by pipeline phase will display the funnel from the last phase to first phase, that is from Close to Qualify.

4. Save the changes and select **Publish**.

5. Open the opportunity pipeline view to verify the changes.

Customize the editable grid

The grid in the opportunity pipeline view is an instance of the Power Apps editable grid control. The grid can be both customized and personalized. As an administrator, you can customize the grid for the entire sales organization. Sellers can personalize their view to include the columns and filters they want to see.

> **Note**
>
> If you customized the editable grid in the deal manager using JavaScript, you need to redo those customizations in the pipeline view.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Where is the deal manager workspace?
Manage opportunities using pipeline view
Column-level security to control access
Events in forms and grids in model-driven apps

Enable customization of the Opportunity Close form

Article • 03/30/2022

Enable system customizers to customize the opportunity close experience so that sellers can capture details about why an opportunity was closed.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable customization

To allow users in your organization to capture more relevant details about an opportunity closing, a system administrator can enable the customization of the Opportunity Close form.

> **Note**
>
> The capability to customize the **Opportunity Close** form is supported only in the sales app built on Unified Interface.

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Platform.

1. In lower-left corner of the screen, select **Change area** and then select **App Settings**.
2. In the site map, select **Overview**, and on the **Overview** page, select **Manage** for **Custom fields on closing form**.
3. On the **Opportunity Closing** page, turn the **Custom fields on closing form** toggle to **Yes**.
4. Select **Save**.

If you're using a custom app, in addition to enabling the customization of opportunity close form, you must also add the Opportunity Close entity to the custom app in the app designer. For more information, see Add Opportunity Close entity to the custom app module to learn how to add to entity to the app.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Customize the Opportunity Close form
Close opportunities as won or lost

Customize the Opportunity Close form

Article • 10/18/2023

Customize the opportunity close form so that sellers can capture details about why an opportunity was closed.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

How does the customization help?

Enable sales managers to draw key insights based on the information the sales representatives fill in while closing an opportunity.

System administrators or customizers can use the **Opportunity Close** quick create form to add custom fields, so that sales representatives can capture important details about why an opportunity was closed. Sales managers can use this data to know which products are doing well and develop a better strategy.

> **Note**
>
> - The capability to customize the **Opportunity Close** form is supported only in the sales app built on Unified Interface.
> - Before you customize the Opportunity Close form, you must enable the customization of Opportunity Close form. More information: **Enable customization of the Opportunity Close form**

What customizations are possible?

- Customization of Opportunity Close entity to add custom fields, including of type Lookup.

  > **Important**
  > - You can't delete the out-of-the-box fields or customize or delete the out-of-the-box entity relationships.
  > - Creating an Opportunity Close record (for example, from a related entity record or the Quick create menu) closes the related opportunity.

- Customization of Opportunity Close Quick Create form to capture details such as Profit Margin, Winning Product and so on, when closing an opportunity.
- Customization of form to add client-side validations. For example, when an opportunity is closed as Won, the Profit margin (custom field) is mandatory.
- Customization of Opportunity Close Information form to view details of the closed opportunity
- Customization of views

To capture any additional custom information during opportunity close, custom attributes (fields) must be added to Opportunity Close entity and their forms. If this additional information is to be made available on other entities, then the data must be maintained in both entities. After an **Opportunity Close** record is created, the data for custom attributes that must be available in other entity records must be updated in the other entity records. Example: If **Opportunity Close** form needs to capture the 'Purchase process', which belongs to the Opportunity entity, the attribute 'Purchase process' must be maintained in both **Opportunity Close** and **Opportunity** entities, and the data between the two entities must be synchronized. You can write a client-side code (form scripting or web resources) or server-side plugin to keep the data in sync between the two entities.

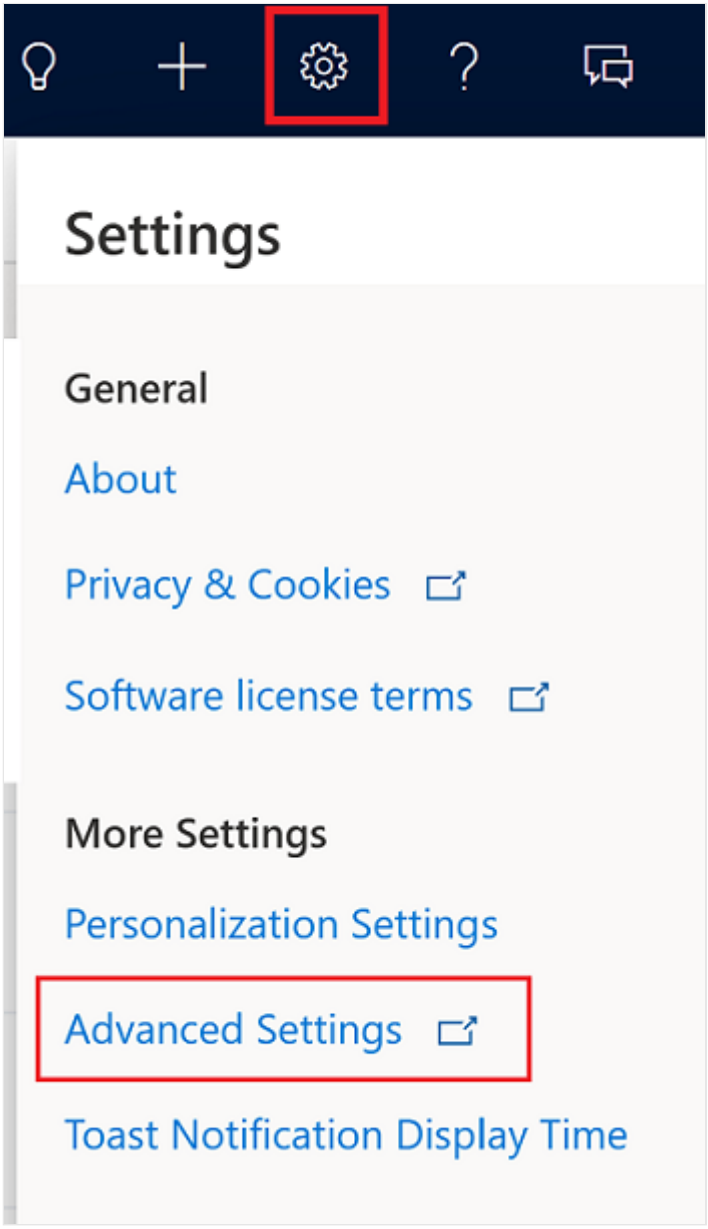
> **Note**
>
> You may see data consistency issues if the attribute value in Opportunity Close isn't synchronized with the main entity when an Opportunity is closed or if the attribute is updated in the main entity after the Opportunity was closed.

Create custom fields for the Opportunity Close entity

To enable sales representatives to capture relevant data about an opportunity close, create fields as required by your organization for the **Opportunity Close** entity. For example, if your organization would like to know the profit margin for all the won opportunities, create a new field called **Profit Margin**.

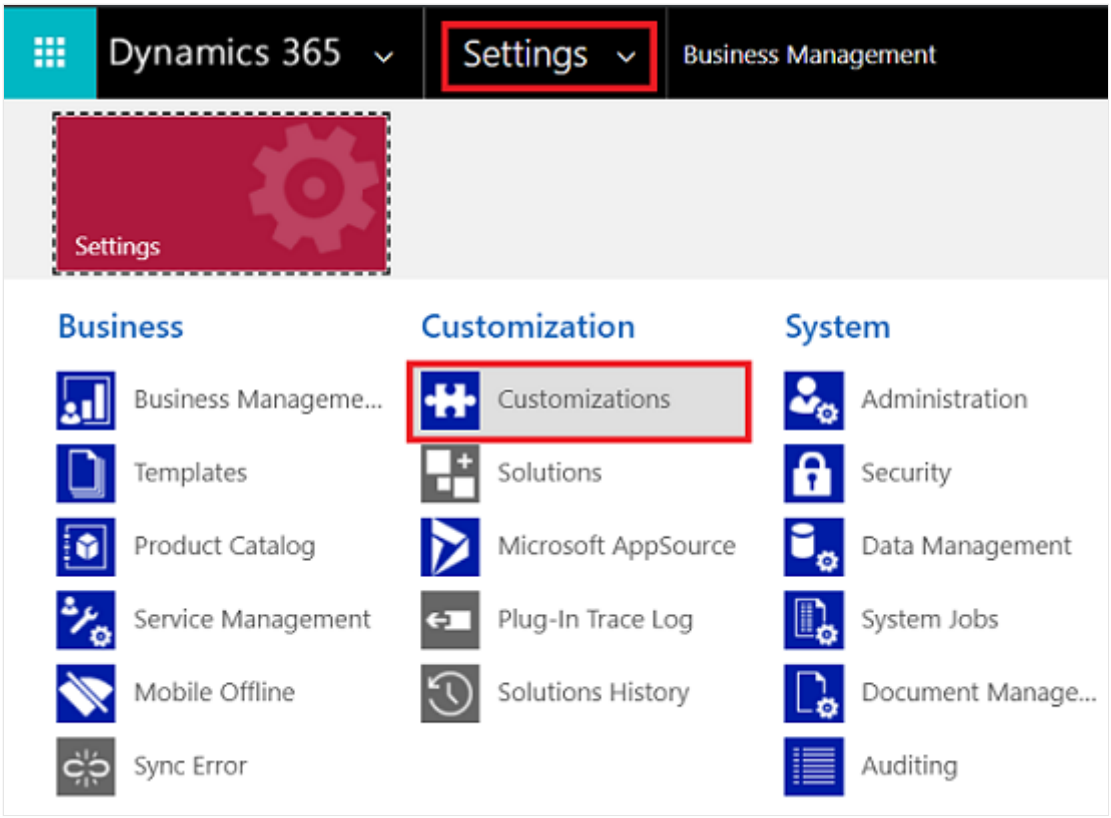
To create fields,

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



   The **Business Management** page opens.

2. On the navigation bar, select **Settings**, and then select **Customizations**.



3. On the **Customization** page, select **Customize the System**.

4. In the solution explorer, under **Components**, expand **Entities**, and then expand **Opportunity Close**.

5. Under the **Opportunity Close** node, select **Fields**.

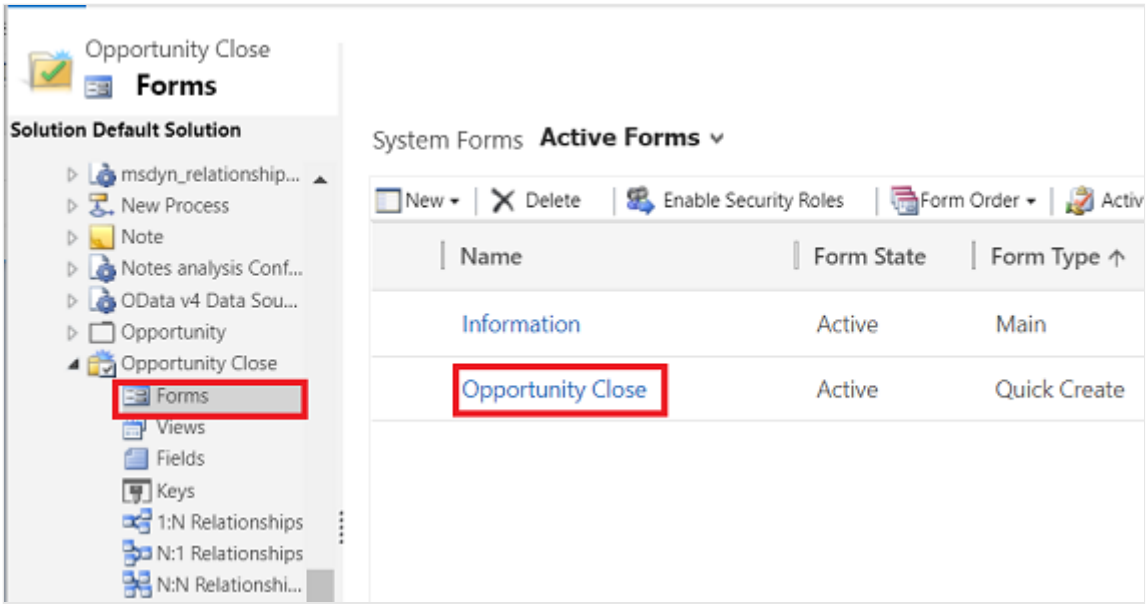
6. To add a new field, on the **Actions** toolbar, select **New**, and enter a **Display Name** to generate the **Name**. For more information on the data to enter, see How to create and edit columns)

Add newly created custom fields to the Opportunity Close form

After you've created the fields that are required by your organization, add those fields to the **Opportunity Close** form, so sales representatives can capture data in those fields at the time of closing opportunities.

1. In the solution explorer, under **Components**, expand **Entities**, and then expand **Opportunity Close**.

2. Under **Opportunity Close** node, select **Forms**.



3. Open the **Opportunity Close** form of type **Quick Create**.

4. Add or remove any fields, as required on the **Opportunity Close** form.

5. Select **Save and Close**.

> **Important**
>
> The Opportunity entity has the following statuses, which aren't customizable: Open, Won, Lost. However, you can add multiple status reasons corresponding to the Won and Lost statuses. It is important to ensure that the custom status reasons added for Opportunity are also present in a special attribute of Opportunity Close entity with schema name "OpportunityStatusCode". If you add custom values to a Status Reason field against a state (Won/Lost) in the Opportunity entity, you must add the same custom value to the special attribute OpportunityStatusCode on the Opportunity Close entity manually and vice versa. This displays the correct customized values with right defaults preselected for each opportunity Win and Loss state.

> **Note**
>
> There are two fields on Opportunity Close entity with display name as "Status Reason" but with schema names as statuscode and opportunitystatuscode. It is important to note that custom status reasons should be added to the opportunitystatuscode attribute and not to the statuscode attribute.

6. Open the **Information** form of type **Main**, and make the same changes that you did in Step 4.

   The sales representatives or managers can view the **Opportunity Close** record after an opportunity is closed either from the Opportunity timeline or from the **Related Activities** grid, which uses the **Information** form. For these newly-added or removed fields to reflect on the **Information** form, the changes must be made to the **Information** form, too.

Add Opportunity Close entity to the custom app module

To enable the capability of customizing the opportunity close experience on a custom app module, you must first add the Opportunity Close entity to the custom app module.

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.
2. On the navigation bar, select **Settings**, and then under **Application**, select **Apps**.
3. On your custom app tile, select the **More options** icon , and then select **Open in App designer**.

   The app designer opens.
4. Select **Add**, and then under **Artifacts**, select **Entities**.
5. In the **Search Entities** box, type Opportunity Close, select the **Opportunity Close** entity.
6. Select the **See more options for the entity** icon, and then select the **Add all assets** and **Include entity metadata** check boxes.
7. Select **Publish**, and then select **Save and Close**.

After completing the steps in this section, follow the steps in the sections Create custom fields for the Opportunity Close and Add newly created custom fields to the Opportunity Close form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Close opportunity as won or lost
Enable customization of the Opportunity Close form

Configure predictive opportunity scoring

Article • 05/30/2023

Predictive opportunity scoring uses a predictive machine learning model to calculate a score for open opportunities based on historical data. The score helps sellers prioritize opportunities and achieve higher opportunity won rates, and reduces the time it takes to win an opportunity.

For example, say you have two opportunities, Opportunity A and Opportunity B, in your pipeline. The opportunity scoring model calculates a score of 80 for Opportunity A and 50 for Opportunity B. Based on the scores, you can predict that Opportunity A has a greater chance of being converted into a won deal. Further, you can review the top influencing factors to analyze why Opportunity B's score is low and decide whether to improve it.

The following image shows an example of an opportunity scoring widget:

Historical data collection begins when you create a scoring model. Historical data is stored in the data lake for analysis. If your Dynamics 365 Sales subscription expires or your org is deleted, the historical data is deleted after 30 days.

If you have a Dynamics 365 Sales Enterprise license, you can enable predictive opportunity scoring in lead and opportunity scoring quick setup. You'll get 1,500 scored

records per month.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

- Advanced Sales Insights features must be enabled.
- You need to have enough opportunities to train the model based on past data. Your organization must have created and closed at least 40 won and 40 lost opportunities during the time frame selected in the **Train with opportunities from the past** field of the scoring model. The time frame ranges from three months to two years. To define a per stage model, you must have at least 40 closed opportunities in the last stage of the business process in the selected time frame. The more opportunities you can include to train the model, the better the prediction results will be.

  > **Note**
  >
  > If you're planning to use a business process flow for your model, then opportunities that have abandoned the selected business process flow will not be considered for training, scoring, and for establishing the minimum requirement for model creation.

The system takes about four hours to sync the data with the data lake. If you've closed opportunities recently, the model won't consider them right away.

What is a per stage model?

A per stage model calculates the influence of attributes at each stage of the business process flow based on past data. For example, you can review how the estimated close date influences different stages of the opportunity. You can then decide which stages

are relevant for each attribute, according to your organization's standards, and improve the model's accuracy.

Per stage modeling is disabled by default. You can enable it only when you're adding a scoring model.

When per stage modeling is disabled, the model uses only attributes that had a higher influence on opportunities that were closed as won. For example, if most of the won deals had an associated business phone number, the model may give a higher score to opportunities that have an associated business phone number.

Create your first scoring model

> **Important**
>
> - If you're using a model that you created in a version of Dynamics 365 earlier than 2020 release wave 2, **delete the model** before you create a new one. Otherwise, the previous version of the model will be applied to all opportunities in your organization, and new models won't have any effect on the opportunities.
> - As of 2020 release wave 2, the application writes the opportunity scoring data to the **msdyn_predictivescore** table and no longer writes to the opportunity entity. Both lead and opportunity scoring use the **msdyn_predictivescore** table.

A scoring model defines the criteria for choosing opportunities for training and scoring. If your organization follows different sales practices across different regions or business units, you can create models and unique training sets for each of them.

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.

2. On the site map under **Predictive models**, select **Opportunity scoring**.

   If your organization doesn't have at least 40 won and 40 lost opportunities that were created in the time frame identified in the **Train with opportunities from the past** field, you can't create a scoring model. If there are enough opportunities, the app generates a model by default.

3. On the **Predictive opportunity scoring** page, change the values for fields such as business process flow, filter column, and so on if needed. For more information

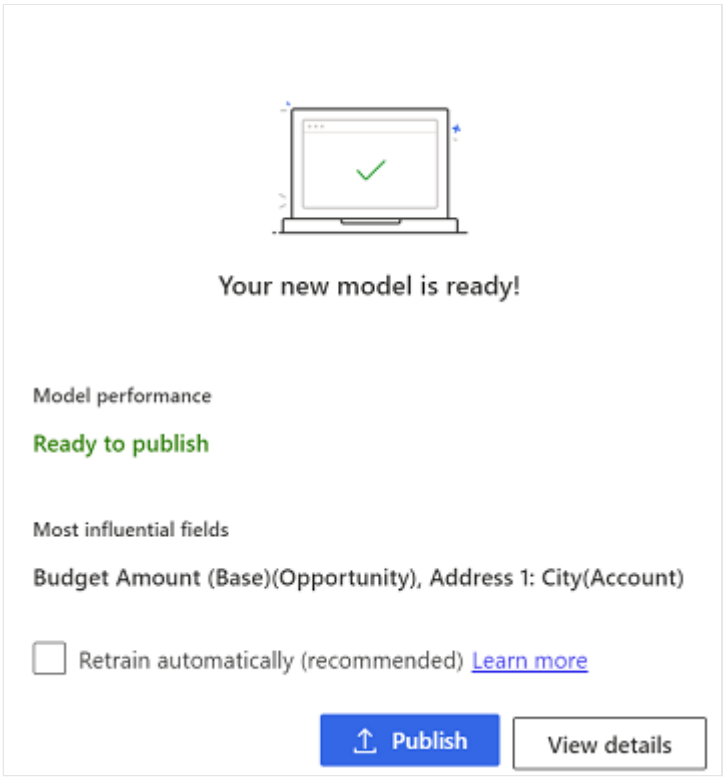
about these fields, see the next section Add a model. When you're done, select **Get started**.

Allow some time for the app to train your model. You can leave the page and come back later.

The application uses standard attributes to train the model. You can edit the model later to include custom or intelligent attributes.

Publish your model

1. When your model is trained and ready to publish, the **Predictive opportunity scoring** page displays a confirmation:



2. If the model is trained but not ready to publish, the **Model performance** field displays **Not ready to Publish**.

3. To retrain the model every 15 days, select **Retrain automatically**.

4. Select **Publish** or **View details**.

   - If the model is ready to publish and you're ready to apply it, select **Publish**.

     The model is applied to opportunities that match the criteria specified in the model configuration. The opportunity score appears in the **Opportunity score** column in views and in a widget in the opportunity form.

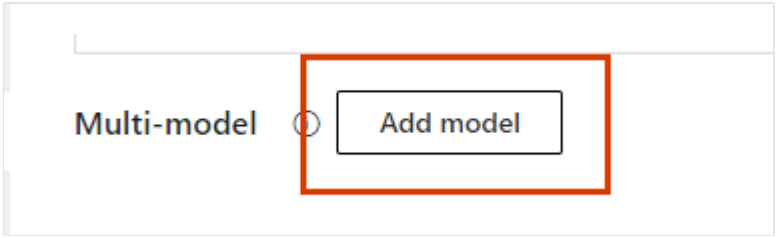
- To view the model's accuracy and performance before you publish it, or if the model isn't ready to publish and you want to know why, select **View Details**, and then select the **Performance** tab.

  The app determines that the model isn't ready to publish if its accuracy falls below a threshold value, the **Area under curve (AUC) score**. You can still publish the model if you like. However, it will perform poorly.

Add a model

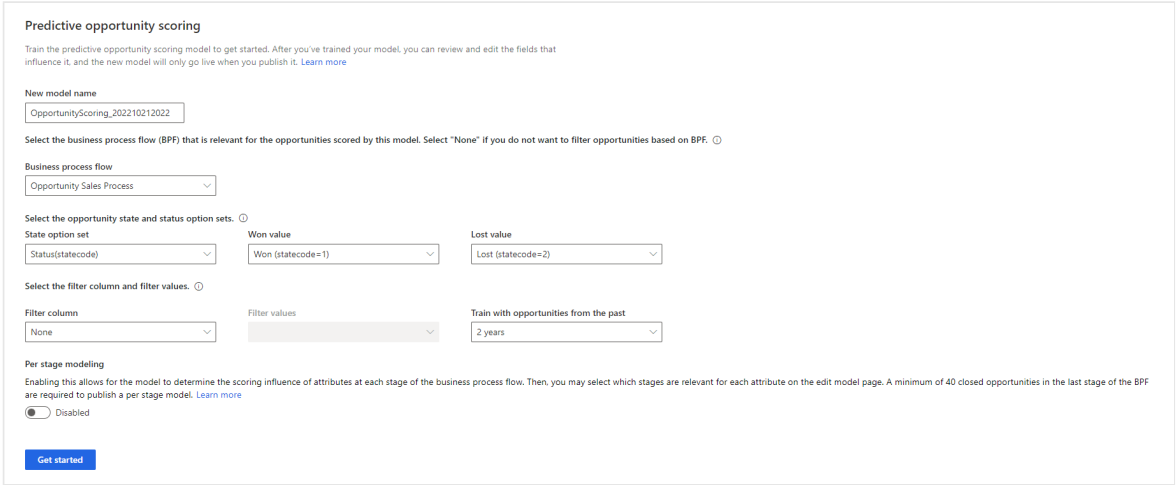
You can create up to 10 models, both published and unpublished, for different sets of opportunities. The app warns you if you try to create a model that might score the same opportunities as an existing model.

1. At the bottom of the **Predictive opportunity scoring** page, select **Add model**.



> **Note**
>
> You won't see the **Add model** button if you haven't created at least one scoring model.

The **Predictive opportunity scoring** page opens with default values.



2. In the **New model name** box, enter a name that contains alphanumeric characters. Underscores are allowed, but not spaces or other special characters.

By default, the name is **OpportunityScoring_<*YYYYMMDD*><*Time*>** (for example, **OpportunityScoring_202009181410**). The date and time are based on Coordinated Universal Time (UTC).

3. In the **Business process flow** list, select a flow that's relevant for the opportunities that you're generating the model for. Opportunities that have abandoned the selected business process flow will not be considered for training, scoring, and for establishing the minimum requirement for model creation.

   The list displays all the business process flows that are defined for opportunities in your organization. If you want to enable per stage modeling, you must select a business process flow.

   To display custom business process flows in the list, enable **Change Tracking** for the business process flow entity. When you generate the model, custom business processes are automatically enabled to sync the data to the data lake for analysis.

4. In the **State option set** list, select the option set in which the status of the opportunities is defined.

5. Select the corresponding values in the **Won Value** and **Lost Value** lists, respectively.

   The out-of-the-box **Status** state option set defines the values as **Won** and **Lost**. You can select a custom option set if one is defined.

6. Select **Filter column** and **Filter values** to specify the opportunities that the model must score.

   To filter based on multiple columns, create a calculated field with the required columns, and then select the calculated field in the **Filter column** list.

7. In the **Train with opportunities from the past** list, select a time period for the training set. The default is two years.

   Your organization must have a minimum of 40 won and 40 lost opportunities that were created and closed during the selected period. The model analyzes closed opportunities from the selected period and uses that data to score open opportunities from the past two years.

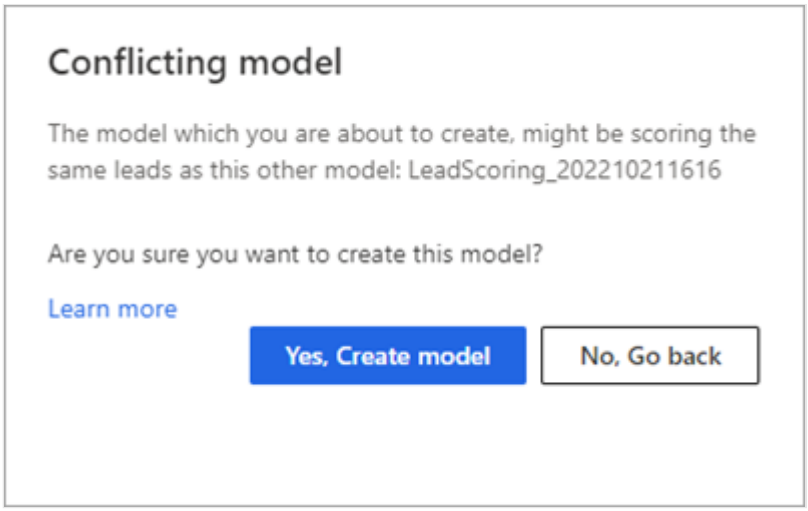
   If you don't have the minimum closed opportunities in the chosen time period, the **Get started** button is disabled. Select another time period that has enough closed opportunities to train the model.

8. (Optional) Enable **Per stage modeling** to select the attributes that the model must consider for each business process stage.

After creating the model, you'll be able to view the prediction influence of each attribute across different stages. You can then select the attributes and corresponding stages.

> **Note**
>
> If you enable **Per stage modeling**, be sure to select a business process in the **Business process flow** list.

9. Select **Get started**. You'll get a warning message if the model is a duplicate of an existing model and is scoring the same set of opportunities. You can choose to create the model anyway or change the configurations to let the model score unique set of opportunities.



The system will take a few minutes to train your model.

10. When your model is trained, publish it or view its details.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System and application users who can push data to Dataverse

Edit and retrain an opportunity scoring model

Prioritize opportunities through scores

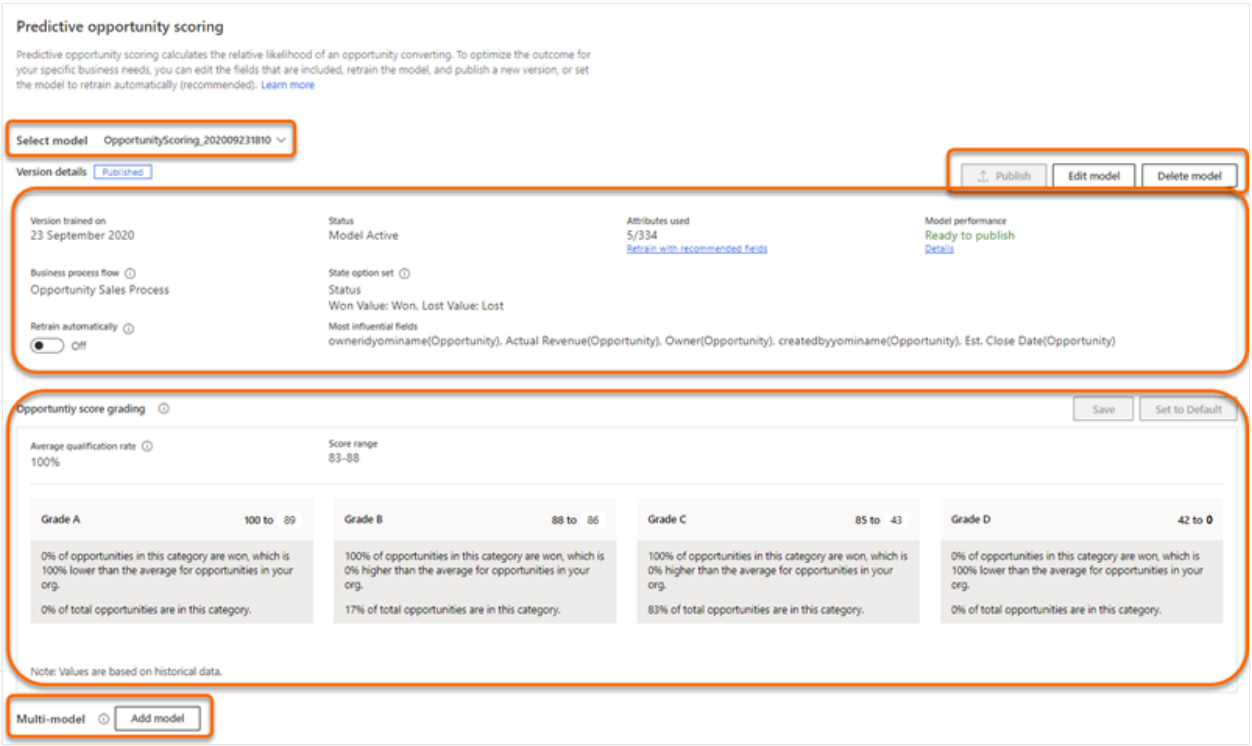
Predictive lead and opportunity scoring

Understand the predictive opportunity scoring configuration page

Article • 11/30/2022

The **Predictive opportunity scoring** page is where you'll create, edit, publish, and delete opportunity scoring models. It's organized into the following sections:

- Select a model
- Actions you can perform on the model
- Version details
- Opportunity score grading
- MultiModel

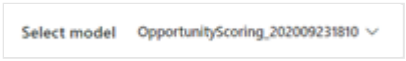


License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

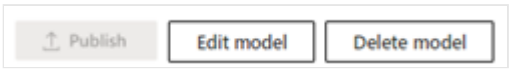
Select a model

If you've created two or more scoring models, use the **Select Model** list to select one of them to view, edit, or delete. The list contains both published and unpublished models. The list control doesn't appear if you have one or zero models.



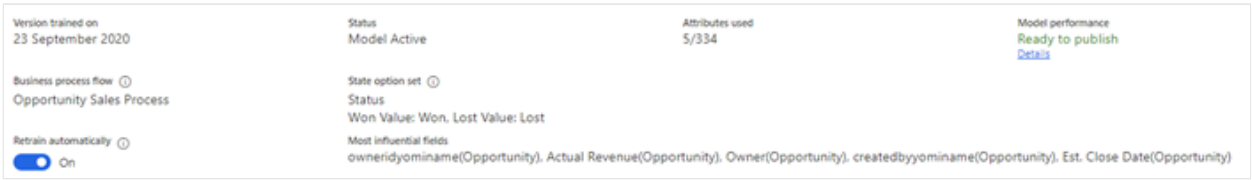
Actions you can perform on the model

- **Publish**: Publish a model so sellers in your organization can access the My Open Opportunities Scored system view and the Opportunity score widget on opportunity forms. After you publish a model, this button appears dimmed and is available only after you retrain or edit the model.
- **Edit model**: Update or add fields that affect the prediction accuracy score. Edit and retrain a model when you want to change the fields to consider or include a unique business process.
- **Revert version**: Return a retrained model to its previous version when it isn't satisfactory or doesn't meet your organization's requirements. This action is only available when you've retrained a model but haven't published it yet.
- **Delete model**: Delete a model your organization no longer requires or that duplicates another model. This button is only available for published models.



Version details

This section shows information about the model's status and performance.

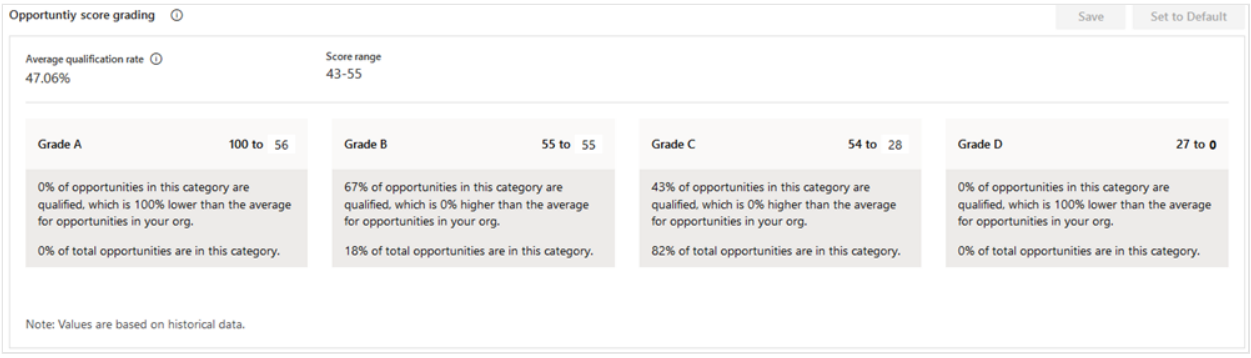


Parameter	Description
Version trained on	The date the model was last trained.
Status	Whether the model is active or inactive.

Parameter	Description
Attributes used	The number of attributes that were used to train the model out of the total number of attributes available. If you're not satisfied with the outcome of the trained model, you can select **Retrain with recommended fields** to retrain the model with the standard (out-of-the-box) attributes. **Edited** appears next to the number if the attributes were custom-selected.
Model performance	The model's accuracy and projected performance are based on the data available and selected to train the model. **Note**: The range of the accuracy score is defined based on the area under the curve (AUC) metric. - **Ready to publish** indicates the model's accuracy is above the range, and you can expect the model will perform well. - **OK to publish** indicates the model accuracy is within range, and you can expect the model might perform reasonably well. - **Not ready to publish** indicates the model's accuracy is below the range, and you can expect the model will perform poorly.
Business process flow	The business process flow that's applied on the opportunities that are scored by this model.
Filter column and filter values	Which column and which values correspond to the opportunities that this specific model should score when you have multiple models.
State option set	The option set that's used for won and lost opportunities in this model.
Retrain automatically	Sets the model to be automatically retrained every 15 days.
Most influential fields	The top five attributes that most affect the outcome of the prediction accuracy score.

Opportunity score grading

When you publish a model, it grades the opportunities that are in your organization's pipeline according to the range defined in this section. Each opportunity in the pipeline is graded A, B, C, or D, according to the opportunity score. Opportunities in the top score range are graded A while opportunities in the lowest score range are graded D.



You can configure the grading range according to your organizational requirements. When you change the opportunity score range for a grade, the maximum range value for the adjacent grade changes automatically in accordance with the change in the minimum value. For example, if you change the minimum range value score for **Grade A** to 51, the maximum opportunity score range for **Grade B** changes to 50.

MultiModel

Select **Add model** to create a model for a line of business that might use different opportunities than your first model. The **Add model** command is disabled when you reach the maximum limit of 10 models (both published and unpublished).

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

View the accuracy and performance of predictive scoring models

Article • 12/01/2022

Knowing how accurate a predictive scoring model is helps you decide whether the model is ready for use or needs to be fine-tuned for higher accuracy. It also helps you convince your leadership team and sellers to adopt the model for improved business outcomes.

The metrics described in this article apply to both opportunity scoring and lead scoring.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Factors that influence accuracy

A predictive scoring model calculates the likelihood that an opportunity or a lead will result in a sale. The accuracy of the model depends on the following factors:

- The quality and amount of the data available for training the model
- The business process flow and filters that you select
- The stages and attributes you select, if the model uses per stage modeling

The model is trained using 80% of the closed opportunities or leads in the training dataset. It's validated using the remaining 20% as a test dataset, which consists of the most recent records. The model's accuracy is calculated using the validated test dataset based on parameters such as true positives, false positives, and so on.

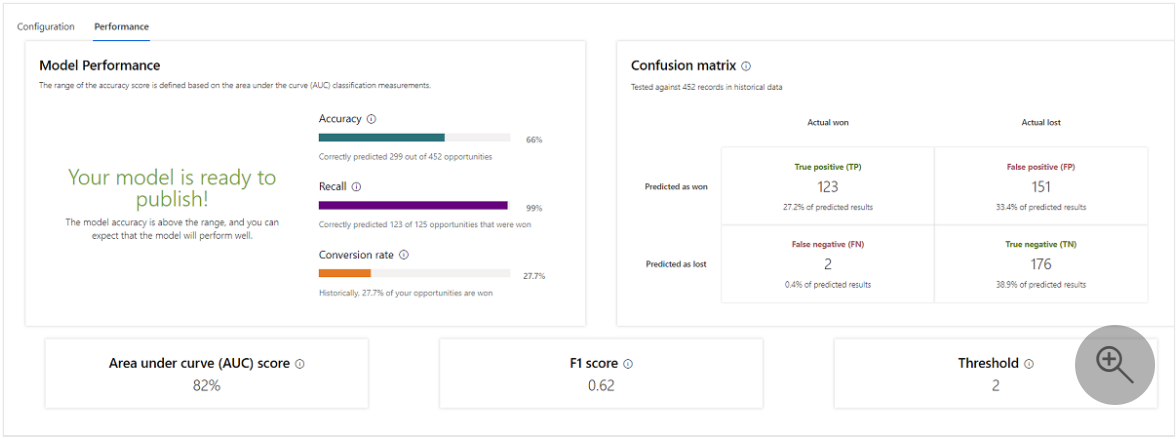
View accuracy and performance metrics

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.

2. On the site map under **Predictive models**, select **Opportunity scoring** or **Lead scoring**.

3. In the **Select model** list, select a model.

4. Select the **Performance** tab.



The **Performance** tab displays the following metrics. If you don't see any metrics in the **Performance** tab, edit and retrain an opportunity scoring model.

- **Model Performance**: Specifies whether the model is ready to publish based on the following parameters:

  - **Accuracy**: How often the model made correct predictions, either positive or negative. This metric is most useful when the dataset is balanced, and the cost of false positives and false negatives is the same. The accuracy score is calculated using the following formula:

    Accuracy = (TP + TN) / (Total number of opportunities or leads scored) *100

  - **Recall**: How often the model predicted a positive outcome correctly compared to the actual positives. A low recall score means the model is predicting fewer true positives. The recall score is calculated using the following formula:

    Recall = TP / (TP + FN) *100

  - **Conversion rate**: The percentage of opportunities or leads that were qualified or won per historical data, or the likelihood that an opportunity or lead will convert. The model uses this value to determine how an attribute will influence the predictive score. The conversion rate is calculated using the following formula:

    Conversion rate = (TP + FN) / (Total number of opportunities or leads scored) *100

- **Confusion matrix**: How well your model predicted the outcomes when it was tested against historical data. The matrix displays the number of true positives, true negatives, false positives, and false negatives.

Metric	Predicted	Actual
True positive (TP)	Yes	Yes
True negative (TN)	No	No
False positive (FP)	Yes	No
False negative (FN)	No	Yes

- **Area under the curve**: The area under the curve (AUC) score of the model. The AUC score determines the probability that a model will rank a randomly chosen positive instance (a won opportunity or a qualified lead) higher than a randomly chosen negative one (a lost opportunity or a disqualified lead). A model with a higher AUC is better at predicting true positives and true negatives.

- **F1 score**: The F1 score calculated based on the model's precision and recall scores. The F1 score determines the quality of the model even when the data is unbalanced.

- **Threshold**: The threshold at which the lead or opportunity is considered qualified or won. For example, if the threshold is 45, opportunities with a score greater than 45 will be predicted as won. The threshold is selected to optimize the F1 score.

Example: Model performance metrics

Let's look at the prediction results for a sample dataset of 1,000 opportunities:

Data	Number of opportunities
True positive	650
False positive	200
True negative	100
False negative	50

The model predicted 850 (TP + FP) opportunities would be won; however, only 650 (TP) opportunities were actually won. Similarly, the model predicted 150 (TN + FN) opportunities would be lost, but only 100 (TN) opportunities were actually lost.

The following table shows the metrics for the data.

Metric	Score
Accuracy	(650 + 100) / 1,000 = 75%
Recall	650 / (650 + 50) = 92%
Conversion rate	(650 + 50) / 1,000 = 70%

Improve model performance

If your model isn't ready to publish or isn't performing well, try the following steps to improve its scores.

- Review the attributes it uses.
- View attribute insights to understand their influence on the model's overall prediction.
- Ignore empty values for attributes that have a higher percentage of empty values and may be contributing to false positives or false negatives.
- Include intelligent fields to help a lead scoring model distinguish between factors that improve or harm the score.
- Use per stage modeling in an opportunity scoring model to choose attributes to apply to each business process stage.
- Refine the filter criteria, time period for training data, or other model configurations. For example, if you've chosen two years as the time period for training data and there are too many test or incorrect records during that period, choose a shorter time period, such as six months or one year, when the quality of your data is better.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure predictive lead scoring
Configure predictive opportunity scoring

Edit and retrain an opportunity scoring model

Article • 11/30/2022

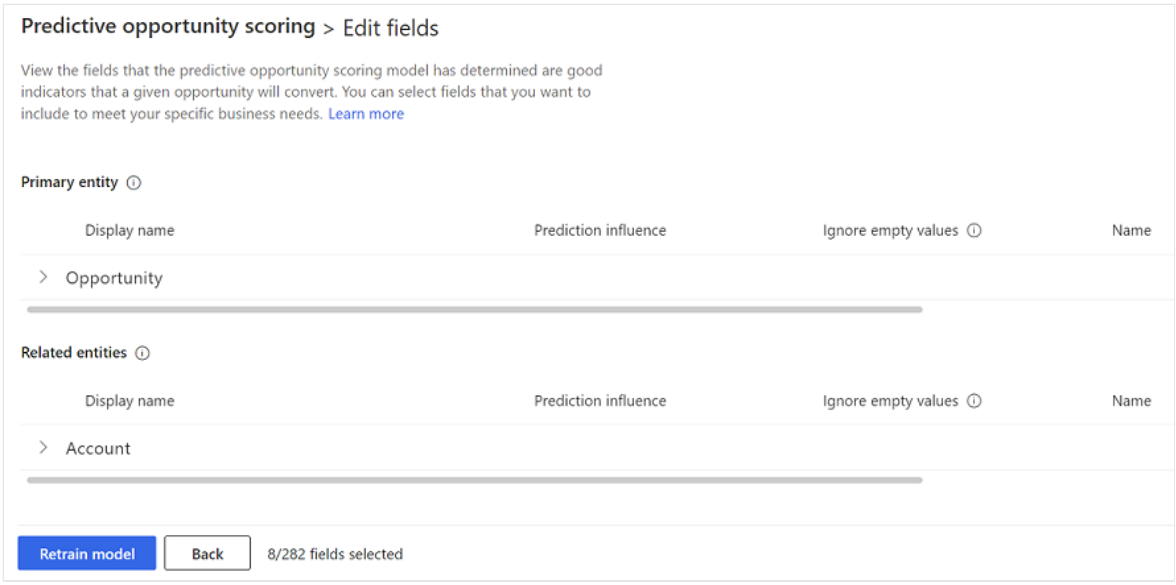
When the prediction accuracy of a model doesn't meet your expectations, or a model duplicates an existing one, you can edit the model's attributes and retrain it.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Edit a model

1. Go to **Change area** in the lower-left corner of the Sales Hub app, and select **Sales Insights settings**.
2. On the site map under **Predictive models**, select **Opportunity scoring**.
3. On the **Predictive opportunity scoring** page, open the model. Make sure that **Retrain automatically** is turned off.
4. Select **Edit model**.
5. On the **Edit model** page:
    - Select an attribute to view insights about its influence on the model.
    - Select attributes that you want the model to consider—including custom attributes—from the opportunity entity and its related entities (account) to train the model.

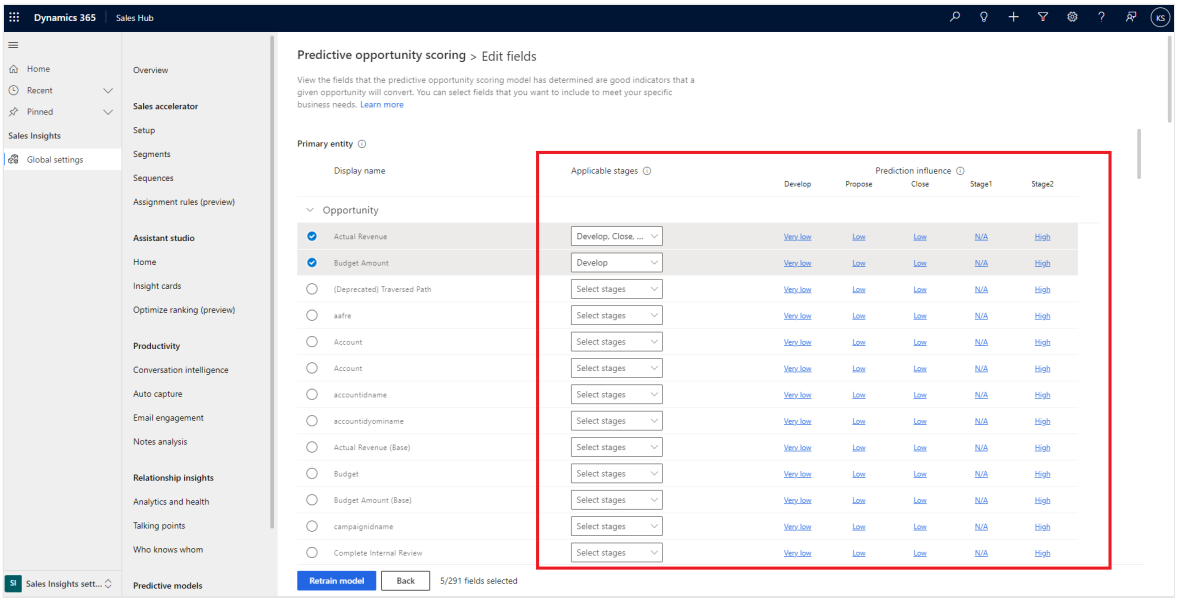


> **Note**
>
> The scoring model don't support the following types of attributes:
>
> - Attributes on custom entities
> - Date and time related attributes
> - System generated attributes (such as, opportunityscore, opportunitygrade, version number, entity image, exchange rate, and predictive score ID)

6. If you've enabled per stage modeling, another column, **Applicable stages**, will be available. Select one or more stages for which the model should use the attribute.

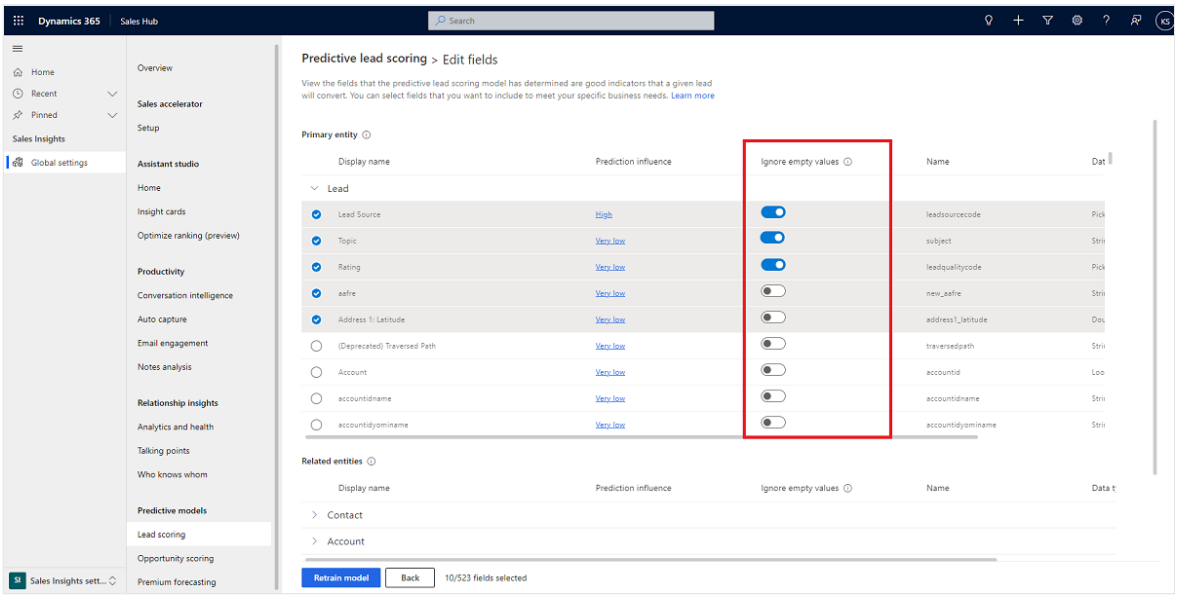
   Use the **Prediction influence** column to understand the attribute's influence on the model at each stage. Prediction influence is calculated based on historical data and ranges from very low to very high.

   For example, maybe you don't want to consider Budget Amount for the Develop stage. However, if historical data shows that it has a high influence, you might want to reconsider your decision or analyze why it has such a high influence.



7. (Optional) Scroll to the right of the attributes list and turn on **Ignore empty values**.

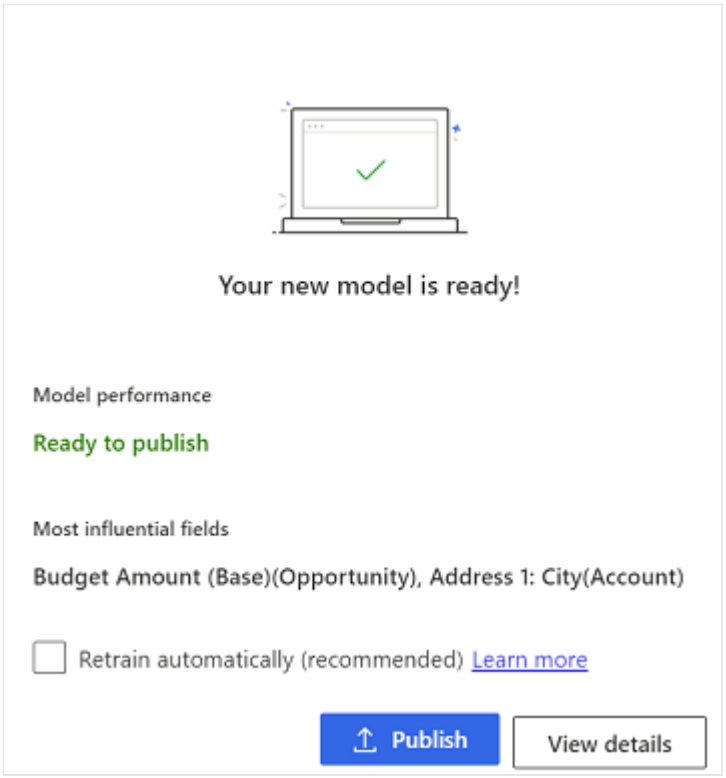
   By default, empty values in the attribute are included for training the model. If you notice that empty values are acting as detractors or are producing false positives, turn on **Ignore empty values**.



   When you turn on **Ignore empty values** for an attribute, the scoring widget will indicate that the score is calculated after excluding blank values.

8. Select **Retrain model**.

   Allow a few minutes for the model to be retrained. When it's ready, you'll receive a message like this one:



9. If you want the application to automatically retrain the model after every 15 days, select **Retrain automatically**.

10. Perform one of the following actions:

    - If you're ready to publish, select **Publish**. The model is applied to opportunities that match the criteria specified in the model configuration. Users can see the opportunity scoring in their views under the **Opportunity score** column and a widget in the opportunity form. More information: Prioritize opportunities through scores

    - If you want to verify the model's accuracy, select **View Details** and then select the **Performance** tab. For more information, see View the accuracy and performance of a predictive scoring model.

    - If the accuracy of the retrained model aren't satisfactory, edit the attributes and retrain the model. If you want to go back to the previous version, revert to that version.

Retrain a model

Retrain a model when its prediction accuracy score doesn't meet your organization's standards, or the model is too old. Typically, retraining increases the prediction accuracy score. The application uses the latest opportunities in your organization to train the model so that it can provide more accurate scores to your sellers.

For better prediction accuracy scoring, retrain a model after the data in your organization is refreshed.

You can retrain a model automatically or manually.

Automatic retraining

Automatic retraining allows the application to retrain a model automatically after every 15 days. This allows the model to learn from latest data and improve its prediction accuracy. Depending on the model's accuracy, the application makes an informed decision whether to publish or ignore the retrained model. The application automatically publishes the model:

- When the accuracy of the retrained model is equal to or greater than 95 percent of the accuracy of the active model
- When the current model is more than three months old

Otherwise, the application keeps the current model.

To retrain a model automatically, go to the model's **Predictive opportunity scoring** page and select **Retrain automatically**. By default, this option is turned on when a model is published.

Manual retraining

Edit the model to trigger manual retraining.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

View the influence of an attribute on the model

Article • 11/30/2022

When you define a predictive scoring model, you'd like to know how each attribute influenced the prediction score. Based on this information, you can understand:

- Why certain attributes carry more prediction influence than others
- How the attribute values compare to the attribute global qualification rate
- How the model harnesses your data to drive predictive scores

Although the following examples refer to leads, this article applies to both opportunity scoring and lead scoring.

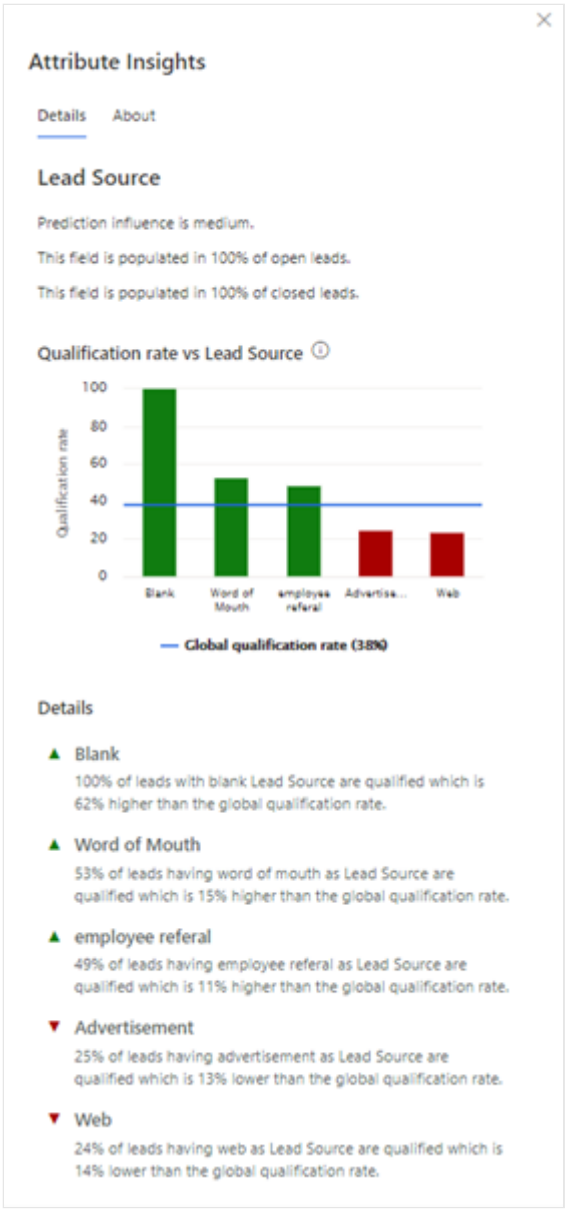
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

View attribute insights and influence

1. Edit a model.
2. On the **Edit fields** page, select the attribute for which you want to view insights, either from **Primary entity** or **Related entities**.

   The **Attribute Insights** pane is displayed on the right side of the page. The following image shows an example of the **Attribute Insights** pane for the **Lead Source** attribute.



The **Attribute Insights** pane displays detailed information about an attribute, such as its qualification rate and the most important reasons—both positive and negative—for that rate. You can also connect the attribute value's relative impact on the score with the data input behaviors of your sellers and how that might affect the accuracy of the predictive score.

The insights displayed on the **Attribute Insights** pane are based on your organization's data and how it correlates to qualified outcomes. For example, when a lead has an attribute value that correlates with a qualification rate above the attribute's global qualification rate, the lead's predictive score increases. When the qualification rate for a lead is below the attribute's average, the predictive score decreases.

The **Attribute Insights** pane is divided into the following sections:

- A summary section with the prediction influence of the attribute, how many times the attribute is populated in open and closed leads or opportunities, and the reason the attribute isn't automatically selected to create the model.

- A graph that illustrates how each value of the attribute contributes to the qualification rate. In the example above, the lead source values **Blank**, **Word of Mouth**, and **Employee referral** perform better than the average, and **Advertisement** and **Web** perform below the average. The average is represented by a blue line and is calculated based on the following formula:

  Global qualification rate for leads = (Total number of leads qualified in your organization) / (Total number of qualified + disqualified leads through this attribute) *100

  Global qualification rate for opportunities = (Total number of opportunities won in your organization) / (Total number of won + lost opportunities through this attribute) *100

  Hover over a bar to view a summary of the value, such as the qualification rate and the number of open and closed leads or opportunities. The qualification rate for a value of the attribute is calculated based on the following formula:

  Qualification rate for a value of the attribute = (Total number of leads or opportunities qualified with the given value in the attribute) / (Total number of closed leads or opportunities with that value in the attribute) *100

  For example, if leads with high budget have a 42 percent qualification rate, the formula is:

  (Total number of leads with high budget that are qualified) / (Total number of leads with high budget that are closed) *100 = 42

  > **Note**
  >
  > Calculations are based on the past two years of data at the time the model is trained and might not represent current data. Also, if the model has filters, calculations are done after the data is filtered.

- A **Details** section that provides reasons why the values are trending as they are in the graph. If there isn't enough data for attributes from related entities, the application doesn't display the insights.

- The **About** tab provides more information about the attribute insights.

> **Note**

Attribute insights are updated when the model is retrained either manually or automatically. Data for attribute insights isn't available for models that were created before March 2021. We suggest that you retrain—or enable the option to automatically retrain—the model to view attribute insights.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Manage duplicate opportunity scoring models

Article • 11/30/2022

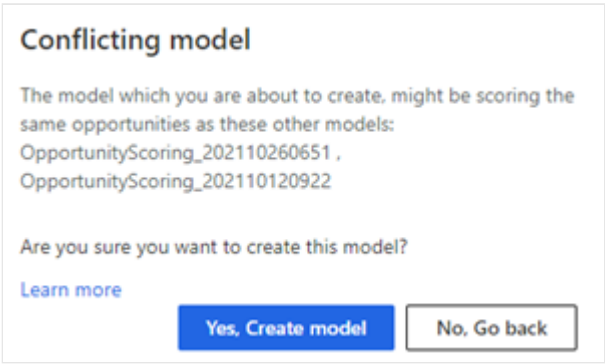
When you create multiple predictive scoring models, it's important to configure them so that they don't score the same opportunities because it's difficult to identify which model scored an opportunity. If you create or edit a model that might duplicate an existing one, you'll receive a warning. You can ignore the warning and create the model anyway, or go back and change the model's configuration.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Avoid a duplicate when you're creating a model

When you create a model and select **Get started**, if the model duplicates one or more existing models, you'll receive a warning like this one:



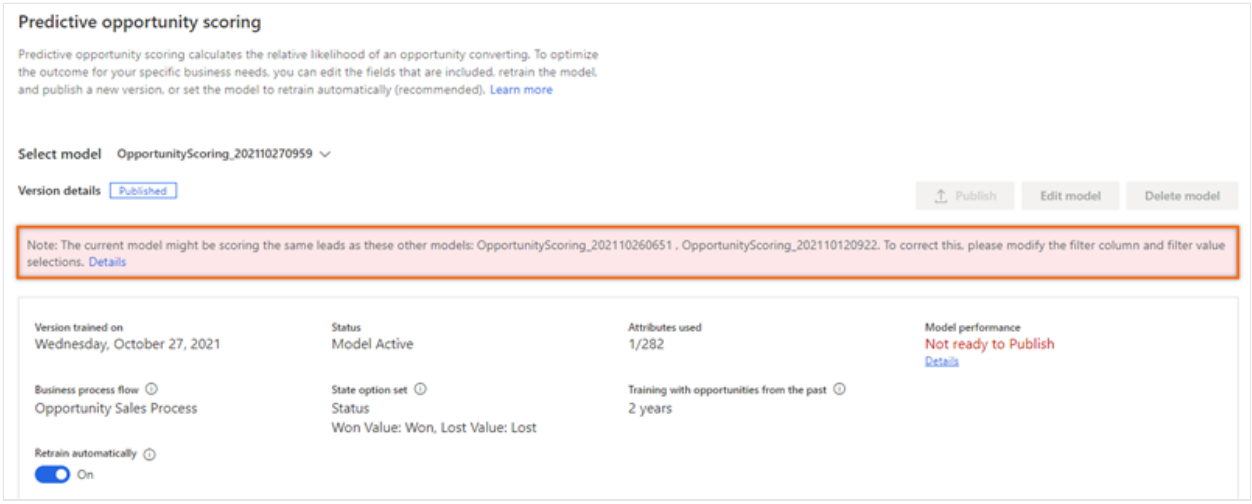
- Select **No, Go back** and change the filter column and values so that the model is scoring unique opportunities.

  -Or-

- Select **Yes, Create model** with the understanding that it might be harder to identify the opportunities that are being scored by this model.

Delete a duplicate published model

When you open a published model, if the model duplicates one or more existing models, the page will include a note like this one:



Edit the model so that it scores unique leads or delete it.

Delete a model

You can delete a scoring model when it's no longer required in your organization or it's a duplicate of an existing model. You can have up to 10 models—both published and unpublished—simultaneously.

1. In **Sales Insights settings** > **Predictive models** > **Opportunity scoring**, open the **Predictive opportunity scoring** page.
2. Select a model in the **Select model** list. Make sure **Retrain automatically** is turned off.
3. Select **Delete model**.
4. When you're asked to confirm, select **Delete**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Add the opportunity scoring widget to a form

Article • 11/30/2022

By default, the predictive opportunity scoring widget is available only in the out-of-the-box **Sales Insights** form. If you're using a customized form for opportunities, you can add the predictive opportunity scoring widget to it.

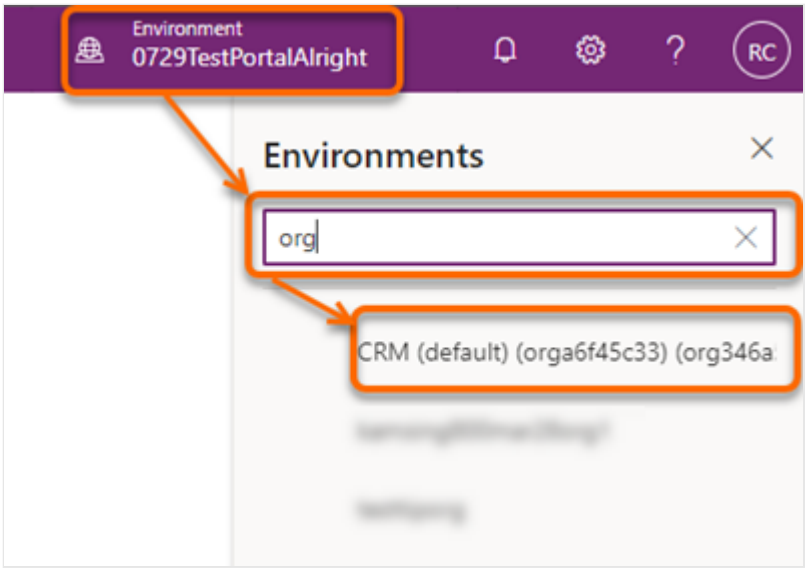
> **Important**
>
> - You can add an opportunity scoring widget to a form only in Unified Interface apps.
> - You can't use the legacy form designer to add an opportunity scoring widget to a form.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

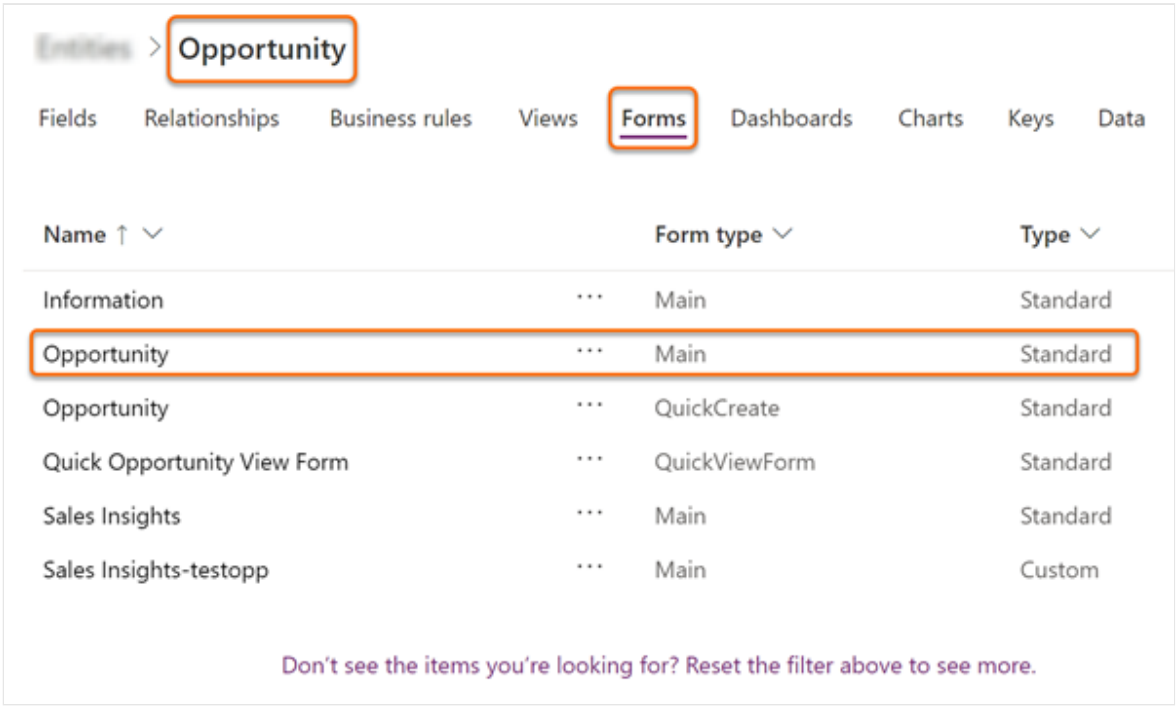
Add the opportunity scoring widget to a custom form

1. Sign in to the Power Apps portal and select an environment.
2. Select **Data** > **Tables**.

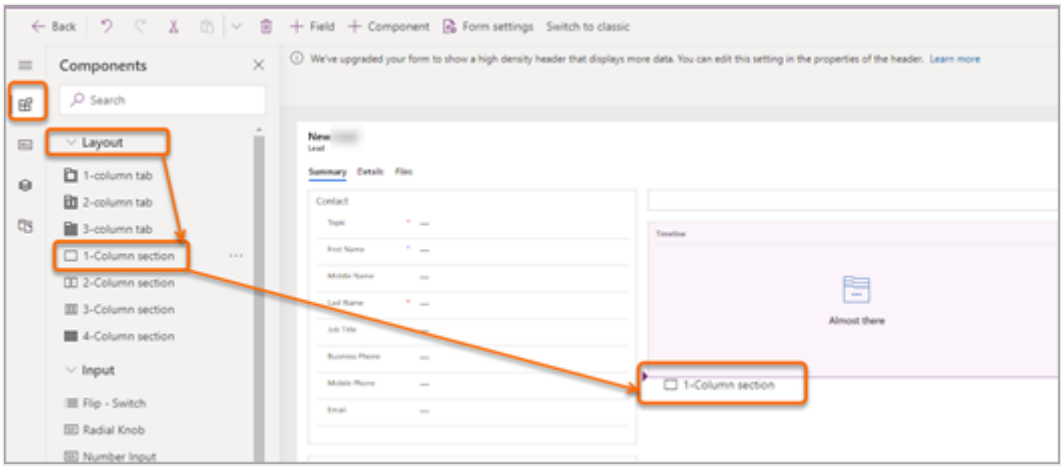


3. Open the **Opportunity** table, select the **Forms** tab, and then select a main form to add the widget to.

> **Note**
>
> If the table to which you want to add the widget isn't listed, in the upper-right corner of the page, change the filter to **All**.

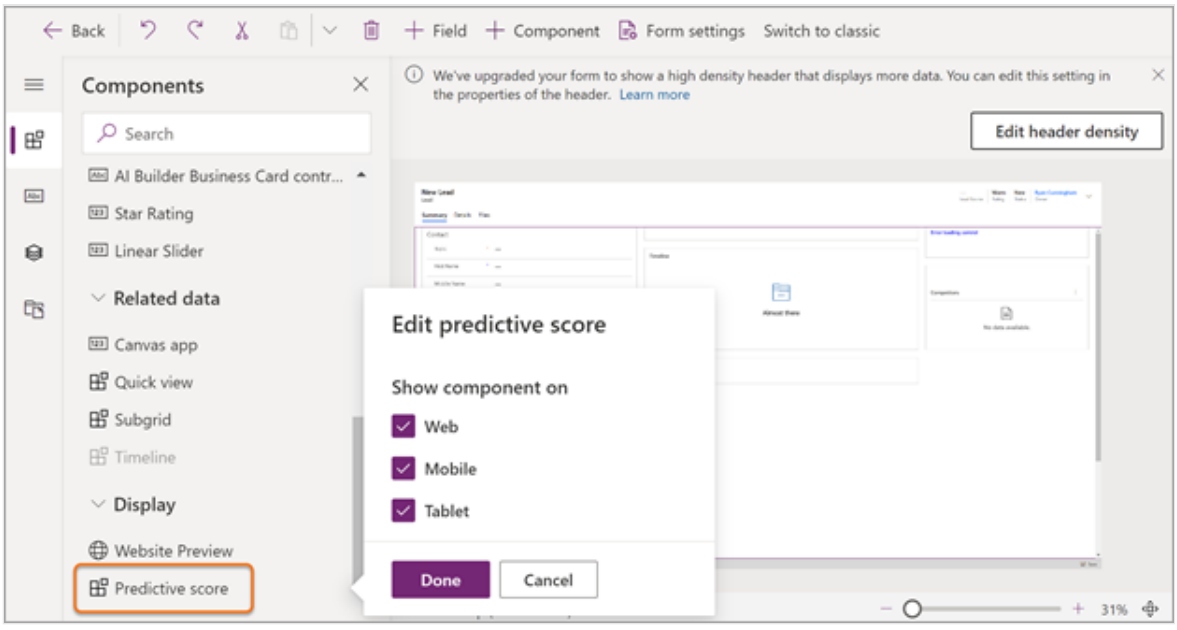


4. In the form designer, select **Component** > **Layout** > **1-Column section** to add a placeholder for the widget.



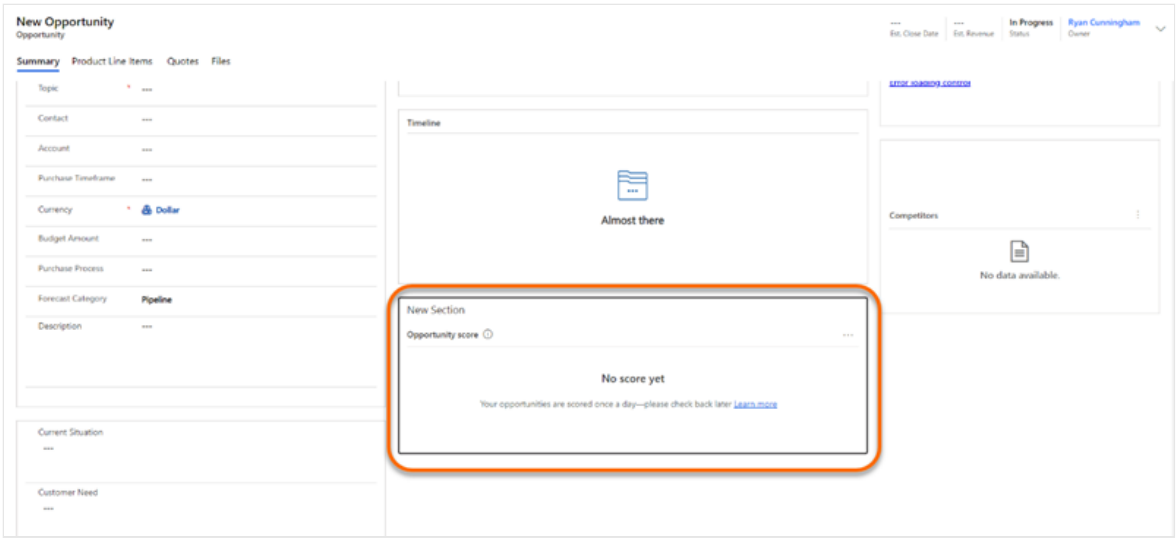
5. With the placeholder column selected, select **Display** > **Predictive score**.

> **Note**
>
> Make sure the placeholder column is selected. If it isn't, the widget will be added at a random place in the form.



6. In the **Edit predictive score** window, select **Done**.

   The predictive score widget is added to the form, as shown in the following image:



7. To hide the **New section** label, select the **Properties** tab of the **New Section** settings pane, and then select **Hide label**.

8. Save and publish the form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Add the Kanban control to Opportunity or Activity entities

Article • 03/30/2022

Add the Kanban control to create Kanban views that help sellers to manage their opportunities or activities effectively.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

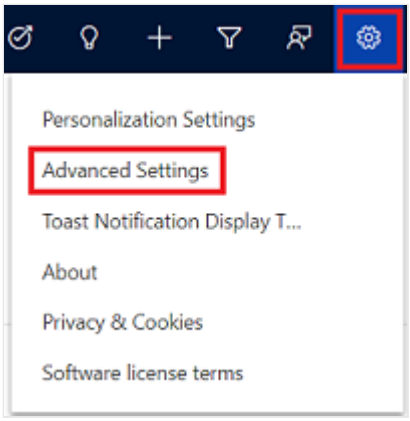
Add the Kanban controls

Kanban views help salespeople to manage their opportunities and activities effectively. Add the Kanban control to the Opportunity and Activity entity so salespeople can use the Kanban views. Similar to other custom controls, Kanban control is supported on all views.

> **Important**
>
> - The Kanban control works only on the Opportunity and Activity entities.
> - The Kanban control is supported only on the main grid. It isn't currently supported on subgrids.
> - The Kanban control is not supported in the **Dynamics 365 for Phones** mobile app.

To add the control:

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



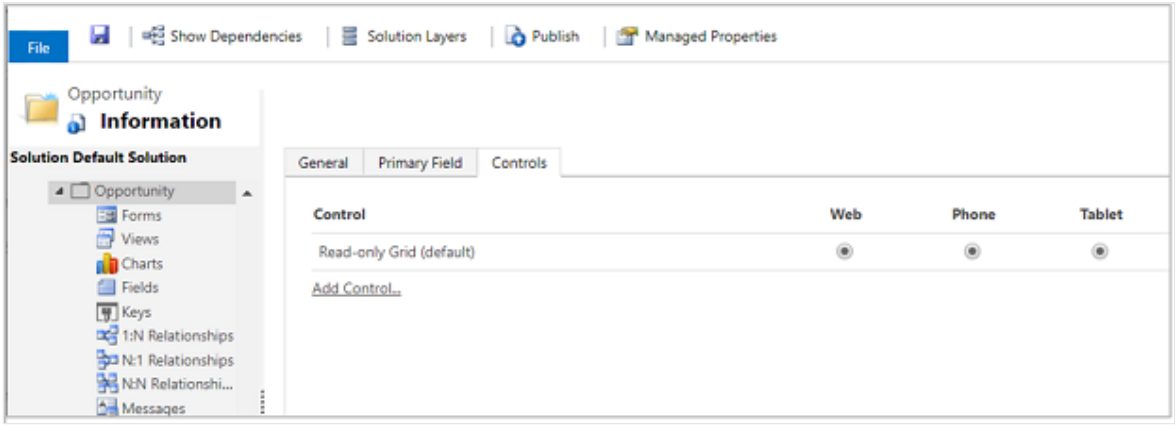
The **Business Management settings** page opens in a new browser tab.

2. On the navigation bar, select **Settings** and then under **Customization**, select **Customizations**.

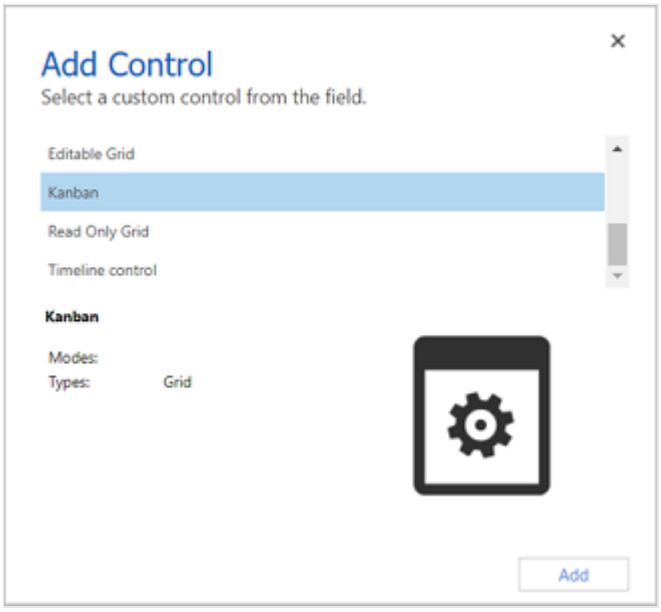
3. Select **Customize the System**.

4. Under **Components** in the solution explorer, expand **Entities** and then select **Opportunity** or **Activity**.

5. Go to the **Controls** tab and select **Add Control**.

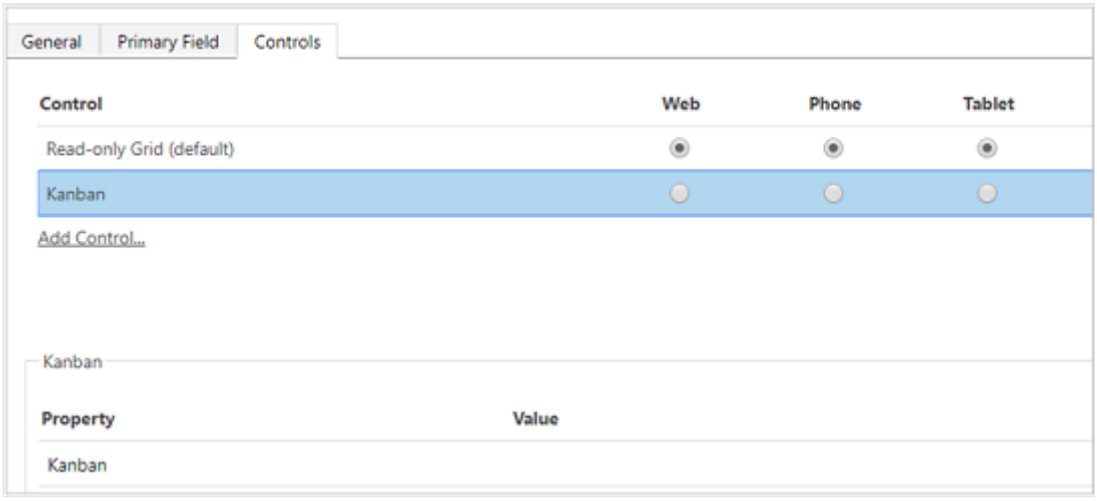


6. In the **Add Control** dialog box, select **Kanban** and then select **Add**.



The Kanban control is added to the list of controls.

7. The Read-only grid is the default option, so when users select **Opportunities** from the site map, they see a read-only grid of opportunities. To make the Kanban view the default view instead, select the radio button for the Kanban control for the corresponding options.



8. Select **Save** to save your changes.

9. To publish the changes you've made, select **Publish**.

What you can't customize?

There are a few customization restrictions that you should be aware of:

- You can't add or remove fields from the cards in the Kanban view swim lanes.
- It isn't possible to have a role-based Kanban view.

- The Activity Kanban view is only available for the Status field. You can't configure the Activity Kanban view for an option set field other than 'Status'.
- For Opportunity Kanban view:
  - While you can customize the out-of-the-box 'Opportunity Sales Process' business process flow, you can't customize the Kanban view to use a business process flow other than the Opportunity Sales Process.
  - The Status-based Opportunity Kanban view is only available for the Status field. You can't configure this Kanban view for an option set field other than 'Status'.
  - In the Opportunity Kanban view, aggregation is supported only for the Estimated Revenue field of the Opportunity entity. You can't configure the Kanban view to have aggregation done on other fields.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Work with opportunities in the Kanban view

Work with activities in the Kanban view

Enable focused view and set it as default

Article • 08/07/2023

In the focused view, sellers can view and manage their CRM records and their associated activities, on one page. This view makes it easier for sellers to stay focused on their tasks and reduces the need to navigate between multiple screens. It also allows sellers to better organize and prioritize their tasks.

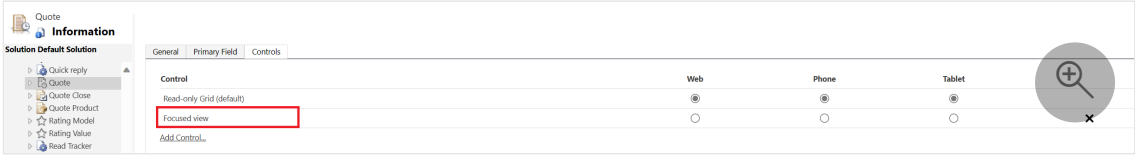
To enable focused view and set it as default

The focused view is enabled by default for contact, account, lead, and opportunity entities. However, you must enable it manually for all the other entities. You can also set it as the default view for any entity so that sellers don't have to switch to the focused view each time they access their entity list.

> **Note**
>
> - When you set the focused view as the default view, users can't switch to the list view. If users must be able to use both views, set the list view as the default view.
> - Focused view is not available for the Activities entity.

Use the following steps to enable the focused view or to set it as default.

1. In the Sales Hub app, select **Settings** > **Advanced Settings**.
2. On the **Settings** menu, select **Customizations** > **Customize the system**.
3. On the Power Apps Default Solution page, select **Entities** > ***Entity name***. For example, select **Entities** > **Quote**.
4. To add the control for entities other than contact, account, lead, and opportunity, follow these steps:
   a. On the **Controls** tab, select **Add Control**.
   b. In the **Add Control** dialog box, select **Focused view**, and then select **Add**.



5. To set the focused view as the default view, select **Focused view** for web, phone, and tablet on the **Controls** tab.

6. Save and publish your changes. The focused view is now enabled and set as the default view for quotes.

See also

View and manage records in focused view
Focused view FAQs

Set up a product catalog

Article • 10/18/2023

Set up the product catalog with the collection of products that you sell and their pricing information.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Process for setting up the product catalog

A product catalog is a collection of products and their pricing information. To set up pricing, you need to define the units in which your products are sold, the amount to charge for each unit, and the discounts you want to offer based on volume purchased.

> **Note**
>
> Product families are only supported with Sales Enterprise and Sales Premium licenses.

Watch this video to understand the components of a product catalog and how to set them up:
https://www.youtube-nocookie.com/embed/AljnXxF6qwg

Other than setting up the pricing for products, product catalog also supports product taxonomy that lets you create a rich classification of products. This helps ensure that your customers receive the most appropriate and complete solution.

As units, discounts, and prices are connected to each other, it's important that you create each of these components in a product catalog in the following sequence:

Step	Description	Related topics
1	Create discount lists to offer your products and services at different prices, depending on the quantity purchased.	Set up a discount list
2	Define the measurements or quantities your products will be available in.	Create a unit group and add units to that group
3	Create products for the items you sell. You can create a standalone product or a product inside a family depending on how you want to organize and classify your products. Each product you create will be linked to a unit group and default unit. You can also create a standalone bundle or a bundle inside a product family.	Create a product family
4	Define pricing for your products.	Create price lists and price list items to define pricing of products
5	Add price list items. A price list item defines the price per unit of a product. Add each new product to one or more price lists as price list items. You can do this either from the product form or the price list form.	Create a product family **- OR -** Create price lists and price list items to define pricing of products
6	Select one of the price lists to which you added the product as the default price list for the product. Dynamics 365 Sales uses the default price list for calculations when the associated price list in the opportunity or order for the product doesn't contain a price definition of the product.	Create a product family

Create discount lists (Optional)
List A: 3 packs, 10% off
List B: 1 box, 20% off
Create unit groups and units
Unit group: Cool drink units
Unit: Single can
Unit: Pack of 6 cans
Unit: Box of 5 packs
Create product
Unit group: Cool drink units
Unit: Single can
Associate units groups and units with products
Product: Cool drink
Create empty price lists
Price list: APAC
Price list: U.S
Add price list items to the price lists
Price list: APAC
Product: Cool drinks
List A: 3 packs, 10% off
Associate product with price lists
Price list: U.S
Associate discount list with price lists (Optional)
Set Default Price List
Price list: APAC
Set the default price list for the product
Product: Cool drink

See Also

Create a product family

Learn the basics of Dynamics 365 Sales

Configure product catalog settings

Article • 10/17/2023

Configure the settings to change the seller experience while selecting products from the catalog.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure the settings

You can configure the product catalog settings to change the experience sellers have when they select products from the catalog. For example, you can choose whether they must select a price list when creating an opportunity, quote, invoice, or order.

To allow a security role to create products, you must assign the **Create** permission for the **Product** entity to the security role. Products can only be created at the organization-level. Even if you set the security role permissions to user level for the **Product** entity, products will be created at the organization level.

To configure the product catalog settings

1. In the Sales Hub app, select **Change area** in the lower-left corner, and then select **App settings**.
2. Under **Product catalog**, select **Product catalog settings**.
3. On the **Product catalog settings** page, set the appropriate values as described in the following table, and then save the changes.

> **Note**
>
> The enhanced experience for adding products is not supported for mobile devices. Mobile users will continue to see the Quick Create form for adding products.

Setting	Description
Adding products	Turn on this option to enable the enhanced **Add products** dialog box that sellers can use to efficiently search, compare, and select products while they're creating an opportunity, quote, invoice, or order. When you turn on this option, you'll see additional customization options you can use to customize the information you need in the **Add products** dialog box. You can either add more columns to the dialog box or add more information to the **Product** column. More information: Preview: Customize the Add products dialog box.
Create products in active state	Turn on this option to set the products to the `active` state upon creation. This option applies only to products that don't have a parent product family. To create products in the `draft` state, turn this option off.
Allow selection of default price list	Turn on this option if you want the default price list to be selected for an opportunity based on the inbuilt rule (that is, using the default price lists that have been defined for territories). Otherwise, turn this option off.
Use system pricing calculation	Turn on this option to use the system pricing engine to calculate prices for opportunities, quotes, orders, and invoices. Turn the option off to use custom pricing. More information: Use custom pricing for products
Make pricing list optional	Turn on this option if you want to allow sellers to add products to opportunities, quotes, invoices, or orders without associating a price list.
Maximum number of products in a bundle	Specify the maximum number of products that can be added in a bundle. **Default**: 15
Maximum number of properties that are allowed for a product or bundle	Specify the maximum number of properties that can be associated with a product or bundle. Product properties are added to the product family record, and all the child products and bundles under the product family inherit the properties added to the parent product family. **Note:** The number specified in this setting comes into effect only when you publish a product or a bundle with the associated properties, and not at the time when you add the properties to a draft product family record. **Default**: 50
Discount calculation method	Select **Per unit** if you want the pricing engine to calculate the discount based on the price per unit instead of a line item. By default, calculations are done on a line-item basis. See the following table.

The following table shows the difference between discounts calculated for a line item versus price per unit.

Discount method	Product	Price per unit	Quantity	Discount	Amount
Line item	Product 1	100	11	10	(100 × 11) − 10 = 1,090
Per unit	Product 2	100	11	10	(100 − 10) × 11 = 990

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Set up a product catalog
Enable the enhanced experience of adding products (Sales Hub)

Set up products

Article • 10/17/2023

Use products in Dynamics 365 Sales to define the products or services that your organization offers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Create a product

Products are the backbone of your business. They can be physical products or services—whatever your organization sells. Your sales reps use the products you create in Sales to generate sales quotes, marketing campaigns, orders, and invoices. Your customer service reps might also use them when they create customer service cases.

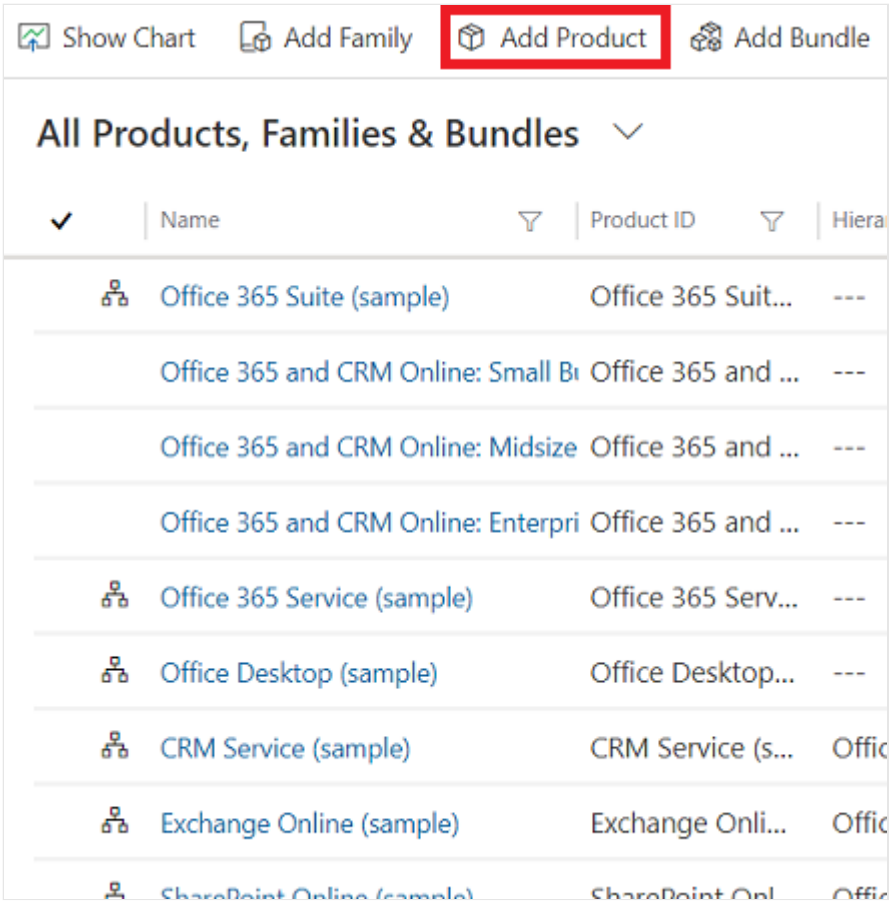
Products that you create are visible to all users in your organization.

1. Depending on the sales app that you're using, do one of the following:

   - If you're using the Sales Hub app,
     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
     b. In the **Product Catalog** area, select **Families and Products**.
   - If you're using the Sales Professional app,
     - Select **Price List** from the site map.

2. (Applicable for Sales Premium and Sales Enterprise) To create a child product to an existing product family, select the family in the list, and then on the command bar, select **Add Product**. The selected family becomes the parent family of the new product you're creating. More information: Create a product family

3. To create an independent product, select **Add Product**. The following scree



4. Fill in your information:

   - **Name**
   - **Product ID**
   - **Parent**: Select a new parent for this product. More information: Change the parent of a product (reparenting)
   - **Valid From/Valid To**: Define the period the product is valid for by selecting a **Valid From** and **Valid To** date.
   - **Unit Group**: Select a unit group. A unit group is a collection of various units a product is sold in and defines how individual items are grouped into larger quantities. For example, if you're adding seeds as a product, you may have created a unit group called "Seeds" and defined its primary unit as "packet."
   - **Default Unit**: Select the most common unit in which the product will be sold. Units are the quantities or measurements that you sell your products in. For example, if you're adding seeds as a product, you can sell it in packets, boxes, or pallets. Each of these becomes a unit of the product. If seeds are mostly sold in packets, select that as the unit.

     More information: Create a unit group and add units to that group

- **Default Price List**: If this is a new product, this field is read-only. Before you can select a default price list, you must complete all the required fields and then save the record. Although the default price list is not required, after you save the product record, it is a good idea to set a default price list for each product. If a customer record does not contain a price list, Sales can use the default price list for generating quotes, orders, and invoices.

- **Decimals Supported**: Enter a whole number between 0 and 5. If the product can't be divided into fractional quantities, enter 0. The precision of the **Quantity** field in the quote, order, or invoice product record is validated against the value in this field if the product does not have an associated price list.

- **Subject**: Associate this product with a subject. You can use subjects to categorize your products and to filter reports.

5. Select **Save**.

6. If you're creating this product under a family, the product will inherit the properties from its parent family. To change a product's property, in the **Product Properties** section, open the property by selecting the name, and selecting **Override**. More information: Use properties to describe a product

7. To add product relationships, select the **Related** tab, and then select **Relationships**. More information: Define related products to increase chances of sales

8. To see all the products that are associated with this product in a bundle, select the **Related** tab, and select **Product Bundles**.

9. Select **Save**.

> ⓘ Note
>
> Previewing the properties of a product is currently not supported.

Typical next steps

Define product pricing with price lists and price list items

Classify products and bundles into product families

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Set up a product catalog
Manage sales literature
Change the parent of a product (reparenting)

Set up product families

Article • 03/30/2022

Make it easier for sales agents to find products and services in a product catalog by creating a product family and classifying similar products.

> **Note**
>
> Product families are only supported for Sales Enterprise and Sales Premium.

License and role requirements

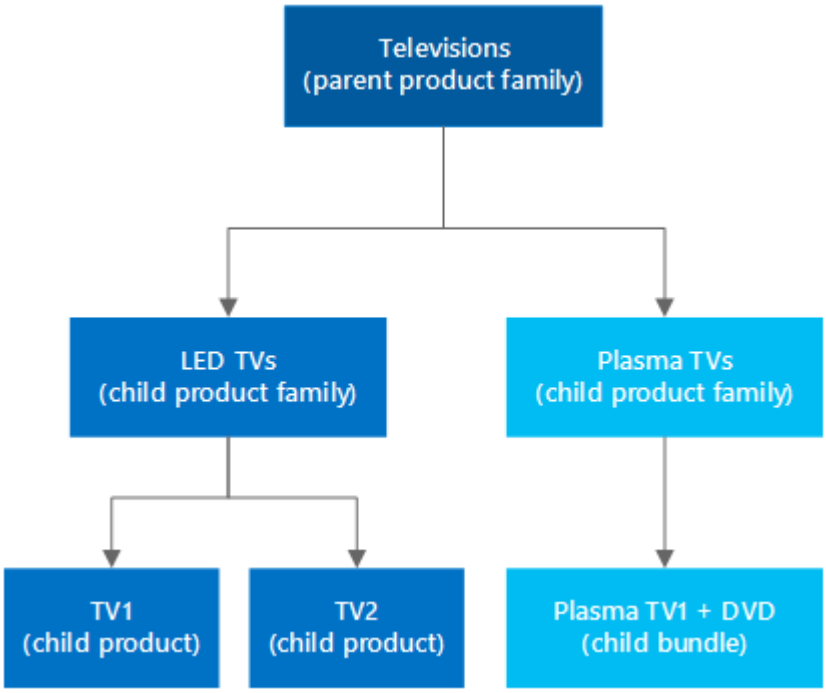
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What is a product family?

A product family lets you group and categorize products, making it easier for you to manage them.

With product families, you can:

- Categorize your products in whichever way is most meaningful to your organization.
- Create child products and product bundles within a product family. (Product bundles allow you to sell multiple items together.)
- Create as many levels of product families as you want by creating a family within a family.



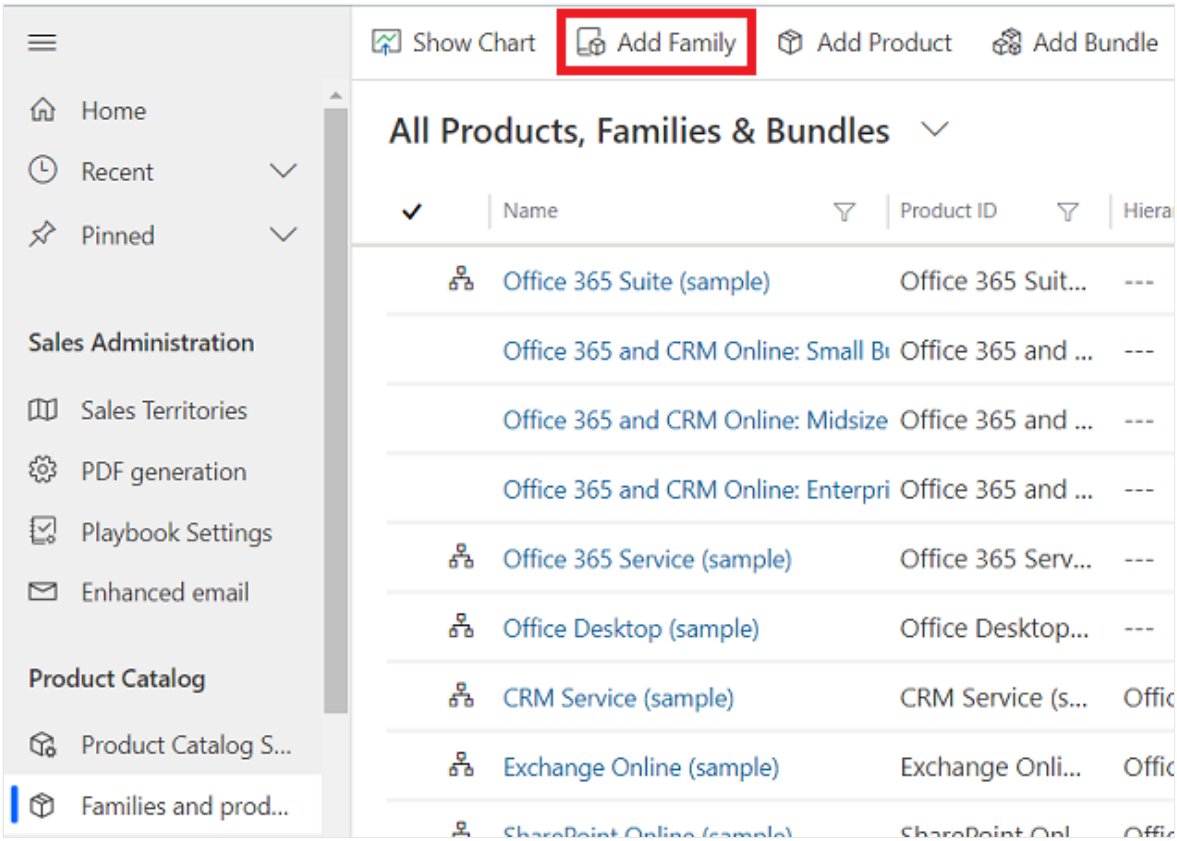
> ⓘ **Note**
>
> The product family that you use for creating a product, bundle, or another product family becomes the parent family.

Create a product family (Sales Hub)

1. Make sure that you have one of the following security roles or equivalent permissions: System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager.
2. Select the site map , then select **App Settings**, and then select **Families and Products**.
3. To create a family, on the command bar, select **Add Family**.

   -OR-

   To create a child product family under an existing family, select the family, and select **Add Family**. The selected family becomes the parent family of the new family you're creating.



4. Fill in your information. Use the handy tooltips as a guide.

> **Note**
>
> The **Valid From** and **Valid To** fields define the duration that a product is valid for. There's no business logic associated with these fields except that the **Valid To** date must be later than the **Valid From** date. If required, you can implement your own business logic in these fields with a workflow, plug-in, or by using the Dynamics 365 Customer Engagement Web Services. For example, you could run a scheduled job to automatically retire last season's products using the date selected in the **Valid To** field.

5. Select **Save**.

6. In the list of products, families, and bundles, open the family that you just created.

7. On the **Product Properties** tab, select the **Add New Property** button, and add the required properties. More information: Use properties to describe a product

Typical next steps

Use properties to describe a product

Create a product

Classify products and bundles into product families

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog
Clone a product
Change the parent of a product (reparenting)

Set up product bundles to sell multiple items together (Sales Hub)

Article • 03/30/2022

Encourage customers to buy more products instead of a single product by combining products in a bundle.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What is a product bundle?

A bundle is a collection of products that is sold as single unit. Product bundling is useful in cases like:

- Pairing a top-selling product with a less popular product
- Grouping products in a way that customers get more benefit from the full line of products, for example, Microsoft Office Suite or a digital camera with lenses

Here are some things to know about bundles:

- You can mark certain products in a bundle as optional and sell them individually.
- When your bundle has an optional product, the bundle can be added only to the price list that has this optional product with the same unit.
- You can't add product families, kits, or other bundles to a bundle.

Create a product bundle (Sales Hub)

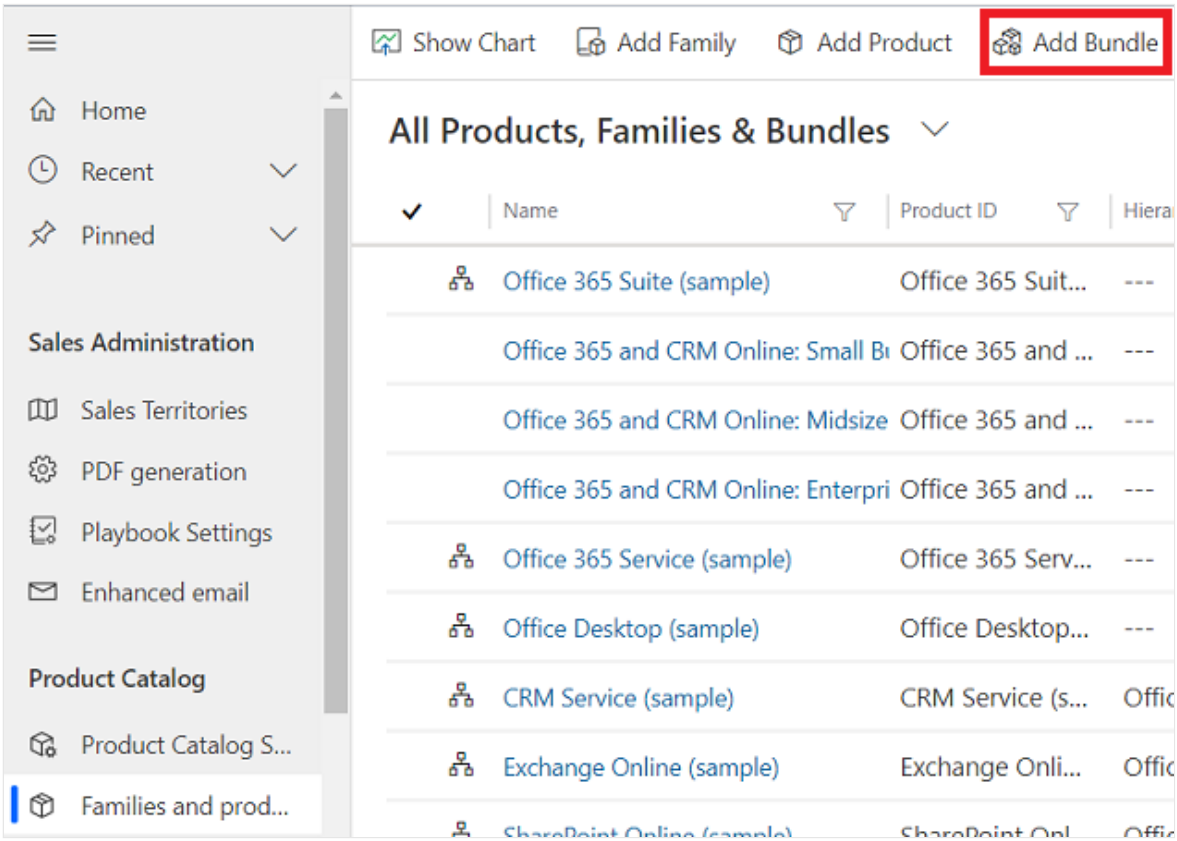
1. Make sure that you have one of the following security roles or equivalent permissions: System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager.

2. Select the site map , then select **App Settings**, and then select **Families and Products**.

3. To add a standalone product bundle, select **Add Bundle**.

   -OR-

   To add product bundle to an existing family, select the family in the list, and then select **Add Bundle**.



4. Fill in the information:

   - **Name**
   - **Product ID**
   - **Parent**: Select a parent product family for the product bundle. If you're creating a child product bundle in a product family, the name of the parent product family is populated here. More information: Change the parent of a product (reparenting)
   - **Valid From/Valid To**: Define the period the product bundle is valid for by selecting a **Valid From** and **Valid To** date.
   - **Unit Group**: Select a unit group. A unit group is a collection of various units a product is sold in and defines how individual items are grouped into larger

quantities. For example, if you're adding seeds as a product, you may have created a unit group called "Seeds" and defined its primary unit as "packet."

- **Default Unit**: Select the most common unit in which the product will be sold. Units are the quantities or measurements that you sell your products in. For example, if you're adding seeds as a product, you can sell it in packets, boxes, or pallets. Each of these becomes a unit of the product. If seeds are mostly sold in packets, select that as the unit.

  More information: Create a unit group and add units to that group

- **Default Price List**: If this is a new product, this field is read-only. Before you can select a default price list, you must complete all the required fields and then save the record. Although the default price list is not required, after you save the product record, it is a good idea to set a default price list for each product. If a customer record does not contain a price list, Dynamics 365 Sales can use the default price list for generating quotes, orders, and invoices.

- **Decimals Supported**: Enter a whole number between 0 and 5. If the product can't be divided into fractional quantities, enter 0. The precision of the **Quantity** field in the quote, order, or invoice product record is validated against the value in this field if the product does not have an associated price list.

- **Subject**: Associate this product with a subject. You can use subjects to categorize your products and to filter reports.

5. Select **Save**.

6. On the **Bundle Products** tab, select **Add New Product Association**.

   The **Product Association** page opens.

7. Select products that you want to add to the bundle.

   - **Bundle**: The bundle you're adding the products to is selected by default.

   - **Product**: Select the **Lookup** button, and select a product you want to add to the bundle. You can't add a family or a product bundle to a product bundle.

   - **Quantity**: Specify the quantity of product you want to add to the bundle.

   - **Required**: Specify whether this product is required or optional. If you select a product as optional, you can sell the bundle without the product.

   - **Unit**: Select the unit in which you want to sell the product.

8. Select **Save & Close**.
9. To change properties of an individual product in the bundle, select **Edit Properties** corresponding to the product, and change the values as required.

If you've added this bundle to a family, the bundle will inherit the properties from its parent family. To change the bundle's property:

10. Open the property, and select **Override**. More information: Use properties to describe a product
11. To add product relationships, select the **Related** tab, and then select **Relationships**. More information: Define related products to increase chances of sales

> **Tip**
>
> To create a new product bundle based on an existing one, on the command bar, select **Clone**. This opens a new product bundle record with the same information as the original product bundle record, except for **Name** and **Product ID**.

Typical next steps

Create price lists and price list items to define pricing of products

Classify products and bundles into product families

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

How prices are calculated for product bundles?
Set up a product catalog: Walkthrough

System Settings dialog box - Sales tab

How are prices calculated for product bundles?

Article • 03/03/2023

Typically, the pricing of products in bundles is different than for individual products. You can set a total, potentially discounted, price for the bundle. Or—if the bundle includes optional products—you can add those products to the price list as price list items.

When a product bundle is added to an opportunity, quote, order, or invoice, the bundle price is calculated based on the required products in the bundle. When the bundle includes optional products, the total price is calculated by adding the total price of the optional products and the price of the product bundle.

Let's understand this with an example. You have a product bundle priced at $600, with the following products included in it:

Products in the bundle	Unit	Price per unit
Required product A	5	$50
Required product B	5	$70

This bundle will be added to an opportunity with a price of $600.

Now, let's see how the calculation differs if the product bundle priced at $600 includes the following required and optional products:

Product bundle	Unit	Price per unit
Required product A	5	$50
Required product B	5	$70
Optional product C	5	$40
Optional product D	5	$50

When this bundle is added to an opportunity, its price will be calculated as follows:

Product bundle price	+	Sum of optional products' price	Total
$600	+	(5 × $40) + (5 × $50) = $450	$1050

When you try to update a product that's a required item in a bundle that has been added to an opportunity, quote, order, or invoice record, you might get an error in Dynamics 365 Sales: "You can't update this bundle item because it's a required product in the bundle."

Because the pricing-related fields for a product that's required for the bundle aren't used in price calculations, you can't modify these fields. The pricing-related fields are: Unit, Existing Product, Pricing, Price Per Unit, Volume Discount, Quantity, Amount, Manual Discount, Tax, Extended Amount, Product Type code, Transaction Currency, and Parent Bundle. You can modify fields other than these pricing-related fields.

See also

Set up product bundles to sell multiple items together

Change the parent of a product (reparenting)

Article • 05/10/2022

Create a product hierarchy by associating product families and products in a parent-child relationship in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

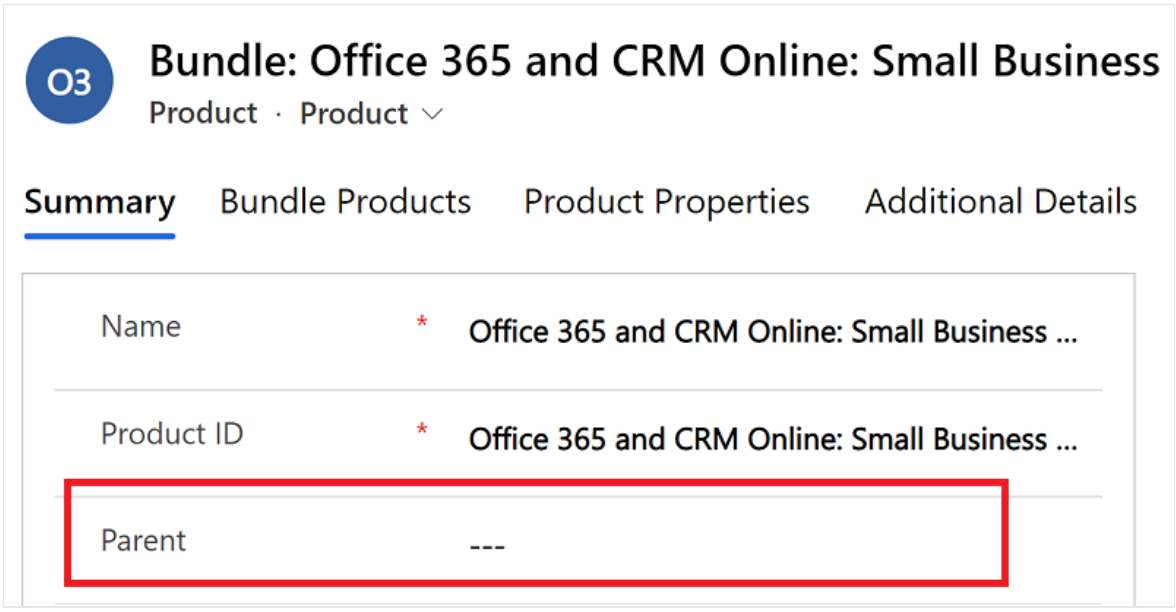
Change or remove the parent of a product

When you change the parent of a product, inherited properties from the previous parent are removed from the record and its child records. For example, think of a TV that was previously classified as "Plasma." The organization decides to organize TVs as Smart and Non-Smart TVs. They decide to move it from the "Plasma" family to the "Smart TV" family. A new set of properties relating to Smart TV are added and Plasma properties are removed from the parent.

To change or remove the parent of a product

1. Open the record for which you want to change parent.

2. In the **Parent** field, select an appropriate product family.



3. To remove the parent from the record, just remove the parent record from the **Parent** field.

Things to consider when reparenting a record:

- Products which are re-parented can't be reverted. When a product is reparented, the properties inherited from the previous parent are lost. Thus, you can't revert the properties of the reparented product to the last active version of the product.
- You can only select a product family as a parent.
- You can only set product families that are in the Under Revision, Draft, or Active state as a parent.
- You can only change or remove the parent from records that are in the **Under Revision** or **Draft** status.
- For an **Under Revision** record, only an **Under Revision** or **Active** record can be selected as its parent.
- For a **Draft** record, only an **Under Revision**, **Draft**, or **Active** record can be selected as its parent.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up products (Sales and Sales Hub)
Set up a product family (Sales and Sales Hub)
Troubleshoot issues with products

Publish a product, family, or bundle to make it available for selling

Article • 03/30/2022

Publishing a product or bundle makes the product available for selling in Dynamics 365 Sales. Sellers can choose only published products and bundles when creating opportunities, quotes, and so on.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Publish a product, family, or bundle

By default, product records are created in a draft state, and are available to your sales agents only after you publish it. For products that don't have a parent product family, you can create them directly in an active state using a system setting, so that you don't have to publish them after creation. More information: System Settings dialog box - Sales tab

> **Note**
>
> - You can only publish a product or bundle with a parent family if the parent product family is active.
> - Product families are only supported for Sales Enterprise and Sales Premium.

1. Depending on the sales app that you're using, do one of the following:

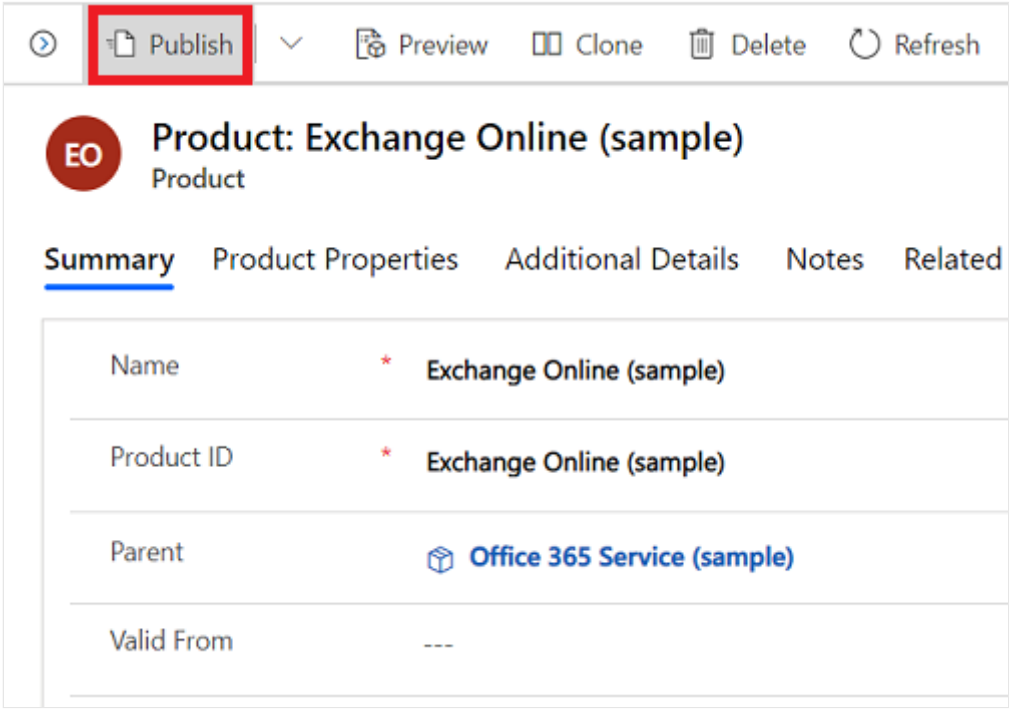
   - If you're using the Sales Hub app,

     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.

b. In the **Product Catalog** area, select **Families and Products**.

- If you're using the Sales Professional app,
  - Select **Products** from the site map.

2. Select the product, bundle, or family you want to publish, and on the command bar, select **Publish**.



This will change the product status to **Active** and make it available for selling.

> **Tip**
>
> You can't publish multiple product records at the same time. To publish all child products and families of a parent family at once, open the family, and choose **Publish** > **Publish Hierarchy**. For product records that don't belong to a product family, publish them individually after creating or editing them to make them available to your sales agents.

Typical next steps

Revise a product

Retire a product

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog: Walkthrough

Define product pricing with price lists and price list items

Article • 08/08/2023

Use price lists and price list items to define price for a product.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What is a price list?

Price lists tell your sales agents what to charge for your products or services. You can create multiple price lists so that you can maintain separate price structures for different regions, sales channels, or sales territories.

Price lists tie the unit, product, and pricing details together, so before you create a price list, make sure the units and products are in place.

> **Note**
>
> - Territories are only supported for Sales Enterprise and Sales Premium licenses.
> - The Price list table inherits its privileges from the Product table. For example, if a user has read and write privileges on the Product table, they get the same privileges on the Price list table too.

- You must create at least one price list for each of the currencies that your organization does business in.

Create a price list and price list items

1. Depending on the sales app that you're using, do one of the following:

   - If you're using the Sales Hub app,
     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
     b. In the **Product Catalog** area, select **Price Lists**.
   - If you're using the Sales Professional app,
     - Select **Price List** from the site map.

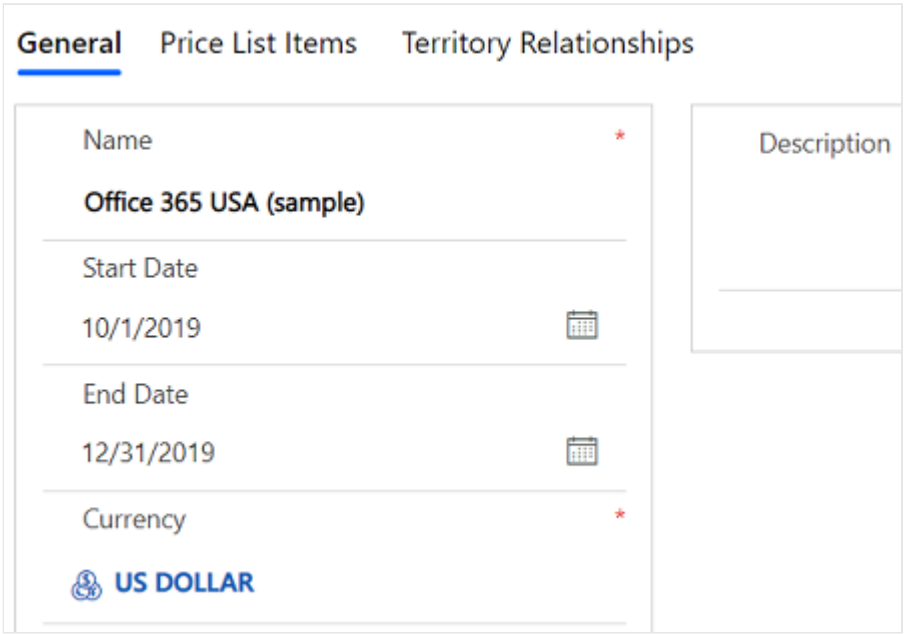
2. To create a new price list, select **New**.

3. In the price list form, fill in your information, and then select **Save**.

   a. **Name**. Type a descriptive name for the price list. For example, if you're creating a price list for retail, mention that.

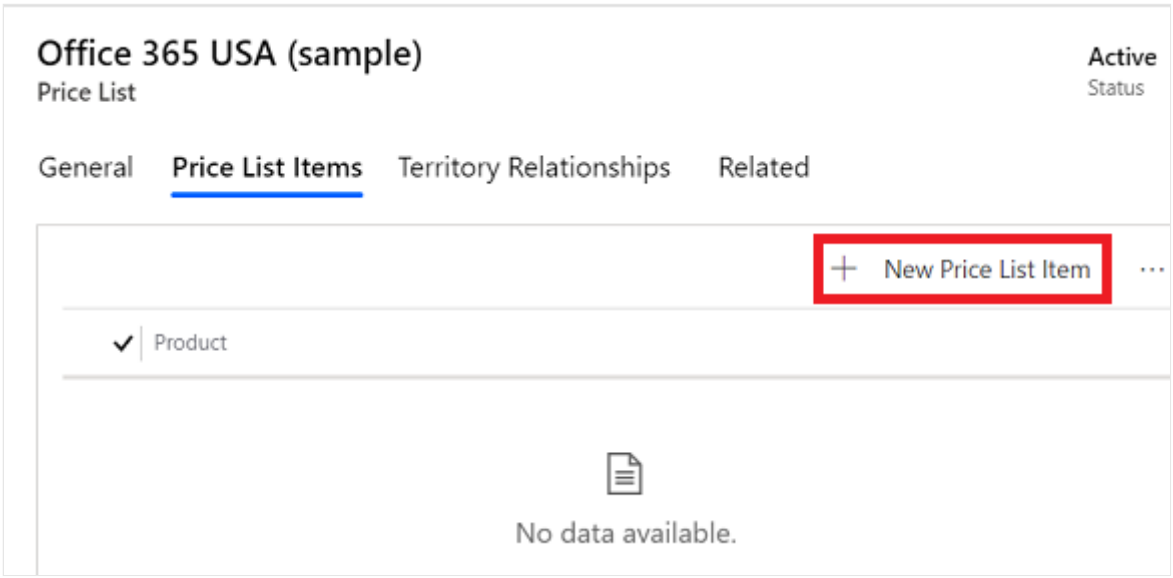
   b. **Start Date/End Date**. Select the start date and end date for the price list. For example, if this is a promotional price list that's effective only for the promotional period, select that period.

   c. **Currency**. Select the currency you're creating the price list for. You can have different price list for different currencies.



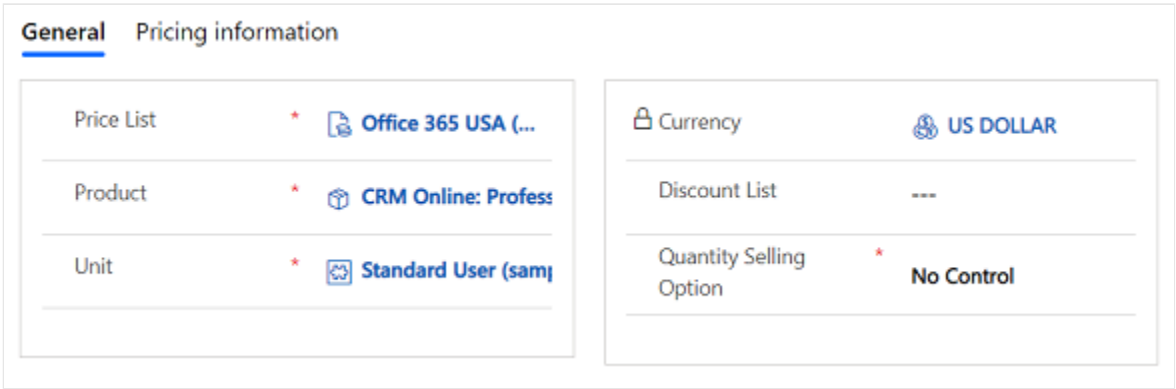
4. To add price per unit for a product, create and add price list items.

   a. In the **Price List** form, select the **Price List Items** tab, and then select **New Price List Item**.



   b. In the **Price List Item** form, fill in the information, and select **Save**:

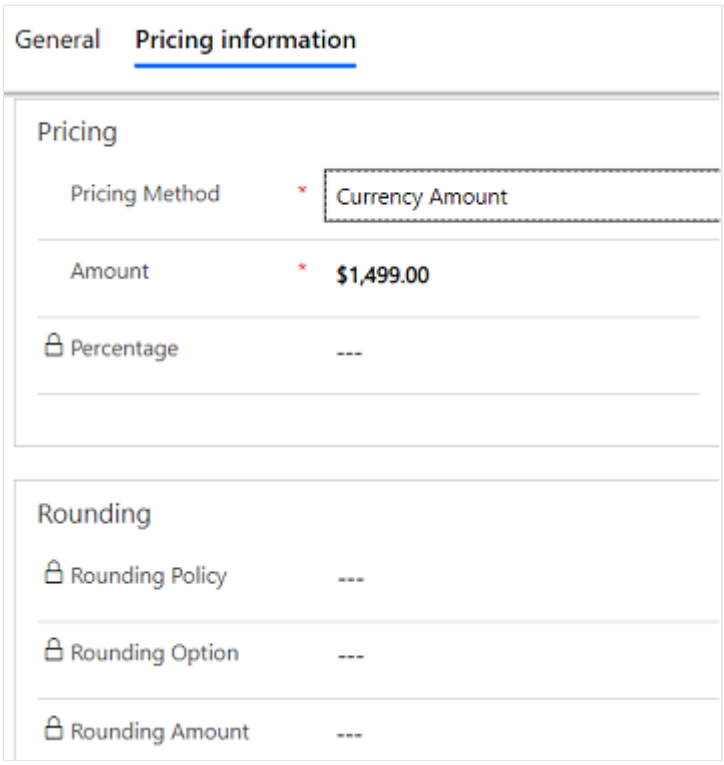
   - **Product**. Select the product for which you're creating this price list.
   - **Unit**. Select the unit for the product you're creating this price list for.
   - **Currency**. The currency defined for the price list is automatically populated.
   - **Discount List**. If you want to offer a discount on the products, select a discount list to the price list item.
   - **Quantity Selling Option**. select whether the product or service can be ordered in whole, partial, or both types of quantities. This information is used in the Quantity field of Quote Product, Order Product, and Invoice Product records.



   c. In the **Price List item** form, on the **Pricing information** tab, fill in the following information, and select **Save & Close**:

- **Pricing Method**. select an option that determines how the pricing will be calculated. It could be a certain amount, or a percentage of the current or standard cost. The available options are as follows:
    - **Currency Amount**. Use this to ignore a product's list price in the product catalog and to enter a different price manually for this price list.
    - **Percent of List**. Use this to calculate a product's price in the price list as a percentage of the list price of the associated product.
    - **Percent Markup - Current Cost**. Use this to add a percent markup on top of the current cost of the product.
    - **Percent Markup - Standard Cost**. Use this to add a percent markup on top of the standard cost of the product.
    - **Percent Margin - Current Cost**. Use this for the price offered in the price list to yield a percentage margin of the current cost of the product.
    - **Percent Margin - Standard Cost**. Use this for the price offered in the price list to yield a percentage margin of the standard cost of the product.
- **Amount**. If you selected **Currency Amount** as the pricing method, type the amount at which the product will be sold.
- **Percentage**. If you selected any value other than **Currency Amount** as the pricing method, type the percentage for the pricing method that you want.
- **Rounding Policy**. If you selected a pricing method other than **Currency Amount**, you can set up a rounding policy. For example, if you want per unit prices to be in the form of $0.99, you can select a rounding policy where all prices per unit automatically have a price that ends in 99 cents. To do this, you select the rounding policy to round up the price, and then set the price to end in a certain amount, such as 99 cents.
    - **None**. Prices are not rounded.
    - **Up**. Prices are rounded up to the nearest rounding amount.
    - **Down**. Prices are rounded down to the nearest rounding amount.
    - **To Nearest**. Prices are rounded to the nearest rounding amount.
- **Rounding Option**. Select **Ends in** or **Multiple of** if you want the price to end in a certain amount or multiples of a certain amount.

- **Rounding Amount**. Enter the amount.



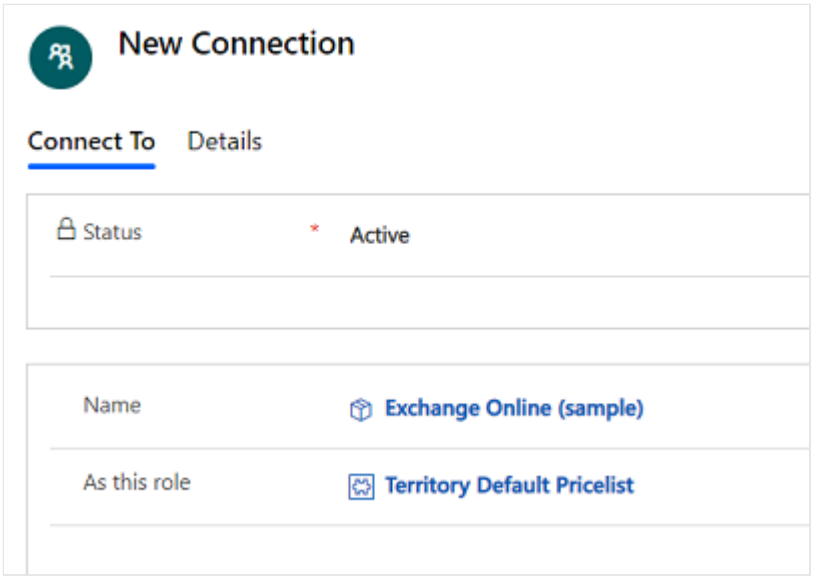
5. (Applicable for Sales Premium and Sales Enterprise) You can also associate default price lists for territories so that the sales reps working with accounts and contacts in certain territories have the price list selected by default.

   a. In the price list record, select the **Territory Relationship** tab.

   b. In the **Territories** section, select **Add New Connection**.

   c. In the **New Connection** form, enter the following, and select **Save & Close**:

   - **Name**. Select the Lookup button and select a territory.
   - **As this role**. Select a connection role that is associated with the territory record type.



d. In the price list record, select **Save & Close**.

Typical next steps

Publish a product or bundle to make it available for selling

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System Settings dialog box - Sales tab
Classify products and bundles into product families
Price calculation for opportunity, quote, order, and invoice records

Decimal precision in currency and pricing

Article • 05/10/2022

Decimal precision plays an important role in determining the number of decimal places to be used with field type **Currency** in Dynamics 365 Sales. It also affects rounding in calculations.

Decimal precision can be used with the following three levels:

- **Pricing decimal precision.** This is an organization-level setting used for pricing precisions.
- **Currency precision.** This option applies the precision defined for the currency in the record.
- **Field-level precision.** This is used to define a specific set precision using values between 0 and 4.

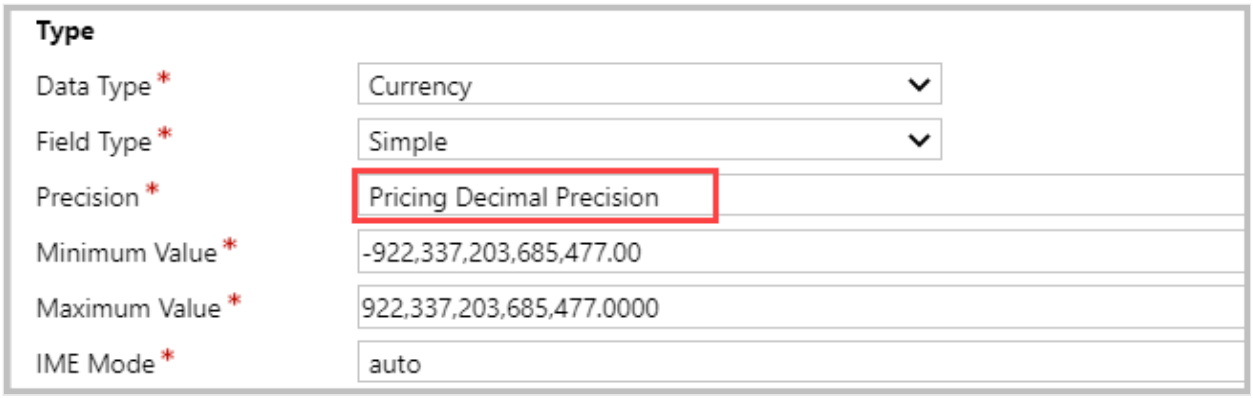
These precision levels are set while configuring currency fields. More information: Create and edit fields for Microsoft Dataverse using Power Apps solution explorer

Pricing decimal precision

This setting allows you to enable and set decimal precision for all supported price-related fields in the system. Pricing decimal precision can be defined in the **Settings** > **Administration** > **System Settings** > **General** tab. More information: System Settings General tab.

> ⓘ **Note**
>
> This setting supports values between 0 and 4.

This precision setting is applied to any currency field whose precision is set to **Pricing Decimal Precision** in the field properties. To see the field properties, go to **Settings** > **Customizations** > **Entity** > **Fields**. Open the currency field to see the properties.



By default, the following fields support pricing decimal precision:

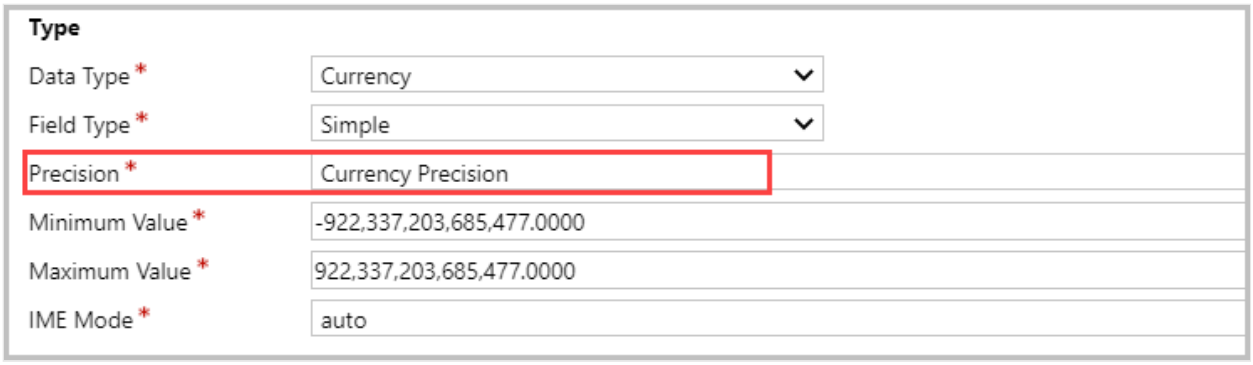
- Product
  - List Price
  - Standard Cost
  - Current Cost
- Price List Item
  - Amount
  - Rounding Amount
- Opportunity Product, Quote Product, Order Product, and Invoice Product
  - Price Per Unit

Currency precision

This option allows you to enable and set decimal precision to individual currencies. To define this setting, go to **Settings** > **Business Management** > **Currencies**. Open the currency record and define the precision for currency. More information: Manage transactions with multiple currencies

> ⓘ **Note**
>
> This setting supports values between 0 and 4.

This precision setting is applied to any currency field whose precision is set to **Currency Precision** in the field properties. To see the field properties, go to **Settings** > **Customizations** > **Entity** > **Fields**. Open the currency field to see the properties.



All currency fields except for the ones listed under the **Pricing decimal precision** section support currency precision.

Field-level precision

This setting allows you to define the precision to individual currency fields.

To apply this precision setting to any of the currency field in the system, go to **Settings** > **Customizations** > **Entity** > **Fields**. Then, open a currency field and define the precision.

> [!NOTE]
> This setting supports values between 0 and 4.

See also

Define product pricing with price lists and price list items
Manage transactions with multiple currencies
Troubleshoot issues with products

Allow adding products without associated price list

Article • 03/01/2023

When adding products to opportunities, quotes, orders, or invoices, at times, salespeople need to specify the product prices ad hoc. You can allow salespeople to add products without associating a price list first.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

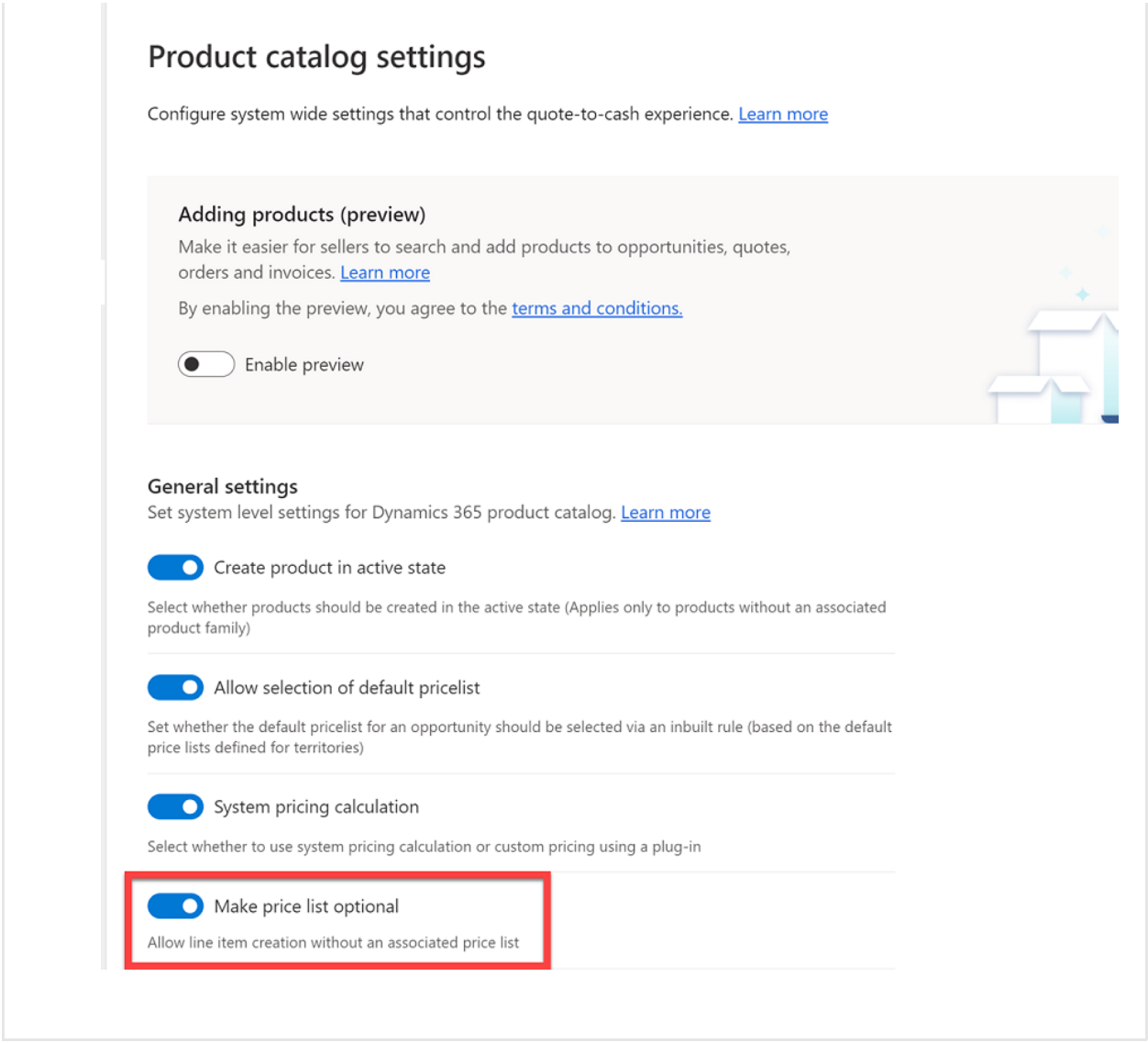
Make price list optional

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Platform.

1. In the lower-left corner of the screen, select **Change area** , and select **App Settings**.
2. Under **Product Catalog**, select **Product Catalog Settings**.
3. Turn on **Make price lists optional** and save the changes.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Add products to an opportunity
Add products to a quote, order, or invoice

Create a unit group and add units to that group

Article • 08/08/2023

Define the quantities or measurements that you sell your products or services in by using units in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What are unit groups and units?

Units are the quantities or measurements that you sell your products or services in. For example, if you sell gardening supplies, you might sell seeds in units of packets, boxes, and pallets. A unit group is a collection of these different units.

In Dynamics 365 Sales, you first create a unit group and then create units within that group.

> **Note**
>
> The Unit group table inherits its privileges from the Product table. For example, if a user has read and write privileges on the Product table, they get the same privileges on the Unit group table too.

Let's look at both of these tasks, using seeds as our example.

Create a unit group and add units

1. Depending on the sales app that you're using, do one of the following:

- If you're using the Sales Hub app,

  a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.

  b. In the **Product Catalog** area, select **Unit Groups**.

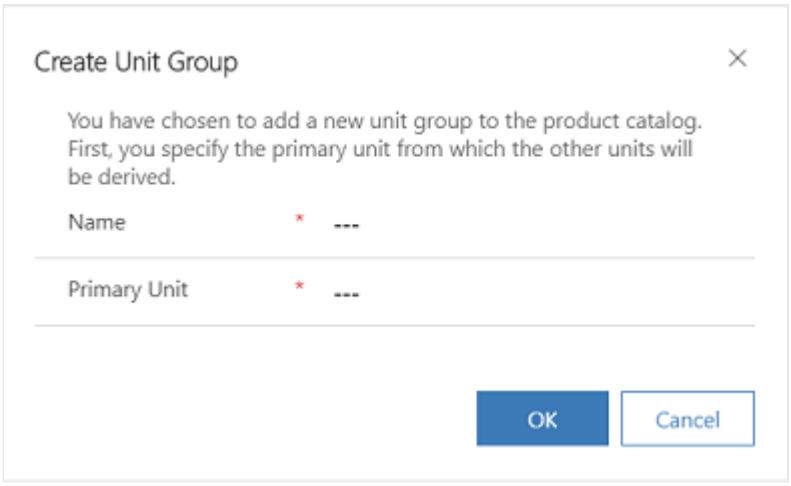
- If you're using the Sales Professional app,
  - Select **Unit Groups** from the site map.

2. To create a new unit group, on the command bar, select **New**.

3. Fill in your information, and select **OK**:

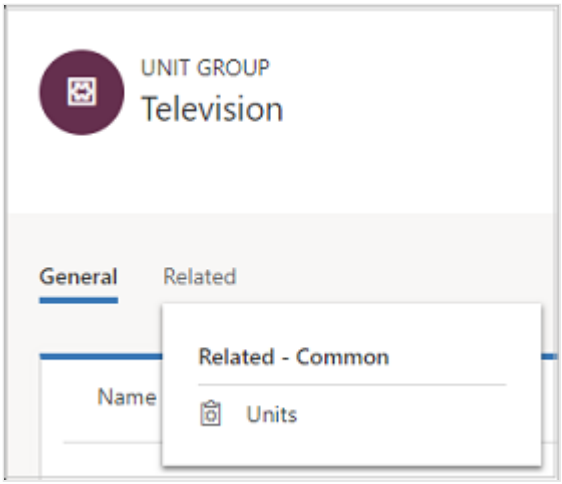
   a. **Name**. Type a meaningful name for the unit group. In our example, you would type "Televisions."

   b. **Primary Unit**. Type the lowest common unit of measure that the product will be sold in. In our example, you would type "Piece." Other examples could include box, cartons, ounces, hours, or tons, depending on your product.



> **Note**
>
> You cannot delete the primary unit in a unit group.

4. To add units to the unit group, select the **Related** tab, and then select **Units**.



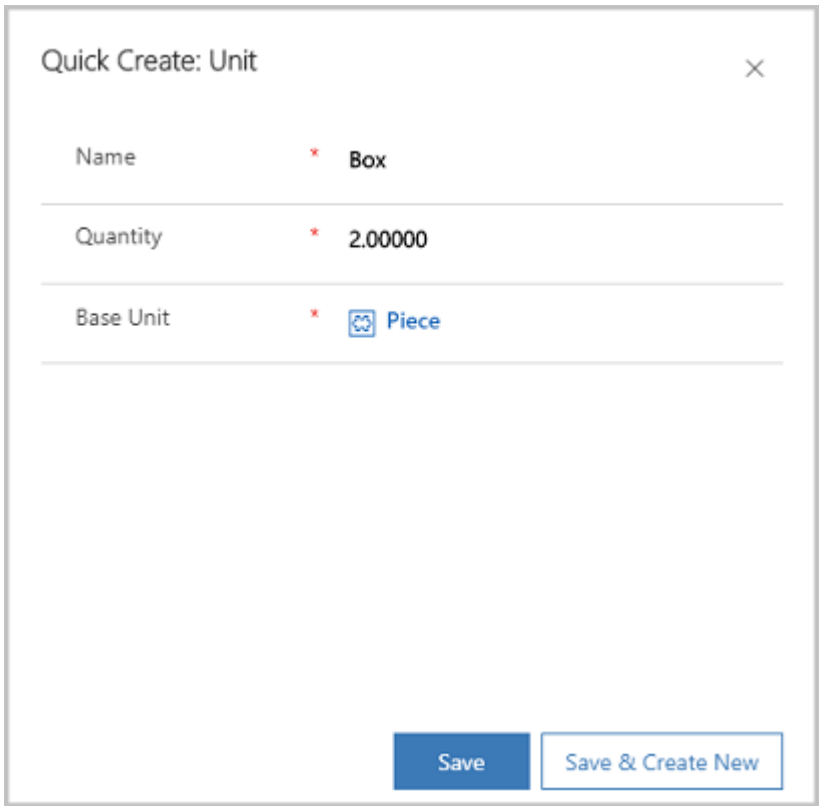
5. On the **Units** tab, you'll see that the primary unit is already added. Select **Add New Unit**.

6. In the **Quick Create: Unit** form, fill in the following, and select **Save**:

   a. **Name**. Type a meaningful name for the unit. In our example, you would type "box."

   b. **Quantity**. Type the quantity that this unit will contain. For example, if a box contains 2 pieces, you would type "2."

   c. **Base Unit**. Select a base unit. The base unit will establish the lowest unit of measurement for the unit you're creating. Using our example, you would select "Piece."



Typical next steps

Create a product

- OR -

Create product bundles to sell multiple items together

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Set up discount lists (Sales Hub)

Article • 03/30/2022

Set up discounts on products in Dynamics 365 Sales to offer products to your customers on marked down rates.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

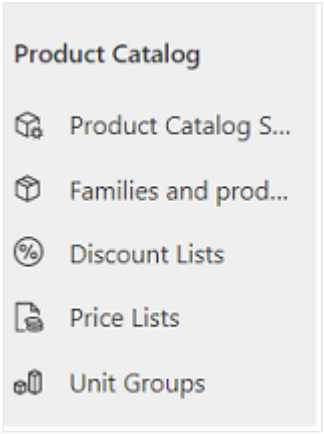
Create a discount list

Motivate customers to buy more by offering them discounts on bulk purchases. To offer discounts, you need to set up a discount list.

1. Make sure that you have the Manager, Vice President, CEO-Business Manager, System Administrator, or System Customizer security role or equivalent permissions.

2. In the Sales Hub app, select the **Change area** icon in the lower-left corner and then select **App Settings**.

3. Under **Product Catalog**, select **Discount Lists**.



4. To create a new discount list, on the command bar, select **New**.

-OR-

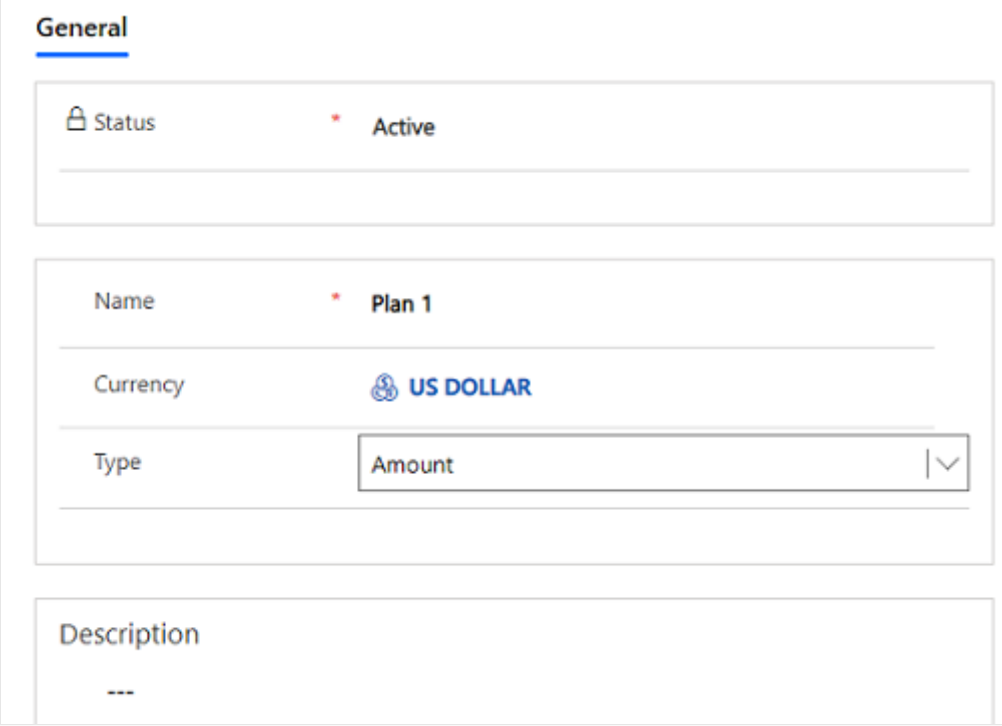
To edit a discount list, open a discount list from the list.

5. Fill in the information, and select **Save**:

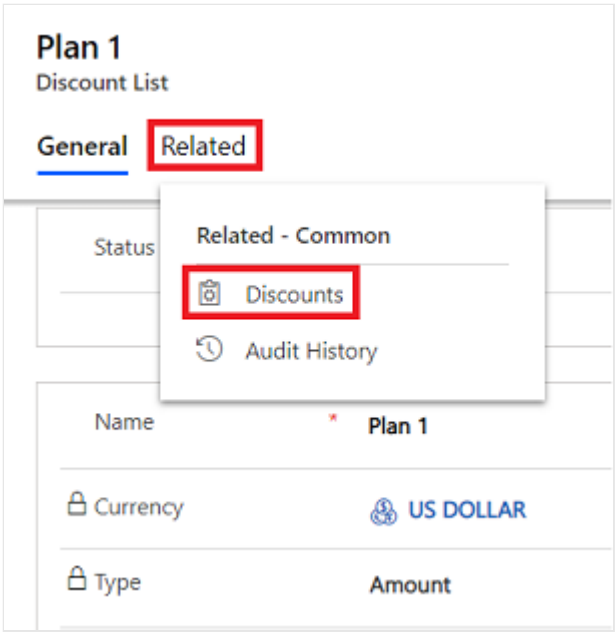
   a. **Name**. Type a name that provides a good description of the kind of discount this list will include.

   b. **Type**. To calculate the discount as a percentage of the price of the item, select Percentage or to give discount as a fixed amount, select Amount.

   c. **Currency**. If you chose to give discount as a fixed amount, select the currency.



6. To add discount details to the list, select the **Related** tab, and then select **Discounts**.



7. On the **Discounts** tab, select **New Discount**.

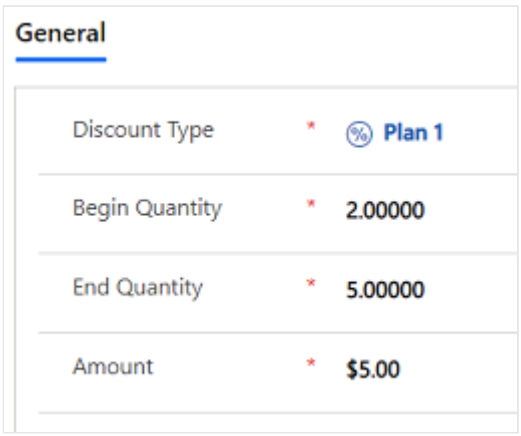
8. In the **New Discount** form, fill in the following information, and select **Save & Close**:

   a. **Begin quantity**. Enter the minimum quantity a customer should purchase to be eligible for the discount.

   b. **End quantity**. Enter the maximum quantity for which the discount is applicable.

   c. **Percentage** or **Amount**. Enter the percentage or the amount of discount the customer will receive.

   For example, this discount list will offer a discount of $5 whenever the customer purchases between 2 – 5 pieces of televisions.



Typical next steps

Create a unit group and add units to that group

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System Settings dialog box - Sales tab

Define related products to increase sales

Article • 03/30/2022

Improve your opportunities to increase sales by adding related products as suggestions for up-sell, cross-sell, accessories, or substitutes in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What are related products?

A related product could be an accessory, cross-sell, substitute, or up-sell. For example, for a Microsoft Surface Pro product, you can add Microsoft Surface Book as an up-sell product so that when your sales agent is adding Microsoft Surface Pro to any opportunity, quote, order, or invoice, Microsoft Surface is suggested as the up-sell option.

The related products are displayed as suggestions to your sales agents during opportunity or order management. These suggestions help your sales agents recommend related products and bundles/kits to the customers, and increase product sales.

> **Note**
>
> You can add related products to a product or product bundle, but not to product families.

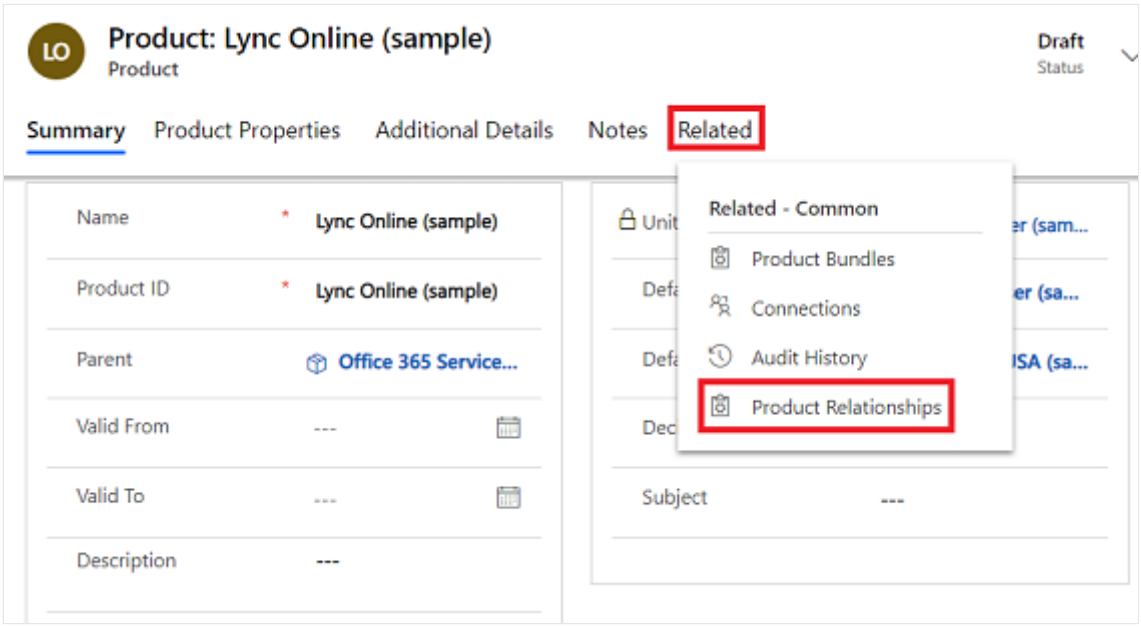
Add related products (Sales Hub)

1. Depending on the sales app that you're using, do one of the following:

- If you're using the Sales Hub app,
  a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
  b. In the **Product Catalog** area, select **Families and Products**.
- If you're using the Sales Professional app,
  - Select **Products** from the site map.

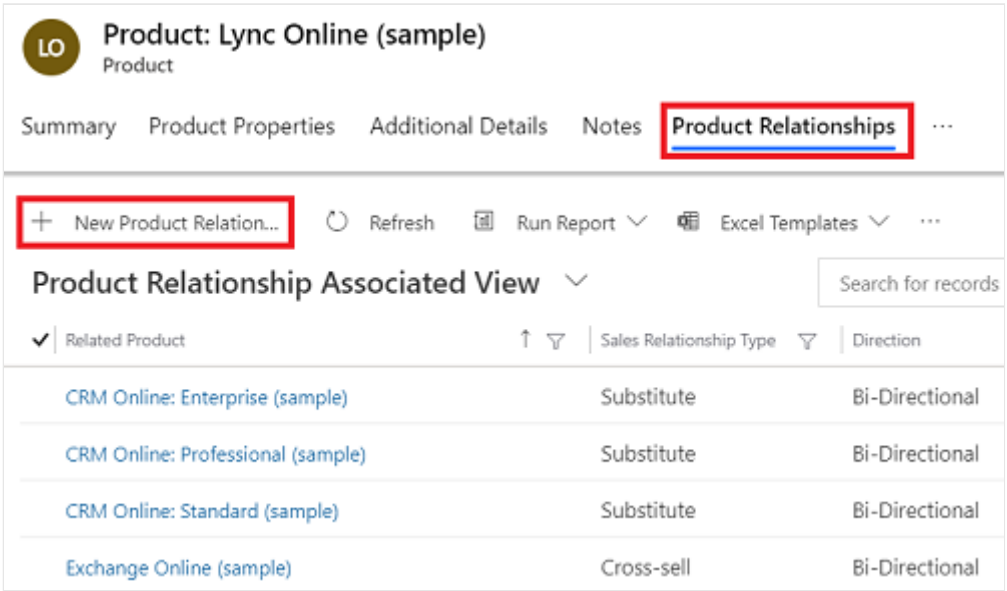
2. Open a product you want to define related products for. The product must be in the **Draft**, **Active** or **Under Revision** state.

3. Select the **Related** tab, and then select **Product Relationships**.



On the **Product Relationships** tab, you'll see the list of products if the product has existing related products.

4. Select **New Product Relationship**.



5. In the **New Product Relationship** form, enter the following details:

    - **Related Product**. Select a product that you want to add as a related product to the existing product record you're working on.
    - **Sales Relation Type**. Select whether you want to add the product as an up-sell, cross-sell, accessory, or substitute product.
    - **Direction**. Select whether the relationship between the products will be uni-directional or bi-directional. When you select Uni-Directional, the product that you select in Related Product will be shown as a recommendation for the existing product but not vice-versa.

6. Select **Save** or **Save & Close**.

> **Note**
>
> Currently, product suggestions are not supported in the Sales Hub app.

Typical next steps

Publish a product or bundle to make it available for selling

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create a product family

Translate product names and properties into multiple languages (Sales Hub)

Article • 03/03/2023

Translate all the relevant information like cross-sell or upsell suggestions, or properties, and make it available to sellers in their preferred language.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Step 1: Export data for translation

1. Make sure that you have one of the following security roles or equivalent permissions: System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager.

   ### Check your security role

   - Follow the steps in View your user profile.
   - Don't have the correct permissions? Contact your system administrator.

2. Go to **Settings** > **Data Management**.
3. Select **Export Field Translations**.
4. In the **Export Field Translations** dialog box, select **OK**.

   All product fields that are marked as localizable by default will be exported. Your internal developers can mark the fields as localizable. More information: Localize product property values

5. Save the .zip file to your local computer.

Exported text is saved as a compressed file that contains a CrmFieldTranslations.xml that you can open by using Excel. You can send this file to a linguistic expert, translation agency, or localization firm.

Step 2: Import translated data

When you get the localized data back from translation, import it into Dynamics 365 Sales.

> **ⓘ Important**
>
> It is important to provision the language packs first. If you import translated values for languages that aren't provisioned in the organization, they'll be discarded. More information: **Install or upgrade Language Packs**

1. Make sure that you have the Manager, Vice President, CEO-Business Manager, System Administrator, or System Customizer security role or equivalent permissions.

   ### Check your security role

   - Follow the steps in View your user profile.
   - Don’t have the correct permissions? Contact your system administrator.

2. Go to **Settings** > **Data Management**.
3. Select **Import Field Translations**.
4. In the **Field Translation Import Jobs** page, on the Action toolbar, select **Import Field Translations**.
5. In the **Import Translated Text** dialog box, select **Browse**, and select the file that you've received from your translation agency.
6. Select **Import**.

   This starts the import job. You can check the status to see if the import has succeeded or failed.

   After you've imported the translated text, users in your organization will see the data in their preferred language. If a value for the preferred language does not exist, the results will be shown in the user's base language.

Selection of language in different scenarios

This section explains how the duplicate detection and workflow logic affect translation in Dynamics 365 Sales:

- Calculated fields logic, including conditional clauses, uses only the base language. The label for the user's preferred language (user interface language) is used if present. Otherwise, the base language is used.
- When a record is created or updated, duplicates are detected from the localizable fields (attributes) that are in the base language. Creating or updating a localizable field is not applicable in a non-base language.
- During data import,
    - For updating or creating records through import, when import is executed in base language, only the labels in the base language are used for duplication detection.
    - When import is executed in non-base language, import fails because update can't be performed in a non-base language.
- When you run duplicate detection in the base language, only the base language is used in conditional clauses.
- When you run duplicate detection job in the preferred language, label in the preferred language is used first. When preferred language is not available, it uses the base language.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog: Walkthrough

Set up duplicate detection rules to keep your data clean

Use properties to describe a product (Sales Hub)

Article • 03/30/2022

Simplify product management and classification by adding product properties in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

What are product properties?

A property of a product could be its size, color, component, and so on. You can add properties to a family, bundle, or product when they're in **Draft** or **Under Revision** states. The child products, bundles, and families inherit the properties from their parent.

Adding well-defined properties to products cuts down on the time spent by your agents trying to find products with the right specifications or properties for your customers when they're building orders.

> **Important**
>
> - You can't set different prices for the different properties you define for a product unless you're using a custom pricing engine.
> - Product families are only supported for Sales Enterprise and Sales Premium.

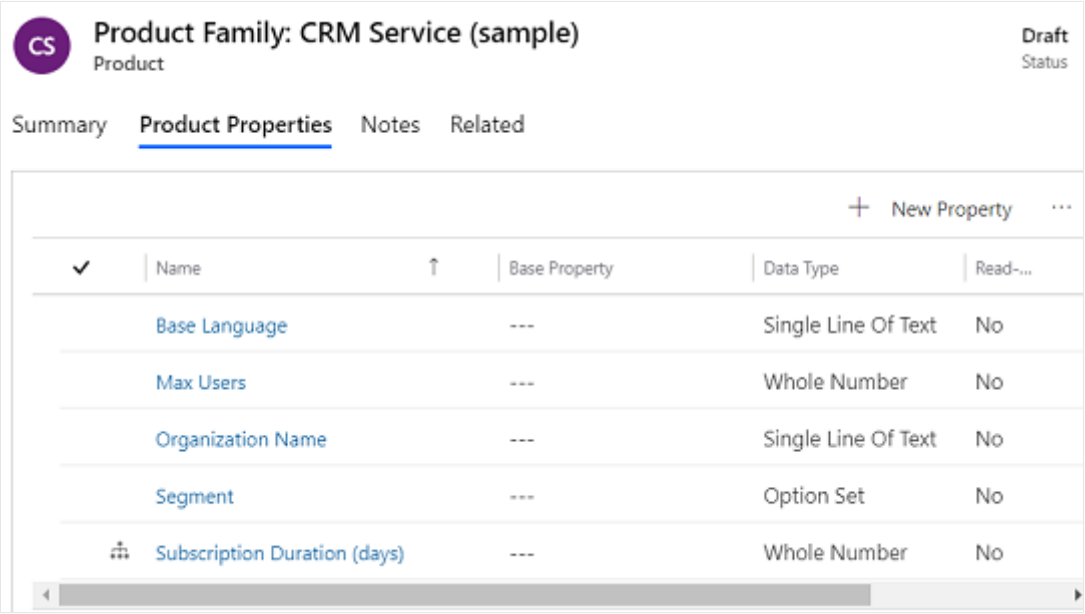
Add properties to a product, bundle, or family

1. Depending on the sales app that you're using, do one of the following:

- If you're using the Sales Hub app,
  a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
  b. In the **Product Catalog** area, select **Families and Products**.
- If you're using the Sales Professional app,
  - Select **Products** from the site map.

2. Open the product, bundle, or family you want to add the properties for.

3. On the **Product Properties** tab, select **Add New Property**.



4. In the **Property** form, on the **Summary** tab, enter the name of the property, and set other fields, as required.

> **Note**
>
> You can hide a property by setting **Hidden** to **Yes**. When you hide a property, you block the child families or products from inheriting that property.

5. On the **Properties** tab, select a data type for the property you're adding.

   As an example, the following table shows a list of properties that you might want to add for a shirt product family:

Property name	Data type	Values
Color	Option Set	red, blue, yellow, green
Size	Option Set	small, medium, large

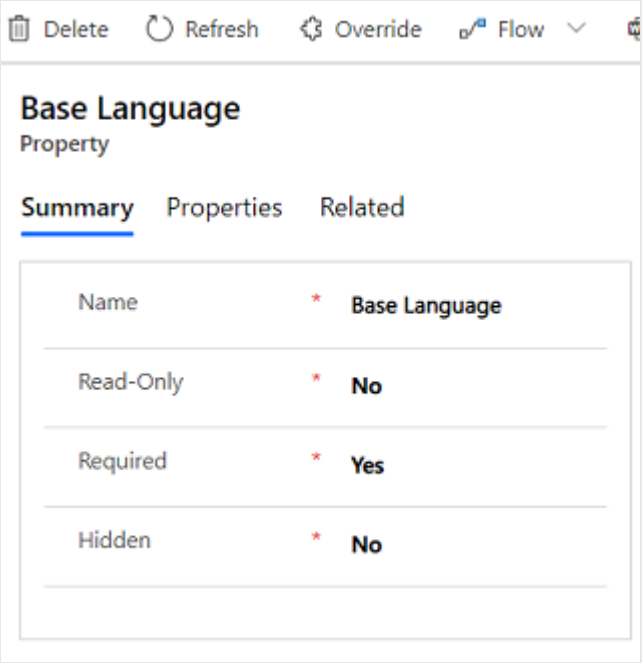
6. Select **Save**.

Repeat the steps to add multiple properties.

Change properties of product family, products, or bundles

You can make changes to the inherited properties of an individual product or family by overriding its properties. For example, for a shirt family, the size can vary between small, medium, and large. A product inside this family will inherit the same property. You can override the property to define the actual size of an individual shirt to medium.

1. Open the product you want to override the property of.
2. On the **Product Properties** tab, open the property you want to override.



3. In the **Product Properties** form, select **Override**.
4. Change the details as required, and save the properties record.

> ⓘ Note
>
> You can override properties only for products and families that have inherited properties from the parent family.

In the following cases, you'll see the **Overwrite** option instead of the **Override** option:

- You're trying to change non-inherited properties of a product family that's in the **Under Revision** status.
- You're trying to change the inherited and already overridden properties of a child product family or product. If the inherited properties of the child product or family weren't overridden, you'll see the **Override** option.

> **Note**
>
> Child families can have their own properties in addition to inherited ones.

Product versioning

At times, opportunities run for extended periods. During these periods, the associated product may change or retire. In such cases, the opportunity must still be taken through to completion.

When you revise a product and change the properties, Dynamics 365 Sales automatically creates a new version of the product and copies the product details from the existing product to the newer version. The new product version has all the details including price lists, product relationships, and properties. The already-created opportunities with the older version of product can continue to refer to the older version of the product. The opportunities that are created after the product is revised or retired will refer to the current (newer) version.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog
System Settings dialog box - Sales tab

Create a product family

Revise products

Article • 03/30/2022

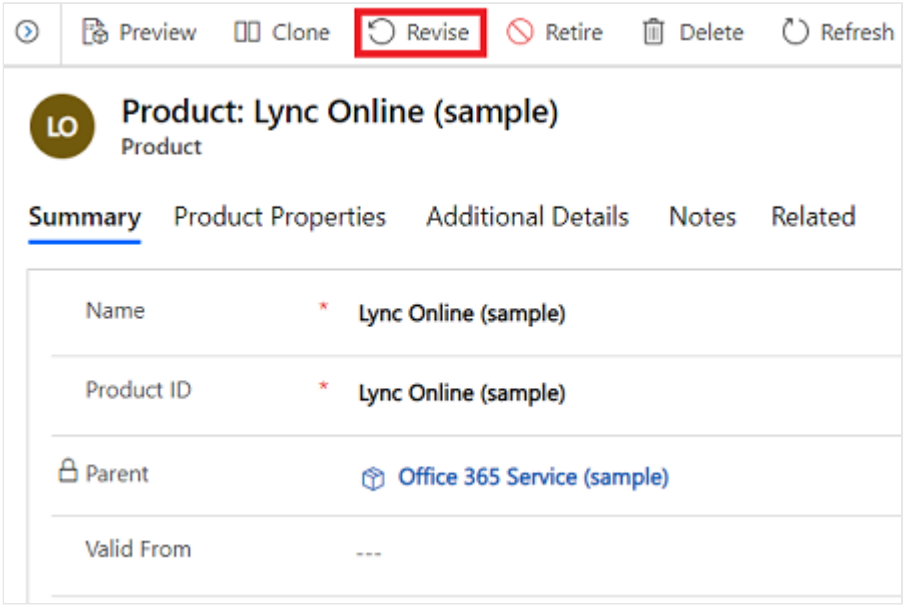
Keep the product inventory updated by quickly revising properties for the products as required, and republishing the information so that your sales agents can see the latest changes to the inventory.

License and role requirements

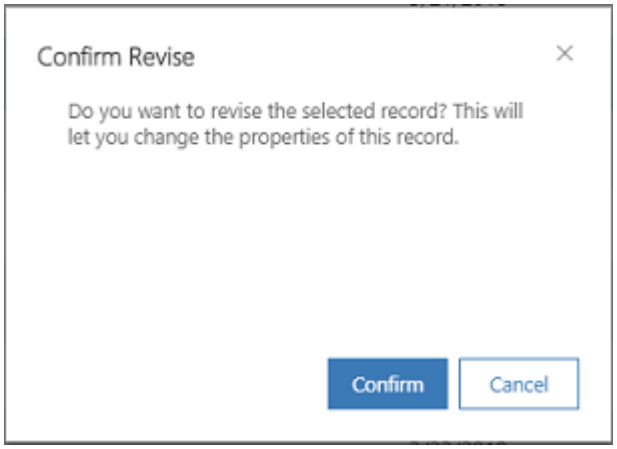
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Revise a product

1. Make sure that you have one of the following security roles or equivalent permissions: System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager.
2. Select the site map , and then select **Products**.
3. Open an active product, bundle, or family you want to change, and on the command bar, select **Revise**.



4. In the **Confirm Revise** dialog box, select **Confirm**.



   This will change the product status to **Under Revision**.

5. Change the product properties, as required. More information: Use properties to describe a product

6. After you're done making the changes, on the command bar, select **Publish** or **Publish Hierarchy**.

   > **Tip**
   >
   > If some of the product properties-related information that you changed doesn't align with the customer or business needs, revert the changes and continue with the last active version of the product. To do this, select **Revert**. This changes the status of the product back to **Active**.

   Revising a family sets all the products and bundles under it to the **Under Revision** state.

Typical next steps

Retire a product
Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog: Walkthrough

Clone products (Sales Hub)

Article • 03/30/2022

Quickly create a copy of an existing product in Dynamics 365 Sales including all its details by cloning it.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Clone a product

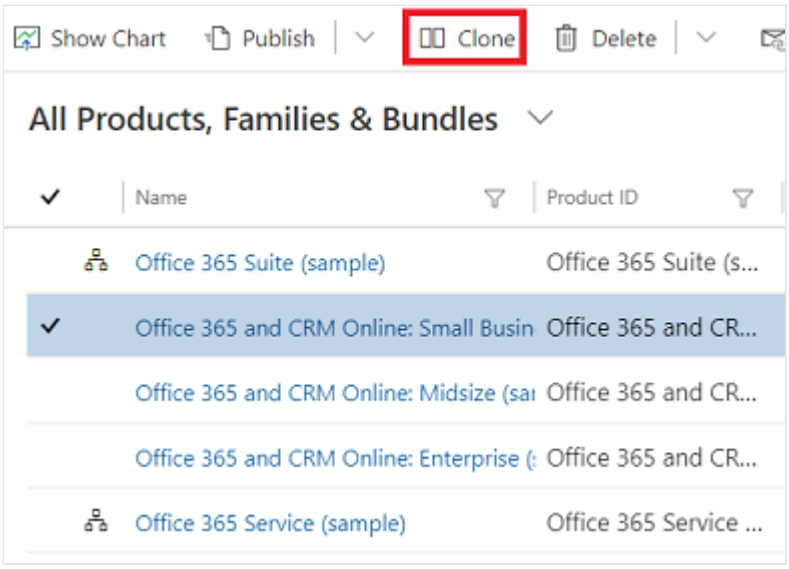
When you're creating a new product, family or bundle, save time by cloning an existing one. Cloning creates a copy of the original record with all the details except for the name and ID. If the product, bundle, or family has any properties, they're also copied to the cloned record.

> ⓘ **Note**
>
> Product families are only supported for Sales Enterprise and Sales Premium.

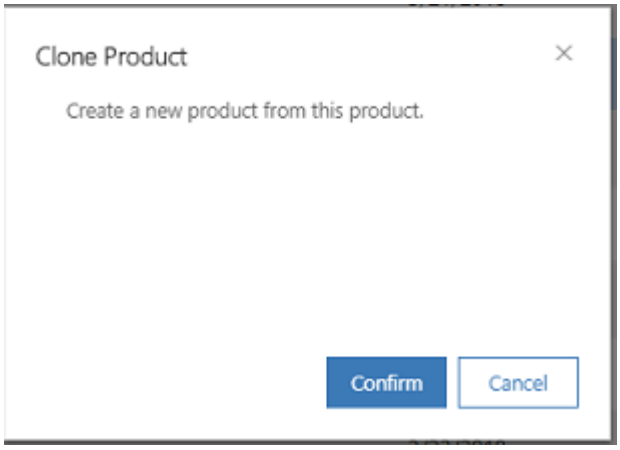
To clone a product, family, or bundle:

1. Depending on the sales app that you're using, do one of the following:
   - If you're using the Sales Hub app,
     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
     b. In the **Product Catalog** area, select **Families and Products**.
   - If you're using the Sales Professional app,
     - Select **Products** from the site map.

2. Select a product family, product, or bundle record that you want to clone, and on the command bar, select **Clone**.



   A confirmation dialog box appears.



3. Select **Confirm**.

   A new product record will open with the same details as the original one except for the name and ID.

   The new record is created under the same parent node as the original one.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See Also

Create a product

Retire products

Article • 12/06/2022

If your organization doesn't sell a product, bundle, or family anymore, retire it so that the product record is no longer available to your sales agents.

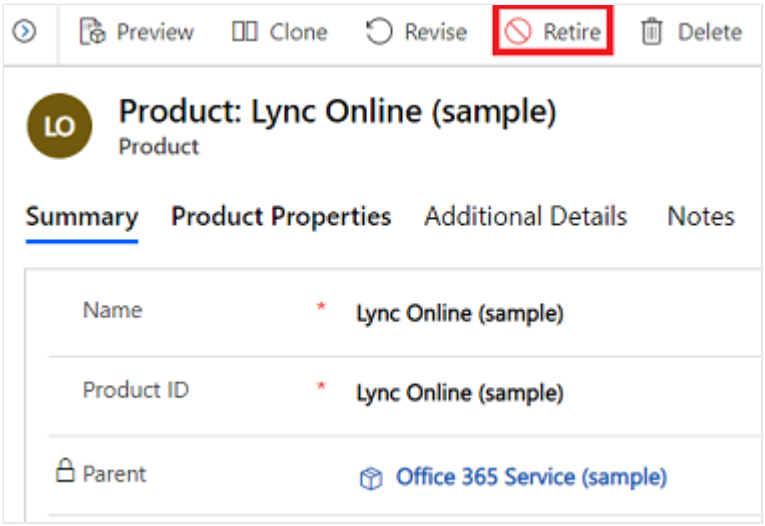
> **Note**
>
> Product families are only supported for Sales Enterprise and Sales Premium.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

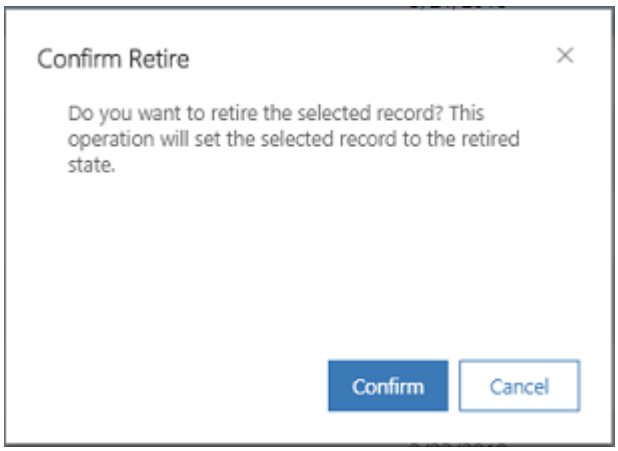
Retire a product

1. Depending on the sales app that you're using, do one of the following:
   - If you're using the Sales Hub app,
     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
     b. In the **Product Catalog** area, select **Families and Products**.
   - If you're using the Sales Professional app,
     - Select **Products** from the site map.
2. Open an active product, bundle, or family that you want to retire, and on the command bar, select **Retire**.



> **Note**
>
> Retired product families cannot be reactivated. Unparent a product before retiring if you think you may need to reactivate it later.

3. In the **Confirm Retire** dialog box, select **Confirm**.



Reactivate a retired product

If you have retired a product inadvertently or want to restore a product that was retired earlier, open the product and select **Activate**.

You can only reactivate a standalone product. If a product has a parent, you'll not see the **Activate** option. You cannot reactivate a product family either.

Typical next steps

Set up a product catalog: Walkthrough

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog: Walkthrough

Delete a family, product, or bundle (Sales Hub)

Article • 03/01/2023

To stop selling a product, bundle, or family, delete it. If you delete a parent family, its child products, families, and bundles are also deleted.

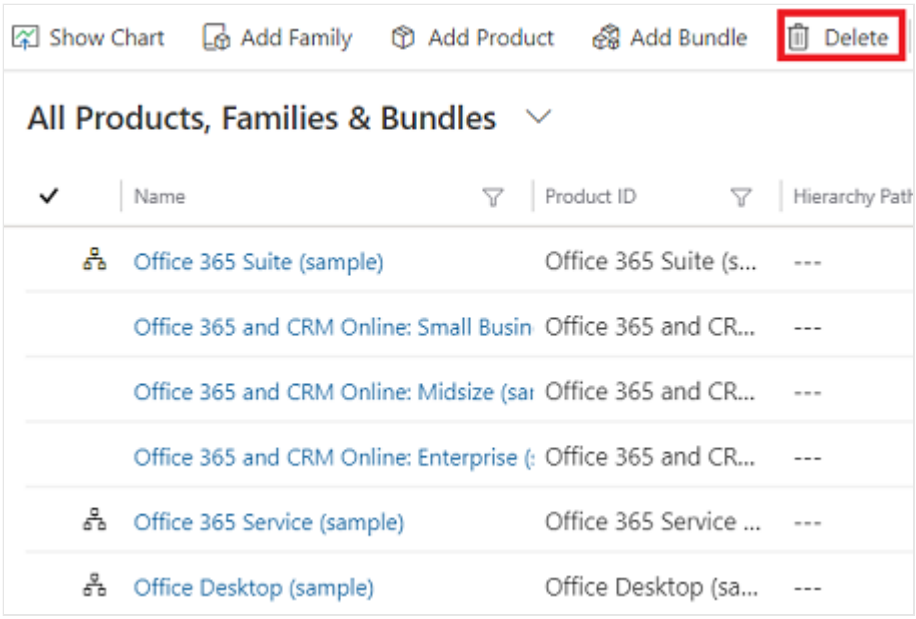
> **Important**
>
> You can't restore a deleted product record. If you don't want to delete a product record but want to temporarily remove it from the catalog, then **retire the product record**.

License and role requirements

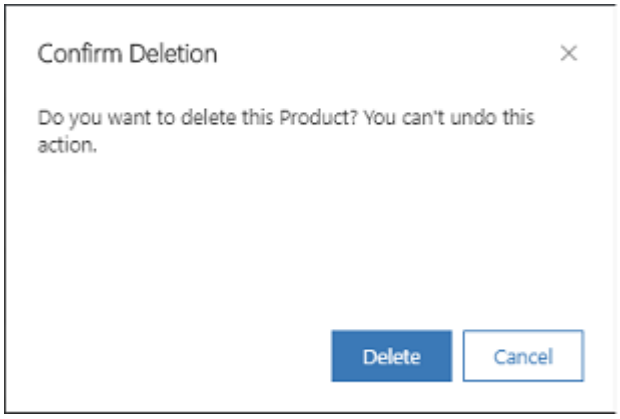
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Sales Manager, Sales Professional Manager, or Vice President of Sales More information: Predefined security roles for Sales

Delete a product record

1. Depending on the sales app that you're using, do one of the following:
   - If you're using the Sales Hub app,
     a. Select **Change area** at the lower-left corner of the site map, and then select **App Settings**.
     b. In the **Product Catalog** area, select **Families and Products**.
   - If you're using the Sales Professional app,
     - Select **Products** from the site map.
2. Select a product family, product, or bundle record you want to delete, and on the command bar, select **Delete**.



3. In the **Confirm Deletion** dialog box, select **Delete**.



> **Note**
>
> Products or bundles can't be deleted if they are associated with an existing quote, order, or invoice.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

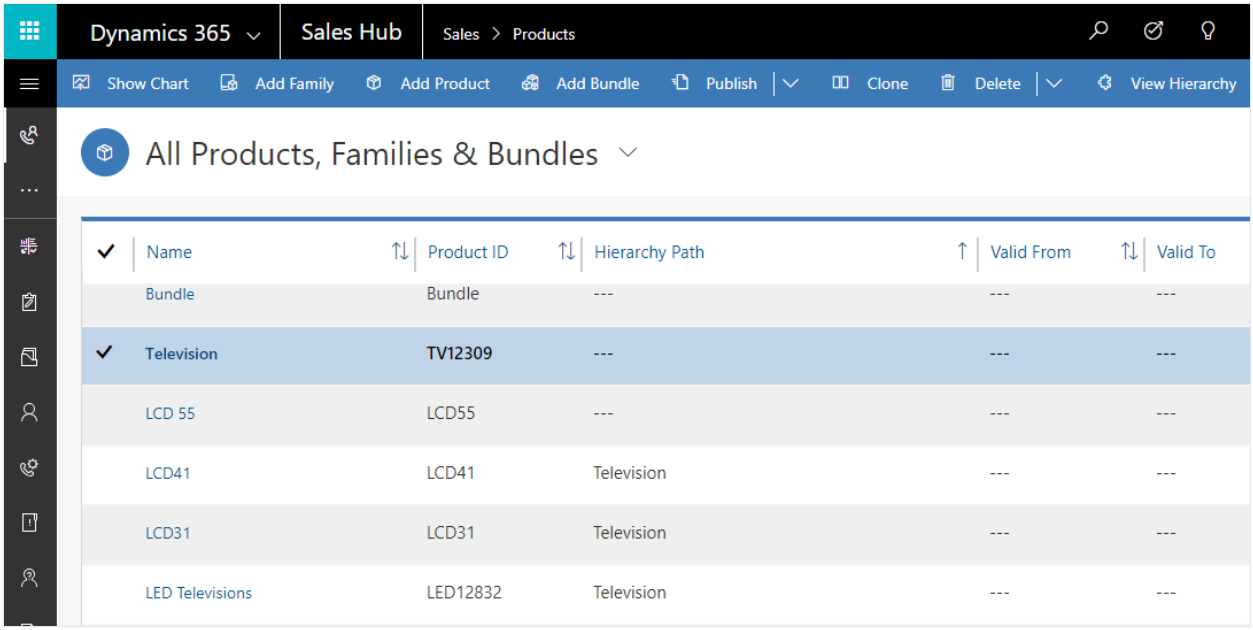
Set up a product catalog: Walkthrough
Create a product family

Visualize hierarchical data with model-driven apps

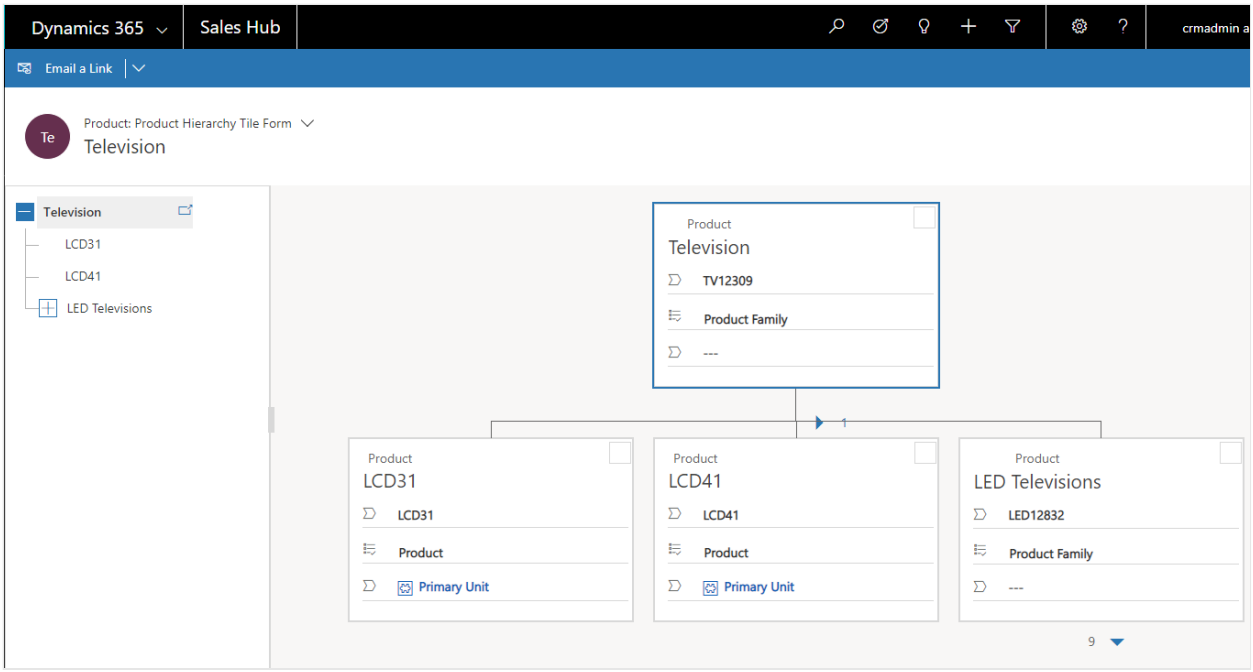
Article • 12/21/2022

When a table is configured to have a hierarchical self-referential relationship you can configure visualizations using that hierarchy. More information: Define and query hierarchically related data

The tables that have visualizations available by default include Account, Position, and User. In the grid view of these tables, you can see the icon depicting the hierarchy chart, to the left of the row name. The hierarchy icon isn't present for all rows by default. The icon is shown for the rows that are related using the hierarchical relationship.



If you select the hierarchy icon, you can view the hierarchy, with the tree view on the left and the tile view on the right, as shown below:



A few other tables can be enabled for a hierarchy. These tables include Contact and Team. All custom tables can be enabled for a hierarchy.

Important things to remember

- Only one (1:N) self-referential relationship per table can be set as hierarchical. In a self-referential relationship the primary table and the related table must be of the same type.
- A hierarchy or visualization is based on one table only. You can depict the account hierarchy showing accounts at multiple levels, but you can't show accounts and contacts in the same hierarchy visualization.
- The maximum number of columns that can be displayed in a tile is three with Unified Interface and four with the legacy web client. If you add more columns to the Quick Form that is used for the tile view, only the first three columns will be displayed.

Hierarchy settings

To enable visualizations for a hierarchy you must connect the hierarchy to a quick view form. This can only be done using solution explorer.

Open an unmanaged solution

1. From Power Apps select **Solutions** from the left navigation pane, and then on the toolbar, select **Switch to classic**. If the item isn't in the left navigation pane, select ...More and then select the item you want.

2. In the **All Solutions** list open the unmanaged solution you want.

The hierarchy settings are associated to a table in the solution explorer.

1. While viewing tables, select **Hierarchy Settings**.

2. If an existing hierarchy setting exists you can edit it. Otherwise click **New** to create a new one.

   > ⓘ Note
   >
   > If the hierarchy settings do not exist the table is not eligible to have a hierarchy configured. There can be only one hierarchy setting

3. Set the data in the following columns:

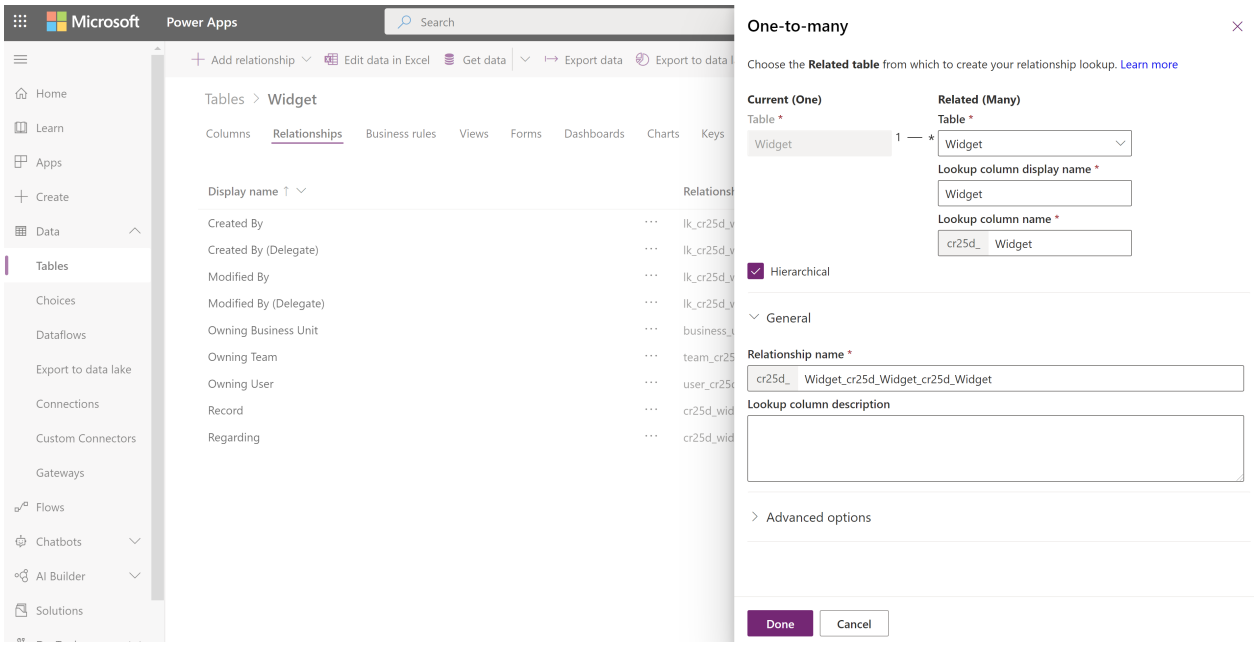
Column	Description
Name	*Required.* Add a unique name for the hierarchy settings. This is typically just the name of the table. This value will include the solution publisher's customization prefix.
Default Quick View Form	*Required.* Choose from an existing Quick View form or choose **Create New** to open the Quick View form editor to create a new one.
Hierarchical Relationship	*Required.* If a hierarchical relationship is already defined for the table the value will be set here. If there is no value, select **Mark a relationship as enabled for hierarchies** to open a dialog to choose one of the available self-referential relationships.
Description	Include a description of the purpose for this hierarchy so that future people customizing the system can understand why this was done.

The same hierarchical settings for visualization are set once, but apply to both web and mobile clients. In tablets, the visuals render in a modified format suitable for the smaller form factor. The customizable components required for hierarchical visualization are solution aware, therefore, they can be transported between organizations like any other customization. You can configure the attributes shown in the visualization by customizing a Quick Form using the form editor.

Visualization walk through

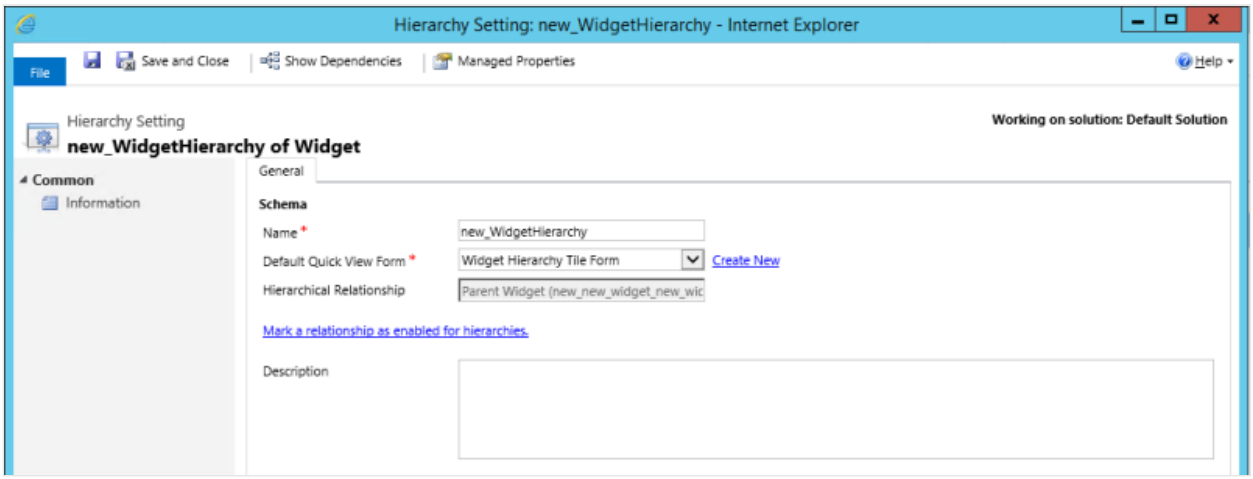
Let's look at an example of creating the visualization for a custom table. We created a custom table called `new_Widget`, created a (1:N) self-referential relationship

`new_new_widget_new_widget` and marked it as hierarchical, as shown here.

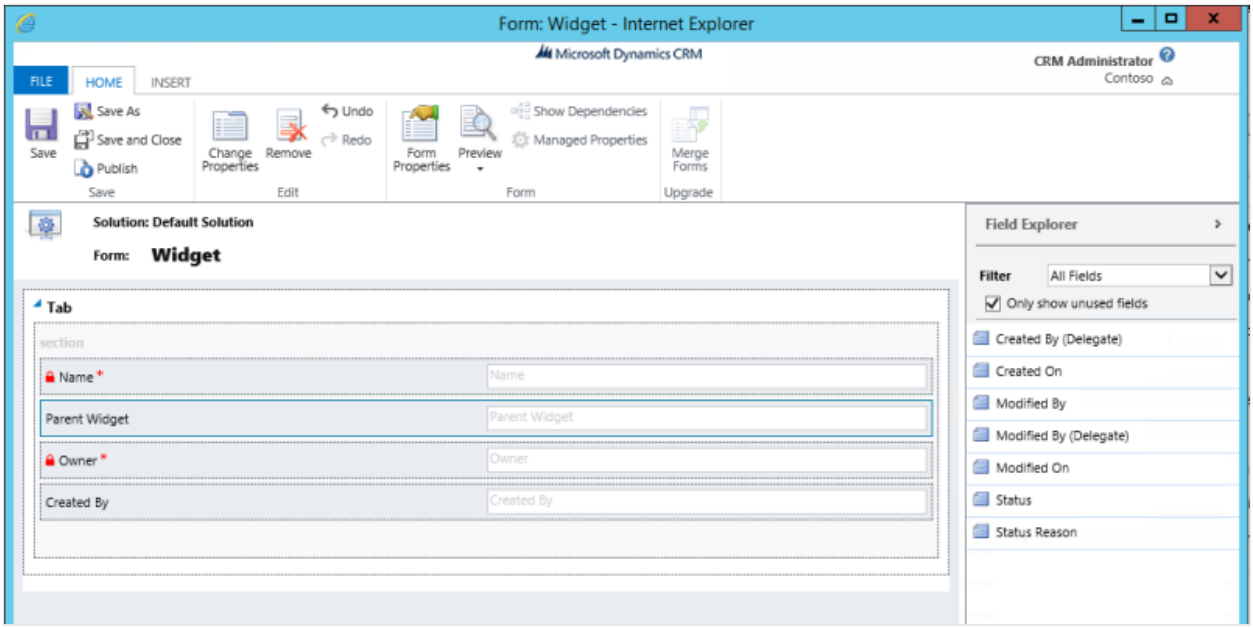


Next, in the **Hierarchy Settings** grid view, we selected the `new_new_widget_new_widget` hierarchical relationship. In the form, we filled in the required columns. If you haven't yet marked the (1:N) relationship as hierarchical, the link on the form will take you back to the relationship definition form, where you can mark the relationship as hierarchical.

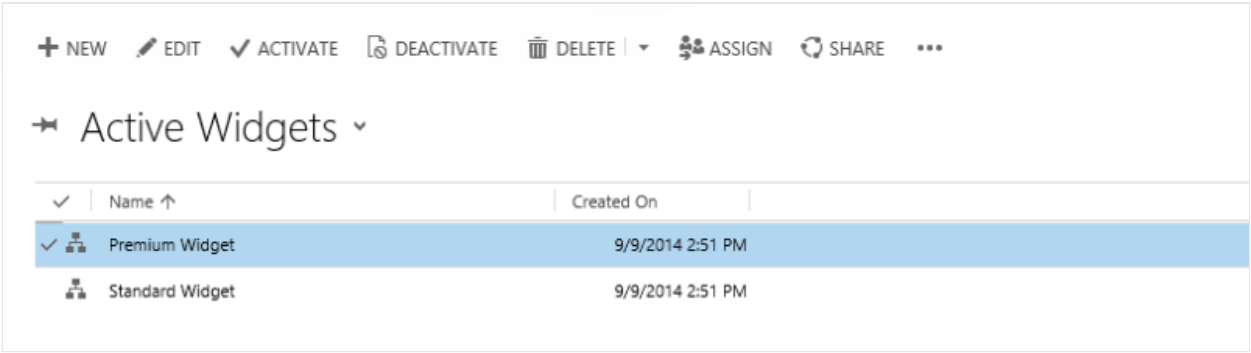
> **ⓘ Important**
>
> Each table can have only one hierarchical relationship at a time. Changing this to a different self-referential relationship can have consequences. More information: **Define hierarchical data**



For the **Quick View Form**, we created a Quick Form called **Widget Hierarchy Tile Form**. In this form that will be used in a legacy web client app, we added four columns to display in each tile. More information: Important things to remember

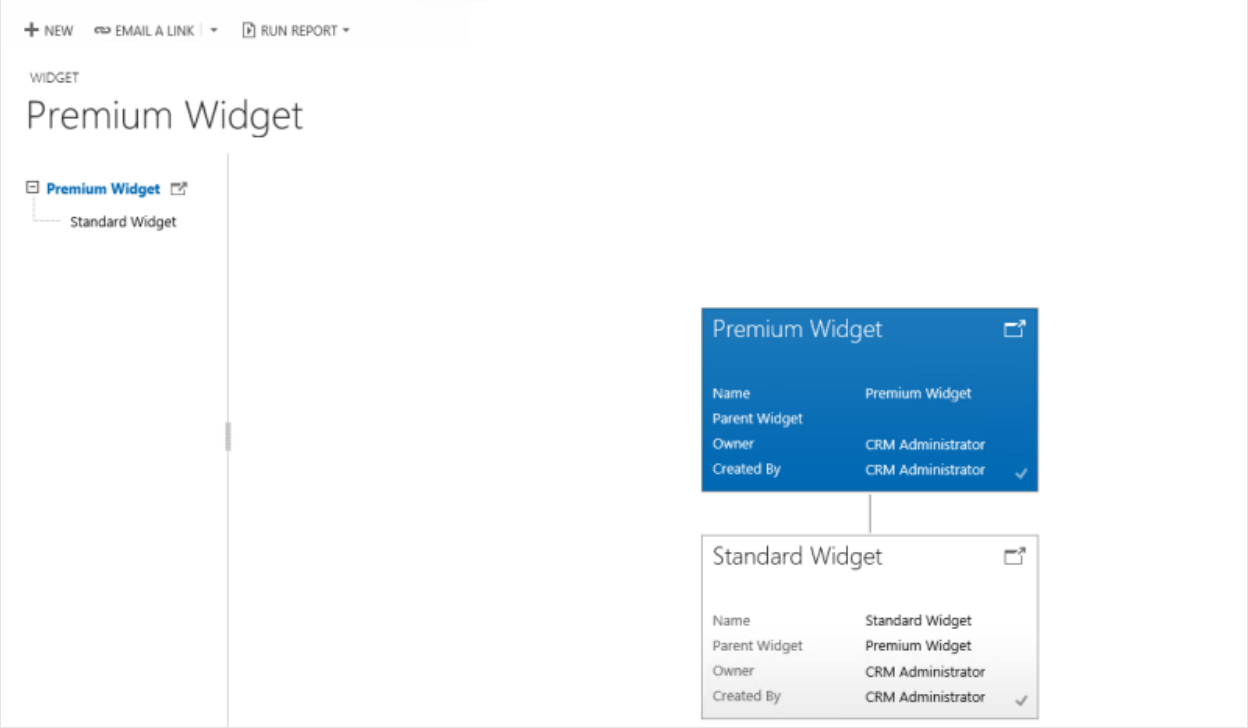


After we completed the setup, we created two rows: *Standard Widget* and *Premium Widget*. After making the Premium Widget a parent of the Standard Widget by using the lookup column, the `new_Widget` grid view depicted the hierarchy icons, as shown below:



> **Note**
>
> The hierarchy icons don't appear in the row grid view until the rows are related using the hierarchical relationship.

Choosing the hierarchy icon displays the `new_Widget` hierarchy with the tree view on the left and the tile view on the right, showing two rows. Each tile contains four columns that we provided in the **Widget Hierarchy Tile Form**.



Based on your needs, you can choose between using a tree view, which shows the entire hierarchy, or a tile view, which depicts a smaller portion of the hierarchy. Both views are shown side by side. You can explore a hierarchy by expanding and contracting a hierarchy tree.

See also

Define and query hierarchically related data

Add editable Products grid to Opportunity, Quote, Order, and Invoice forms

Article • 03/30/2022

Editable products grid on the Opportunity, Quote, Order, or Invoice forms lets sellers to edit product details inline, without having to open individual product records to update.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Enable editable Products grid

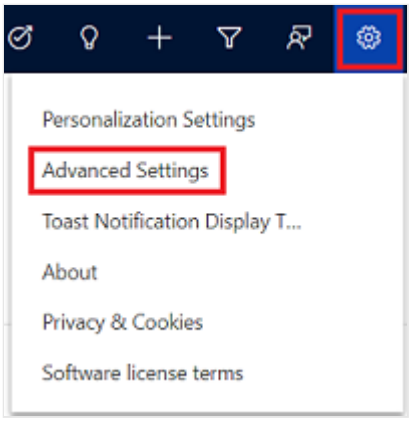
Currently, the preconfigured Products grid is available only on apps built on the Unified Interface framework and is optimized to work on the web.

The product editable grid is added out-of-the-box to the **Product Line Items** section of the Opportunity form of type **Main**. For Quote, Order, or Invoice, it is added to the Products section of the forms of type **Main**.

If you're upgrading to the latest version and you've made customizations to the **Product Line Items** or **Products** sections of these forms, your customizations will prevail, and the product editable grid won't be added to the forms by default. You must manually enable the product editable grid, though the product grid configurations for the editable grid already will be defined. If there are no customizations to these sections, the Products grid will be automatically configured and enabled after the upgrade.

To enable the editable products grid on the Opportunity, Quote, Order, or Invoice form:

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



The **Business Management settings** page opens in a new browser tab.

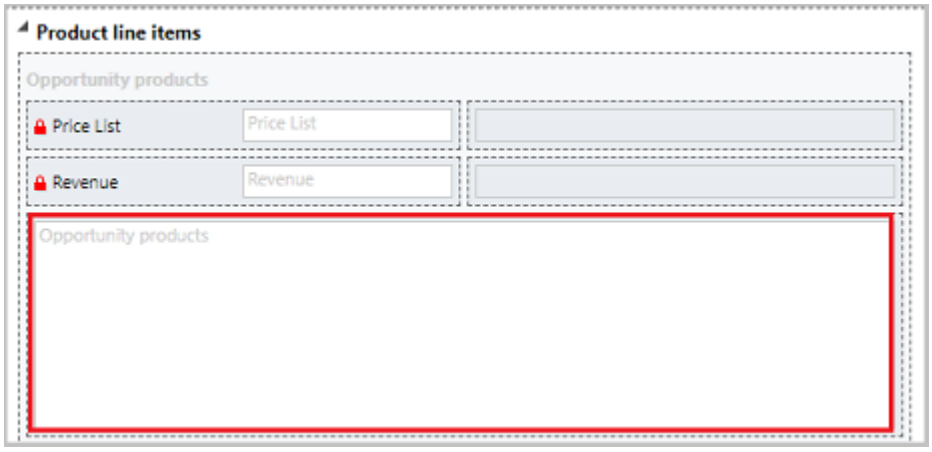
2. On the navigation bar, select **Settings** and then under **Customization**, select **Customizations**.

3. Select **Customize the System** to open the default solution.

4. Under **Components**, expand **Entities**, expand the entity you want, and then select **Forms**.

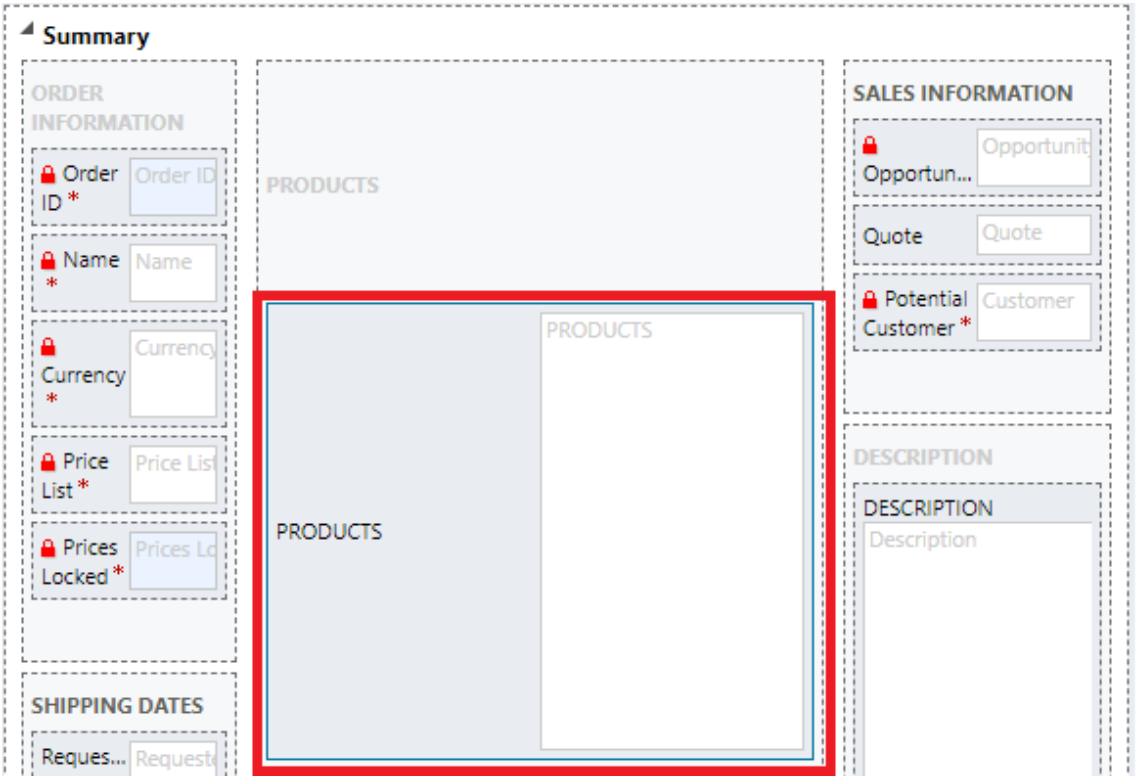
5. In the list of forms, open the form of type Main.

6. If you're enabling the editable product grid in the Opportunity form, select the **Opportunity Products** area in the **Product Line items** section, and in the **Edit** group, select **Change Properties**.

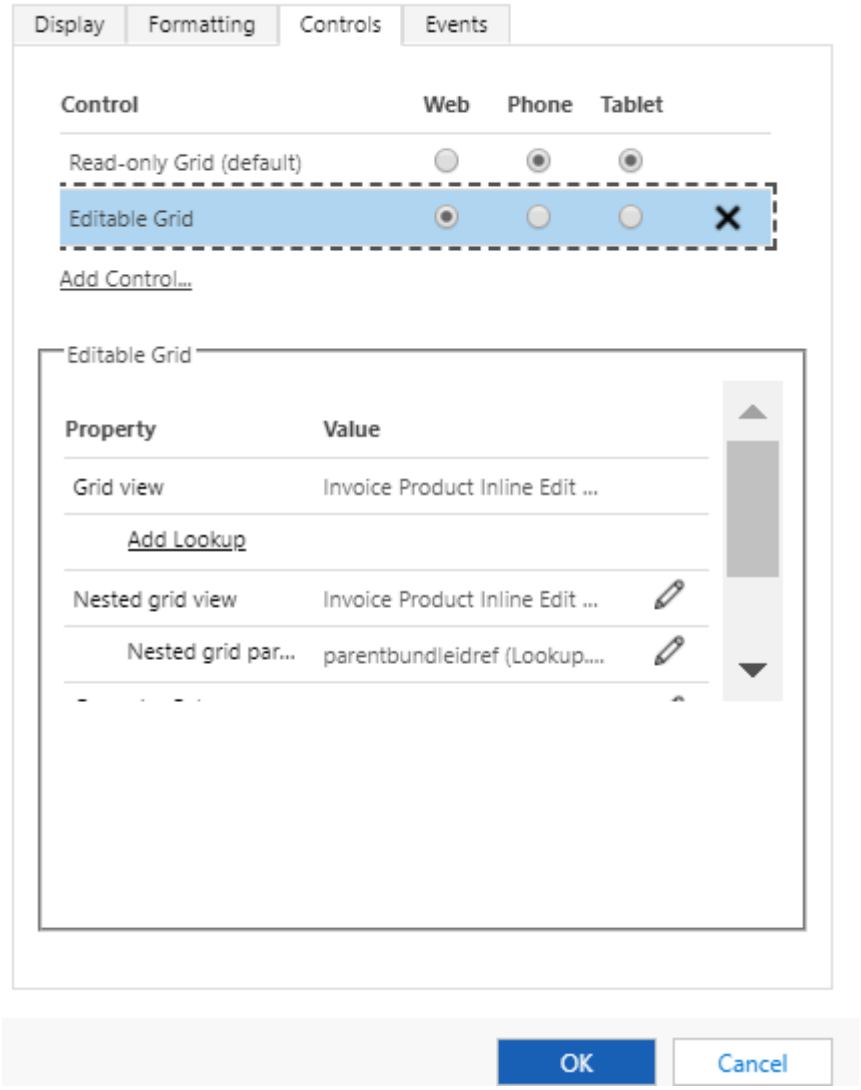


– OR –

If you're enabling the editable product grid in the Quote, Order, or Invoice form, select the **Products** area in the **Products** section, and in the **Edit** group, select **Change Properties**.



7. In the **Set Properties** dialog box, select the devices on which you want the editable grid to be available by selecting the corresponding radio button. Currently, the editable grid is optimized to work on the web.



Notice that the properties of the editable grid such as Grid view or Nested grid view are preconfigured by default.

8. Select **OK**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Make model-driven app views editable using the editable grid control

Enable or disable the enhanced experience for adding products

Article • 05/30/2022

Enable your salespeople to quickly find and add multiple products to an opportunity, quote, order, or invoice by enabling the enhanced add product experience.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What's in the enhanced experience?

By using the enhanced experience, salespeople can do the following:

- Quickly search for products and add them to opportunity, quote, order, or invoice.
- Filter by product families if you have the Sales Enterprise or Sales Premium license.
- View product details inline.
- Compare products before selecting them.
- Add multiple products in one go.

> **Note**
>
> The enhanced experience for adding products is not supported for mobile devices. Mobile users will continue to see the Quick Create form for adding products.

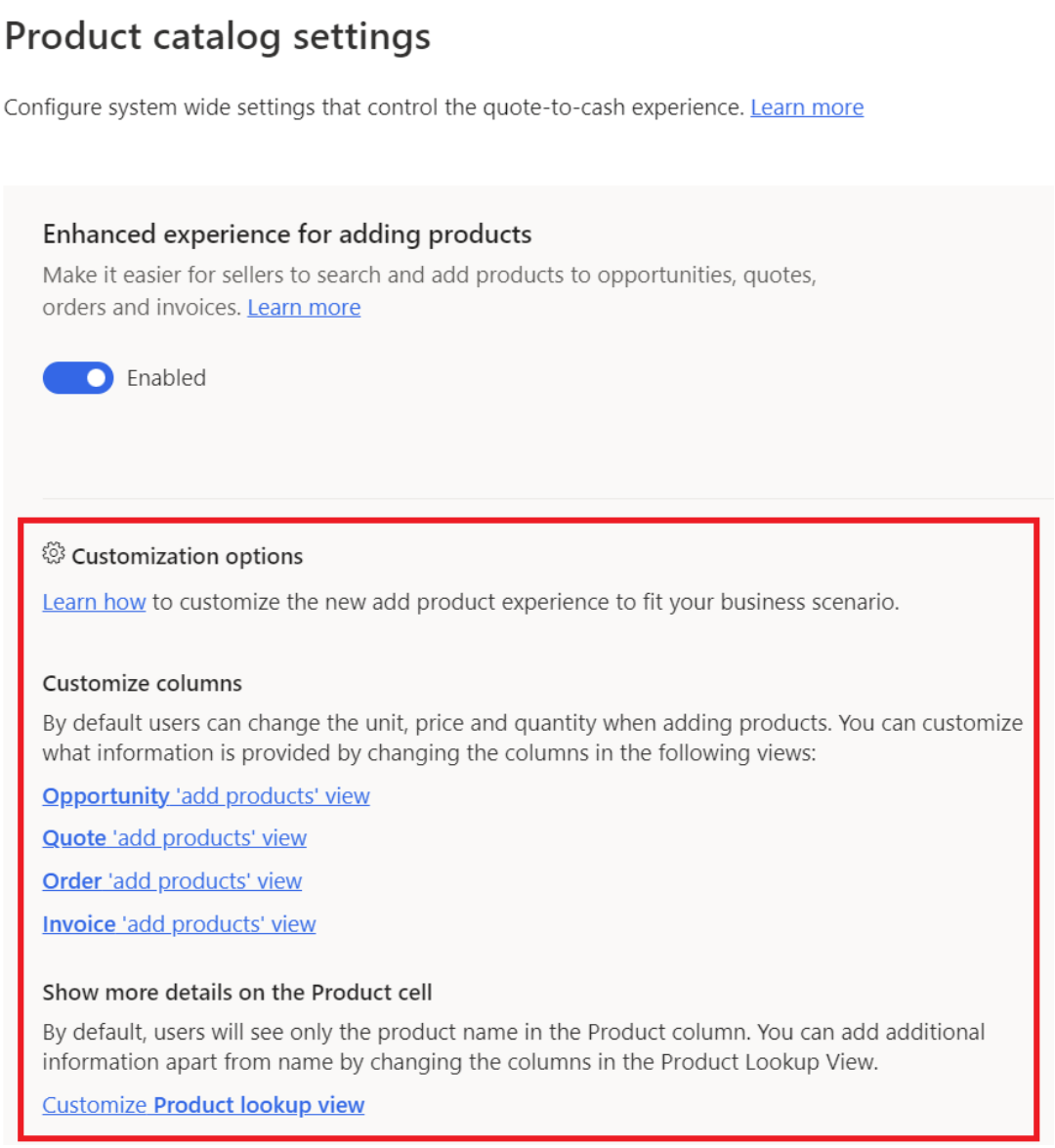
Enable or disable the enhanced experience

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Platform.

1. In lower-left corner of the screen, select **Change area** , and then select **App Settings**.
2. Under **Product Catalog**, select **Product Catalog Settings**.
3. On the **Product Catalog Settings** page, turn on **Enhanced experience for adding products** to enable the enhanced experience. When you enable the enhanced experience, you'll see additional options for customizing the **Add products** dialog box.



You can either add more columns to the grid or add more attributes to the **Product** column in the dialog box. For more information, see Customize the

Add Products dialog box.

If you turn off the enhanced experience, the **Add products** option in the opportunity, quote, order, and invoice will switch back to **Quick create** form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Add products to an opportunity by using the enhanced experience
Add products to a quote, order, or invoice by using the enhanced experience

Customize the Add Products dialog

Article • 05/17/2022

Customize the Add Products dialog so that salespeople can see important product details while adding products to opportunity, quote, order, or invoice records in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

> **Important**
>
> Customizations described in this topic must be done within a custom solution. For more information see, **Why you shouldn't use the default solutions to manage customizations**

What can you customize?

You can customize the following components of the **Add product** dialog to help sellers identify and add products quickly:

- Add more columns to the products grid. More information: Add or remove columns in the grid
- Add more attributes to the **Product** column. More information: Add or edit attributes in the Product column

> **Note**
>
> Attributes in the **Product** column help sellers get more information *before* choosing a product. So, if you want to add a category or product ID to help

distinguish products from each other, add it to the **Product** column. On the other hand, if sellers need to perform an action *after* selecting a product—for example, choosing delivery priority (a custom attribute)—add that attribute to the grid.

- Customize the fields to search. More information: Customize the fields to search

Add or remove columns in the grid

By default, the **Add products** dialog displays the following columns in the grid:

- Product name
- Unit
- Price per unit
- Quantity

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Apps.

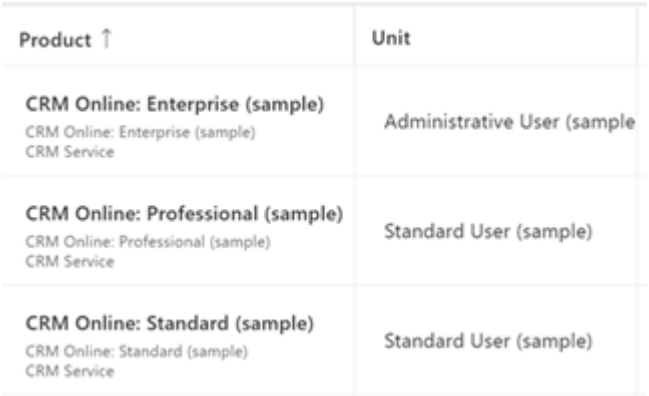
To add or remove columns in the grid

1. In the Sales Hub app, select the **Change area** icon in the lower-left corner of the page and then select **App Settings**.
2. Under **Product Catalog**, select **Product Catalog Settings**.
3. Turn on the **Enhanced experience for adding products** option, if you haven't already.
   You'll see additional options to customize the Add products dialog for opportunity, quote, invoice, and order.
4. Select the add products view of the entity that you want to customize. For example, select **Quote 'add products' view** to customize the Add products dialog for quotes.
   You will be redirected to the corresponding view in Power Apps.
5. Select **View Column** and then select the columns you want to add to the grid. Or, simply drag-and-drop the columns into the grid.

6. To remove a column, select the column in the grid and select **Remove**.
7. Select **Publish** to save and publish the customizations. The changes are applicable to the Add products dialog of the selected entity.
8. Open the entity that you've customized. If you customized the add products view for quotes, open a quote and then select **Add products**. Verify whether the customizations to the grid are reflected in the dialog.

Add or edit attributes in the Product column

By default, the **Product** column in the Add product dialog includes the product name and ID. You can customize this column to add other attributes to help you better distinguish the products. For example, you can add the product category to differentiate products as shown in the following image:



Note: The **Product** column can display up to three attributes, apart from the product name.

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

If you have the Sales Hub app, follow the instructions in this tab. Otherwise, follow the instructions in the **Sales Professional** tab to configure the option in Power Apps.

To add or edit product attributes:

1. In the Sales Hub app, select the **Change area** icon in the lower-left corner of the page and then select **App Settings**.
2. Under **Product Catalog**, select **Product Catalog Settings**.

3. Turn on **Enhanced experience for adding products**, if you haven't already. You'll see additional options for customizing the Add products dialog.
4. Select **Customize Product lookup view.** You'll be redirected to the **Product Lookup View** in Power Apps.
5. Select **+ View Column** and then select the attributes you want to add. Or, simply drag-and-drop the attributes into the grid.
6. To remove an attribute, select the attribute in the grid and select **Remove**.
7. Select **Publish** to save and publish the customizations. The changes are applicable to the Add products dialog of opportunity, quote, order, and invoice.
8. To verify the changes, open an opportunity and select **Add products**. You will see the updated attributes in the **Product** column.

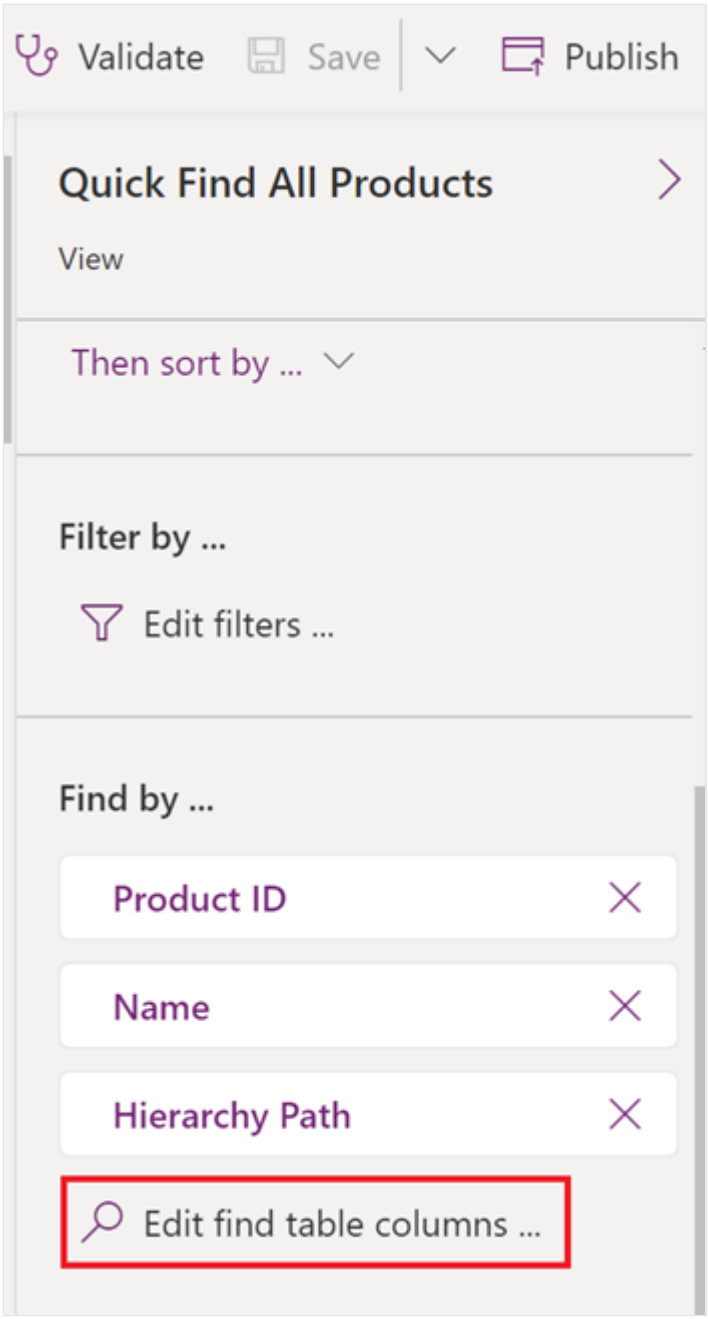
Customize the fields to search

By default, the search field in the Add products dialog searches the product name, ID, and description. You can expand the search to include other text-based fields too. For example, you can add the hierarchy path field to the search scope.

To customize the fields to search:

1. Open Power Apps and navigate to **Tables** in the left pane.
2. Search for the **Product** entity and open it.
3. Select the **Views** tab and open the **Quick Find All Products** view.
4. In the right pane, go to the **Find by** section and select **Edit find table columns**. Select the fields you want to include in search.

> ⓘ **Note**
>
> Select only the text-based fields.



5. Select **Publish** to save and publish changes to the view. The changes are applicable to the product search in the Add products dialog of opportunity, quote, order, and invoice.

6. To verify the changes, open an opportunity and select **Add products**.

7. Search for a keyword and verify whether the search is returning matches from the newly added fields.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create a solution
Choose and configure columns in model-driven app views
Add products to an opportunity by using the enhanced experience
Add products to quotes, orders, or invoices

Customize the quote closure experience

Article • 10/03/2023

As an administrator, you can customize the following aspects of quote closure experience to enable your sellers to close quotes quickly and efficiently:

- Change the default value of the **Create a revised quote** field to **No** in the Quote Close dialog to avoid creating unwanted revisions.
- Add command buttons to quickly close a quote without opening the Quote Close dialog.

Use ribbon customizations to customize these quote closure experience.

Change the default value for creating a revised quote

When your sellers close a quote in Dynamics 365, they can choose to create a revised quote based on the original one. By default, this option is turned on in the Quote Close dialog box. However, you might want to turn it off to avoid creating unwanted revisions. To do this, you need to edit the code for the ribbon definition of the quote entity.

The ribbon definition is an XML file that controls the appearance and behavior of the ribbon buttons and menus. You can access it by downloading the default ribbon data. In the `quoteRibbon.xml` file, find the `closeQuote` function, which is triggered when you click the **Close Quote** button. This function has a boolean parameter that sets the default value for creating a revised quote. To change the default value to **No**, you need to change the value of this parameter from **true** to **false**. The following code snippet shows how to do this:

XML

```
<CommandDefinition Id="Mscrm.Form.quote.CloseQuote">
    <EnableRules>
        <EnableRule Id="Mscrm.QuoteIsActive" />
    </EnableRules>
    <DisplayRules />
    <Actions>
        <JavaScriptFunction
FunctionName="Sales.QuoteRibbonActions.Instance.closeQuote"
Library="$webresource:Sales/_static/SFA/quotes/QuoteRibbonActions.js">
            <BoolParameter Value="true" /> <!-- Change this value from true
to false -->
        </JavaScriptFunction>
```

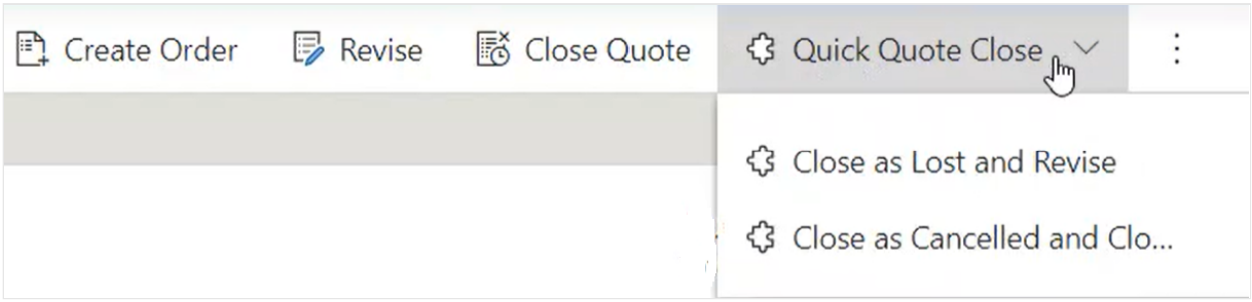
```
    </Actions>
</CommandDefinition>
```

Make sure that the above definition is part of your entity customization solution. After you save and publish the changes, the default value for creating a revised quote in the Quote Close dialog box will be **No**. Sellers can still create a revised quote manually by selecting **Yes** in the dialog box.

Add quick close quote button to the command bar

By default, when your sellers close a quote, the Quote Close dialog box opens for them to enter additional information. As an administrator, you can customize this experience by adding quick quote close buttons that will let your sellers close quotes with just a click.

You can add multiple buttons to enable different behaviors. For example, you can add a button to close the quote as lost and create a revision and another button to close the quote as canceled and close the opportunity. The following screenshot is an example of how the quick quote close buttons can be implemented:



You can add these buttons to the command bar using ribbon customizations.

To add a button, define a new custom action in the quote ribbon customization and use the `Sales.QuoteRibbonActions.Instance quickCloseQuoteWithoutDialog` javascript function from the `QuoteRibbonActions.js` file for its command action.

> **Important**
>
> All these parameters are mandatory and must be passed in the given order. If you miss any any of these parameters, the button will not work.

- **IntParameter (Status Reason)**: Use the IntParameter to specify the reason for quote closure.
  Allowed values: 5 for Lost, 6 for Cancelled, 7 for Revise

- **BoolParameter (Create Revision)**: Use the first BoolParameter to specify whether you want to create a revised quote.
  Allowed values: true, false

- **BoolParameter (Close Opportunity)**: Use the second BoolParameter to specify whether to close the associated opportunity.
  Allowed values: true, false

The following code snippet includes a sample command definition to close the quote as lost and create a revision:

XML

```
<CommandDefinitions>
    <CommandDefinition Id="new.quote.Command0.Command">
        <EnableRules>
            <EnableRule Id="new.quote.EnableRule0.EnableRule" />
        </EnableRules>
        <DisplayRules />
        <Actions>
            <JavaScriptFunction
FunctionName="Sales.QuoteRibbonActions.Instance
quickCloseQuoteWithoutDialog"
Library="$webresource:Sales/_static/sfa/quotes/QuoteRibbonActions.js">
                <IntParameter Value="5" />
                <BoolParameter Value="true" />
                <BoolParameter Value="false" />
            </JavaScriptFunction>
        </Actions>
    </CommandDefinition>
</CommandDefinitions>
```

See also

- Customize commands and the ribbon
- Export ribbon definitions
- Customize the command bar using command designer

Configure forecasts in your organization

Article • 12/23/2022

A forecast helps your organization predict how much revenue your sales team will generate in a given time frame. When done correctly, forecasting can play a significant role in your company's success.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

How forecasting helps organizations?

Using forecasts:

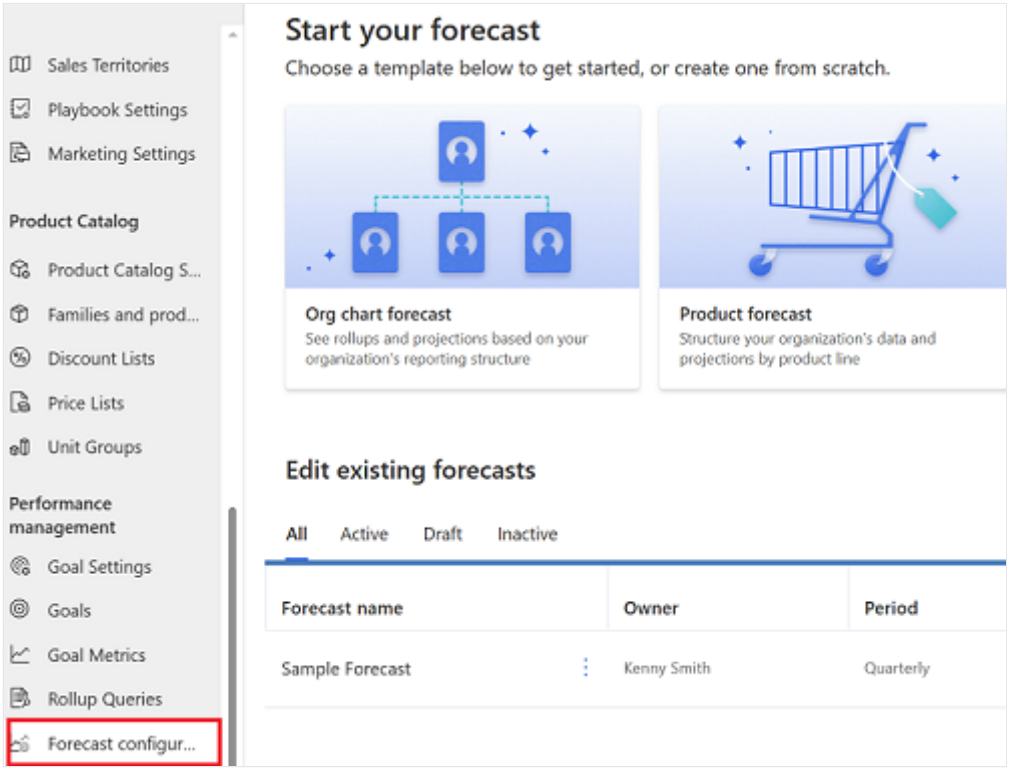
- Sellers can track performance against targets and identify pipeline risks that might jeopardize their ability to hit them.
- Managers can track individual sales performance against quotas to proactively provide coaching.
- Directors can use forecast trends to anticipate departmental sales and reallocate resources if necessary.
- Organization leaders can use the projected estimates to change the product strategy or provide updated projections to investors.

> **Note**
>
> Forecasting isn't supported on Government Community Cloud (GCC) or mobile devices.

Configure forecasting

You can configure forecasts that are based on revenue or quantity. You define the type of forecast, the hierarchy, access permissions, and the details you want to see in the forecast grid. After a forecast is activated, your sales team can view the revenue, or quantity, and pipeline projections.

1. Sign in to the **Sales Hub** app.
2. In the site map, select the Change area icon , and then select **App Settings**.
3. Under **Performance management**, select **Forecast configuration**.



   If you're getting started with forecasting, play around with the sample forecast configuration before creating a new one.

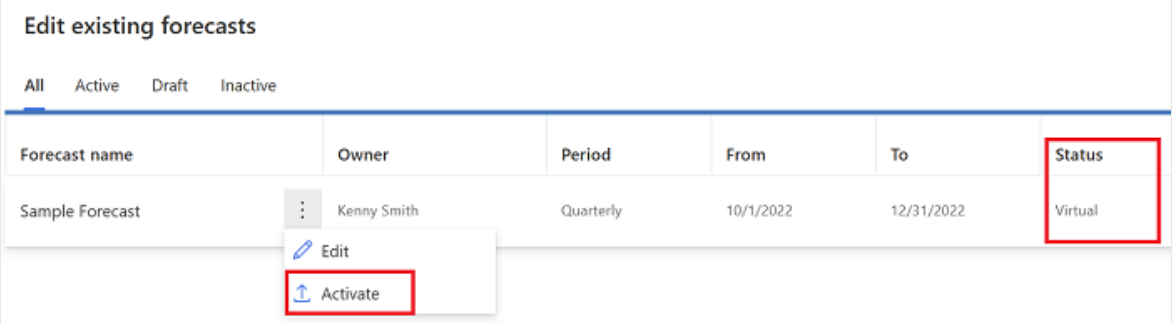
4. Select a template.
5. Define and schedule a forecast model
6. Provide access permissions.
7. Configure columns and layouts.
8. Configure and manage drill-down entities.
9. Configure advanced settings.
10. Activate the forecast and upload data.

Use the sample forecast configuration

A ready-to-publish sample forecast configuration is available for you to experiment and get started with forecasting. Use the sample forecast to understand how forecasting works and how you can tweak the parameters and filters to suit your organization's needs.

1. Go to **App Settings** > **Performance management** > **Forecast configuration**.

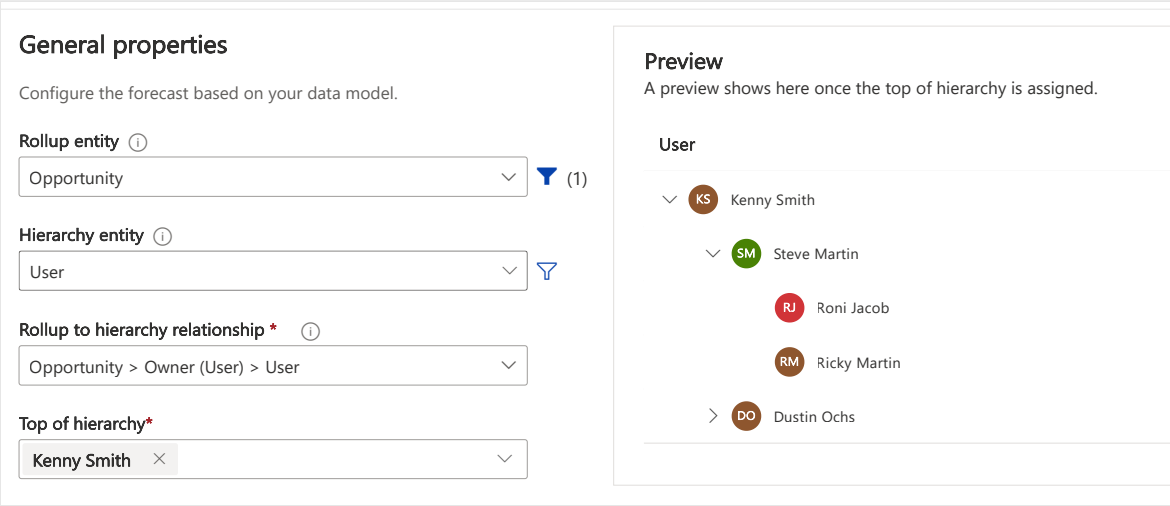
   You'll see a sample forecast configuration in your first-run experience. You can directly activate the forecast if you'd like to go with the defaults. After the status turns **Active**, you can view the forecast.

   If you want to know who'll have access to the forecast or restrict access to the forecast, continue with the following steps.

2. Select **Sample forecast**.

3. In the **General** step, check the **Preview** section to know the users who are part of the forecast. By default, all these users will have access to view the forecast after you activate it.

4. If you want to limit the access, go to the **Permissions** step and select the appropriate security roles.

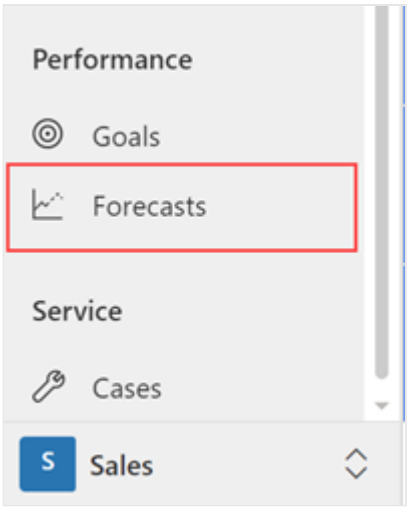
5. Go to the **Activate & add quotas** step and select **Activate forecast** to make the forecast available to users in the hierarchy.
6. Wait for the status to turn **Active**.
7. View the forecast to know the actual and forecasted values for your sales teams.

Use APIs to upload forecast data

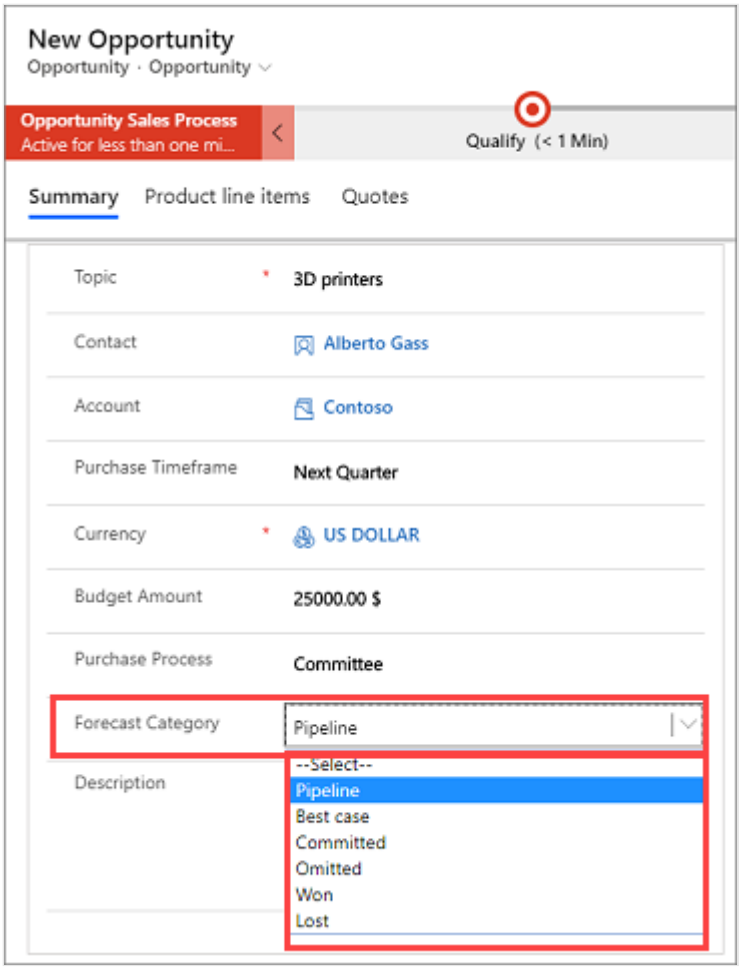
After a forecast is activated, you can use the msdyn_ForecastApi custom action to upload forecasting data to simple columns. For more information, go to msdyn_ForecastApi action.

Find your forecasts

In the **Sales** site map, you'll find **Forecasts** under **Performance**.



In the **Opportunity** form, **Forecast Category** appears above **Description**.



The categories define the confidence level of closing the opportunity. You can add custom values for your organization if you need to. To learn more, see Capture forecast category for opportunity.

> **Note**
>
> - Forecast category options include **Won** and **Lost**. If an opportunity is closed as **Won** or **Lost**, the **Opportunity Forecast Category Mapping Process** out-of-the-box workflow automatically changes the forecast category to match.
> - To view the **Opportunity Forecast Category Mapping Process** workflow, go to **Settings** > **Process Center** > **Processes** and select the **All Processes** view. Search for and open the **Opportunity Forecast Category Mapping Process** workflow. You can customize or deactivate the workflow according to your organization's requirements.
> - Are you using a custom option set instead of forecast category? You'll need to create a workflow to automatically sync the opportunity status with your option set to make sure that the projection is accurate.
> - To learn more, see **Create a cloud flow in Power Automate**.

If you don't want to see the forecast category in the opportunity form, you'll need to customize the form. You can't use the **Visible by default** option to hide it. To learn more, see Unable to hide forecast category field in opportunity forms.

> **Important**
>
> The forecasting feature is intended to help sales managers or supervisors enhance their team's performance. It is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with users. This also includes adequately notifying users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with users may be monitored, recorded, or stored.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Next step: Select a template

See also

Blog: Tips for setting up sales forecasting in Dynamics 365 Sales
System and application users who can push data to Dataverse
Project accurate revenue with sales forecasting
View forecasts

About premium forecasting
msdyn_ForecastApi action
Forecasting FAQs

Select a forecasting template

Article • 03/30/2022

Select a template to define how a forecast structures your organization's data and projections. If you prefer to create a forecast based on your own rollup and hierarchy entities, select **Create from scratch** instead.

License and role requirements

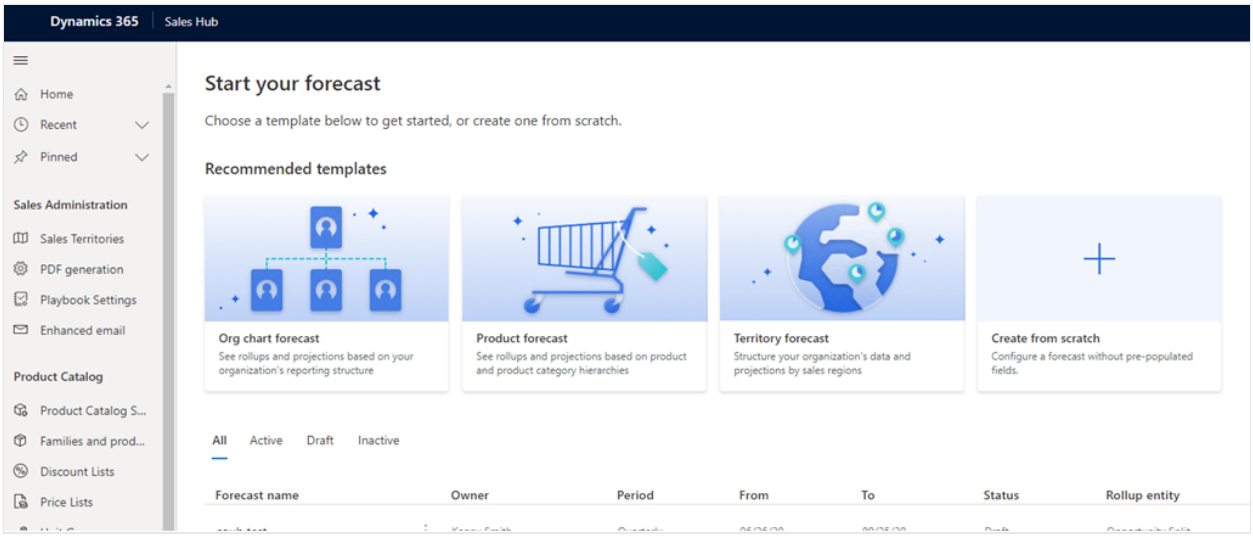
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Select a template

The fastest way to create a forecast is to use a template. The template that you select defines how the forecast groups data.

On the **Forecast configurations** page, select one of the following templates:

- **Org chart forecast**: Rollup columns and projections are based on your organization's reporting structure. This template uses the **Manager** field of the **User** entity for the hierarchy.
- **Product forecast**: Rollup columns and projections are based on the product hierarchy.
- **Territory forecast**: Rollup columns and projections are based on the sales territory hierarchy.



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Next step: Define general properties and scheduling

See also

Configure forecasts in your organization

Configure forecast using custom rollup entity

Define and schedule a forecast model

Article • 09/01/2023

Use general properties and scheduling options to define and schedule a forecast model.

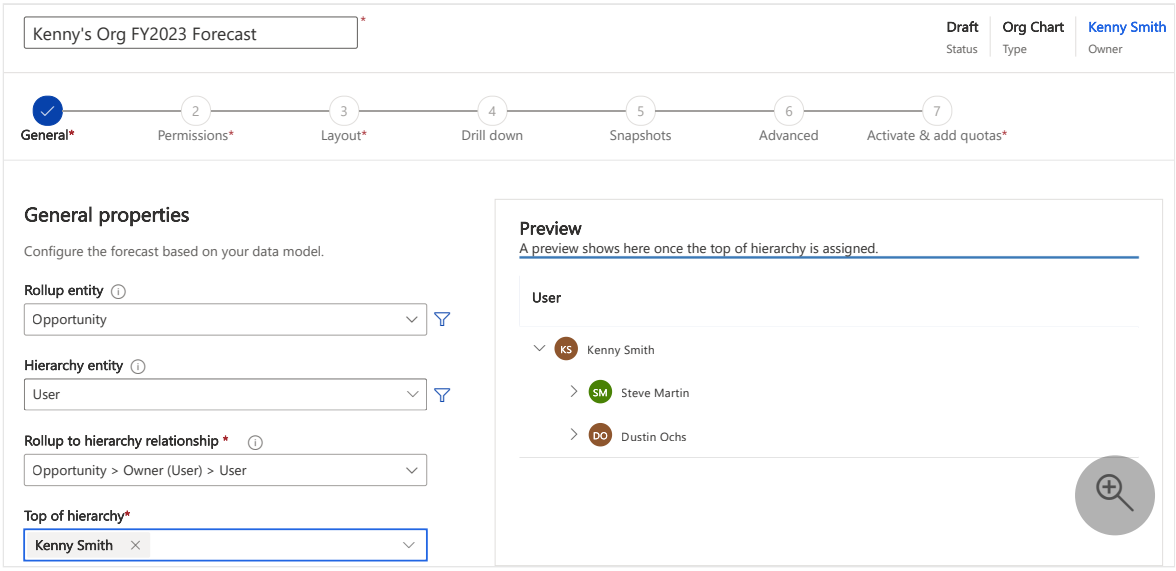
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Define a forecast model

Define the entities that must be used to generate the forecast.

1. In the **General** step of the **Forecast configuration** page, define the fields that should be used for the forecast. The following screenshot is an example of the **General** step for an org chart forecast. Let's walk through the options in the subsequent steps.



2. Enter a descriptive name for the forecast. Example: *Kenny's Org FY2023 Forecast*.

3. Select a **Rollup entity**.

The forecast is based on the gross rollup of the entity you select. Each forecast template starts with a default rollup entity:

Template	Default rollup entity
Org chart forecast	Opportunity
Product forecast	Opportunity Product
Territory forecast	Opportunity

Choose a custom or out-of-the-box entity to support your organization's specific requirements if needed.

Only entities that have **Change Tracking** turned on are listed. To learn more, see Enable change tracking to control data synchronization.

4. Select the **Funnel** icon next to **Rollup entity** to filter opportunities that participate in calculating the forecast values. Learn more about roll up filters.

5. Select a **Hierarchy entity**.

   The forecast uses this entity to group your organization's data. Only entities that have a hierarchy are shown in the list.

   Each forecast template starts with a default hierarchy entity:

Template	Default hierarchy entity
Org chart forecast	User
Product forecast	Product
Territory forecast	Territory

6. Select the **Funnel** icon next to **Hierarchy entity** to filter your forecast to include only those hierarchies that meet the specified conditions. Learn more about hierarchy filters.

7. Select a **Rollup to hierarchy relationship**.

   This step establishes a relationship between the rollup and hierarchy entities. Each forecast template starts with a default rollup to hierarchy relationship:

Template	Rollup to hierarchy relationship	Description
Org chart	Opportunity > Owner (User) >	The forecast hierarchy is defined

Template	Rollup to hierarchy relationship	Description
forecast	User	based on the organizational hierarchy.
Product forecast	Opportunity Product > Existing Product (Product) > Product	The forecast hierarchy is defined based on the product hierarchy.
Territory forecast	Opportunity > Account (Account) > Territory (Territory) > Territory	The forecast hierarchy is defined based on the territory hierarchy.

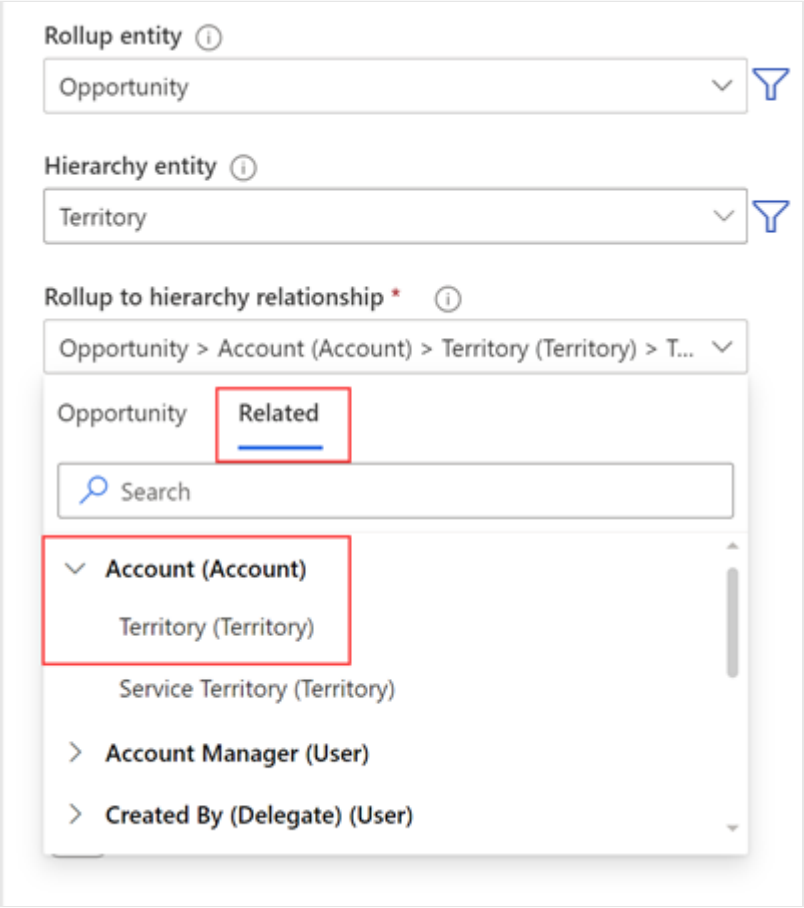
Choose different values to support your organization's specific requirements if needed.

In the example screenshot, we selected **User** as the hierarchy entity. We can choose from fields in the **Opportunity** entity that are related to the **User** entity. As we want to build a forecast based on sellers who own opportunities, we selected **Owner** as the relationship. The relationship is mapped as *Opportunity* > *Owner (User)* > *User*. The mapping specifies that the forecast values are based on the **Owner** field in the **Opportunity** entity.

What if there is no direct relationship between the rollup entity and the hierarchy entity? In that case, you can choose a field from a related entity to define an indirect relationship. Select the **Related** tab, and then choose a field from the list. Only fields in hierarchical entities are shown in the **Related** list.

In the following example, we selected **Opportunity** as the rollup entity and **Territory** as the hierarchy entity. Because there's no direct relationship between them, we must select the **Related** tab.

In our example, the **Territory** field in the **Related** list is indirectly related to **Opportunity** through the **Account** entity. In other words, **Account** is an intermediate entity for establishing a relationship between **Opportunity** and **Territory**.

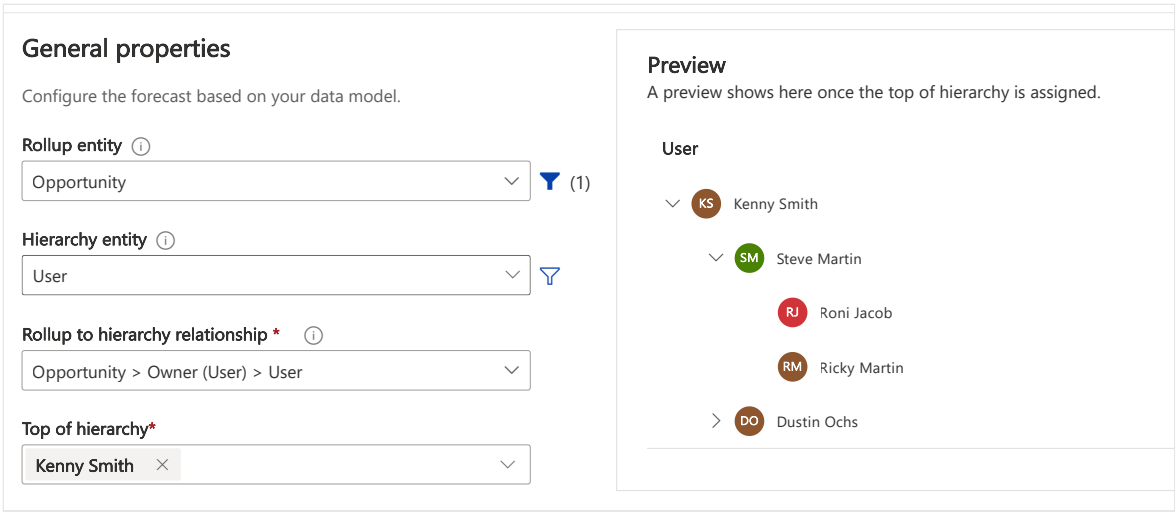


The relationship is mapped as *Opportunity* > *Account (Account)* > *Territory (Territory)* > *Territory*. The mapping specifies that there's a field **Account** in the **Opportunity** entity that's related to the **Account** entity. The **Account** entity in turn has a **Territory** field that's related to the **Territory** entity. The rollup values in the forecast are based on the relationship defined through the **Territory** field.

8. In the **Top of hierarchy** list, select a value that will be at the top of this forecast hierarchy.

   The list of values depends on the hierarchy entity you selected. For example, if you select **User** as the hierarchy entity, the list displays active users in your organization.

   Let's say that Kenny Smith, a sales director, wants to see the forecast for their team. Kenny builds a forecast based on the **Org chart** template and selects their own name as the top of the hierarchy. The team's hierarchy is previewed to the right of the forecast options.



9. Schedule the forecast, as described in the following section. You must add at least one forecast period to go to the next step.

10. When you've finished scheduling, select **Next**.

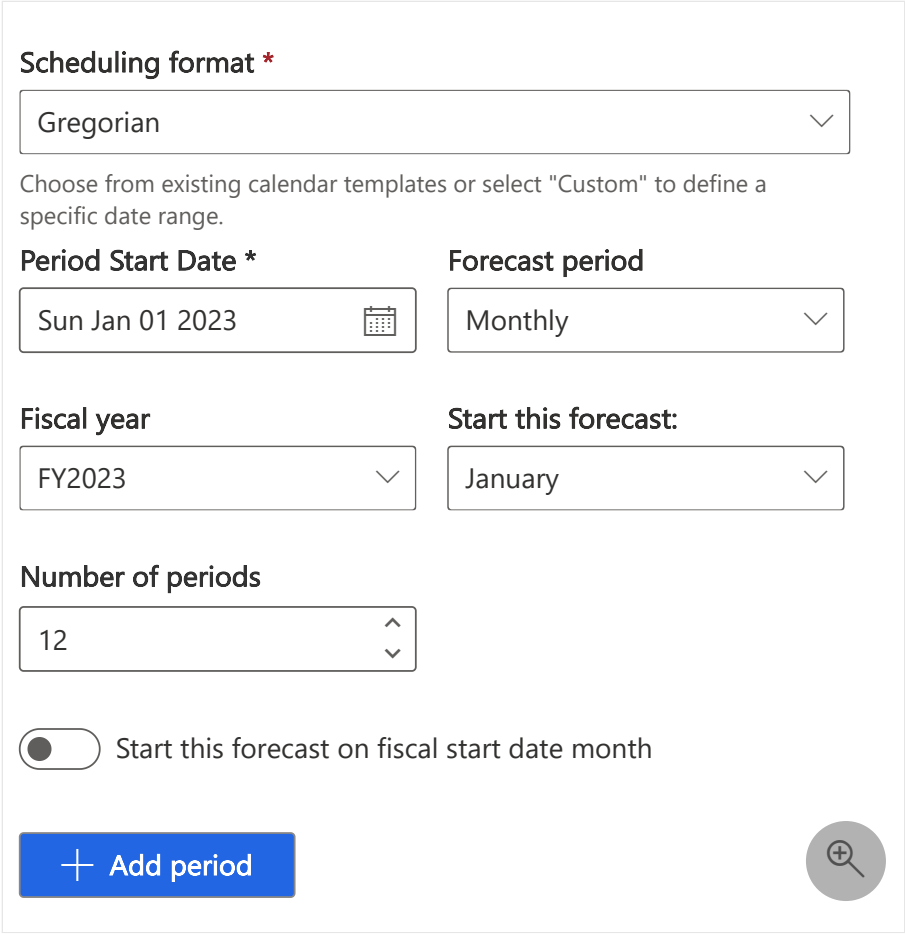
Schedule the forecast

In the **Scheduling** section, add forecast periods to match the forecast periods in your organization and how often you want to generate the forecast. Each forecast configuration can have multiple forecast periods with different period types.

Quick example

Let's say your organization's fiscal year runs from January 1 to December 31. To schedule a monthly forecast for the fiscal year 2023, select the values as follows:

- **Scheduling format**: **Gregorian**
- **Period start date**: **Jan 1, 2023**
- **Forecast period**: **Monthly**
- **Fiscal year**: **FY2023**
- **Start this forecast**: **January**
- **Number of periods**: **12**



When you add the above schedule, 12 forecast periods are added to the **Periods for this forecast** table on the right side. Select the image to see the full screen view. For information about each of the above fields, see Manage forecast periods.

Can't find the options in your app?

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- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

> [!div class="nextstepaction"] > [Previous step: Select a template](select-template-forecast.md)

Next step: Provide viewing and adjustment privileges

See also

Configure forecasts in your organization
Configure forecasts by using a custom rollup entity
Forecast period rules
Work with fiscal year settings
Troubleshooting forecasts

Apply additional filters

Article • 09/01/2023

Add filters to refine the opportunities and hierarchies that participate in calculating the forecast values.

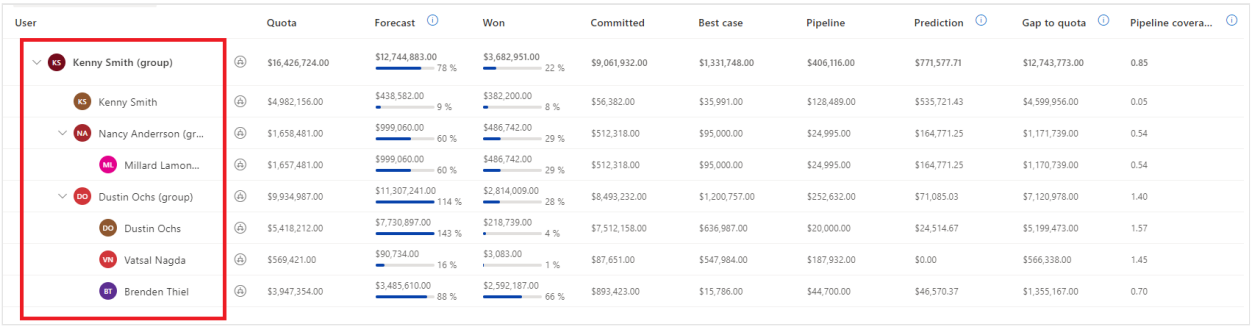
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Filter hierarchy records in the forecast

You can filter your forecast to include only those hierarchies that meet the specified conditions. For example, Kenny Smith, the Sales head for APAC and EMEA wants to view the forecast data of the org in the APAC territory. As an administrator, you can create an org chart forecast and set the hierarchy filter to include only the APAC forecast data.

The following screenshot illustrates a sample forecast hierarchy:



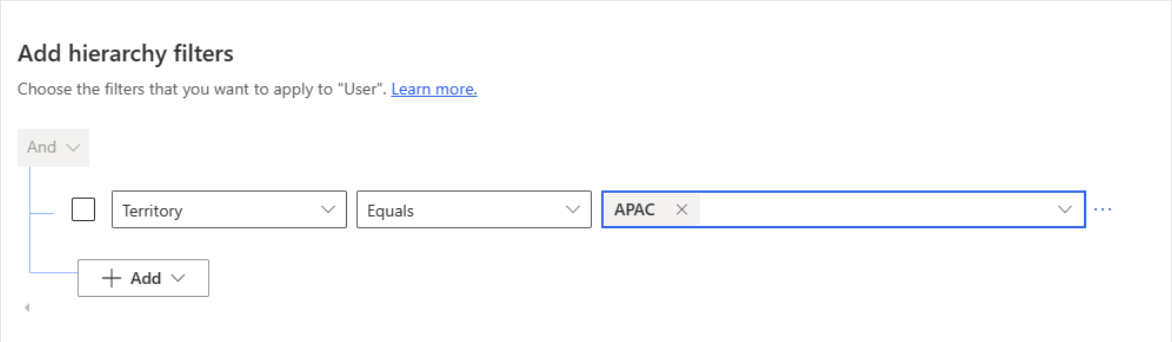
To filter hierarchy records in a forecast

1. In the **General** step of the forecast configuration, select the **Funnel** icon next to **Hierarchy entity** field.

> **Note**
>
> To apply the filter on an existing forecast, clone the forecast configuration, apply the filter, and activate it. You can then deactivate the old forecast

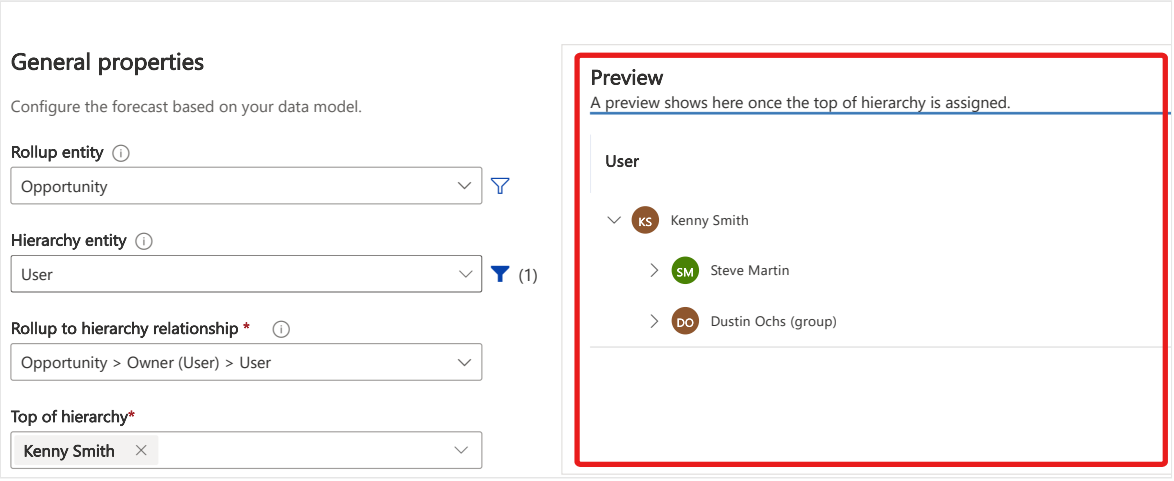
configuration.

2. Select the conditions to filter the hierarchy that you want to include in the forecast. For our example, let's select **Territory** is equal to APAC. This will include forecast records of sellers from APAC.



> **Note**
>
> If a parent record is filtered out of the hierarchy, the rollup value of the child records will show up under the parent record. However, the opportunities that were directly owned by the parent record won't be displayed in the forecast. Let's suppose that Dustin Ochs is a Sales Manager in Kenny's org who manages two sellers. Henry is in Europe, but manages sellers in APAC. When Kenny looks at the forecast for APAC, the opportunities of Dustin's reports will roll up under Henry's name, but the forecast won't show the opportunities owned by Henry.

3. Select a value that will be at the top of this forecast hierarchy in the **Top of Hierarchy** drop-down. You'll see a preview of the hierarchy after applying the filter conditions.



If a parent record is suffixed with **(group)** in the preview, it means that the parent record is filtered out of the hierarchy but its child records are included in the

hierarchy. As an example, see Dustin's record in the above screenshot.

4. Ensure that the forecast hierarchy looks correct before you activate the forecast. After the forecast is activated, you can't edit the filter.

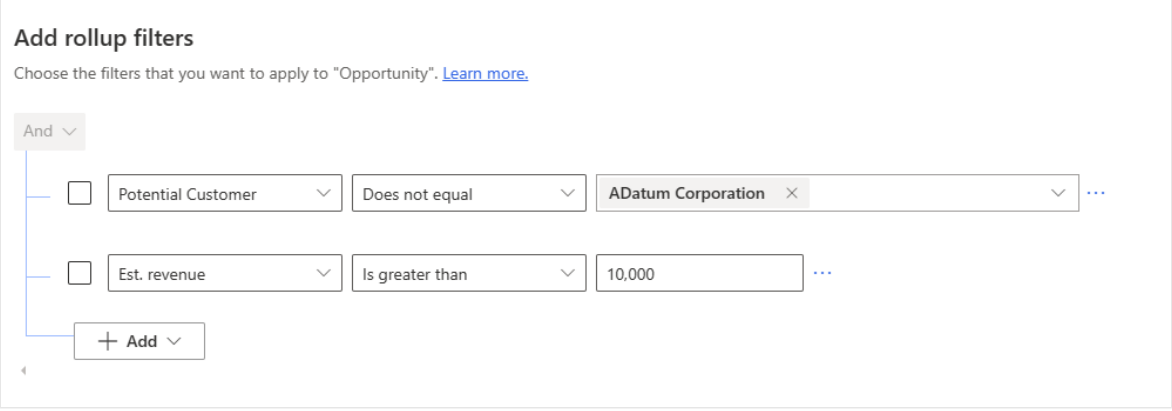
Add additional filters on opportunities to calculate forecast values

Using the rollup filters, you can filter opportunities that participate in calculating the forecast values. To filter opportunities, create filter conditions based on the opportunity and its related entity attributes.

For example, you know that opportunities related to **ADatum Corporation** and the revenue of more than **$10,000** can't be closed for the current quarter. To filter out such opportunities from the forecast, follow these steps:

1. In the **General** step of the forecast configuration, select the **Funnel** icon next to **Rollup entity** field.
2. Select **Add** > **Add row**.
3. In the selection boxes, select the attribute as **Potential Customer**, the condition as **Does Not Equals**, and the account name as **ADatum Corporation**.

   With this condition, the opportunities related to **Adatum Corporation** will be removed from the forecast. In the next step, you'll add a condition to filter revenue that's more than or equal to **$10,000**.
4. Select **Add** > **Add row**.
5. In the selection boxes, select the attribute as **Est. Revenue**, the condition as **Is greater than**, and revenue to be considered as **10000**.



6. Select **Apply** to save the filter conditions.

When the forecast is activated, the query will be executed to filter the forecast for the added conditions.

Can't find the options in your app?

There are three possibilities:

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- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure forecasts in your organization
View a forecast

Forecast period rules and scheduling formats

Article • 09/01/2023

A forecast period is a time period for which you want to forecast sales. A forecast period defines start date, frequency, number of occurrences, and so on. This article describes the rules that you need to follow when you're adding forecast periods and information about calendar templates that you use to schedule forecast periods.

Forecast period rules

The following rules apply when you're adding forecast periods:

Rule	Condition
Duration of custom periods	- Minimum duration: 7 days - Maximum duration: 1 year
Maximum duration across all periods in a forecast	- Only annual periods: 3 years - Only weekly, monthly, or quarterly periods: 1 year - Combination of period types: 1 year **Note:** If you have two or more annual periods, you can't add periods from any other period type.
Maximum number of periods supported	- Overall: 17 - Weekly periods: 17 - Monthly periods: 12 - Quarterly periods: 4 - Annual periods: 3
Period types assigned for custom periods	The following period types are assigned to custom periods depending on the number of days in the period. The rules, such as maximum number of periods and maximum duration, that apply to the predefined period types also apply to custom periods. - Up to of 7 days (1 week): Weekly - 7 days to 35 days (5 weeks): Monthly - 35 days to 98 days (14 weeks): Quarterly - 98 days to 1 year (52 weeks): Annual
Duplicate periods	Not allowed. Duplicate periods—periods with the same start date and end date—are not allowed.
Snapshot frequency	- Weekly, monthly and quarterly periods: Daily - Annual periods: Weekly

Scheduling format

A scheduling format is a calendar template that corresponds to the number and grouping of accounting periods in your organization's calendar. You select the scheduling format when you add a forecast period.

The following table describes the templates available for scheduling forecasts.

Scheduling format	Description
Gregorian	This template uses the most-widely used Gregorian calender with 12 weeks per quarter.
Broadcast Calendar	In this pattern, every month has either four or five weeks that all start on Monday and end on Sunday. Broadcast calendar months have either 28 days or 35 days. The key link between the broadcast and Gregorian calendars is that the first week of every broadcast month always contains the first day of the month on the Gregorian calendar. For example, if January 1 falls on a Saturday, the broadcast calendar year begins on the preceding Monday, December 27. Broadcast January has five weeks and ends on January 30. The four weeks of broadcast February begin on January 31. The number of weeks in a broadcast month is based on the number of Sundays that fall in that month. The period ends on the last Sunday of the month. When you choose this option, the **Fiscal Year Start Date** is automatically set to the Monday in the week that contains January 1. To remained aligned with the established broadcast calendar logic, the start date can't be changed.
3-3-3-4, **3-3-4-3**, **3-4-3-3**, and **4-3-3-3***	This pattern divides a year into 13 months of 4 weeks each, with three 3-week months and one 4-week month in each quarter. For example, in the 4-3-3-3 and 3-3-3-4 calendars, the 4-week month falls at the start or end of the quarter, respectively.
4-4-5, **4-5-4**, and **5-4-4***	This pattern divides a year into four quarters of 13 weeks each, with two 4-week months and one 5-week month in each quarter. In the 5-4-4 and 4-4-5 patterns, the 5-week month falls at the start or end of the quarter, respectively. With 13-week quarters, the period always ends on the same day of the week. This pattern is useful for shift or manufacturing planning, because every period is the same length.
Custom	If none of the predefined calendar templates match your organization's calendar, select **Custom** and specify the start date and end date of your forecast. The Period Name field is populated based on the start and end dates. You can edit the period name, but it'll not be localized. So, even your non-English users will see the period name in English. Review the Forecast period rules to learn about the duration and period types.

*The 4-4-5/4-5-4/5-4-4 and 3-3-3-4/3-3-4-3/3-4-3-3/4-3-3-3 calendars have only 364 days (7 days × 52 weeks). You'll need to add a fifty-third week every five or six years, which might make year-on-year comparison difficult. Instead, you can add an extra week to a specific quarter or month each year. Select the **Custom** calender template from the **Scheduling format** list. Then, specify the start date and end date of the week.

See also

- Define forecast properties and scheduling
- Manage forecast periods

Manage forecast periods

Article • 09/01/2023

A forecast period is a time period for which you want to forecast sales. A forecast period defines the start date and end date of forecast period and the number of weeks in the period. You can create multiple forecast periods for a forecast. For example, you can create a forecast period for each quarter of the year.

Important considerations

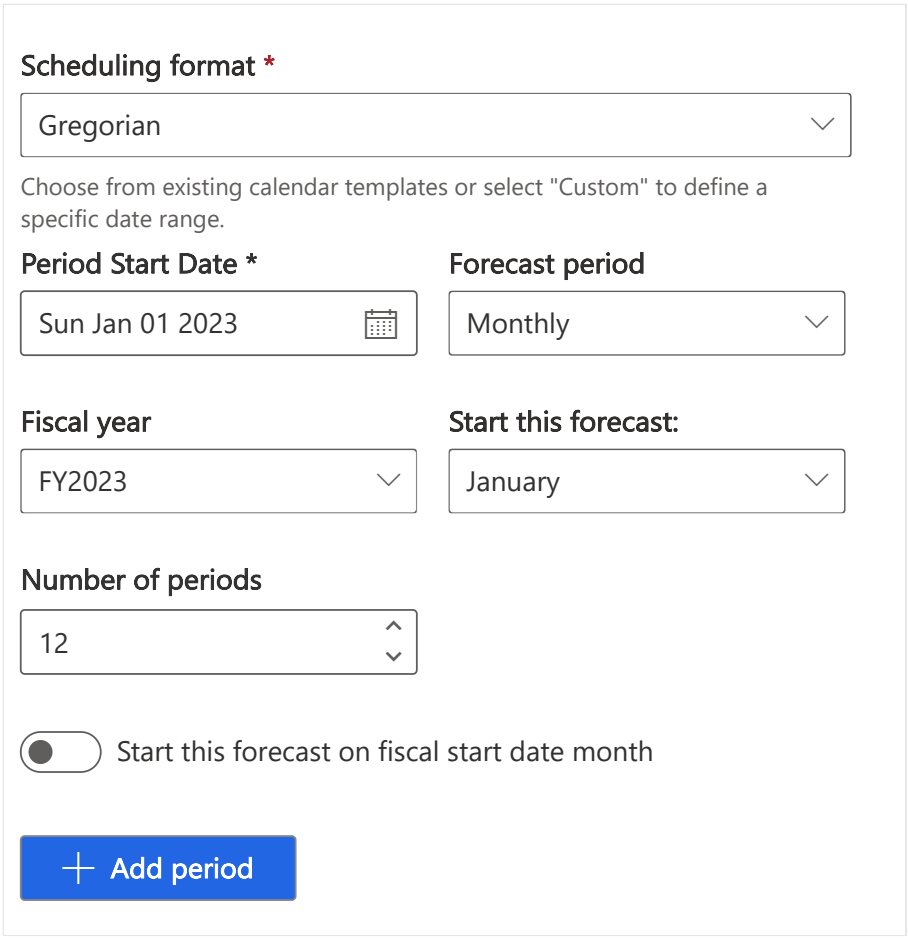
Before adding and scheduling forecast periods, review the following information:

- Each forecast configuration can have multiple forecast periods with different period types. For example, you can add a quarterly forecast for the first six months of the fiscal year and a monthly forecast for the remaining six months. For more such rules, see Forecast period rules
- You can have different period types for the same period to track your team's forecast at multiple intervals. For example, towards the end of the quarter, you may want to track your team's forecast on a weekly basis, in addition to the monthly forecast. For example, you can have a monthly forecast for the month of September and a weekly forecast for the same month. However, you can't add duplicate periods with the same recurrence and period.
- You can add forecast periods to archived forecasts and reactivate the forecast.

Add forecast periods

You can add forecast periods while you're defining the forecast configuration or after you've activated the forecast. If you add a new period after activating the forecast, you need to reactivate the forecast for the new period to take effect.

1. Open the **Forecast configuration** page in **App Settings**.
2. Open the forecast configuration record that you want to edit.
3. In the **General** step of the forecast configuration, scroll down to the **Scheduling** section,



4. In the **Scheduling format** drop-down, select a calendar template that corresponds to the number and grouping of accounting periods in your organization's calendar. Learn more about the available scheduling formats. For example, select **Gregorian** if your organization uses the most-widely used Gregorian calender with 12 weeks per quarter.

5. Use the information in the following table to complete the remaining fields in this section:

Field	Description	Example scenario
Period start date	Select the date from when the forecast period starts. This date can be the date when your fiscal year starts. For Broadcast calender template, this value can't be changed as this value is already preset to the first Monday that contains January 1.	If your organization's fiscal year starts on July 1, select **July 1**. You'll then be able to create forecasts for the period from July 1 to June 30 of the following year. If you want to track your team's forecast a few weeks ahead of the organization's fiscal year, set the start date to a few weeks before the fiscal year start date.
Forecast period	Select the frequency of the forecast. Specify whether you want a weekly, monthly, quarterly, or yearly forecast. The forecast period determines the	Select **Monthly** to generate a forecast for every month.

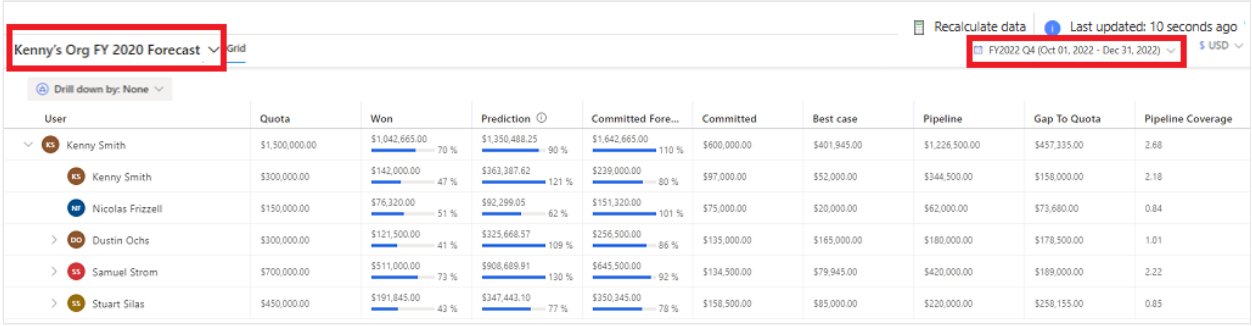
Field	Description	Example scenario
	granularity and recurrence of the forecast.	
Fiscal year	Select the fiscal year for the forecast.	Select **FY2023** if you're creating a forecast for the fiscal year 2023.
Start this forecast	Select the exact week, month, quarter, or year for the forecast period.	If you've selected **Monthly** as the forecast period and want to start your forecast from July, select **July** as the start month.
Number of periods	Enter the number of forecast periods to generate. Forecast periods can only span up to one year.	If you've selected monthly forecast and selected **July** as the start month, and number of periods as 6, then 6 forecast periods will be configured for the period from July to December. When you select **Add period**, a forecast for each month will be added to the table on the right side.
Start this forecast on fiscal start month	Applicable only for monthly forecasts. When you turn this option on, the period name will be based on the start date of the period. Otherwise, it'll be based on the end date of the period.	For a monthly period that's set to from July 15, 2023, the period name will be set as **FY2023 July** if this option is turned on. If it's turned off, the period name will be set as **FY2023 August**.

6. Select **Add period** to add the forecast periods to the table on the right side.

7. Repeat step 4 through 6 to add more forecast periods.

Rearrange forecast periods

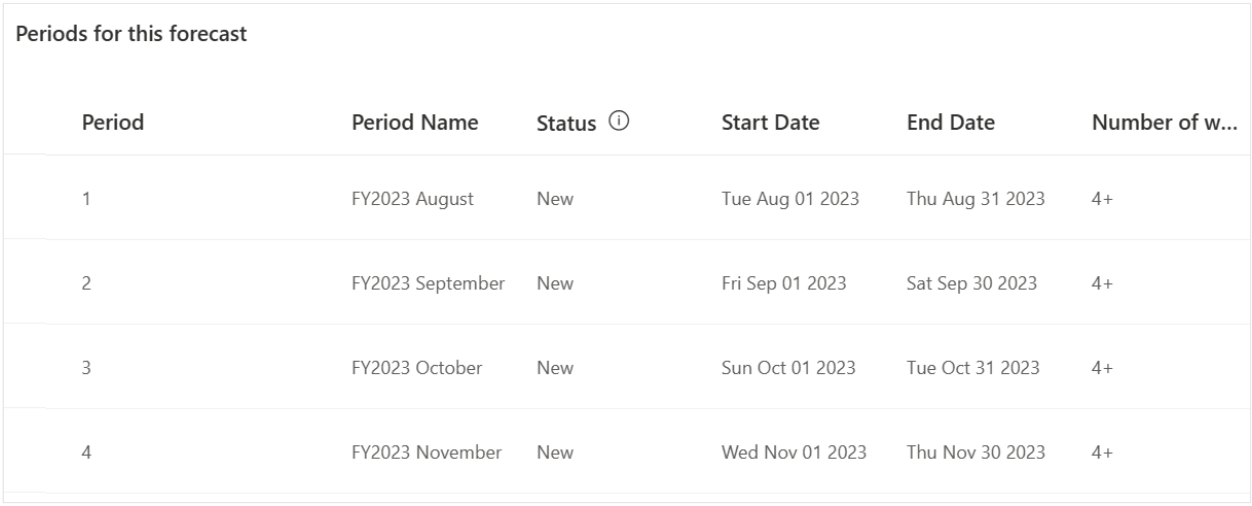
By default, forecast periods are arranged in the order of the forecast start date in the **Forecasts** page. You can rearrange the forecast periods as per your organization's requirements.



1. In the **General** step of the forecast configuration, scroll down to the **Scheduling** section, and then drag and drop the forecast periods to rearrange them.
2. Save the changes.
3. Open the forecast page to ensure that the forecast periods are arranged as per your requirements.

View forecast calculation status

The **Status** column in the **Periods for this forecast** table indicates the status of the forecast value calculation.



The status can be **New**, **Queued**, **In progress**, **Completed**, or **Failed**.

- Until you activate the forecast, the status is set as **New**.
- After you activate the forecast, it changes to **Queued**
- After the calculation starts, it changes to **In progress**.
- When the forecast value is calculated, it changes to **Completed**.
- If the forecast value calculation fails, the status changes to **Failed**.

After you activate the forecast, verify the status of the periods in the **Periods for this forecast** table before you view the forecast.

Capture forecast category for opportunity

Article • 03/30/2022

Capture the forecast category to indicate the confidence level of an opportunity getting converted into a sale.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

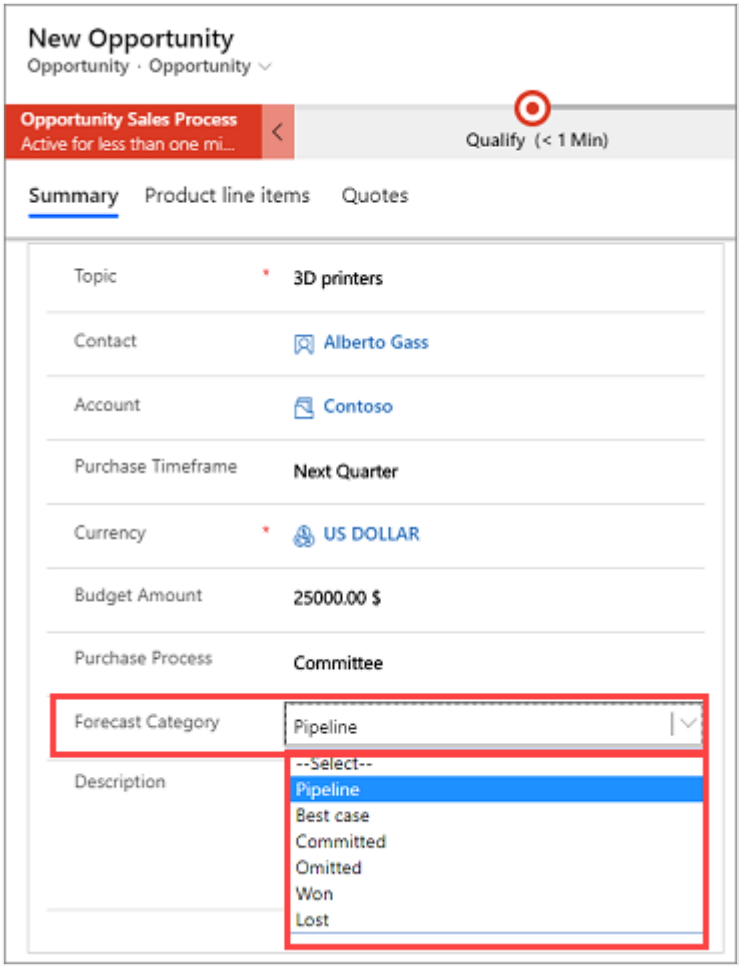
Select option set

You must select an option set while configuring the forecast to determine the confidence level of an opportunity as it moves along the path to conversion. For example, when you select the option set as **forecast categories**, the forecast grid displays the stages that are defined in the option set.

You can also manually configure your columns for a fully customized forecast. Forecast shows how many opportunities are in the pipeline and which of those are committed, delivering actionable insights.

1. In the site map, select **Opportunities**.
2. In the list of opportunities, open an opportunity for which you want to capture the forecast category.
3. In the **Forecast Category** drop-down list, select one of the following, and then select **Save**:
    - **Pipeline**. The confidence of winning this opportunity is low. Any opportunity that a sales rep has just started to work on can be set to this category (this is the default value).

- **Best case**. The sales rep has started talking to customers or has shared quotes, and there is a moderate chance of winning the opportunity.
- **Committed**. The customer has committed to closing the deal.
- **Omitted**. To exclude an opportunity's numbers from the forecast.
- **Won**. Don't select this option manually. When you close an opportunity as **Won**, its forecast category is automatically set to **Won**.
- **Lost**. Don't select this option manually. When you close an opportunity as **Lost**, its forecast category is automatically set to **Lost**.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Create or edit an opportunity

Configure a forecast in your organization

View forecasts

Close opportunities as won or lost

Configure forecasts by using a custom rollup entity

Article • 08/30/2023

Forecasting supports custom and other out-of-the-box rollup entities (now known as tables) so you can configure a forecast that's specific to your organizational requirements.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

How it works

To configure a forecast that's specific to your organization, you can select an entity as a rollup entity, select a related entity as a hierarchical entity, and establish a relationship between them.

> **Note**
>
> - Only the entities that have **Change Tracking** enabled can be used as a rollup entity. To learn more, see **Enable change tracking to control data synchronization**.
> - Only the hierarchy-enabled entities can be used as a hierarchy entity.

Forecasting supports up to two levels of relationships between the rollup and hierarchical entities. For example, *Opportunity* > *Owner (User)* > *Territory (Territory)* > *Territory*. Here, **Owner** is the attribute in the **Opportunity** entity of type **User** and **Territory** is the attribute in **User** entity of type **Territory**. This helps the forecast to be more specific to your complex organizational requirements.

While configuring the forecast columns, some attributes that are necessary for a forecast are forecast category, estimated revenue, and estimated close date. Typically, these

attributes are available in the selected rollup entity. For complex data models, such as opportunity splits and opportunity products, these attributes are distributed between rollup and related entities. To address this complexity, the enhanced forecasting supports the selection of related attributes for forecast category and estimated close date.

For example, let's consider two data models: opportunity product and opportunity split.

Opportunity product

Use this model to create a product-based revenue forecast.

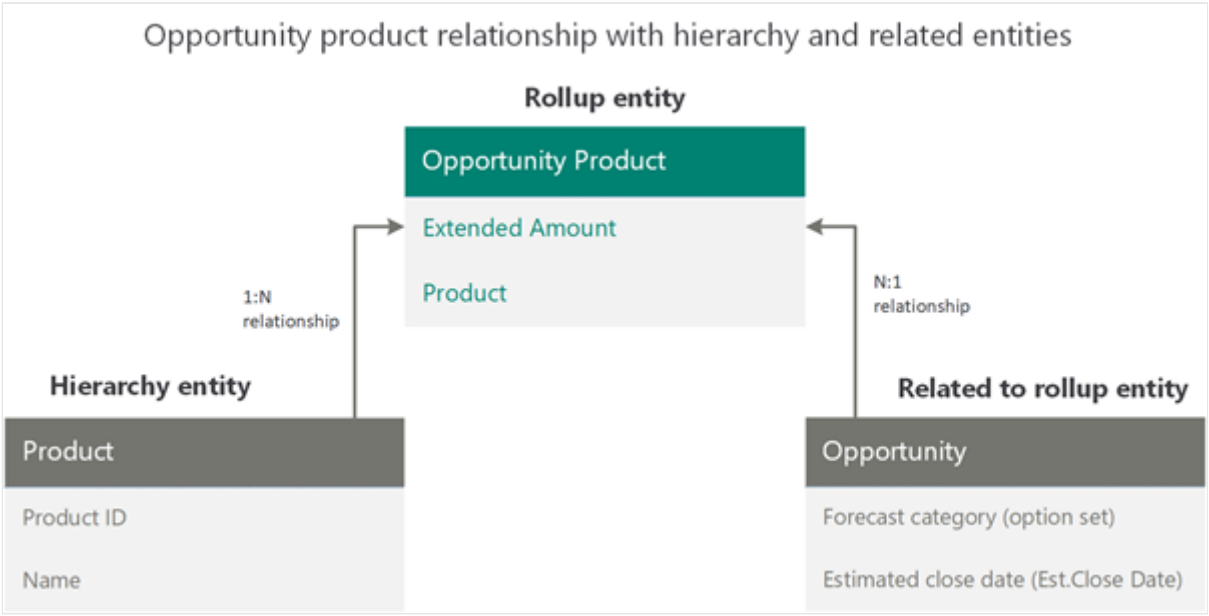
For product-based forecasting, the product level revenue comes from the Opportunity Product entity. Therefore, **Opportunity Product** must be selected as the rollup entity and **Product** as the hierarchy entity that has a direct relationship with the Opportunity Product rollup entity.

The other key attributes for the forecast are **Forecast category** and **Est.Close Date**. These attributes are available in the Opportunity entity that's related to the Opportunity Product rollup entity.

So, we're using the following entities to create the forecast:

- **Opportunity Product** as the rollup entity
- **Product** as the hierarchy entity
- **Opportunity** for the forecast category and estimated close date

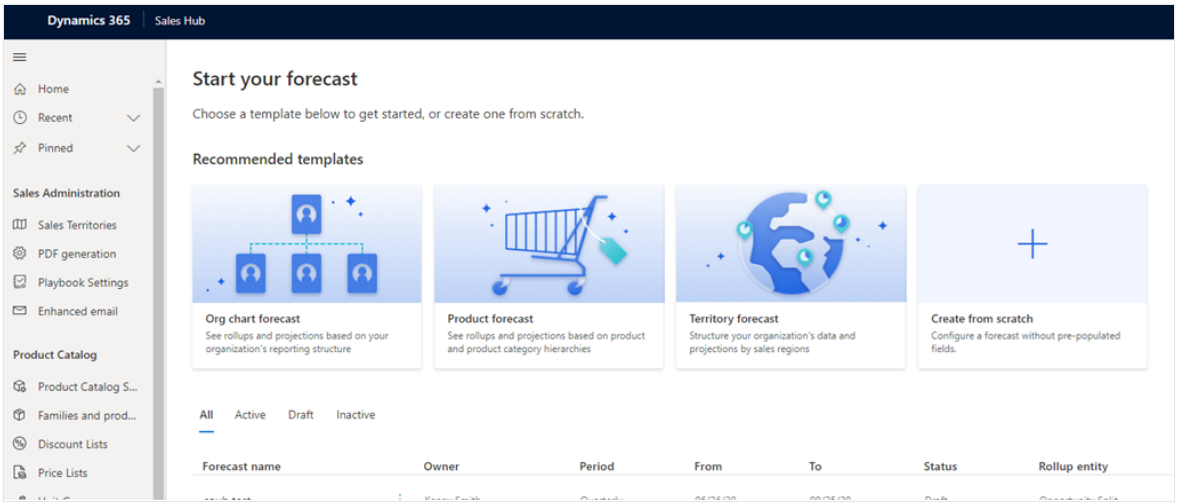
The following image illustrates the above mentioned data model.



Let's configure this forecast.

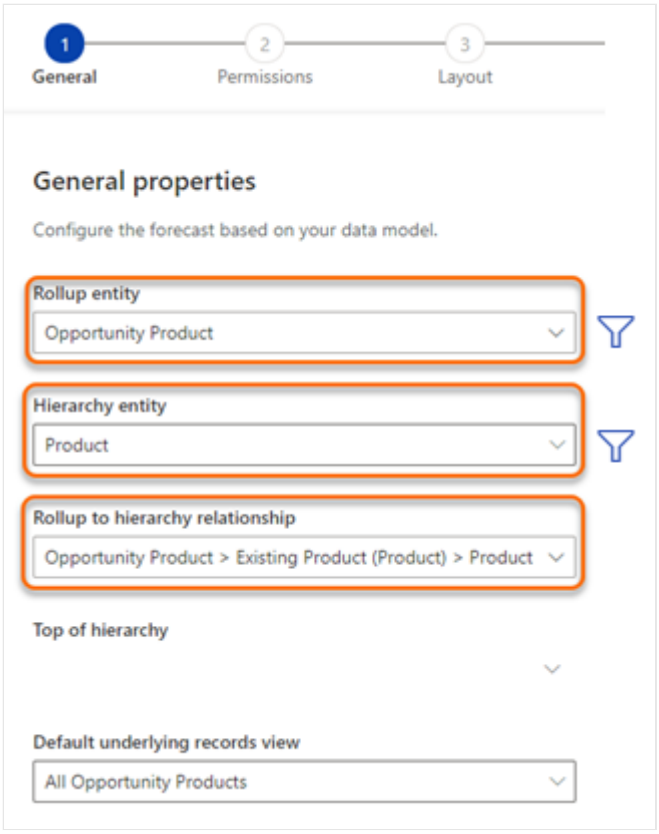
1. Select the **Product forecast** template. This template is available to you to configure a forecast based on opportunity product and product hierarchies.

   > **Note**
   >
   > You can choose **Create from scratch** to create a forecast based on your custom entities and custom relationships.



2. In the **General** section, select the rollup entity as **Opportunity Product** and the hierarchy entity as **Product**.

   A direct relationship exists between the rollup and hierarchy entities, so you select the relationship as **Opportunity Product** > **Existing Product (Product)** > **Product**. Here, **Existing Product** is an attribute in the **Opportunity Product** rollup entity that has a relationship to the **Product** hierarchy entity.

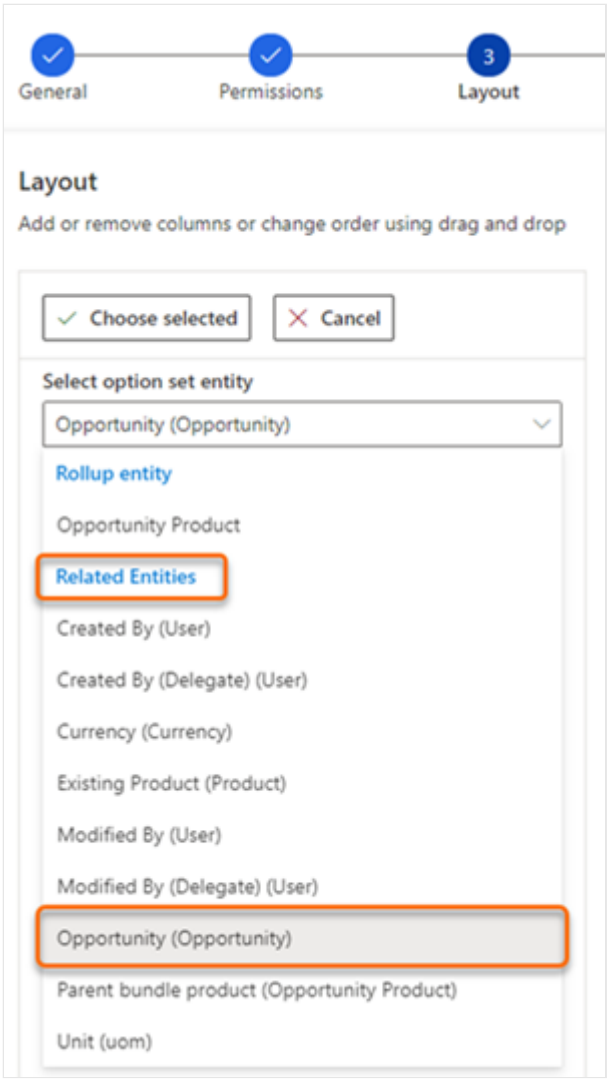


If there's no direct entity relationship between the rollup entity and the hierarchy entity, you can choose a related attribute to define the relationship. Select the **Related** tab, and then choose a related attribute from the list. The list displays attributes of the hierarchy-defined entities only. If no relationships exist, the entity and related tab will be empty, and you can't configure the forecast.

Enter other necessary information in the form, and then select **Next**. More information: Define general properties and scheduling

3. Perform the steps in Provide viewing permissions.

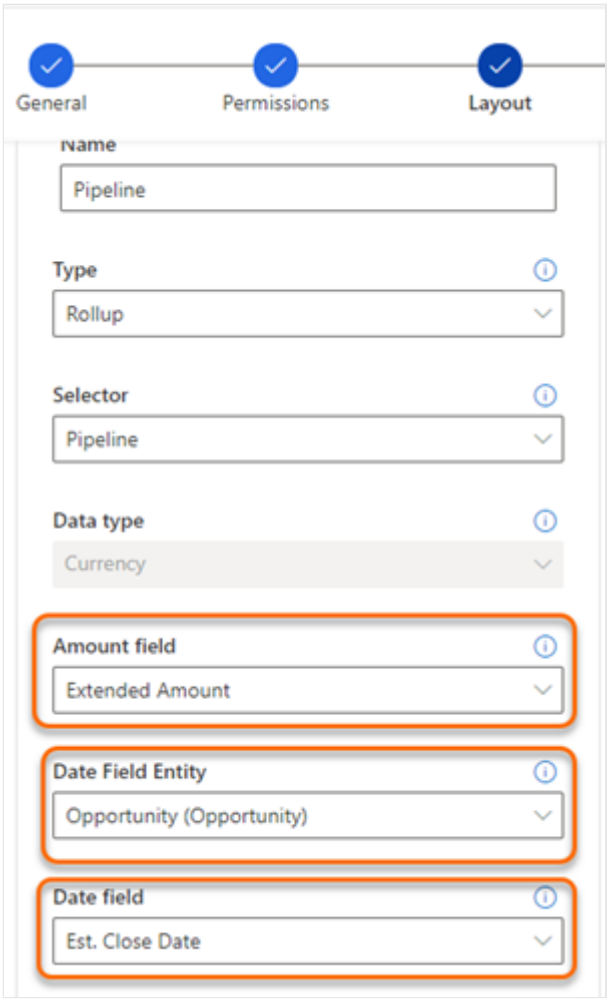
4. In the **Layout** section, choose the option set entity from the rollup entity or from its related entities. For this data model, the forecast categories exist in the Opportunity entity. Select the **Opportunity (Opportunity)** option set entity from **Related Entities**.



a. In the **Opportunity (Opportunity)** entity, the **Forecast category** option set is selected and automatically configured.

b. To configure each column, select the corresponding gear icon and the column configuration section opens.

c. In the **Amount field**, the **Extended Amount** attribute is selected from **Opportunity Product** (rollup entity). However, **Date field entity** isn't available in the **Opportunity Product** entity. You can select the related **Opportunity** entity, and then select the **Est.Close Date** attribute.



d. Enter other necessary information in the form, and then save it.

Repeat the step to configure other columns in accordance with your needs, and then select **Next**. More information: Choose layout and columns

5. If you have enabled premium forecasting and want to take snapshots automatically, see Take snapshots automatically.

6. Perform the steps in Activate and upload simple columns data.

Opportunity split

> **Important**
>
> The opportunity split is a custom entity and isn't available by default. You must first create the opportunity split custom entity to be able to use as a rollup entity. More information: **Create a custom table**.

Use this model to create an opportunity split forecast.

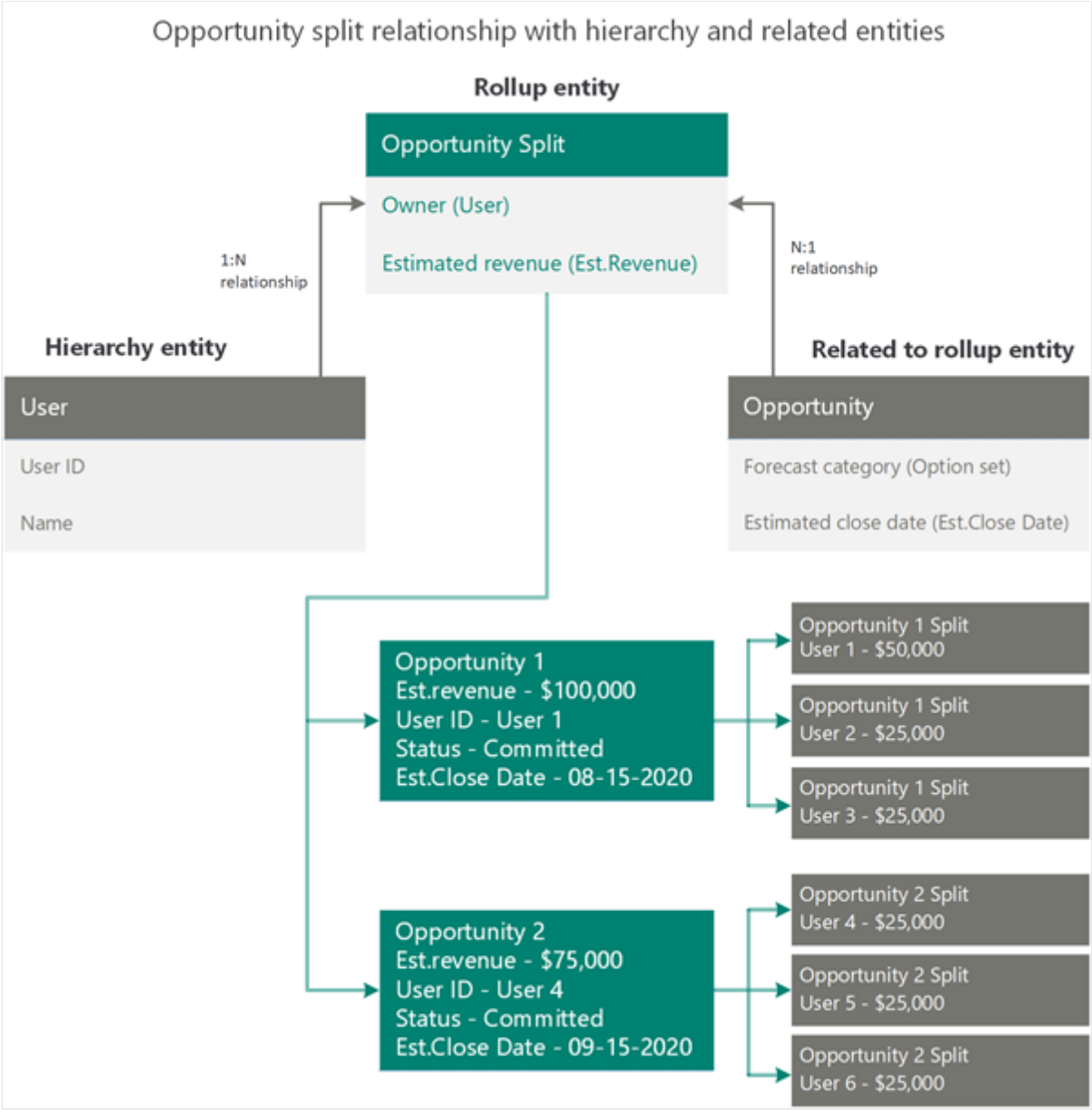
For opportunity split–based forecasting, the user-level revenue comes from the opportunity split entity. Therefore, **Opportunity Split** must be selected as the rollup entity and **User** as the hierarchy entity that has a direct relationship with the rollup entity through the **Owner** attribute.

The other key attributes for the forecast are **Forecast category** and **Est.Close Date**. These attributes are available in the Opportunity entity that's related to the opportunity split rollup entity.

So, we're using the following entities to create the forecast:

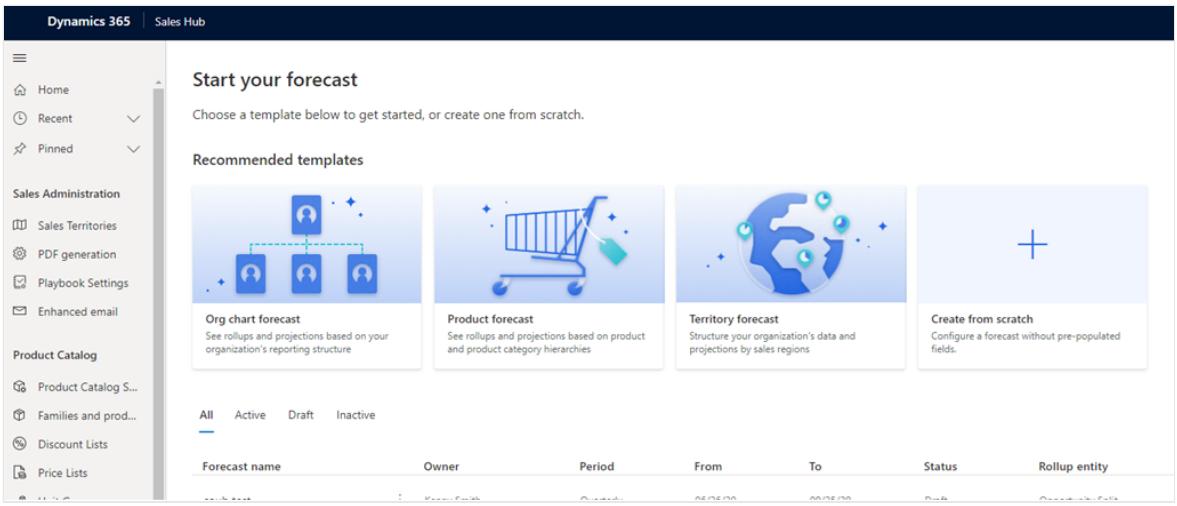
- **Opportunity Split** as the rollup entity
- **User** as the hierarchy entity
- **Opportunity** for forecast category and estimated close date

The following diagram illustrates the above mentioned data model.



Let's configure this forecast.

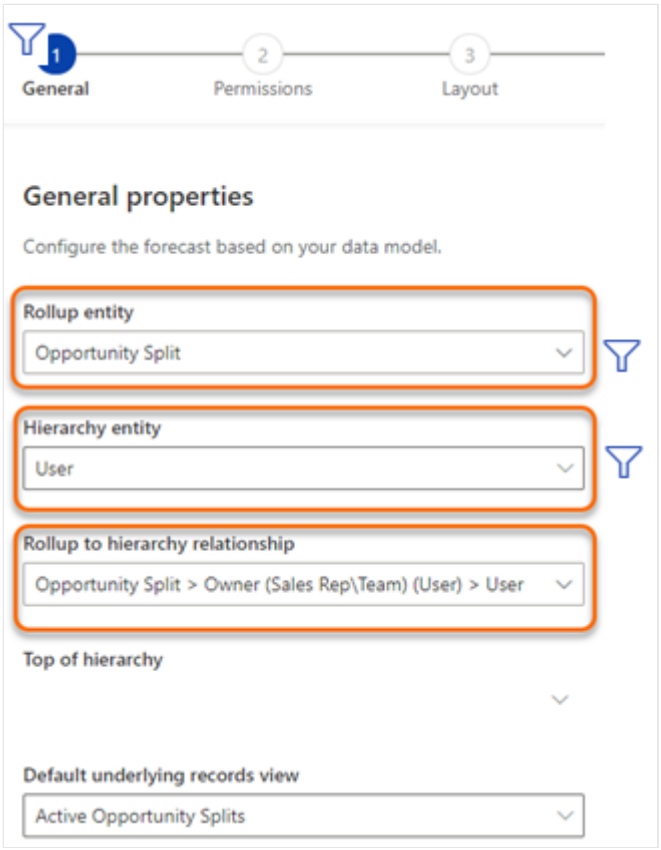
1. On the template selection page, select **Create from scratch** to create a forecast based on your custom rollup entities.



2. In the **General** section, select **Opportunity Split** as the rollup entity and **User** as the hierarchy entity.

   Because there's a direct relationship between the rollup and hierarchy entities through the **Owner** attribute, select the relationship as **Opportunity Split** > **Owner (User)** > **User**.

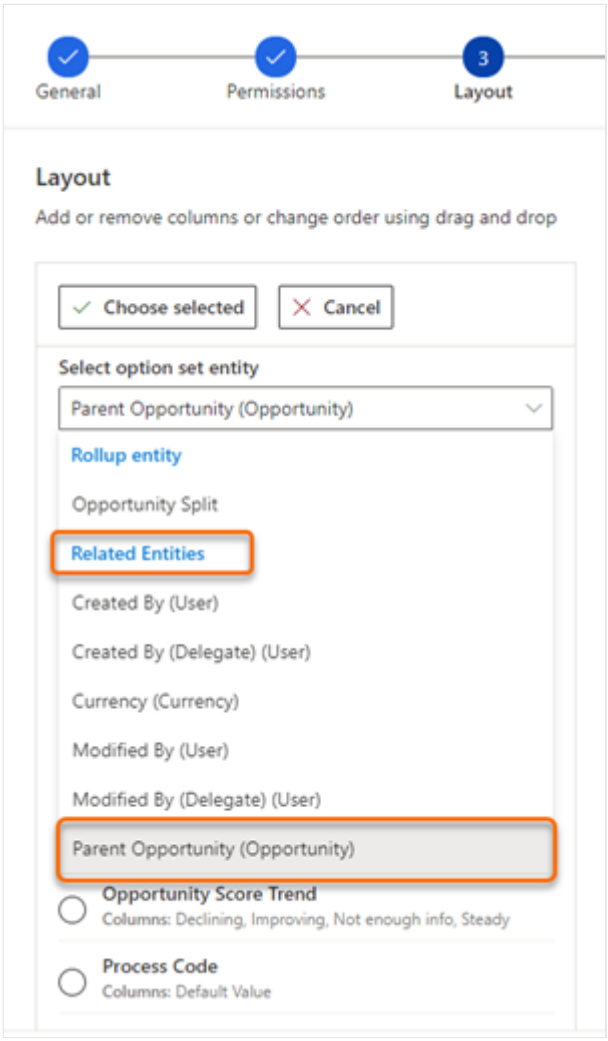
   If there's no direct entity relationship between the rollup entity and the hierarchy entity, you can choose a related attribute to define the relationship. Select the **Related** tab, and then choose a related attribute from the list. The list displays attributes of the hierarchy-defined entities only. If no relationships exist, the entity and related tab will be empty, and you can't configure the forecast.



Enter other necessary information in the form, and then select **Next**. More information: Define general properties and scheduling

3. Perform the steps in Provide viewing permissions.

4. In the **Layout** section, choose the option set entity from the rollup entity or from its related entities. In this example, we select **Parent Opportunity (Opportunity)** from **Related Entities**.



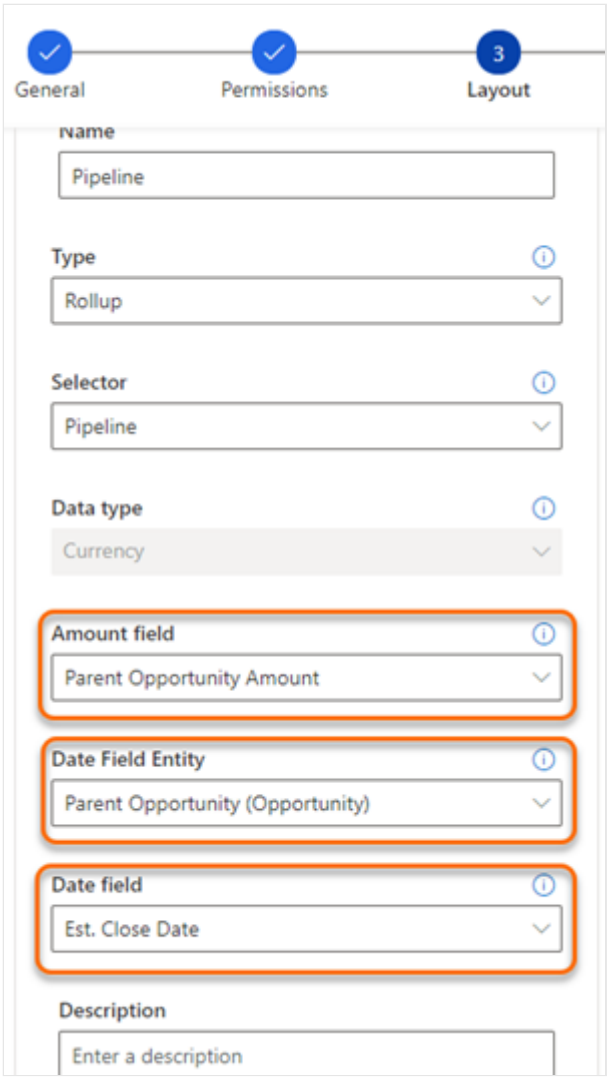
a. In **Parent Opportunity (Opportunity)**, the **Forecast category** option set is selected. The columns for the **Forecast category** option set won't be automatically configured, because you might want to use some of the custom attributes. You must manually configure each column.

b. To configure each column, select the corresponding gear icon , and the column configuration section opens.

c. Select **Amount field**. From this list of out-of-the-box and custom revenue attributes that are related to **Opportunity Split** (such as **Parent Opportunity Amount** and **Revenue Total**), select **Parent Opportunity Amount**.

d. For **Date Field Entity**, the **Opportunity Split** entity consists of date attributes. Select **Parent Opportunity (Opportunity)** from the **Related Entities** section that consists of the required estimated close date attribute.

e. In **Date field**, select the **Est.Close Date** attribute.



Enter other necessary information in the form, and then save it.

Repeat the steps to configure other columns as required, and then select **Next**. More information: Choose layout and columns

> **Note**
>
> You can't proceed to the next step until you complete the configuration of all the columns.

5. If you have enabled premium forecasting and want to take snapshots automatically, see Take snapshots automatically.
6. Perform the steps in Activate and upload simple columns data.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure forecasts in your organization
Project accurate revenue with sales forecasting

Provide permissions to access and share a forecast

Article • 08/17/2023

After you've selected general properties and scheduled your forecast, define who can view, access, and share it.

Use the **Permissions** step to:

- Define the owner of the forecast
- Provide access to users who have specific security roles to view the forecast
- Allow users to share their forecast records with other users

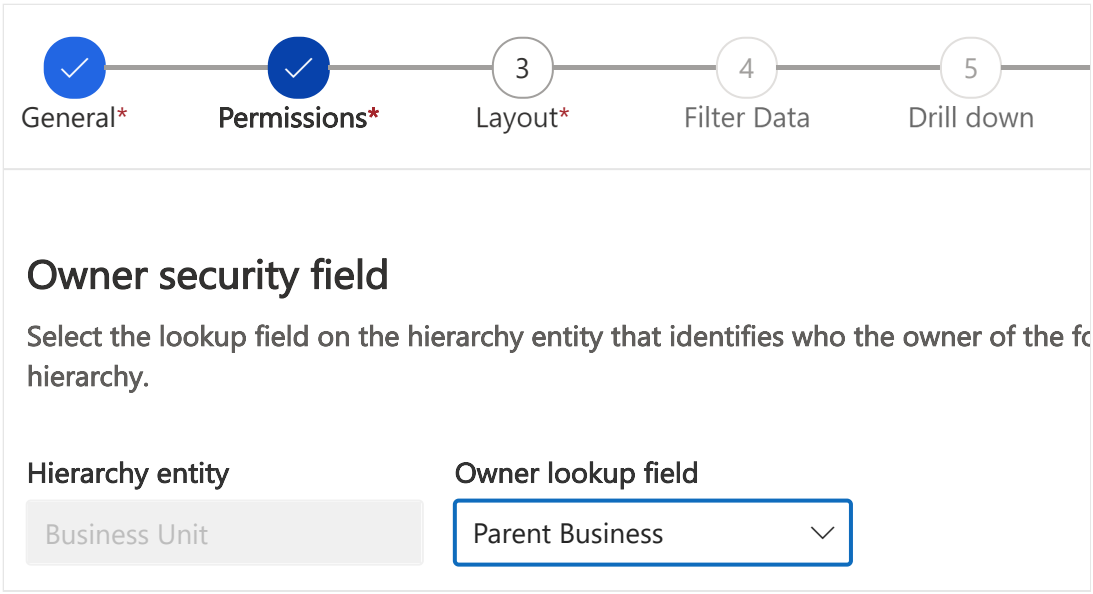
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Define the forecast owner

A forecast owner can view, share, and adjust the forecast. You can assign a user or a business unit (BU) as the owner.

In the **Permissions** step of the forecast configuration, use the **Owner lookup field** field to select who owns the forecast:



Use the following information to select the owner:

- To assign ownership to all users in the BU, select an attribute of the business unit entity. For example, if you select **Owning Business Unit** as the owner of an account-based hierarchy, all users in the BU can view, share, and adjust forecasts for all accounts in the BU. The BU ownership is available only to hierarchy entities that have a BU relationship. By default, entities such as territory and product aren't connected to any BUs, and therefore can't be assigned BU ownership.
- To assign ownership to a specific user, select an attribute of the user entity. For example, if you select the **Created by** user as the owner of an account-based hierarchy, users who created accounts will own the forecast for their respective accounts.
- To assign ownership to a parent hierarchy, select **Manager** (user-based hierarchy) or **Parent Business** (BU-based hierarchy). For example, if you select **Parent Business** as the owner of a BU-based hierarchy, all users in the parent BU can view and update the forecasts of their child BU.

If you change the default value of the **Owner lookup field** field, the corresponding column is added to the forecast grid.

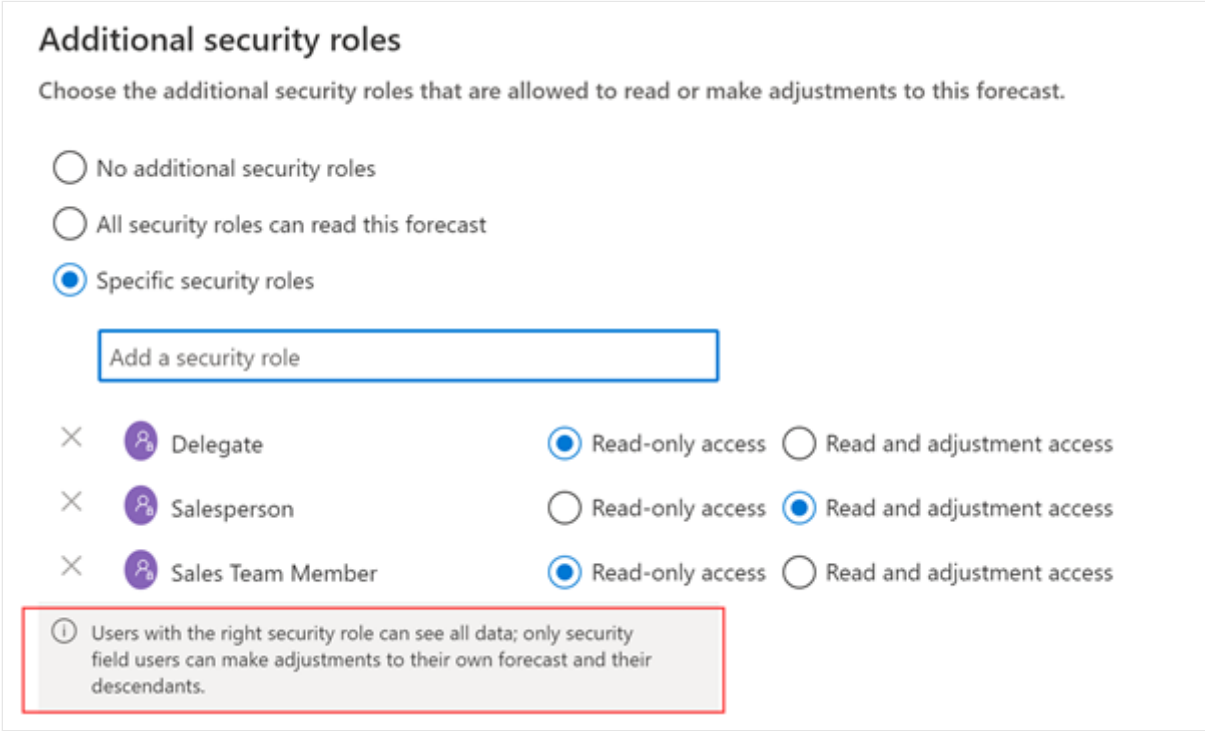
Provide access to additional roles

In the **Additional security roles** section, select an option to give access:

- **No additional security roles**: This option gives access only to the selected hierarchy users. Users who have other security roles in the organization can't view the forecast. This option is selected by default.

- **All security roles can read this forecast**: This option gives read-only access to all the security roles in your organization.
- **Specific security roles**: Use this option to specify the security roles to receive either read-only access, or read-only and adjustment access.

A message under the security roles gives more information about how the forecast security is applied, based on your selections.



Enable or disable forecast sharing

By default, forecasts can't be shared. If you turn on forecast sharing, users can share only the forecasts that they own. For more information, see Who owns the forecast?

In the **Share forecast** section, select one of the following options:

- **None**: The forecast can't be shared with anyone. If it's already been shared, users it was shared with can no longer access it.
- **Read-only**: The forecast can be shared to view, but not to edit.
- **Read and adjust**: The forecast can be shared either to view, or to view and edit. Select this option to share the forecast to users with different levels of access.

When you've finished setting permissions, select **Next**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Previous step: Define general properties and scheduling

Next step: Choose layout and columns

See also

Configure forecasts in your organization

Choose layout and columns

Article • 06/28/2023

Configure columns and layouts you want sellers to see in the forecast grid. Add from option set, change column type, show columns in chart, and more.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Add and configure columns

In the **Layout** step of the forecast configuration, you can configure columns to define the forecast grid that appears for users. You can configure rollup columns from option sets that are defined for opportunities in your organization.

> **Note**
>
> To add a column that has field-level security, provide read access to the user "# Dynamics 365 Sales Forecasting" in the field security profile. For more information on configuring security profiles, see **Field-level security to control access**.

Perform the following steps to add columns and configure the forecast grid:

1. Add columns from an option set.
2. Configure columns.

Add columns from an option set

Every forecast needs an option set to define rollup columns.

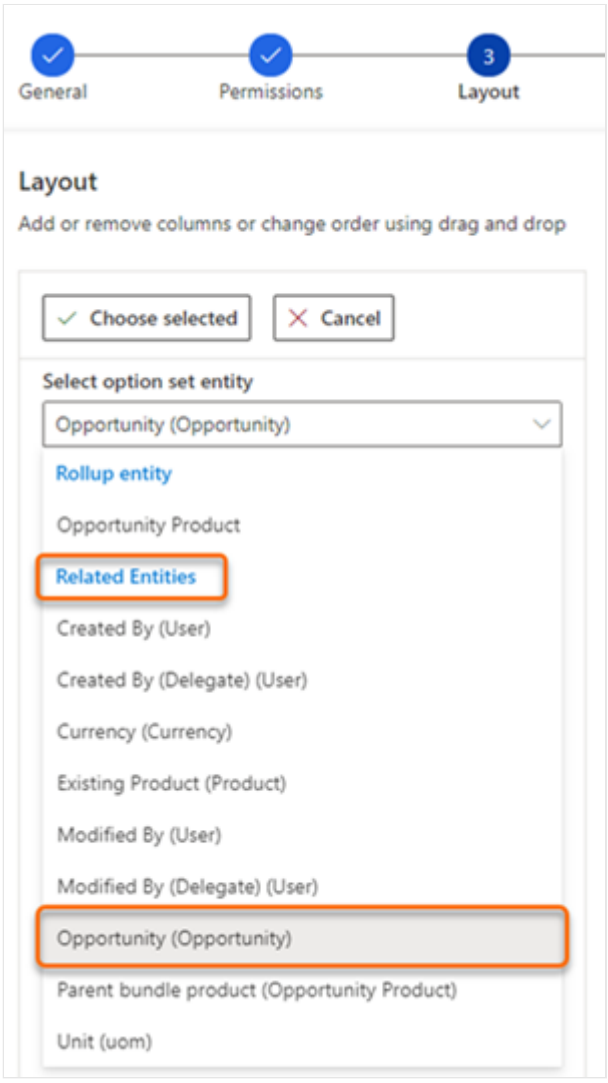
> **Important**

> The **Prediction** column is available only when predictive forecasting is enabled for your organization. To learn more, see **About premium forecasting**.

To define the layout, select an option set and then add the rollup columns accordingly, as described in the following steps.

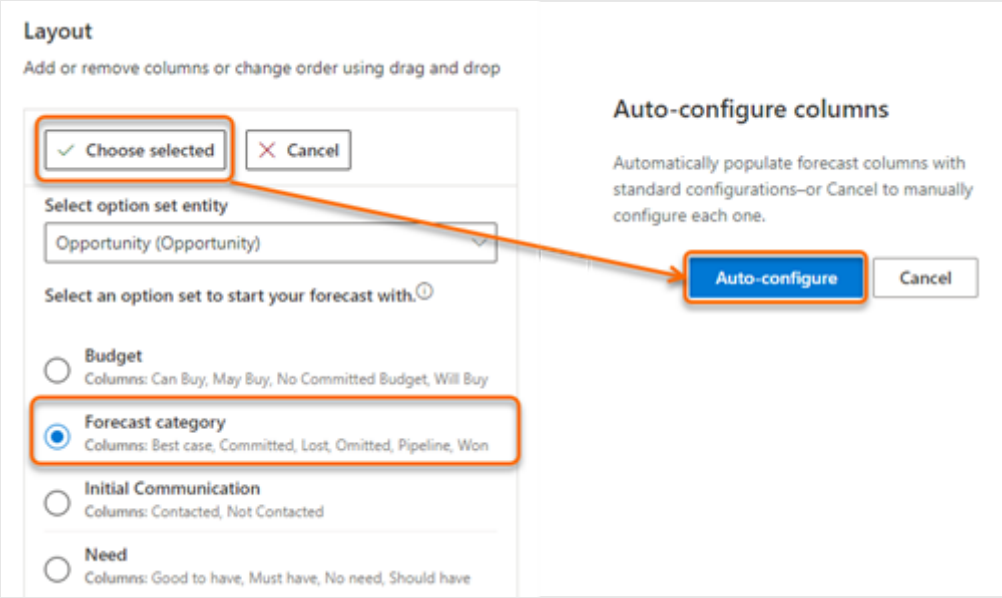
1. In the **Layout and column** section, select **Add from option set**. A list of option sets appears.

2. Choose an option set entity from the rollup entity or from its related entities. The selected entity consists of option sets that are necessary to add columns to the forecast. In this example, the **Opportunity (Opportunity)** option set entity is selected from **Related Entities**. The list shows only the option sets defined on the opportunity entity.



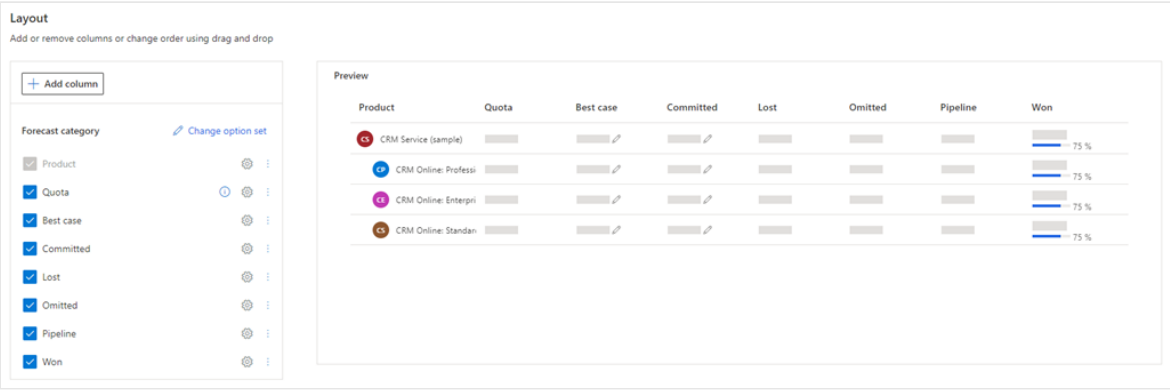
3. Choose an option set and then select **Choose selected**. In this example, **Forecast category** option set is selected. The option set values are added as columns for you to configure.

> **Tip**
>
> We recommend you use the out-of-the-box **Forecast category** option set for column configuration. After choosing this option, select **Auto-configure** in the dialog box that asks if you want to auto-populate the configuration parameters. This saves time by automatically populating columns according to best practices. The option to auto-configure columns are available only for **Opportunity** and **Opportunity product** rollup entities.



By default, a **Quota** column of type **Simple** is added to the forecast. To begin tracking against targets, you must manually upload an Excel workbook that contains quota values to the forecast. To learn more, see Activate and upload simple columns data.

After the rollup columns are added to the forecast, you can use **More options** to rearrange or remove the columns that you don't need.

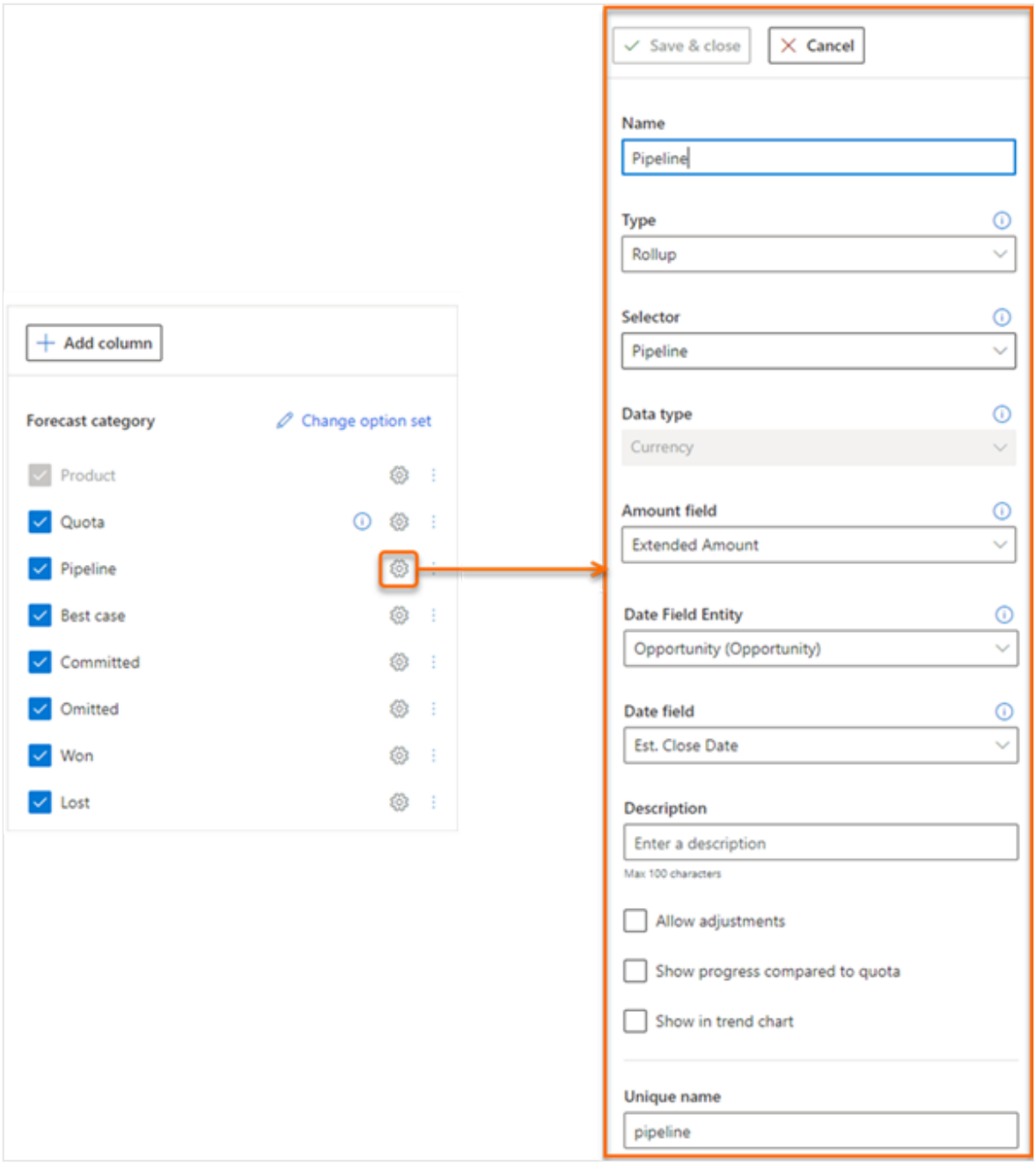


Configure columns

In the **Layout** step of the forecast configuration, you can configure each column individually—such as changing the column type, allowing adjustments, and showing a column in the trend chart—according to your organizational requirements.

> **Note**
>
> - Auto configuration of columns are available only for **Opportunity** and **Opportunity product** rollup entities. For other rollup entities, you must manually configure each column.
> - An alert icon corresponding to a column, indicates that the column is not configured.

1. To configure each column, select the gear icon and the column configuration section opens. In this example, the **Pipeline** column is selected.



On the column configuration page, the **Name** field specifies the display name of the column. The **Unique name** field is auto-populated based on the display name you've specified and supports only English characters. If you use non-English characters in the **Name** field, the **Unique name** field isn't auto-populated. You must manually enter a unique name in English for such columns.

2. Select the **Type** of column. The options that appear depend on the type of column you select. For example, when you select a column of type **Calculated**, a text box appears for you to enter a formula to use for calculating the value of the column.

   The following column types are supported:

   - Rollup type
   - Calculated type
   - Simple type

- Hierarchy related type

When configuring columns, you'll see a preview of the configuration in the **Preview** section.

3. Save and close the configuration.

4. Repeat steps 1 through 4 for each column that you want to edit.

Rollup type

The **Rollup** column type aggregates the values of all fields based on the selected **Selector** and **Amount field** values, by using the **Date field** value as the filter criteria.

While configuring these columns, some attributes are necessary for calculating the forecast estimated revenue and estimated close date. Typically, these attributes are available in the selected rollup entity. For complex data models, such as opportunity splits and opportunity product, these attributes are distributed between rollup and related entities. To address this complexity, the forecasting supports the selection of related attributes for estimated revenue and estimated close date.

Select the column **Type** as **Rollup**. The following options are available to configure.

Parameter	Description
Selector	Select the option set value that defines how this column is grouped. For example, if **Best Case** is selected, only opportunities with the forecast category set to **Best Case** will be aggregated.
Data type	Select the data type of a column of which the aggregated value is displayed in the forecast grid. The supported values are currency, integer, and decimal. You can use integer or decimal data type for quantity-based forecast. By default, the value is selected as **Currency**. If the forecast contains both currency and numeric columns, then you must select the primary data type to activate the forecast. More information: Forecast with different data type.
Amount field	Select the amount field on which the aggregation is calculated. The list is displayed based on the selected **Data type** and **Rollup entity**. For example, to calculate the aggregation based on the estimated revenue for lost opportunities, select **Est. Revenue** in the **Amount** field. If you're using a custom field to track the estimated revenue for your organization, select that custom field.
Date entity	Select the entity from which you want to choose the date field. If the required date field is not available in the rollup entity, you can choose from the related entities. For example, in a product-based forecast, the rollup entity is **Opportunity Product** and the required estimated close date attribute

Parameter	Description
	will not be available in this entity. Therefore, select the **Opportunity** entity from **Related entities** that has the estimated close date attribute.
Date field	Select the date field that defines the record's forecast period. The available fields are based on the selected **Date entity**, such as **Opportunity**. For example, if the **Opportunity** entity is selected, the date field is configured as **Est.Close Date**. If you're using a custom field to track the estimated close date for your organization, select that custom field.
Description	Enter a description for the column. This description appears as a tooltip on the column header of the forecast grid, to help your users understand what the column contains.
Allow adjustments	Enable this setting to let users manually edit a system-calculated value directly in the forecast grid. When this setting is enabled, you'll see a pencil icon next to the forecasted value in that column. To learn more, see Adjust values in a forecast.
Show progress compared to quota	Enable this option to compare the column's value against the quota column. When this is enabled, a progress bar indicating the attainment percentage is shown below the column's value.
Show in Trend Chart	Enable this option to show the value in the **Trend Chart**. This option is available only when predictive forecasting is enabled for your organization. To learn more about trend charts, see Understand forecast projection through trend charts.

Calculated type

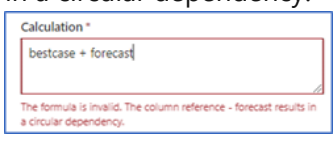
Calculated columns can be identified in your forecast by looking for the information icon in the column header. Hovering over the icon will display the formula that is defined for the column. When you select column **Type** as **Calculated**, the values for the column are calculated and displayed based on a formula that you define. The following options are available to configure.

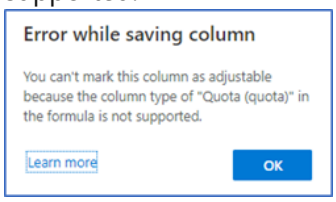
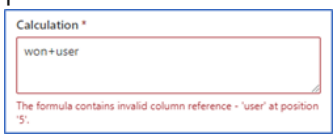
Parameter	Description
Data type	Select the data type of a column of which the aggregated value is displayed in the forecast grid. The supported values are currency, integer, and decimal. You can use integer or decimal data type for quantity-based forecast. By default, the value is selected as **Currency**. If the forecast contains both currency and numeric columns, then you must select the primary data type to activate the forecast. More information: Forecast with different data type.
Calculation	Enter a formula to calculate values for the column. When you start typing a formula, suggestions are displayed for your convenience. The names shown are

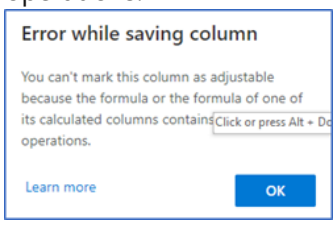
Parameter	Description
	the column's unique name and value. For example, if you want to see the best case forecast in this column, enter the formula as **Closed + Commit + Best Case**. If you enter an invalid formula, an appropriate error message appears below the **Calculation** field.
Description	Enter a description for the column. This description appears as a tooltip on the column header of the forecast grid, to help your users understand what the column contains.
Allow adjustments	Enable this setting to let users manually edit the value of a calculated column directly in the forecast grid. When you select the column as adjustable, the formula you have created for this column must satisfy certain conditions that allow a proper rollup of values in the forecast. If not satisfied, an error is displayed, and you can't proceed to the next step. To learn more about the conditions and its corresponding errors, see Adjustment column conditions. When this setting is enabled, you'll see a pencil icon next to the forecasted value in that column. To learn more, see Adjust values in a forecast.
Show progress compared to quota	Enable this option to compare the column's value against the quota column. When enabled, a progress bar indicating the attainment percentage is shown below the forecast value in that column.
Show in Trend Chart	Enable this option to show the value in the **Trend Chart**. This option is available only when predictive forecasting is enabled for your organization. To learn more about trend charts, see Understand forecast projection through trend chart.

Adjustment column conditions

To configure a calculated column as adjustable, it must satisfy certain conditions. These conditions apply to the columns that are used to create the formula. If the conditions aren't satisfied, an error will be displayed and you won't be able to proceed further.

Condition	Description	Error type	Resolution
No column with adjustments	In the **Calculation** box, the formula must not contain columns that have been defined as adjustable. **Example:**You want to configure the **committed** column as a calculated field with adjustments. You entered the formula as **won + forecast**. Here, the **forecast** column has been configured as adjustable.	**Error:** "The formula is invalid. The column reference - *column* results in a circular dependency." 	Remove the column that has been configured as adjustable from the formula and replace it with a non-adjustable column.

Condition	Description	Error type	Resolution
	When you select **Allow adjustments**, an error is displayed.		
No simple or prediction columns	In the **Calculation** box, the formula must not contain any columns of the **simple** or **prediction** type. **Example:** You want to configure the **forecast** column as a calculated field with adjustments. You entered the formula as **won + quota**. Here, **quota** is a simple column. When you select **Allow adjustments** and then save the configuration, an error is displayed.	An error of type **Error while saving column** is displayed with the message "You can't mark this column as adjustable because the column type of '*Column(display name)* ' in the formula is not supported."  Select **OK** to continue.	Remove the simple or prediction columns from the formula.
No hierarchy-related columns	In the **Calculation** box, the formula must not contain any columns that are of type **hierarchy related**. Columns of this type won't be available through autocomplete in the **Calculation** box, but manually entering them will result in an error. **Example:** You want to configure the **committed** column as a calculated field with adjustments. You entered the formula as **won + user**. Though the **user** column is of type **hierarchy related** and isn't displayed in the suggested column list, you entered it manually. When you select **Allow adjustments**, an error is displayed.	**Error:** "The formula contains invalid column reference - *column* at position *number*." 	Never use columns that are of type **hierarchy related**.
Formula must contain only addition and	In the **Calculation** box, the formula must contain only addition and subtraction operations. Other	An error of type **Error while saving column** is displayed with the message "You can't mark	Remove the unsupported mathematical operations from

Condition	Description	Error type	Resolution
subtraction operations	mathematical operations, such as multiplication or division, aren't supported. **Example:** You want to configure the **forecast** column as a calculated field with adjustments. You entered the formula as **won * committed**. Here, the operator is multiplication. When you select **Allow adjustments** and then save the configuration, an error is displayed.	this column as adjustable because the formula or the formula of one of its calculated columns contains non-supported operations."  Select **OK** to continue.	the formula, and use only addition and subtraction operations.
No adjustable calculated field inside a formula of another calculated field	In the **Calculation** box, the formula can contain calculated fields. However, the calculated field you use must not be adjustable, and it must satisfy all the other conditions defined in this table. **Example:** You want to configure the **forecast** column as a calculated field with adjustments. You entered the formula as **committed + pipeline**. Here, **committed** is a calculated column that is set as adjustable. When you select **Allow adjustments** and then save the configuration, an error is displayed.	An error of type **Error while saving column** is displayed with the message "You can't make this change because the formula contains '*Column(display name)*', which is already an adjustable column." Select **OK** to continue.	Remove the calculated column that is configured as adjustable from the formula. Add only non-adjustable columns.
No column can be set as adjustable after being added to the formula	After you create a calculated field that's adjustable, you can't set a column as adjustable if it has been used in the formula for that field. **Example:** You configured the **committed** calculated column by entering the formula **won + best case** and set the column to adjustable. Then you tried to	An error of type **Error while saving column** is displayed with the message "You can't mark this column as adjustable because it's being used in the adjustable calculated column '*Column(display name)*'."	Don't use any columns that you plan to make adjustable in the future.

Condition	Description	Error type	Resolution
	change the **won** column setting to adjustable. When you select **Allow adjustments** and then save the configuration, an error is displayed.	 Select **OK** to continue.	

Simple type

Use the **Simple** column type to manually upload external data to a forecast. An Excel workbook is available for you to download after you activate the forecast. You must edit the Excel workbook with the necessary values and then upload it to the forecast. To learn more, see Activate and upload simple columns data.

For example, **Quota** is a simple column type where you can manually upload data by using an Excel workbook. The following options are available to configure.

Parameter	Description
Data type	Select the data type of a column of which the aggregated value is displayed in the forecast grid. The supported values are currency, integer, and decimal. You can use integer or decimal data type for quantity-based forecast. Depending on the type of value that you'll be uploading data through an Excel workbook. By default, the value is selected as **Currency**. If the forecast contains both currency and numeric columns, then you must select the primary data type to activate the forecast. More information: Forecast with different data type.
Description	Enter a description for the column. This description appears as a tooltip on the column header of the forecast grid, to help your users understand what the column contains.

Hierarchy related type

When you select column **Type** as **Hierarchy related**, the column helps you pull additional attributes from the hierarchy entity. The following options are available to configure.

Parameter	Description
Data type	Data type of the column that you want to display on the forecast grid. By default, the value is selected as **Single line of text** and can't be changed.
Attribute field	Select an attribute to display in the column. For example, you can select **Email**, which will be unique to each user in your organization and can help you identify to

Parameter	Description
	whom the record belongs.
Description	Enter a description for the column. This description appears as a tooltip on the column header of the forecast grid, to help your users understand what the column contains.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Previous step: Provide viewing and adjustment privileges

Next step: Configure and manage drill-down entities

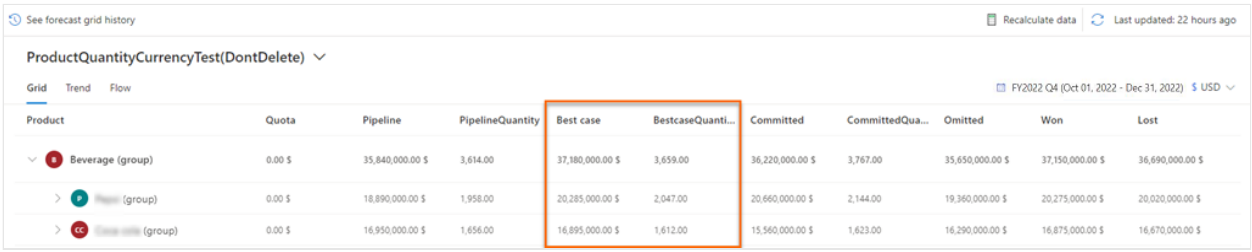
See also

Configure forecasts in your organization
View a forecast
About premium forecasting
Configure forecast using custom rollup entity

Forecast with multiple data type columns

Article • 03/21/2023

In a forecast grid, you can have multiple columns with different data types—such as currency and quantity—displayed in a single view. For example, in a product-based forecast, you can display the **Best case** column values as a quantity (the decimal value of the volume of products sold) and as currency simultaneously.



For more information about configuring columns and data types, go to Choose layout and columns.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

While the forecast grid can display multiple data types, the Kanban view, deal flow, and trend chart can only display a single data type at a time. Hence, for a multiple data type forecast, you must select the primary data type to be displayed in these views before activating the forecast.

Similarly, the Kanban view, deal flow, and trend chart can't show two columns with the same selector. For example, using the **Best case** selector both revenue and discount. Because the Kanban view and deal flow can only show a single revenue column for a category, you must choose the revenue column to display in these views before activating the forecast.

> **Note**

To use deal flows and trend charts, you must have the Sales Premium license.

Examples of forecasts with different data types

Let's look at a few examples of configuring and activating forecasts with different data types:

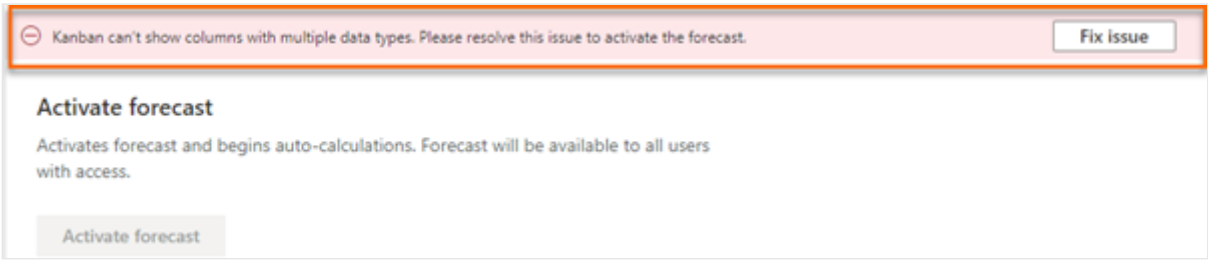
- Example 1: Create two different currency columns and a quantity column with the same forecast category
- Example 2: Create a currency column and a quantity column with two different forecast categories,

Example 1: Create two different currency columns and a quantity column with the same forecast category

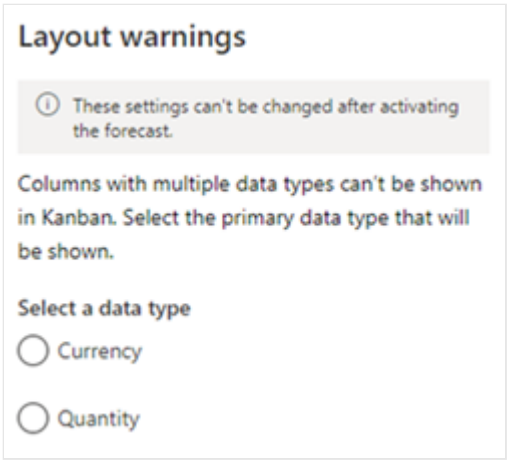
Let's say you want to view the **Best case** forecast category's total amount, discount amount, and the number of products sold to get this amount. You configure three **Best case** columns as follows in the **Layout** step of the forecast:

Column name	Type	Selector	Data type	Amount field
Best case	Rollup	Best case	Currency	Amount
Best case discount	Rollup	Best case	Currency	Manual Discount or Volume Discount
Best case products sold	Rollup	Best case	Decimal	Quantity

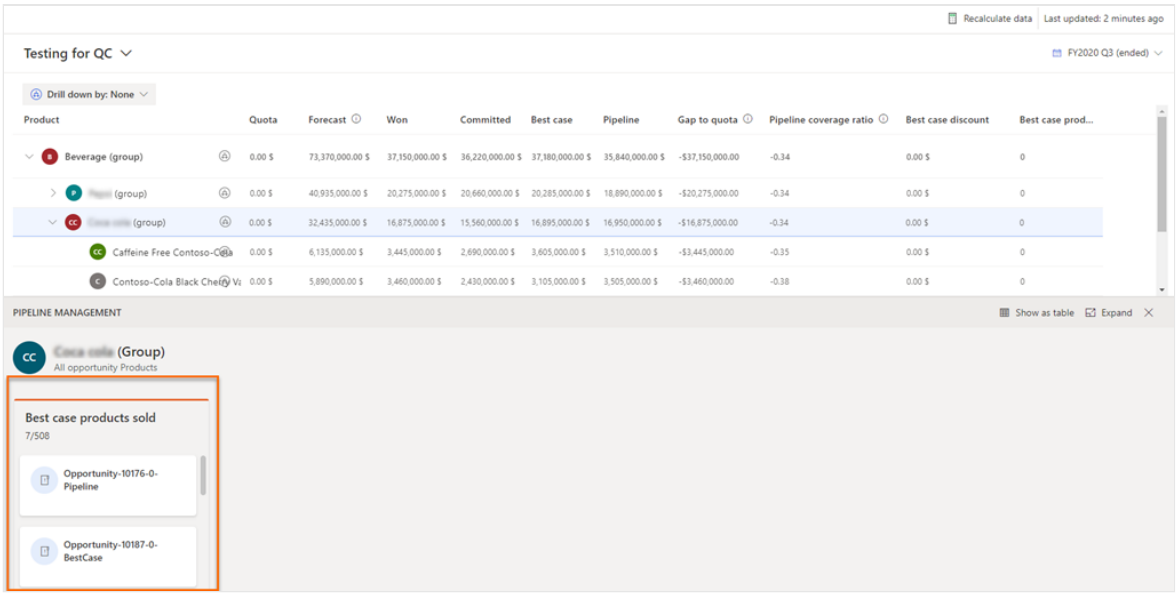
After you've completed the other configuration steps as required and are activating the forecast, an error message is displayed at the top of the **Activate forecast** configuration page.



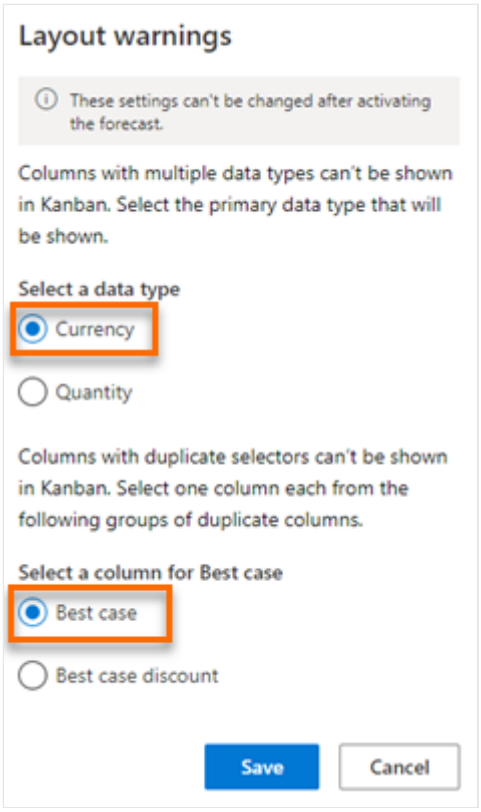
Select **Fix issue**. The following **Layout warnings** pane is displayed, where you can select a primary data type.



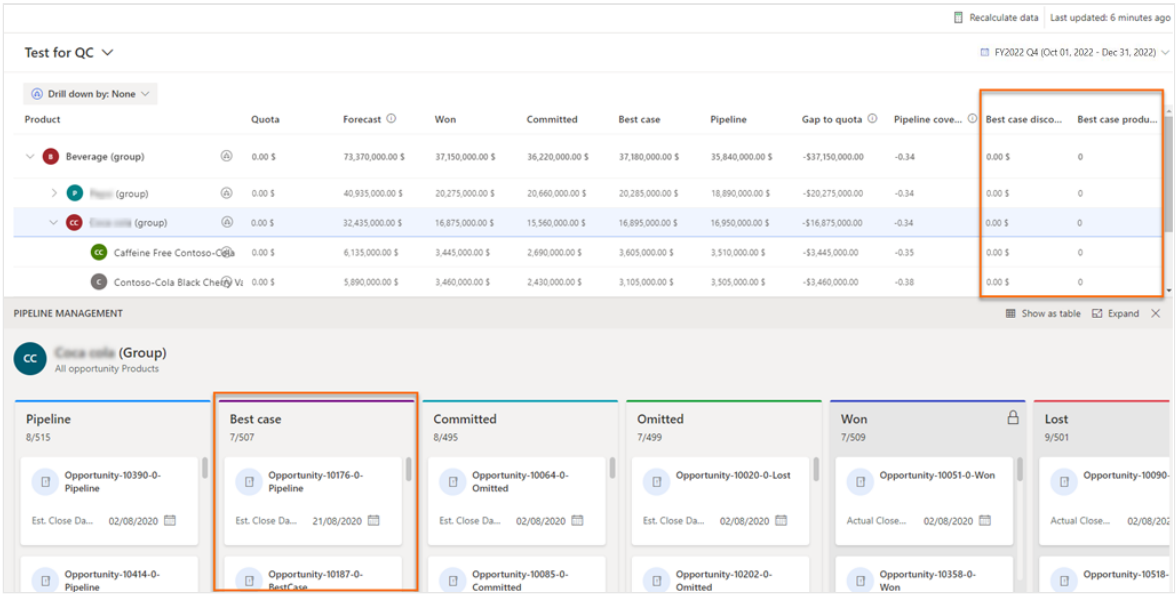
- If you select the primary data type as **Quantity**, the forecast chooses the **Best case products sold** column to display in the Kanban view, deal flows, and trend charts. This is because the **Best case products sold** column is the only column that has a quantity (in this case, decimal) data type. You can proceed with activating the forecast after you select the primary data type. The Kanban view in the following image displays only one lane with a single quantity-based column.



- If you select the primary data type as **Currency**, you must choose between **Best case** and **Best case discount** columns to display in the Kanban view, deal flows, and trend charts. This is because both these columns have **Currency** as the data type and share the same selector (**Best case**). Select the appropriate column, and then select **Save**.



In this forecast, the **Best case** column is selected to be displayed in the Kanban view, though the **Best case discount** column is of the same selector and data type. The quantity-type column **Best case products sold** is of the same selector and is displayed in the forecast grid, but not in the Kanban view.



Example 2: Create a currency column and a quantity column with two different forecast categories

Let's say you want to view the total revenue of the **Won** forecast category and the products sold under the **Best case** forecast category. You configure the **Won** and **Best case** columns as follows in the **Layout** step of the forecast:

Column name	Type	Selector	Data type	Amount field
Won	Rollup	Won	Currency	Amount
Best case products sold	Rollup	Best case	Decimal	Quantity

After you've completed the other configuration steps as required and are activating the forecast, the "Kanban can't show columns with multiple data types. Please resolve this issue to activate the forecast" error message is displayed at the top of the **Activate forecast** configuration page.

Select **Fix issue**, and in the **Layout warnings** pane, select a primary data type.

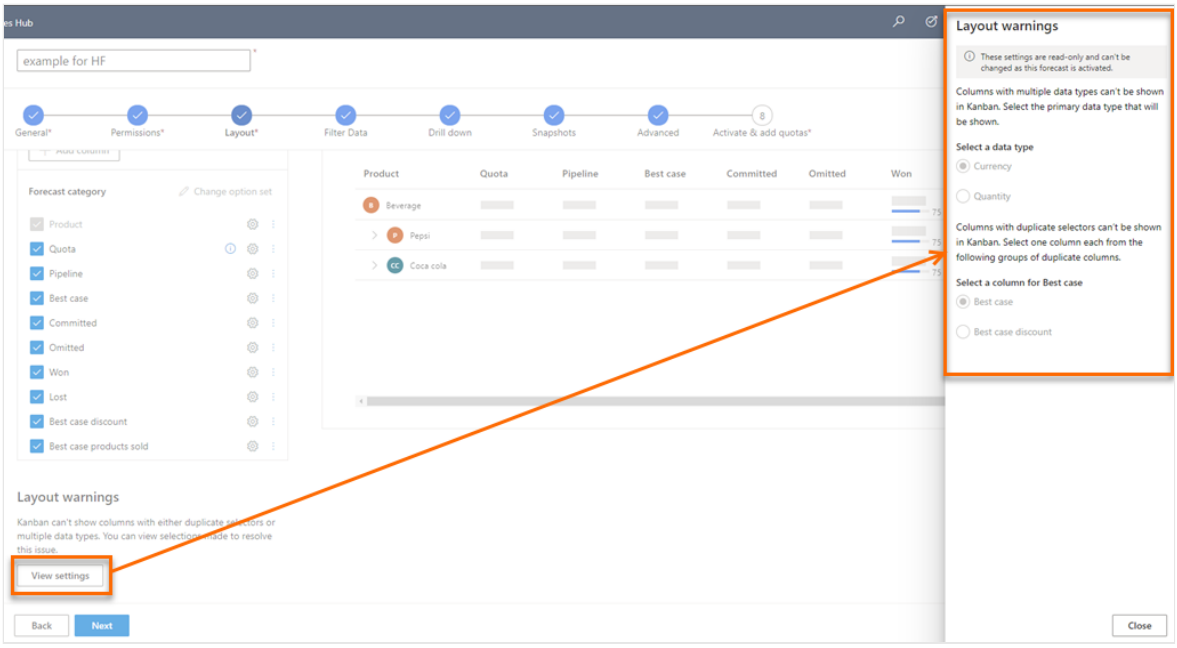
Select the primary data type that meets your needs. As the **Won** (currency) and **Best case** (quantity) columns have different selectors and data types, you must select one of them a primary data type to be displayed in the Kanban view, deal flows, and trend charts.

View selected primary data type and columns

You can view the details of the primary data type and the selected column (among duplicate columns with the same selector) that'll be displayed in the Kanban view, deal flows, and trend charts. The displayed details are view-only and can't be edited after you activate the forecast.

1. Sign in to the **Sales Hub** app.
2. In the site map, select the **Change area** , and then select **App Settings**.
3. Under **Performance management**, select **Forecast configuration**.

   The forecast configuration page opens.
4. Select **More options** corresponding to the forecast, and then select **Edit**.
5. Go to the **Layout** configuration step. At the bottom of the **Layout** section, a **Layout warnings** section is displayed.
6. Select **View settings**. A **Layout warnings** pane is displayed on the right side of the page.



You can view the selected primary data type and column to display in the Kanban view, deal flows, and trend charts.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Activate and upload simple columns data
Choose layout and columns

Configure and manage drill-down entities

Article • 03/14/2023

Configure drill-down entities to help sellers understand what values are constituting their forecast projections.

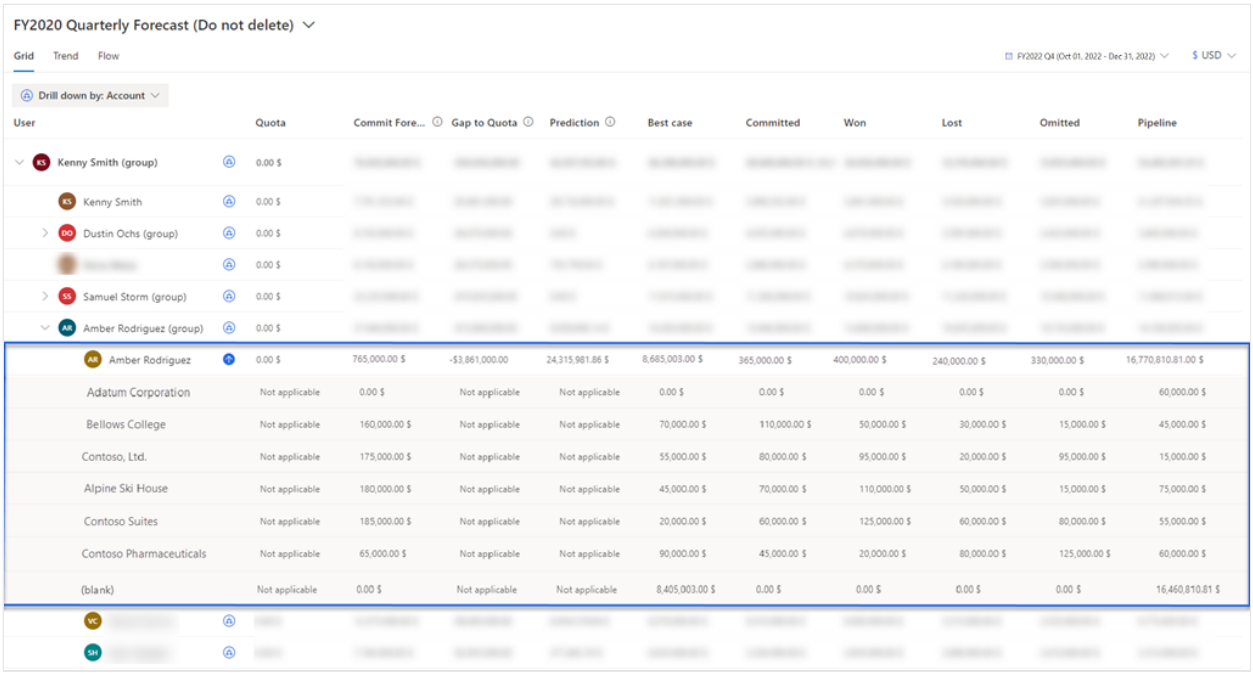
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

What are drill-down entities

Once you've configured the forecast page, you'll have a view into the pipeline amounts that your sellers are projecting for the period. Now you might want to know which accounts contribute to a specific seller's Committed value or maybe you want to know which products are contributing to a different seller's Won value. The drill-down feature allows you to break down your seller's forecast projections as a function of the contributing factors that you care about such as Account and Product. The drill-down feature looks at the underlying records that are contributing to the value of the rollup column and groups them according to the drill-down selection.

Let's look at an example. **Amber Rodriguez** is a seller who's associated with four accounts. Amber's projected revenue for the current period is $400,000. **Kevin Smith**, Amber's sales manager, wants to understand how the revenue of $400,000 is broken down by each account. On the forecast page, Kevin chooses to drill down into Account from the drop-down menu. Kevin then selects the drill-down icon beside Amber's record to view a list of accounts that make each of Amber's forecast pipeline values.



Configure drill-down entities

As an administrator or forecast manager, you can enable and configure the drill-down option using the **Drill down** step in the forecast configuration. By configuring the drill-down choices that match your organizational requirements, you can break down your forecast values into any of the configured drill-down options. This allows users to understand what values are constituting their forecast projections.

> **Note**
>
> To understand how drill-down selections are used, see **View and understand data through drill-down entities**.

Things you must know

Before you configure a drill-down choice, we recommend you understand the following concepts:

- Drill-down type
- Amount entity
- Entity relationship

With the forecasting feature, we have provided out-of-the-box drill-down templates to configure the rollup and hierarchy entities.

More information: Add a drill-down entity

Drill-down type

A drill-down type specifies the data type that is used to break down the forecast values into its contributing parts. While configuring the drill-down feature, you can choose the drill-down type as an entity or an option set.

Drill down by entity

If you choose the drill-down type by entity, you can select an entity that has a direct or indirect relationship with the rollup entity. For example, the **Account** entity has a direct relationship with the **Opportunity** rollup entity. Similarly, the **Product** entity has an indirect relationship with the **Opportunity** rollup entity through the **Opportunity Product** entity. To learn more about the relationships, see Reference.

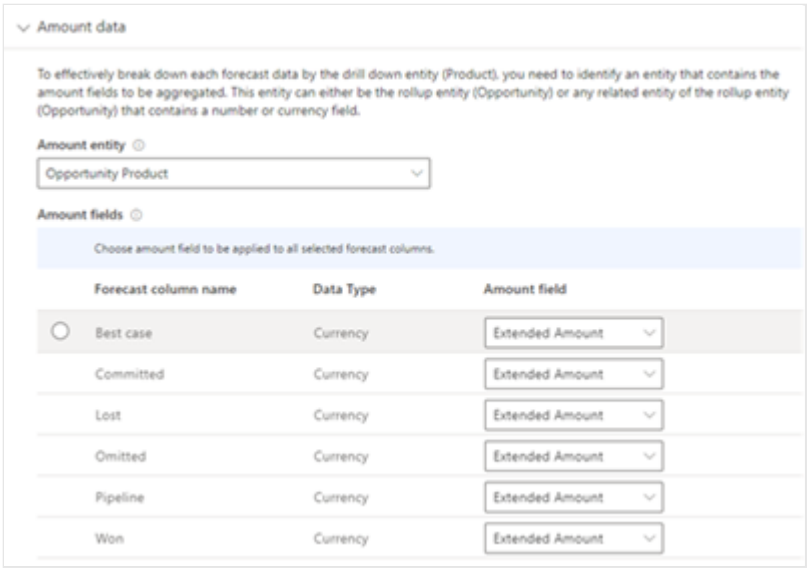
Drill down by option set

If you choose the drill-down type by option set, you can select an option set from the list. These option sets are from the rollup entity—for example, the Forecast category and Budget. After you select the option set, you can save and proceed with forecast configuration. No further configuration is required because both the option sets and the amount field are from the rollup entity.

Amount entity

To effectively break down each forecast data by the drill-down entity, you need to identify an entity that contains the amount fields to be aggregated. This entity can either be the rollup entity or any related entity of the rollup entity that contains a number or currency field.

The amount entity contains the fields of type amount or currency. For each defined forecast column, you must select an amount field that corresponds to the aggregate value. Choose the appropriate amount fields, so that the drill-down values sum up to the aggregate value.

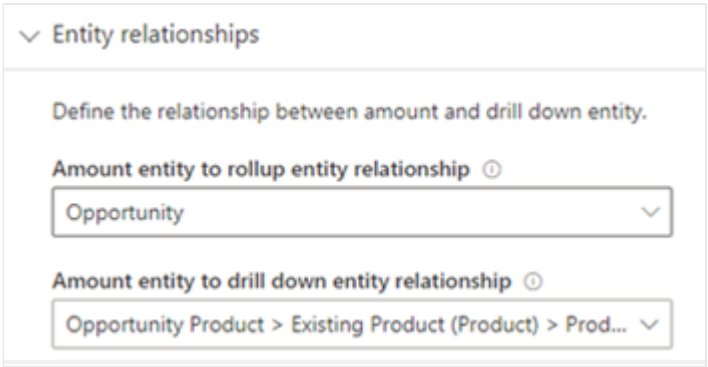


Depending on the amount entity, you must establish the entity relationship between the amount and drill-down entity.

Entity relationship

The entity relationship is established to connect drill-down and rollup entities through the amount field in the amount entity. This relationship guides the forecast to break down the amount data by drill-down values.

- If the amount and rollup entities are same, you can establish a direct relationship between amount and drill-down entities.
- If the amount and rollup entities are different, you must establish a relationship between amount and rollup entities and then establish a relationship between amount and drill-down entities.



Templates

The following out-of-the-box templates are provided for you to configure drill-down views. You can add these templates according to the rollup and hierarchy entities that you have used to configure the forecast.

Rollup entity	Hierarchy entity	Drill-down templates
Opportunity	User	Account, Product, and Parent Product
Opportunity	Territory	User, Account, Product, and Parent Product
Opportunity	Account	User, Product, and Parent Product
Opportunity Product	Product	Account and User

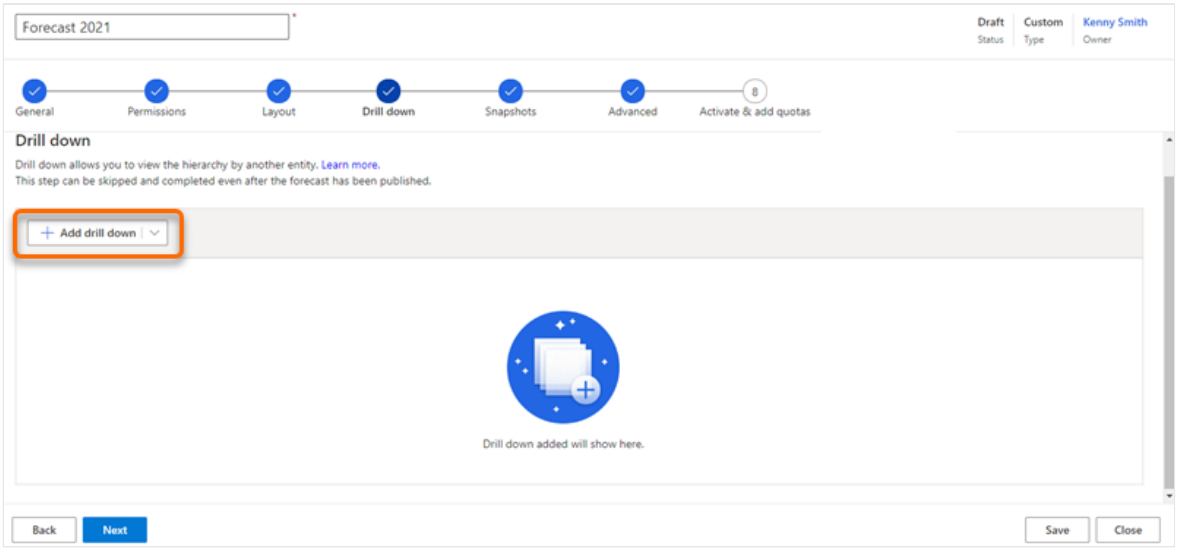
Using these templates, you can break down your forecast values by accounts, products, parent products, users, owners, and territory.

Add a drill-down entity

Add a drill-down entity to group and drill-down forecast projections by an entity. You can edit or delete them later as per your requirements.

1. In the **Drill down** step, select **Add drill down**.

> **Note**
>
> You can select the down arrow icon and choose a template to autoconfigure the drill-down option.

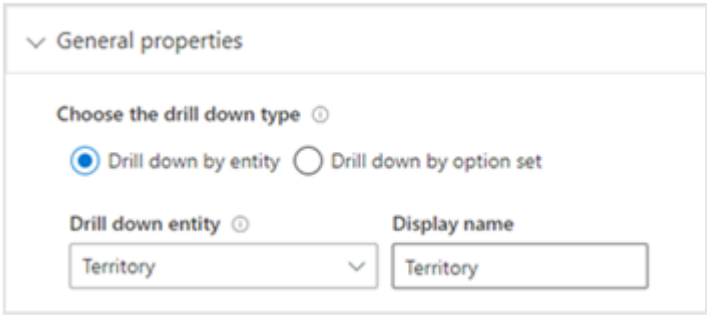


2. In the **General properties** section, choose the drill-down type.

   To learn more, see Drill-down type.

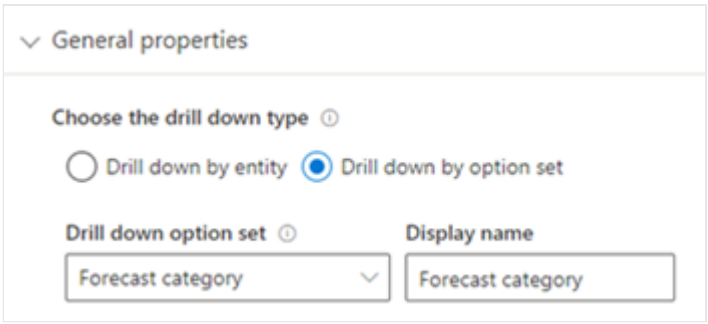
   - **Drill down by entity**: Displays a list of entities that are directly related to the rollup entity and its related entity.

Select an entity, then enter a **Display name**. The value you enter here is visible to users to select the drill-down choice. In this example, we are configuring a drill-down selection that is based on Territory.



- **Drill down by option set**: Displays the list of option sets that are available in the rollup entity.

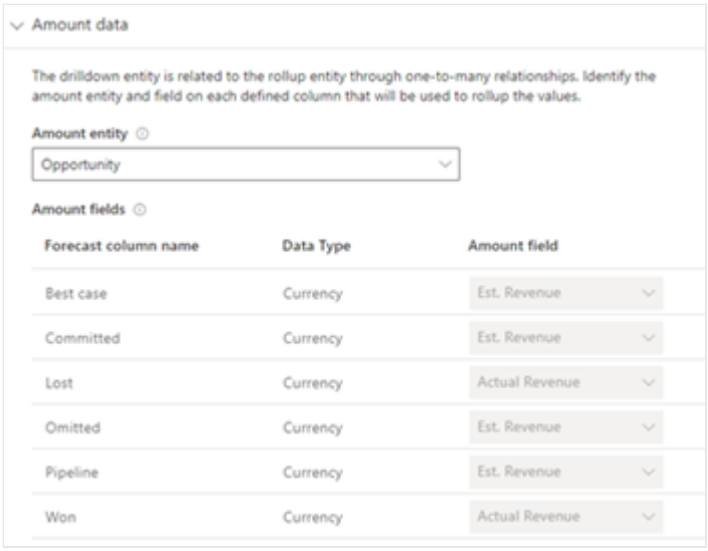
  Select an option set from the **Drill down option set** list, then enter a **Display name**. The value you enter here is visible to users to select the drill-down option. In this example, we are selecting a drill-down option that is based on the **Forecast category** option set.



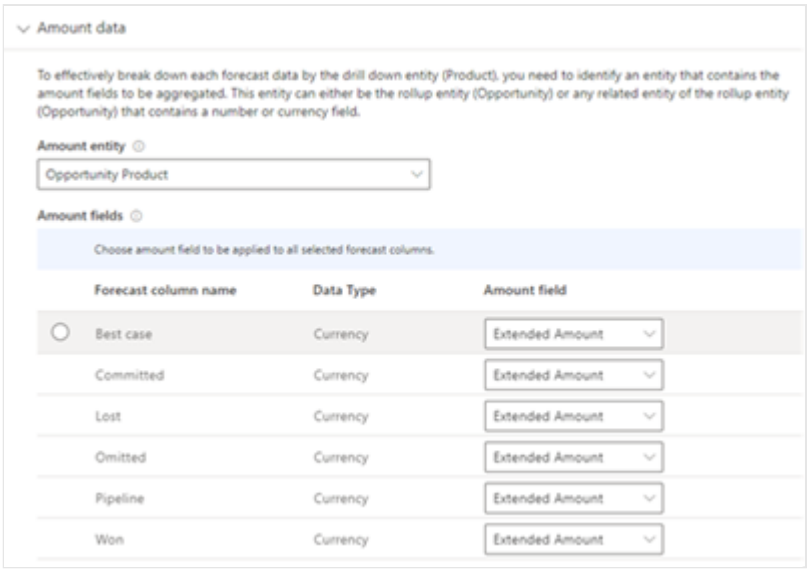
If you select this option, go to step 5.

3. In the **Amount data** section, select the entity from the **Amount entity** list. The entity list that is displayed here is populated based on the selected drill-down entity. To learn more, see Amount entity.

   - If the amount and rollup entities are the same, the **Amount field** values are automatically configured, and these values can't be edited. In this example, the amount entity is selected as **Opportunity**, which is also the rollup entity, and the forecast columns are configured as follows:
   - For **Best case**, **Committed**, **Omitted**, and **Pipeline** as **Est. Revenue**.
   - For **Won** and **Lost** as **Actual Revenue**.

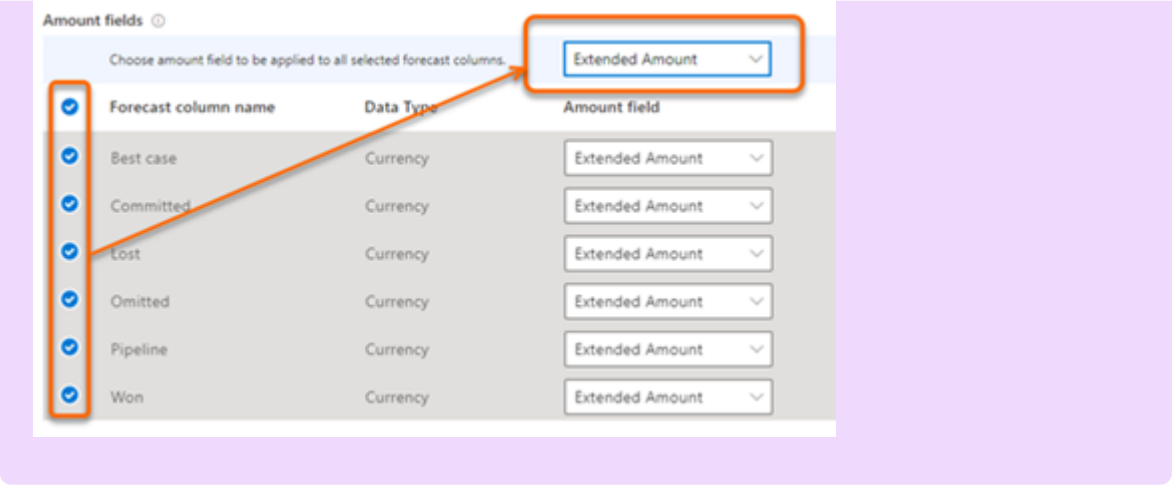


- If the amount and rollup entities are different, you must manually configure the amount fields. Select and add the appropriate amount field for each forecast column from the drop-down list in the Amount field. In this example, the amount entity is selected as **Opportunity product** and is different from the rollup entity. Therefore, the amount fields for each forecast column are selected manually as **Extended Amount**.



ⓘ Note

You can select the amount field for multiple forecast columns at the same time by hovering your cursor to the left of the columns and selecting the radio buttons that appear to make a selection. Then, a drop-down list will display with the option to **Choose amount field to be applied to all selected forecast columns**.



4. In the **Entity relationship** section, select the relationship as described:

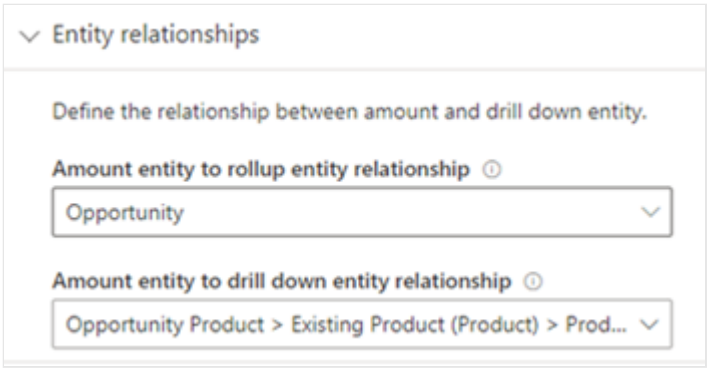
   - **Amount and rollup entities are the same**: Select the **Amount entity to drill down entity relationship** from the drop-down menu to establish a relationship between the drill-down and amount entities.

     In this example, the amount entity is **Opportunity**, which is also the rollup entity, and the drill-down entity is **Account**. A relationship between amount and drill-down entities can be established through the **Account** attribute. The relationship is mapped as **Opportunity** > **Account (Account)** > **Account**. The mapping specifies that the **Opportunity** and **Account** entities can be connected by the shared attribute **Account**.

   - **Amount and rollup entities are different**: If the amount entity is different from the rollup entity, you must establish a relationship between amount and rollup entities. Then you must establish a relationship between the amount and drill-down entities. Select **Amount to rollup entity relationship** from the drop-down menu to establish a relationship between amount and rollup entities. The values displayed in the list are based on the selected amount entity.

     In this example, the amount entity is **Opportunity Product** and relationship is established through **Opportunity**. Select **Amount** entity to drill-down entity relationship attribute to establish a relationship between the drill-down and amount entities. The values displayed in the list are also based on the selected amount entity.

     The amount entity is **Opportunity Product** and relationship is established through the **Product** attribute. The relationship is mapped as **Opportunity Product** > **Existing Product (Product)** > **Product**. The mapping specifies that there is an attribute **Product** in the **Opportunity Product** entity that's related to the **Existing Product** entity that in turn is related to the **Product** attribute.



To learn more, go to Entity relationship.

5. Save and select **Next**.

Reference

Understand the relationships many-to-1 and 1-to-many in detail:

In drill-down type

- **Many-to-1 relationship entity**: The drill-down types that are defined based on a many-to-1 relationship with rollup entity are simpler to configure because the drill-down entity is directly related to the rollup entity, and an intermediary relationship needs to be established. For example, if you select the rollup entity as Opportunity and the drill-down entity as Account, the relationship rollup entity (Opportunity) has a many-to-1 relationship with the drill-down entity (Account) and this type of drill-down entity is easy to break into groups.

- **1-to-many relationship entity**: The drill-down types that are defined based on a 1-to-many relationship with rollup entity are often complex to break because the drill-down entity is a related entity of the rollup entity. For example, if you select the rollup entity as Opportunity and the drill-down entity as Product, the relationship rollup entity (Opportunity) has a 1-to-many relationship with the drill-down entity (Product) and this type of drill-down entity is complex to break into groups.

In account entity

- If the selected drill-down entity has a many-to-1 relationship with a rollup entity and the amount entity is the same as the rollup entity, the amount fields are automatically configured because these values are taken from the amount fields that are configured in forecast columns. These amount fields can't be edited—for example, if you select Account as the drill-down entity and the rollup entity as Opportunity. Select the amount entity as Opportunity, which is the same as the

rollup entity. For each column, the amount fields are automatically taken from the amount fields that are used while configuring the forecast columns.

- If the selected drill-down entity has a 1-to-many relationship with a rollup entity and the amount entity is different from the rollup entity, the amount fields must be manually configured. After you select the amount entity, the possible amount fields that are used to aggregate the rollup columns are displayed. For example, if you select Product as a drill-down entity and the rollup entity is Opportunity, the amount fields for the product are available in the Opportunity Product entity and are selected as the amount entity.

To learn more about entity relationships, go to Entity relationships.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Previous step: Choose layout and columns

Next step: Configure advanced settings

See also

View and understand data through drill-down entities

Configure forecasts in your organization

Take snapshots automatically

Article • 09/01/2023

A snapshot freezes the forecast data at a moment in time. The frozen data includes aggregate column values, manual adjustments, and underlying record fields that directly affect the forecast. You can use these snapshots to see how the forecast and its underlying data have changed over time.

Snapshots are taken automatically each day and while configuring the forecasts you can enable the option. When enabled, the snapshots are taken daily for that forecast and you can view deal flows and trend data based on the snapshots.

> **Note**
>
> - Premium forecasting must be enabled for the snapshot feature.
> - You can enable or disable snapshots any time while a forecast is active. When you disable or archive the forecast, some of the previously taken snapshots will be deleted according to the **snapshot deletion rules**.

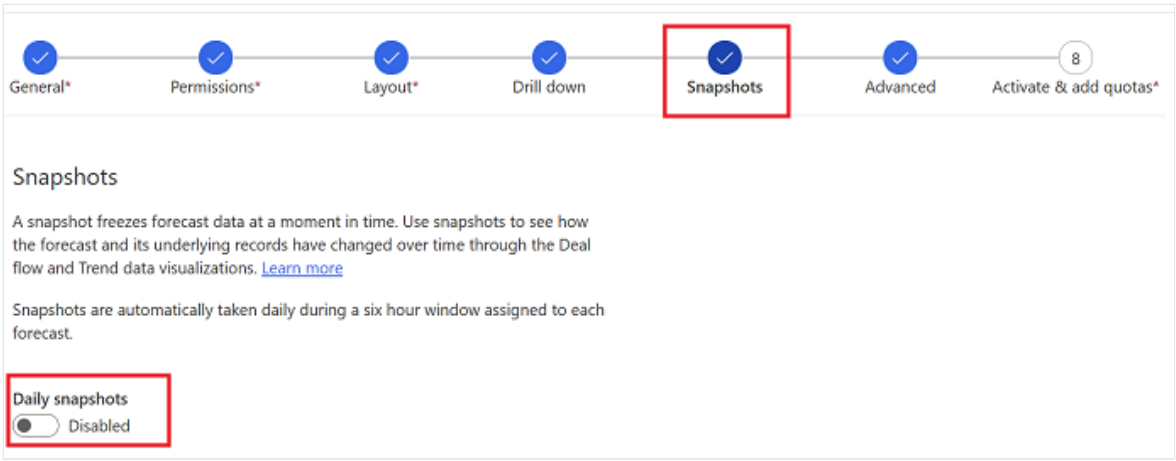
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

To enable the snapshots

1. While configuring a forecast, the **Snapshots** step is displayed.

   More information: Configure forecasts in your organization



2. Set the **Daily snapshots** toggle to **Enabled**.
   After the forecast is active, snapshots are automatically taken daily for weekly, monthly, and quarterly forecast periods. For annual periods, snapshots are taken weekly. The initial snapshot might take a few hours to generate.

   > **Note**
   >
   > - For a forecast that's in progress, the snapshots are taken from the date the option is enabled.
   > - For a forecast that's scheduled for future, the snapshots are taken from the start date of the forecast.
   > - The final snapshot of a forecast is taken on the final day of the forecast.
   > - Snapshots aren't taken when a forecast is in inactive state or for the past dates. Snapshots of archived and inactive forecasts are deleted according to the **snapshot deletion rules**.

> **Important**
>
> While configuring columns for a forecast, ensure that each column is unique and the **Selector** option doesn't have duplicates. If duplicates exist, when you activate the forecast an error will be displayed that states that snapshots can't be enabled for the forecast.

Snapshot deletion rules

Snapshots are deleted based on the following rules:

- Snapshots of only inactive and archived forecasts are deleted.

- The deletion process will start after 30 days of the forecast being inactive or archived.
- The last snapshot of a forecast is retained. Apart from this, the following snapshots will be retained based on the forecast recurrence:
  - For a recurrence length up to 35 days, which is five weeks, one snapshot per week is retained.
  - For a recurrence length up to 100 days, one snapshot for every 14 days (2 weeks) is retained.
  - For a recurrence length greater than 100 days, one snapshot per month is retained.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

About premium forecasting
Analyze deals flow between snapshots

Configure advanced settings for forecasts

Article • 06/05/2023

Use the **Advanced** step of the forecast configuration to customize the forecast. You can enable features, such as multi-currency selection and Kanban view. You can also override column headers and customize the underlying records grid by using javascript.

License and role requirements

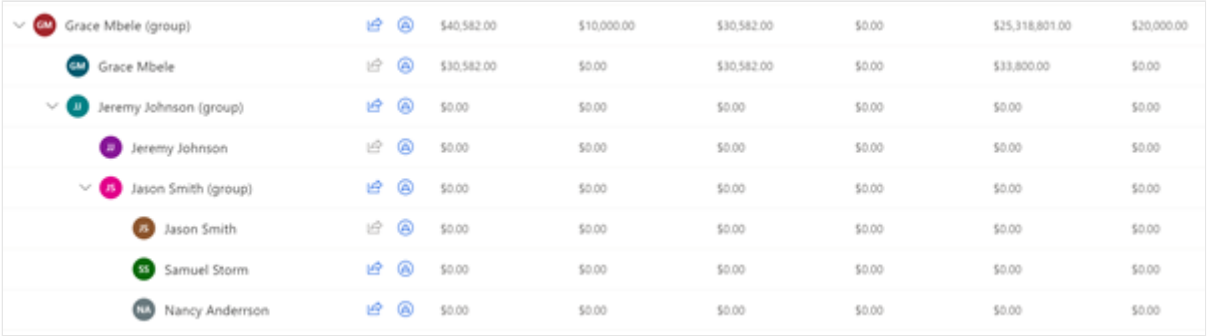
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Automatically hide parent row

In a forecast, each parent row in the hierarchy entity has its own contributor row. This row shows the parent's individual simple columns, such as quota and revenue contribution. These dedicated contributor rows are shown whether or not they contain any values to contribute.

You may not want to see duplicate zero-value parent rows. To hide them, turn on **Auto-hide parent row**.

For example, Grace Mbele, a sales manager, has created a forecast based on the **User** hierarchy. On opening the forecast, Grace sees two rows each for the sales leads, Jeremy Johnson and Jason Smith. The first row is the parent. The second is the contributor row.



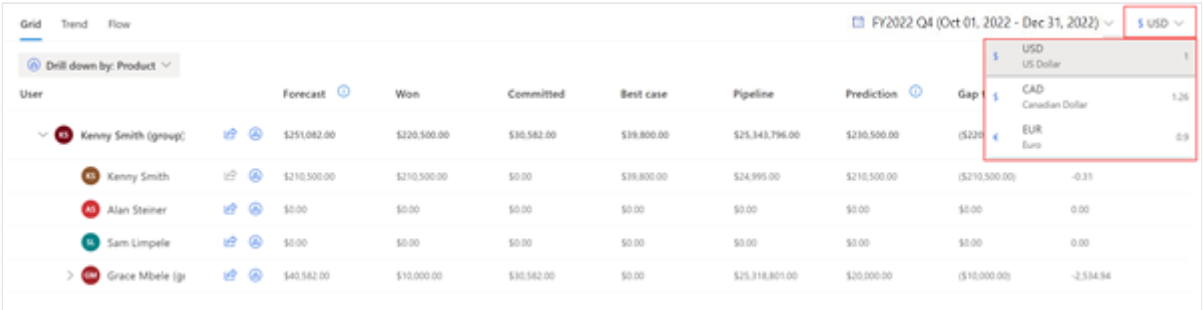
After turning on **Auto-hide parent row**, Grace still sees the rolled-up parent rows for Jeremy and Jason, but not the duplicate zero-value rows.

> **ⓘ Important**
>
> The parent row won't be hidden if it has underlying records or values in simple columns.

Turn on multi-currency selection

For global sales teams, viewing forecast revenue values in the organization's base currency might be confusing for users who are accustomed to working in their local currency. Turn on **Multi-currency selection** to convert forecast revenue data to any currency that's available in the system. The conversion happens in real time, based on the latest exchange rate defined by your organization.

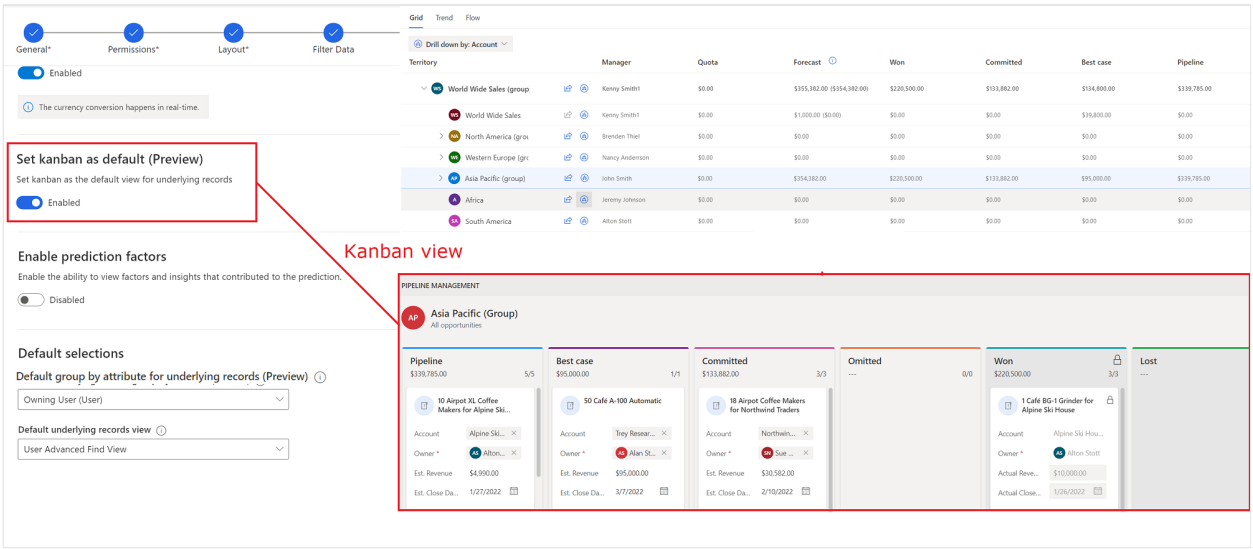
For example, your organization has sales teams in the United States, Canada, and Europe. The US dollar is set as the base currency for your organization. The Canadian dollar and euro are also available in the system. You create a forecast with multiple-currency selection turned on. All three sales teams initially see the forecast revenue values displayed in US dollars. The sales teams in Canada and Europe can display revenue in their local currency. Any manual adjustments made to the forecast grid will use the selected currency.



Set Kanban as the default view for underlying records (preview)

> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

The underlying records of a forecast can be displayed in a table view or a Kanban (swimlane) view. Table view is the default. To change it, turn on **Set kanban as default**.



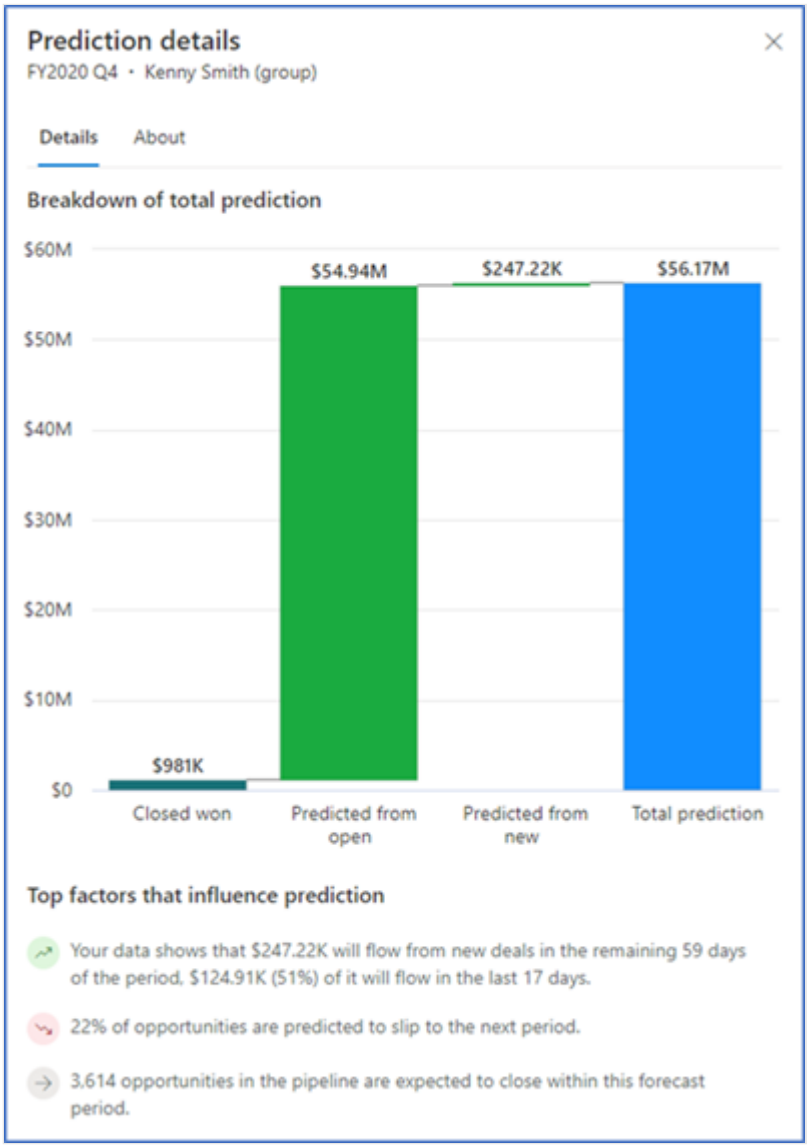
A user's most recent selection overrides the default for that user. For example, the default view for the underlying records of a forecast is Kanban and a user switches to the table view. The underlying records open in the table view the next time the user views the forecast.

View prediction factors

Predictive forecasting draws on many factors to create a prediction. You can analyze these factors to discover new insights about your data and understand how it's

influencing the prediction.

You'll need to turn on **Enable prediction factors** in your forecast's advanced settings first. To see the details of a prediction, including the top factors that influenced it, select a value in the **Prediction** column of the forecast.



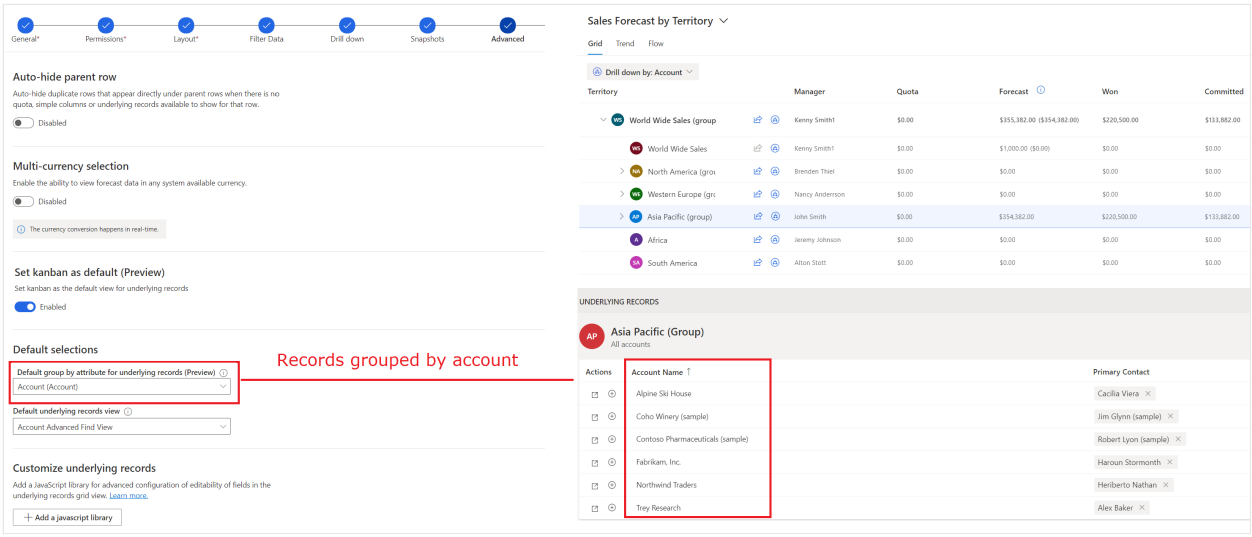
> **Note**
>
> Premium forecasting must be turned on for the **Prediction details** view to work. For more information, see About premium forecasting.

Select the default attribute to group underlying records (preview)

From the **Default group by attribute for underlying records (Preview)** dropdown list, select an attribute by which to group underlying records by default. Users can select a

different grouping attribute. Their selection overrides the default the next time they view the forecast.

The following screenshot illustrates how selecting the attribute will group the underlying records by default:

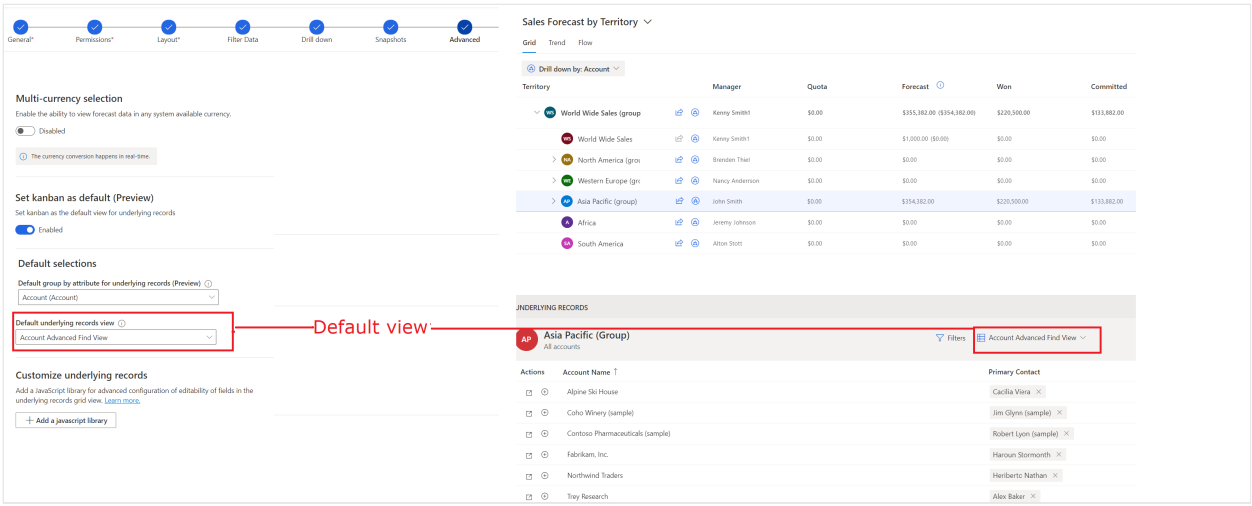


> **Note**
>
> Grouping is only available in the table view. If you want to group underlying records, you'll need to turn off **Set kanban as default**. If you select both Kanban view and grouping, then the default view is set to Kanban, and groups appear only when the user switches to the table view.

Select the default view for underlying records (preview)

If you want underlying records to open in a specific view (such as My open opportunities view) by default, select it in **Default underlying records view**. For more information, see View and manage underlying opportunities.

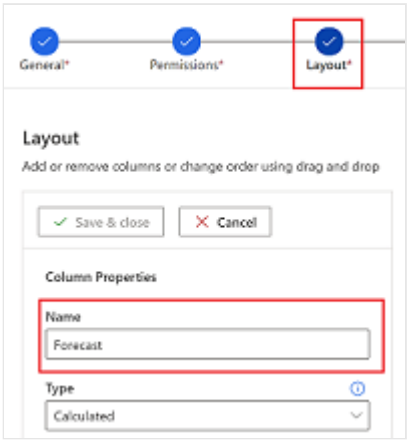
The following screenshot illustrates how selecting a default view displays the underlying records in that view by default:



> [!NOTE]
> ## Note
>
> View selection is only available in the table view. If you want to open the records in a specific view by default, you'll need to turn off **Set kanban as default**. If you select both Kanban view and a default view, then the records open in Kanban view, and the default view appears only when the user switches to the table view.

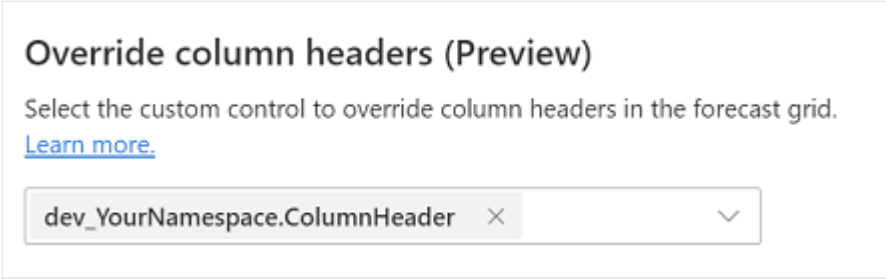
Override column headers (preview)

In the **Layout** step of the forecast configuration, you select columns that you need in the forecast grid. These columns help your sellers better understand the forecast.



If you want to translate the column names or add tooltips for additional context, you can define a control with the customization that you need. You can then override the column headers with the custom control. For more information about how to create a custom control for the header, see Customize column headers in the forecast grid.

In the **Override column headers (Preview)** section, select the custom control that includes the customizations.



Customize underlying records grid

Add a JavaScript library to customize the underlying records grid in a forecast.

Before you upload the JavaScript library, it must be created according to the schemas defined in Events and context object.

Create a JavaScript library

Write your custom JavaScript code. The following example disables all fields except a few for the **Opportunity** entity.

JavaScript

```
function OnRowLoad(executionContext) {

// Get the logical name of the loaded entity as part of forecasting editable
grid.
var entityName =
executionContext.getFormContext().data.entity.getEntityName();

    if (entityName === "opportunity") {

        // Defining the attributes list from opportunity that must be
enabled if loaded as part of view.
        var OPTY_ENABLE_ATTRS_LIST = ["name", "msdyn_forecastcategory",
"actualvalue", "actualclosedate", "estimatedvalue", "estimatedclosedate"];

        executionContext.getFormContext().data.entity.attributes.forEach(
            attribute => {
                // Disabling all attributes other than
OPTY_ENABLE_ATTRS_LIST
                if (!OPTY_ENABLE_ATTRS_LIST.includes(attribute.getName())) {
                    attribute.controls.get(0).setDisabled(true);
                }
            }
        )
    }
}
```

For more such customization examples, see Override save, update, and load events for editable fields on forecasting grid.

> ⓘ Note
>
> - The function names in the JavaScript file must match the event names, and must accept the context object parameter.
> - The forecasting context object that's referred to in the example is different from the execution context of Microsoft Dataverse. A forecasting context object is specific to forecasting. It supports the advanced configurations of the underlying records grid. For more information, see **Events and context object**.

Add your JavaScript code in a Script web resource

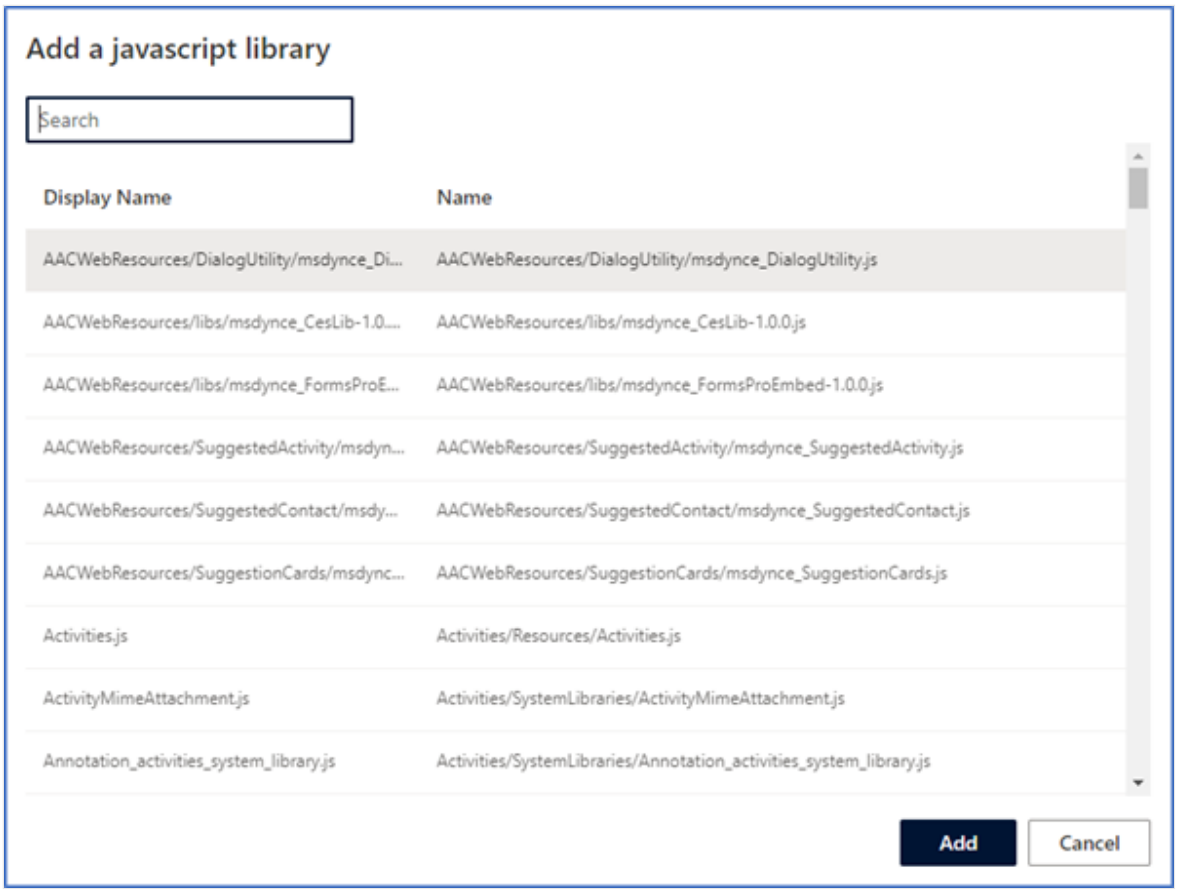
1. In Dynamics 365 Sales, select **Settings** > **Customizations**.
2. Select **Customize the System**.
3. In the solution explorer, under **Components**, select **Web Resources**.
4. Select **New**.
5. Enter a **Name** (for example, *mySampleScript.js*) and **Display Name** (for example, *Sample: Walkthrough script*) for your web resource.
6. In **Type**, select **Script (JScript)**, and then do one of the following:
    - Select **Choose File** to upload a file containing your JavaScript code.
    - Select **Text Editor**, and then paste your JavaScript code in the editor.
7. Select **Save**, and then select **Publish**.

Upload the JavaScript library to your forecast

> ⓘ Note
>
> You can have only one JavaScript file at a time in a forecast. You must remove the existing file before you can upload a new one. You can add a file to a forecast at any time.

1. On the forecast configuration page, **Advanced** step, under **Customize underlying records**, select **Add a javascript library**.

2. Search for your JavaScript file, and then select **Add**.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Previous step: Configure and manage drill-down entities

Next step: Activate and upload simple columns data

See also

Configure forecasts in your organization
Events and context objects for underlying records grid

Customize column headers in the forecast grid

Article • 12/16/2022

You can customize column headers in the forecast grid using Power Apps code components. For example, you can translate the column name or add a tooltip for additional context.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System administrator or customizer More information: Predefined security roles for Sales

How to customize the header

Let's understand the customizations with an example. We'll add the French translation for the column names **Forecast** and **Won** in the forecast grid.

1. Create a code component with the name `ColumnHeader`
2. Create a resource file and add translations
3. Implement the manifest
4. Implement the component logic
5. Build and package the component

Create a resource file and add translations

After you create the code component, the `ColumnHeader` folder is created in the path you've specified. Let's create a resource file and add the French translations in the resource file.

1. Create a folder named `strings` under the `ColumnHeader` folder.

2. Copy the following code to a new file, ColumnHeader.1036.resx.

> **Note**
>
> The number 1036 in the file name is the language code for French. For a list of language codes, see **this article**.

XML

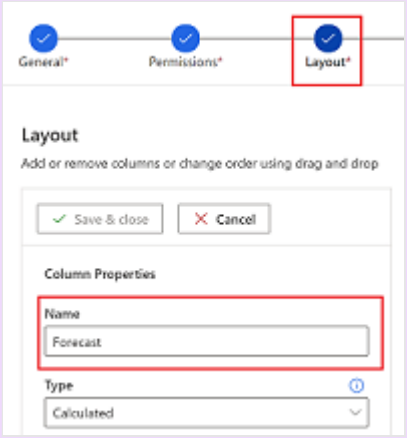
```
<?xml version="1.0" encoding="utf-8"?>
<root>

  <xsd:schema id="root" xmlns=""
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:msdata="urn:schemas-
microsoft-com:xml-msdata">
    <xsd:import namespace="http://www.w3.org/XML/1998/namespace" />
    <xsd:element name="root" msdata:IsDataSet="true">
      <xsd:complexType>
        <xsd:choice maxOccurs="unbounded">
          <xsd:element name="metadata">
            <xsd:complexType>
              <xsd:sequence>
                <xsd:element name="value" type="xsd:string"
minOccurs="0" />
              </xsd:sequence>
              <xsd:attribute name="name" use="required"
type="xsd:string" />
              <xsd:attribute name="type" type="xsd:string" />
              <xsd:attribute name="mimetype" type="xsd:string" />
              <xsd:attribute ref="xml:space" />
            </xsd:complexType>
          </xsd:element>
          <xsd:element name="assembly">
            <xsd:complexType>
              <xsd:attribute name="alias" type="xsd:string" />
              <xsd:attribute name="name" type="xsd:string" />
            </xsd:complexType>
          </xsd:element>
          <xsd:element name="data">
            <xsd:complexType>
              <xsd:sequence>
                <xsd:element name="value" type="xsd:string"
minOccurs="0" msdata:Ordinal="1" />
                <xsd:element name="comment" type="xsd:string"
minOccurs="0" msdata:Ordinal="2" />
              </xsd:sequence>
              <xsd:attribute name="name" type="xsd:string"
use="required" msdata:Ordinal="1" />
              <xsd:attribute name="type" type="xsd:string"
msdata:Ordinal="3" />
              <xsd:attribute name="mimetype" type="xsd:string"
msdata:Ordinal="4" />
              <xsd:attribute ref="xml:space" />
            </xsd:complexType>
```

```
          </xsd:element>
          <xsd:element name="resheader">
            <xsd:complexType>
              <xsd:sequence>
                <xsd:element name="value" type="xsd:string"
minOccurs="0" msdata:Ordinal="1" />
              </xsd:sequence>
              <xsd:attribute name="name" type="xsd:string"
use="required" />
            </xsd:complexType>
          </xsd:element>
        </xsd:choice>
      </xsd:complexType>
    </xsd:element>
  </xsd:schema>
  <resheader name="resmimetype">
    <value>text/microsoft-resx</value>
  </resheader>
  <resheader name="version">
    <value>2.0</value>
  </resheader>
  <resheader name="reader">
    <value>System.Resources.ResXResourceReader, System.Windows.Forms,
Version=4.0.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089</value>
  </resheader>
  <resheader name="writer">
    <value>System.Resources.ResXResourceWriter, System.Windows.Forms,
Version=4.0.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089</value>
  </resheader>
  <data name="Forecast" xml:space="preserve">
    <value>Prévision</value>
  </data>
  <data name="Won" xml:space="preserve">
    <value>Gagné</value>
  </data>
</root>
```

In the above code sample, the column names for **Forecast** and **Won** are overridden with the French translations **Prévision** and **Gagné** respectively in the `<data>` node.

> ⓘ **Note**
>
> In the `name` parameter, specify the exact column name that you've configured in the **Layout** step of the forecast.



If you want to translate the column name into additional languages, create a resource file for each language that you want to translate into. Make sure that the resource file name uses the following naming convention:

```
filename.languagecode.resx
**Example file name for German:** ColumnHeader.1031.resx
```

Implement the manifest

Next, we'll modify the manifest file to specify the property that we're overriding. In our example, we're overriding the `ColumnName` property. We'll also specify the path to the resource file that contains the translated text.

1. Open the `ControlManifest.Input.XML` file.
2. Search for the `property` node and replace it with the following code as-is:

   `<property name="columnName" display-name-key="Property_Display_Key" description-key="Property_Desc_Key" of-type="SingleLine.Text" usage="bound" required="true" />`

3. Update the `<resources>` node to specify the path to the resource file that includes the French translations:

```xml
<resources>
  <code path="index.ts" order="1"/>
  <!-- UNCOMMENT TO ADD MORE RESOURCES
  <css path="css/ColumnHeader.css" order="1" />
  -->
```

```
  <resx path="strings/ColumnHeader.1036.resx" version="1.0.0" />
</resources>
```

The `<resx path>` node contains the resource file path. In the preceding code sample, we've added the resource file for the French language. If you have translations for other languages, add the resource file path for those languages as well.

Implement the component logic

Let's add the code to implement the component logic in the `index.ts` file.

1. Open the `index.ts` file.
2. Add the following lines in the `updateView` method:

Java

```
public updateView(context: ComponentFramework.Context<IInputs>): void
    {
        // Add code to update control view
        const colName = (context.parameters.columnName &&
context.parameters.columnName.raw) || "";
        this._container.innerHTML =
context.resources.getString(colName);
    }
```

Next steps

- Build the code component
- Package the code component
- Override column headers (preview)

Activate and upload simple columns data

Article • 09/01/2023

Activate a forecast, and download the spreadsheet template to populate quotas and simple columns data. Then, upload the spreadsheet to the forecast.

License and role requirements

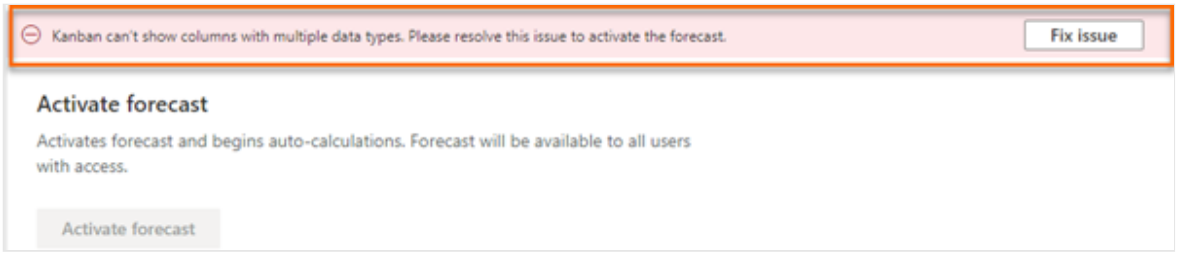
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Activate a forecast and upload simple data

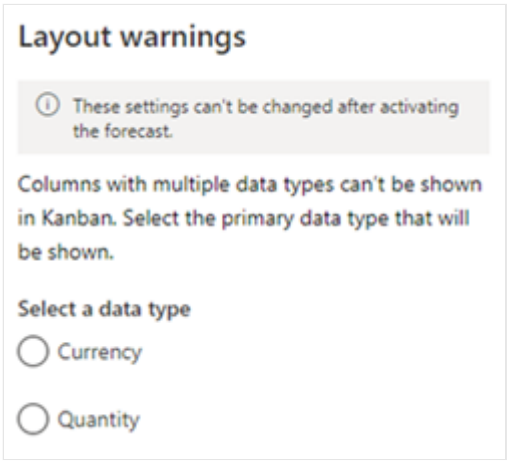
Now that you've completed the required configurations for the forecast, use the **Activate & add quotas** step to activate it and make it available for users. After the forecast is active, you can download a template (Excel workbook) and upload it with data, such as quotas and simple column types, for all users who are defined in the forecast hierarchy.

> **Important**
>
> - You can have a maximum of 50 forecasts at any given time in your organization, out of which only six forecasts can be active.
> - Use only the forecast configuration page to activate forecasts. Don't use any other options, such as **Advanced find**.

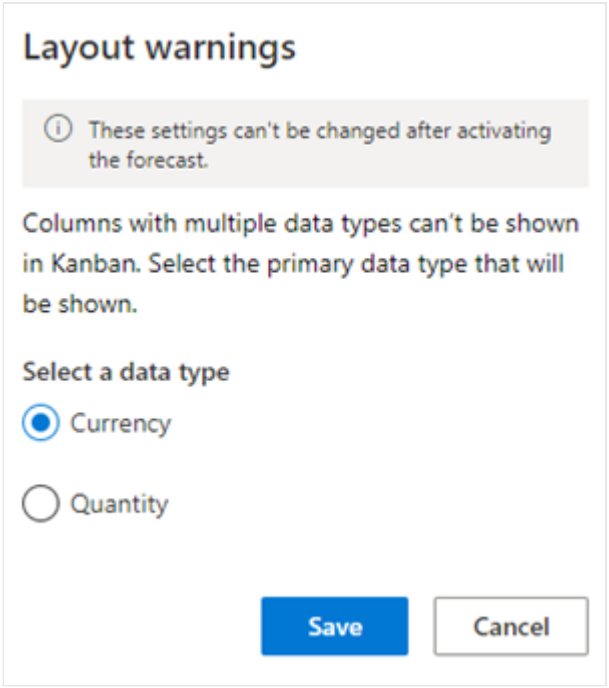
1. If you've used different data types for columns in the forecast, an error is displayed at the top of the **Activate forecast** section. You must resolve the issue to publish and display the data in the Kanban view, deal flows, and trend charts. The following screen is an example of error:



a. Select **Fix issue**. The **Layout warnings** pane opens on the right side of the page.

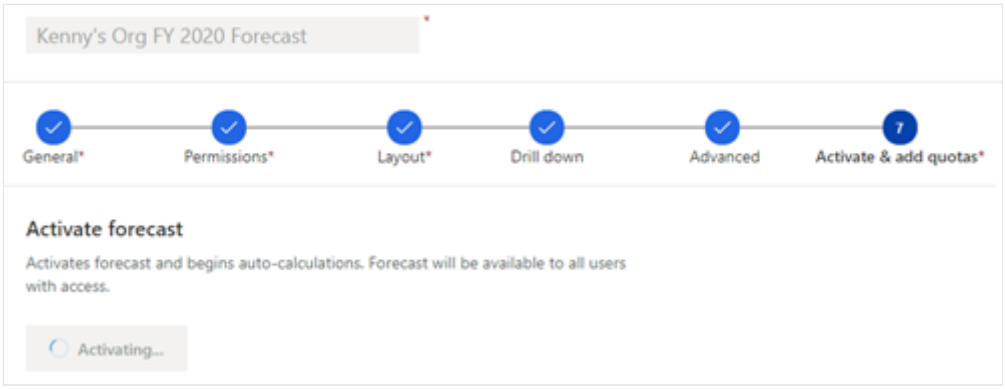


b. Select the primary data type that meets your needs, and then select **Save**.



After the error is resolved, you can continue with activating the forecast. For more information about how different data types are used in forecasts, go to Forecast with multiple data type columns.

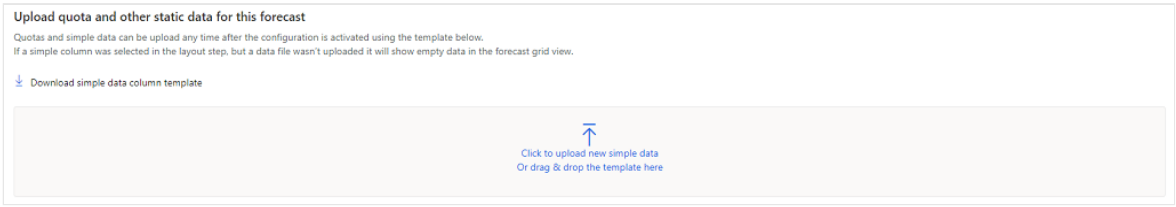
2. In the **Activate forecast** section, select **Activate forecast**. The configured forecast starts calculating the values for the forecast and becomes available for users in your organization. The activation might take a few minutes.



After a forecast is activated, a confirmation message is displayed and the option to download the quota template becomes available.

> **Note**
>
> Forecast auto-recalculation works only when the forecast is active. If the last period of the forecast has just lapsed, the forecast will continue auto-recalculating for 30 more days and then will stop.

3. In the **Upload quota and other static data for this forecast** section, select **Download simple data column template**. A template (Excel workbook) showing users in the hierarchy is downloaded to your local computer.



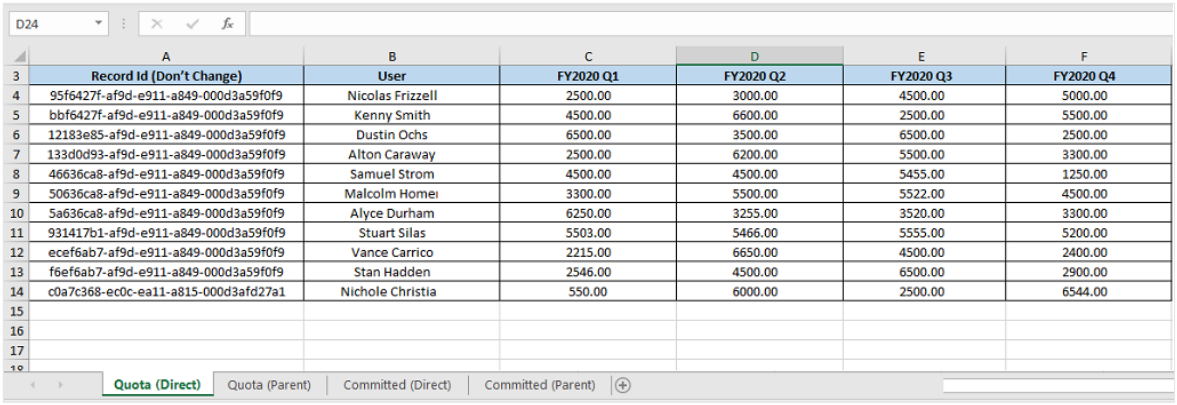
The naming convention of the downloaded workbook is ***forecastname*_Simple.xlsx**. For example, if you've created a forecast with the name **Kenny's Org FY 2020 Forecast**, the name of the downloaded workbook is **Kenny's Org FY 2020 Forecast_Simple.xlsx**.

4. Open the downloaded Excel workbook.

   The workbook is divided into groups of two tabs, **Direct** and **Parent**. The groups depend on the simple columns you've configured for the forecast. Each tab consists of the following columns: **Record Id**, **Hierarchy** field (and any hierarchy-related columns), and each forecast period (depends on the number of periods you've selected for the forecast).

   For example, if you've configured a forecast by using two **Simple** columns—**Quota** and **Committed**—and specified the number of periods as **4** in 2020, the downloaded workbook will consist of four tabs: **Quota (Direct)**, **Quota (Parent)**,

Committed (Direct), and **Committed (Parent)**. Each tab consists of six columns – **Record Id**, **User**, **FY2020 Q1**, **FY2020 Q2**, **FY2020 Q3**, and **FY2020 Q4**.



Record Id (Don't Change)	User	FY2020 Q1	FY2020 Q2	FY2020 Q3	FY2020 Q4
95f6427f-af9d-e911-a849-000d3a59f0f9	Nicolas Frizzell	2500.00	3000.00	4500.00	5000.00
bbf6427f-af9d-e911-a849-000d3a59f0f9	Kenny Smith	4500.00	6600.00	2500.00	5500.00
12183e85-af9d-e911-a849-000d3a59f0f9	Dustin Ochs	6500.00	3500.00	6500.00	2500.00
133d0d93-af9d-e911-a849-000d3a59f0f9	Alton Caraway	2500.00	6200.00	5500.00	3300.00
46636ca8-af9d-e911-a849-000d3a59f0f9	Samuel Strom	4500.00	4500.00	5455.00	1250.00
50636ca8-af9d-e911-a849-000d3a59f0f9	Malcolm Homei	3300.00	5500.00	5522.00	4500.00
5a636ca8-af9d-e911-a849-000d3a59f0f9	Alyce Durham	6250.00	3255.00	3520.00	3300.00
931417b1-af9d-e911-a849-000d3a59f0f9	Stuart Silas	5503.00	5466.00	5555.00	5200.00
ecef6ab7-af9d-e911-a849-000d3a59f0f9	Vance Carrico	2215.00	6650.00	4500.00	2400.00
f6ef6ab7-af9d-e911-a849-000d3a59f0f9	Stan Hadden	2546.00	4500.00	6500.00	2900.00
c0a7c368-ec0c-ea11-a815-000d3afd27a1	Nichole Christia	550.00	6000.00	2500.00	6544.00

- ***Column* (Direct)** tab: This tab shows all the sales reps or territories (also called leaf nodes) in the forecasting hierarchy. Enter the forecast values. After you upload the workbook, the values will be displayed under their respective columns in the forecast grid. The values you enter for managers or parent territories on the **Direct** tab won't affect the values that you enter on the **Parent** tab (a manager or parent territory can also be working on opportunities and will have certain values as an individual).

- ***Column* (Parent)** tab: This tab shows anyone who has direct reports in the selected hierarchy. A manager or parent territory has at least one direct report. Enter the values you want, and when the workbook is uploaded, the values will be shown under their respective columns in the forecast grid for managers or parent territories (a level above individuals).

> **ⓘ Important**
>
> Don't change the **Record Id** values in the workbook. If they're changed, the forecast will display inaccurate values.

5. Save and close the workbook.

6. In the **Upload quota and other static data for this forecast** section, select the option to browse and upload, or drag the workbook to the upload area. You can verify the status at the bottom of the upload area.

7. After the workbook is uploaded, select **Finish**.

You're directed to the **Forecast configuration** home page, where your organization's forecasts are listed. To verify whether the forecast is ready to view, select the forecast

configuration, and see if the forecast periods are in **Completed** status. For more information, see View forecast calculation status

> **Note**
>
> If you update data (simple columns and adjust fields), the changes may take up to two hours to reflect in the forecast.

Use APIs to upload forecast data

After a forecast is activated, you can use the msdyn_ForecastApi custom action to upload forecasting data to simple columns. For more information, see msdyn_ForecastApi action.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Previous step: Configure advanced settings

See also

Configure forecasts in your organization
msdyn_ForecastApi

Select a default forecast (preview)

Article • 03/30/2022

If your organization has configured multiple forecasts, save your users time and select one to be displayed by default when they open the Forecasts page.

> **Note**
>
> You can also specify the default experience for the underlying records of the forecast. More information: **Configure advanced settings for forecasts**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

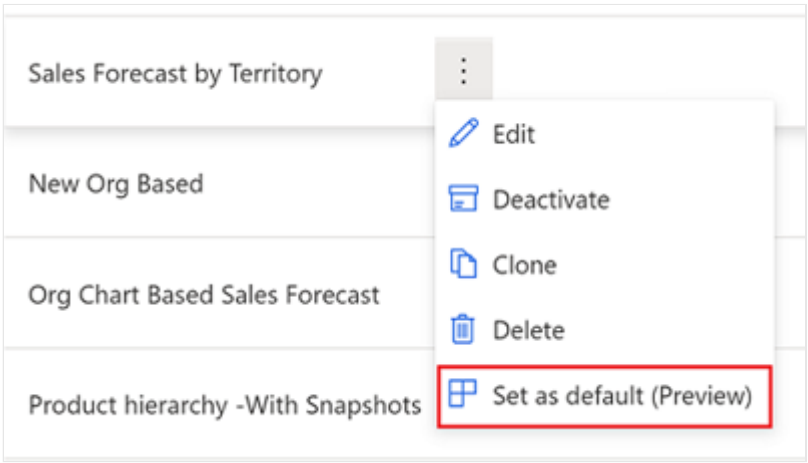
To select a default forecast

> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Select a forecast to be displayed by default

1. In the **Sales Hub** app, select the Change area icon , and then select **App Settings**.
2. Under **Performance management**, select **Forecast configurations**.
3. Select **More actions** ⋮ and select **Set as default (Preview)**.

   > **Note**
   >
   > This option is only shown for active forecasts.

4. (Optional) To confirm that the forecast you selected is set as the default, change to the **Sales** area. Under **Performance**, select **Forecasts**.

> **Note**
>
> If a user switches to a different forecast, that forecast is displayed instead of the default the next time they open the Forecasts page.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

View a forecast

Deactivate and delete forecasts

Article • 03/30/2022

You can deactivate or delete forecasts that are no longer required in your organization.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

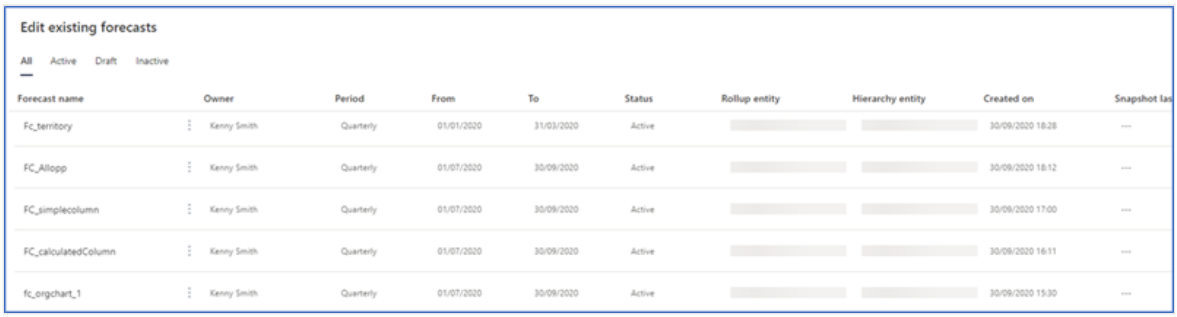
Deactivate a forecast

You can deactivate forecasts that are that are no longer required in your organization. You can view the list of deactivated forecasts under the **Inactive** tab.

> **Important**
>
> - You can't activate a forecast after you deactivate it.
> - Don’t deactivate a forecast through any other options such as **Advanced find**. Use only forecast configuration page to deactivate forecasts.

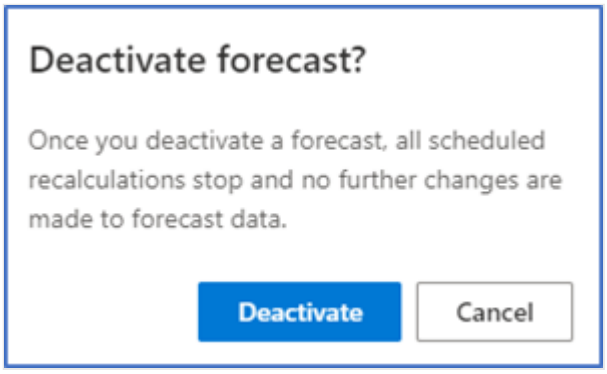
1. Open the **Forecast configuration** page.

   The forecast configuration page opens.



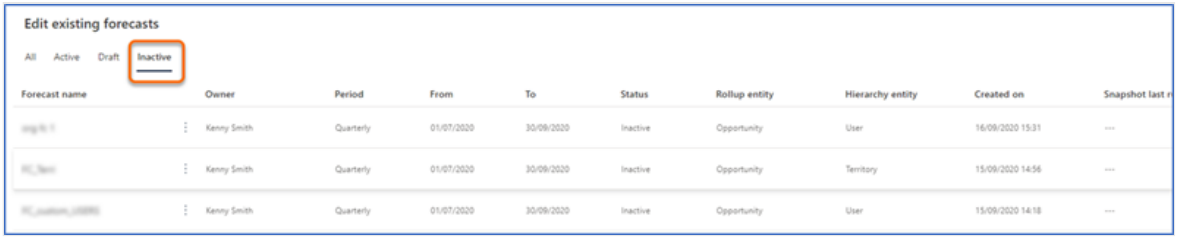
2. Select the **More options** icon corresponding to the forecast that you want to deactivate, and then select **Deactivate**.

A confirmation message is displayed.



3. Select **Deactivate**.

   The forecast is deactivated and listed under the **Inactive** tab.

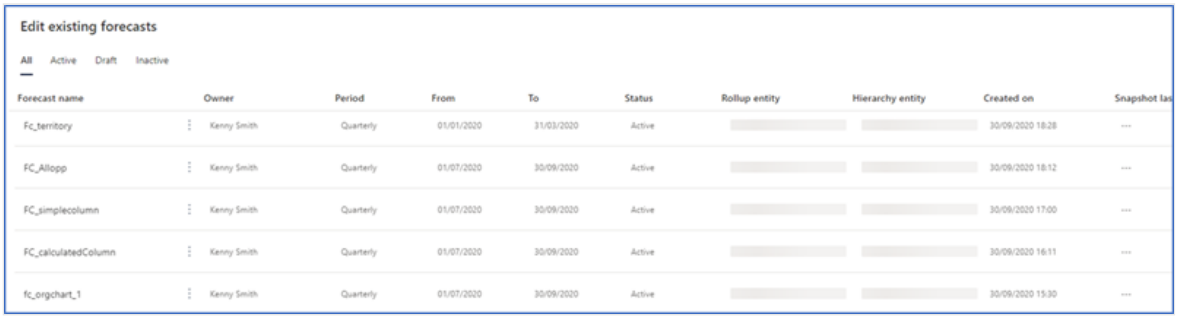


Delete a forecast

You can permanently delete a forecast that is in the active, inactive, or draft state.

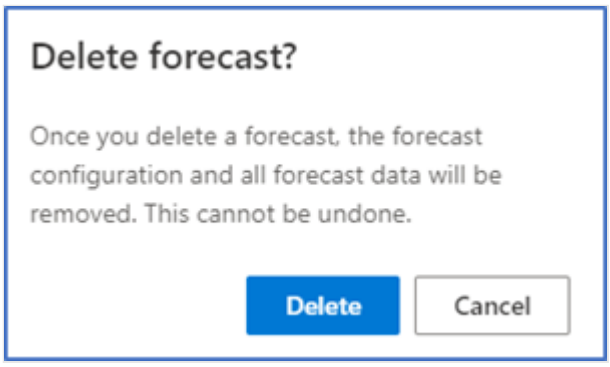
1. Open the **Forecast configuration** page.

   The forecast configuration page opens.



2. Select the **More options** icon corresponding to the forecast that you want to deactivate, and then select **Delete**.

A confirmation message is displayed.



3. Select **Delete**.

   The forecast is deleted permanently from your organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Activate and upload simple columns data
Configure forecasts in your organization

Clone a forecast

Article • 03/30/2022

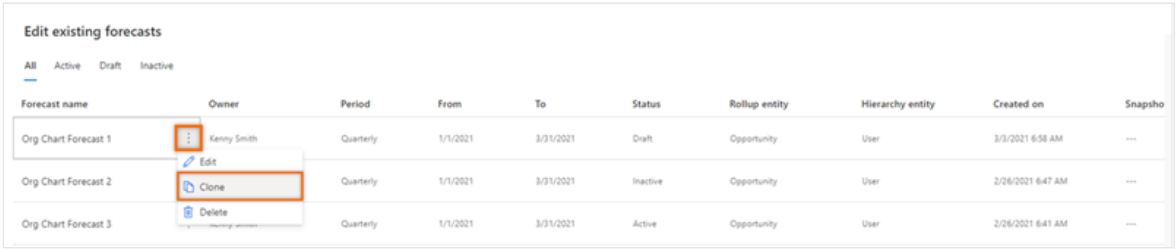
When you clone a forecast, you duplicate any configurations you made previously. You can work on this cloned forecast as a draft for a new forecast that better meets your needs. You retain the configurations you want, make edits to others, and create a new forecast that matches your requirements. After you make the changes, you can save and activate the cloned forecast.

License and role requirements

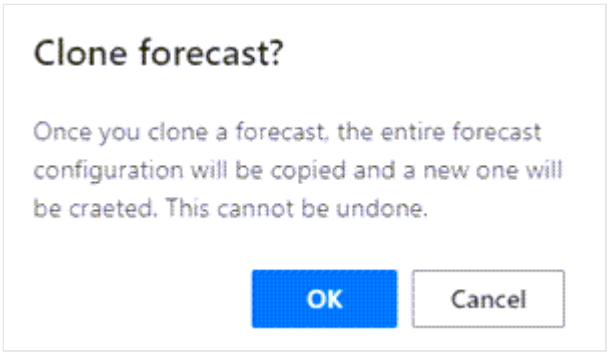
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

To clone a forecast

1. Sign in to the Sales Hub app.
2. In the site map, select **Change area** , and then select **App Settings**.
3. Under **Performance management**, select **Forecast configuration**.
   The forecast configuration page opens.
4. On the forecast that you want to clone, select **More options** , and then select **Clone**.



5. In the message that appears, select **OK**.



The clone of the selected forecast is opened in edit mode.

6. Edit the forecast to meet your needs, and then activate it.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure forecasts in your organization

Predict future revenue outcomes using premium forecasting

Article • 03/21/2023

Premium forecasting helps sellers and managers improve their forecast accuracy by providing forecast projections based on data. To achieve this, premium forecasting uses AI-driven models that look at historical data and the sales pipeline to predict future revenue outcomes.

> **Important**
>
> Premium forecasting is not available on Government Community Cloud (GCC), France, and India.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

Features available in premium forecasting

The following premium forecasting features are available with the Sales Premium license. Before you begin, ensure that forecasting is enabled. More information: Configure forecasts in your organization.

Forecast predictions

Provides an AI-powered forecast that helps sellers and managers understand how much revenue their sales team can achieve. These predictions are calculated based on historical data and the current sales pipeline, and are available at each level of the hierarchy. A detailed breakdown is also provided.

To verify that the predictive forecasting feature is enabled in your organization, go to **Change area** > **App settings** > **Forecast configuration**. The **Prediction** column appears

in a forecast grid when you select it as a column. To learn more, see Choose layout and columns.

> **Note**
>
> - **Prediction** column is now available for all hierarchies with rollup entity as **Opportunity**.
> - All underlying opportunities must have system users as owners for predictive forecasting to consider while generating the values.

After you activate the forecast for the first time, predictive forecasting will take about two hours to display data in the column.

To learn more, see Configure forecasts in your organization.

Consider the following before you start using predictive forecasting, you must have:

- More than 10 closed opportunities with values filled for the fields–**Actual Value**, **Actual Close Date**, **Estimated Value**, and **Estimated Close Date**.
- Open opportunities with values filled for the fields–**Estimated Value** and **Estimated Close Date**.
- Data should be real as in the usage scenarios for both closed and open opportunities. For example, opportunity created date should be before close date.
- Predictive forecasting service selects forecast model according to the available data, so, larger volume of closed opportunities with more complete values will result in getting more accurate forecasts.
- Additional filters created for the forecast don't negatively affect the outcome of the predictive forecasting model.
- To optimize the accuracy of the predictive forecast model, consider activating and publishing predictive opportunity scoring. To learn more, see Predictive opportunity scoring.

Snapshots

Sales organizations can use snapshots to "freeze" forecast data at a moment in time. To learn more about how to use snapshots and how deals flow between two snapshots, see Take snapshots automatically and Analyze deals flow between snapshots.

Trend chart

The **Trend** chart provides a visualization of how each forecast amount is trending over time, comparing it against the period end prediction and quota. A separate predicted realization line is automatically created to project the future revenues over time.

The option **Show in Trend Chart** is available to add forecast columns to the trend chart while configuring the column in the forecast configuration. Only **Roll up** and **Calculated** column types can be displayed in the trend chart. To learn more, see Configure columns.

To understand how to use trend charts, see Understand forecast projection through trend charts.

Flow chart

The flow chart provides a visual representation of how the forecast changes between two moments in time. To learn more, see Analyze deals flow between snapshots.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System and application users who can push data to Dataverse
Take snapshots automatically
Install and configure premium Sales Insights features
Blog: Predictive sales forecasting in Dynamics 365 Sales

View prediction model status

Article • 03/30/2022

Use the status of prediction column in a forecast to view the details such as, last predicted date and errors.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Forecast Manager More information: Predefined security roles for Sales

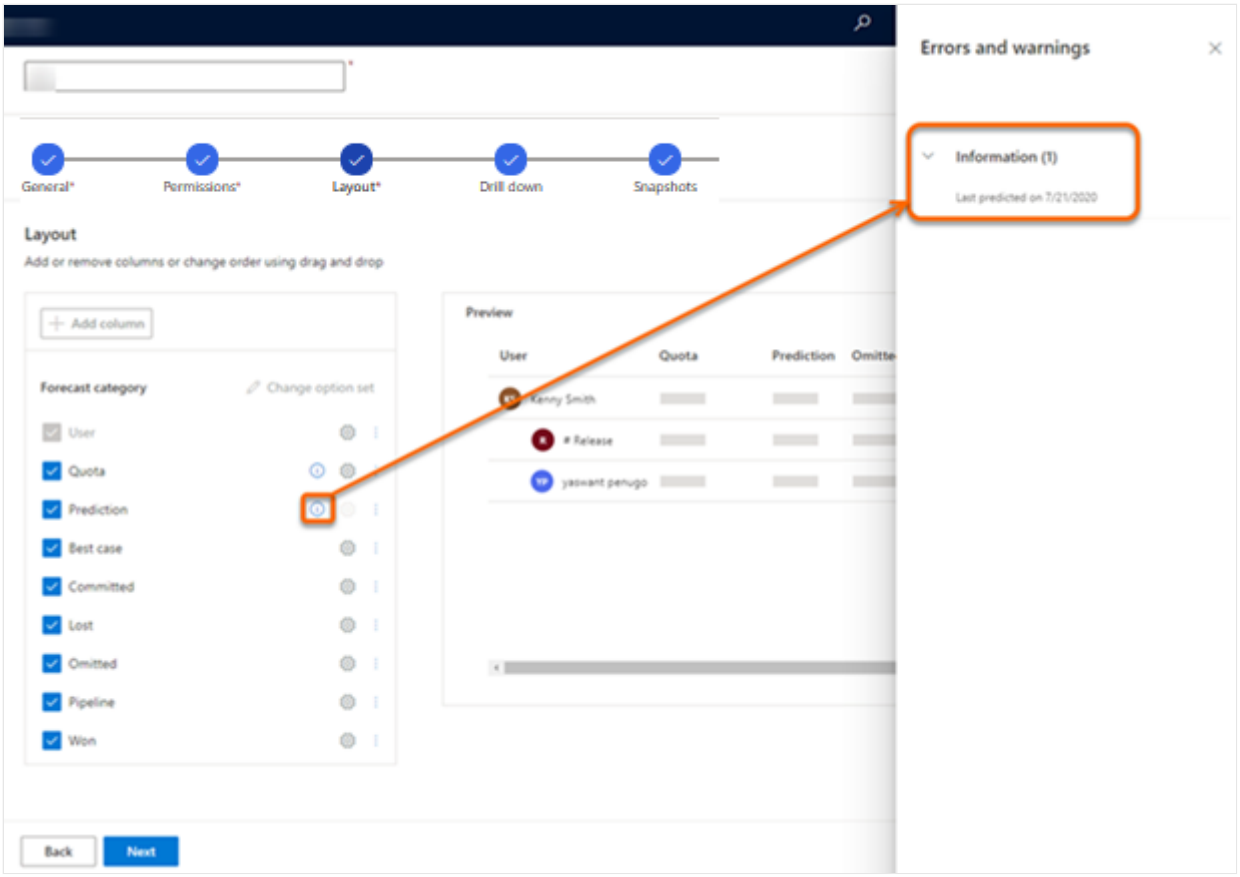
How to view prediction model status

You can view the details of the prediction model, such as last predicted date and errors in a forecast. After a model is generated, an icon is displayed corresponding to the **Prediction** column in the layout configuration step of a forecast. Based on the icon, you can determine whether the model was successful.

> ⓘ Note
>
> After you configure and publish a forecast with a prediction column for the first time, the column takes about two hours to display the data.

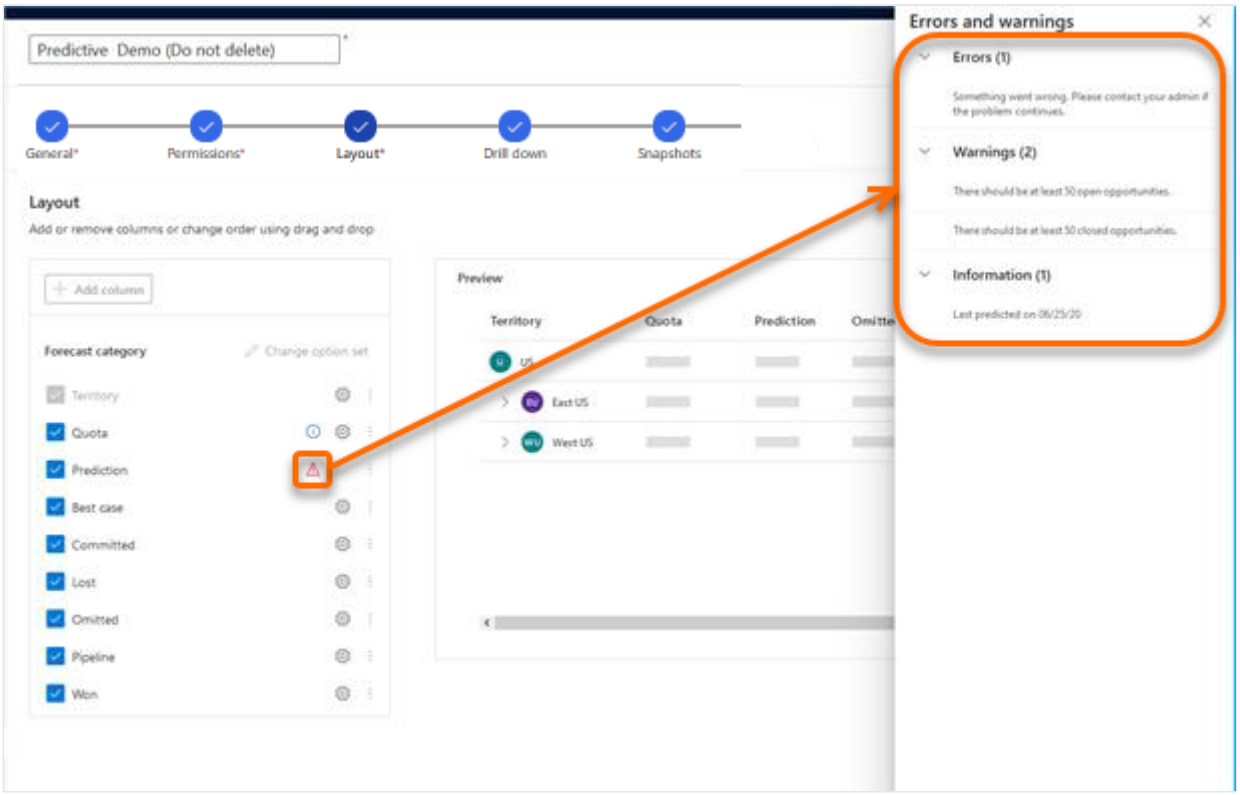
On successful prediction

When the prediction succeeds, an information icon is displayed corresponding to the **Prediction** column. Select the icon to see a side pane with the date of the last prediction.



On erroneous prediction

When the prediction fails, an alert icon is displayed corresponding to the **Prediction** column. Select the icon to see a side pane with information about errors, warnings, and the last prediction date. Based on this information, you can take necessary steps to resolve the issues and regenerate the model.



See also

Premium forecasting

Add the forecast grid and configuration options to a sitemap

Article • 03/30/2022

As the forecast grid and configurations are based on URL custom control forms, add them manually to the sitemap so that your users can access.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add forecast grid and forecast configuration options to sitemap

When you create a custom model-driven app, you can choose a default solution to create a sitemap for the app. However, the list contains solutions that are based on entity forms only. The forecast options are based on URL custom control forms and do not appear in the solution list. You must manually add these options to the sitemap. After you add these options, users in your organization can see them on the app's sitemap.

Follow these steps to individually configure the sitemap for forecast grid and forecast configuration:

1. Open your custom app on the app designer and go to the sitemap designer.
2. Select a group from the area for which you want to add the forecast options.

> **Note**
>
> We recommend using the General area for forecast grid and the Administration area for forecast configuration.

3. On the sitemap designer canvas, select **Add** > **Subarea**.

   OR

   From the **Components** tab, drag the **Subarea** tile to an empty box under the **Group** section in the canvas. You'll see the empty box when you move the tile to the correct place in the canvas.

4. Select the subarea that you have created and go to the **Properties** tab.

5. Under the **General** section, do the following:

   a. Select **Type** as **URL**.

   b. In **URL**:

   - For the forecast grid, enter: **/main.aspx?pagetype=control&controlName=ForecastingControls.FieldControls.ForecastGridPage**
   - For the forecast configuration, enter: **/main.aspx?pagetype=control&controlName=ForecastingControls.FieldControls.CCFForecastConfig**

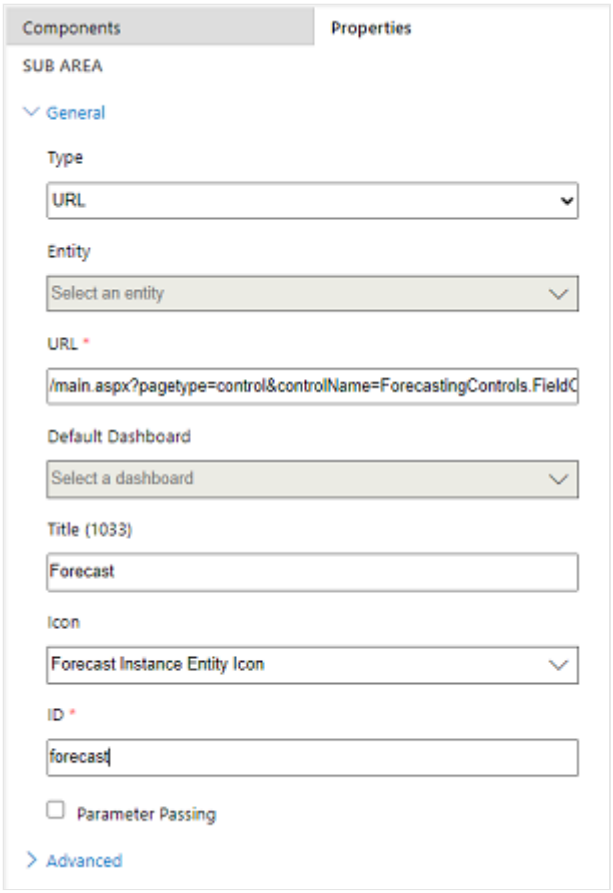
   c. In **Title**:

   - For the forecast grid, enter **Forecasts**.
   - For the forecast configurations, enter **Forecast configurations**.

   d. In **Icon**, select the following:

   - For the forecast grid, select **Forecast Instance Entity icon**.
   - For the forecast configurations, select **Forecast Definition Entity icon**.

   e. (Optional) If required, enter unique IDs for the forecast grid and forecast configuration. You can also use the default IDs.



6. Save and close the sitemap designer page.
7. Publish your custom app.

   The forecast grid and configuration options are now displayed on the sitemap.

More information: Create a sitemap for an app using the sitemap designer

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure a forecast in your organization

Design custom business apps by using the app designer

Define and track your sales goals

Article • 03/30/2022

With Dynamics 365, you can define, measure, and track goals for your organization and team. For example, your sales organization can define goals based on sales revenue for a specific territory, number of leads created, number of units sold, and so on. Similarly, your customer service organization can define goals based on the number of cases closed.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sales Manager, or above More information: Predefined security roles for Sales

Goal setting process

You can create parent goals based on criteria like market research, budget planning, and historical performance. You'll typically assign parent goals to managers, and then assign child goals to individuals, teams, organizations, territories, and product lines. These child goals roll up into the overall goals for a specified metric.

For example, a parent goal might be to generate a certain number of sales leads during a quarter. Child goals assigned to territories, teams, or individuals would be for their portion of the parent goal. You can track child goals separately, with each child goal contributing to the parent goal. The actual and in-progress results of the child goals roll up to parent goals during a scheduled rollup or through a manual trigger.

To set goals, consider these factors:

- Goal hierarchy
- Setting goal metrics
- Defining rollup queries
- Setting targets
- Setting time periods for goals
- Monitoring goals
- Goals and security roles

Define goal hierarchy

Typically, a manager's goal is a total of the goals assigned to their staff. A large organization's goal could be a combination of regional sales or service goals.

A staff goal is a child goal of a manager's goal, which in turn can have a parent goal at the regional level, and so on. A goal can have only one parent goal, but a parent goal can have multiple child goals.

Deleting a parent goal does not delete the child goal. Deleting a parent goal only removes the reference to the parent goal for the child goal.

The goal rollup is done from the bottom of the hierarchy to the top. During rollup, the parent goal total is the sum of all its child goals.

Set goal metrics

There are two types of goal metrics:

- **Count:** Counts things that you track, such as how many sales phone calls were completed in a given period.
- **Amount:** Tracks things like revenue or sales measured in something other than whole numbers. This metric is more versatile. You could use the amount metric to track sales of a product sold by weight, or to make a goal more specific, such as the number of sales calls that lasted longer than five minutes, instead of only the total number of calls made.

If your metric type is Amount, you need to further specify the amount data type:

- **Money:** Tracks a monetary amount, such as revenue from a product line.
- **Integer:** Tracks anything countable in whole numbers, such as units sold.
- **Decimal:** Tracks data that includes partial numbers, such as pounds sold of a product that is sold by weight.

If your metric type is Count, the data type is always an integer.

> ⓘ **Note**
>
> After you select the metric type and data type, and then save the metric, you cannot change the type.

The metric type and amount data type determine the kind of data you can track when you create a rollup field to track the goal. The rollup fields that you define appear in the goal form and also in the grid on the Goals area. You can create or edit rollup fields only from the Goal Metric form.

You must have at least one of the following rollup fields, but you cannot have more than one per type.

- **Actual:** Can be modified as Actual (Money), Actual (Integer), or Actual (Decimal), depending on the data type. This shows the actual amount or count of finished measurable results, such as closed invoices or sales called completed.
- **In-Progress:** Can be modified as In-progress (Money), In-progress (Integer), or In-progress (Decimal), depending on the data type. This includes measurable results that could contribute to a goal, but are not counted yet as actual. For example, an in-progress rollup field that shows qualified leads that have not been contacted could help you track progress toward contacting leads.
- **Custom Rollup Field:** Can be modified as Custom Rollup Field (Money), Custom Rollup Field (Integer), or Custom Rollup Field (Decimal), depending on the data type. Use this to track a third category for results. You could use the actual result to show contacted leads, the in-progress rollup field to track qualified leads, and the custom rollup field to track new leads.

More information: Create or edit a goal metric

Define rollup queries

Goals roll up from the bottom of the goal hierarchy to the top, with Dynamics 365 rolling child goal totals into their parent goal totals. Goals at the top of a hierarchy reflect a summation of all the goals in the organization.

When you define rollup queries, you identify the record types to compare against the goals you define in the rollup fields. For example, you could create a goal metric that measures all invoices closed within a specific period. You could then create a rollup query to show invoices that are owned by a person, or raised for customers in a territory.

You can only query one entity type in a query, but the query builder helps you make a query as simple or as complex as you need. As you fine-tune your query, you can test the results.

More information: Create or edit a rollup query

Set targets

You can specify a target value for each goal for measuring the results of the goal rollup, and you can also specify a stretch target for each goal. A target revenue goal for one product line might be $100,000, with a stretch target of $120,000.

More information: Create or edit goals

Set time periods for goals

You can set a fiscal period, such as a quarter or year, or a custom period, such as a campaign or sales event.

If your organization merges with another organization that uses different time periods, you can change yours to match with the new organization.

Changing a fiscal year or fiscal period does not automatically change the dates for the goals; you will need to update them to show the new dates as a separate step.

More information: Create or edit goals

Monitor goals

You can monitor goals using the business intelligence tools in Dynamics 365.

You can set up a customized dashboard to list goals you track, or a report that has a complete view of a team's goal and performance toward it.

Understand goals and security roles

User roles limit what each user can see, depending on what type of access they have and what kinds of records they need to view. Dynamics 365 allows you to set security on an entity or on a specific field. This helps to keep access to information from users who should not see it.

Setting goals is typically a multi-layered process in which child goals roll up into parent goals. A user might create a goal using entities or fields that the user is restricted from viewing, or they might be able to add child goals that include entities or fields they can not view.

For example, User One creates a goal that references a restricted entity that User One has permission to view. User Two cannot view this entity in User One's goal, but can

create a parent goal that includes it. When User Two rolls up the parent goal's results, User Two sees aggregated rollup data that includes data from the restricted entity, but still cannot see User One's restricted data by itself.

System Settings Goals tab

Article • 02/15/2022

Set the duration and frequency of the automatic rollup of goals. These settings only affect the automatic handling of all goals set in customer engagement apps (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation). You can always perform a manual rollup for any goal at any time.

1. Make sure that you have the System Administrator or System Customizer security role or equivalent permissions.

   Check your security role

   - Follow the steps in View your user profile.
   - Don't have the correct permissions? Contact your system administrator.

2. If you are using a Sales web application, go to **Settings** > **Administration** > **System Settings**, and then select the **Goals** tab.

   OR

   If you are using the Sales Hub App, select the Site map icon , then select ellipsis , then select **App Settings**, and then select **Goals Settings**.

Settings	Description
Set the roll-up expiration time and the roll-up frequency.	
Days after the goal end date when the rollup will stop	Set the number of days after the ending date of a goal for model-driven apps in Dynamics 365 to stop including a goal in a rollup. **Default**: 30 days.
Roll-up recurrence frequency	Set the number of hours between each goal rollup. **Default**: 24 **Limits**: Must be greater than or equal to 24 hours

See also

Administrator and Sales Manager Guide

Progress Against Goals report

Create or edit goals

Article • 03/30/2022

Use goals to track your progress on achieving target revenue or other targets set by your organization. Propagate goals using parent and child goals.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

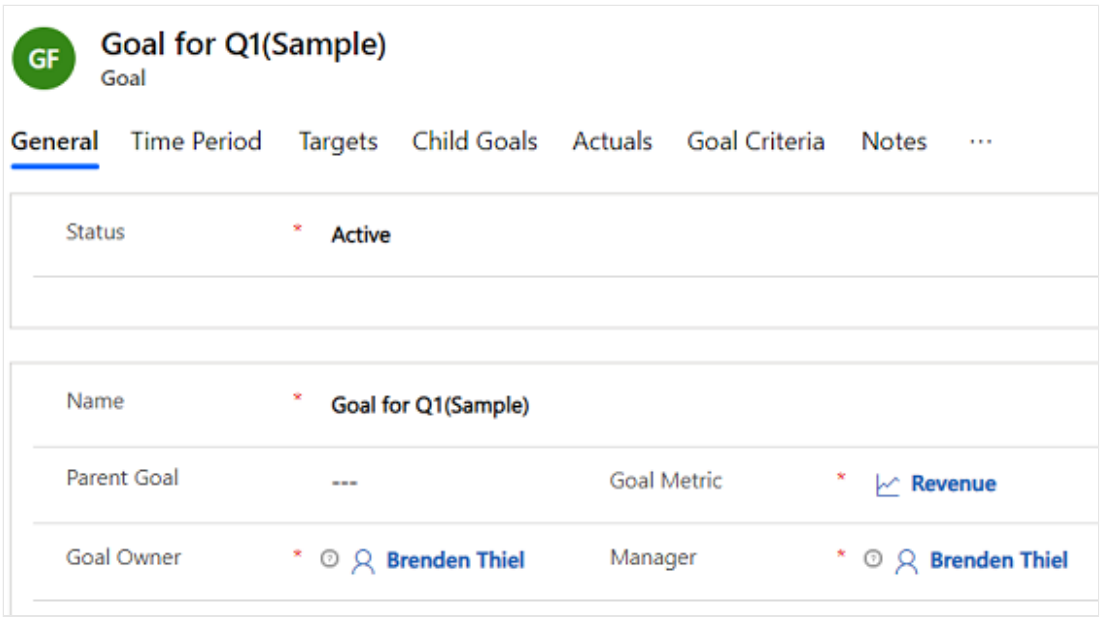
Create a goal

Use goals to keep track of your progress on achieving target revenue.

1. Make sure that you have the System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager security role or equivalent permissions.
2. Select the site map icon , and then select **Goals**.
3. On the command bar, select **New**.
4. Fill in your information. Use the handy tooltips as a guide.
    - Name. Type a name that describes the goal.
    - Parent Goal. If this goal is a child goal of another goal, select that goal as a parent goal here.
    - Goal Metric. Choose how the goal will be tracked by selecting a metric for the goal.

      > **Note**
      >
      > If you select a parent goal for this goal, you can't select a goal metric. It is automatically populated from the parent goal.

- Goal Owner. Select the user or team responsible for meeting the goal.

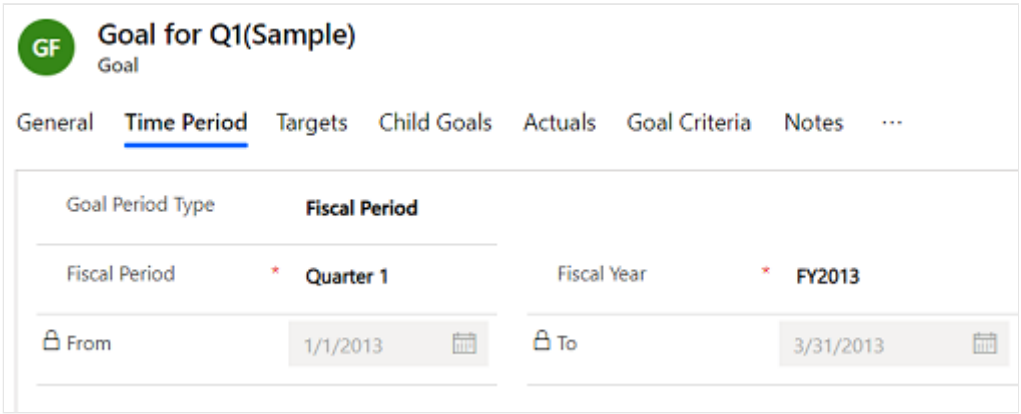


5. Select **Save**.

6. On the **Time Period** tab, specify whether the goal period is a fiscal period or a custom period.

   - If **Goal Period Type** is **Fiscal Period**, select a fiscal period and fiscal year for which the goal is tracked.

   - If **Goal Period** Type is **Custom Period**, select a date in the From and To fields to define a custom period for which the goal is tracked.



> **Note**
>
> If this goal has a parent goal, you can't specify the time period for the goal. It is automatically populated from the parent goal.

7. On the **Targets** tab, specify a target value against which the results of the goal rollup are measured. The target type depends on the **Amount Data Type** selected

for the goal metric that you chose for this goal. You will see one of the following fields:

- **Target (Decimal)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data Type** is **Decimal**.
- **Target (Money)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data** Type is **Money**.
- **Target (Integer)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data** Type is **Integer** or if the goal **Metric Type** is **Count**.

8. If the goal metric you are using has **Track Stretch Target** selected, you will also see one of the following fields:
   - **Stretched Target (Decimal)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data Type** is **Decimal**.
   - **Stretched Target (Money)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data Type** is **Money**.
   - **Stretched Target (Integer)**. Required. This field is available if the goal **Metric Type** is **Amount** and the **Amount Data Type** is **Integer** or if the goal Metric Type is **Count**.
9. To add an existing goal as a child goal of this goal, on the **Child Goals** tab, select the **Add Existing Goal** button.
10. The **Actuals** tab shows the actual value achieved towards the target as of the last rolled-up date:
    - **Actual (Money)**. If the goal metric uses **Money** as the **Amount Data Type**, this field shows the total amount of money achieved towards the goal as of the last rolled-up date.
    - **In-progress (Money)**. If the goal metric uses **Money** as the **Amount Data Type**, this field shows the amount of money achieved towards the goal since the last time the actuals were calculated.
    - **Percentage Achieved**. If the goal metric is **Decimal** or **Integer**, this field shows the percentage of the goal that is complete as of the last rolled-up date.

- **Last Rolled Up Date**. This field shows the last date and time that the actuals were recalculated.

11. On the **Goal Criteria** tab, define the criteria that will be used for rolling up the Actuals data against the goal.

    - **Roll Up Only From Child Goals**. If you want to limit the data used for the roll up to only child goals, select **Yes**. To allow other data to be used for the roll ups, select **No**.

    - **Record Set for Rollup**. If you want to limit the records that can be included in the roll up to only those records owned by the goal owner, select **Owned by goal owner**. To allow all records to be included in the roll up data, select **All**.

12. On the **Notes** tab, enter any notes for this goal.

13. Select **Save** or **Save & Close**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit a goal rollup query

Define a goal metric

Article • 03/30/2022

Measure goals in terms of count or amount, depending on what you're measuring. Use rollup fields to track progress on the goals.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Sales Manager or Vice President of Sales More information: Predefined security roles for Sales

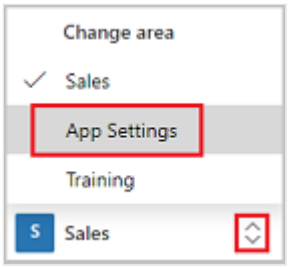
What are goal metrics?

Goal metrics let you clearly define how a goal will be measured. For example, a sales team's performance can be measured based on the number of leads they get or the revenue amount. There are two goal metric types: Amount and Count. The Amount metric type can be a money value, an integer, or a decimal number. The Count metric type is an integer. For example, you can use the Amount (money) goal metric to track the revenues from all active opportunities or sales orders. An integer type can be used to track sales calls made by a salesperson. A decimal number can represent a product sold by weight, such as grain or sugar.

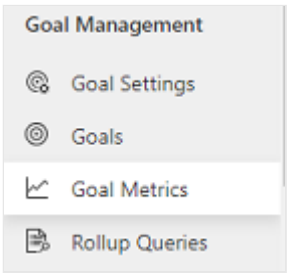
Create a goal metric

1. Make sure that you have the Manager, Vice President, CEO-Business Manager, System Administrator, or System Customizer security role or equivalent permissions.

2. In the site map, at the bottom, select the Change area icon , and then select **App Settings**.



3. Select **Goal Metrics**.



4. To create a new goal metric, on the command bar, select **New**.

5. Under **Step 1: Define the metric**, fill in the information:

   a. **Name**. Required. Enter a name between 1 and 100 characters.

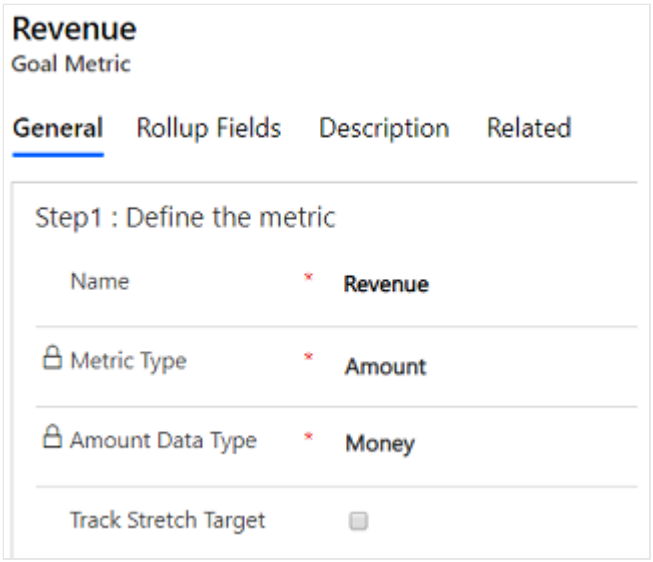
   b. **Metric Type**. Required. To track a monetary amount, select **Amount**. To track another type of amount, such as how many new contacts are added, select **Count**.

   > ⓘ Note
   >
   > After you save the goal metric, you will no longer be able to edit this field.

   c. **Amount Data Type**. Required. This option is not available if the you chose is **Count** as the **Metric Type** because Dynamics 365 Sales automatically sets the data type to integer.

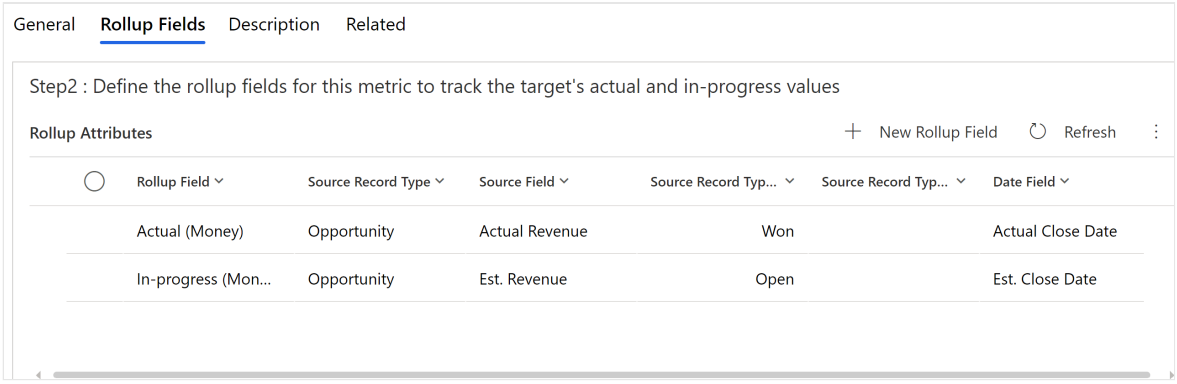
   > ⓘ Note
   >
   > After you save the goal metric, you will no longer be able to edit this field.

   d. **Track Stretch Target**. Select this check box if you want this metric to track an additional target beyond the primary goal.



6. Select **Save**.

7. On the **Rollup Fields** tab, define how you want to calculate the actual and in-progress values for this metric. For example, let's say your goal metric is based on revenue. You can define your rollup fields as shown in the following screenshot:



a. Select **Add New Rollup Field**.

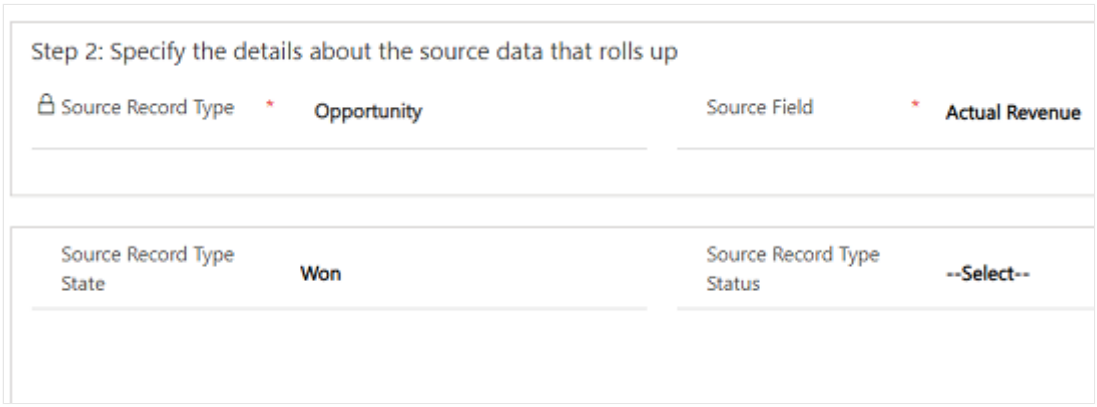
b. Complete the following fields:

- **Rollup Field:** Select the rollup field type. Select Actual, In-progress, or Custom rollup. Apart from the actual and inprogress values, you can track one more value as a **Custom Rollup Field**. For example, let's say you want to track the lost revenue as a third rollup.

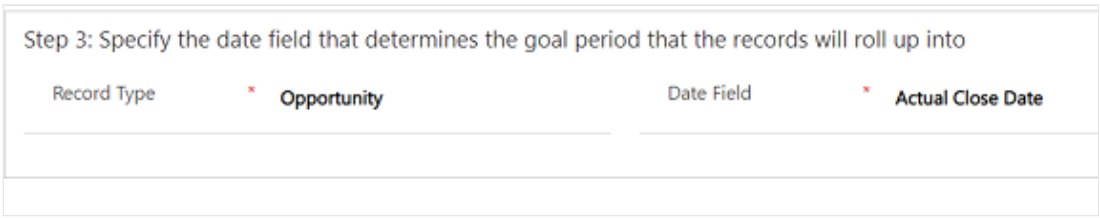
- **Source Record Type:** Select the record type to use as the source for the rollup data. Example: Opportunity.

> ⓘ **Note**
>
> Custom record types are not supported.

- **Source Field:** Select the field to use for calculating the rollup value. Example: Actual Revenue.
- **Source Record Type State:** Select the record state you want to use as the source of the rollup data for the metric. Example: Won.
- **Source Record Type Status:** Select the status of the records you want to use as the source of the rollup data for the metric. State and status may be identical, depending on the record type you selected.



- **Record Type:** Select the entity that contains the date field you want. Typically, you can only choose the same record type you selected as the Source Record Type.
- **Date Field**. Select a date field you want to use to determine the goal period that the records will roll up into. Example: Actual Close Date.



e. Select **Save & Close**.

8. On the **Description** tab, enter a description for the goal metric to enable other users to understand what metrics are being tracked.
9. Select **Save**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit goals
Define a goal rollup queries

Define goal rollup queries (Sales Hub)

Article • 03/30/2022

Use rollup queries to specify additional criteria that you want to apply on existing goal metrics. For example, you could create a goal metric that measures all invoices closed within a specific period. A rollup query could then show you invoices owned by one person, or for customers in one territory.

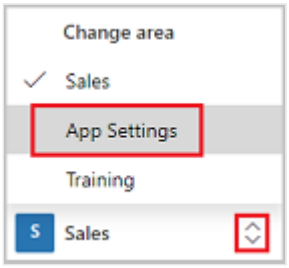
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Create a rollup query

1. Make sure that you have the Manager, Vice President, CEO-Business Manager, System Administrator, or System Customizer security role or equivalent permissions.

2. In the site map, select the Change area icon , and then select **App Settings**.



3. Select **Rollup Queries** under **Goal Management**.

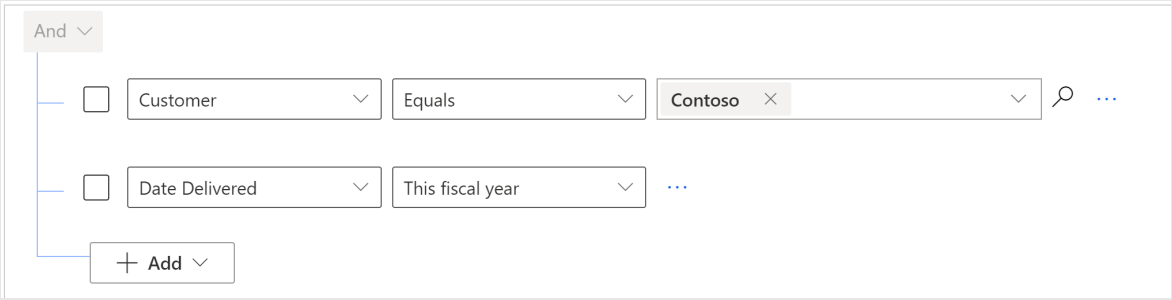
4. To create a new rollup query, on the command bar, select **New**.

5. In the **Entity Type** field, select the entity for the rollup query. For example, if you want the invoices for customers in a territory, select the Invoice entity.

> **Note**

If you change the entity type after you add your query criteria in the Query builder, the query criteria will be deleted.

6. In the Query builder, add the criteria for your query.



7. To see the results for the query, select **View records**.

8. Save the query.
   Now that the rollup query is created, you can apply it to the goals of individuals or teams who need to meet this specific criteria.

Apply rollup query to a goal

Rollup queries define additional criteria for a goal. Applying the rollup query to individual or team goal ensures that the goal metrics are calculated based on the additional criteria.

Follow these steps:

1. In the Sales Hub app, navigate to **Performance**, **Goals** in the left pane.

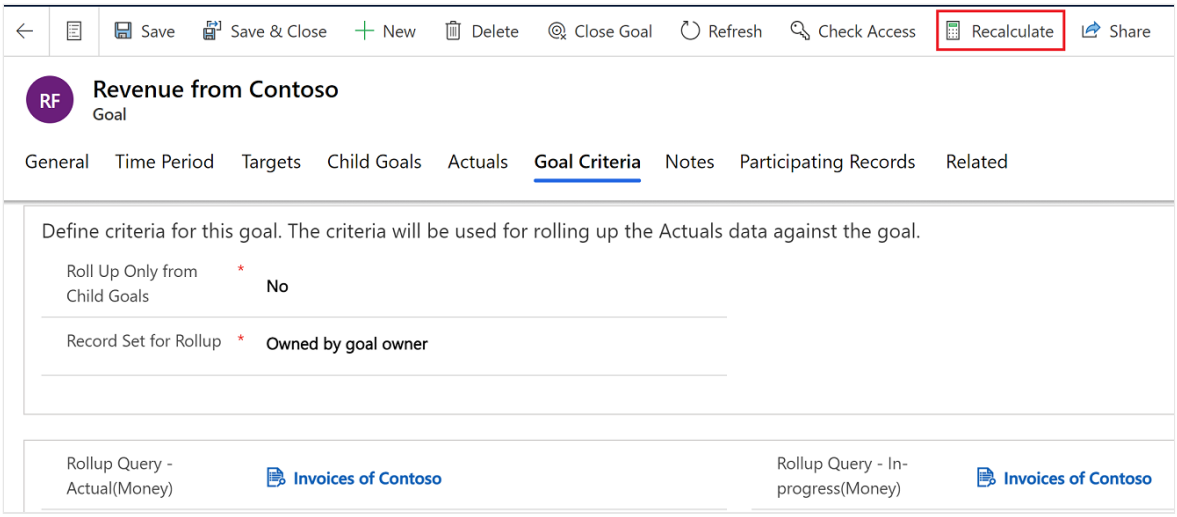
2. Open the goal to which you want to apply the rollup query.

3. (Optional) Select the **Actuals** tab and note down the values before applying the rollup query.
   This step helps in comparing the values after applying the rollup query.

4. Select the **Goal Criteria** tab.

5. Select the rollup query in the **Rollup Query - Actual** and **Rollup Query - In-Progress** fields.

6. Select **Recalculate** on the command bar and wait for the calculations. Calculation time depends on the complexity of the query and the volume of data.



> **Note**
>
> The goals are automatically rolled up depending on the rollup frequency set by your administrator. For more information, see **Define system settings from the Goals tab**.

7. Select the **Actuals** tab of the goal and verify the **Last Rolled Up Date** to ensure that the recalculated data is the latest.
   The **Percentage Achieved**, **Actual**, and **In-Progress** fields display the values after applying the additional criteria in the rollup query. For example, values for a specific customer.

> **Note**
>
> The maximum number of records that can be counted in a goal rollup query is 5000.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit goals
Define a goal metric

Configure the sales accelerator

Article • 09/30/2022

Enable and configure the sales accelerator to create sequences and connect records, and view daily work list items.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

How does the sales accelerator help a sales team?

The sales accelerator is an engagement platform that helps a sales team understand customers' needs and respond in the following ways:

- Engage with customers by using multiple channels within one workspace.
- Minimize the time spent on searching for the next best customer to reach out to.
- Gather information from multiple sources and let sellers focus on how to best approach their customers.
- Sell smartly by building a strong and prioritized pipeline, offering context, and surfacing automated recommendations throughout a sales sequence that helps to expedite the sales process.

> **Note**
>
> - To configure the sales accelerator for assignment rules with your Dynamics 365 Sales Enterprise license, go to **Configure sales accelerator for assignment rules**.

- You can also set up the sales accelerator through quick setup (with the Dynamics 365 Sales Enterprise license). In this case, you'll get 1,500 sequence-connected records per month. To set up sales accelerator through quick setup, go to the **Get started with digital sales** page under **App Settings**. More information: **Set up sales accelerator**

https://go.microsoft.com/fwlink/?linkid=2190823

Recommendations

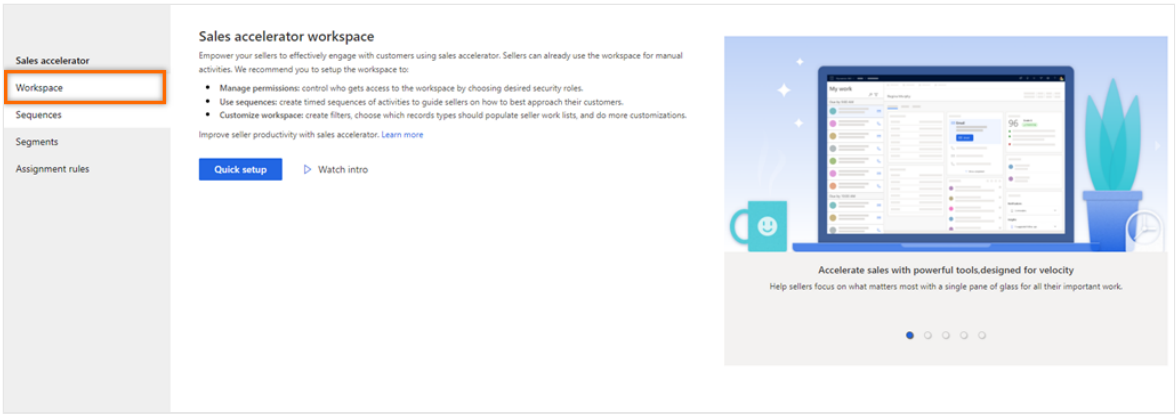
For the best experience of the sales accelerator, enable and configure predictive lead scoring and predictive opportunity scoring to display predictive scores for each record in the work list. Displaying the score helps your sellers to prioritize leads and opportunities based on how likely they're to be converted.

First-run setup

Enable the sales accelerator by quickly providing access to security roles and selecting the record types to be shown in the work list.

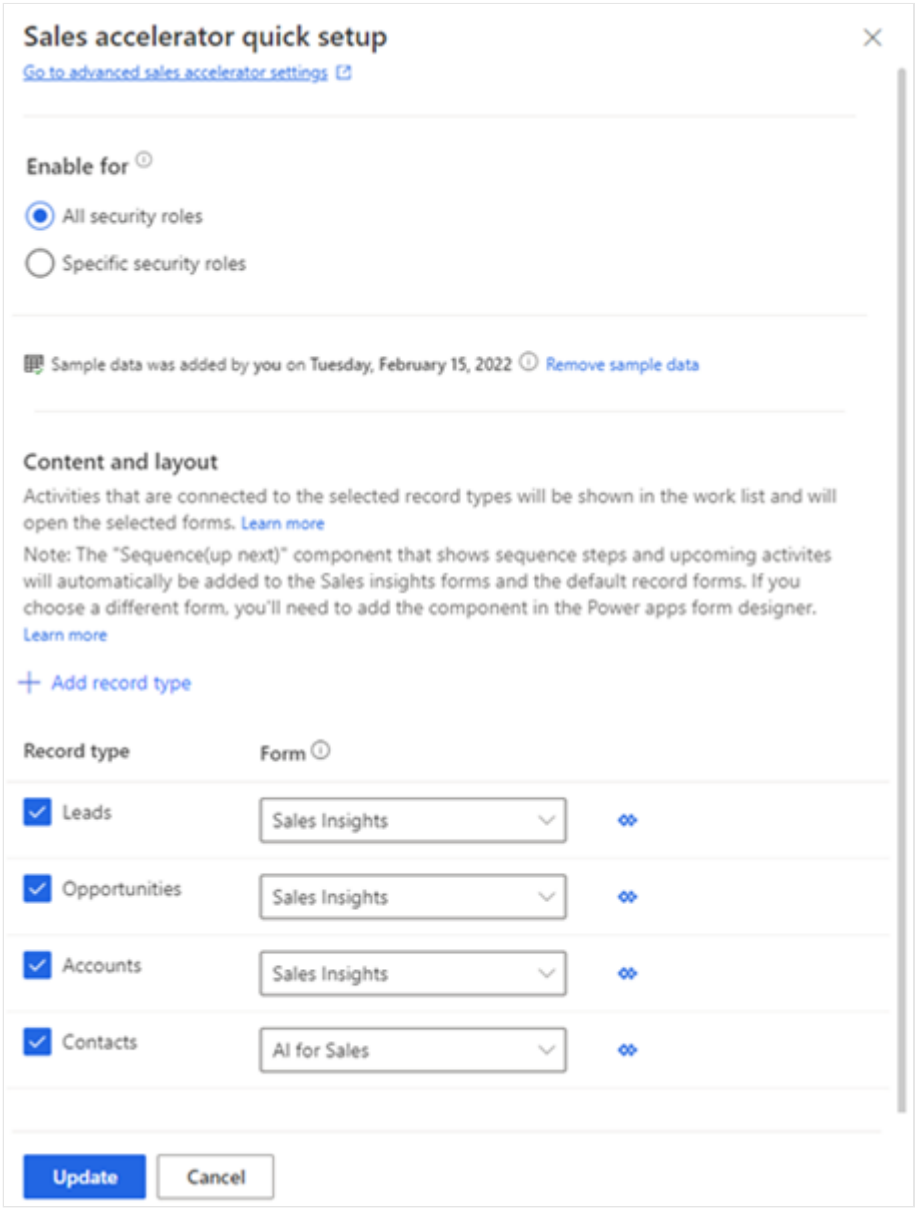
> **Note**
>
> By default, sales accelerator is available in the Sales Hub app with limited functionalities. Your Sales teams can view the work list items created through timeline for contact, opportunity, lead, and account records. To experience the full capabilities of sales accelerator, purchase the Sales Premium license and configure the features such as sequences and segments.

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. Under **Sales accelerator**, select **Workspace**.
   The sales accelerator workspace setup page opens.



3. Select **Quick setup**.

   The **Sales accelerator quick setup** pane opens.



4. In the **Enable for** section, select roles to grant permissions to use sales accelerator features. Choose one of the following options to grant permissions.

Security roles	Description
All security roles	Select this option to give access to view sales accelerator features to all the security roles in your organization.
Specific security roles	Select this option to specify security roles to give access to view the sales accelerator to just a few users. Use the lookup box to add the security roles.

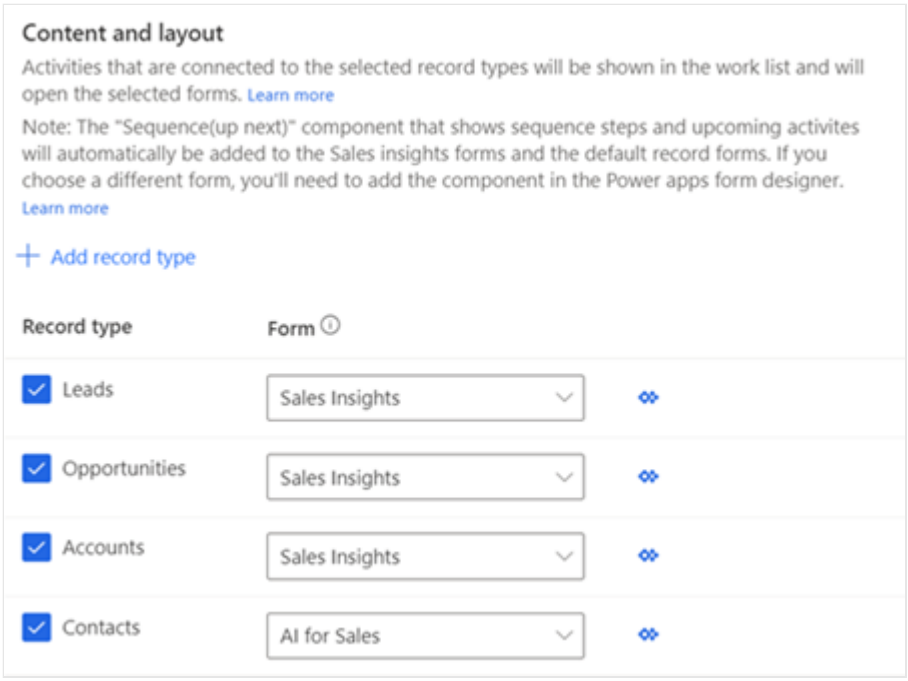
> **Note**
>
> To provide permissions for other user roles to create, edit, delete, connect, and disconnect sequences, see **Permission requirements to manage sequences**

5. (Optional) Select **Add sample data** to explore the sales accelerator feature with the provided sample data.

   Installing the sample data is relevant only for your sandbox or trial environments. Adding the sample data might take a few minutes. More information: Manage sample data

   > **Important**
   >
   > To prevent unwanted results, sample data is available only for non-production environments.

6. In the **Record type and form** section, select the record types and their corresponding related forms to view in the work list, as required by your organization. By default, leads, opportunities, accounts, and contacts are selected.



a. To add a record type, select **Add record type**, and then select the dropdown list to choose the records that you want to add.

b. From the dropdown list, choose a form to which you want to add the Sequence (up next) widget. Sales managers use the record types to configure the sequence that will be assigned to records to be displayed in the app.

> ⓘ Note
>
> - To view the custom records types in the list, go to **Settings** > **Customizations** > **Customize the System** > **Components** > **Entities**. Under **Communication & Collaboration**, enable the options **Activities**, **Connections**, and **Sending email (If an email field does not exist, one will be created)**.
> - To add the **Up next** widget to your custom entity form, see **Add the Up next widget to an entity form**.

c. Repeat steps a and b to add more record types.

> ⓘ Note
>
> - You can remove the record types that you no longer need to associate automated activities with. Select the **X** icon corresponding to the record type to remove it from the list. However, note that if the

records in the deleted record type are associated with a sequence, these records will continue to be associated with the sequence.

- To know how records are populated in the work list, go to **View my records by using the work list**.

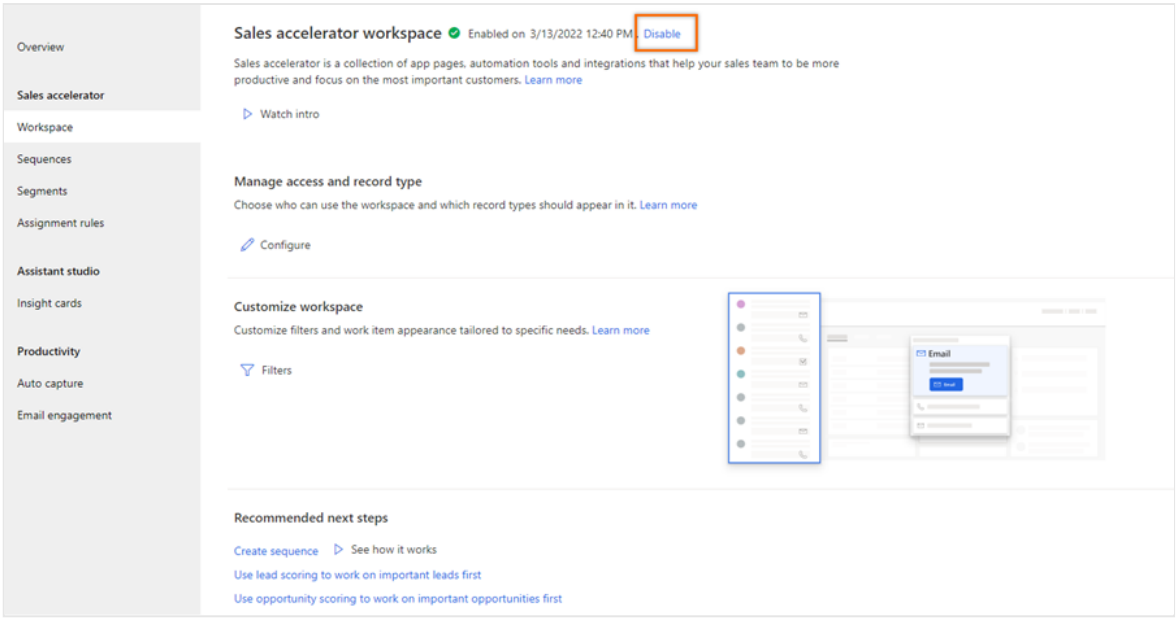
7. Select **Update**.

The sales accelerator workspace is enabled and ready to use in your organization. Now, you can customize the workspace by configuring filters, sort, and work item appearances. More information: Customize the workspace

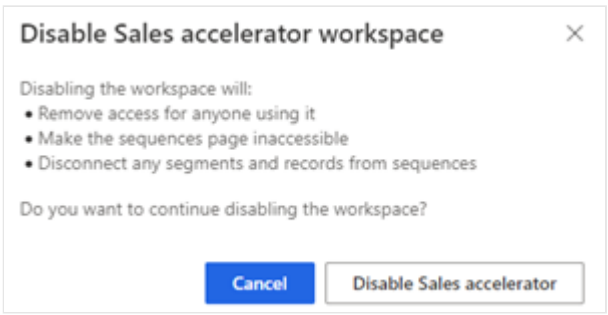
Disable sales accelerator

You can disable the sales accelerator workspace, if it's no longer required in your organization.

1. On the **Sales accelerator workspace** page, select **Disable**.



2. On the confirmation message, select **Disable Sales accelerator**.



The sales accelerator workspace is disabled in your organization. Also, sellers can't see the **Sales accelerator** sitemap entry under **My Work**.
To configure the sales accelerator, go to First-run setup.

Customizations

By default, the **Up next** widget is displayed on the **Default Main** and **Sales Insight** forms. To add the **Up next** widget to other forms, follow the process specified in How do I add the Up next widget to an entity form?

Learn more about how to add sales accelerator to the site map in your custom app.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

What is the sales accelerator?
Create and manage sequences
Configure sales accelerator settings for sellers to personalize
Manage access and record type
Customize the workspace

Manage access and record types

Article • 10/20/2022

Choose who can use the workspace and which record types should appear in the sales accelerator.

License and role requirements

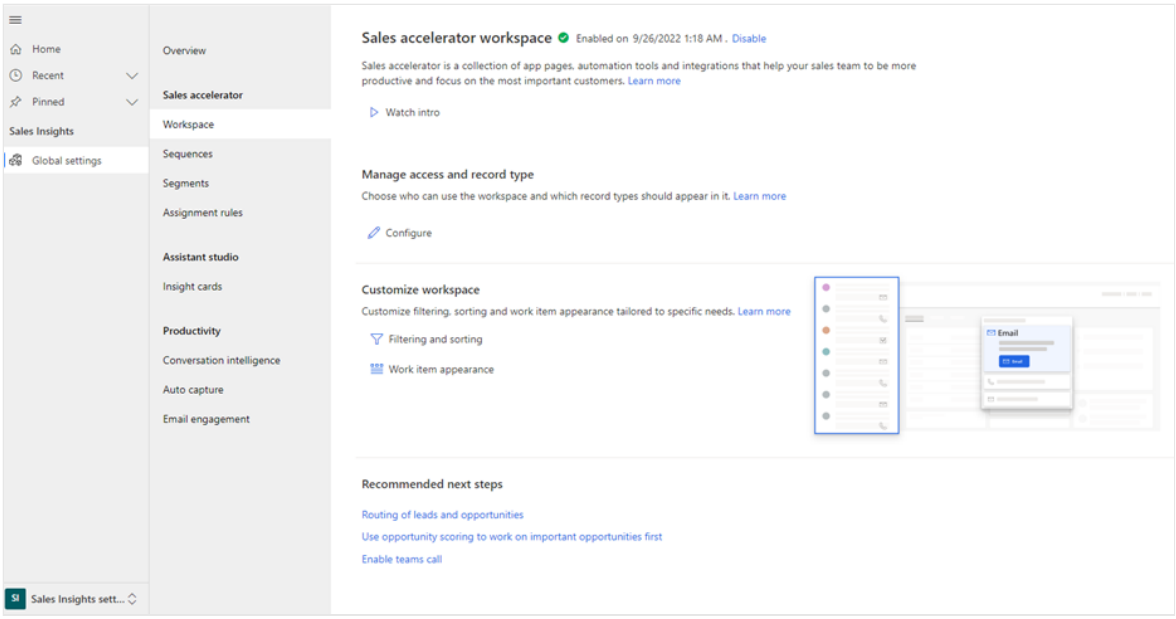
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Configure security roles, sample data, and record types

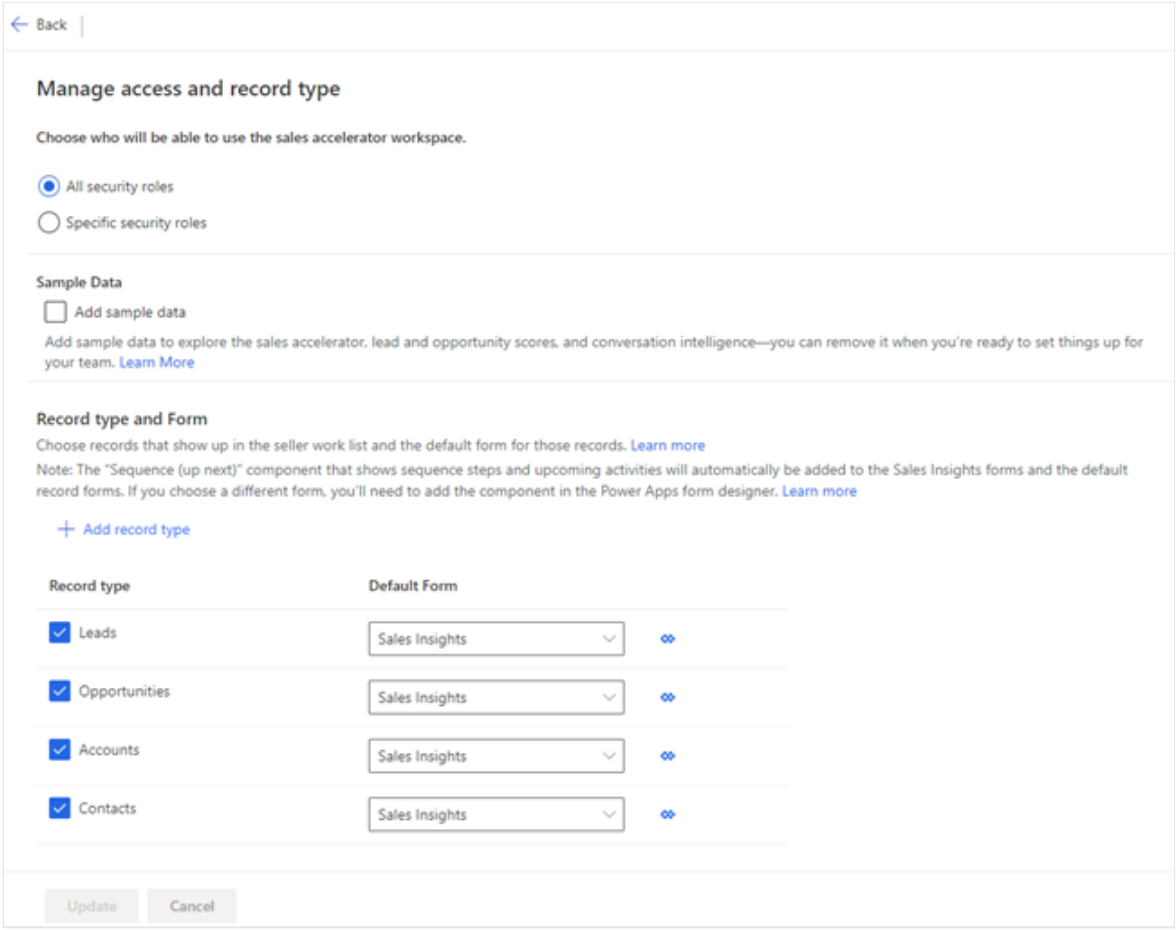
After the first-run setup of the sales accelerator, you can manage security roles, sample data, and record types.

1. Sign in to your sales app. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.

2. Under **Sales accelerator**, select **Workspace**.



3. In the **Manage access and record type** section, select **Configure**.



4. Update the information as required, and then select **Publish**.

   For more information, go to steps 5 through 7 in First-run setup.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

What is the sales accelerator?
Configure the sales accelerator
Customize the workspace

Customize the sales accelerator workspace

Article • 10/20/2022

Customize the sales accelerator workspace by configuring filters, sorting, and the appearance of work items.

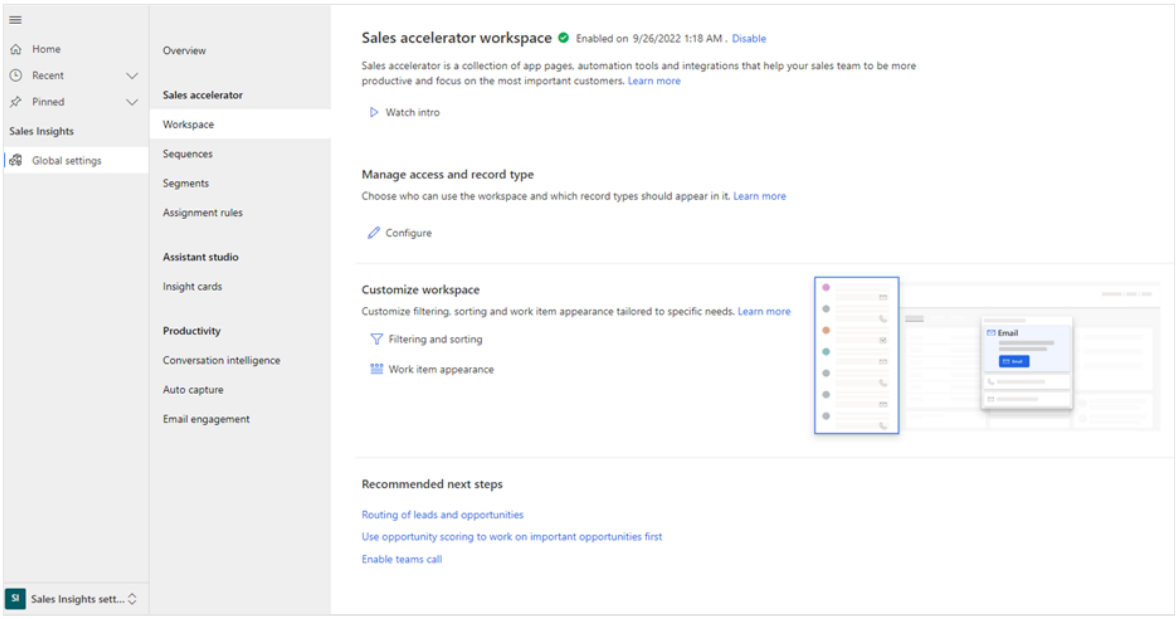
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Customize the workspace for sellers

After the first-run setup of the sales accelerator, you can customize the workspace to meet your sellers' needs. For example, if sellers want to filter work items based on currency type for leads, add a filter with the record type **Lead** and the field **Currency**. Learn how sellers can use custom filters.

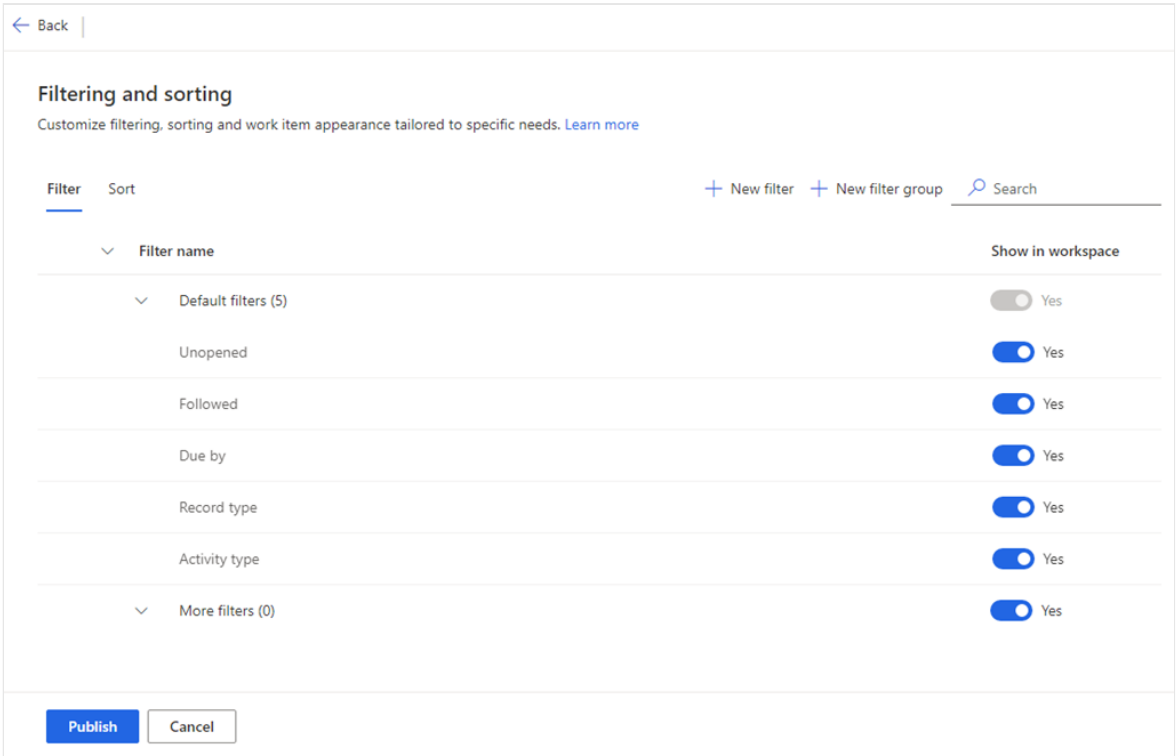
1. Sign in to the Sales Hub app. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. Under **Sales accelerator**, select **Workspace**.



3. In the **Customize workspace** section, select **Filtering and sorting**.

   The **Filters** page opens. Here you can do the following tasks:

   - Manage filters
   - Manage sorting



Manage filters

Filters help your sellers target specific work items in the sales accelerator workspace. In the **Filter** tab of the **Filtering and sorting** page, you can:

- Add basic and advanced filters

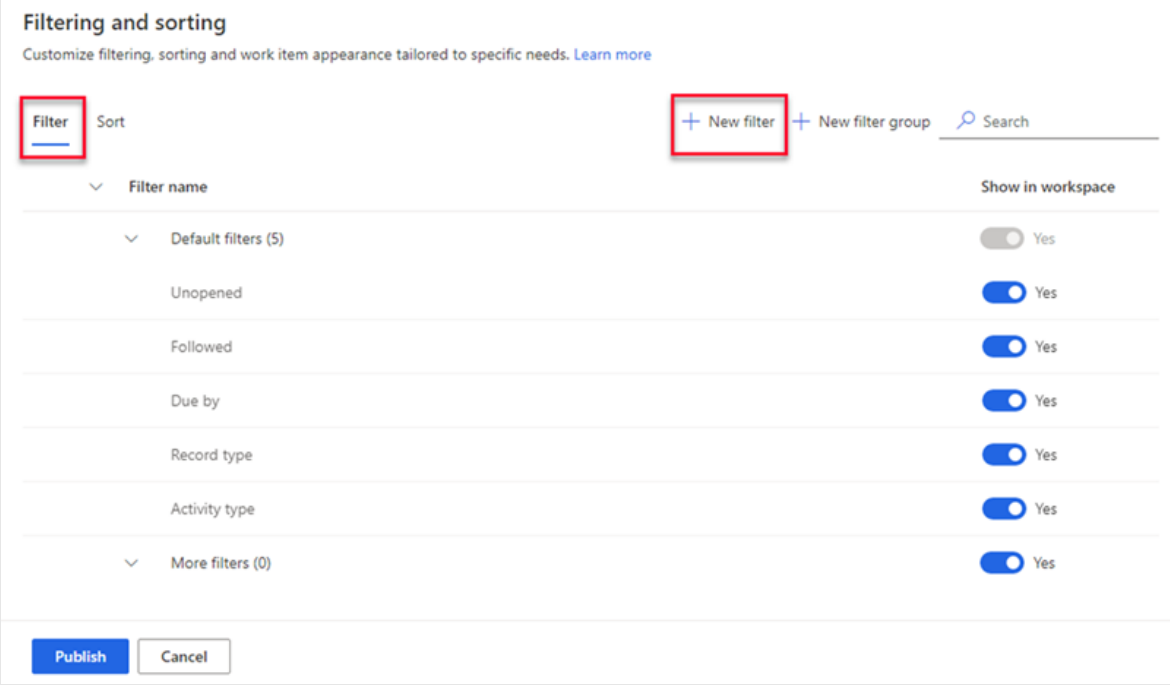
- Add groups
- Hide filters
- Edit custom filters and groups
- Move filters to a group
- Delete custom filters and groups

Add basic and advanced filters

You can create two types of filters:

- **Basic filters**: Filters based on simple expressions
- **Advanced filters**: Filters based on complex expressions that combine multiple fields using the AND operator

1. In the **Filter** tab, select **New filter**.

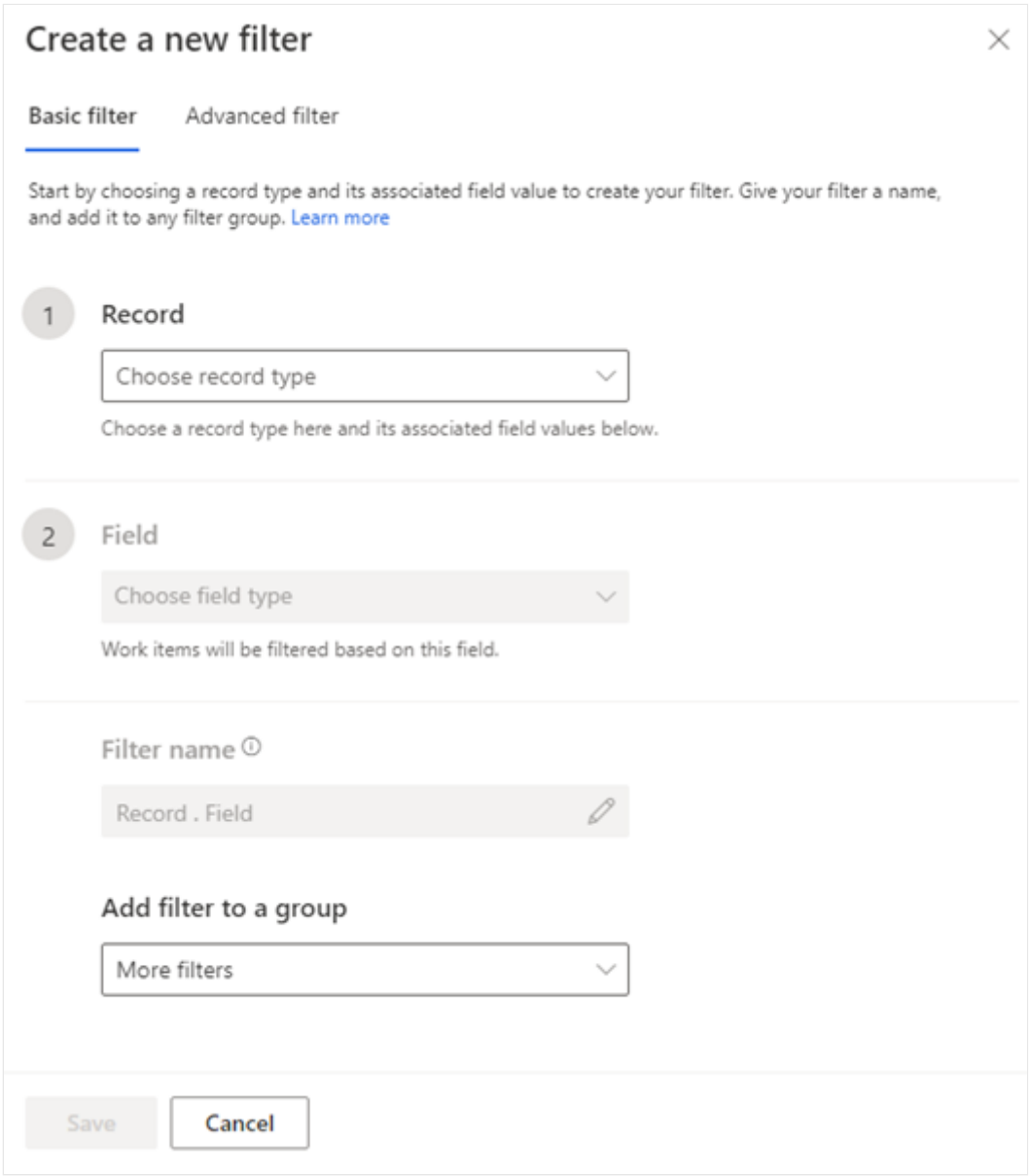


2. In the **Create a new filter** pane, select the following options as required.

   - **For a basic filter**, enter the following information:

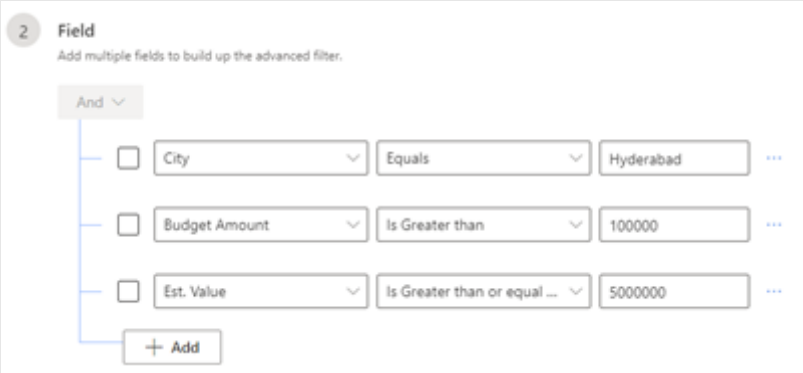
Parameter	Description
Record	Select the type of record that you want to use to filter the work list. You can select only the record types that you added during the content and layout configuration when you set up the sales accelerator. For more information, go to step 7 in First-run set up. The parameters **Field** and **Filter name** won't be active until you choose the record type.

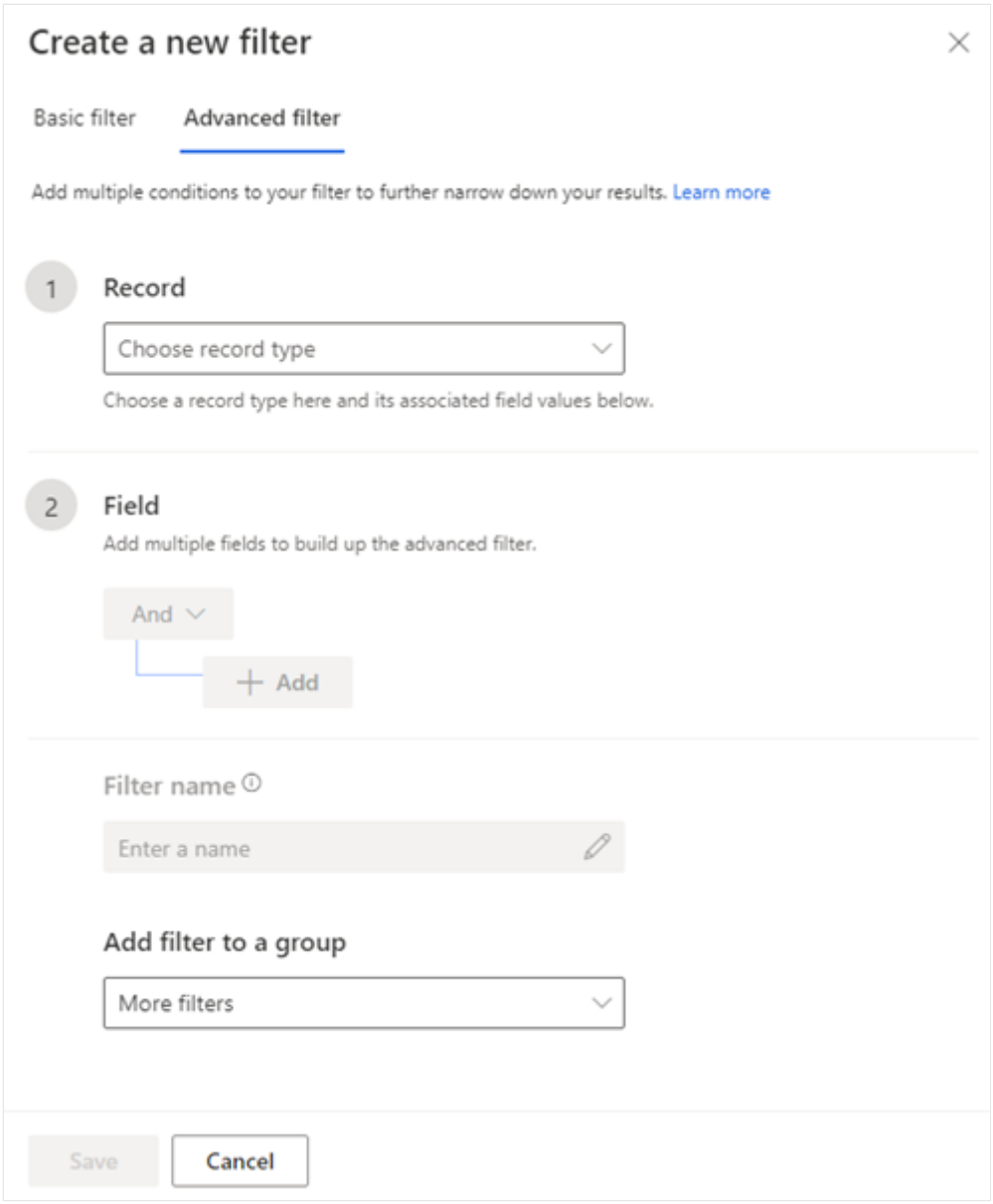
Parameter	Description
Field	Select the field that you want to use to filter the work list. The fields in the list are the basic attributes of the record type you selected.
Filter name	Enter a name for the filter. By default, the name is *record type.field*; for example, **Lead.Currency**.
Add filter to a group	Select a group to add the filter to. Grouping filters helps sellers to easily identify and apply them. If you don't select a group, the filter is added to the default **More filters** group. Learn how to add groups.



- **For an advanced filter**, select the **Advanced filter** tab and enter the following information:

Parameter	Description

Parameter	Description
Record	Select the type of record that you want to use to filter the work list. You can select only the record types that you added during the content and layout configuration when you set up the sales accelerator. For more information, go to step 7 in First-run set up. The parameters **Field** and **Filter name** won't be active until you choose the record type.
Field	Select **Add**. In the field options, select the field, operator, and value. To filter the work list on multiple fields using the AND operator, select **Add** and enter more filter conditions. The fields in the list are the basic attributes of the record type you selected. The following screenshot is an example of an advanced filter with multiple fields: 
Filter name	Enter a name for the filter.
Add filter to a group	Select a group to add the filter to. Grouping filters helps sellers to easily identify and apply them. If you don't select a group, the filter is added to the default **More filters** group. Learn how to add groups.



3. Save and publish the filter.

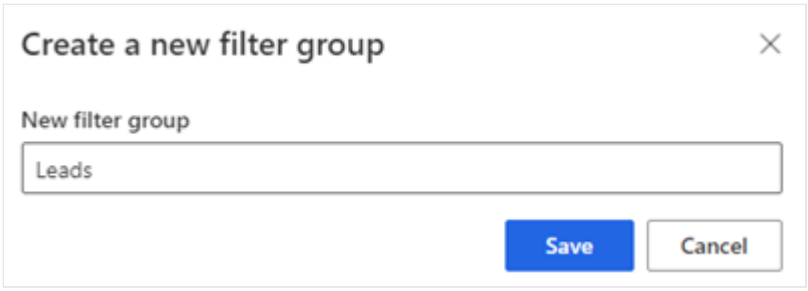
Add groups

Filter groups allow you to organize filters so that sellers can easily identify them.

1. Use one of the following methods to create a filter group:

    - In the **Filter** tab, select **New group**.
    - While creating a filter, in the **Add filter to a group** list, select **Create a new filter group**.

2. Under **New filter group**, enter the name of the new group.

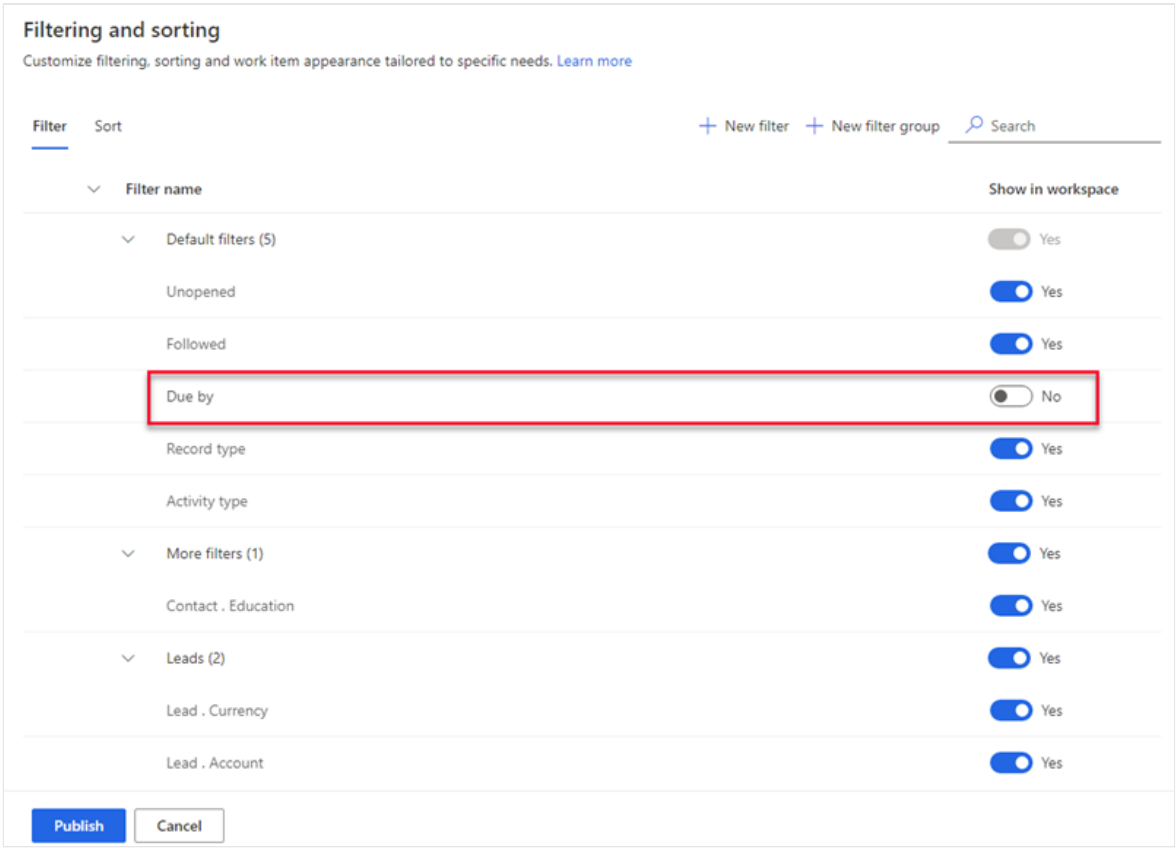


3. Save and publish the group.

Hide filters

You can hide any filter to prevent it from appearing in the filter list. You can hide an entire group of filters, too.

1. In the **Filter** tab, under **Show in workspace**, turn off the filter or group you want to hide.



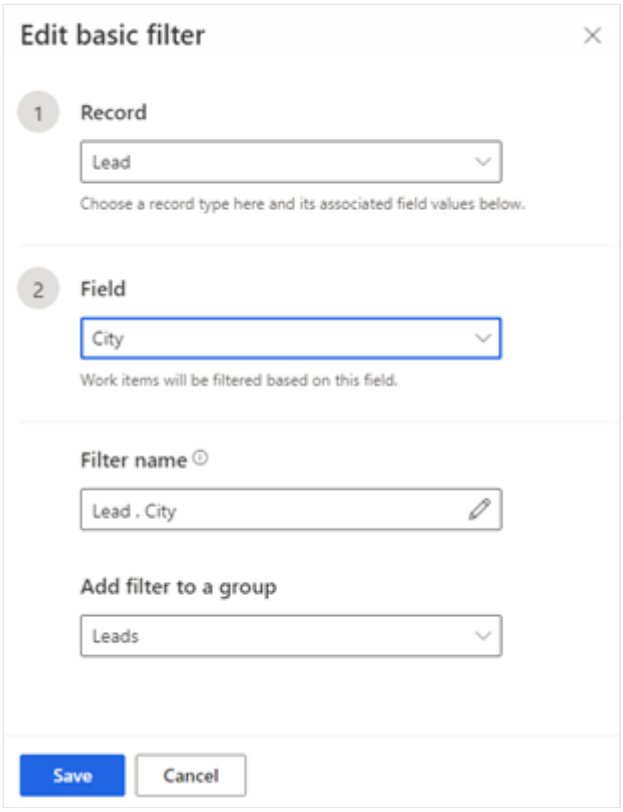
2. Select **Publish**.

The filter is hidden from the list that sellers use. However, the filter is still available in the application and you can turn it on again at any time.

Edit custom filters and groups

You can edit filters and groups that you created. You can't edit the out-of-the-box filters that are listed under the **Default filters** group.

1. In the **Filter** tab, hover over the filter or group and select **More options** > **Edit** (✎).

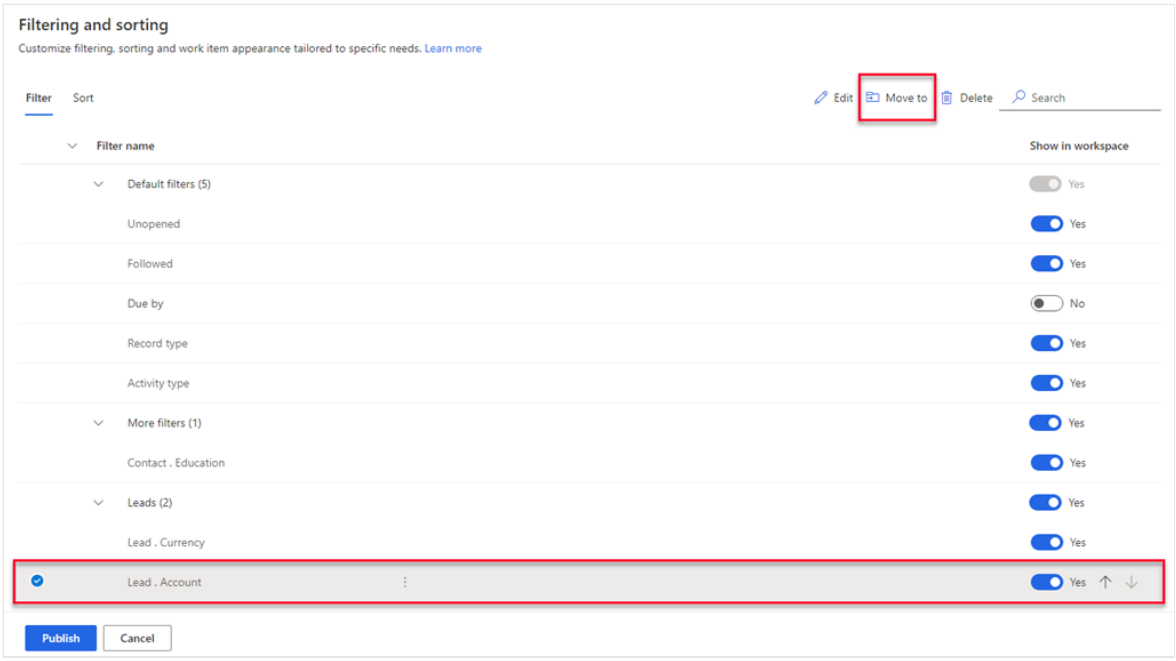


2. Update the filter as required, and then save and publish.

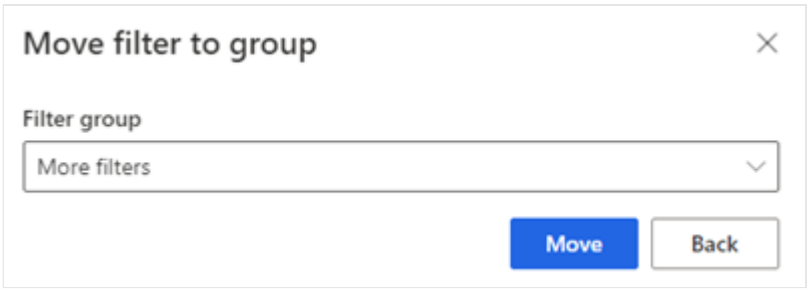
Move filters to a group

You can move filters that you created to a different group. You can't move the out-of-the-box filters to a custom group or move custom filters to the **Default filters** group.

1. In the **Filter** tab, select the filter, and then select **Move to** (📁).



2. In the **Filter group** list, select the group you want to move the filter to.



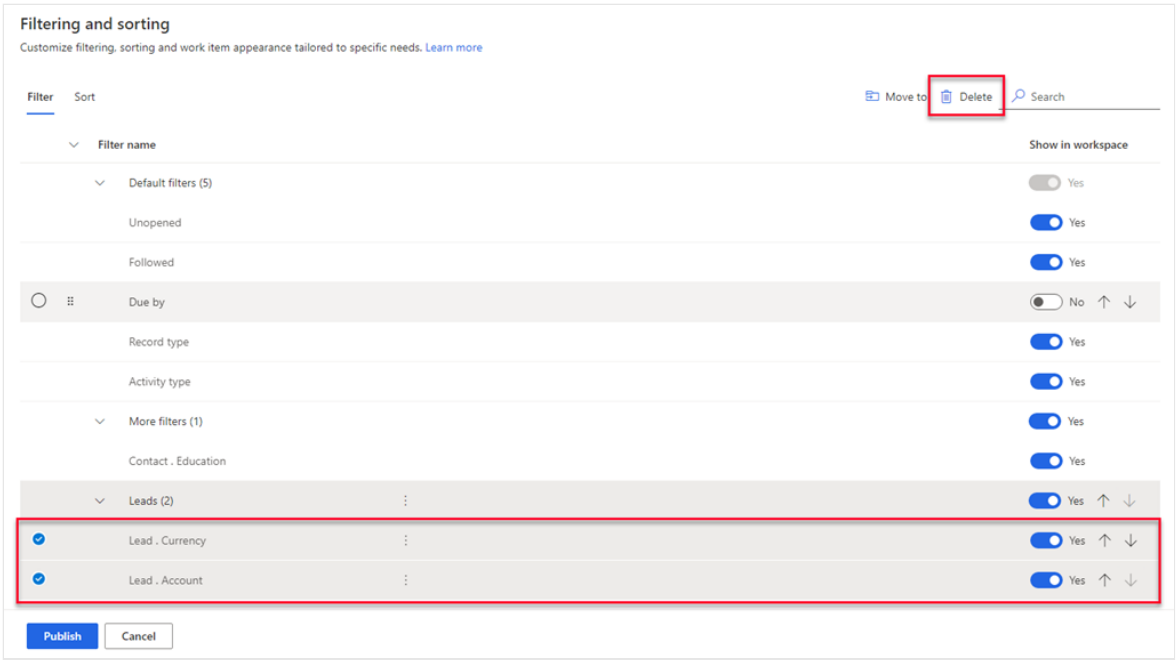
3. Select **Move** and then publish the filter list.

Delete custom filters and groups

You can delete filters and groups that you created if your organization no longer needs them. You can't delete the filters that are available out-of-the-box under the **Default filters** group.

> ⓘ **Note**
>
> When you delete a group, all filters in the group are also deleted.

1. In the **Filter** tab, select one or more filters or groups.
2. Select **Delete** (🗑).



3. In the confirmation message, select **Delete permanently**.

4. Select **Publish**.

Manage sorting

Sorting determines the order in which sellers view their work items. By default, sellers can sort work items by activity type, due date, name, record type, score, and sequence name.

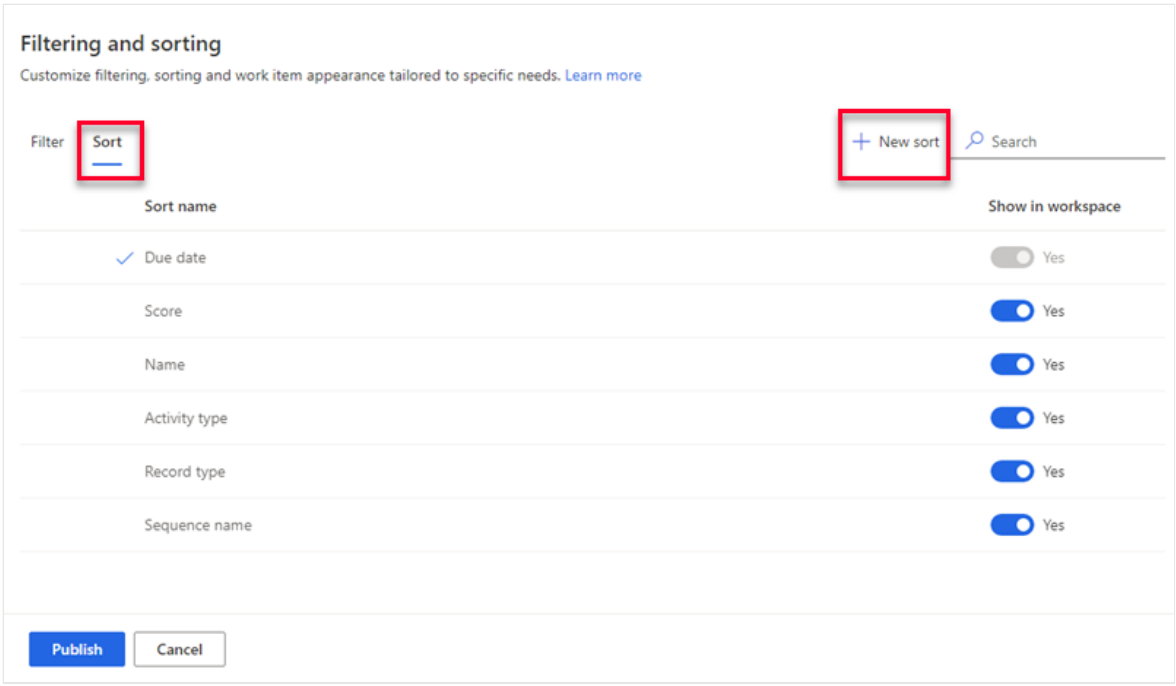
In the **Sort** tab of the **Filtering and sorting** page, you can:

- Add a custom sort
- Choose a sort type as the default
- Edit a sort type
- Hide a sort
- Change the sort order
- Delete a sort

Add a custom sort

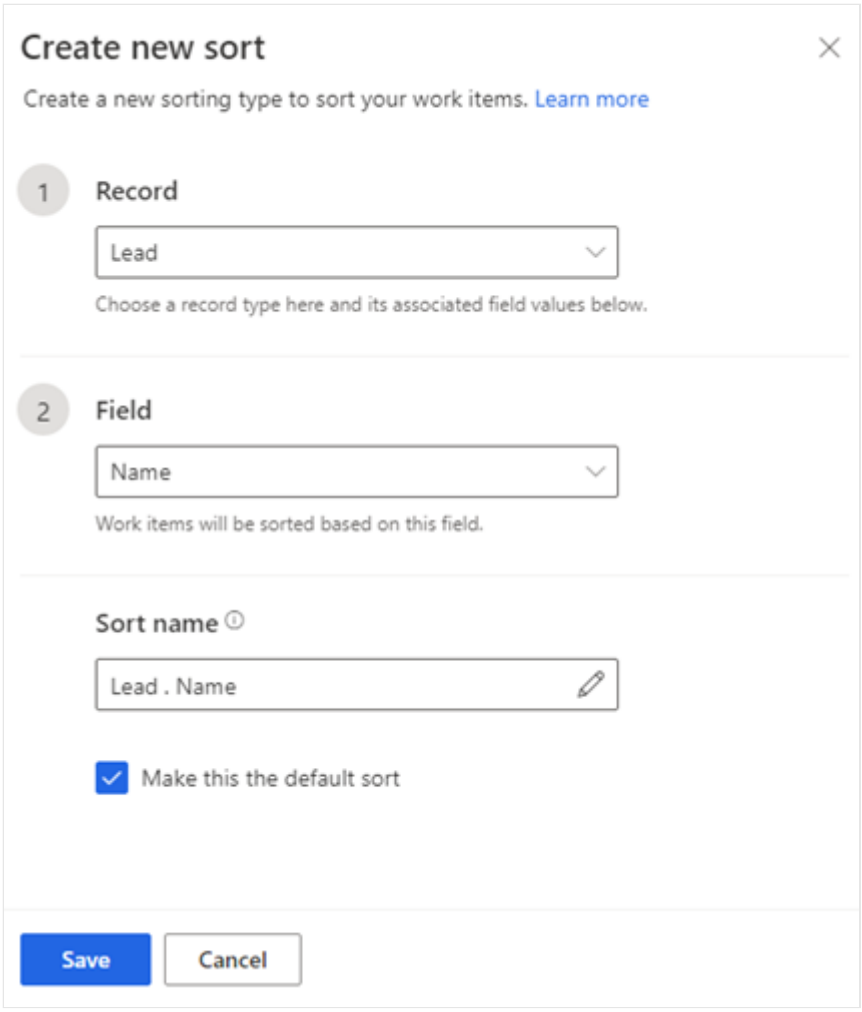
You can create sorts based on your sellers' requirements.

1. In the **Sort** tab, select **New sort**.



2. In the **Create new sort** pane, enter the following information as required.

Parameter	Description
Record	Select the type of record that you want to use to sort the work list. You can select only the record types that you added during the content and layout configuration when you set up the sales accelerator. For more information, go to step 7 in First-run set up. The parameters **Field** and **Sort name** won't be active until you choose the record type.
Field	Select a field to use to sort the work list. The fields in the list are the basic attributes of the selected record type.
Sort name	Enter a name for the sort. By default, the name is *record type.field*; for example, **Lead.Name**.
Make this the default sort	Select this option to make this sort the default for the work list when sellers open the sales accelerator.

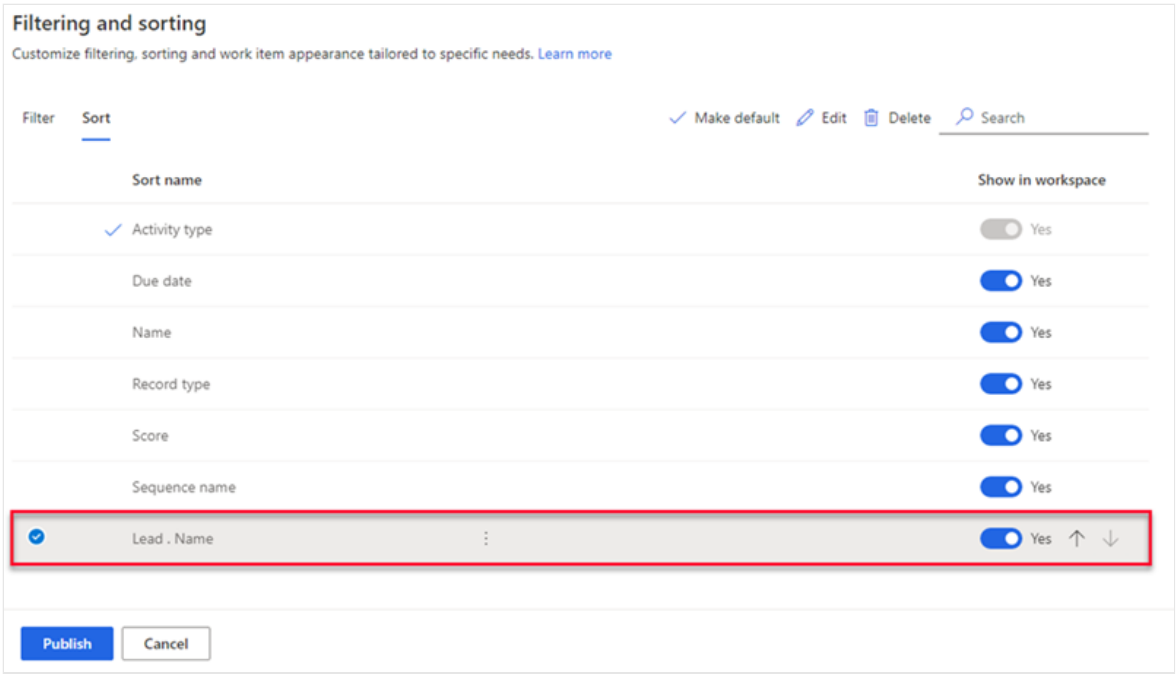


3. Select **Save**.

Choose a sort type as the default

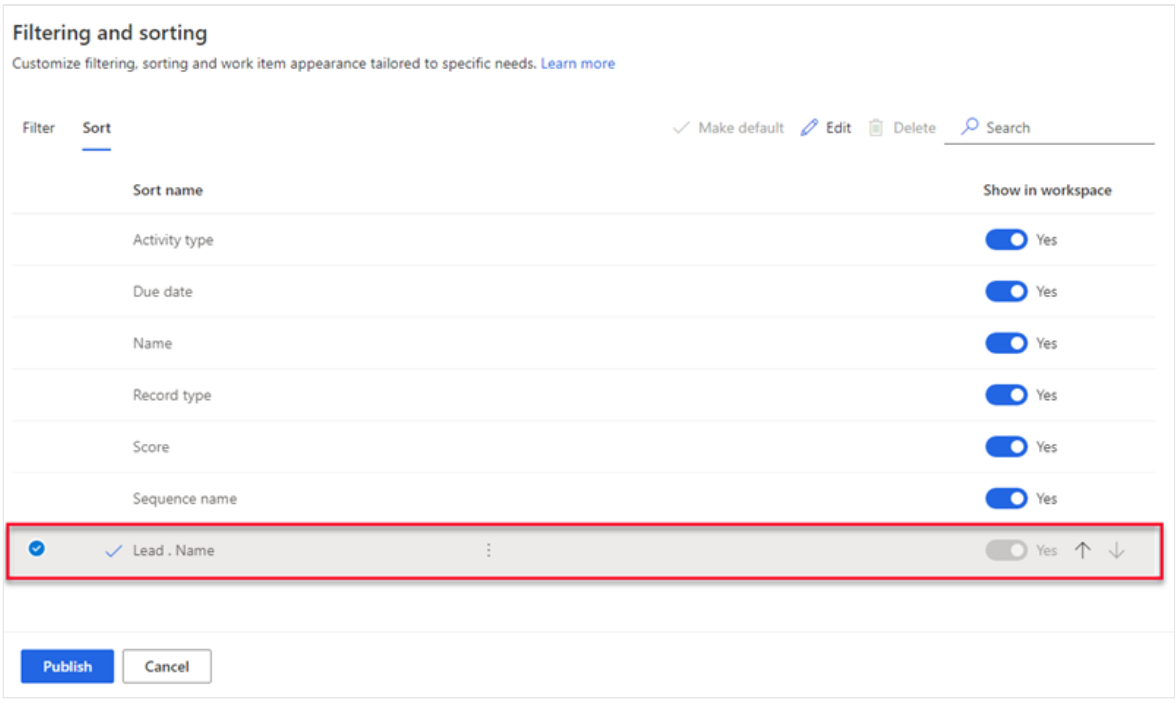
You can choose a sort as the default for work items when sellers open the sales accelerator workspace. You can edit, but not delete or hide, a default sort type. A check mark indicates the default sort type.

1. In the **Sort** tab, select the sort type that you want to set as the default.



2. Select **Make default**.

> **Note**
>
> You can also hover over a sort type and select **More options** > **Make default**.



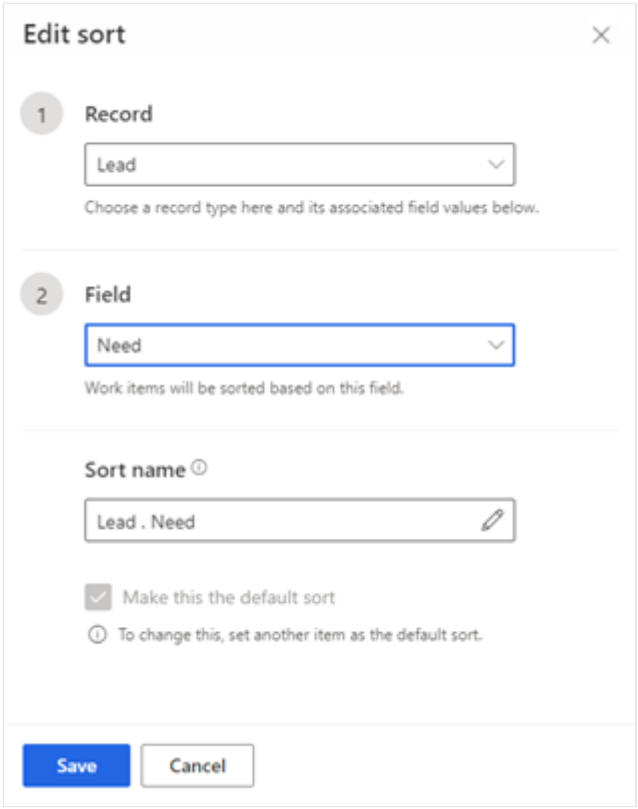
3. Select **Publish**.

Edit a sort type

You can edit sort types that you created. You can't edit the out-of-the-box sort types.

1. In the **Sort** tab, select the sort type, and then select **Edit**.

> **Note**
>
> You can also hover over the sort type and select **More options** > **Edit** ( ).

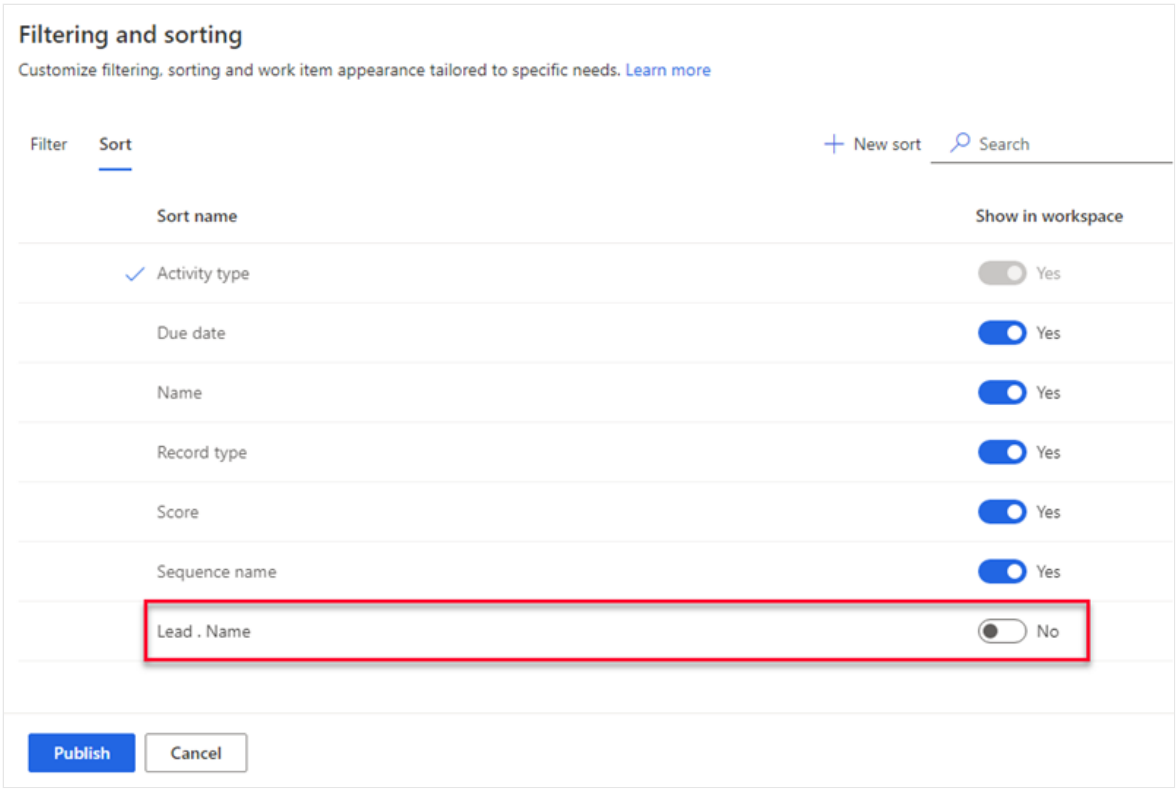


2. Update the sort as required, and then save and publish.

Hide a sort

You can hide a sort to prevent it from appearing in the sort list. You can't hide the default sort type.

1. In the **Sort** tab, under **Show in workspace**, turn off the sort you want to hide.



2. Select **Publish**.

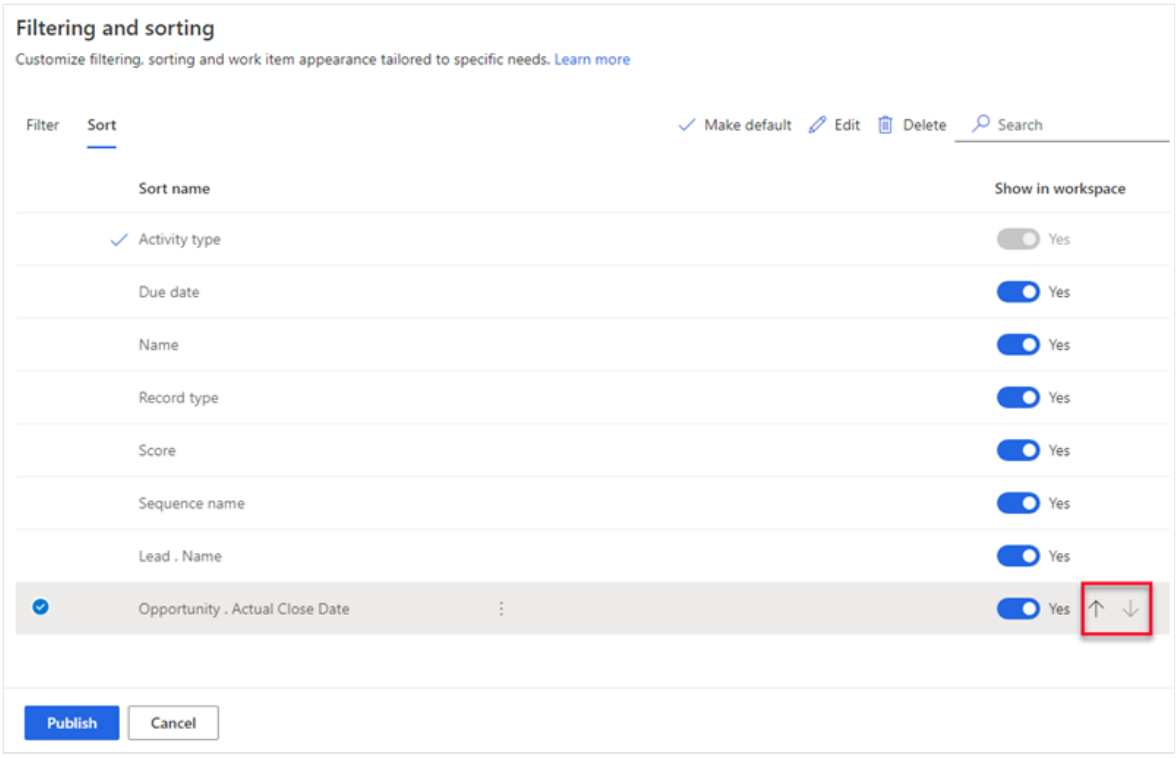
The sort is hidden from the list that sellers use. However, the sort is still available in the application and you can turn it on again at any time.

Change the sort order

You can arrange the list of sort types in the order you want them to appear to sellers when they open the sales accelerator workspace.

1. In the **Sort** tab, select a sort type.

2. Use the up and down arrows to change its position in the list.



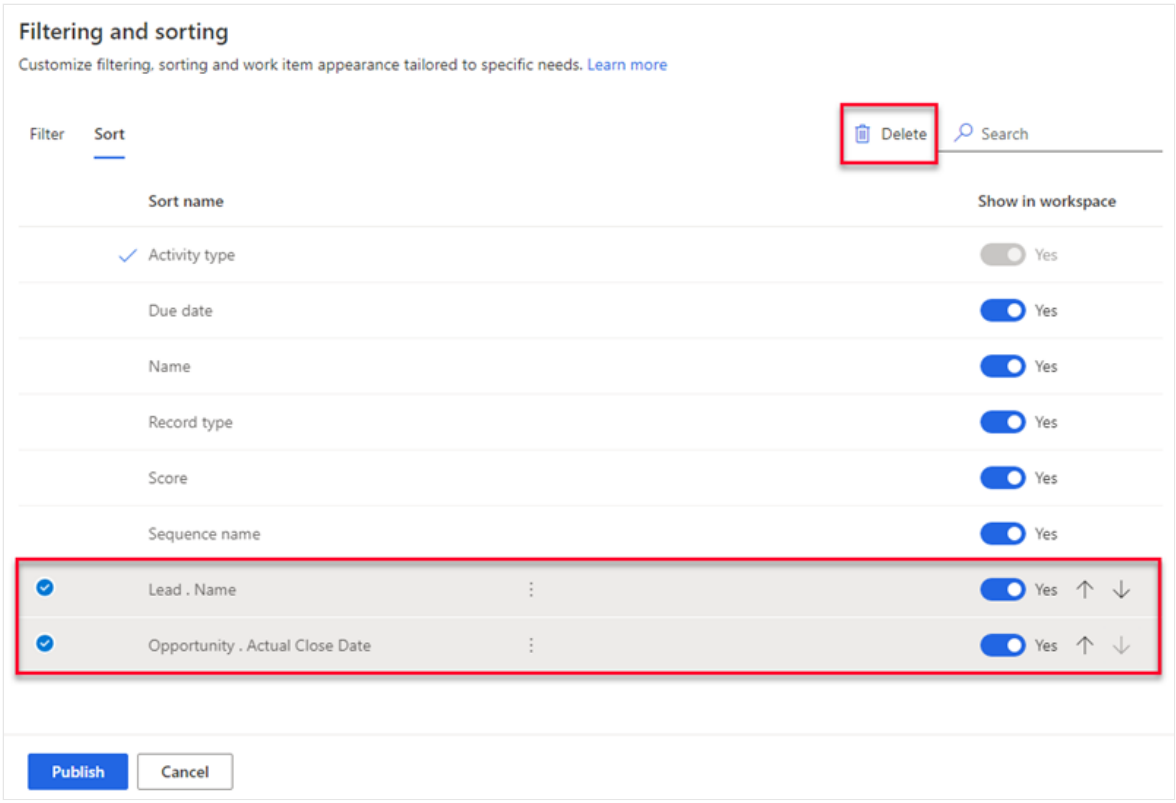
3. Select **Publish**.

Delete a sort

You can delete sort types that you created if your organization no longer needs them. You can't delete the out-of-the-box sort types.

1. In the **Sort** tab, select one or more sort types.

2. Select **Delete** ( ).



3. In the confirmation message, select **Delete permanently**.

4. Select **Publish**.

Configure work item appearance

The work list in the sales accelerator helps sellers to prioritize their time and effort. Customize work items to display the most relevant and important information in the work list. You can customize work items for each entity type that your sellers work with. Learn how to customize the appearance of work items.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

What is the sales accelerator?
Configure the sales accelerator
Manage access and record types

Add the Up next widget to a custom form

Article • 12/08/2022

Display the Up next widget on your customized forms through sales accelerator configuration in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What is the Up next widget?

The **Up next** widget helps sellers to view and perform actions on activities on a record by not losing context or need to switch among multiple applications. The activities include phone call, email, or Teams meeting. The widget displays the current activity, upcoming activity, and completed activities. The activities are added to a record manually or by using a sequence:

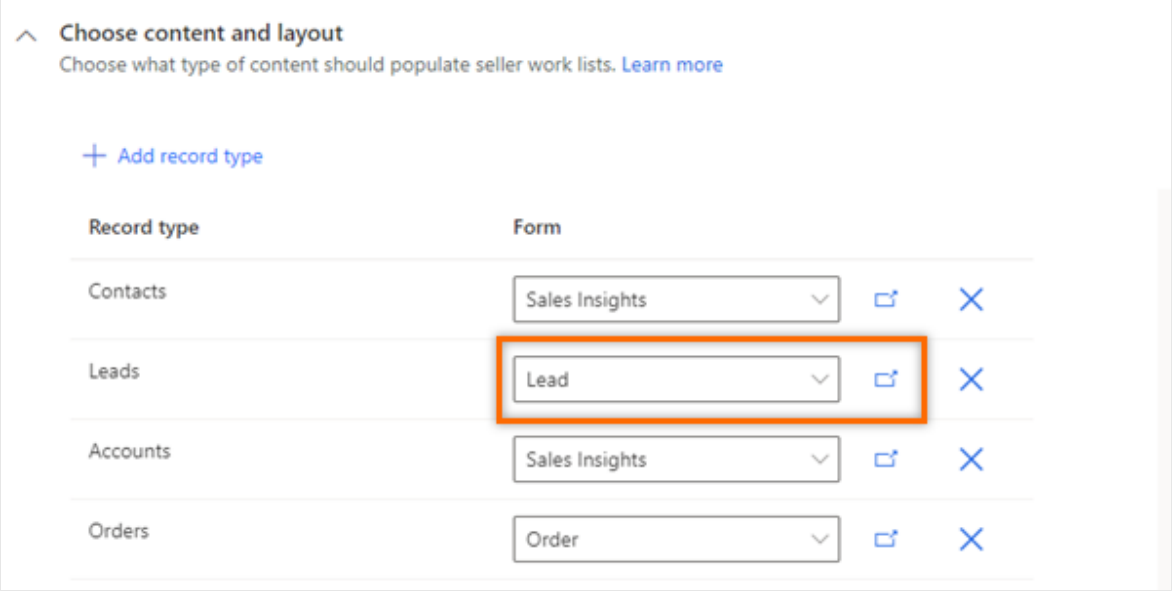
- In a sequence, a sales manager creates activities and applies them to the record according to business requirements. The activities in the sequence are displayed in the **Up next** widget.
- For manual activities, you or a sales manager can create an activity on the timeline. The activity is displayed in the **Up next** widget as a current, upcoming, or completed activity, depending on its due date. This activity is available to you and other sellers who have access to the record.

Add the Up next widget

By default, the **Up next** widget is available only in the out-of-the-box Sales Insights, lead, and opportunity forms. If you're using customized forms, you can display the Up next widget on your custom forms by following these steps.

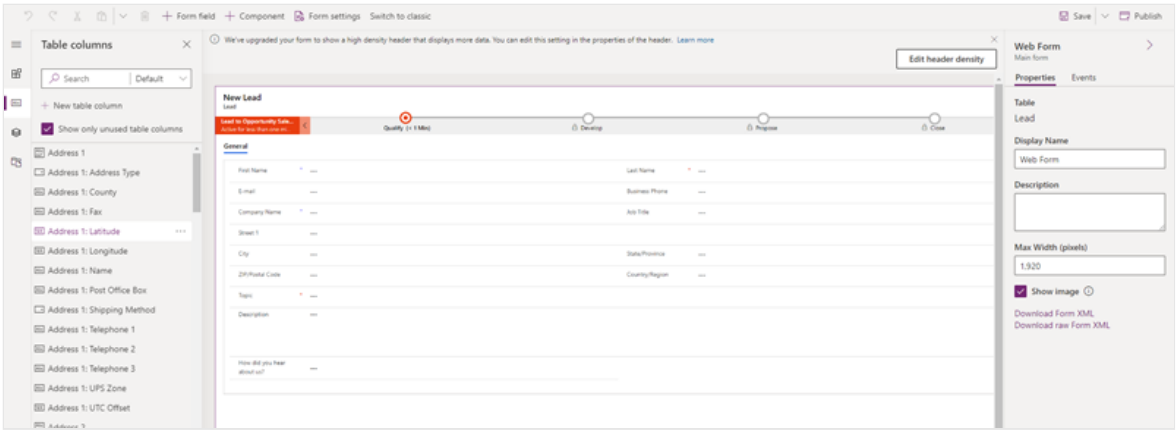
> **Note**
>
> - You can add the **Up next** widget only to managed forms.
> - Adding the **Up next** widget is supported only in Unified Interface apps.

1. Sign in to the **Sales Hub** app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
3. Under **Sales accelerator**, select **Set up**.
4. In the **Choose content and layout** section, select the custom form for which you want to add the Up next widget.

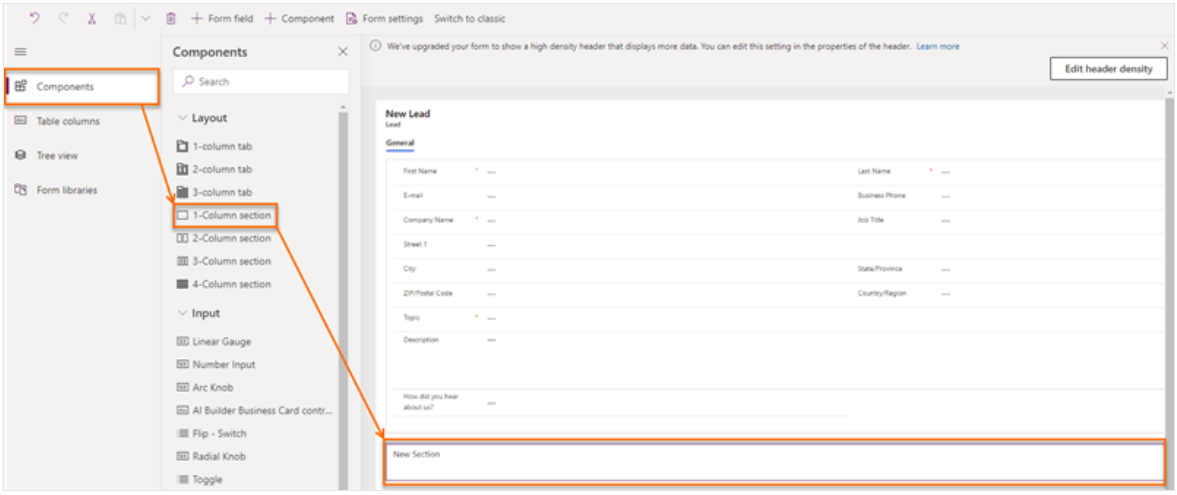


> **Note**
>
> Here we're using the custom lead form as an example to add the Up next widget for leads. For other record types, you can perform the steps described in the procedure with the custom form selector.

5. Select the open in new tab icon (⧉) and the form designer tab opens.



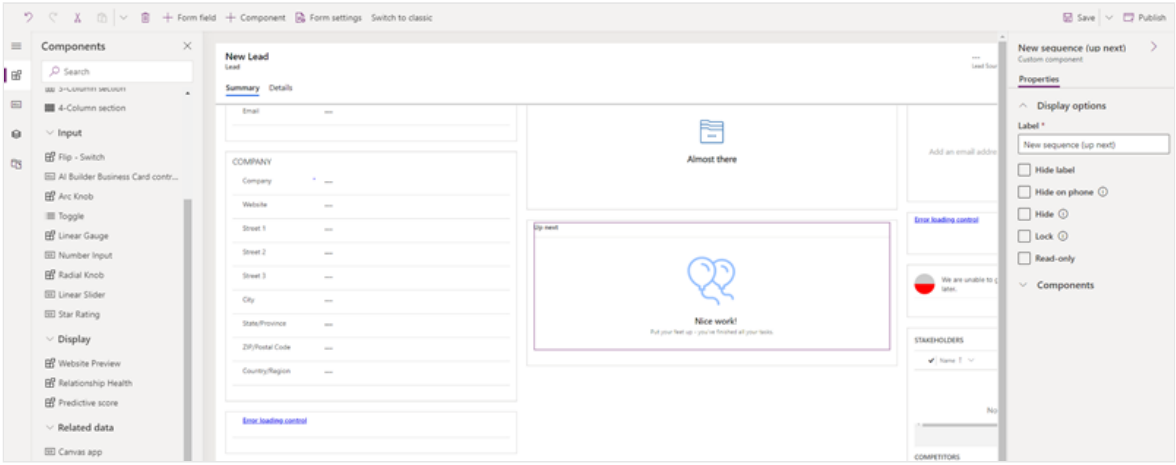
6. In the form designer, select **Component**, and then from **Layout**, add a column to the form as a placeholder to add the widget.



7. From the site map, select **Display** > **Sequence (Up next)**.

> **Note**
>
> Ensure that the added placeholder column is selected. If it isn't, the widget will be added at a random place in the form.

8. In the **Edit sequence (Up next)** pop-up window, select **Done**.
   The Up next widget is added to the form, as shown in the following image.



> **Note**
>
> To hide the **New section** label, go to the **Properties** tab of the **New Section** settings pane, and then select **Hide label**.

9. Save and publish the form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable and configure sales accelerator
Connect with customers through a record or the Up next widget
Understand the Up next widget

Add the sales accelerator site map entry to custom app

Article • 04/13/2022

Know how to add the sales accelerator site map entry to your custom app.

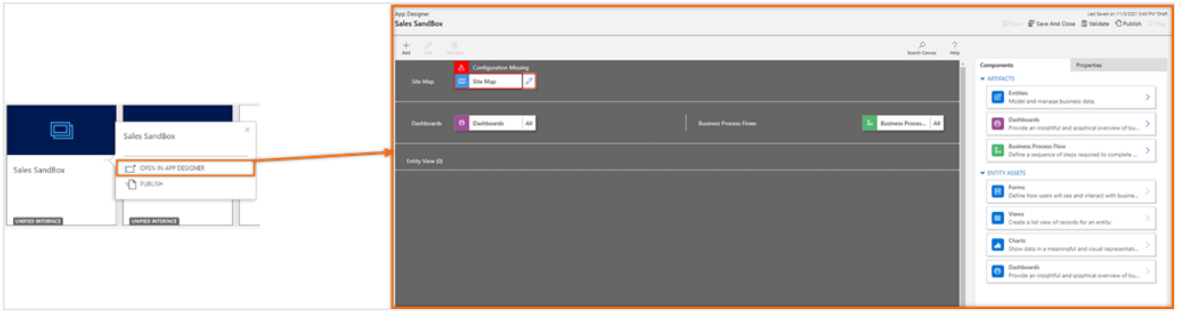
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator See Predefined security roles for Sales

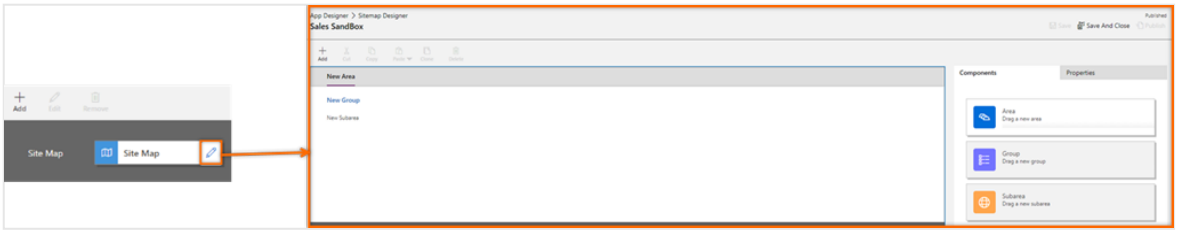
Add the site map entry to your custom app

> **Note**
>
> Enable sales insights in your organization before you add the site map to your custom app.

1. Open your custom app in the app designer. In the following example, the custom app **Sales SandBox** is opened.

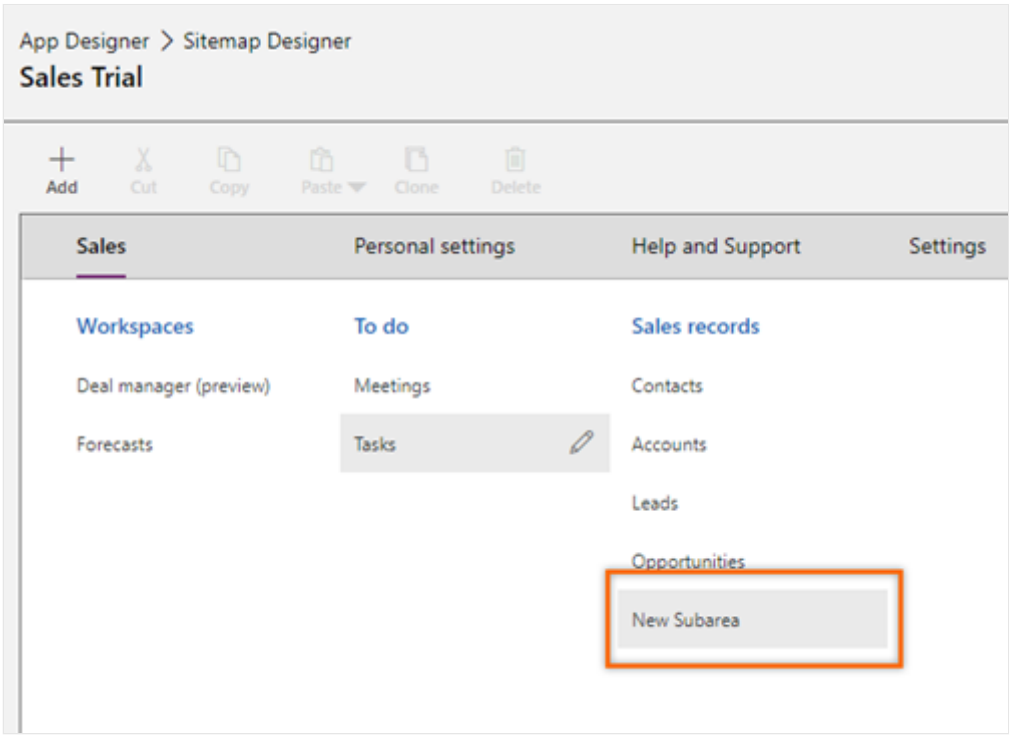


2. Open the site map designer. Select the pencil icon corresponding to the **Site Map** section.

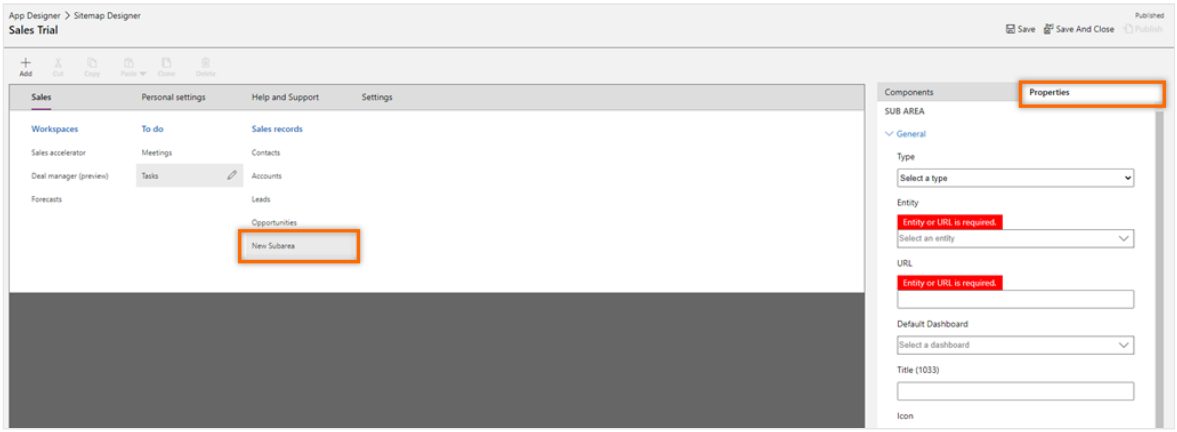


3. Select the area in which you want to add the work list entry and then select **Add** > **Subarea**.

In the following example, subarea entry is added to the **Sales** area under **Sales records**.

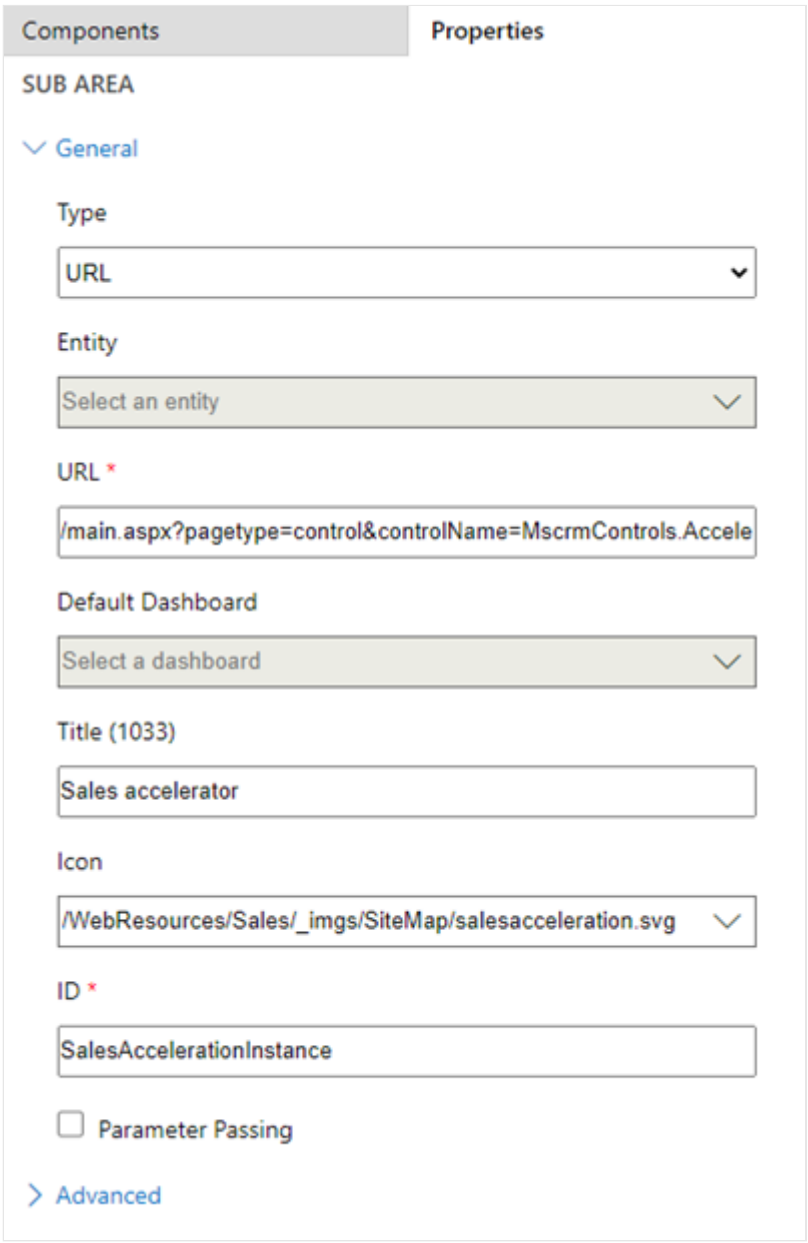


4. Select **New Subarea** and go to the **Properties** tab.



5. In the subarea properties, enter the following values:

- Choose **Type** as **URL**.
- Enter the **URL** value as `/main.aspx?pagetype=control&controlName=MscrmControls.AcceleratedSales.AnchorShellControl`.
- Enter the **Title (1033)** for the entry. For example, **Sales accelerator**.
- Select the **Icon** to use in the sitemap. For example, use default icon **salesacceleration.svg**.
- Enter the **ID** field with a unique ID value. For example, **SalesAccelerationInstance**.



6. (Optional) To show or hide the section only to enabled users, go to **Advanced** and then select **Privileges**. In the **Entity** dropdown list, select **Work Queue record**.
7. Save and publish the sitemap. The work list site map entry is added to your custom app.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure sales accelerator
Add the Up next widget to an entity form

Create conditional workflows with sequences

Article • 09/02/2022

Sequences help sales managers enforce best practices by introducing a set of consecutive activities for sellers to follow during the course of their day. A manager can connect sequences to leads and opportunities that appear in a seller's work queue, to help sellers prioritize activities to focus on selling, be more productive, and better align to business processes.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence manager, or Sales Manager More information: Predefined security roles for Sales

Permission requirements to manage sequences

The following table shows the permissions required for a user role to perform tasks on sequences.

> **Note**
>
> By default, these permissions are available for System Administrator, Sequence manager, Sales Manager, and Salesperson security roles.

Task related to sequence	Permissions required
Create, edit, and delete	In the Security roles page, under the **Custom Entities** tab, provide Create, Read, Write, and Delete permissions for **Sequence** entity. More information: Security roles and privileges

Task related to sequence	Permissions required
Connect and disconnect	In the security roles page, under the **Custom Entities** tab, provide permissions for following entities: - **Sequence**: Create and Append To - **Sequence Target**: Create, Read, Write, Append, Append To, and Assign - **Sequence Target Step**: Create, Read, Write, Append, and Assign More information: Security roles and privileges

Use sequence designer

https://www.microsoft.com/en-us/videoplayer/embed/RE4Vdof?postJsllMsg=true

You can use the sequence designer to do the following tasks:

- Create and activate a sequence.
- Connect a sequence to records.
- View details of a sequence and its connected records.
- Clone and edit a sequence.
- Delete a sequence.

Review prerequisite

Before you start, be sure you that the sales accelerator feature is configured in your organization. More information: Configure the sales accelerator.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Next step: Create and activate a sequence

See also

Configure the sales accelerator
Prioritize your sales pipeline by using the work list

Create and activate a sequence

Article • 09/08/2023

Every organization has its own selling processes for sellers to follow. A sequence helps sellers overcome any inconsistencies in training or lack of documentation as they progress through the sales journey. When you create a sequence, you define the activities you want your sellers to perform—and the order to perform them in—as they handle records. This lets sellers concentrate on selling and gives them a better understanding of what to do next.

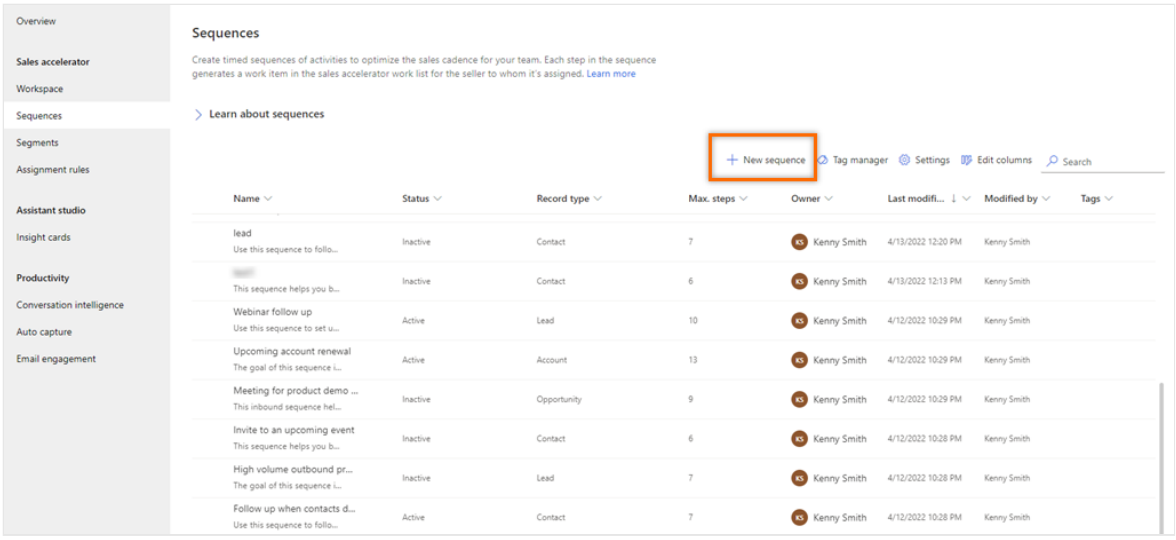
Also, sellers can create and activate sequences for themselves and use the sequences to work on their assigned records. More information: Create and connect sequence for yourself

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

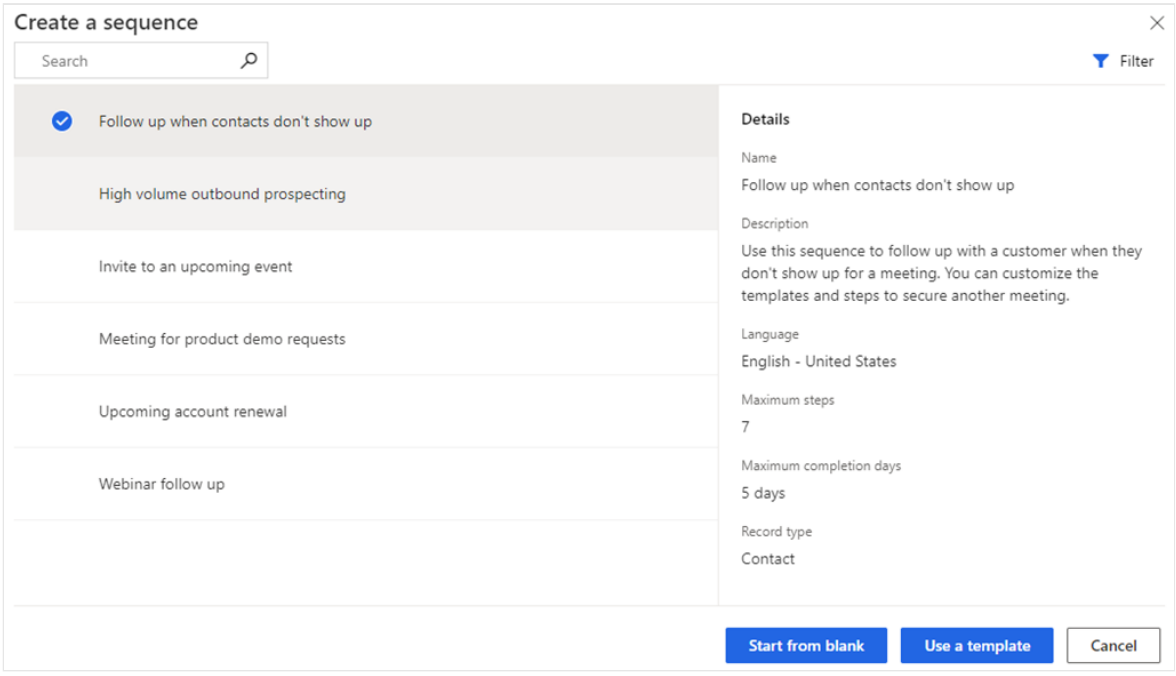
Create a sequence

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select **New sequence**.



4. In the **Create a sequence** dialog, select one of the following options to create the sequence:

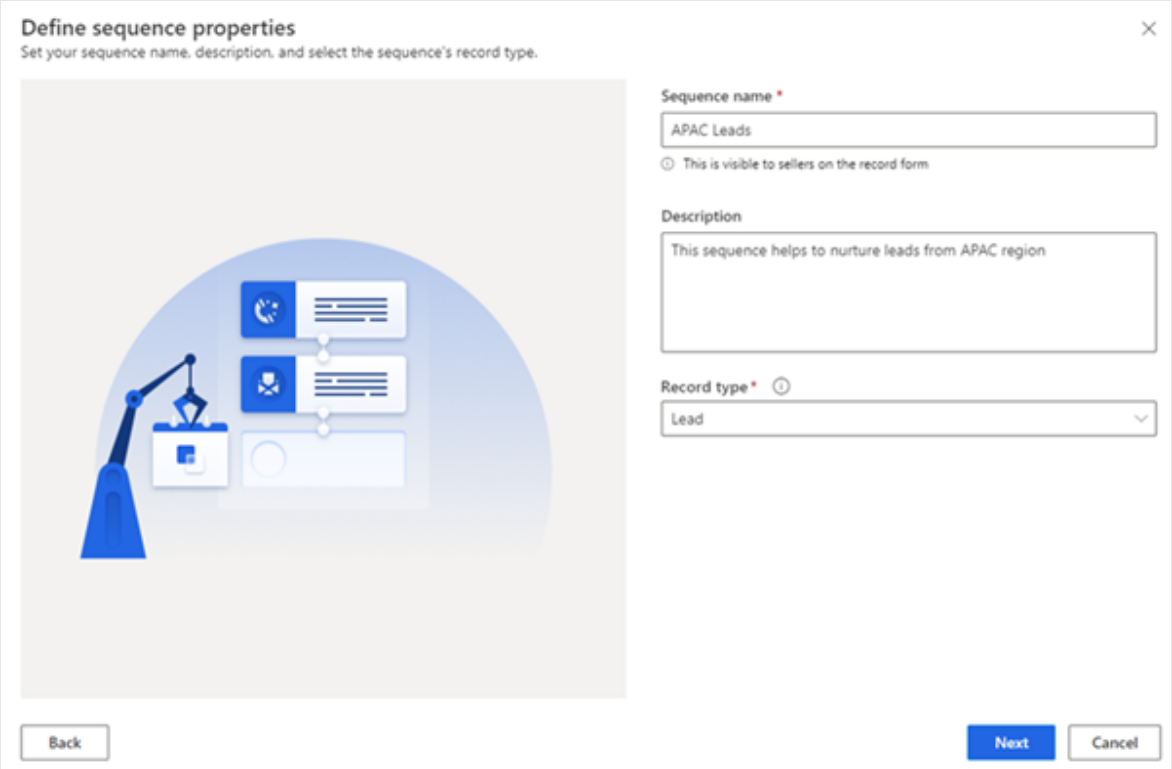
   - **Use template**: Use the templates to quickly set up sequences. Sequence templates provide a set of activities to guide sellers with the next best action to take to achieve a task, such as getting introduced to a lead and winning the deal. More information: Sequence templates
   - **Use blank sequence**: Use a blank sequence to create a sequence from scratch.



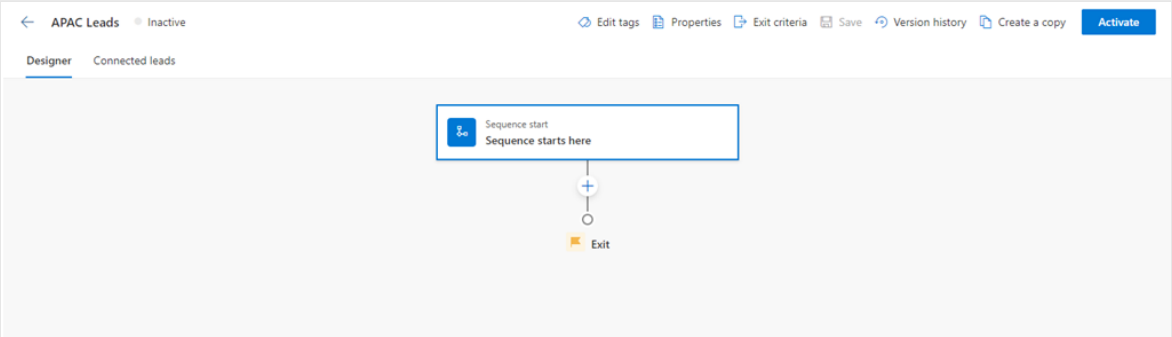
5. In the **Define sequence properties** dialog, enter the following information.

Parameter	Description
Sequence name	The name of the sequence.

Parameter	Description
Description	A description of the sequence. (Optional)
Entity	The entity type for which you want to apply this sequence. By default, the Lead entity type is selected.



6. Select **Next**.
   The sequence designer page opens.



   By default, the **Sequence start here** step is added to sequence as the first step.

7. After the **Sequence start here** step, select the **Add** icon (+) and configure the sequence steps.

   For a sequence, the steps are categorized into the following four groups:

   - **Steps**: The step in a sequence is an engagement task that a seller performs for sales outreach such as, email, phone call, and task. More information: Add steps to sequence

- **Conditions**: The condition step in a sequence determines the next course of action that the sequence will take after the condition is either met or not, based on the completed activity. More information: Add the conditions steps
- **Commands**: The command step in a sequence determines the next course of action according to the value given in the field or the stage of a business process. More information: Add command steps to sequences
- **LinkedIn**: The LinkedIn activity step in a sequence allows sellers to diversify their day-to-day activities by including the social selling functions. You can use LinkedIn's vast network with recommended actions that your sellers can take to build deeper connections. More information: Add LinkedIn activities to sequence

8. Select the **Add** icon, and then repeat step 7 for all the activities that you want to add to the sequence.

9. Save the sequence.

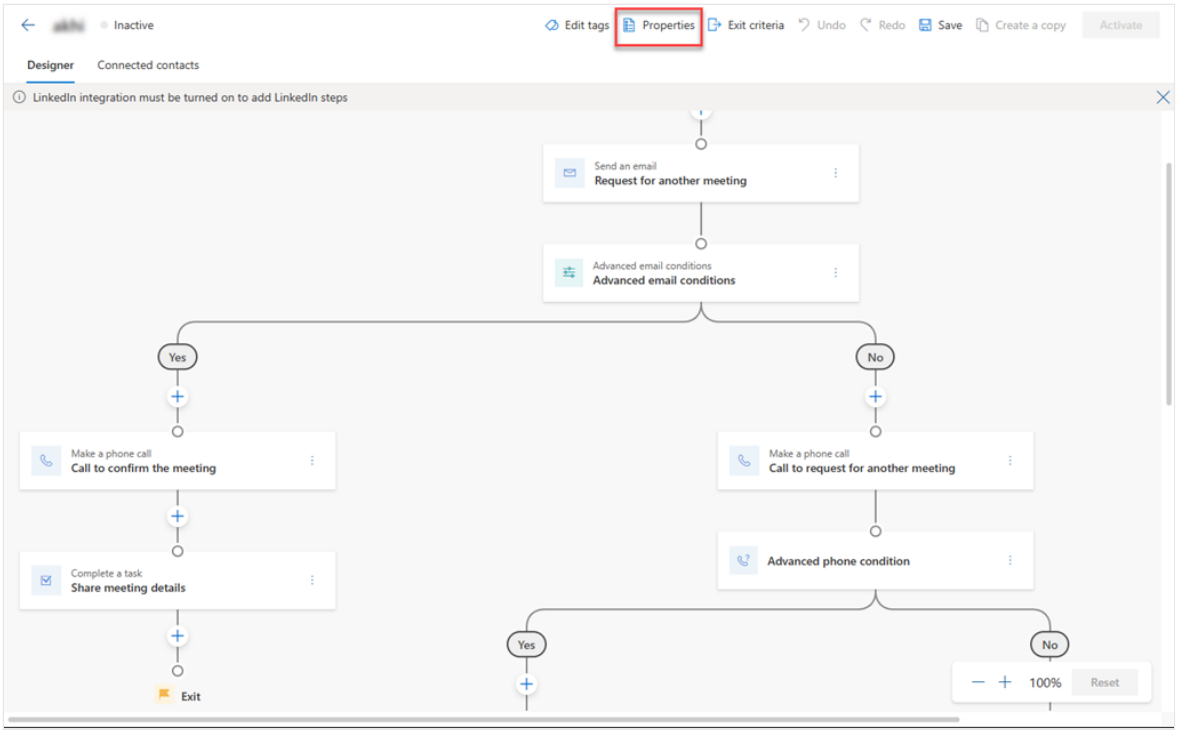
Now, you can assign the sequence to users and then activate.

Automatically assign sequence to users or a team

You can assign different sequences to different sellers for a record. Each seller can then focus on a unique set of actions to enhance their chances of securing a deal. For example, you can assign one sequence to a seller and another to the account manager responsible for the same record, enabling them to collaborate simultaneously.

Deactivate the sequence before you assign it to users or a team.

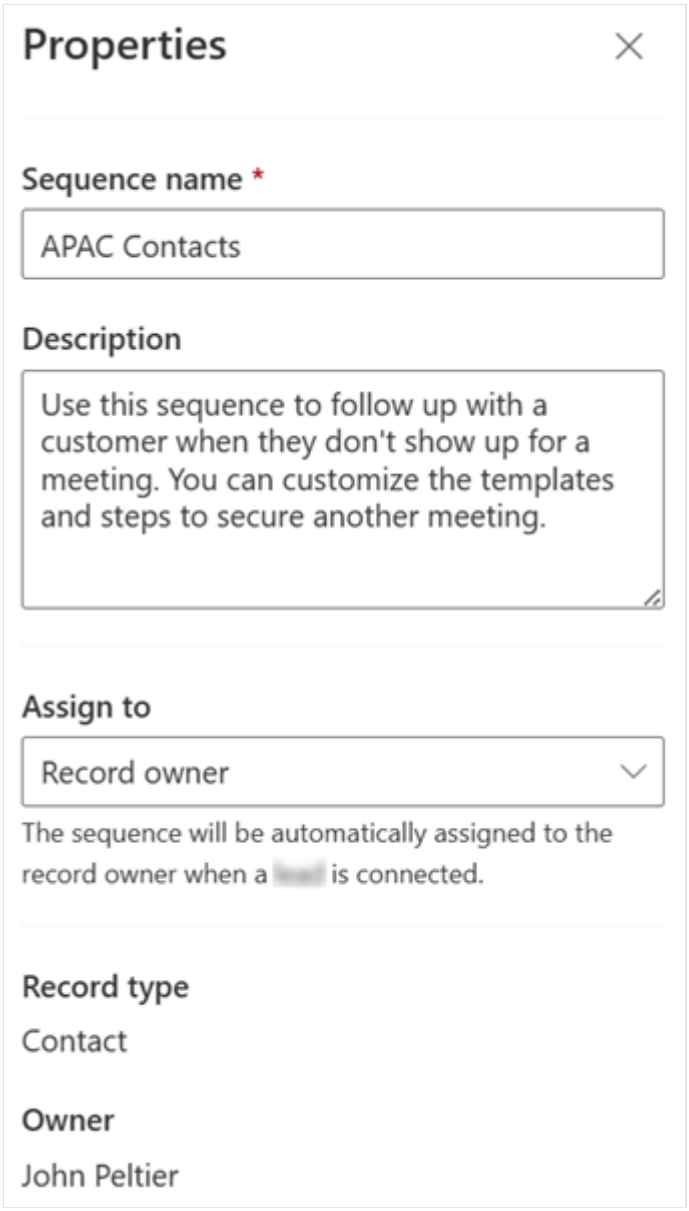
1. In the sequence page, select **Properties**.



2. In the **Properties** pane, under the **Assign to** section, select the one of the following options.

Type	Option	Description
Record	Record owner	The option automatically assigns the sequence to the owner of the record when connected. By default, this option is selected.
	Team member specified in a record field	The option automatically assigns the sequence to an individual based on the selected field name in the record. Choose the field name that you want to consider for assigning the sequence to a specific user, as identified in that field.
Teams	Owner team	The option automatically assigns the sequence to the owner team when the record is connected. The owner of the record must be the owner team. Optionally, you can define conditions to assign sequence to specific individuals within the owner team. To define conditions, select **Condition is empty**.
	Access team	The option automatically assigns the sequence to the access team when the record is connected. The owner of the record must be the access team. Optionally, you can define conditions to assign sequence to specific individuals within the access team. To define conditions, select **Condition is empty**.

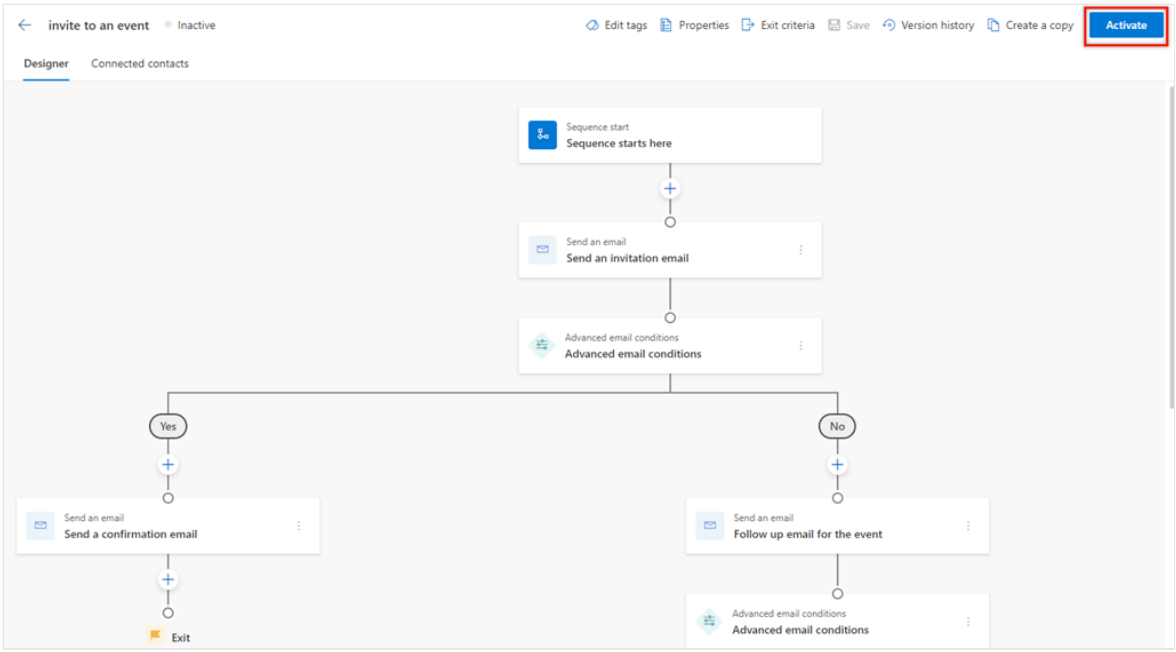
The following image is an example of the Properties pane:



Activate a sequence

1. Open a sequence and then select **Activate**.

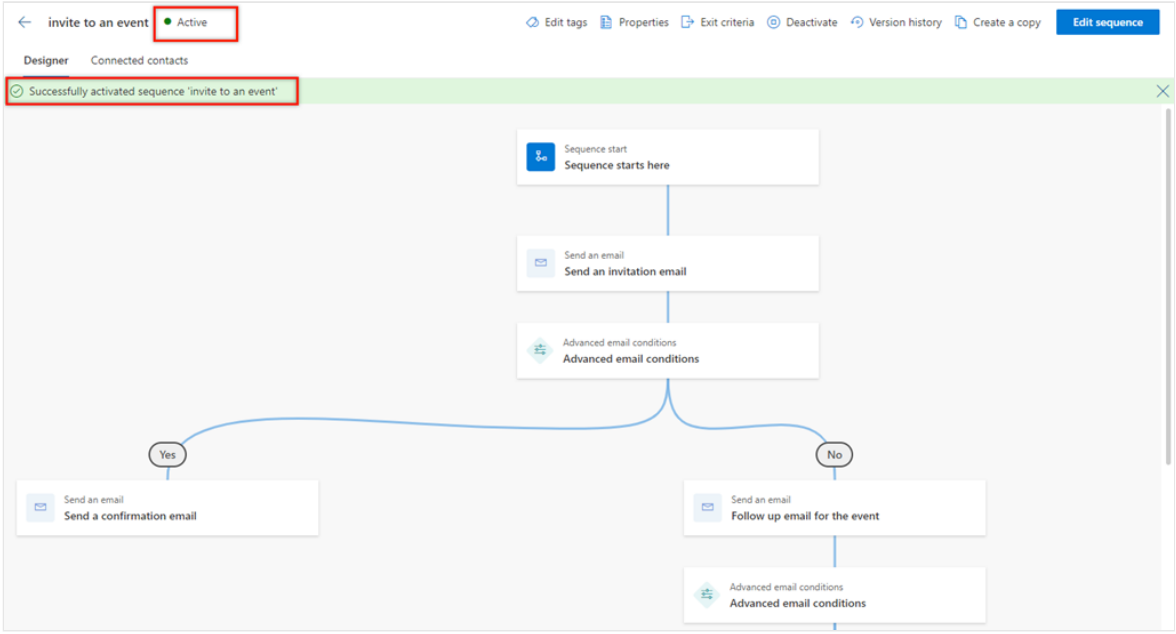
> **Note**
>
> You can have up to 250 active sequences at a time in your organization.



2. Select **Activate** in the confirmation message that appears.

> **Note**
>
> An error might occur if you've added **Set wait time** as the last activity of the sequence. You must delete this last **Set wait time** activity, and then save and activate the sequence.

The sequence is activated and listed in the sequence designer home page. Also, you can see the status of the sequence beside the name and a confirmation message.

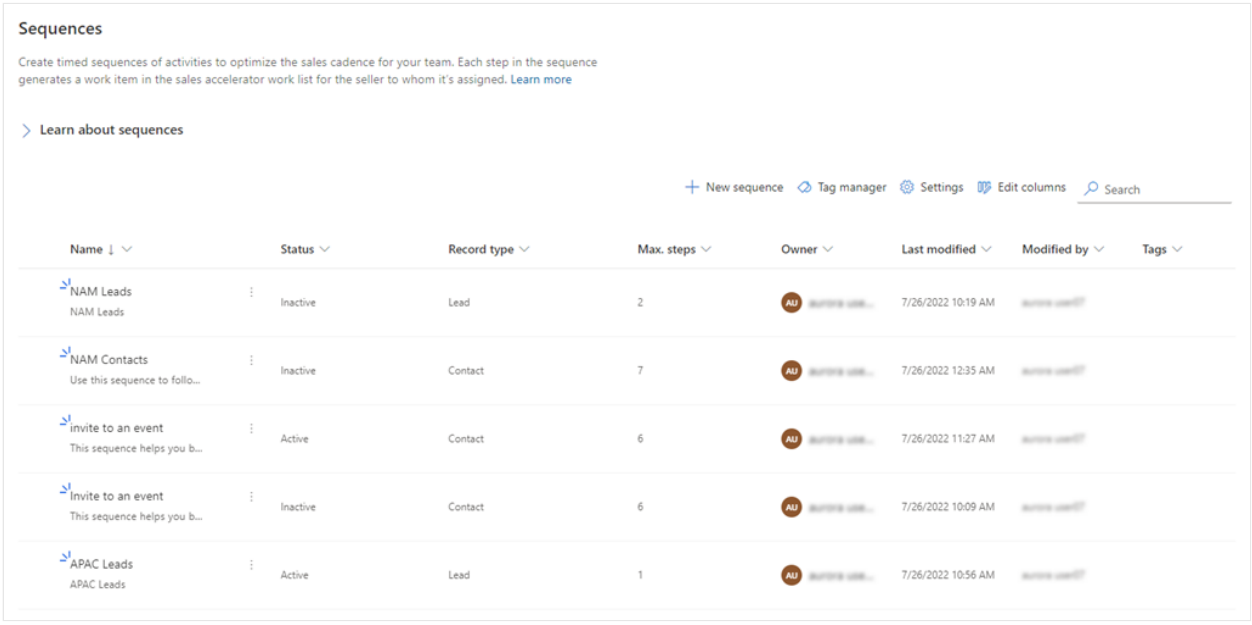


Next, you connect the active sequence to records. More information: Connect a sequence to records

Sequence home page

On the sequence home page, you can do the following tasks:

- Sort and filter the records based on the column options. Expand the column header, and then select the sort and filter options that are available.
- Reorder the columns by dragging them to the location you want in the grid.
- Search is available only on the name and description of the sequence.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Sequences
Add steps to sequence
Manage tags for sequences
Migrate sequences from one environment to another

Add steps to sequence

Article • 06/08/2023

Add steps to define activities for sequences in the sales accelerator to display in the work list and Up next widget.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, and Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Types of steps

When creating a sequence, you can add the following types of activities as steps:

- A/B test
- Email activity
- Automated email activity
- Send a text message
- Send an automated text message
- Phone call activity
- Task activity
- Set wait time

A/B test

The A/B tests help you to examine your trigger-based sequence path, allowing you to gain insights into how best to reach your customers.
Using A/B tests, you can measure which channel or content messaging strategy leads to higher success. Each test compares a control group of users (version A) against a variant (version B). The control group receives a default experience. The variant group receives a different experience or message. By comparing the results of the groups, you can determine which one is the most effective.

The sequence usually runs the entire test automatically. The test starts by sending versions A and B to a small part of your audience as they funnel through the sequence. The sequence then analyzes the interaction results and chooses a winner based on your selected criteria (click through, open rate, or sequence goal). The sequence then sends the winning version to the rest of your audience automatically.

To create and add A/B test:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Test which variation performs better**.
3. In the **Select which type of action to test** step, select **Create test**.
4. In the **A/B test side** pane, configure the attributes as described.

Attribute name	Description
Display name	Enter a name for the test. This name is displayed in the A/B test panel and in the sequence analytics when you're looking at which tests are running. Once the sequence is active and assigned, you can't rename your test.
Version A and Version B	Configure each version with the name and template that you want to include. You can do this through a dropdown list by either selecting the child tiles in the designer, or by selecting the side panel. For more information on configuring email step, see Automated email activity.
Audience	Choose the audience distribution you would like. The slider is automatically on 50-50, but you can set the slider to your desired distribution. The minimum a version can receive is 10 percent, and the maximum is 90 percent. Remember that, traditionally, version A is your control group and version B is your variant.
Winning metric	You can set the winning condition for your test by choosing a winning metric: The version with the most journey goal events hit, the most clicks, or the most opens.
This test ends	You can also choose between ending the test automatically or at a specific date and time. For best results, we recommend letting the test determine a winner automatically when the results reach statistical significance. Once a clear winner is determined, the system sends the winning version to the rest of your audience. The losing version is discarded.
Default version	Choose a default version in case the test doesn't end successfully. In cases where a winner hasn't been determined by the deadline specified through the date and time, the default version is automatically sent.

5. Close the A/B test pane.
   The A/B test is added to the sequence.

Track A/B test

After you have activated and connected the sequence, you can open it to track the lifecycle of your tests.

- **Draft**: These tests haven't run yet, so you can still edit the settings.
- **In progress**: These tests are currently being run. The settings are locked, and you can’t make significant changes.
- **Stopped**: Theses tests are stopped, and the marketer can choose which version to send.
- **Ended**: These tests were completed by finding a statistically significant winner or by timing out when scheduled to end at a set date and time. Ended tests can't be reused.

Understand the results

There are three possible A/B test result outcomes:

- **Test concluded with a clear winner**: The test concluded that one version is performing better than the other. The winning version has a “winner” badge and is distributed to any new customers that funnel through the sequence.
- **Test was not conclusive**: The test concluded that recipients are as likely to engage with version A as with version B. In this case, the default version is sent to any new customers that funnel through the sequence.
- **The test was stopped**: This means that you or one of your coworkers stopped the test before it could conclude. In this case, the version specified by you, or your coworker is sent to any new customers that funnel through the sequence.

Email activity

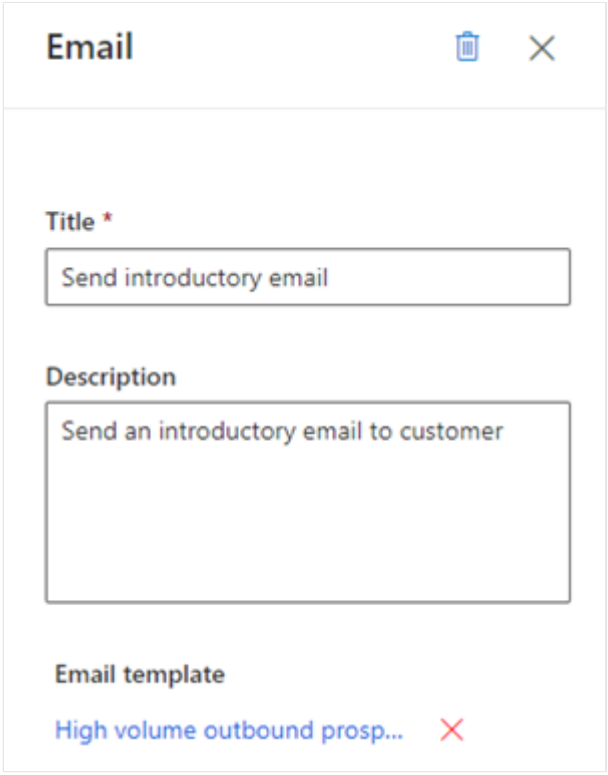
Creates an email activity for sellers to communicate with customers. When this activity is shown to the seller, an envelope icon is displayed on the record. When a seller selects the icon, an email composer opens with a template, if one was selected. If no template was selected, an empty email composer opens.

To add the email activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.

2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Send an email**.

3. On the **Email** activity pane, enter the following information to configure the email activity
   a. A name and description for the activity. The information you enter here is displayed to sellers.
   b. (Optional) If templates are available for your organization, select **Add email template**. On the **Email templates** dialog box, select the template you want to assign for this step and then select **Apply template**. To know more about email templates, see the step to add email template in the **Automated email** section.



4. Close the email pane.
   The email activity is added to the sequence.

Now, you can define conditions for an email activity to determine the branch that the sequence moves to as the next step. More information: Define conditions for email activity

Automated email activity

Creates an automated email activity for sellers to communicate with customers. When this activity is shown to the seller, a send icon is displayed on the record. The email is automatically sent to the customer based on the selected template.

Tip

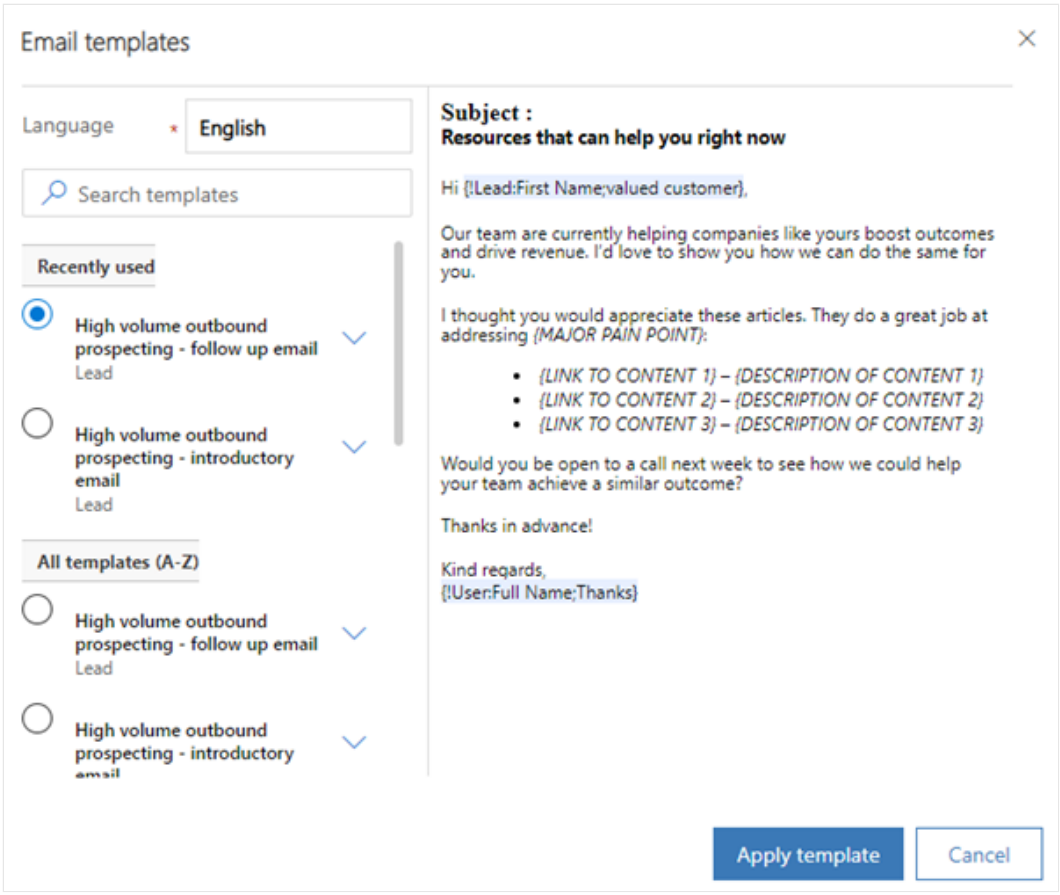
Add a **Set wait time** activity before the **Automated email** activity. Adding wait time provides a time gap between the previous step and sending the automated email. If the time gap isn't configured, the automated email will be sent immediately after the previous activity is completed, which won't give sellers the time they might need to take action on the automated email activity.

Note

- Verify that required email templates are created in your organization. More information: **Create templates for email**
- Configure **the email engagement feature** in your organization before you start using the automated email step.

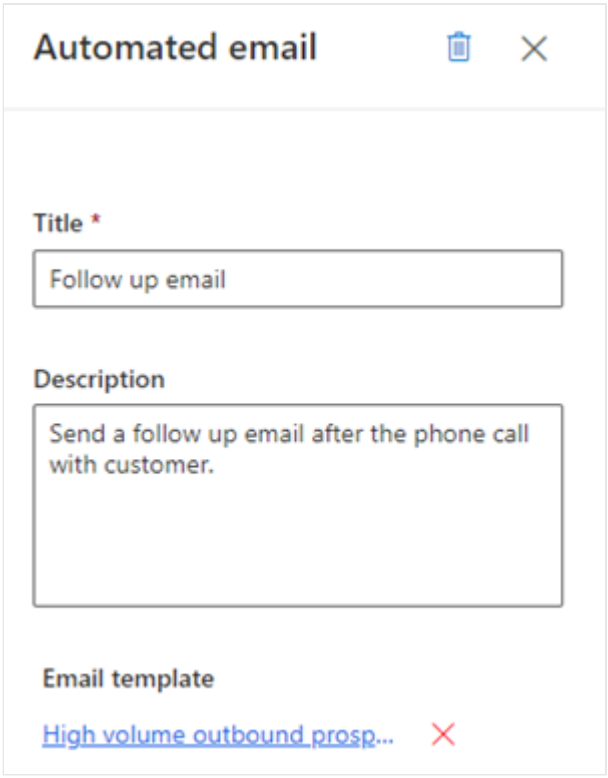
To add the automated email activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Send an automated email**.
3. On the **Automated email** activity pane, enter the following information to configure the automated email activity:
    - A name and description for the activity. The information you enter here is displayed to sellers.
    - An email template that you want to assign for this step.
        a. Select **Add email template**.
        b. In the **Email templates** dialog, select the language and then choose a template. When a template is chosen, you can see the preview.



c. Select **Apply template**.

The template is selected for the step.



4. Close the automated email pane.

The automated email activity is added to the sequence.

Now, you can define conditions for automated email activity to determine the branch that sequence moves to next step. More information: Define conditions for email activity.

Send a text message

Creates a text message (SMS) activity for sellers to communicate with customers. When this activity is shown to the seller, a message icon is displayed on the record in the **Up next** widget. When a seller selects the icon, the text composer opens with a template, if one was selected. If no template was selected, an empty text composer opens.

To add the text message activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Send a text message**.
3. On the **Text message** pane, enter the following information to configure the text message activity:
    - A name and description for the activity. The information you enter here will be on the step in the **Up next** widget.
    - (Optional) Add an SMS template.
        a. Select **Add a text message template**.
        b. In the **Text message templates** dialog box, select the template you want to use for this step.
        c. Select **Select template**.

        If no templates are available, you can add a template by selecting **Create new template** and then selecting it to be used in the step.

        To know more about SMS templates, see Personalize text messages through templates.
4. Close the text message pane.

The text message activity is added to the sequence.

Send an automated text message

Creates an automated text message (SMS) activity for sellers to communicate with customers. When this activity is shown to the seller, a send icon is displayed on the record in the **Up next** widget. The SMS is automatically sent to the customer based on the selected template.

> **Note**
>
> - Add a **Set wait time** activity before the automated text message activity. Adding wait time provides a time gap between the previous step and sending the automated SMS. If the time gap isn't configured, the automated SMS will be sent immediately after the previous activity is completed, which won't give sellers the time they might need to act on the automated SMS activity.
> - Verify that required SMS templates are created in your organization. More information: **Personalize text messages through templates**

To add the automated text message activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. In the **Add an action or other element** dialog box, under the **Steps** tab, select **Send an automated text message**.
3. In the **Text message** pane, enter the following information to configure the automated text message activity:
    - A name and description for the activity. The information you enter here will be displayed on the step in the Up next widget.
    - Add an SMS template.
        a. Select **Add a text message template**.
        b. In the **SMS templates** dialog box, select the template you want to use for this step.
        c. Select **Select template**.

        If no templates are available, you can add a template by selecting **Create new template** and then selecting it to be used in the step.

        To know more about SMS templates, see Personalize text messages through templates.
4. Close the text message pane.

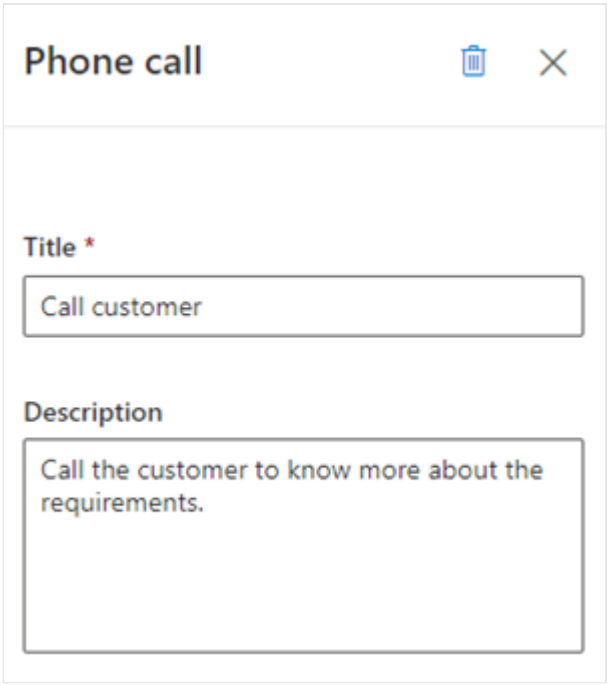
The text message activity is added to the sequence.

Phone call activity

Creates a phone call activity for sellers to communicate with customers. When this activity is shown to the seller, a phone icon is displayed on the record. When sellers select the icon, a softphone appears on the app to dial the customer.

To add the phone call activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Make a phone call**.
3. On the **Phone call** activity pane, enter a name and description for the phone call activity. The information you enter here will be displayed to sellers.



4. Close the phone call pane.
   The phone call activity is added to the sequence.

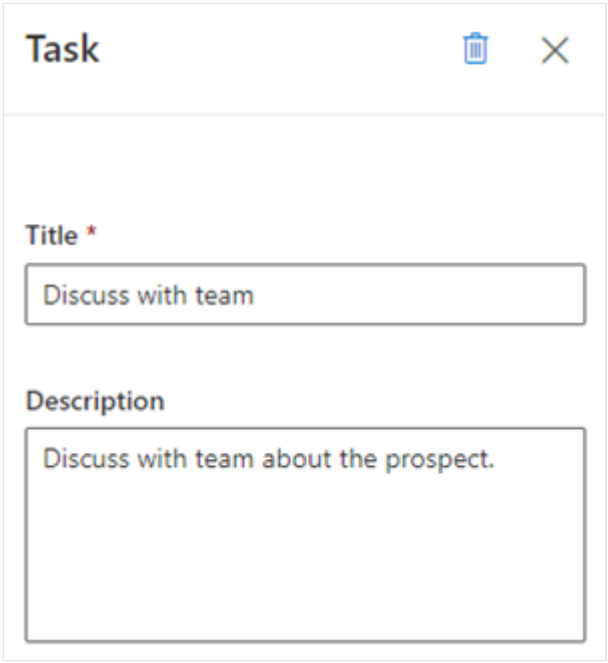
Now, you can define conditions for phone call activity to determine the branch that sequence moves to next step. More information: Define conditions for phone call activity.

Task activity

Creates a custom activity that you define—such as scheduling a meeting with the customer—that isn't specified in the activity selector.

To add the custom activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Complete a task**.
3. On the **Task** activity pane, enter a name and description for the custom activity. The information you enter here will be displayed to sellers.



4. Close the task pane.
   The custom activity is added to the sequence.

Set wait time

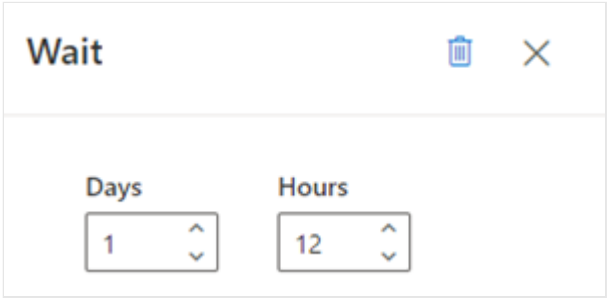
Specifies the interval between activities—that is, after an activity is completed and before the next activity occurs—during which sellers need to wait. A sequence can't end with this activity.
When this activity is shown to sellers on a record, they don't need to perform any action; they simply need to wait until the wait time expires before they perform the next activity.

To add the wait time step:

1. In the sequence designer page, select the **Add** (+) icon under a step.

2. On the **Add an action or other element** dialog box, under the **Steps** tab, select **Set wait time**.

3. On the **Wait** activity pane, choose the duration in days and hours that you want sellers to wait before they perform the next activity. The maximum wait time is 30 days.



4. Close the task pane.
   The wait time is added to the sequence.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence
Add condition steps to sequences
Add command steps to sequences
Add LinkedIn activities to sequence

Add condition steps to sequences

Article • 08/01/2022

Use adaptive sequences in sales accelerator to define conditions steps that determines the path of a sequence.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Configure adaptive sequence steps

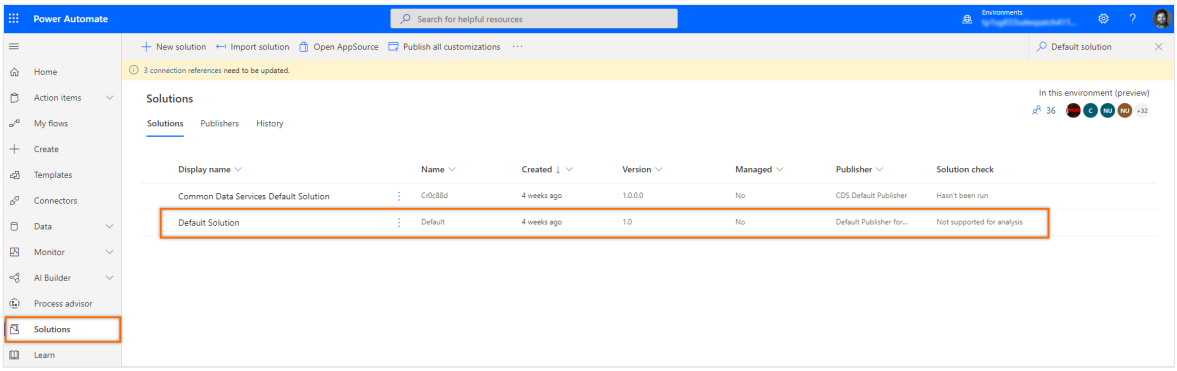
Use *adaptive sequences* to define conditions for the steps in a sequence. These conditions determine the course of action the sequence will take after the condition is either met or not. After the result of a condition is determined—for example, whether a user opened an email (**Yes**) or didn't (**No**)—the sequence proceeds as you designed it. Conditions are available for the following activities:

- Email
- Phone call
- Field value
- Business process stage

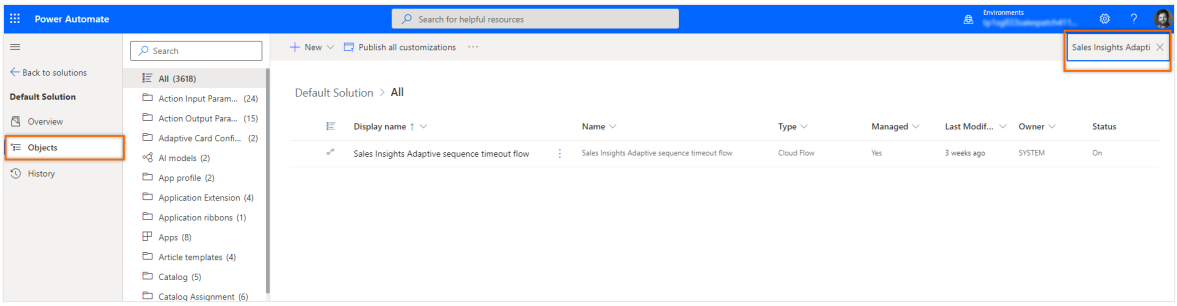
Prerequisite

Conditions in the adaptive sequences work as defined only when **Sales Insights Adaptive sequence timeout flow** process is enabled. To enable the process, follow these steps:

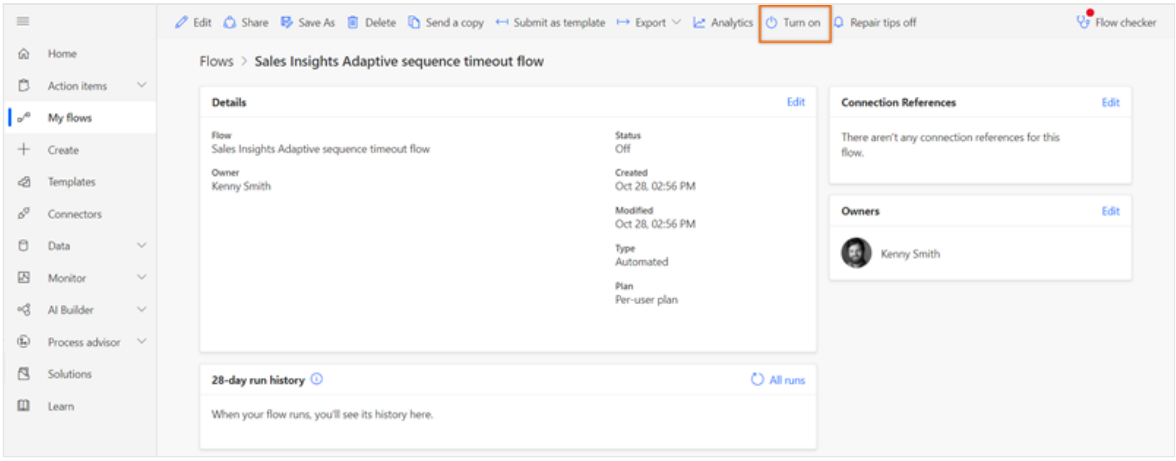
1. Go to Power Automate and change the environment to your organization.
2. Select **Solutions** and then select **Default Solution**.



3. On the **Default Solution** page, select the view as **All** and search for **Sales Insights Adaptive sequence timeout flow** process.



4. On the **Sales Insights Adaptive sequence timeout flow** page, select **Turn on**.



The process is enabled.

Define conditions for an email activity

When you add an email activity to a sequence and select **Add** (+), the **Add an action or other element** dialog box displays. Select the **Conditions** tab, where you determine the next course of action in the sequence.

When the seller skips an email activity that includes a condition, the flow follows the **No** path.

> **Important**

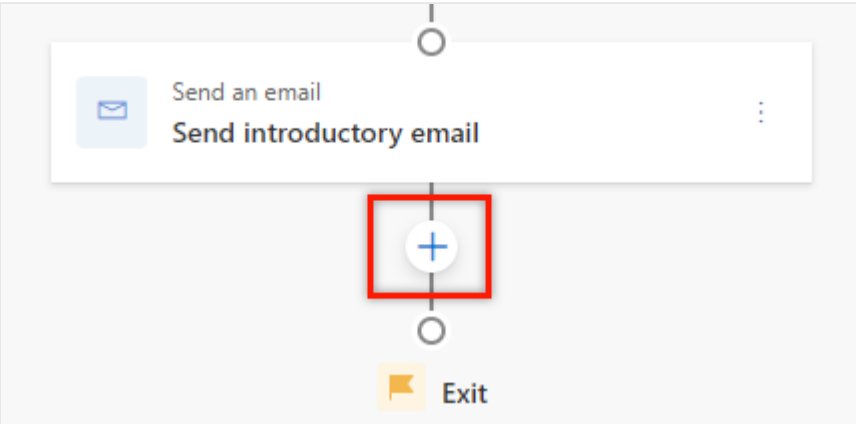
- You need to **configure the email engagement feature** in your organization before you start using conditions for the email activity. The interactions that customers have with emails are displayed in the condition list.
- **Enable sequence activities** to create conditions for email activities.

The following table lists the interactions that are available in email conditions.

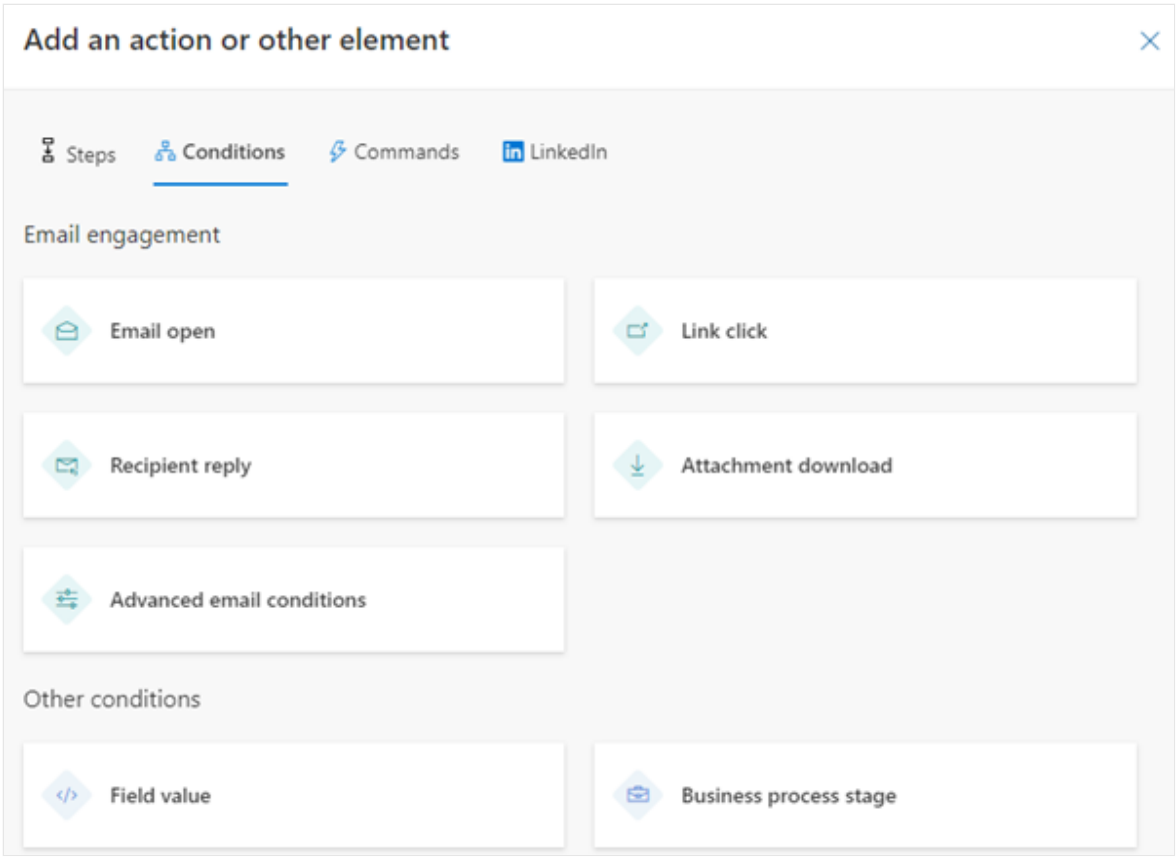
Interaction	Description
Email open	If a customer opens the email, the flow follows the **Yes** path. If not, the **No** path is followed.
Recipient reply	If a customer replies to the email, the flow follows the **Yes** path. If not, the **No** path is followed.
Link opened	If a customer opens a link that's included in the email, the flow follows the **Yes** path. If not, the **No** path is followed.
Attachment downloaded	If a customer downloads an attachment that's linked to your email, the flow follows the **Yes** path. If not, the **No** path is followed.
Advanced email conditions	Define condition to choose whether only one email result must occur or all email results must occur in order to advance to the next step. More information: Advanced email conditions

Let's define a flow so that if a customer opens your email, the next step is to schedule a phone call, and if the customer doesn't open your email, the next step is to send a reminder email.

1. Select **Add** (+) after the email activity.



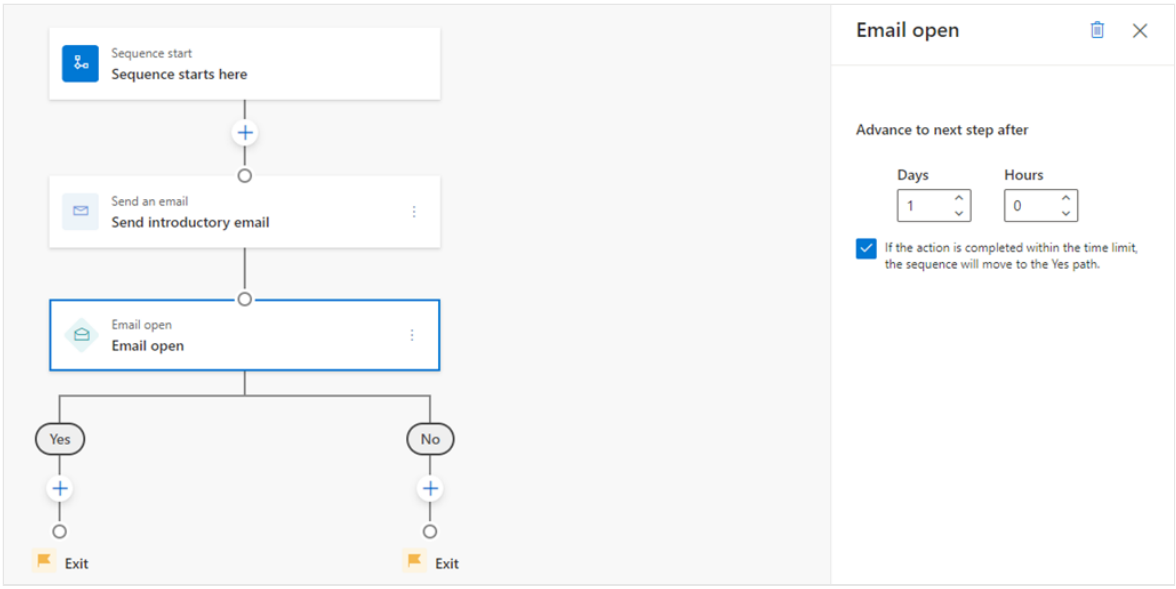
2. In the **Add an action or other element** dialog box, select the **Conditions** tab. A list of interactions that are defined in the email engagement feature is displayed.



3. Select **Email open**.

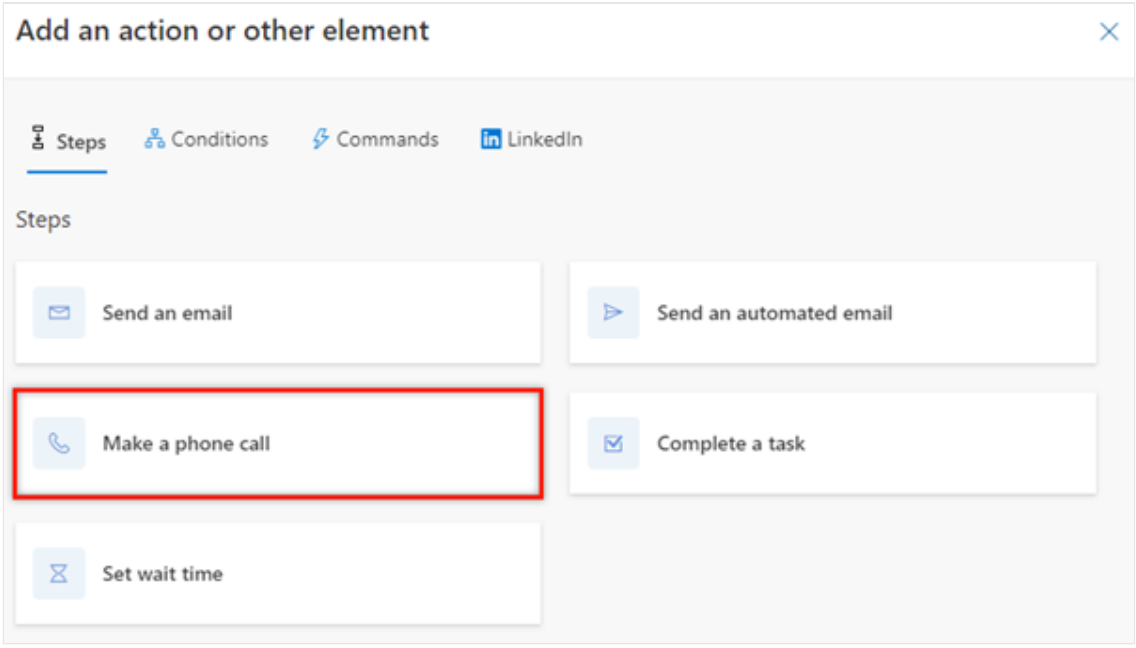
4. On the **Email open** pane, configure the time limit for satisfying the condition before proceeding to the next step. In the following example, we configure the wait time as one day. This establishes the following:

    - If the customer opens the email within the day, the **Yes** path is initiated and the sequence moves to the next step after a day has passed.
      If you don't want to wait a day to move to the next step in the **Yes** path, select the **If the action is completed within the time limit, the sequence will move to the yes path** checkbox.
    - If the customer doesn't open the email within the time limit, the **No** path is executed.



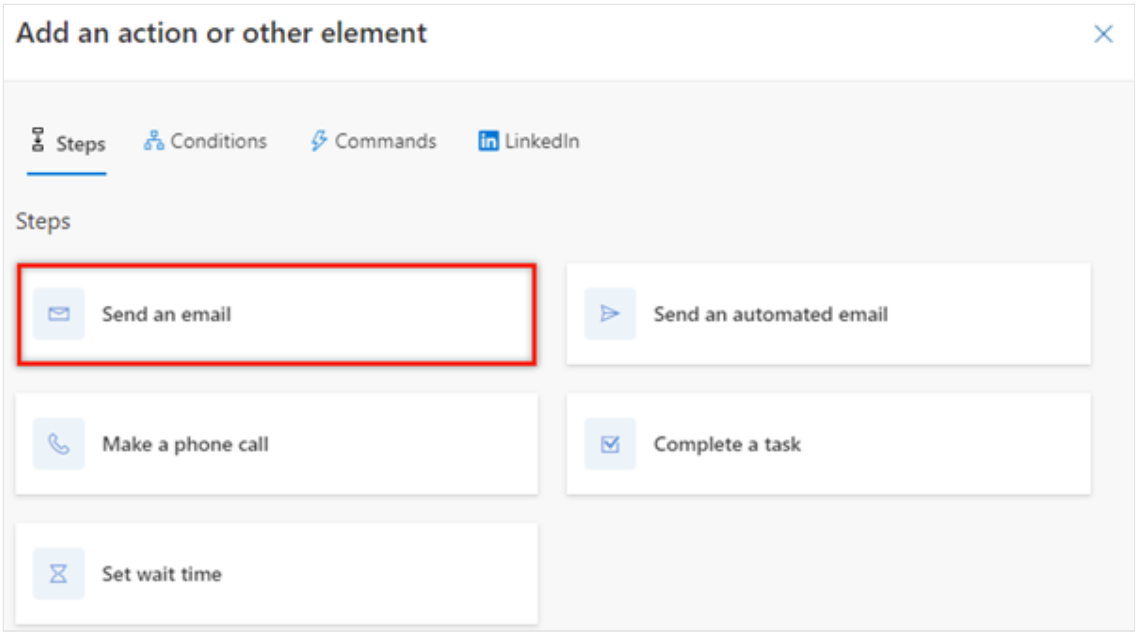
5. Close the email open pane.
   The condition is created.

6. To schedule a phone call activity in the **Yes** path to talk with the customer, do the following:
   a. Select **Add** (+), and then under the **Steps** tab, select **Make a phone call**.

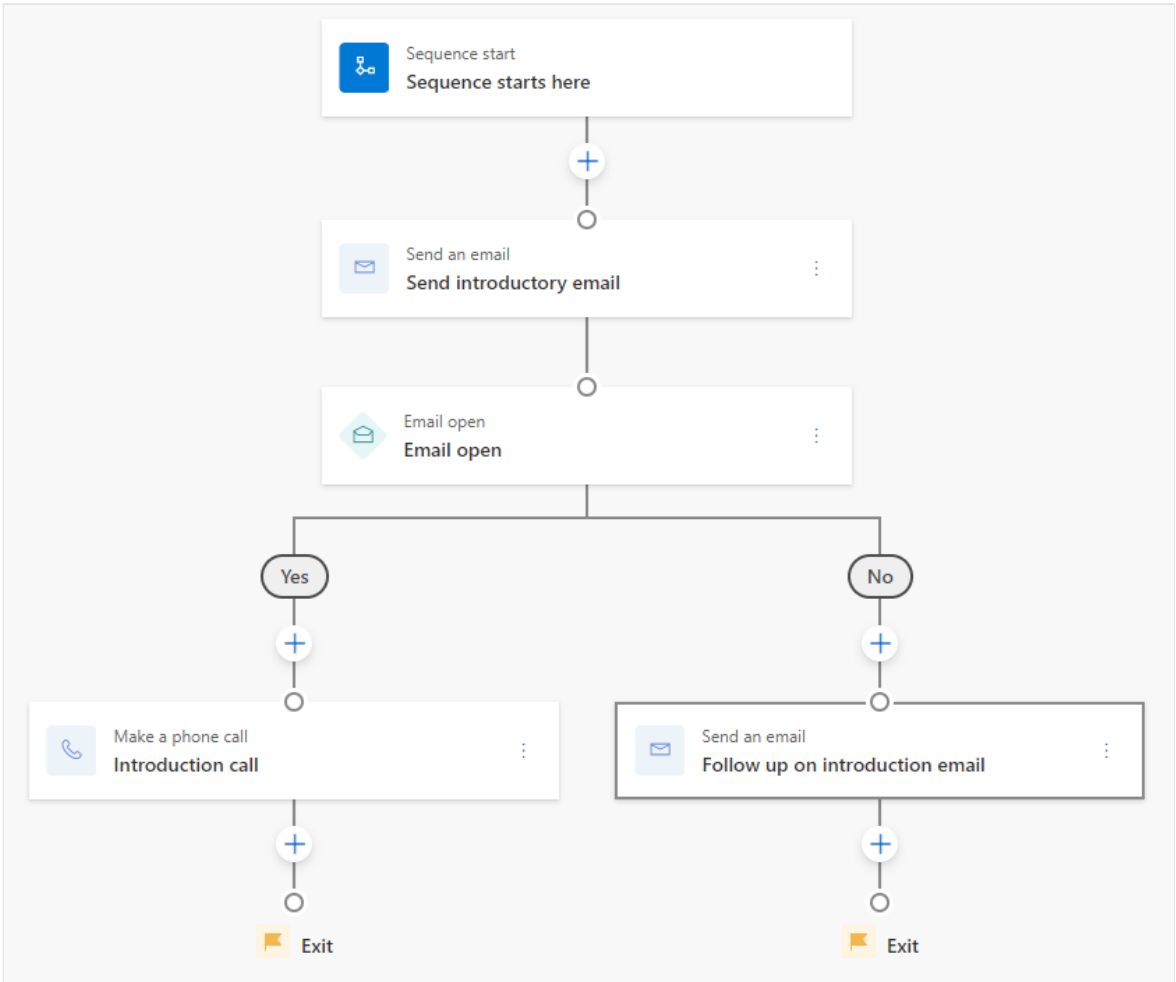


   b. Configure the phone call activity, and then close the pane.
      The phone call activity is created.

7. To send a follow-up email in the **No** path when the customer doesn't respond within the time limit of one day, do the following:
   a. Select **Add** (+), and then under the **Steps** tab, select **Send an email**.



b. Configure the email activity, and then close the pane.
The email activity is created.



> **Note**
>
> You can't delete a step that's followed by a condition. To delete such a step, remove the condition and then delete the step.

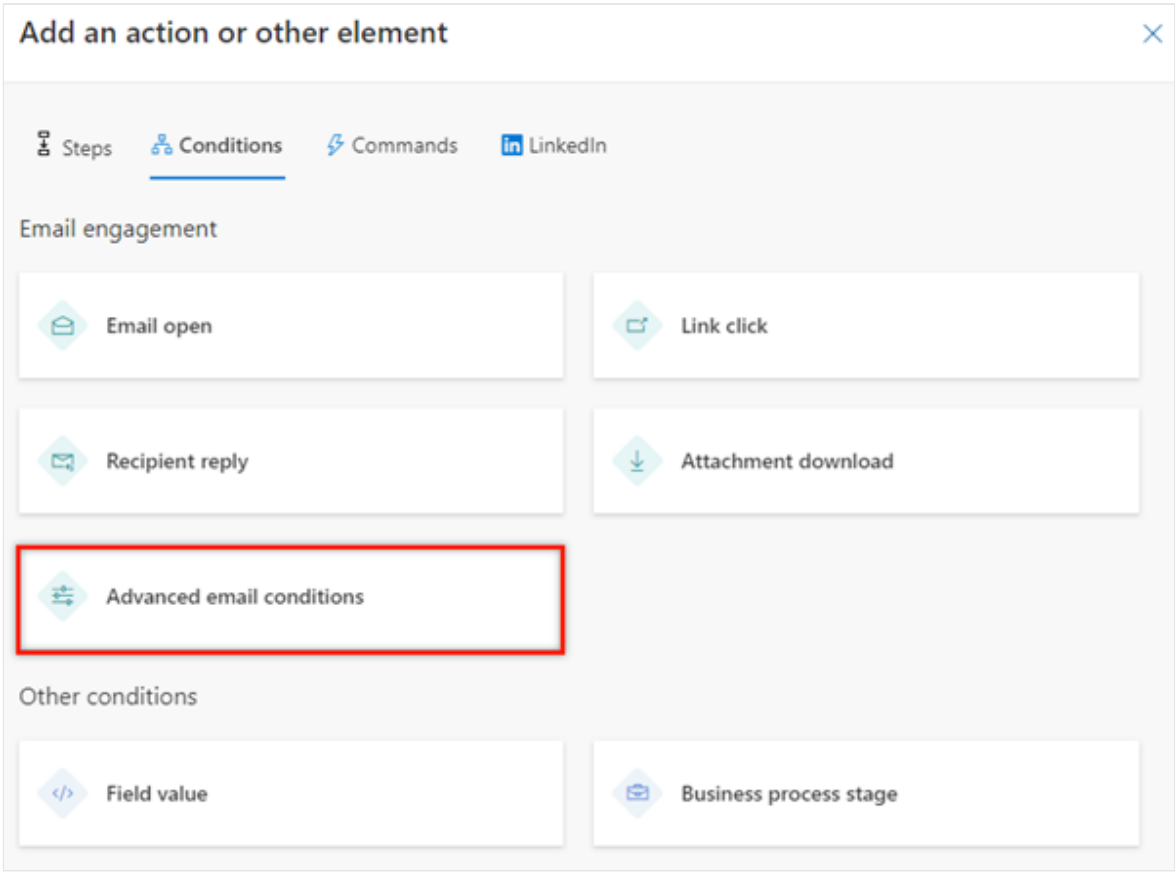
Advanced email conditions

The **Advanced email conditions** step lets you define next course of action when a set of actions—or any of the selected actions—is performed by the customer on the email step.

> **ⓘ Important**
>
> - You need to **configure the email engagement feature** in your organization before you start using conditions for the email activity. The interactions that customers have with emails are displayed in the condition list.
> - **Enable sequence activities** to create conditions for email activities.

Let's define a flow where you want to trigger the next step when a customer opens the email and downloads the attachment.

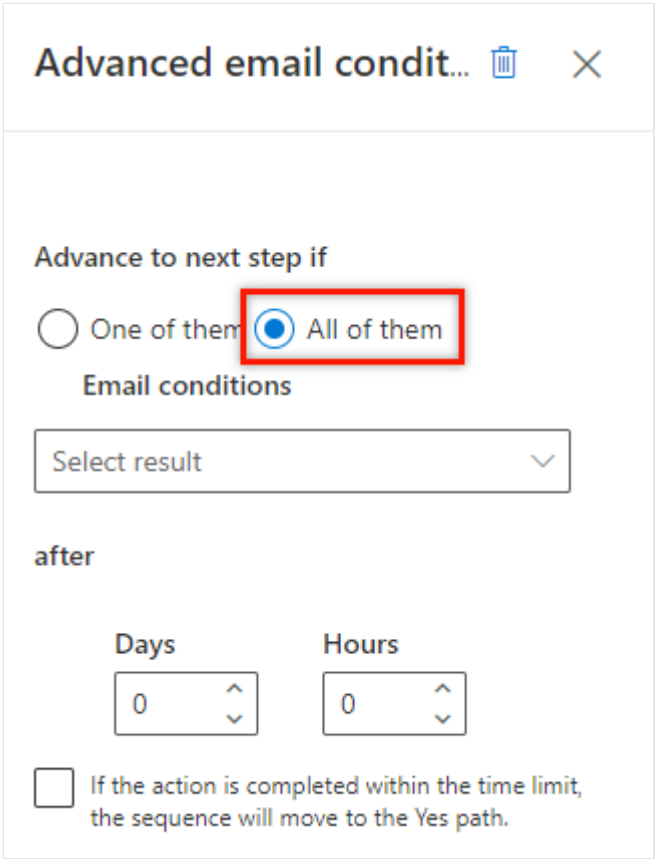
1. After adding the **Email** activity, select + (**Add**).
2. On the **Add an action or other element** dialog box, go to the **Conditions** tab and select **Advanced email conditions**.



3. In the **Advanced email conditions** pane, select the **All of them** option. In this example, we're defining the condition to go to **Yes** path when a customer opens

the email and downloads the attachment.

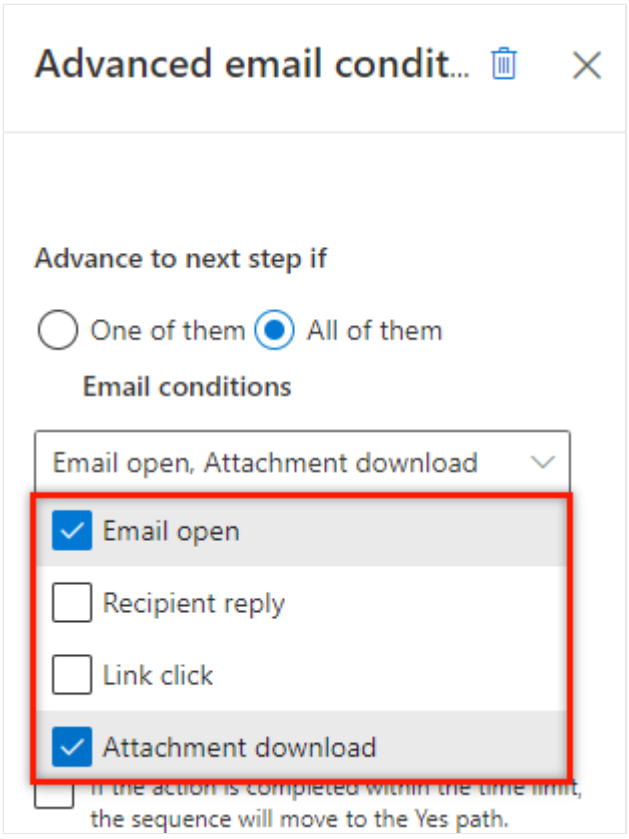
> ⓘ Note
>
> Select the **One of them** option if you want to trigger the **Yes** path when only one of the selected actions is performed.



4. From the **Select results** dropdown list, select the **Email open** and **Attachment downloaded** checkboxes.

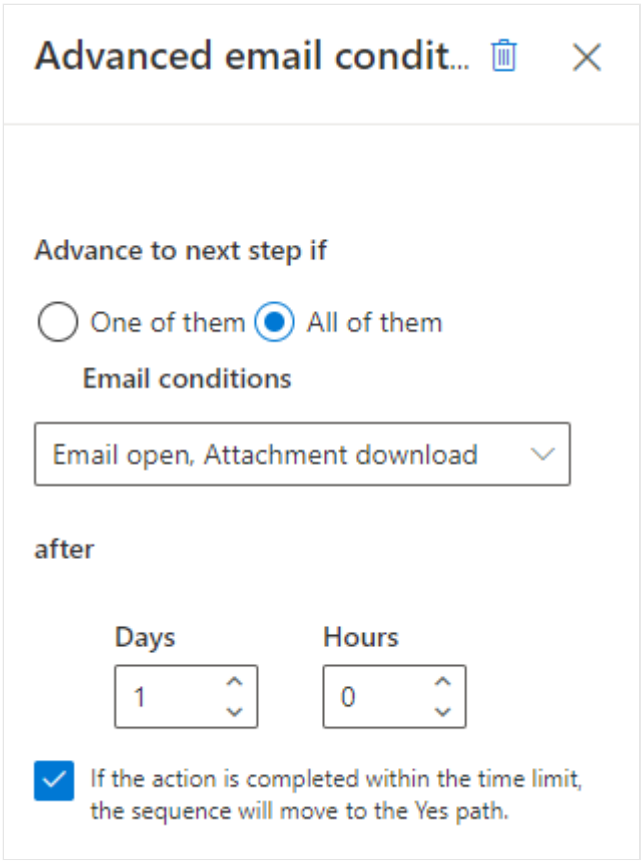
   When a customer performs both of these actions on the email, the **Yes** path is initiated.

> ⓘ Note
>
> If you've selected the **One of them** option, the **Yes** path will be initiated when the email is opened or the attachment is downloaded.



5. Select the duration in days and hours after which you want to initiate the **Yes** path when a customer performs the selected actions. If the customer doesn't perform these actions within the time limit, the **No** path is initiated.

   If you don't want to wait and move to the next step in the **Yes** path after a customer performs the selected actions, select the **If the action is completed within the time limit, the sequence will move to the Yes path.** checkbox.



6. Close the **Advanced email conditions** pane.
   The advanced email conditions step is created.
   You can continue to create the steps in the **Yes** and **No** paths, according to your requirements.

Define conditions for a phone call activity

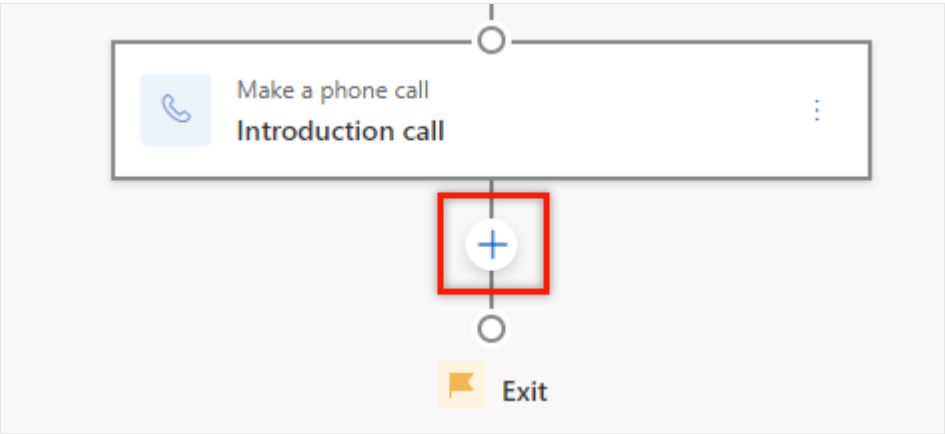
When you add phone call activity to the sequence and select **Add** (+), the **Add an action or other element** dialog box displays. Select the **Conditions** tab, where you determine the next course of action in the sequence. The actions that can be performed on a phone call activity are displayed in the **Advanced call conditions** step. However, these actions vary from organization to organization depending on their requirements, and are added by the administrator.
The **Advanced call conditions** step lets you select multiple results, when only one result must occur to advance to the **Yes** path.

When the seller skips a phone call activity that includes a condition, the flow follows the **No** path.

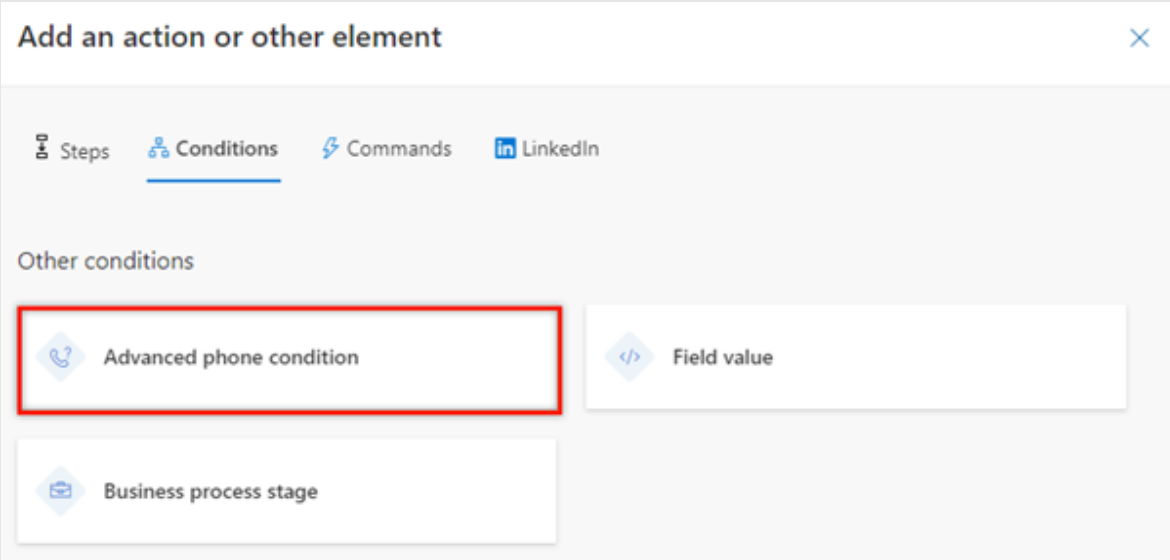
> ⓘ **Note**
>
> To learn about adding custom status for your organization, see **Define status reason transitions for the Case or custom tables**.

Let's define a flow where you want to initiate the **Yes** path when the customer makes or receives a call.

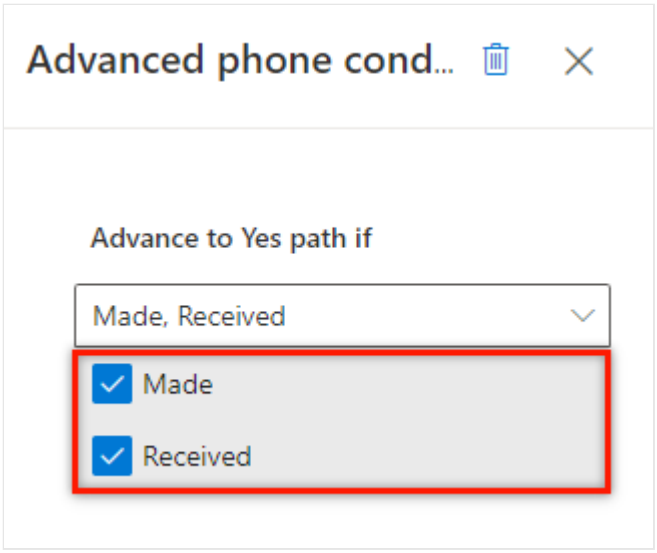
1. Select **Add** (+) after the phone call activity.



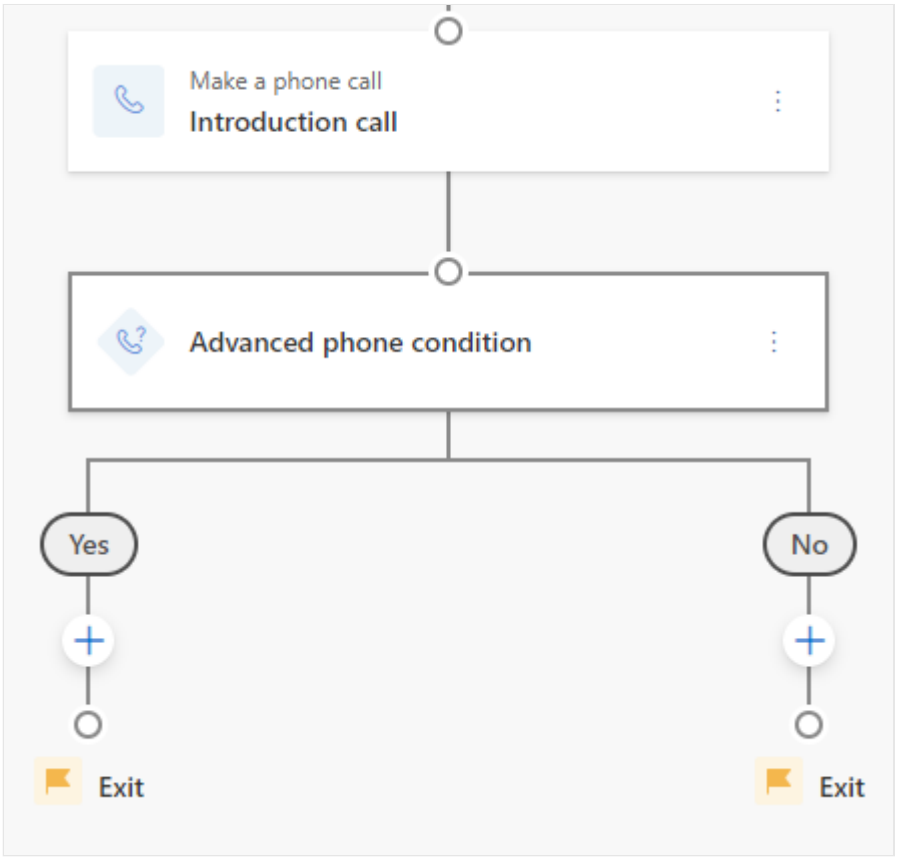
2. In the **Add an action or other element** dialog box, go to the **Conditions** tab and then select **Advanced phone conditions**.



3. In the **Advanced phone conditions** pane, from the **Select results** dropdown list, select the **Made** and **Received** options. When any of the selected activities is completed, the **Yes** path will be initiated.



4. Close the **Advanced phone conditions** pane.
   The advanced call conditions step is created.



You can continue to create the steps in the **Yes** and **No** paths, according to your requirements.

Define conditions based on a field value

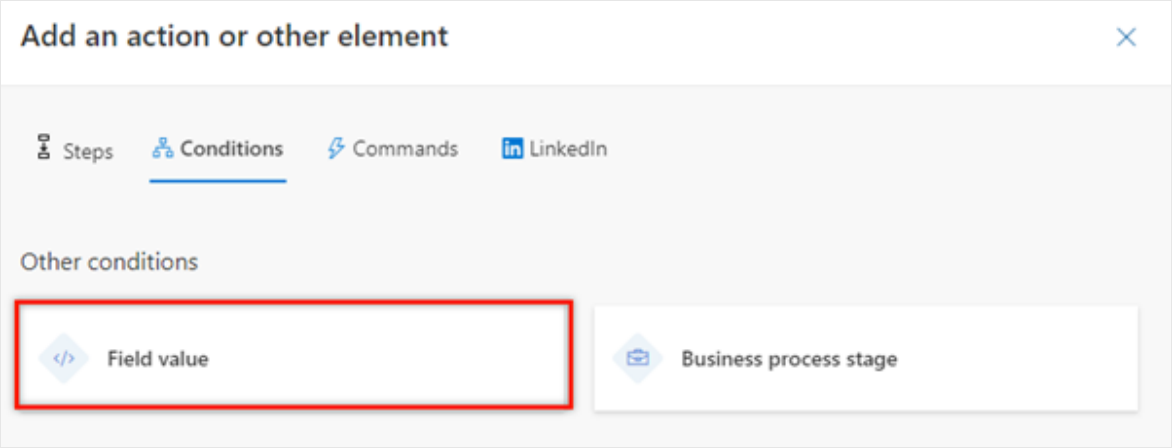
When you add a condition based on a field value, you determine the next course of action for the sequence according to the value given in the field. The available field

values—including related entities—are based on the type of record you've selected for the sequence.

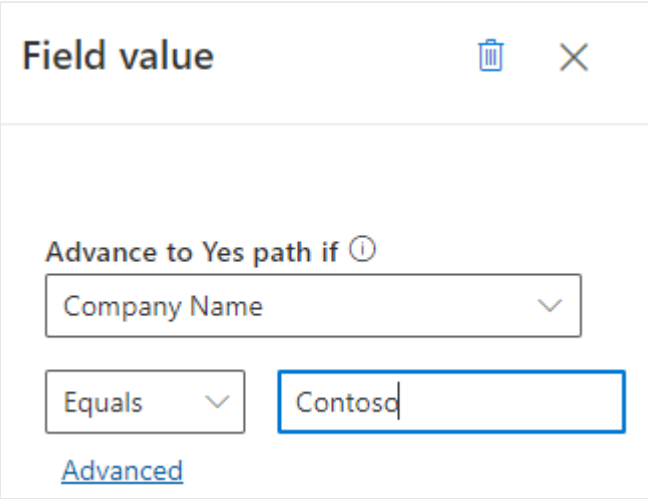
In the the **Add an action or other element** dialog box, go to the **Conditions** tab, choose a field, and create a condition. The sequence follows the **Yes** path when the condition is true and the **No** path when the condition is false.

In the following example, let's set the sequence to follow the **Yes** path when a lead's company name is **Contoso**.

1. Select **Add** (+) after an activity.
2. In the **Add an action or other element** dialog box, go to the **Conditions** tab and then select **Field value**.



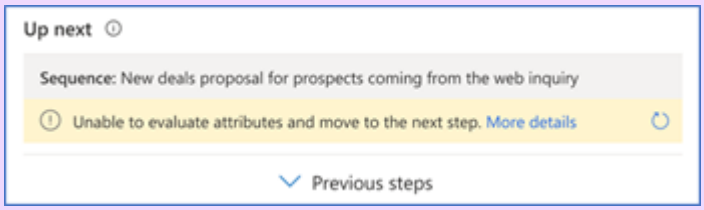
3. In the **Field value** pane, under the **Advance to Yes path if** section, select **Company Name**, and then set the condition as **Equals** to **Contoso**.



> **Note**
>
> - When you select **Advanced**, the **Field values** pane opens on the right to define more conditions for the step. You can define conditions based on

row, group, and related entities.

- Lookup type fields such as **Created by** and **Owner** are only displayed when you select **Advanced**.
- If the connected record doesn't include the configured field, an error is displayed in the **Up next** widget. The following image shows an example of the error:



4. Close the **Field value** pane.
   The field value condition step is created.

   You can continue to create the steps in the **Yes** and **No** paths, according to your requirements.

Define conditions based on a business process stage

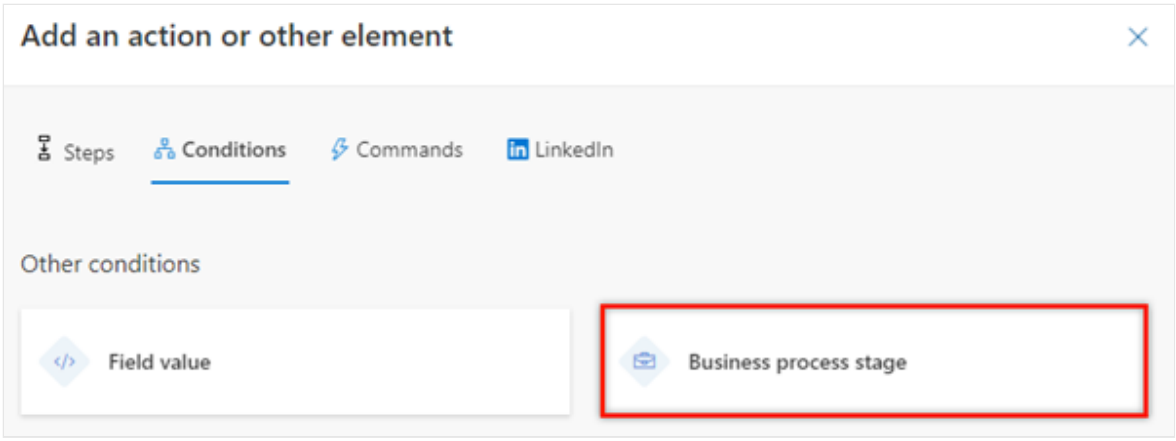
When you add a condition based on the stage of a business process, you determine the path of a sequence based on which stage the business process is in. The business process flows are listed based on the type of record you've selected for the sequence.

In the the **Add an action or other element** dialog box, go to the **Conditions** tab, choose a **Business process stage**, and create a condition. The sequence follows the **Yes** path when the condition is true and the **No** path when the condition is false.

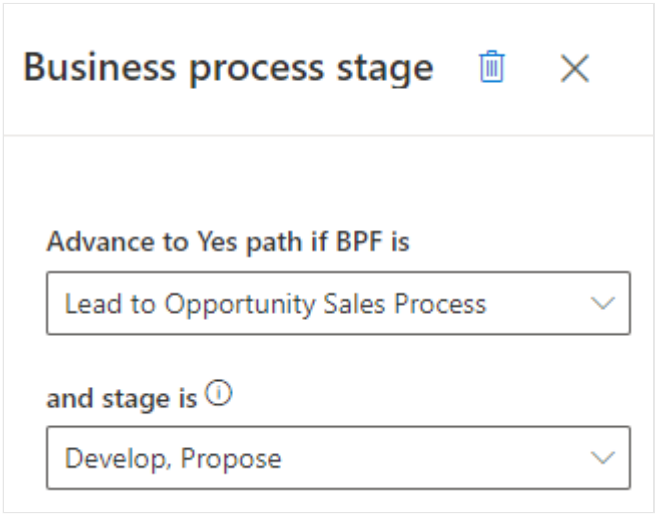
> ⓘ **Note**
>
> Verify that business process flows are defined for the record type you've selected in the sequence.

In the following example, let's set the sequence to the **Yes** path when the **Lead to Opportunity Sales Process** flow is in either the **Propose** or **Develop** stage.

1. Select **Add** (+) after an activity.
2. In the **Add an action or other element** dialog box, go to the **Conditions** tab and then select **Business process stage**.



3. In the **Business process stage** pane, under the **Advance to Yes path if BPF is** section, select **Lead to Opportunity Sales Process**. In the **and stage is** box, select **Propose** and **Develop**.



4. Close the **Business process stage** pane.
   The business process flow condition step is created.
   You can continue to create the steps in the **Yes** and **No** paths, according to your requirements.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence
Add steps to sequence
Add command steps to sequences
Add LinkedIn activities to sequence

Add command steps

Article • 08/01/2022

Add steps to advance to other sequences and update fields in a sequence to display in the work list and Up next widget.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Types of command steps

The following command steps are available in sequences:

- Advance to another sequence
- Update field

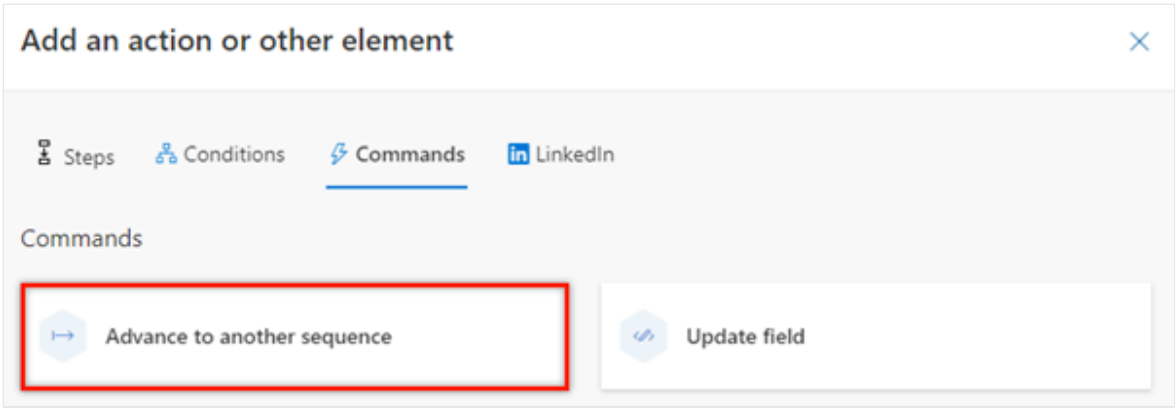
Advance to another sequence

Transfers the sequence control from the current sequence to the selected sequence. For example, you defined a sequence **S1** and attached a sequence **S2** after an initial activity of sending an introduction email. When **S1** is attached to a record and seller completes the initial task of sending an introduction email, the record starts displaying the activities defined in **S2**. The following are the considerations to use this activity:

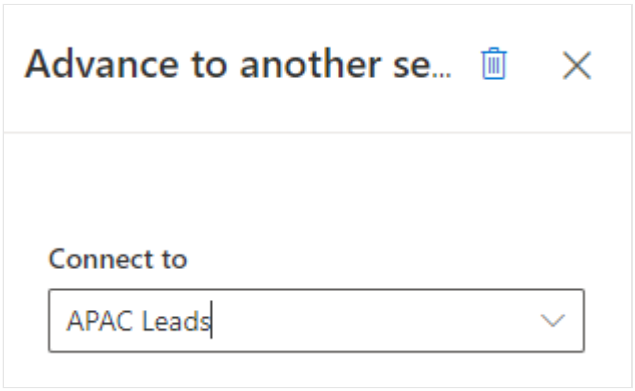
- A sequence can't start with this activity
- Other steps can't be added after this activity

To add the advance to another sequence activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Commands** tab, select **Advance to another sequence**.



3. In the **Advance to another sequence** pane, from the **Connect to** list, choose a sequence to attach. The list consists of the sequences that are active and related to the record type.



4. Close the **Advance to another sequence** pane.
   The activity step is added to the sequence.

Update field

Creates a step that automatically updates a record by using a configured value for a field. When the activity is displayed to the seller in the record, the field automatically gets updated with the value you configured. The following types of fields are supported (including custom fields):

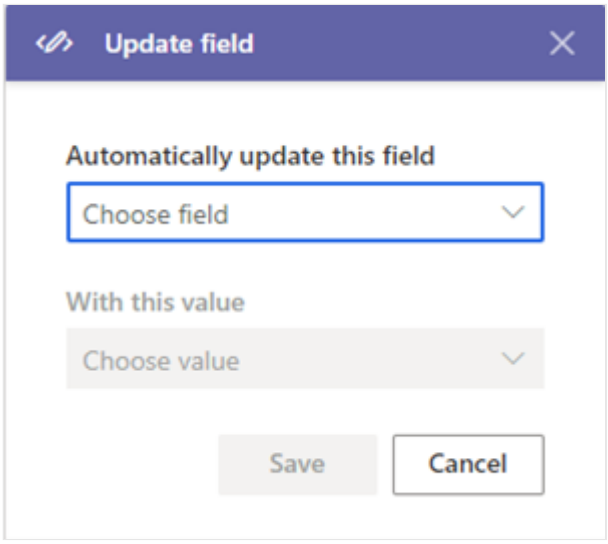
- Two options (for example, a **Do Not Email** field that contains the values **Allow** and **Do Not Allow**)
- Option set (for example, a **Budget** field that contains the values **No Committed Budget**, **May Buy**, **Can Buy**, and **Will Buy**)

You can add this activity anywhere in the sequence. As soon as the previous activity is completed, the **Update field** activity is executed automatically and the sequence moves on to the next activity. To avoid executing the **Update field** step immediately after the previous activity is completed, add the Set wait time activity (described earlier in this topic) before the **Update field** activity.

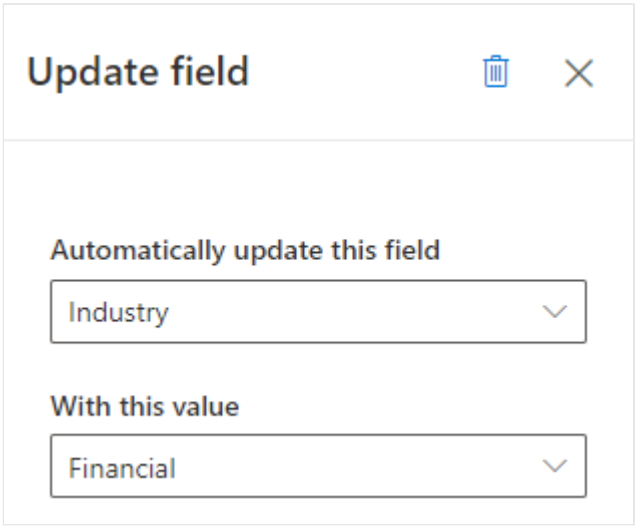
Sellers can see the activity on the timeline of the record.

To add the update field activity step:

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **Commands** tab, select **Update field**.



3. In the **Update field** pane, under **Automatically update this field**, select a field. Under **With this value**, select a value to use to update the record automatically.



4. Close the **Update field** pane.
   The activity step is added to the sequence.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence
Add steps to sequence
Add condition steps to sequences
Add LinkedIn activities to sequence

Add LinkedIn activities to a sequence

Article • 08/01/2022

Use LinkedIn features to define activities for sequences in the sales accelerator to display steps in the work list and **Up next** widget.

License and role requirements

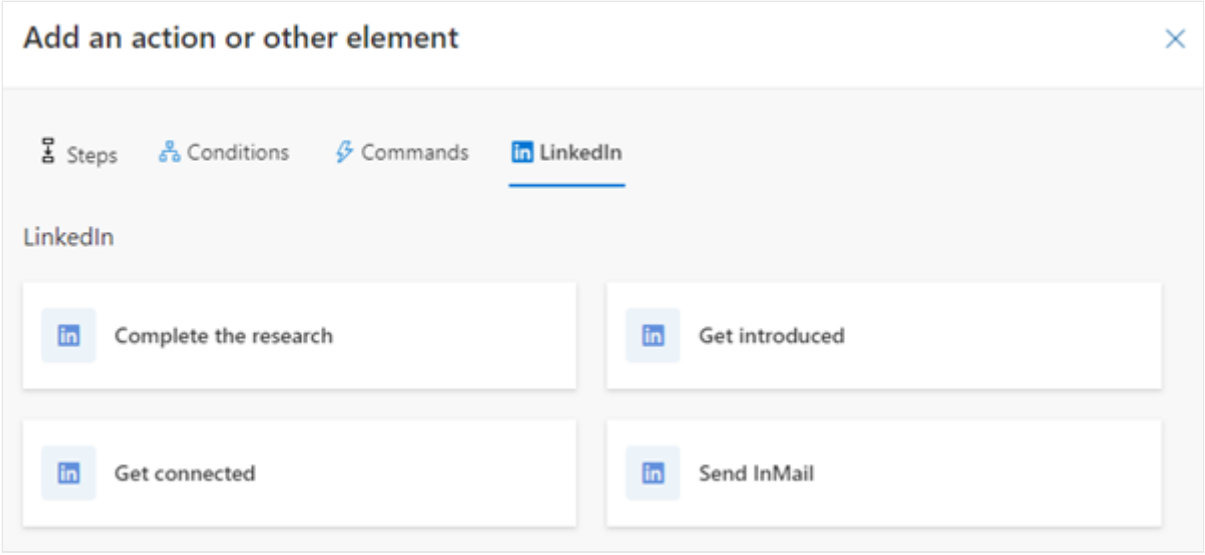
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

How do LinkedIn activities help?

In sequences, activities that are based on LinkedIn Sales Navigator allow sellers to diversify their day-to-day activities by including the social selling functions that are available in LinkedIn. You can use LinkedIn's vast network with recommended actions that your sellers can take to build deeper connections.

As an administrator or sequence manager, you can add the following activities to sequences:

- Complete the research
- Get introduced
- Get connected
- Send InMail



Prerequisites

Ensure that you meet the following requirements before configuring LinkedIn activities:

- LinkedIn Sales Navigator is configured in your organization. More information: Install and enable LinkedIn Sales Navigator
- The latest version of the solution is installed. Go to **Advanced settings** > **Solutions**, and search for **msdyn_LinkedInSalesNavigatorAnchor**. The version number should be **3.0.1.1060** or later.
- You have the proper license to use LinkedIn Sales Navigator.

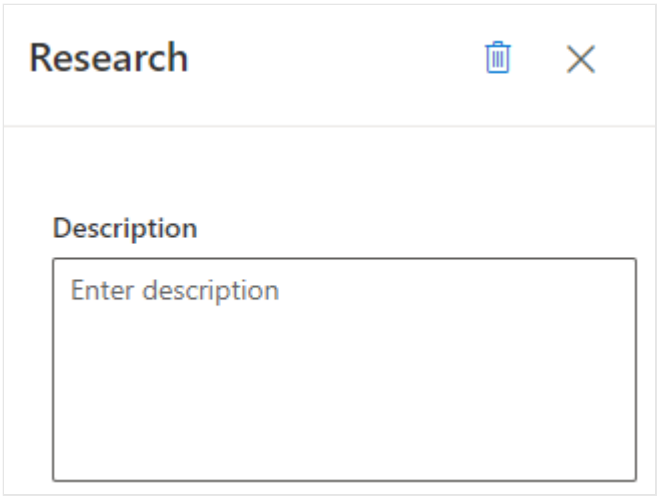
Complete the research

Sellers can use the **Research** activity to view a customer's LinkedIn profile, including contact and account information. This helps sellers to better understand customers before starting to work with them. More information: Leads Module References and Accounts Module References

When the activity is displayed to the seller, the LinkedIn **Research** step is displayed in the **Up next** widget and work list.

To add the Research activity

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **LinkedIn** tab, select **Complete the research**.
3. In the **Research** pane, enter a description for the activity.



4. Close the **Research** pane.
   The LinkedIn search step is created and added to the sequence.

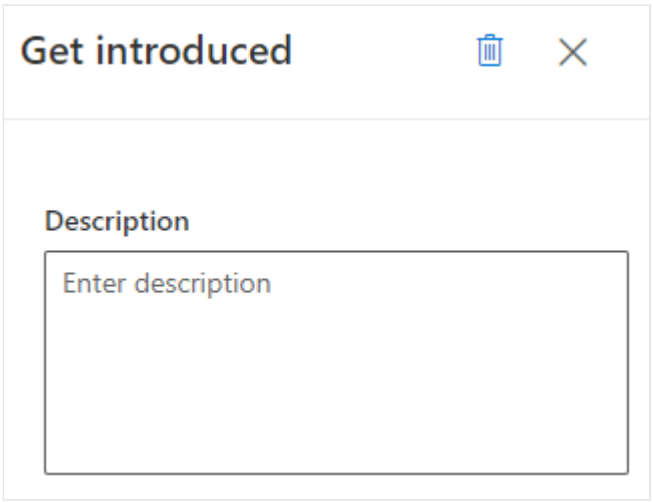
Get introduced

Sellers can use the **Get introduced** activity to ask for an introduction to the customer from anyone within their network in LinkedIn who's already connected to the customer. More information: Get Introduced

When this activity is displayed to the seller, the **Find intro person** step is displayed in the **Up next** widget and work list.

To add the Get introduced activity

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **LinkedIn** tab, select **Get introduced**.
3. In the **Get introduced** pane, enter a description for the activity.



4. Close the **Get introduced** pane.
   The LinkedIn get introduced step is created and added to the sequence.

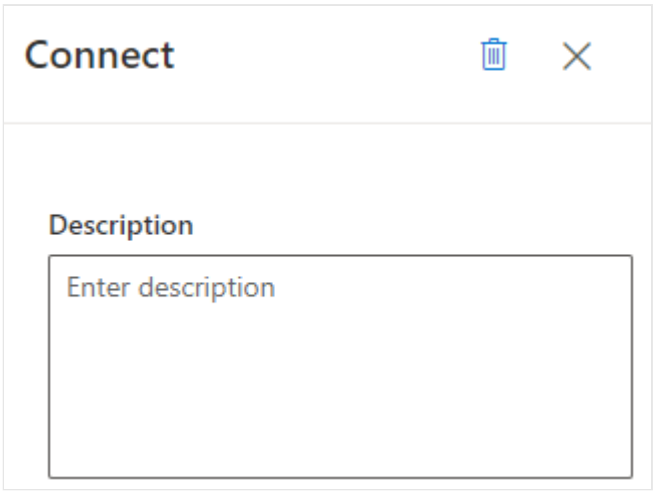
Get connected

Sellers can use the **Get connected** activity to send connection invites to customers along with personal messages, to help solidify customer relationships and add them to their network. More information: Connect

When this activity is displayed to the seller, the **Get connected** step is displayed in the **Up next** widget and work list.

To add the Connect activity

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **LinkedIn** tab, select **Get connected**.
3. In the activity selection box, select the **LinkedIn** tab, and then select **Connect**.
4. In the **Connect** pane, enter a description for the activity.



5. Close the **Connect** pane. The LinkedIn get connected step is created and added to the sequence.

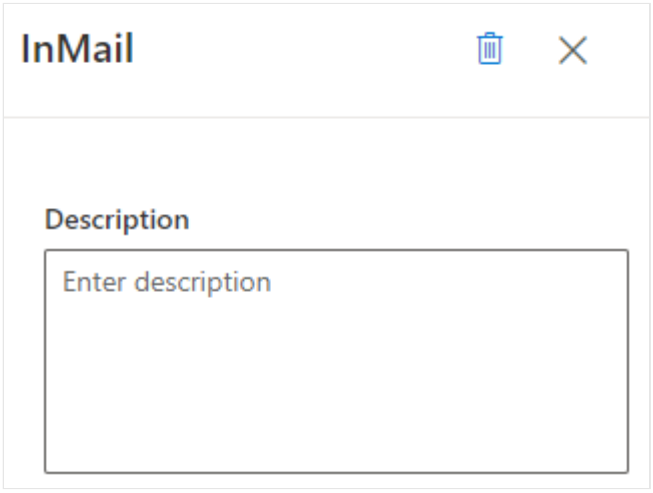
Send InMail

The **Send InMail** activity allows sellers to directly message customers who they're not already connected to through LinkedIn. More information: Send an InMail Message

When this activity is displayed to the seller, the Send InMail step is displayed in the Up next widget and work list.

To add the Send InMail activity

1. In the sequence designer page, select the **Add** (+) icon under a step.
2. On the **Add an action or other element** dialog box, under the **LinkedIn** tab, select **Send InMail**.
3. In the **InMail** pane, enter a description for the activity.



4. Close the **InMail** pane. The LinkedIn send InMail step is created and added to the sequence.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence
Add steps to sequence
Add condition steps to sequences

Add command steps to sequences
Work with LinkedIn activities

Exit a sequence during the flow

Article • 08/01/2022

By enabling the option to exit a sequence, you disconnect the sequence from its records when the criteria is met. For example, if the flow includes an email reply from the customer, the record will be disconnected from the sequence.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, and Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

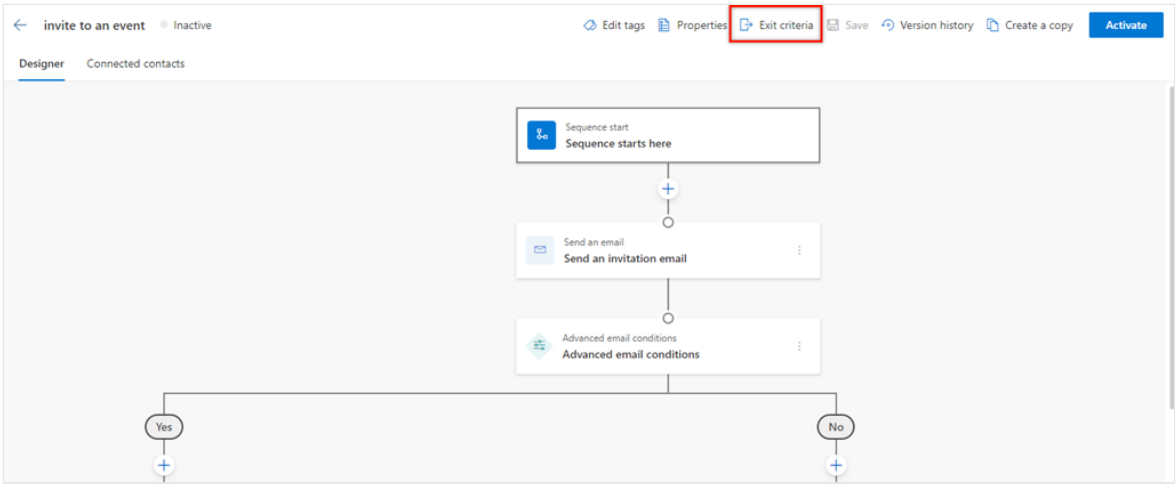
Prerequisites

Review the following requirements before you configure the exit criteria:

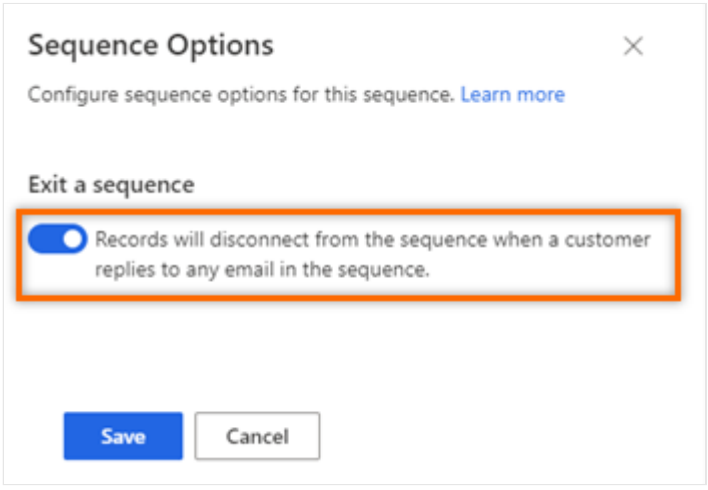
- At least one email activity step is created in the sequence.
- The sequence must be in inactive or revision state.
- Configure the email engagement feature in your organization before you start using this option for the email activity.

Configure the exit sequence criteria

1. Open the sequence and then on the designer page, select **Exit criteria**.



2. On the **Sequence Options** pane, turn on the **Exit a sequence** toggle to exit a sequence when a customer replies to any email in the sequence.



3. Select **Save**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence
Add steps to sequence

Add condition steps to sequences

Add command steps to sequences

Add LinkedIn activities to sequence

Sequence templates

Article • 08/01/2022

Sequence templates provide a set of activities to guide sellers with the next best action to take in a specific scenario.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence manager, or Sales Manager More information: Predefined security roles for Sales

Using sequence templates

You can use sequence templates to quickly get started with sequences. Sequence templates provide a set of activities to guide sellers with the next best action to take in a specific scenario, such as getting introduced to a lead and winning the deal.

Sequence templates are available for common scenarios, such as an incoming lead on a website. You can customize the template by adding and removing steps in accordance with your organization's requirements. The following templates are available by default:

- Follow up when contacts don't show up
- High volume outbound prospecting
- Invite to an upcoming event
- Meeting for product demo requests
- Upcoming account renewal
- Webinar follow up

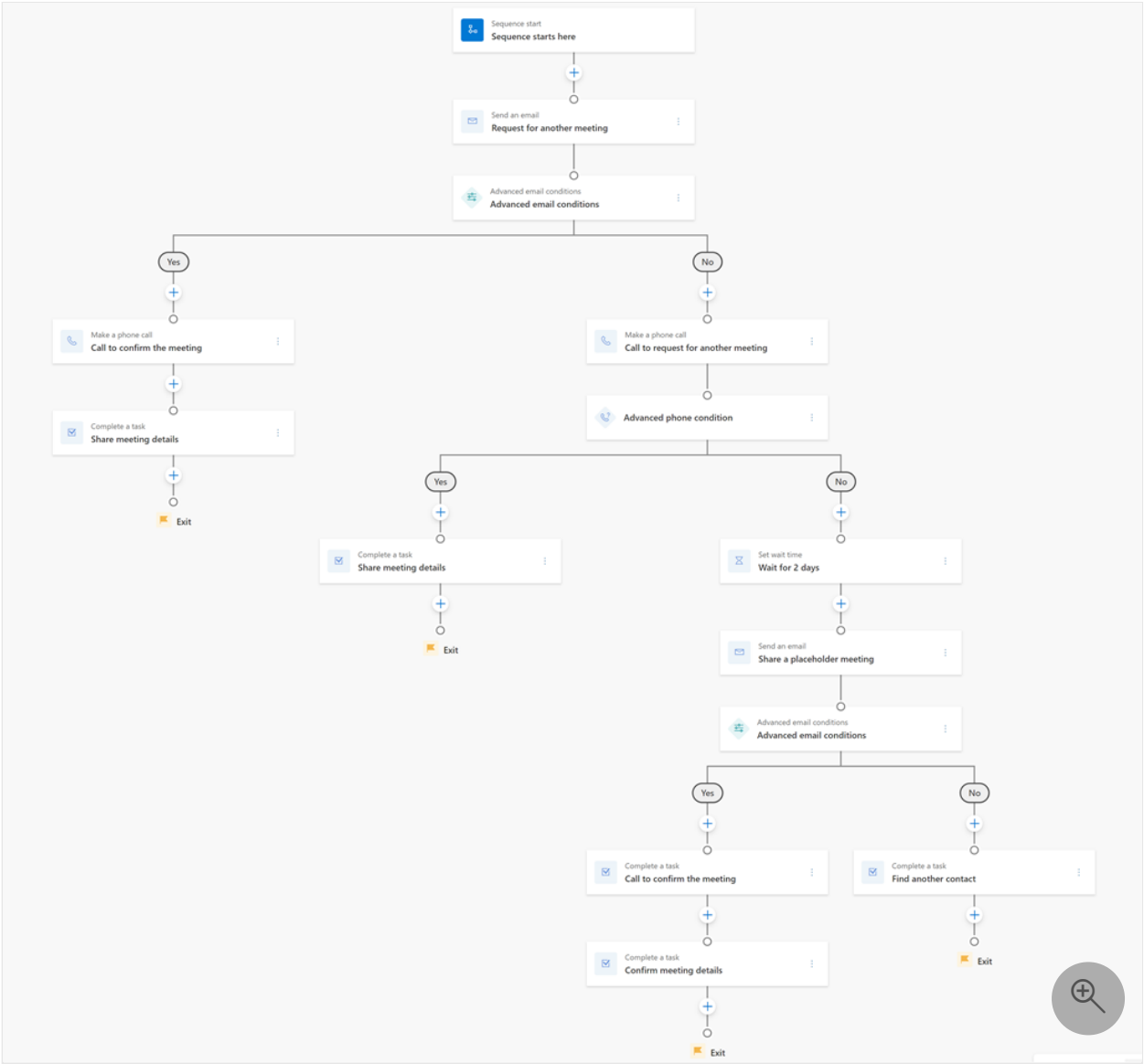
Follow up when contacts don't show up

The **Follow up when contacts don't show up** sequence template is for the Contact record type. The template helps sellers to follow up with customers when they don't show up for a meeting.

By default, the template contains seven steps (excluding wait time steps) and the sequence takes five days to complete. The template consists of the following process:

1. Send an email to the customer about the missed meeting, and request another meeting. If the customer replies, make a phone call, and share details about the missed meeting.
2. If the customer doesn't reply to the email, make a phone call. If the customer answers the call, discuss, and share details about the missed meeting.
3. If the customer doesn't answer the call, wait for two days, and send an email to schedule a placeholder meeting. If the customer replies to the email, make a phone call, and share details about the missed meeting.
4. If the customer doesn't reply to the email, reach out to other contacts in the company.

The following flow diagram illustrates the steps included in the template.



High volume outbound prospecting

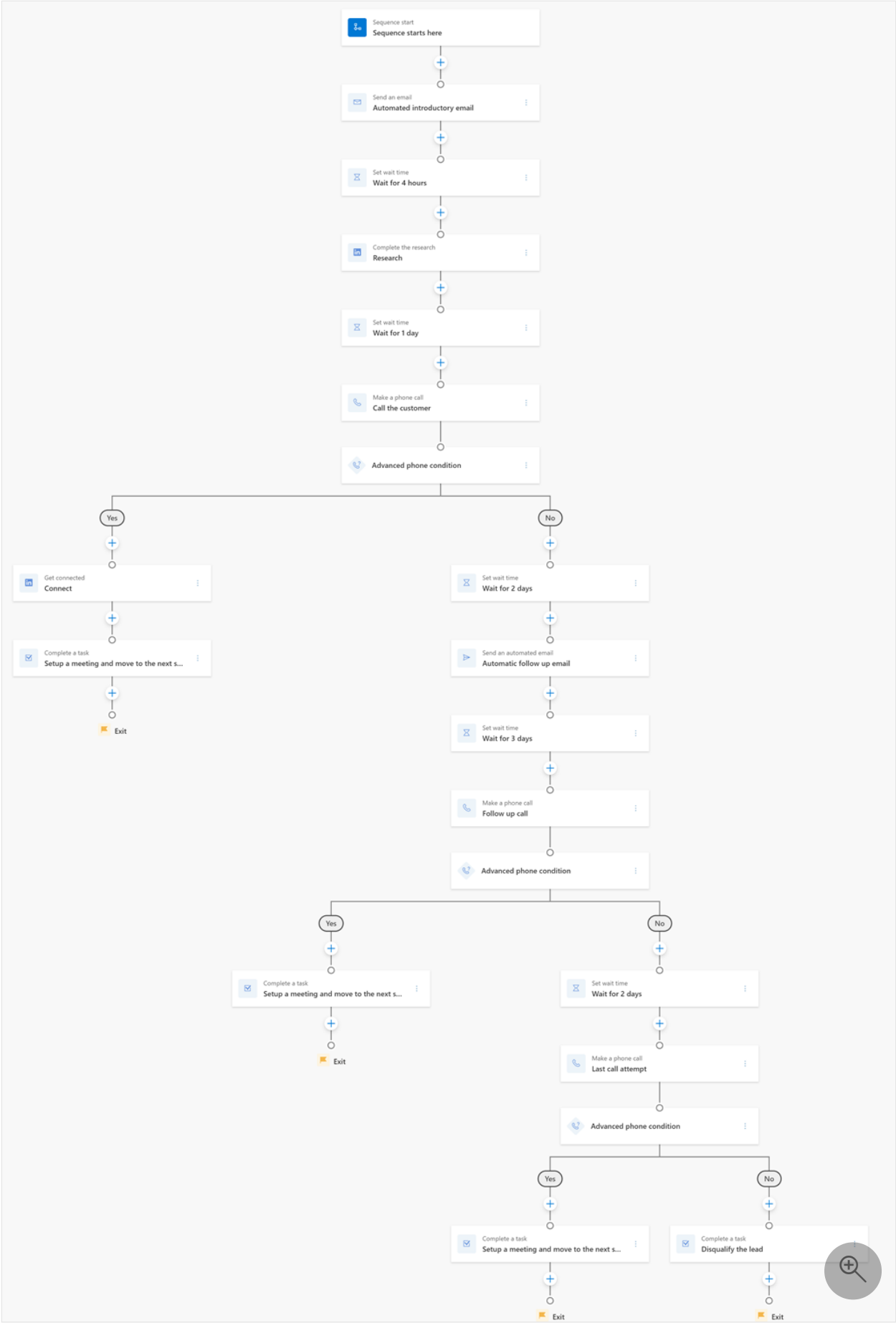
The **High volume outbound prospecting** sequence template is for the Lead record type. The template helps sellers to meet prospects and understand their needs and requirements.

By default, the template contains seven steps (excluding wait time steps) and the sequence takes nine days to complete.

The template consists of the following process:

1. Send an automated introductory email to the lead with the seller's information, and then research the lead's company and details on LinkedIn to understand the lead.
2. Make a phone call to the lead. If the lead answers the phone call, discuss, and connect with the lead through LinkedIn. Schedule a meeting with the lead to take the deal to the next stage.
3. If the lead doesn't answer the phone call, an automated follow-up email is sent; after three days, make a phone call to the lead. If the lead answers the phone call, discuss, and schedule a meeting with the lead to take the deal to the next stage.
4. If the lead doesn't answer the phone call, wait for two days, and make the final phone call. If the lead answers the phone call, discuss, and schedule a meeting with the lead to take the deal to the next stage.
5. If the lead doesn't answer the phone call, disqualify the lead.

The following flow diagram illustrates the steps included in the template.



Invite to an upcoming event

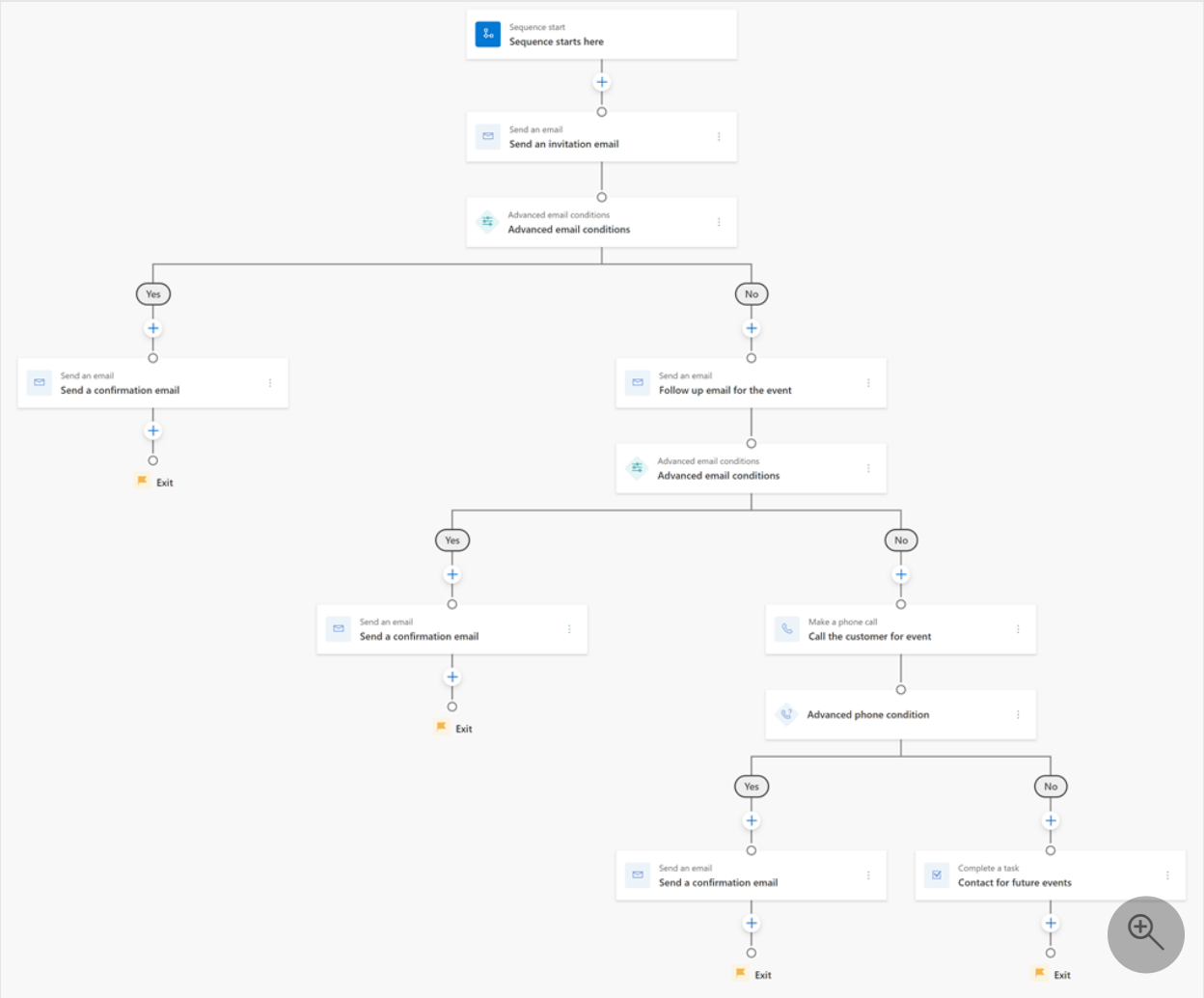
The **Invite to an upcoming event** sequence template is for the Contact record type. The template helps sellers to build relationships and drive attendance to an upcoming event, such as an online webinar or an offline conference.

By default, the template contains six steps (excluding wait time steps) and the sequence takes five days to complete.

The template consists of the following process:

1. Send a personalized email inviting the customer to the event. If the customer replies to the email, send a confirmation email with details about the event.
2. If the customer doesn't reply to the email, send a follow-up email. If the customer replies to the email, send a confirmation email with details about the event.
3. If the customer doesn't reply to the follow-up email, make a phone call. If the customer answers the call, discuss, and send a confirmation email with details about the event.
4. If the customer doesn't answer the call, mark the customer for future events.

The following flow diagram illustrates the steps included in the template.



Meeting for product demo requests

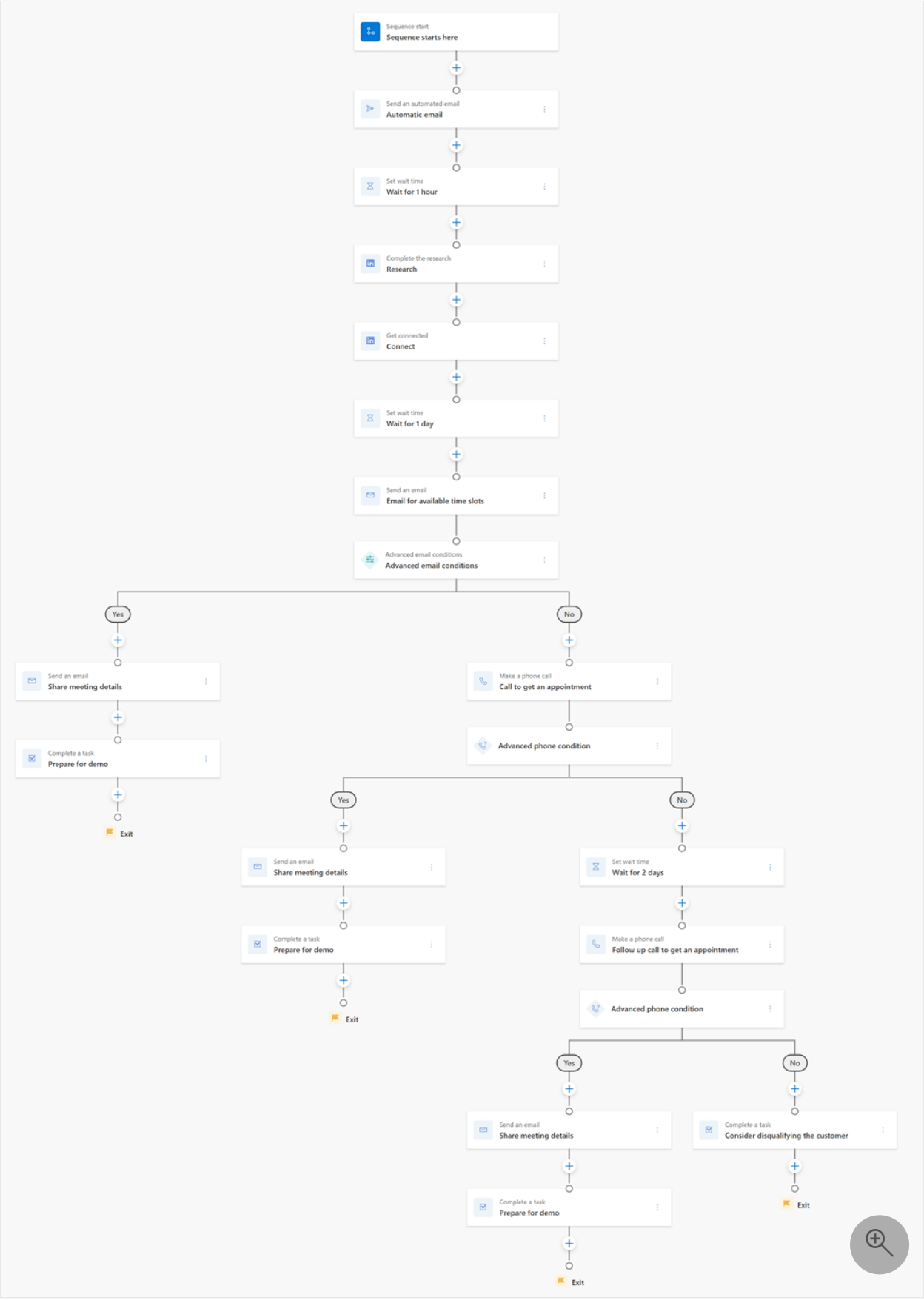
The **Meeting for product demo** requests sequence template is for the Opportunity record type. The template helps sellers to get a meeting with users who have requested a product demo.

By default, the template contains nine steps (excluding wait time steps) and the sequence takes five days to complete.

The template consists of the following process:

1. Send an email to the customer thanking them for showing interest in the product. Research and connect with the customer through LinkedIn.
2. Wait for a day, and then send an email to the customer requesting a time slot for the demo. If the customer replies to the email, set up a meeting and demo the product.
3. If the customer doesn't reply, make a phone call. If the customer answers the phone call, set up a meeting and demo the product.
4. If the customer doesn't answer the phone call, wait for two days, and make a follow-up phone call. If the customer answers that phone call, set up a meeting and demo the product.
5. If the customer doesn't answer the follow-up phone call, disqualify the customer.

The following flow diagram illustrates the steps included in the template.



Upcoming account renewal

The **Upcoming account renewal** sequence template is for the Account record type. The template reminds account executives about upcoming renewals and recommends steps.

By default, the template contains 13 steps (excluding wait time steps) and the sequence takes 50 days to complete.

The template consists of the following process:

1. Verify the account and renewal details, and then send an email to the customer about the upcoming renewal and request to schedule a meeting to discuss it.
2. Check the products and features used by the account, and research add-ons that can be proposed. Make a phone call to the customer to answer the questions and pitch the add-ons.
3. Note action items from the previous call and work on them. Send an email to schedule a follow-up meeting to answer the questions and resolve any doubts the customer has.
4. Prepare a renewal quote, and discuss with the sales team for approval.
5. Make a phone call to the customer and discuss the approved renewal quotation. Email the quotation to the customer for review, and make a call to finalize the quotation.
6. Discuss and sign the renewal contract.
7. Send an email to thank the customer for signing the renewal contract.

The following flow diagram illustrates the steps included in the template.

Sequence start
Sequence starts here
Complete a task
Check upcoming renewal details
Set wait time
Wait for 5 days
Send an email
Share renewal details and request for a ...
Set wait time
Wait for 10 days
Complete a task
Find product usage
Make a phone call
Call to discuss renewal
Complete a task
Action items from the call
Set wait time
Wait for 10 days
Send an email
Follow-up meeting
Set wait time
Wait for 5 days
Complete a task
Prepare renewal quote
Complete a task
Internal approval of renewal quote
Set wait time
Wait for 10 days
Make a phone call
Call to discuss the draft quote
Set wait time
Wait for 2 days
Send an email
Quote review meeting
Set wait time
Wait for 2 days
Make a phone call
Call to discuss final quote
Set wait time
Wait for 5 days
Complete a task
Renewal discussion and contract finaliza...
Send an email
Thank you email
Exit

Webinar follow up

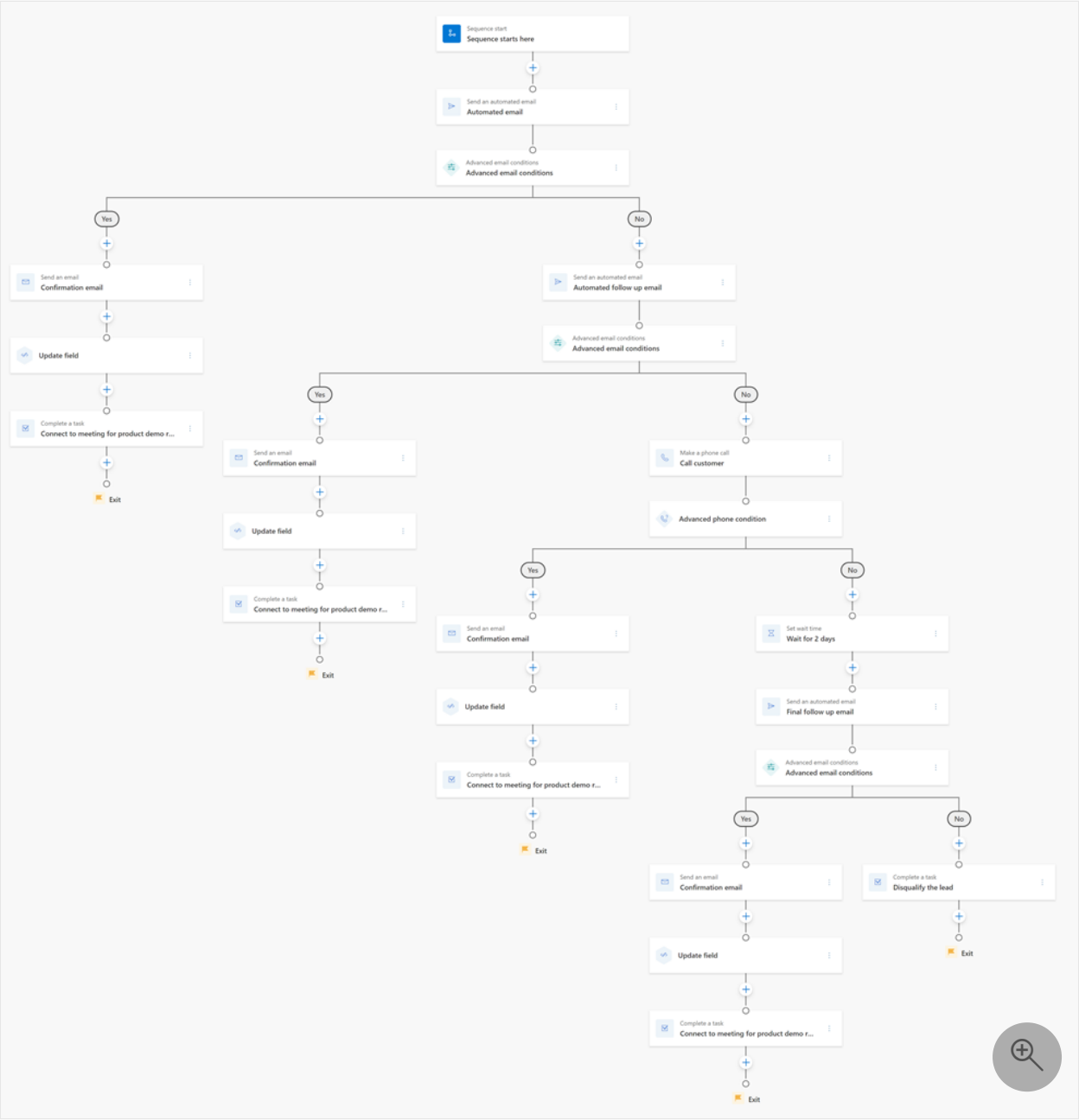
The **Webinar follow up** sequence template is for the Lead record type. The template allows sellers to set up a meeting with the customers who have recently attended a webinar or an event.

By default, the template contains 10 steps (excluding wait time steps) and the sequence takes seven days to complete.

The template consists of the following process:

1. Send an automated email thanking customers who attended the webinar, and ask to schedule a meeting to discuss next steps and answer any questions. If the customer replies to the email, send a confirmation email, qualify the lead, and set up a meeting to demo the product.
2. If the customer doesn't reply to the email, send a follow-up email. If the customer replies to the email, send a confirmation email, qualify the lead, and set up a meeting to demo the product.
3. If the customer doesn't reply to the follow-up email, make a phone call for next steps. If the customer answers the call, send a confirmation email, qualify the lead, and set up a meeting to demo the product.
4. If the customer doesn't answer the call, wait for two days, and send a final follow-up email for a meeting. If the customer replies to the email, send a confirmation email, qualify the lead, and set up a meeting to demo the product.
5. If the customer never replies to the email, disqualify the lead.

The following flow diagram illustrates the steps included in the template.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence

Manage sequences

Connect a sequence to records

Article • 08/28/2023

After you create and activate a sequence for the selling process, you connect the sequence to records depending on the entity that you've created the sequence for. When a sequence is connected to an entity, the activities defined in the sequence will be shown in order on the record's **Summary** under **Up next** in **My work**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Salesperson More information: Predefined security roles for Sales

Ways to connect sequence to records

You can connect a sequence to records in the following ways:

- Through a sequence
- Through the lead or opportunity grid view
- Through a record
- Through Power Automate

Through a sequence

> **Note**
>
> In this procedure, we're considering a sequence that was created based on **Lead** as an example. For sequences that are based on **Opportunity**, the procedure is similar.

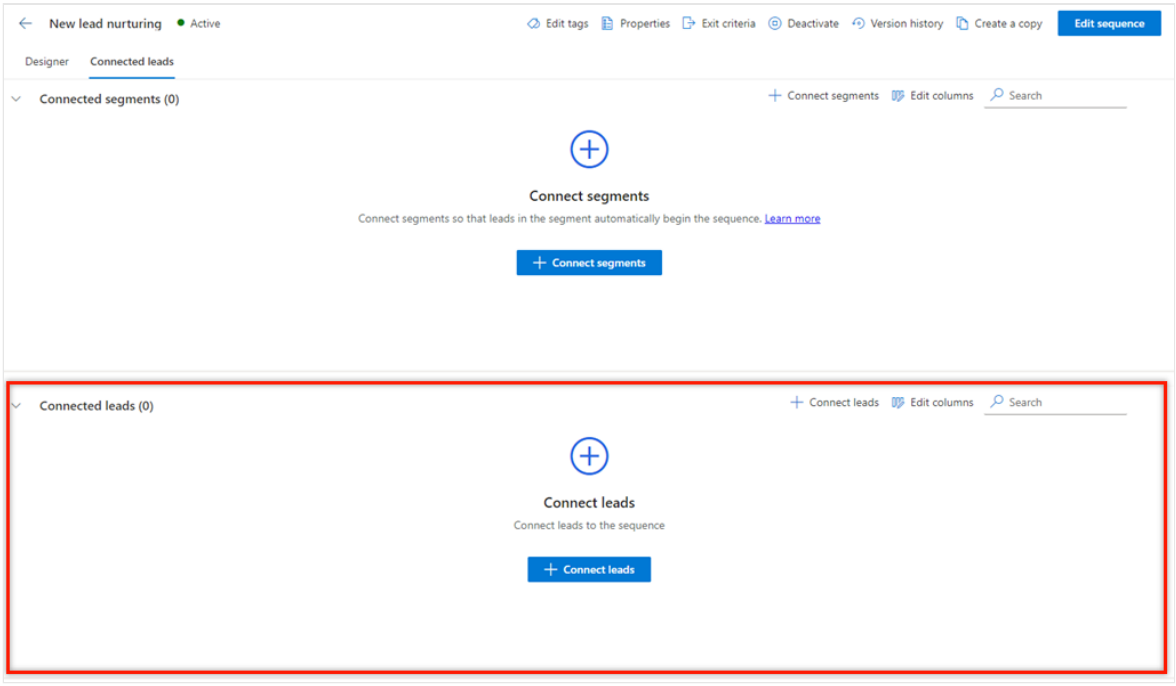
1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

3. Under **Sales accelerator**, select **Sequences**.

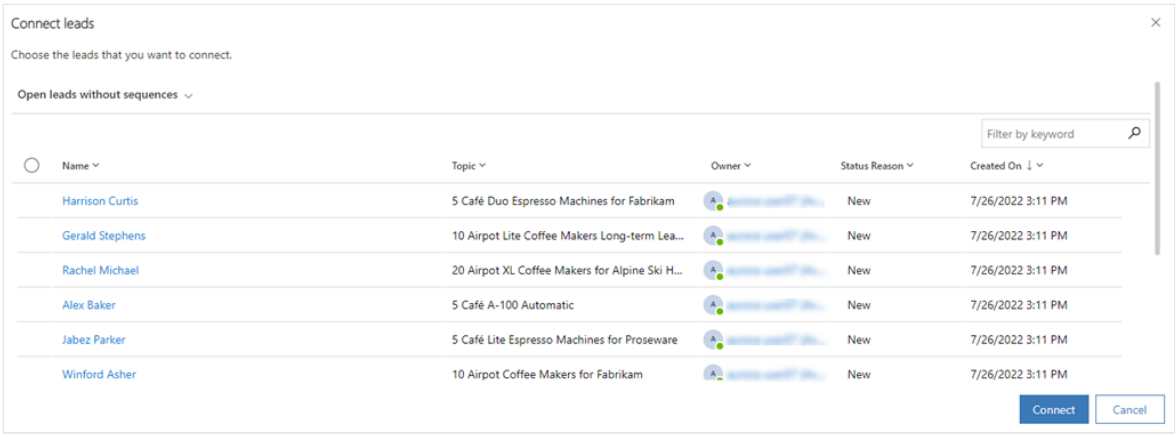
4. On the **Sequences** page, select and open the sequence that is active state.
   or
   Hover over the sequence, and then select **More options** > **View sequence**.
   The sequence opens.

> **Note**
>
> You can assign records only to sequences that are in an **Active** state.

5. Select the **Connected *record*** tab. In this example, we're selecting a sequence with record type lead.
   You can see the list of records that are connected to the sequence. If no records are connected, an empty section is displayed.

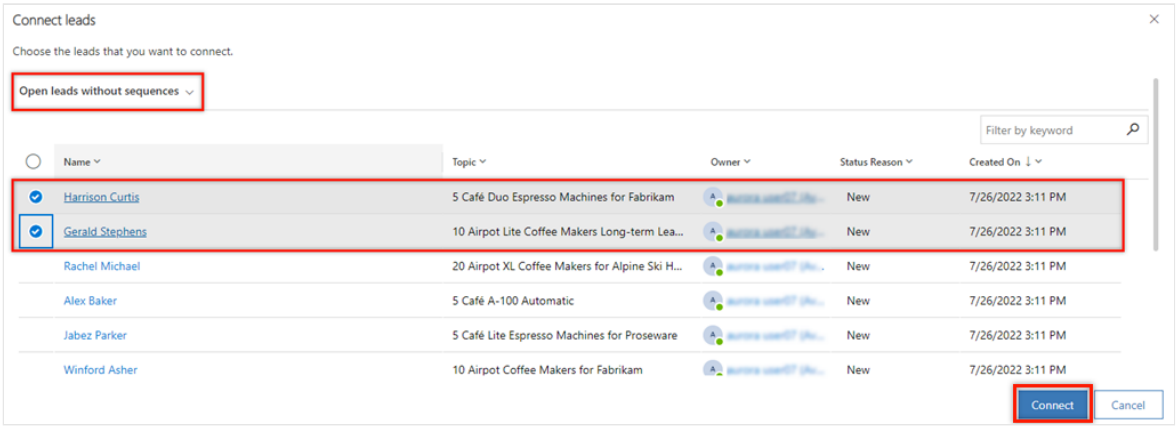


6. In the **Connected leads** section, select **+ Connect leads**.
   The list that appears shows available lead records that aren't connected to any sequence.

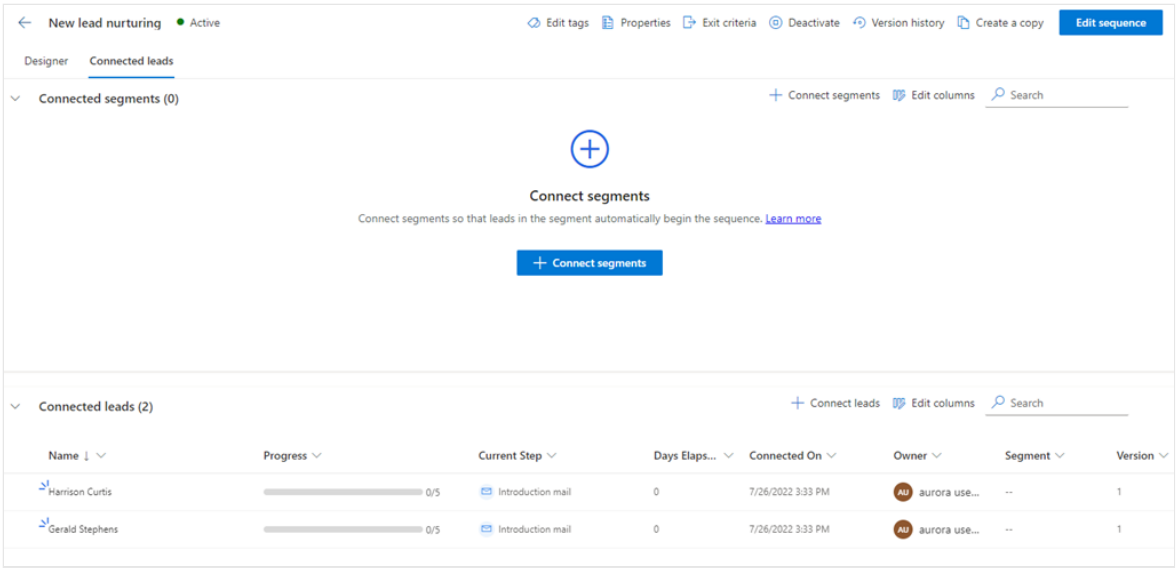


> **Note**
>
> On the record selection page, you can do the following tasks on the grid:
>
> - Sort and filter the records based on the column options. Select the down arrow icon corresponding to column header, and then select the sort and filter options that are available.
> - Reorder the columns by dragging-and-dropping at the location you want in the grid.
> - Search is available only on the name and description of the sequence.

7. Choose the records that you want to connect to the sequence, and then select **Connect**.
   Verify that the **Open leads without sequences** view is selected. Selecting this view helps to list only the records that aren't associated with other sequences. You can select other views to choose records to connect, but the records in that view must not be associated with other sequences.



The lead records are connected to the sequence and are added to the list of connected records.

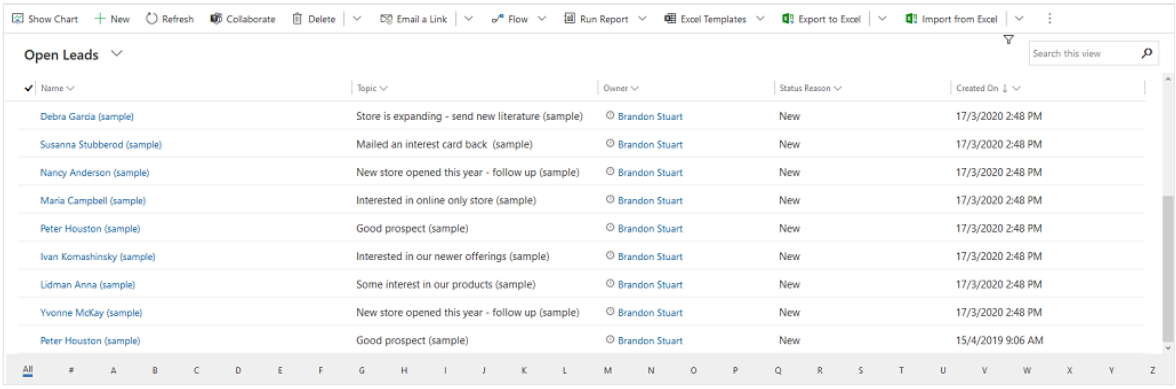


Through the record type grid view

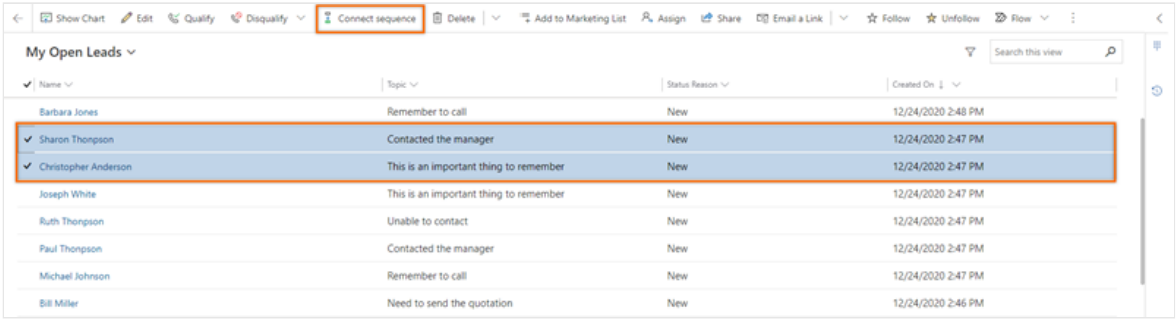
1. Sign in to your sales app.

2. Go to **Change area** in the lower-left corner of the page, and select **Sales**.

3. Under **Sales**, select the record type such as, **Leads** or **Opportunities**, depending on the records you want to connect.
   In this example, we select **Leads**.

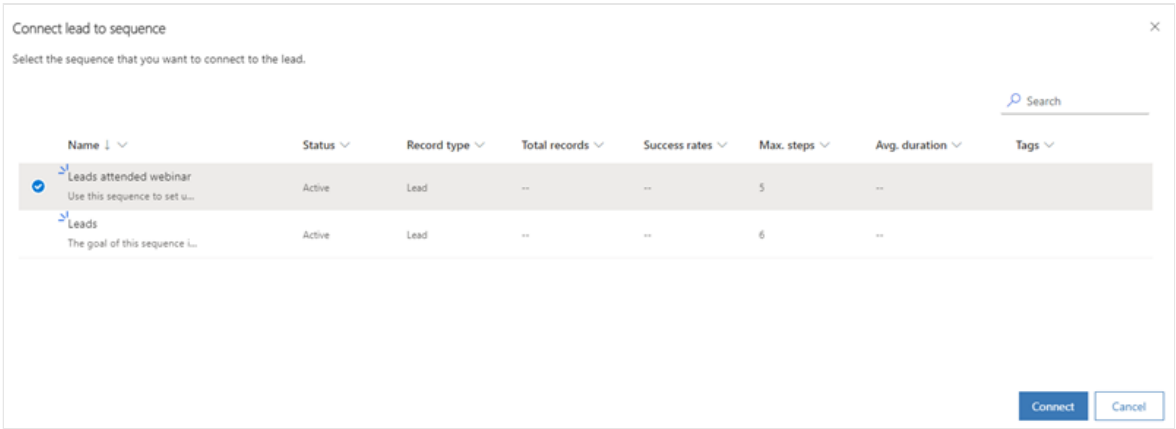


4. Select the records to which you want to connect the sequence. In this example, we select **Sharon Thonpson** and **Christopher Anderson**.



> **Note**
>
> - You can't connect a sequence to a record that has already been connected with a different sequence. When you select a record that was already connected, the **Disconnect sequence** option appears on the toolbar. To connect to a different sequence, select **Disconnect sequence**. The record will be available to connect to the sequence you want.
> - When you choose multiple sequences to connect, and the chosen list contains both connected and disconnected records, no option to connect or disconnect will be displayed on the toolbar.

5. Select **Connect sequence**. The list of available sequences that appears includes sequences created by you and other sales managers.
   In this example, a list of sequences that are configured for the **Lead** entity is displayed.

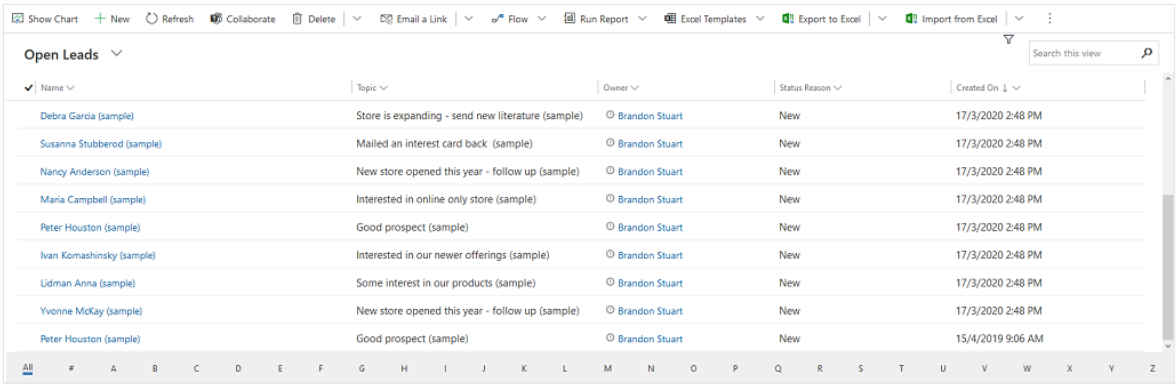


6. Select a sequence, and then select **Connect**.

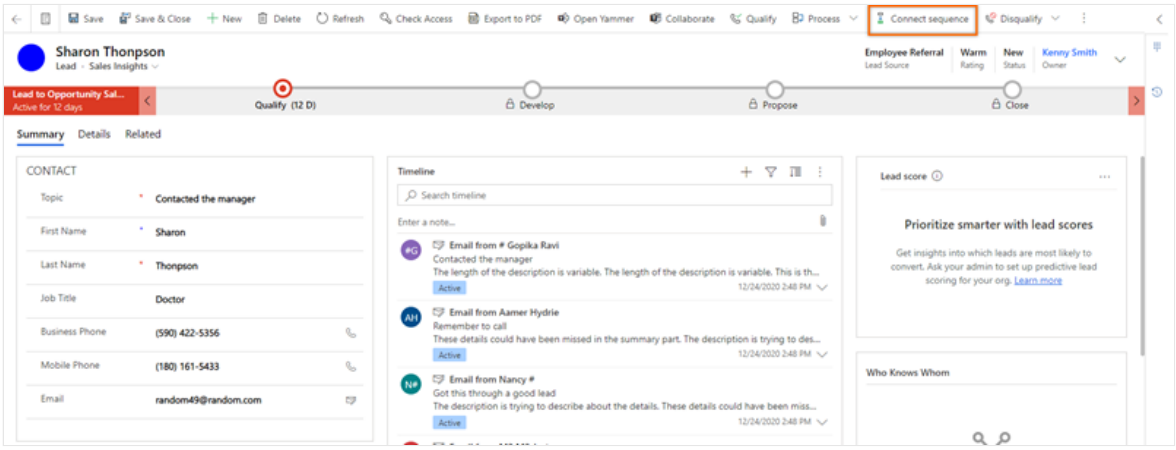
A confirmation message appears at the bottom of the page, and the sequence is connected to the selected lead records. Now, sellers who have access to the lead record can see the activities connected with it.

Through a record

1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales**.
3. Under **Sales**, select **Leads** or **Opportunities**, depending on the records you want to connect.
   In this example, we select **Leads**.

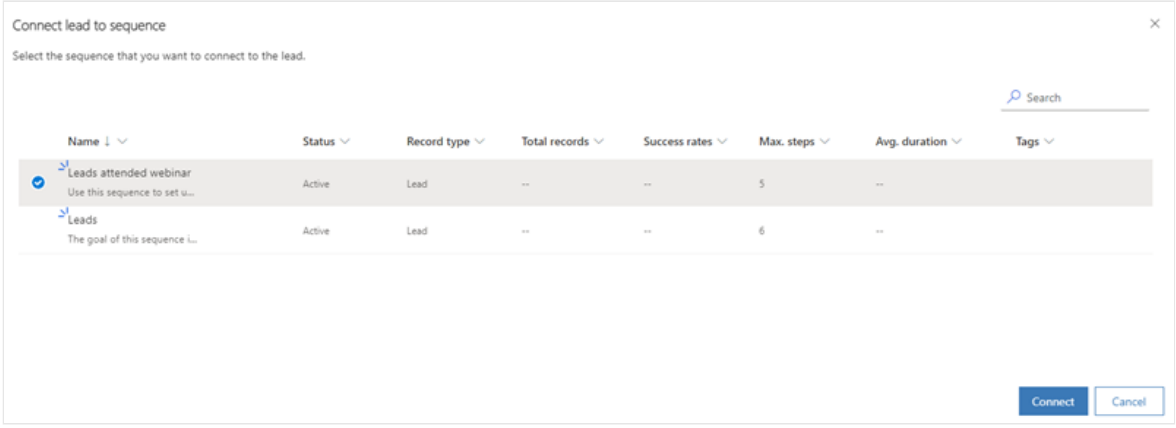


4. Open the record to which you want to connect the sequence. In this example, we opened the lead **Sharon Thonpson**.



> **Note**
>
> When you select a record that was already connected, the **Disconnect sequence** option appears on the toolbar. Disconnect the record from the sequence it's currently connected with, and then connect it to the sequence you want. More information: **View details of a sequence and its connected records**

5. Select **Connect sequence**. The list of available sequences that appears includes sequences created by you and other sales managers.
   In this example, a list of sequences that are configured for the **Lead** entity is displayed.



6. Select a sequence, and then select **Connect**.

A confirmation message appears at the bottom of the page, and the sequence is connected to the selected lead records. Now, sellers who have access to the lead record can see the activities connected with it.

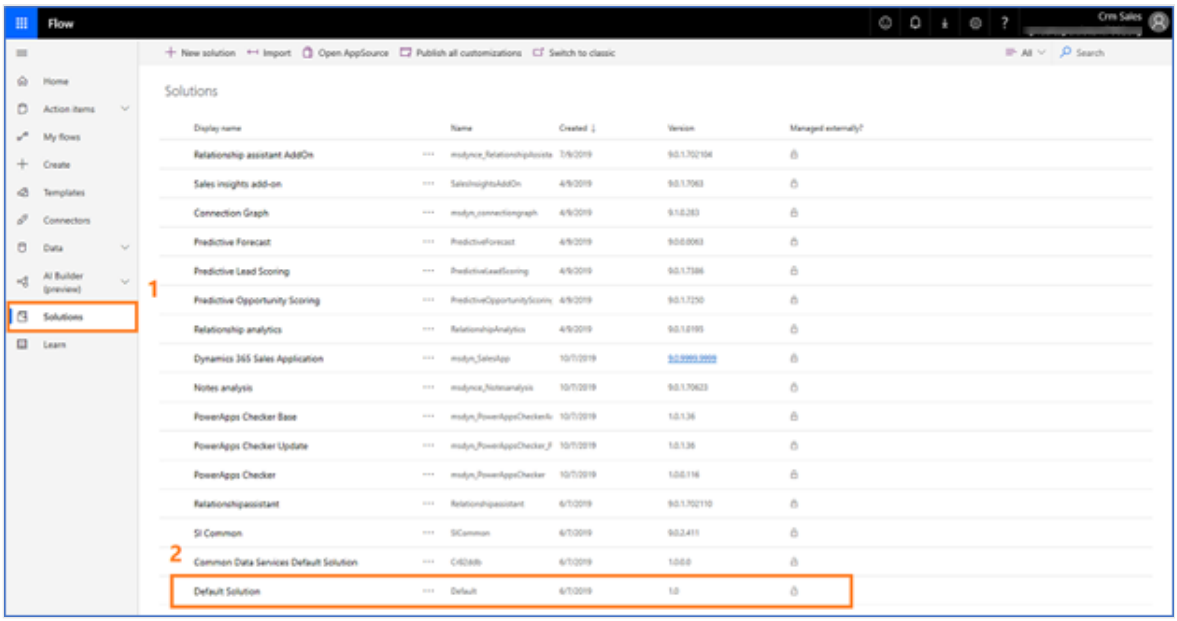
Through Power Automate

You can create a flow based on a sequence. The flow connects the records automatically to the sequence when the trigger satisfies the flow condition.

1. Go to Microsoft Power Automate, and sign in with your Dynamics 365 credentials.

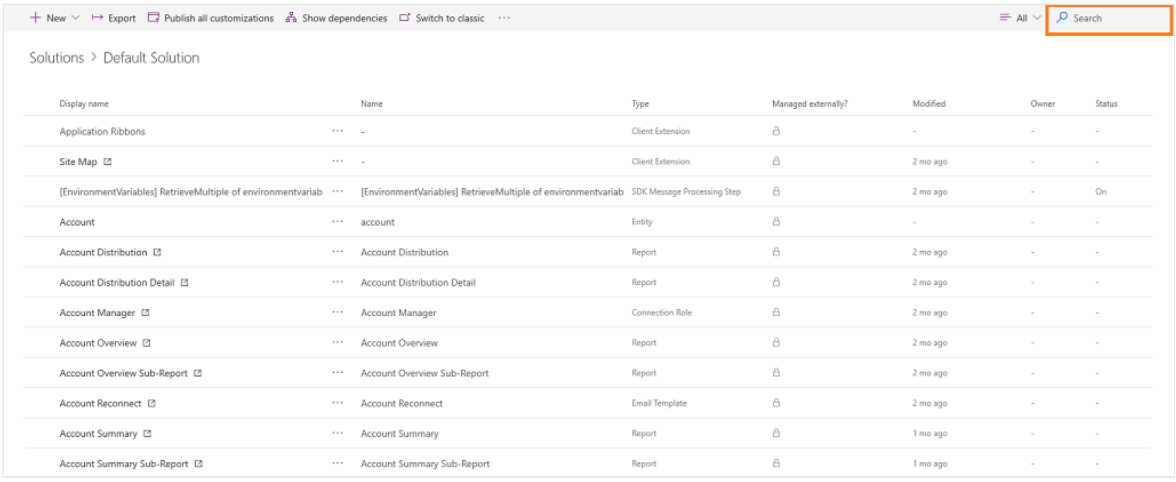
   > **Note**
   >
   > By default, your organization is selected based on your latest association. If you have multiple organizations associated with you, select the proper organization from your profile settings.

2. Select **Solutions**, and then select **Default Solution**.



   All default solutions are listed.

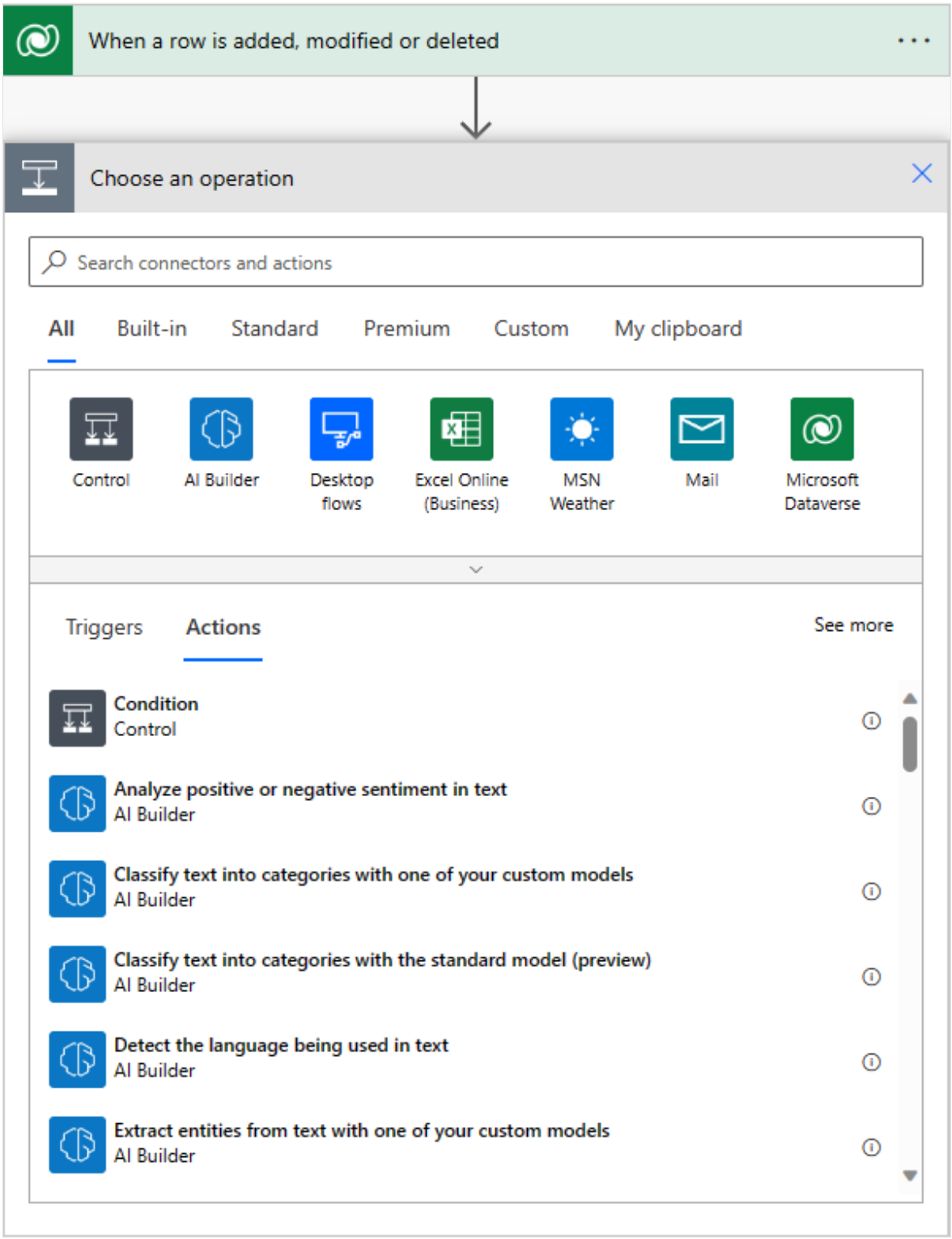
3. In the search box on the toolbar, search for the flow that you want update or view.



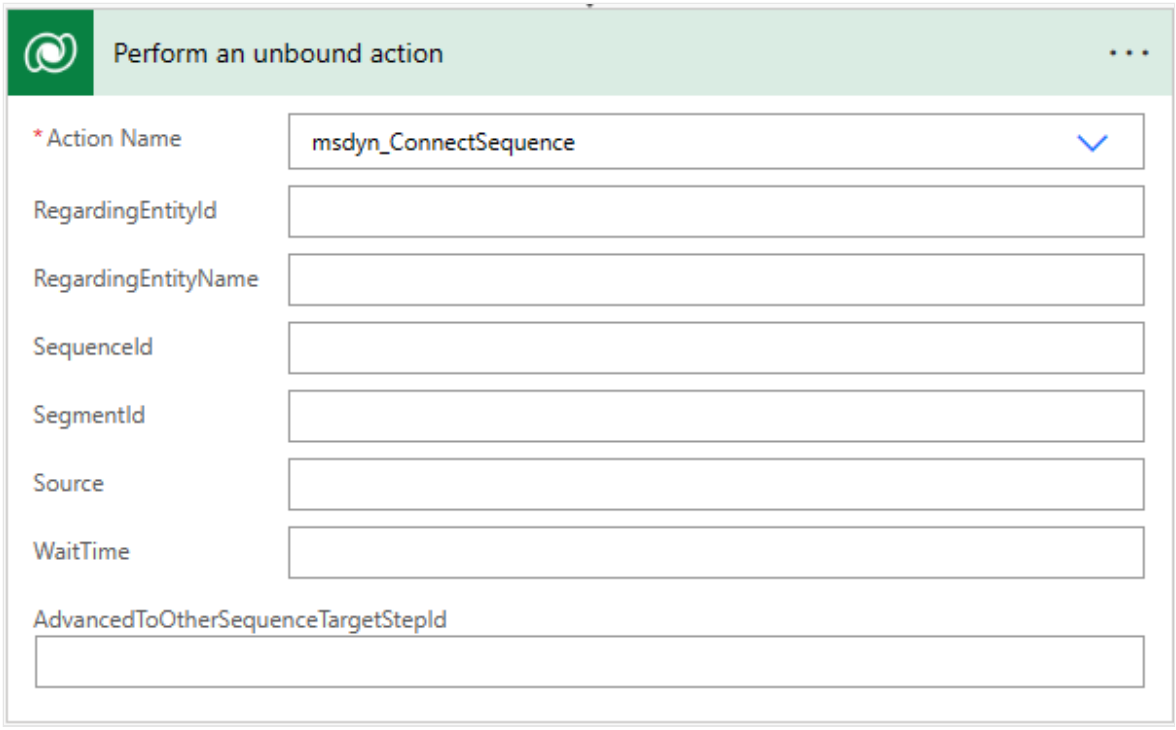
4. Configure a trigger to the flow.

5. Select **New step**.

6. In the **Search connectors and actions** box, select **Microsoft Dataverse**, and then search for and add the action **Perform an unbound action**.



7. In the **Perform an unbound action** step, select the **Action Name** as **msdyn_ConnectSequence**.



Enter the following additional information:

- **RegardingEntityId**: The unique identifier of the entity record that is to be connected to the sequence.
- **RegardingEntityName**: The logical name of the entity.
- **SequenceId**: The unique identifier of the sequence.
- **SegmentId**: (Optional) The unique identifier of the segment.
- **Source**: (Optional) The source of the record.
- **WaitTime**: (Optional) The time to wait before connecting the record to the sequence.
- **AdvancedToOtherSequenceTargetStepId**: (Optional) The unique identifier of the sequence step to which the record is to be advanced to another sequence.

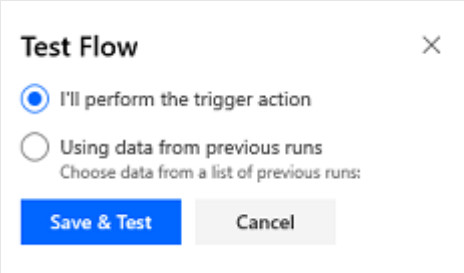
> **Note**
>
> To get the unique identifier of the sequence, query OData for the sequence entity (msdyn_sequence). More information: **Querying or browsing an OData endpoint**

8. Use **Flow Checker** to verify errors and warnings in the flow.
   Errors and warnings in the flow cause performance or reliability issues. Ensure that the flow is free from errors and warnings. The checker is always active, appearing in the command bar in the designer. The checker shows a red dot when it finds one or more errors in your flow.

For example, while creating a **For due date coming up** card, you haven't entered **Card Name**. The flow checker identifies the error and displays a red dot.

> **Note**
>
> You must resolve all errors and warnings to save the flow.

9. (Optional) Select **Test** to test your flow.
   Ensure that all the configured steps are working as required. The test feature runs and validates each step in the flow, and highlights any step that contains an error. You must resolve the error to proceed.
   Select an option to test the flow by triggering actions or by using the data from previous test runs, and then select **Save & Test**.



10. Save and publish the flow.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Sequences
Create and activate a sequence

View details of a sequence and its connected records

Article • 08/01/2022

You can view the details of a sequence and the records connected with it.

License and role requirements

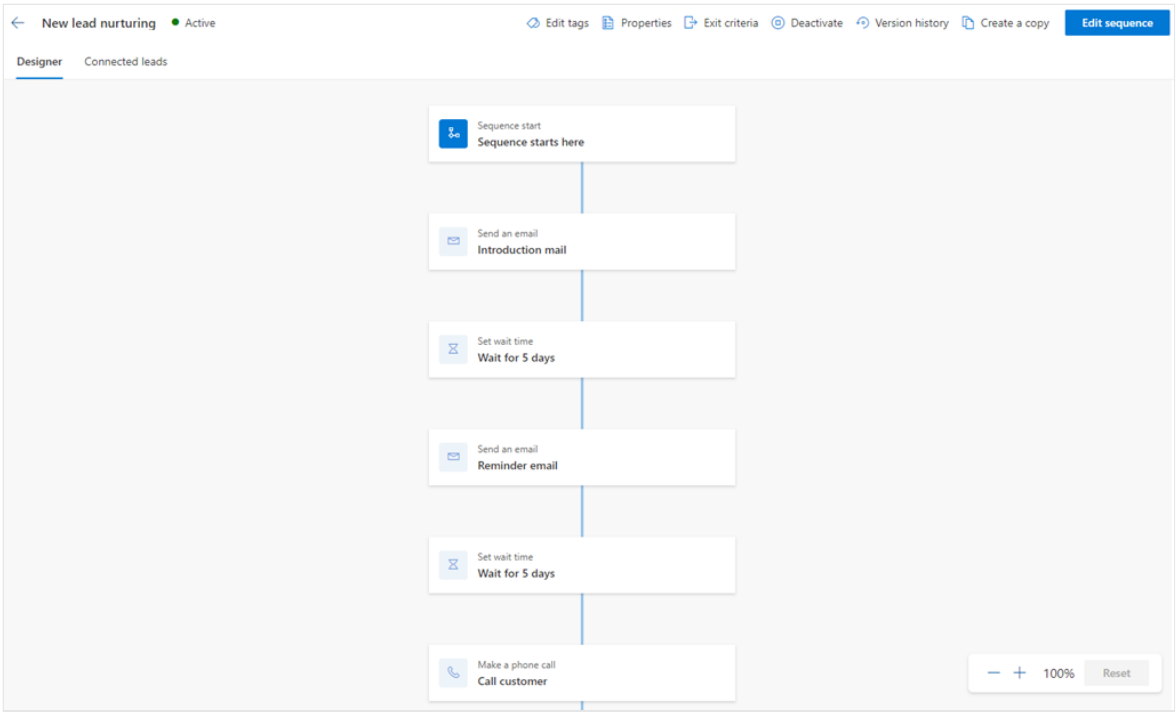
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

To view details of a sequence and its connected records

1. Sign in to your sales app.
2. At the bottom of the site map, select **Change area** > **Sales Insights settings**.
3. Under **Sales accelerator**, select **Sequences**.
4. On the **Sequences** page, select and open the sequence for which you want to view the details such as activities and assigned records.

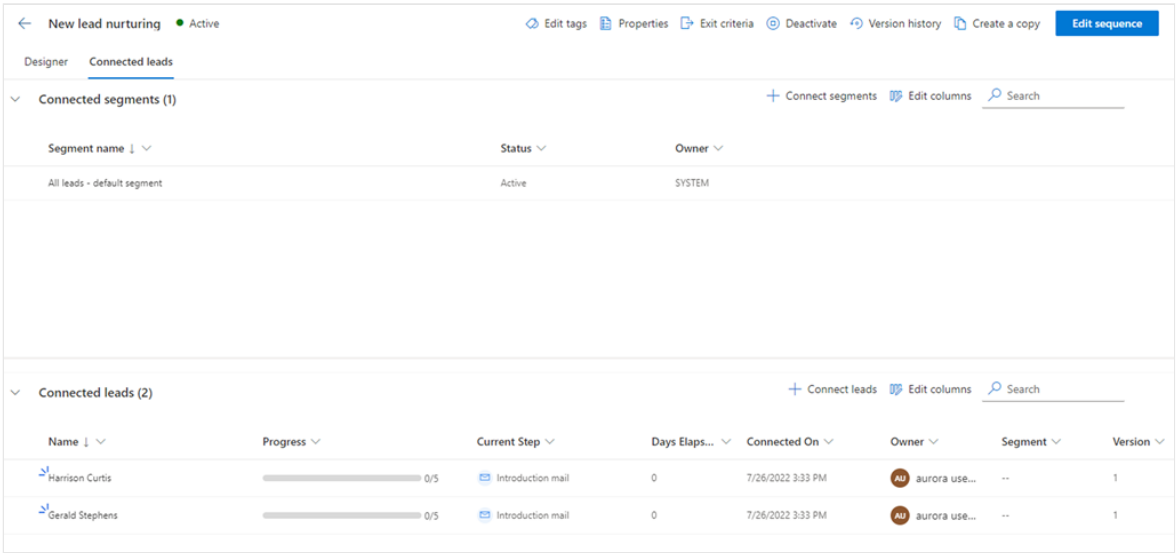
   > **Tip**
   >
   > Alternatively, hover over a sequence, and then select **More options** > **View sequence**.

   The sequence opens and on the **Designer** tab, you can view the activities that are defined for the sequence.

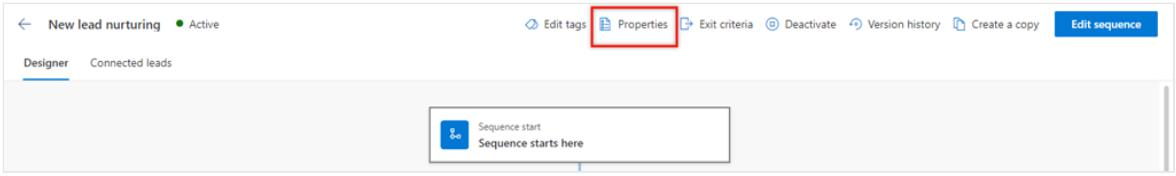


5. To view the list of connected records, select the **Connected *record*** tab. In this example, we're selecting a sequence with record type lead. You can also remove and connect records with the sequence through this view. More information: Connect a sequence to records

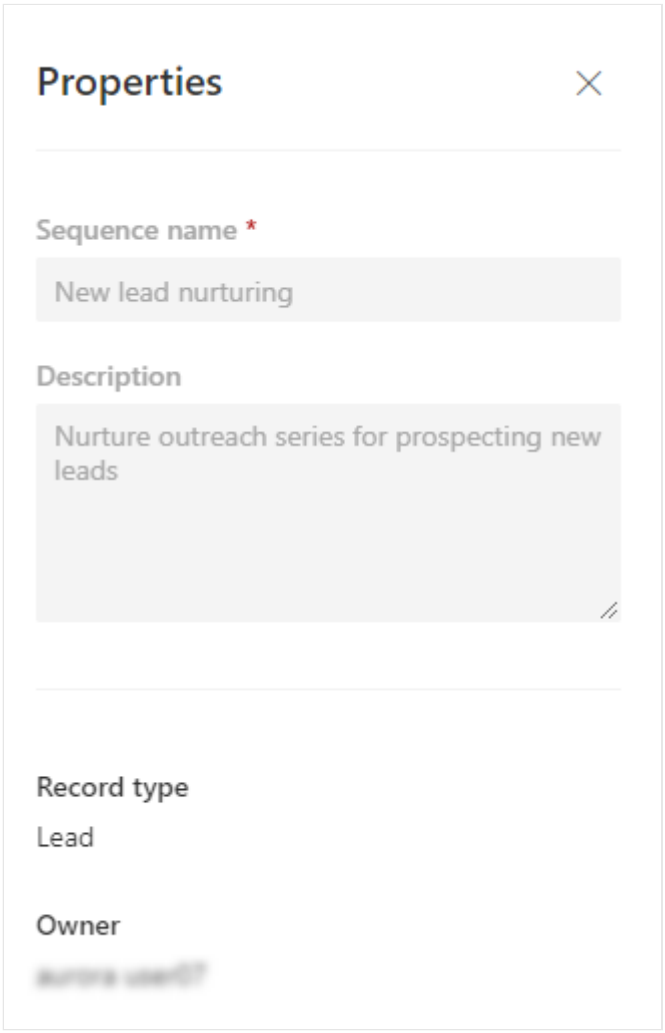
   - The **Connected segments** section lists the segments that are associated with the sequence.
   - The **Connected *records*** section displays the list of records that are connected to the sequence with the following information in columns:
     - **Progress**: Shows the number of steps that are completed in the record.
     - **Current step**: Shows the step that is to be completed.
     - **Days elapsed**: Shows the number of days since the record moved into the current step.



6. To view the properties of the sequence such as, name, description, record type, and owner, select **Properties**.



The **Properties** pane opens.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and manage sequences

Clone and edit a sequence

Article • 08/17/2022

If your organization changes its selling process, you might want to edit a sequence to reflect the changes. You can only edit a sequence that's in an inactive state, so you must deactivate or create a copy of it.

License and role requirements

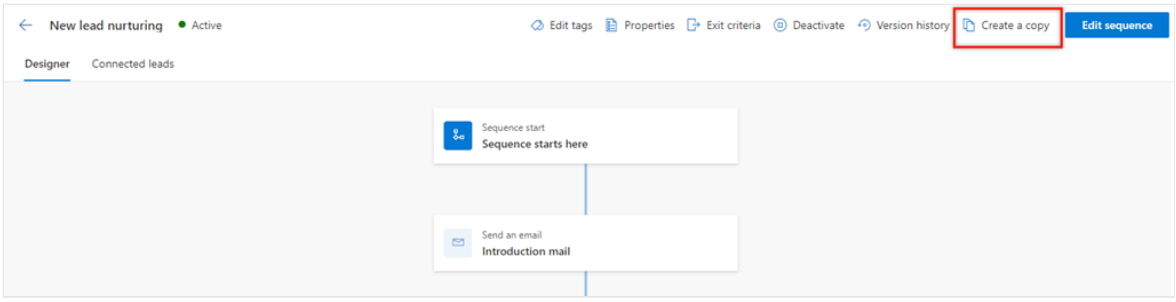
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Clone a sequence

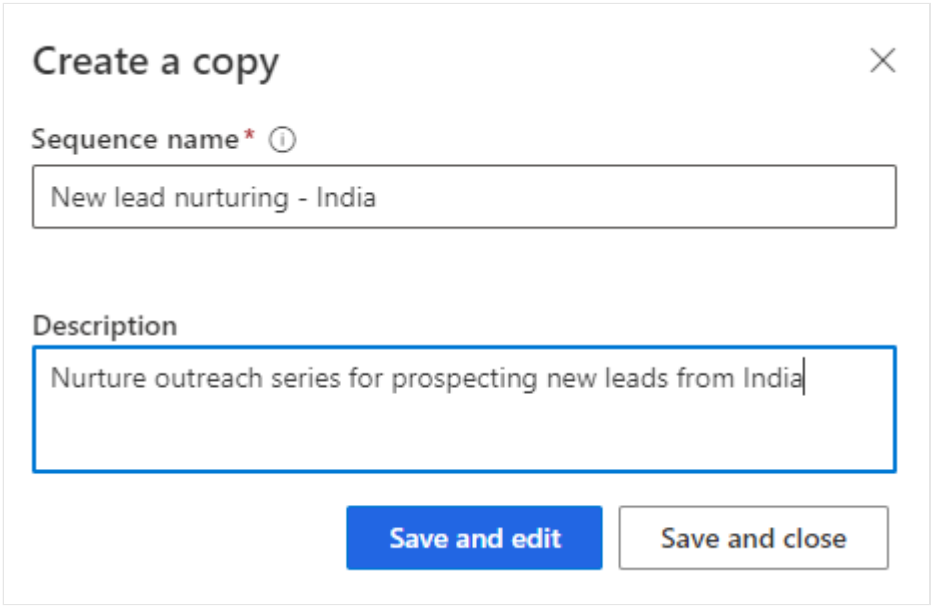
Cloning a sequence makes it easier to add or remove steps, and save the changes to create new sequence. Also, cloning pulls down a full copy of the sequence data that you're cloning at that point in time, including all steps and configurations. After you make the changes, you can save and activate the cloned sequence and apply it to records.

1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.
3. Under **Sales accelerator**, select **Sequence**.
4. Open the sequence that you want to clone and select **Create a copy**.

> **Tip**
>
> Alternatively, hover over a sequence, and then select **More options** > **Create a copy**.



5. On the **Create a copy** dialog, enter the name of the sequence and description.



6. Select one of the buttons:

   - **Save and edit**: Select this button to open the sequence editor and add steps as necessary. To edit a sequence, see Edit a sequence.
   - **Save and close**: Select this button to save and create the sequence.

Edit a sequence

1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.
3. Under **Sales accelerator**, select **Sequences**.
4. On the **Sequences** page, select and open the sequence that you want to edit.

> **Note**
>
> If the sequence is **Active** state, you can one of the following actions to edit.

- Deactivate or **create a copy**
- Select **Edit sequence**. More information: **Edit an active sequence and view version history**

5. Do one of the following activities:

   - To add an activity, perform **step 7** from Create and activate a sequence.
   - To edit an activity, select the activity and the details open in the right pane. Make the edits you want, and then select **Save**.

6. (Optional) If you want the sequence to be available to connect with records, select **Activate**.

7. Save and exit the sequence designer.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Sequences

Edit an active sequence and view version history

Article • 08/01/2022

When you've changed the process of an active sequence, you can create a new version of the sequence without deactivating it. You can update a sequence multiple times, and when you connect a record to the sequence, the record will be connected to the latest version.

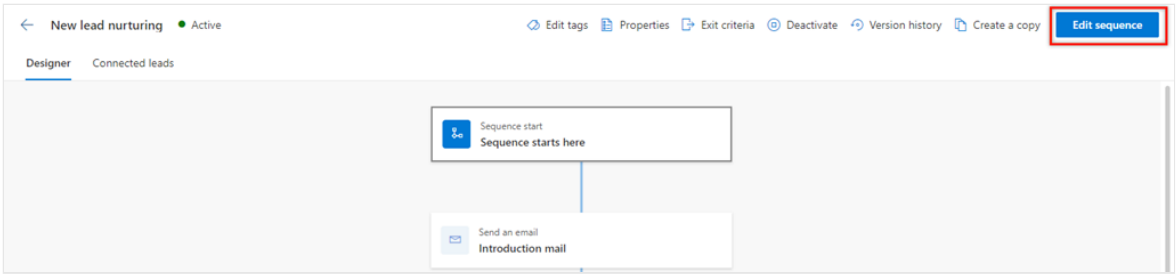
> **Important**
>
> The records that were connected to a previous version of the sequence remain connected to that previous version.

License and role requirements

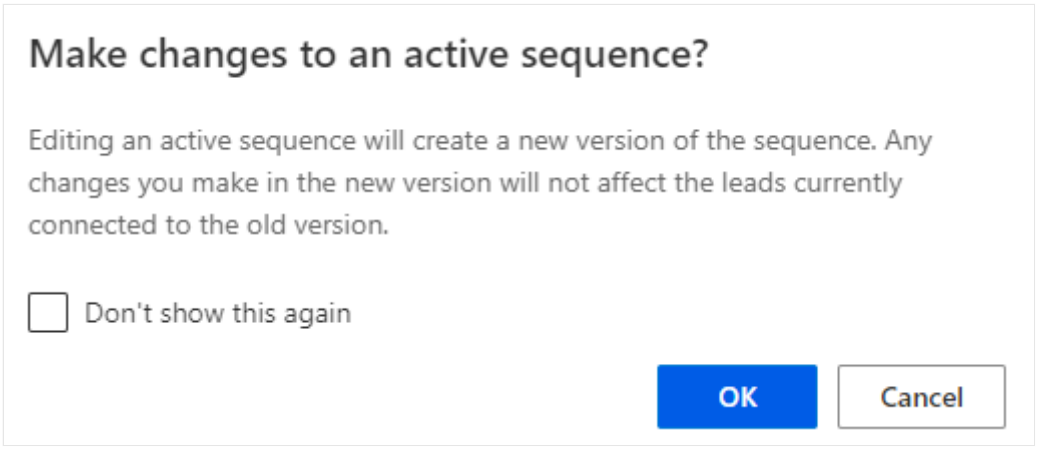
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Edit an active sequence

1. Sign in to your Dynamics 365 Sales Hub app.
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
3. Under **Sales accelerator**, select **Sequences**.
4. On the **Sequences** page, open the sequence that is in active state.
5. On the sequence view page, select **Edit sequence**.

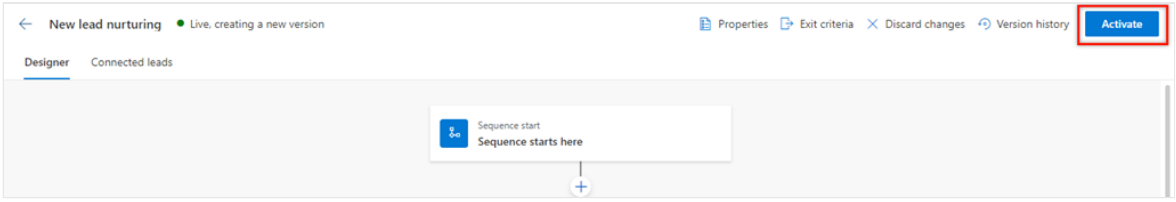


6. On the confirmation message, select **OK**.

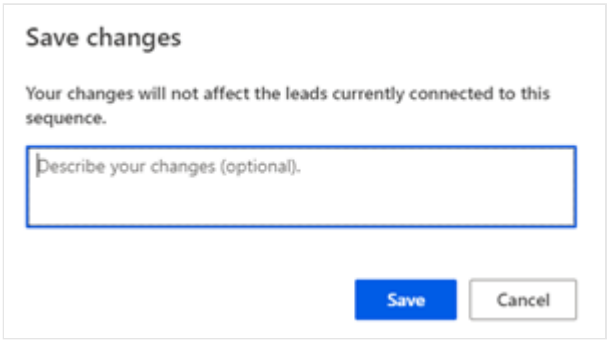


A version is created for the sequence.

7. Edit the sequence as required, and then select **Activate**.



8. On the confirmation message, provide a description of the change, and then select **Save**.



A new version of the existing sequence is created and saved.

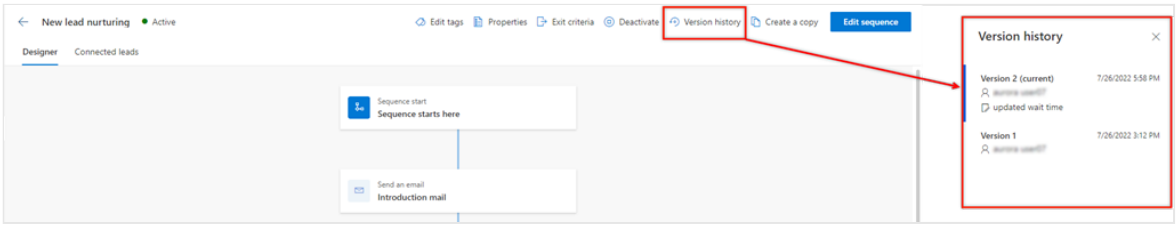
View version history and associated records

Viewing the version history helps you to understand the number of versions that have been created for a sequence, and view the records that are connected to each version.

1. Open the sequence.

2. To view the version history, select **Version history**.

   A list of versions that exist for the sequence is displayed on the right pane.

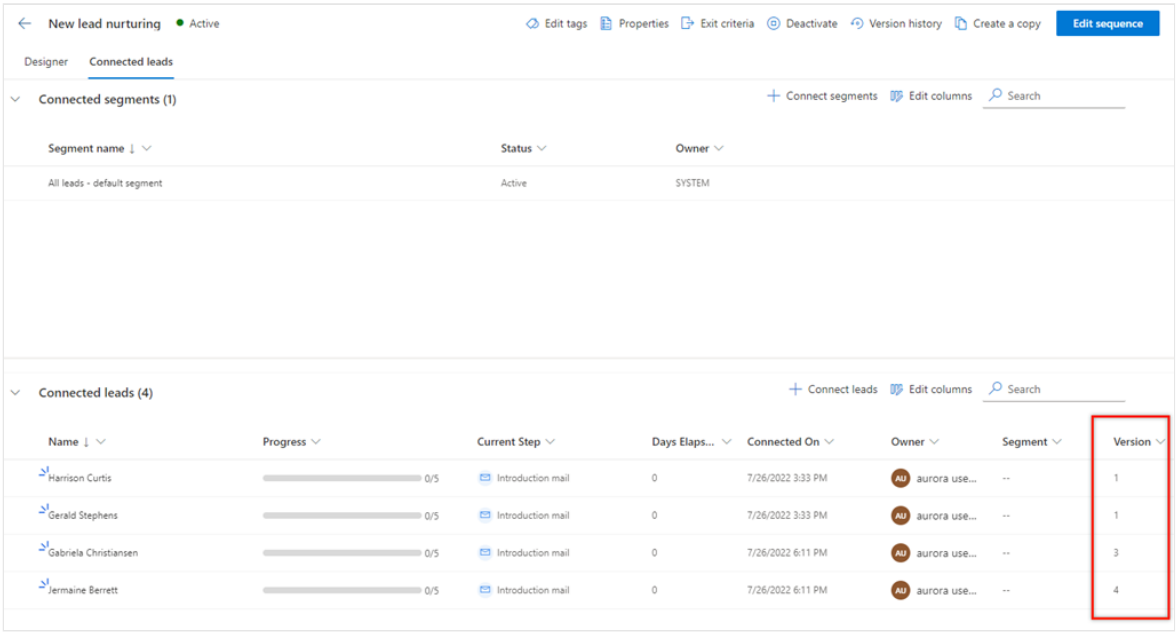


   The current selected version is highlight with a Blue line corresponding to the version name.

   > **Note**
   >
   > If there are no leads connected to the sequence, and you created a new version, only the latest version is displayed in the list.

3. To view the version of the sequence to which a record is connected, go to the **Connected *records*** tab. In this example, we selected the **Connected leads** tab.

   A list of leads that are connected to the sequence is displayed, along with the version to which they're connected.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Edit a sequence
Create and activate a sequence

Assign a sequence to a user or a team

Article • 10/21/2022

Before users or teams can use a sequence you create, you need to assign them to it. Assigning users and teams to a sequence gives them full permissions to view, edit, and delete the sequence.

License and role requirements

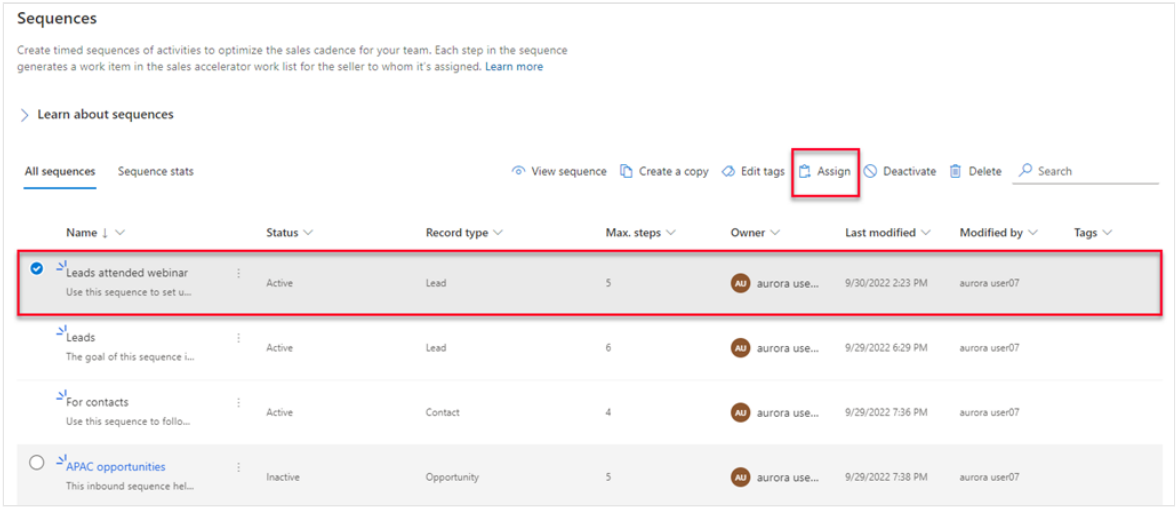
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Assign a sequence

1. Sign in to the **Sales Hub** app. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.

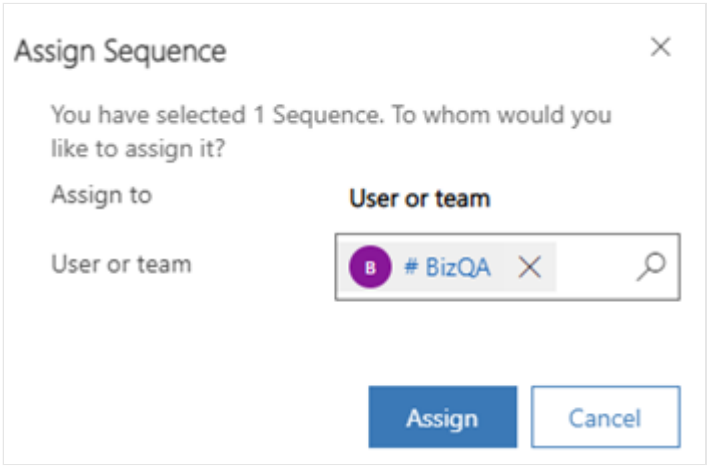
2. Under **Sales accelerator**, select **Sequences**.

3. Select one or more sequences, and then select **Assign**.



4. In the **Assign Sequence** box, enter the following information:

Parameter	Description
Assign to	Select **User or team** to choose a user other than yourself or a team to assign to the sequence. Select **Me** to assign only yourself.
User or team	Type the name of a user or a team. To assign the sequence to multiple users, create a team with the users as the members and then assign the sequence to the team.



5. Select **Assign**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence

Delete a sequence

Article • 08/01/2022

You can delete sequences that your organization no longer needs, and they'll be deleted permanently from the app. You can delete active or inactive sequences. When you delete an active sequence, the records that were connected with the sequence will be disconnected from it.

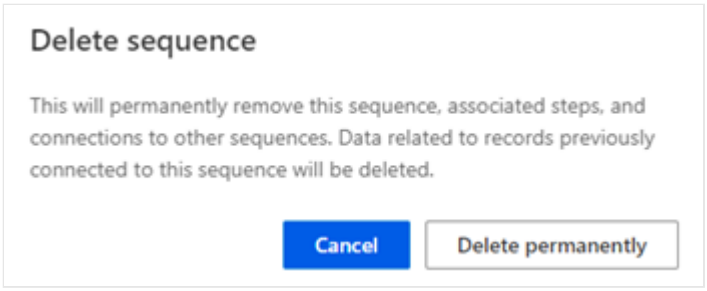
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

To delete a sequence

1. Sign in to your sales app.
2. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.
3. Under **Sales accelerator**, select **Sequences**.
4. On the **Sequences** page, hover over the sequence you want to delete, and then select **More options** > **Delete**.
5. In the confirmation message that appears, select **Delete permanently**.

> **Note**
>
> If you are deleting a sequence that is the active state, a confirmation message is displayed that the sequence will be deactivated and deleted. Select **Deactivate and delete**.



Can't find the options in your app?

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- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Sequences
Create and activate a sequence

Migrate sequences from one environment to another

Article • 05/20/2022

Use the solution export and import functionality to migrate sequences from one environment to another in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Migrate sequences

Organizations use staging (non-production) environments to set up and test complex steps, such as sequences, assignment rules, and segments. Organizations then use the staging environments to test these steps to avoid any disruption in their operations, saving time and money. Also, the staging environments help in training the sellers.

Administrators and sales managers can now migrate sequences along with their dependent entities from one environment to the other. To migrate sequences, complete the following steps:

1. Create a solution
2. Add sequence to the solution
3. Export the solution
4. Import the solution

Create a solution

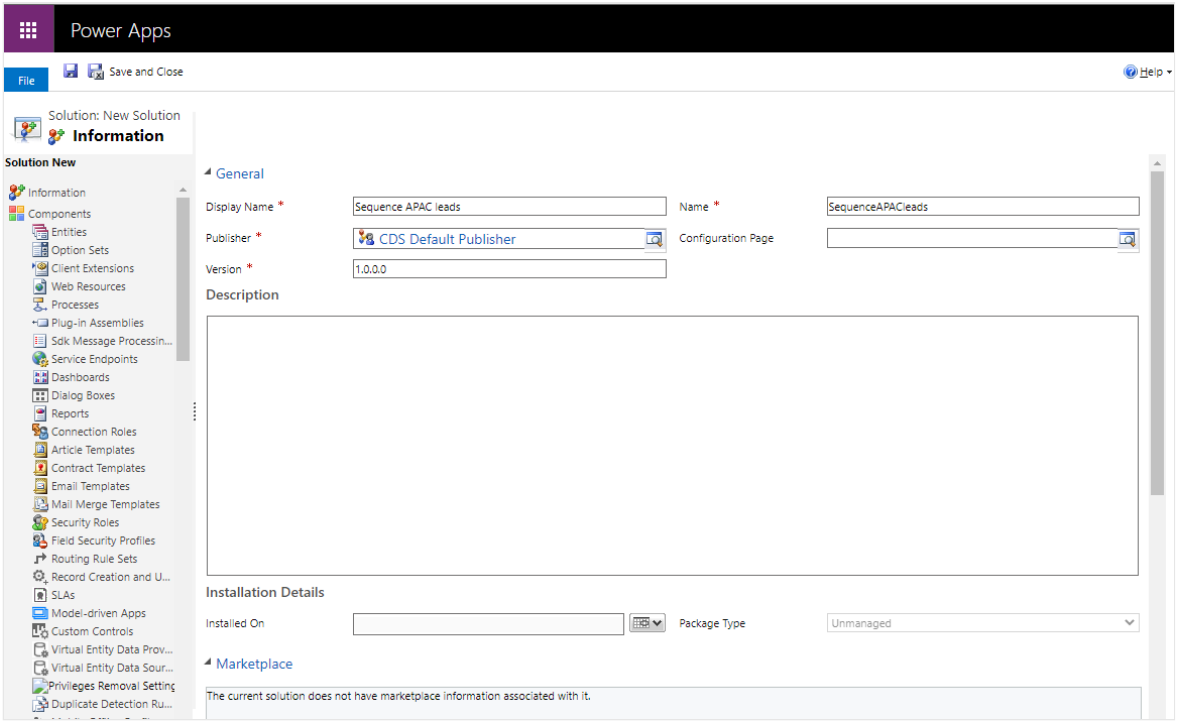
Let's create a sequence solution with an example.

1. Sign in to the Sales Hub app and go to **Settings** > **Advanced Settings**.

2. On the **Advanced settings** page, go to **Setting** > **Customization** > **Solutions**.

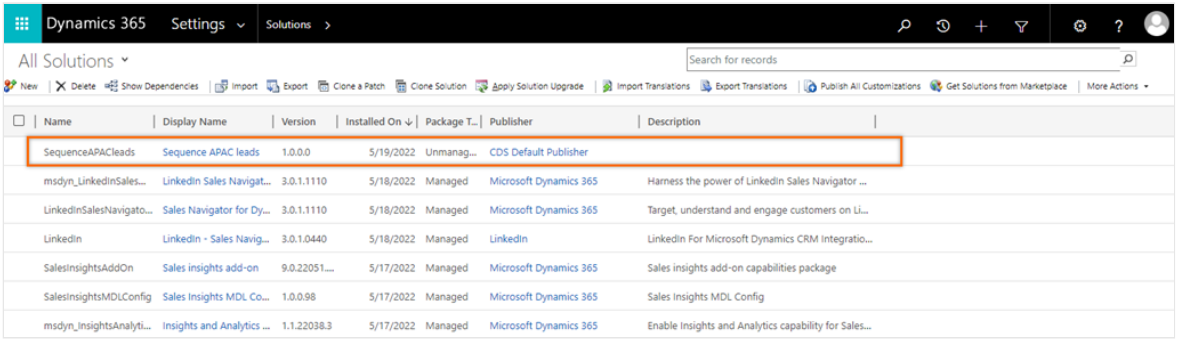
3. On the **Solutions** page, select **New** and then on the **New solution** dialog, enter the values for the following fields:

Column	Description
Display name	Specify a meaningful name. Display name appears in the list of solutions and can be changed later. Example: **Sequence APAC leads**
Name	Specify a unique name for the solution. This field is populated using the value you enter in the Display name field. You can edit this before you save the solution, but not after.
Publisher	Select the default publisher or create a new publisher. We recommend that you create a publisher for your organization to use consistently across your environments where you'll use the solution. Example: **CDS Default Publisher**.
Version	Specify a version number for the solution. This version number will be included in the file name when you export the solution.



4. Select **Save and close**.

   The solution is created and listed under solutions.

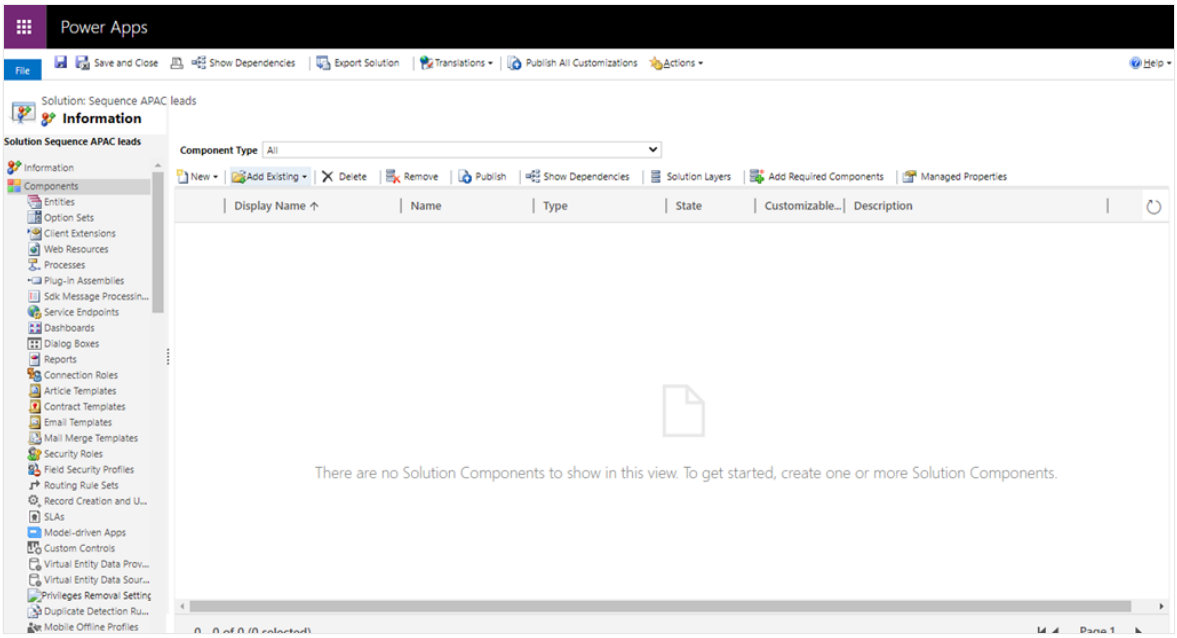


Now, let's add the required sequences into the solution.

Add sequence to the solution

After you create the solution, add the sequences that you want to export through the solution.

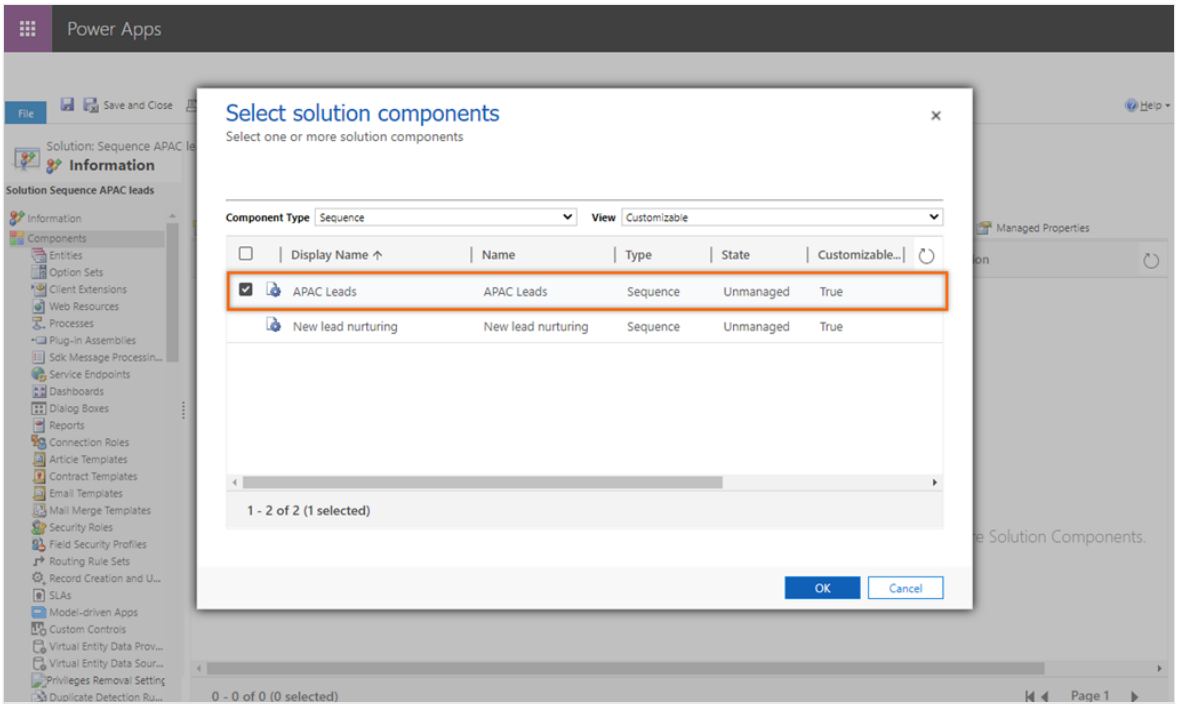
1. Open the solution. In this example, we're opening the **Sequence APAC leads** solution.



2. Select **Add existing** > **Sequence**.

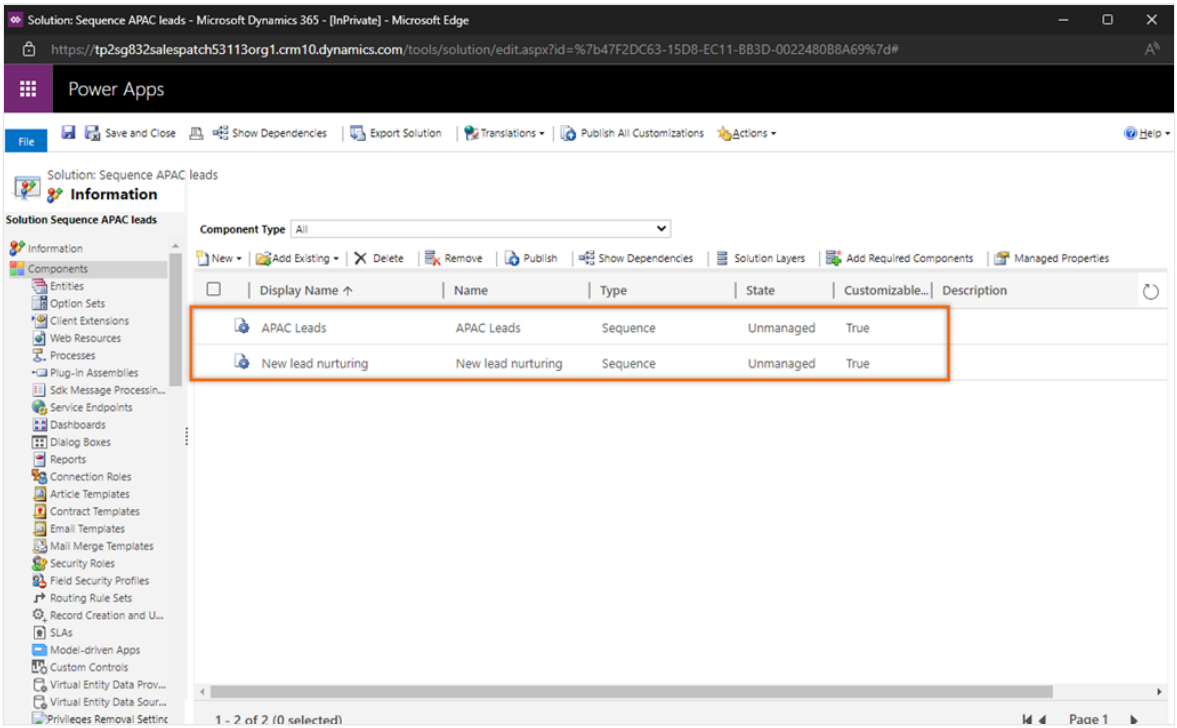
   The **Add existing sequence** page opens with a list of sequences.

3. Select and add the sequences that you want to include in this solution. In this example, we're selecting and adding **APAC Leads**.



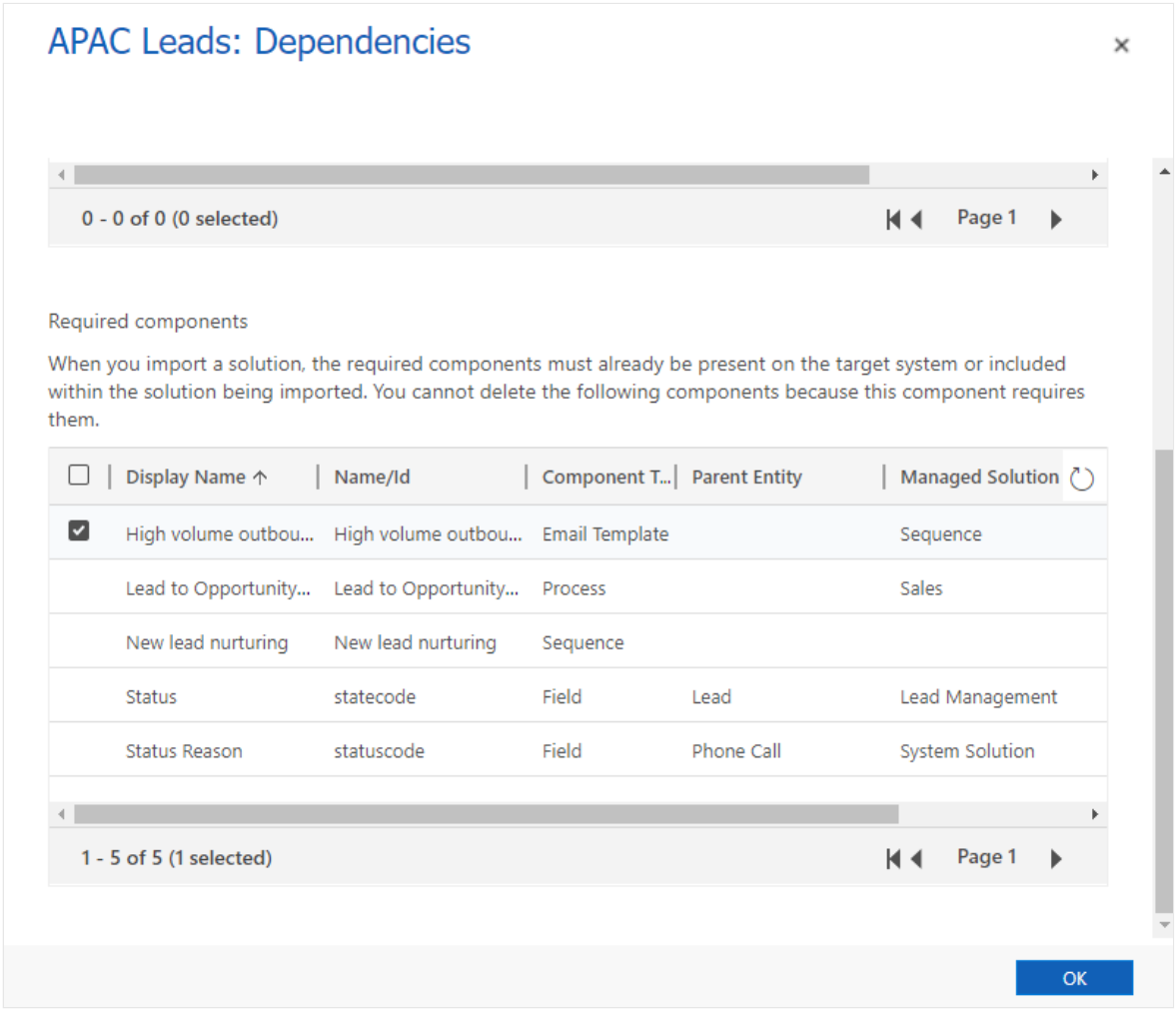
The sequence and its dependent components such as sequences, email templates, business process flows (BPF) record, sequence tags, and attributes are added to the solution.

In our example, the **New lead nurturing** sequence is added to the list because the **APAC Leads** sequence contains it as a step.



To see other dependent entities of the added sequences, select the sequence, and then select **Show Dependencies** and go to the **Required components** section. In this example, we are viewing the other dependencies of **APAC Leads** sequence.

> **Note**
>
> If the sequence contains managed components, they won't be added to the solution. Therefore, when the solution is imported, the steps that are dependent on the missed components will show an error. To resolve the errors in the target organization, go to **Troubleshoot solution import errors in Microsoft Dynamics 365**.



Now that you've added the sequences, export the solution.

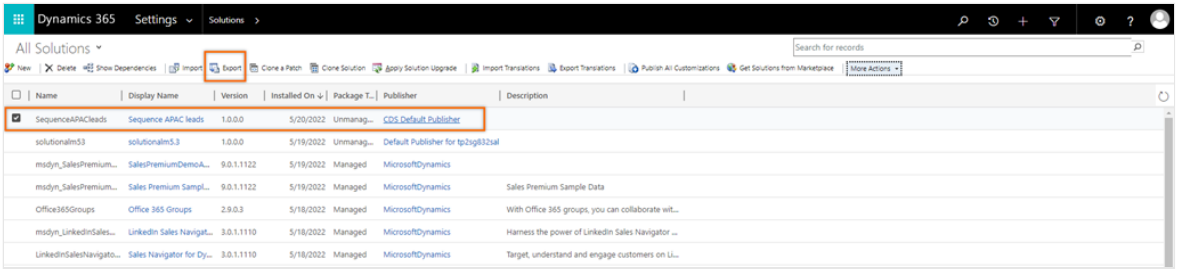
Export the solution

Always export the sequence as an unmanaged solution. The unmanaged dependent components of the sequences are automatically added to the solution package; managed components aren't added. When the solution is imported, the steps that depend on the missing components will show an error. To resolve the error, install the dependent components in the target environment. More information: Solution install fails due to missing dependencies.

Also, you can edit the sequences and their dependent components in the target environment after the import.

1. On the **Solutions** page, select the solution. In this example, let's select **Sequence APAC leads**.

2. From the tool bar, select **Export**.



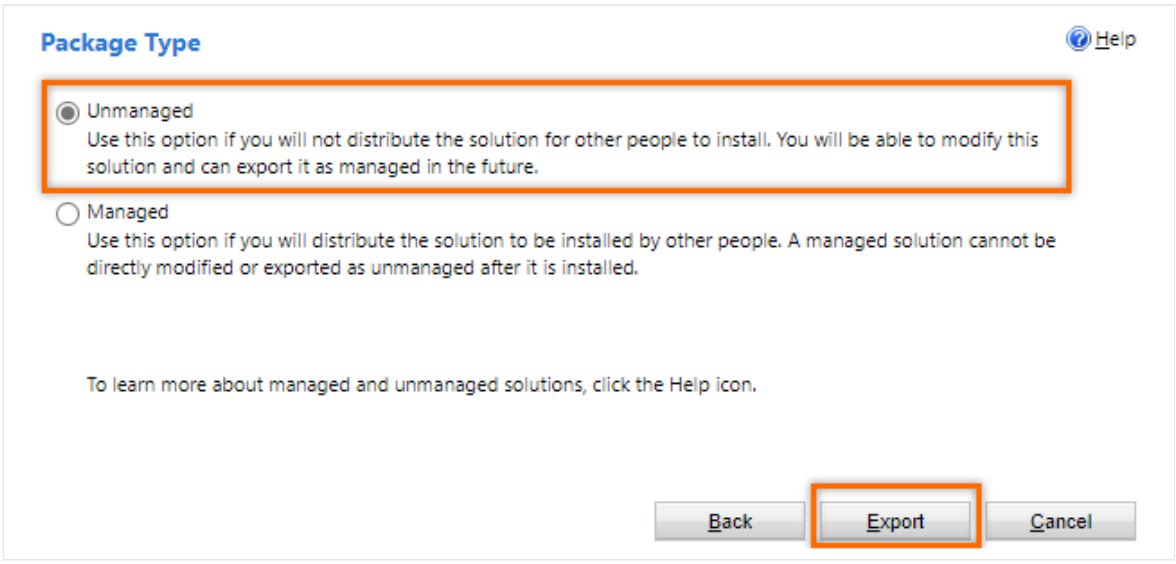
3. On the **Publish Customizations** dialog, select **Next**.

> ⓘ Note
>
> After you've added the sequence and its dependent components to the solution and if you've made any changes that you would like to export, select **Publish All Customizations**. The updates are added to the solution.

4. On the **Export System Settings (Advanced)** dialog, select the required system settings and then select **Next**.

5. On the **Package Type** dialog, select **Unmanaged** and then select **Export**.

   More information: Managed and unmanaged solutions |



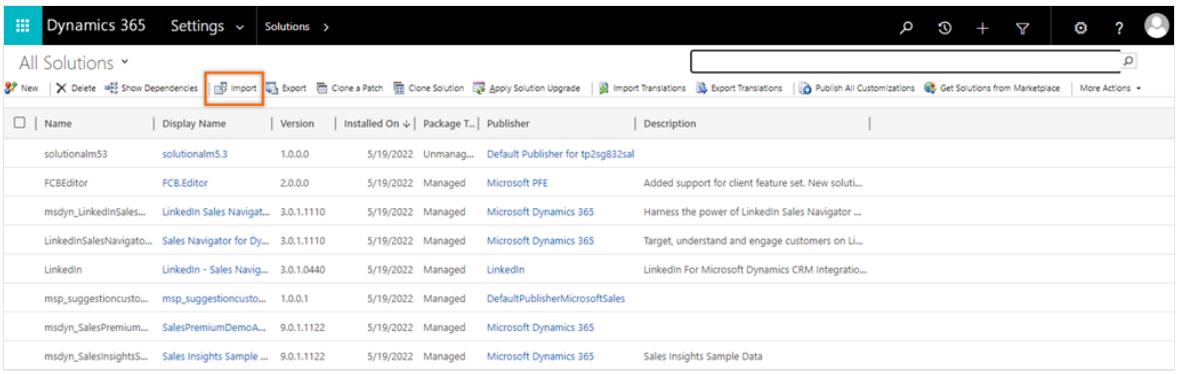
   The export can take several minutes to complete. Once finished, the exported *.zip* file is available in the download folder specified by your web browser. Download

the zip file to your local computer. For example, **SequenceAPACleads_1_0_0_1.zip**.

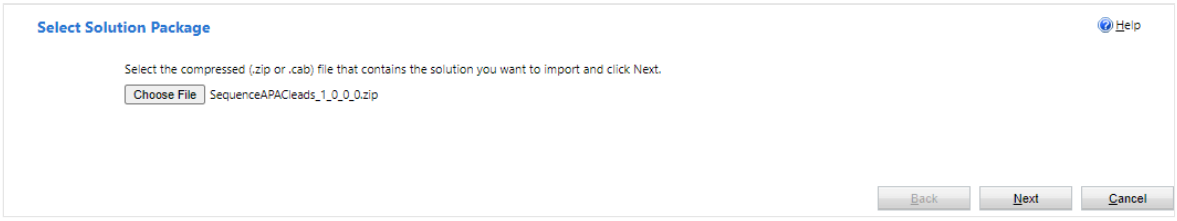
Now, the solution is ready for import.

Import the solution

1. Sign in to the Sales Hub app and go to **Settings** > **Advanced Settings**.
2. On the **Advanced settings** page, go to **Setting** > **Customization** > **Solutions** and select **Import**.

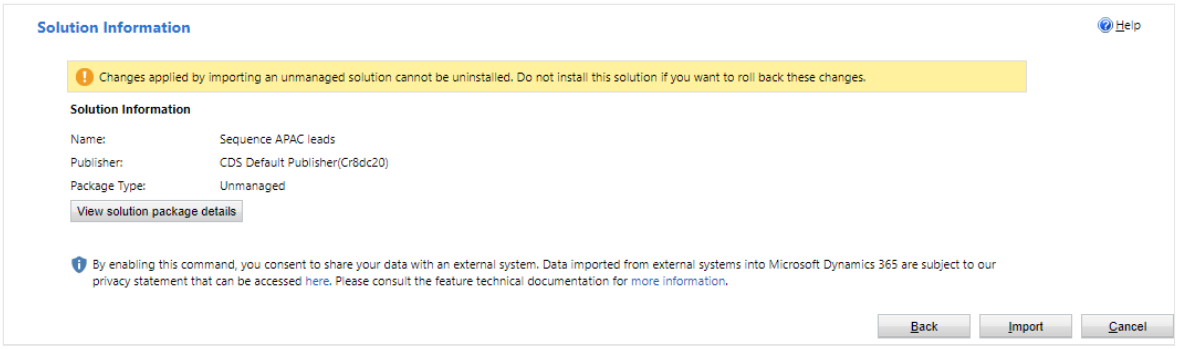


3. On the **Select Solution Package** dialog, select **Choose File** and open the solution that you've downloaded.



4. Select **Next**.
5. On the **Solution Information** dialog, select **Import**.

> ⓘ **Note**
>
> To view the details of the imported solution, select **View solution package details**.



The solution is imported into the target environment along with its dependent components. Also, when you delete the sequence, the dependent components remain in the imported environment, in case the components are used by other sequences or entities.

> **Note**
>
> If the import fails due to missing dependencies, a message is displayed on the top of the dialog. To troubleshoot import-related issues for solutions, go to **Troubleshoot solution import errors in Microsoft Dynamics 365**.

6. On the **Importing Solution** dialog, select **Close**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a sequence

Manage sequences

Manage tags for sequences

Article • 09/02/2022

Tags help you quickly filter and identify sequences from a list by categories that you define.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence manager, or Sales Manager More information: Predefined security roles for Sales

Permission requirements to manage tags

The following table shows the permissions required for a user role to perform tasks on tags.

Task related to tags	Permissions required
Create, edit, and delete	In the Security roles page, under the **Custom Entities** tab, provide Create, Read, Write, and Delete permissions for **Sales Tag** entity. More information: Security roles and privileges **Note:** By default, these permissions are available for System Administrator, Sequence manager, and Sales Manager security roles.
Apply and remove	In the Security roles page, under the **Custom Entities** tab, provide permissions for following entities: - **Sales Tag**: Read, Append, and Append To - **Sequence**: Read, Append, and Append To More information: Security roles and privileges **Note:** By default, these permissions are available for System Administrator, Sequence manager, Sales Manager, and Salesperson security roles.

What are tags?

A *tag* is a label that's used to identify a sequence. The tag works as metadata to help you filter and find sequences. By tagging sequences, you can distinguish one sequence from another and easily choose a specific sequence from a huge list.

You can perform the following activities on tags:

- Create tags
- Edit a tag
- Delete a tag
- Apply a tag to a sequence
- Filter sequences based on tags
- Remove tags from a sequence

Who can manage tags?

By default, the users with sales manager and sequence manager roles can use the tag manager and assign tags to sequences. For other roles to use the feature, you need access to the **Sequences** page. Contact your administrator to get the following privileges:

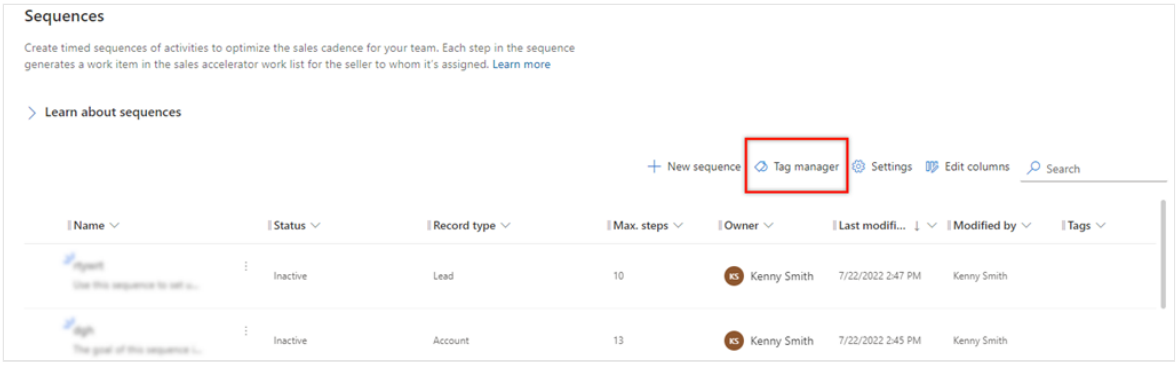
- Read, append, and append to access at the user level for the **Sales tag** (**msdyn_salestag**) table to assign tags to a sequence.
- Create, read, write, and delete access at the user level for the **Sales tag** (**msdyn_salestag**) table to use tag manager.

More information: Security roles and privileges

Create tags

Create tags to categorize sequences into a logical order. For example, you want to categorize leads based on their city of origin. You create tags with city names, such as Seattle and Hyderabad, and apply them to leads according to their city of origin.

1. In the **Sales Hub** app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select **Tag manager**.



4. On the **Tag manager** page, select **New tag**.

5. In the **Create new tags** dialog, enter the following details.

Field	Description
Tag name	Enter the name of the tag. **Note**: Forward slash (/) isn't supported in tag names.
Nest tag under	Select a tag name under which you want to create the tag. When **None** is selected, the tag is created at level 1 and you can add tags under it. To add multiple tags, select **Enter** after adding each tag. You can also create nested tags. More information: Create nested tags.

6. Select **Save**.

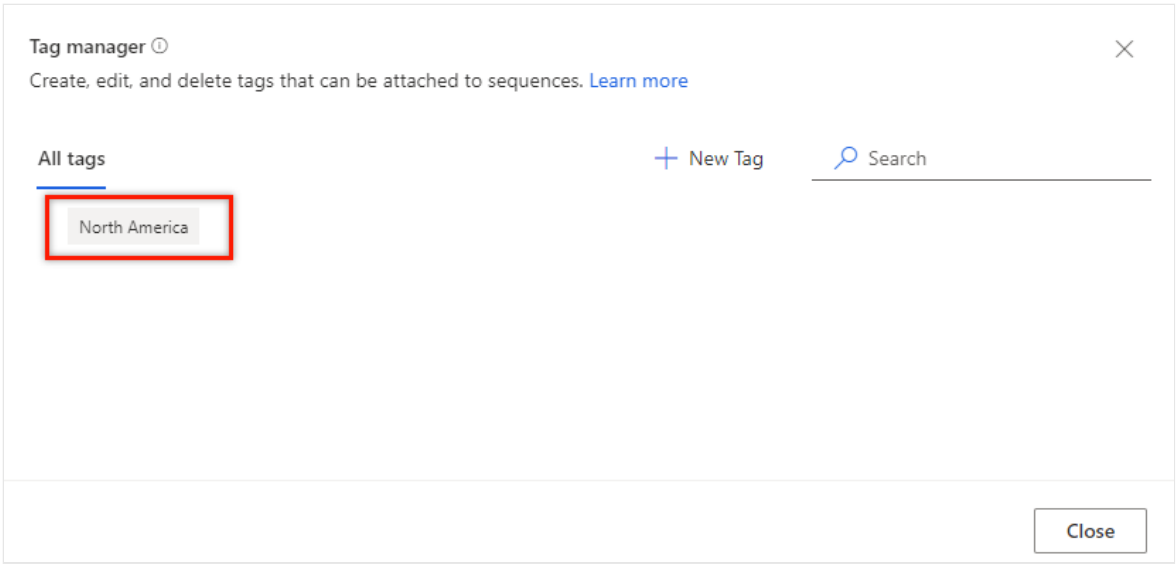
Repeat the procedure to add more tags.

Create nested tags

Nested tags allow you to group tags together so that it's easy to identify tags while applying them to a sequence. For example, you want to create tags based on regions and go down levels to countries, states (if applicable), and cities. You create North America (at level 1), United States of America (level 2), Washington state (level 3), and then Seattle (level 4).

> **ⓘ Important**
>
> - You can create nested tags for up to four levels.
> - There's no limit to adding tags at level 1. For other levels, you can only add up to 100 tags.

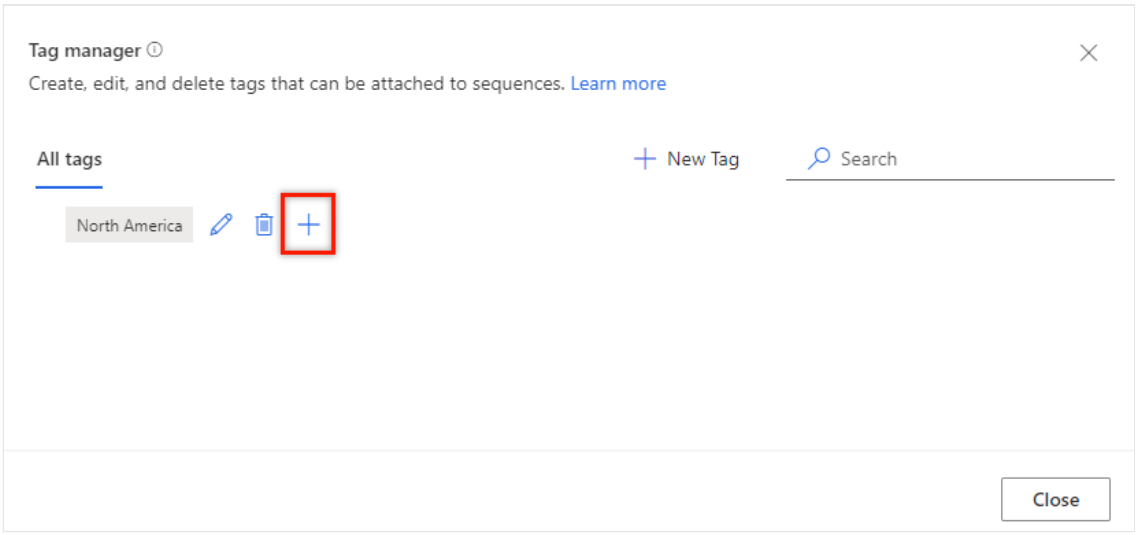
1. Create a tag at the root node. In this example, we're creating the **North America** tag.



2. Create a node at a level below the root node of North America.

   a. Hover over the root node tag of **North America**, and then select **Add (+)**.

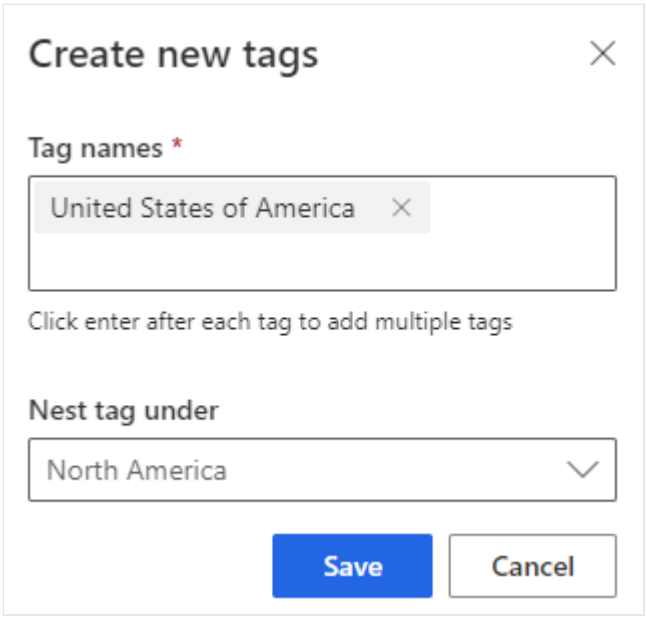
   > **Note**
   >
   > You can also use **New Tag** to add a node below the root node.



   b. In the **Create new tags** dialog, enter the **Tag names**. Add multiple tags by selecting **Enter** after each tag.

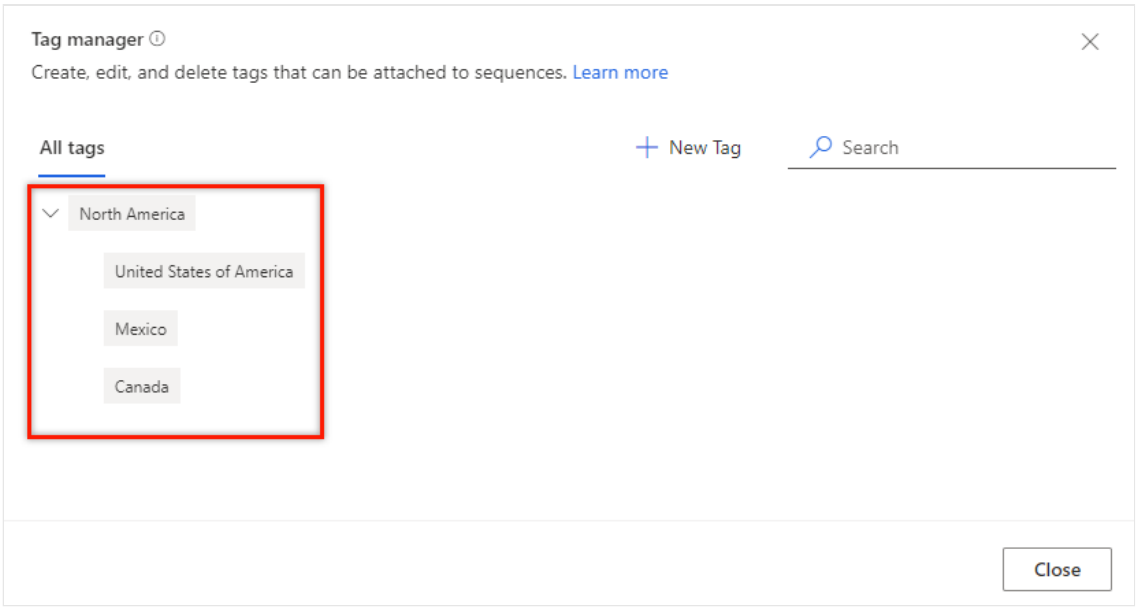
      In the **Nest tag under** field, select the parent tag. Currently, only four levels of hierarchy are supported, and each level can have up to 100 tags. For example, level 1 > level 2 > level 3 > level 4. If you try to add another node below the level 4 node, an error message is displayed.

      In this example, we're adding **United States of America**, **Canada**, and **Mexico** under the parent node **North America**.



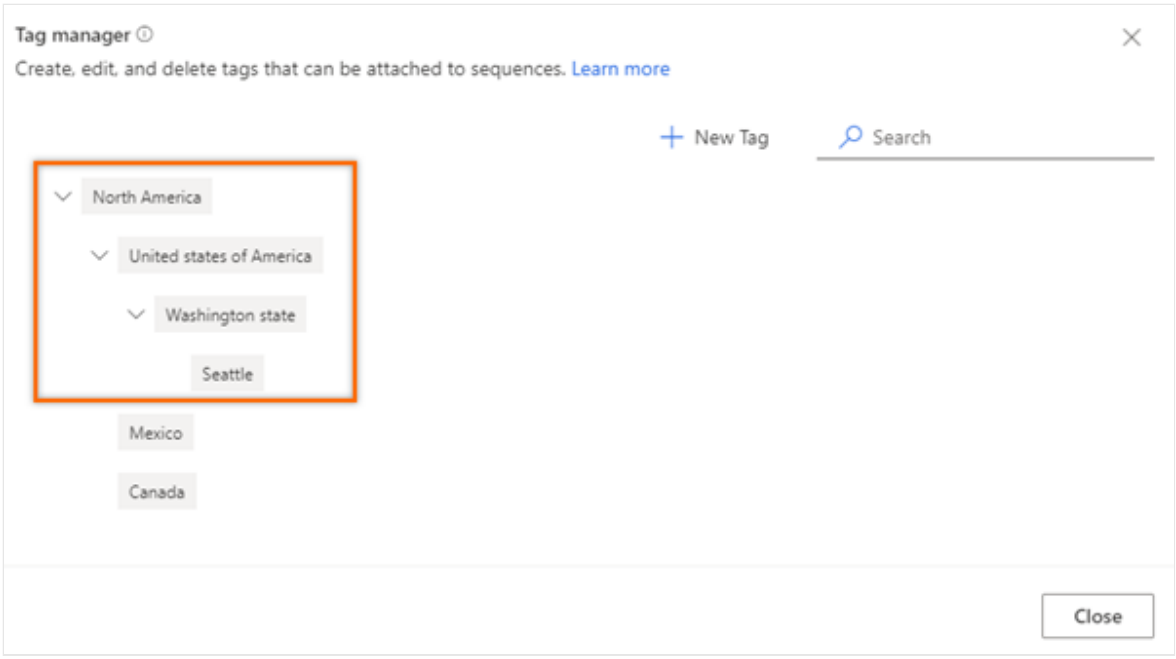
c. Select **Save**.

Under the **North America** node, you can see that **United States of America**, **Canada**, and **Mexico** have been added to the next level as child nodes.



3. Similarly, repeat step 2 to add:

- A node below **United States of America** as **Washington State**.
- A node below **Washington State** as **Seattle**.

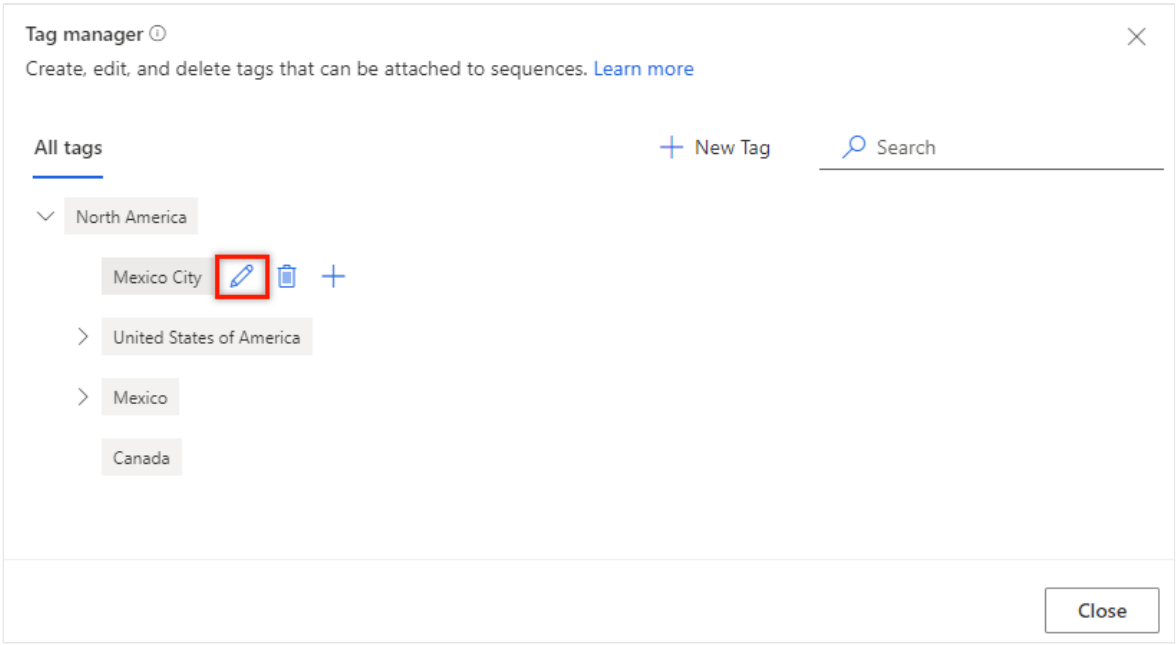


Edit a tag

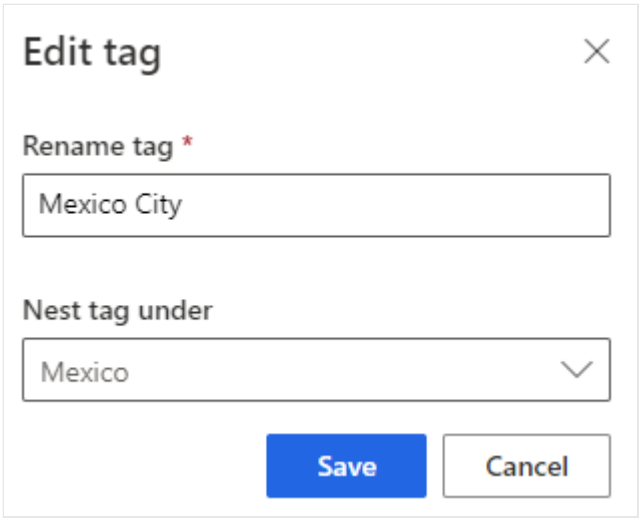
You can edit a tag if you want to change its name or hierarchy level. In this example, we're editing the tag **Mexico City** (which is under **North America**) to move it under **Mexico** without changing its name.

1. Open the tag manager.

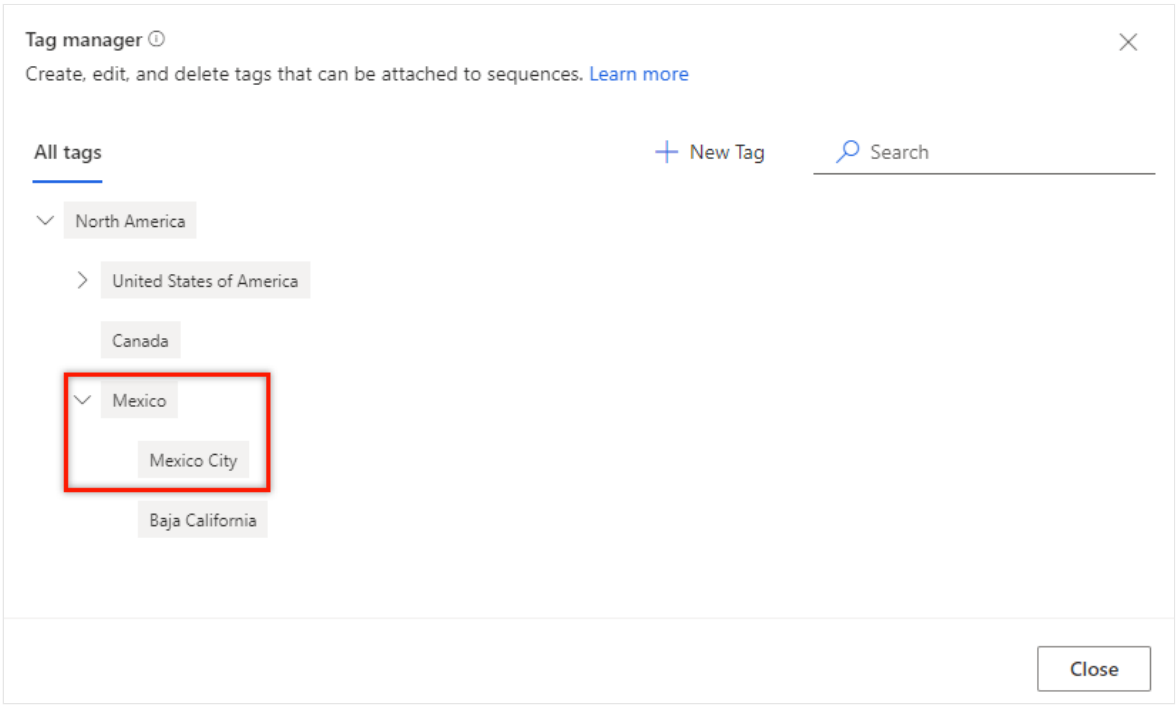
2. Hover over a tag, and select the **Edit** icon.



The **Edit tag** dialog opens.



3. Update the information as necessary, and then select **Save**. In this example, we're changing the **Nest tag under** value to **Mexico**.

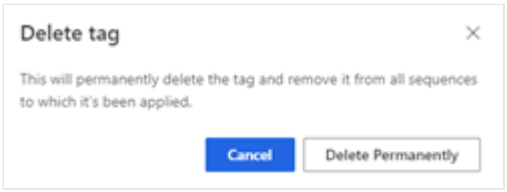


Delete a tag

You can remove the tags that your organization no longer requires to be associated with a sequence. If a sequence is associated with the deleted tag, the tag is automatically removed from the sequence. More information: Filter sequence based on tags

1. Open the tag manager.

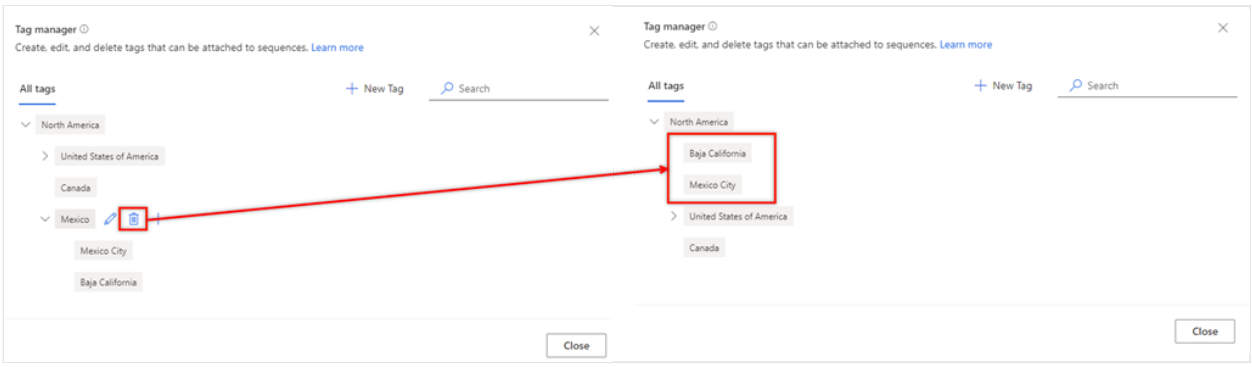
2. Hover over a tag, and select the **Delete** icon.
   A confirmation message is displayed.



3. Select **Delete permanently**.

If the tag being deleted has child tags, the child tags will move up a level in hierarchy and will be nested under the parent of the deleted tag.

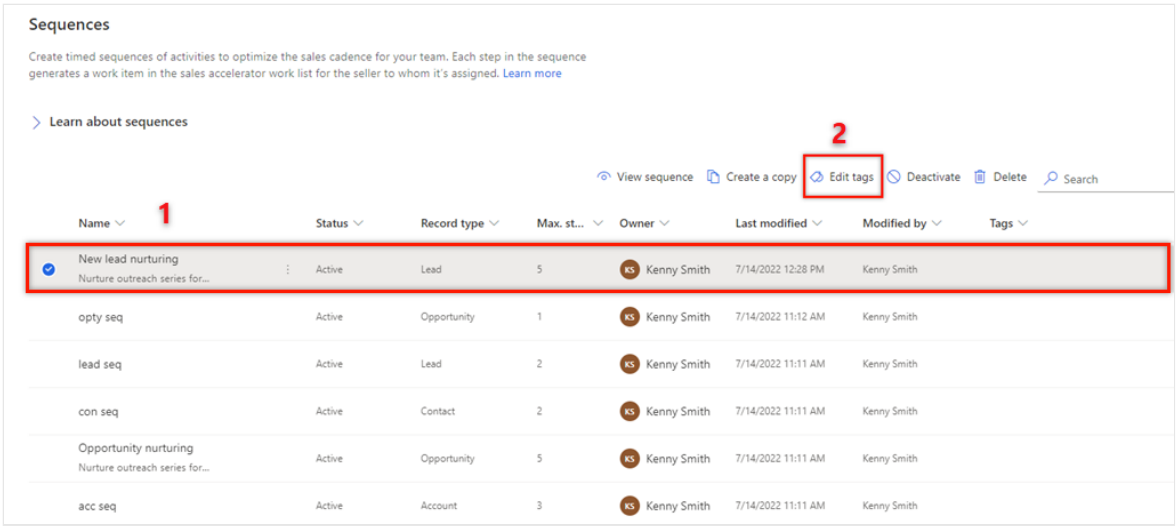
For example, there are three levels of tags in the hierarchy. You delete a tag at level 2 that has child tags. The child tags (level 3) move up a level (level 2) and are nested under the hierarchy parent (level 1). When you delete **Mexico** (parent), which is at level 2, the cities under it move a level up to **North America** and become level 2 in the hierarchy.



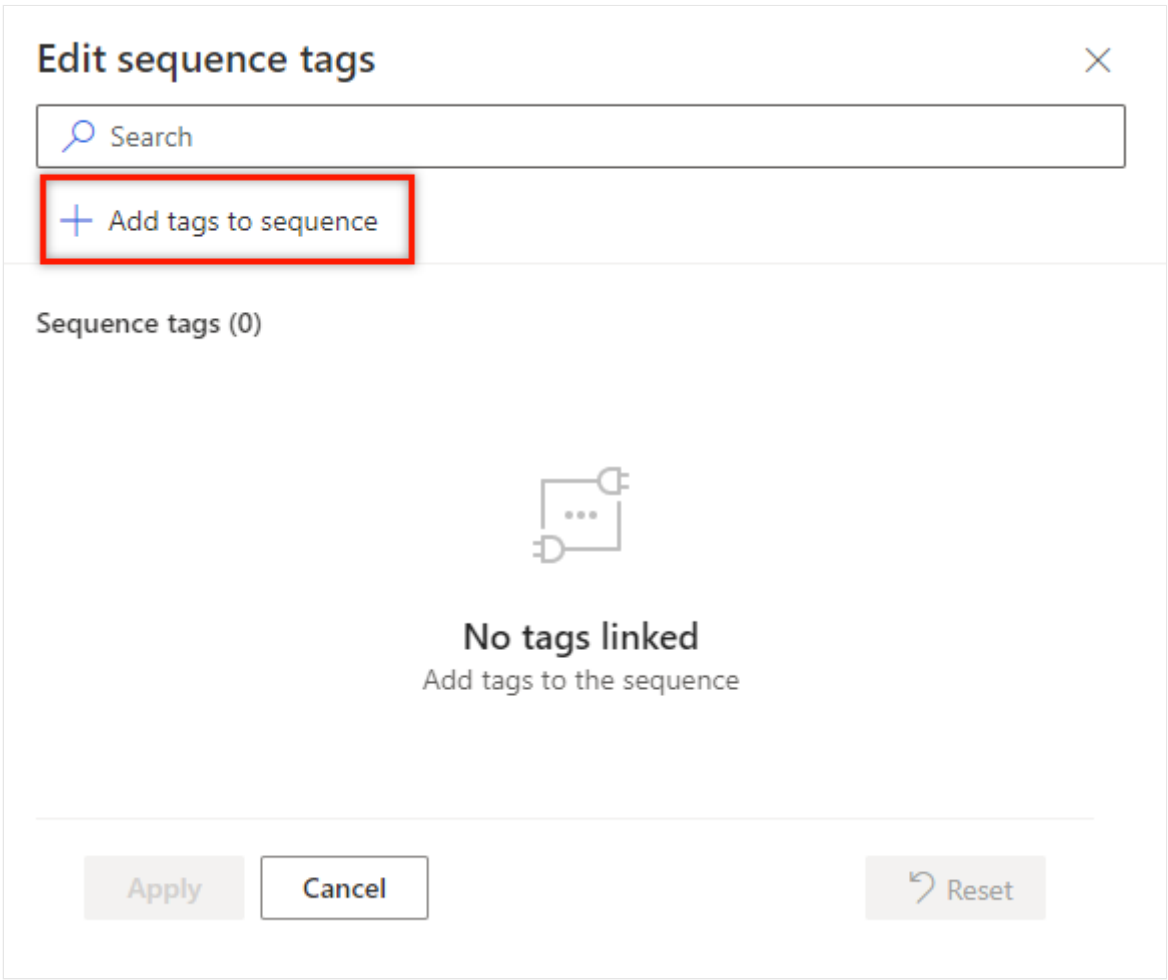
Apply a tag to a sequence

1. In the **Sales Hub** app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. Select a sequence for which you want to apply tags, and then select **Edit tags**.

> **Note**
>
> You can also select the **Edit tags** option by opening the sequence.

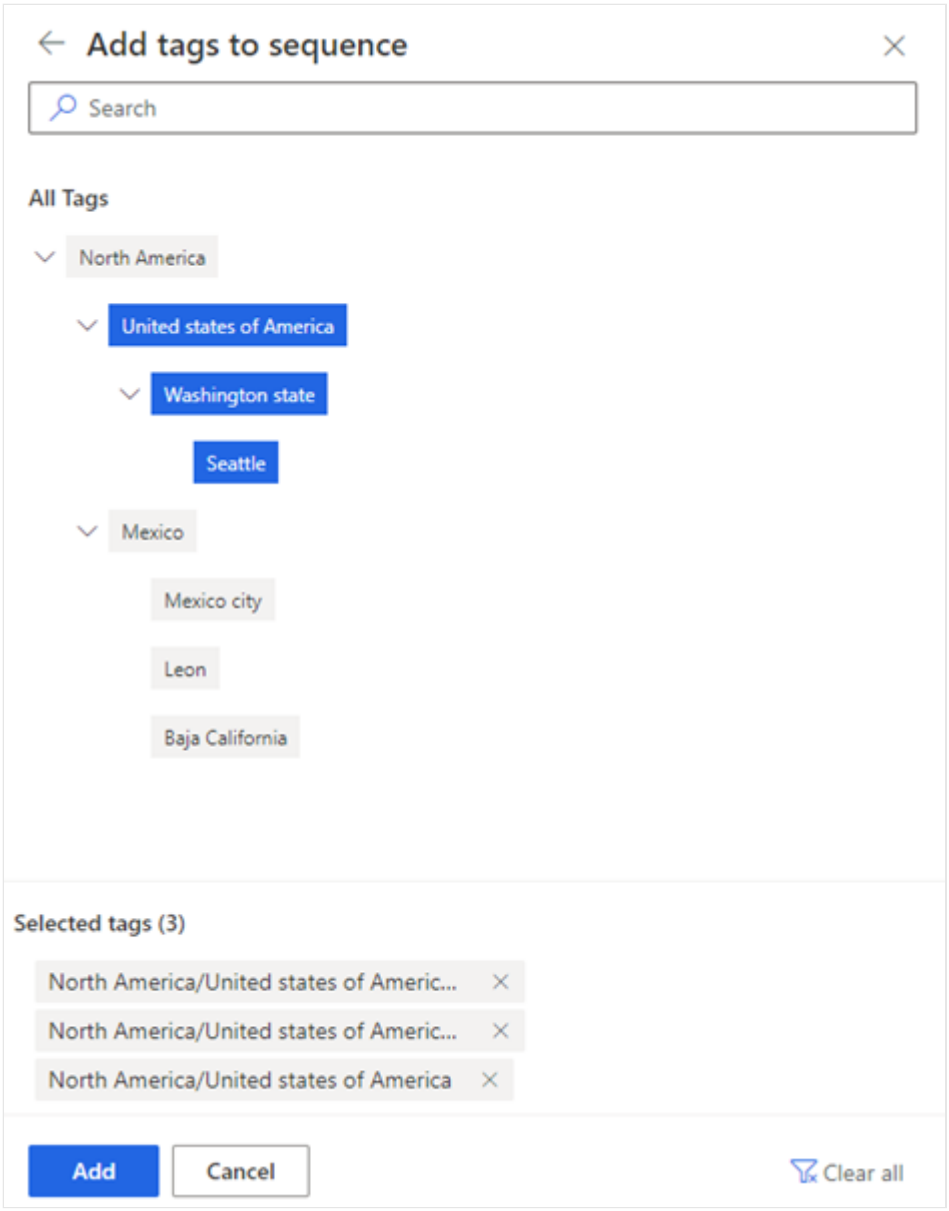


4. On the **Edit sequence tags** pane, select **Add tags to sequence**.



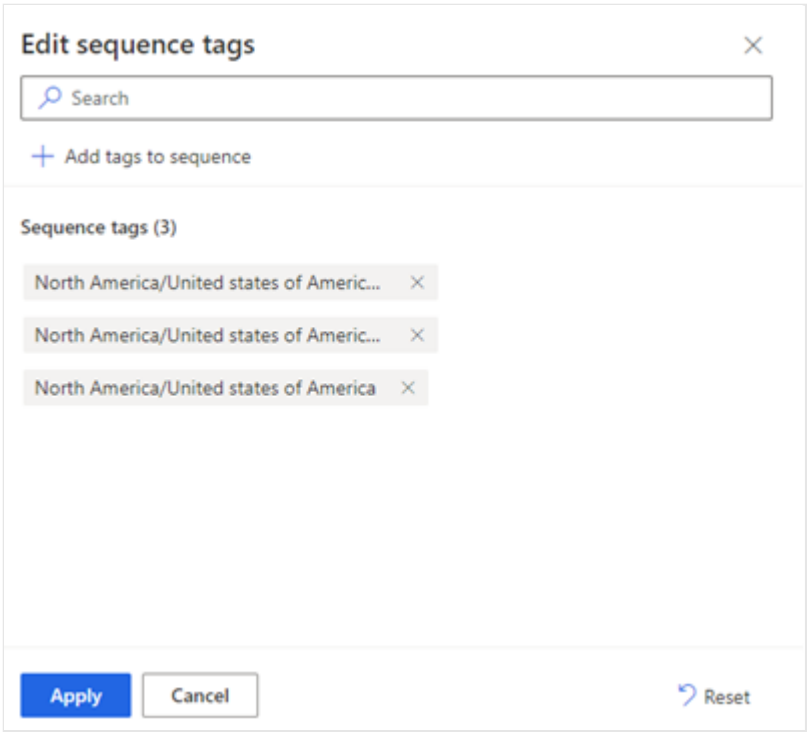
5. Select the tags that you want to apply to the sequence.

   The selected tags are highlighted in blue and are listed in the **Selected tags** section with the hierarchy path.



6. Select **Add**.

   The tags, including the hierarchy, are listed in the sequence. Hover over the added tag to view the full path for the tag.

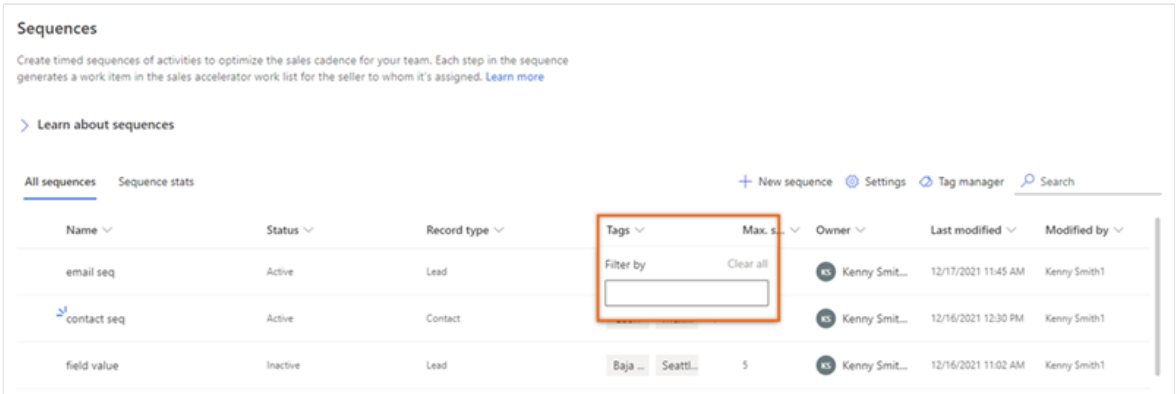


7. Select **Apply**.

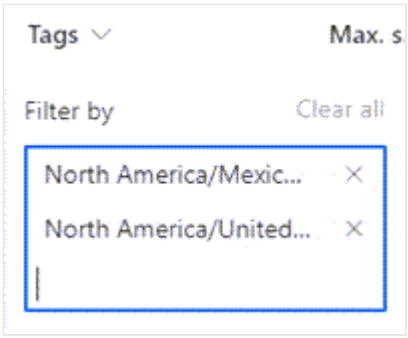
The tags are applied to the sequence.

Filter sequences based on tags

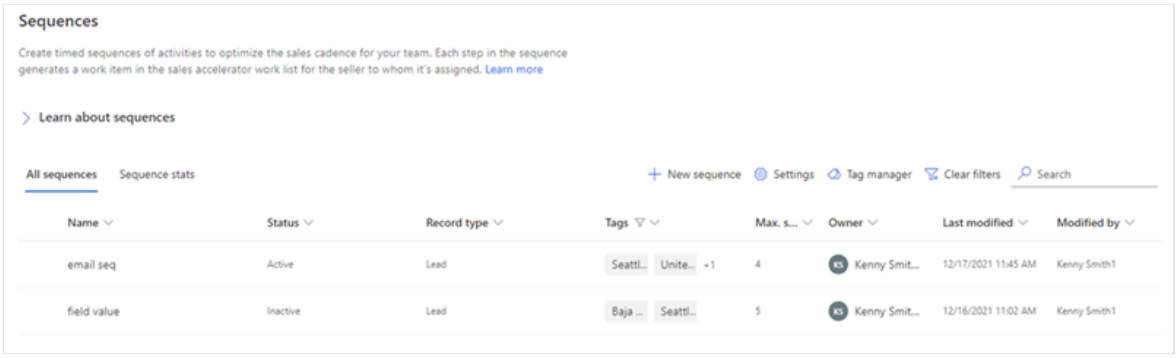
1. In the **Sales Hub** app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. Select the **Tags** column.
   The **Filter by option** opens.



4. Search for the tags to filter the sequence.



The sequences are filtered and listed on the **Sequences** page. The list displays all the sequences that match the filter criteria, regardless of their status.



Remove tags from a sequence

1. In the **Sales Hub** app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. Select a sequence for which you want to remove tags, and then select **Edit tags**.
4. In the **Sequence tags** section, select the **Cross** icon (**X**) corresponding to the tag, and then select **Apply**.

The tag is removed from the sequence.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Create and manage sequences
Create and activate a sequence

View a sequence in a grid

Article • 09/30/2022

As an administrator, you can create a saved query to view the latest sequences that are in progress in an entity record grid.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Create a saved query

1. Make sure that you have the System Administrator security role or an equivalent role. To check your security role, do the following:
   a. Follow the steps in View your user profile.
   b. Don't have the correct permissions? Contact your system administrator.

2. (Optional) Create a new view for each entity that you want to include in the sequence view. The entity must be enabled for the sales accelerator on the **Workspace** setup page. For more information, go to Manage access and record type.

3. In the web app, go to **Settings** ( ) > **Advanced Settings**, and then go to **Settings** > **Customizations** > **Solutions**.

4. Create a solution with the name **SequenceViewSolution**. For more information, go to Create a solution.

5. Select **Entities** > **Add Existing** > **Entity**, and then find and add the entities for which you created views (as described in step 2).

6. Select **Save and Close**.

7. Publish all customizations.

8. Select the **SequenceViewSolution** solution you created in step 4.

9. Export the solution, and choose the **Package type** as **Unmanaged**. The `SequenceViewSolution.zip` file will be downloaded.
10. Delete the solution that was created during step 4 from the organization.
11. Extract the exported solution zip file (the file you downloaded in step 9).
12. In the solution contents folder, locate and then open `Solution.xml`.
13. Change the following value in `Solution.xml`, and then save it:

    Change `<Managed>0</Managed>` to `<Managed>1</Managed>`.
14. In the solution contents folder, locate and open `customization.xml`.
15. For each view that you added in step 2, locate its `<savedquery>` and add the following to its `fetchxml` function:

    ```
    XML
    ```

    ```xml
    <link-entity name="msdyn_sequencetarget" from="msdyn_target" to="
    {primary key of the entity}" alias="sequencetarget" link-type="outer">
        <attribute name="msdyn_parentsequence" />
        <filter type="and">
            <condition attribute="statecode" operator="eq" value="0" />
        </filter>
    </link-entity>
    ```

    For example, if the view was added for the lead entity, replace the `to` parameter in `link-entity` with `leadid`.
16. For each view that you added in step 2, locate its `<savedquery>` and add the following to its `layoutxml`.

    ```
    XML
    ```

    ```xml
    <cell name="sequencetarget.msdyn_parentsequence" width="100" />
    ```
17. Save the file.
18. Zip the folder.
19. Open a model-driven app, such as Sales Hub in Dynamics 365.
20. Go to **Settings** > **Solutions**.

21. Import the solution (the zipped file you created in step 18).

22. Publish all customizations.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Manage sequences

Configure sales accelerator settings for sellers to personalize

Article • 02/10/2023

The personalize sales accelerator settings allows sellers determine what happens when you complete an activity.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

What can you configure?

As an administrator or sequence manager, you can configure sequences by using the following options to allow sellers to customize and personalize their experience:

- Seller availability
- Sequence activities
- Sequence reporting
- Phone number priority

Seller availability

Configure sellers' availability to optimize workload by considering only business days and excluding the non-working days for the work list activities. Also, you can select the calendar type to identify the weekdays or work hours for sellers. Further, the wait time step also considers weekends and computes the activity schedule accordingly.
For example, let's look at the following scenarios and understand the enhanced calendar and wait time computation work:

- With the calendar selection, the workflow works as:
  - Task 1: Send an introductory email to customer (Wednesday)

- Task 2: Follow up with a call after 3 days (Task will be displayed on the following Monday, which is the subsequent working day).

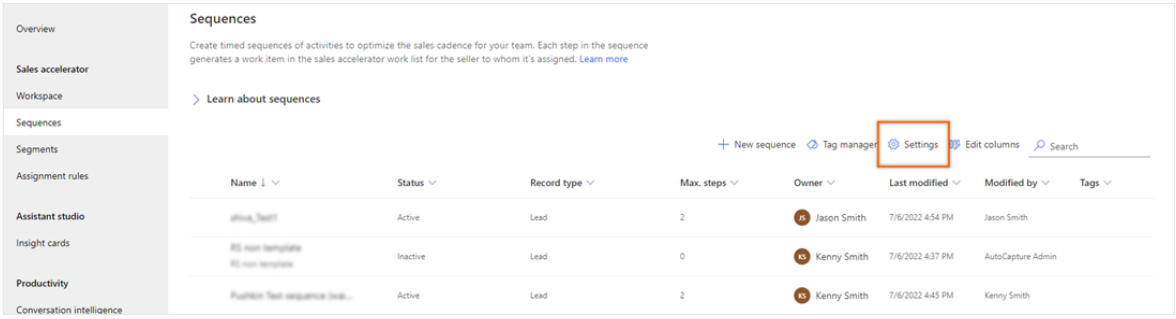
- With the enhanced calendar and wait time calculation, the workflow works as:
  - Task 1: Send an introductory email to customer (Wednesday)
  - Task 2: Follow up with a call after 3 days (Task will be displayed on the following Tuesday considering that the wait time takes weekends as non-working days).

Follow these steps:

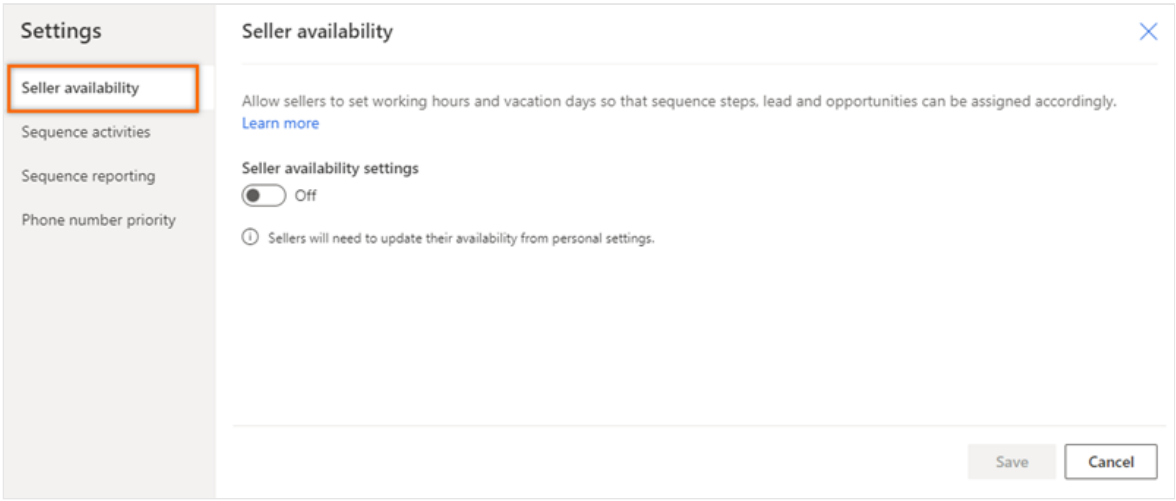
1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.

2. On the site map, under **Sales accelerator**, select **Sequences**.

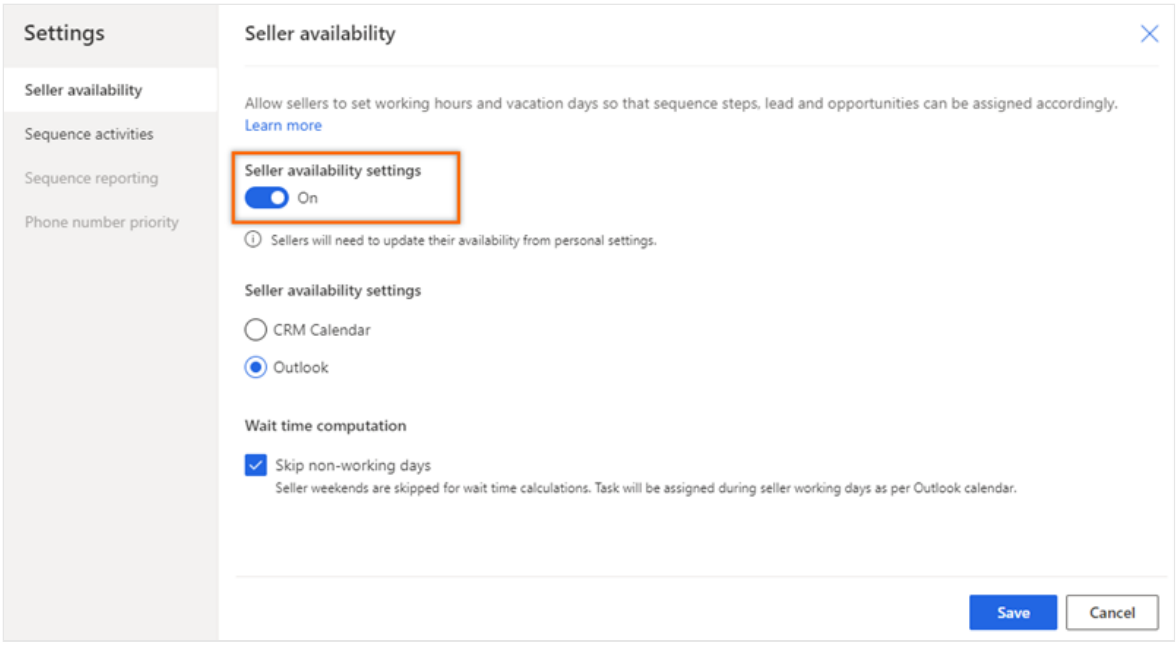
3. On the **Sequences** page, select **Settings**.



4. On the **Settings** page, select **Seller availability**.



5. Turn on the **Seller availability settings** toggle.



6. Under the calendar selection, choose a calendar type and select **Wait time computation** from which the sequence steps will consider seller's work week and working hours for the activities to be adjusted based on business days.

> **Note**
>
> If you want the sequence steps to consider all days of the week, don't select the Wait time computation option.

- Choose the calendar type:
  - **CRM calendar**: Allows sellers to configure work hours, time off, and non-working hours through the Dynamics 365 calendar in personal settings. To know more on configuring sellers' work availability, see Configure your work availability.
  - **Outlook**: Allows sellers to configure work days and out of office through the Outlook calendar. Before you select this option, verify that server-side synchronization of email, appointments, contacts, and tasks is configured for your organization.

- Wait time computation: The option displayed here depends on the calendar you've selected:
  - CRM calendar: Skip non-working hours
  - Outlook: Skip non-working days

    Select the option for wait time activity to skip non-work hours and move it to the following working day. For example, a seller configures weekends as non-working hours, and the wait time activity falls on a Saturday. With the Wait time computation option enabled, the wait time activity scheduled

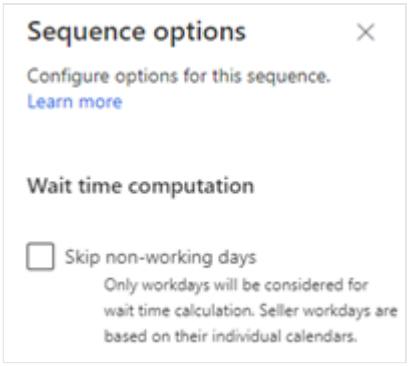
Saturday (non-working hours) will be moved to the following working day (Monday) and subsequently, other activities will be moved in the order they are defined. When selected, the Wait time computation option is enabled for all sequences. However, if you want to disable the Wait time computation option for a sequence, do the following steps:

a. Open the sequence.

b. On the sequence page, select **Options**.

> ⓘ **Note**
>
> Deactivate the sequence before you edit the options.

c. On the **Sequence options** pane, under the **Wait time computation** section, clear the check box for **Skip non-working days**.



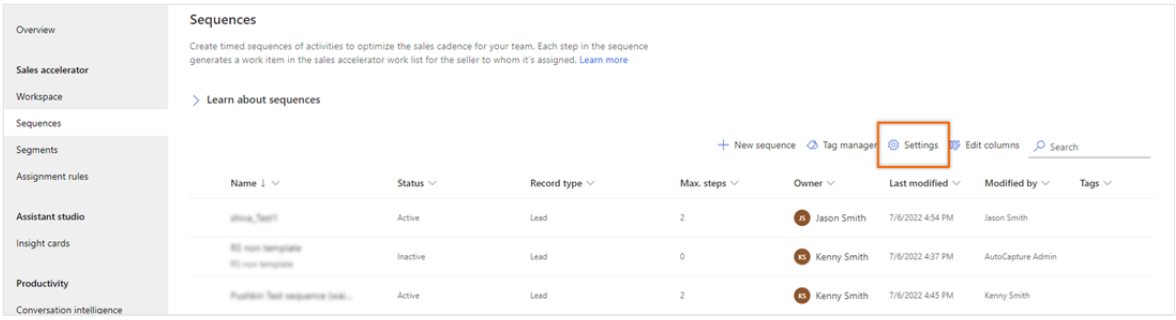
7. Select **Save**.

Sequence activities

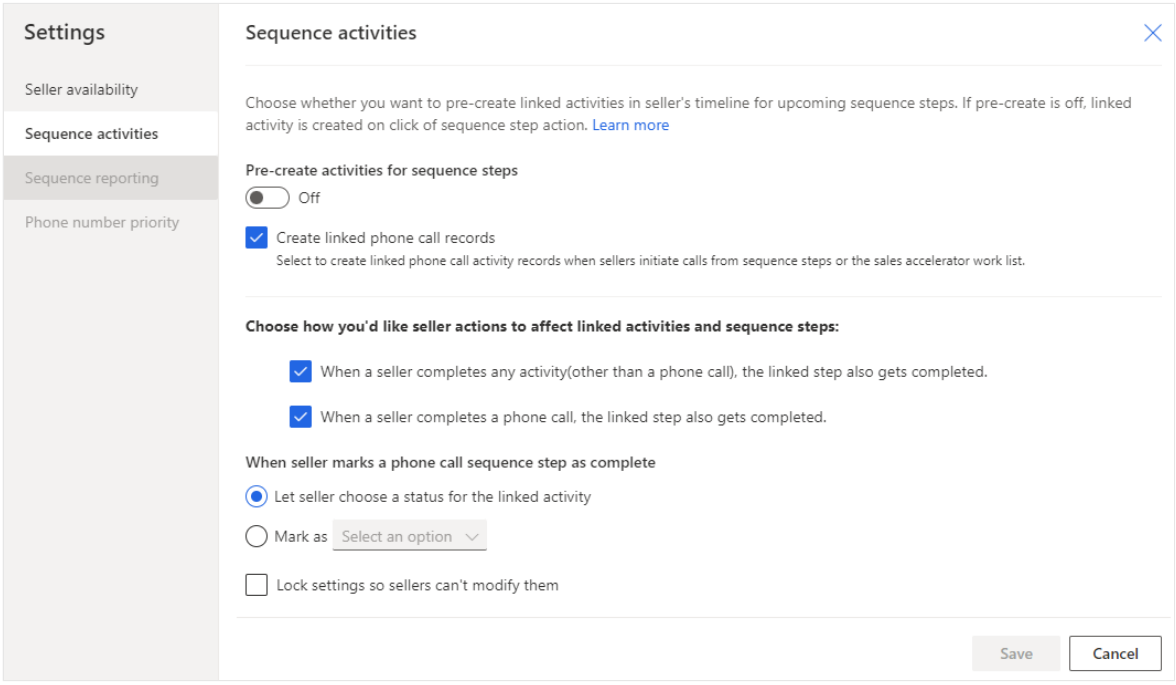
Configure the linking of sequence steps and activities to automatically create linked activities for sellers' upcoming sequence steps. Linked activities are added to seller timelines for the next sequence step.

Follow these steps:

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. On the site map under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select **Settings**.

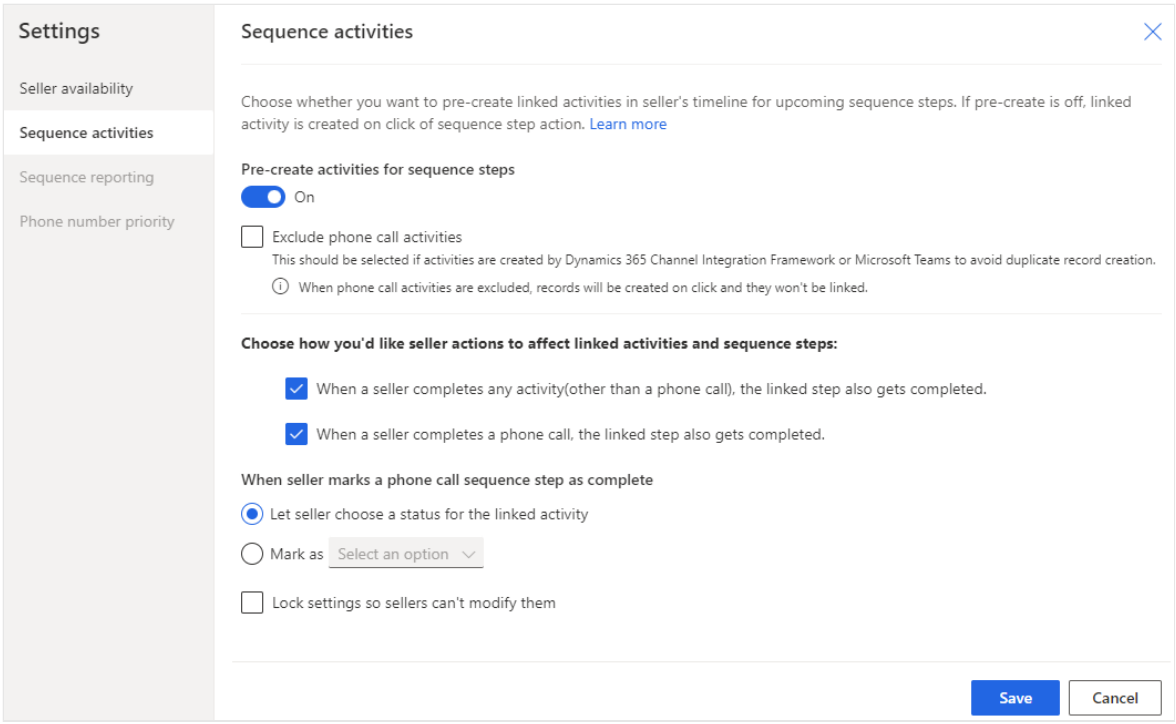


4. On the **Settings** page, select **Sequence activities**.



5. Turn on the **Create linked activities** toggle.

   Select the **Exclude phone call activities** checkbox to avoid creating a duplicate phone call activity when you're using Dynamics 365 Channel Integration Framework as your phone system. If you don't select this option, a duplicate phone call activity will be created on the timeline and a duplicate activity will be created when the step is waiting to be completed on the record.



> **Note**
>
> When turned off, activities will not be created automatically. However, activities are created on the timeline only when sellers select the activity in the **Up next** widget.

6. Configure activities and steps. You can choose how the actions that sellers perform on steps will affect linked activities and sequence steps.

Action	Description
When a seller completes any activity(other than a phone call), the linked step also gets completed.	When you select this checkbox and sellers complete the activity through the timeline, the sequence step that's related to this activity is automatically marked as complete.
When a seller completes a phone call, the linked step also gets completed.	When you select this checkbox and sellers make a phone call through the timeline, the sequence step that's related to this activity is automatically marked as complete.
When seller marks a phone call sequence step as complete	When sellers complete a phone call activity in the sequence step, you can choose to let sellers enter the status of the activity or enter a default value that has been defined for your organization.

> **Note**

Select the **Lock settings so sellers can't modify them** checkbox to prevent sellers from updating the sequence activities configuration.

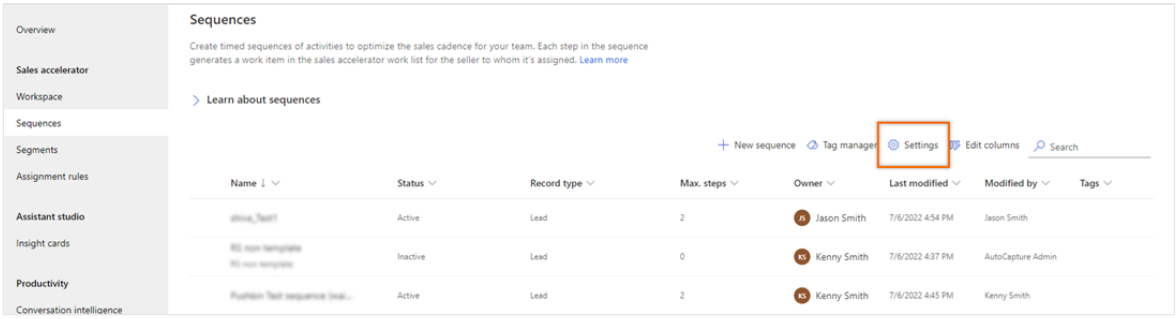
7. Select **Save**.

Sequence reporting

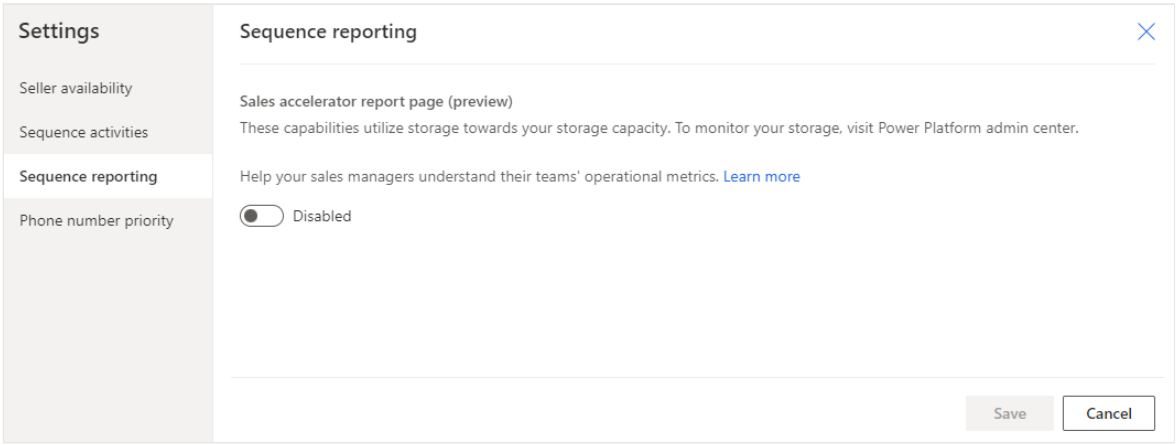
Enable sales accelerator reports to help your sales manager view and understand their team's historical operational metrics, key performance indicators (KPIs), and sequence stats page.

Follow these steps:

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. On the site map under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select **Settings**.



4. On the **Settings** page, select **Sequence reporting**.



5. Turn on the toggle.
6. In the confirmation message, select **Enable**.

By default, users with sales manager and sequence manager roles can view the reports. To grant view access to other roles, provide read access at the organizational level for the sales acceleration reports table. More information: Security roles and privileges

> **Note**
>
> After you enable the option, the application might take up to 24 hours to display the data in the reports. Subsequently, the reports will be refreshed every 24 hours. You can view the last updated date in the upper-right corner of the sales acceleration report page.

To know how sales managers use:

- Metrics and KPIs, go to Understand sales acceleration reporting.
- Sequence stats, go to Understand sequence stats.

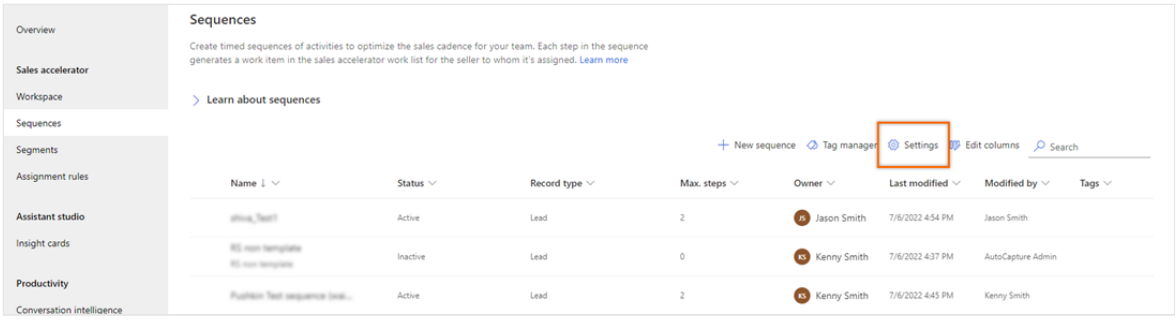
Phone number priority

When a phone system is configured in your organization, sellers can make calls directly through the sales accelerator feature. Under **Phone number priority**, select the phone numbers for **Default**, **Fallback1**, and **Fallback2**. When sellers initiate calls through a sequence step or the work list, the softphone chooses the phone numbers in the order they're listed.

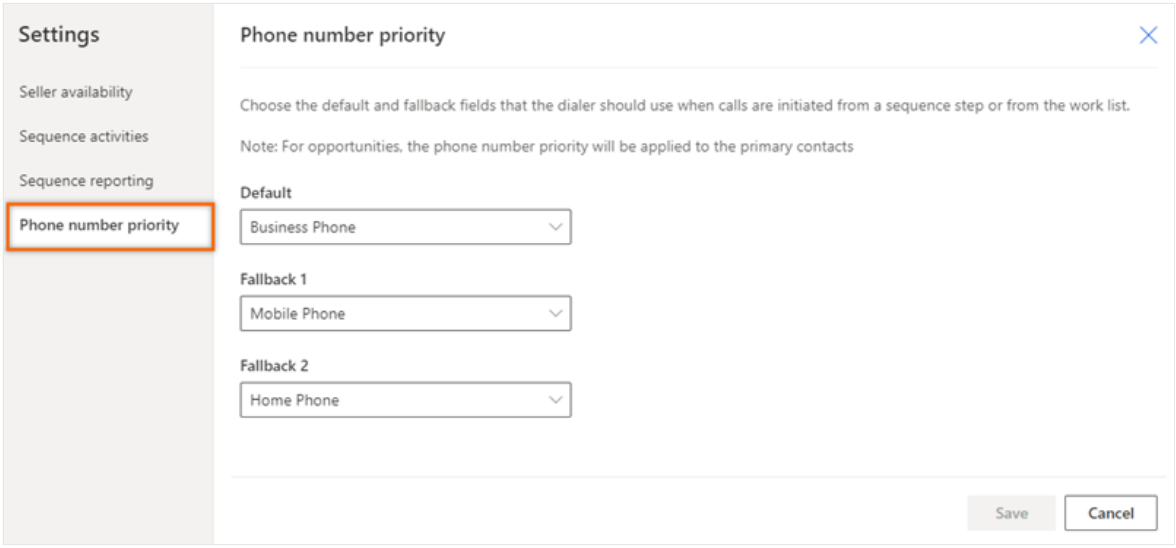
For example, you can select **Business Phone** in **Default**, **Mobile Phone** in **Fallback1**, and **Home Phone** in **Fallback2**. When sellers initiate a call, the number in the **Default** option is dialed if it's available. If it isn't available, the call goes to the next option.

Follow these steps:

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
2. On the site map under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select **Settings**.



4. On the **Settings** page, select **Phone number priority**.



5. Select phone number options for **Default**, **Fallback1**, and **Fallback2**.

6. Select **Save**.

> **Note**
>
> For opportunities, the phone number priority will be applied to the primary contacts.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Personalize sales accelerator

View and understand sales acceleration reporting

Article • 02/10/2023

View and understand the report for sales acceleration to get a broad overview of the sequences related to leads and opportunities in your organization.

License and role requirements

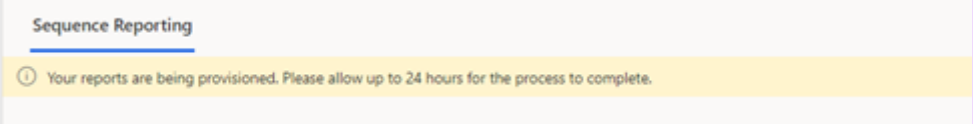
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Sales Manager or Sequence Manager More information: Predefined security roles for Sales

What is sales acceleration reporting?

Sales acceleration reporting gives you a broad overview of the sequences related to leads and opportunities in your organization. The reports use AI to provide insights into which sequences are doing better and emerging with the most successful conversion rates. Also, you can analyze metrics and key performance indicators (KPIs) to identify areas for improvement that might have the greatest effect on sales growth.

Note

- Sales acceleration reporting is not available on Government Community Cloud (GCC).
- The sales acceleration reporting is not supported on mobile devices.
- After your administrator enables reporting, the application might take up to 24 hours to display the data in the reports. When the reports are being provisioned for the first time, the following message is displayed:

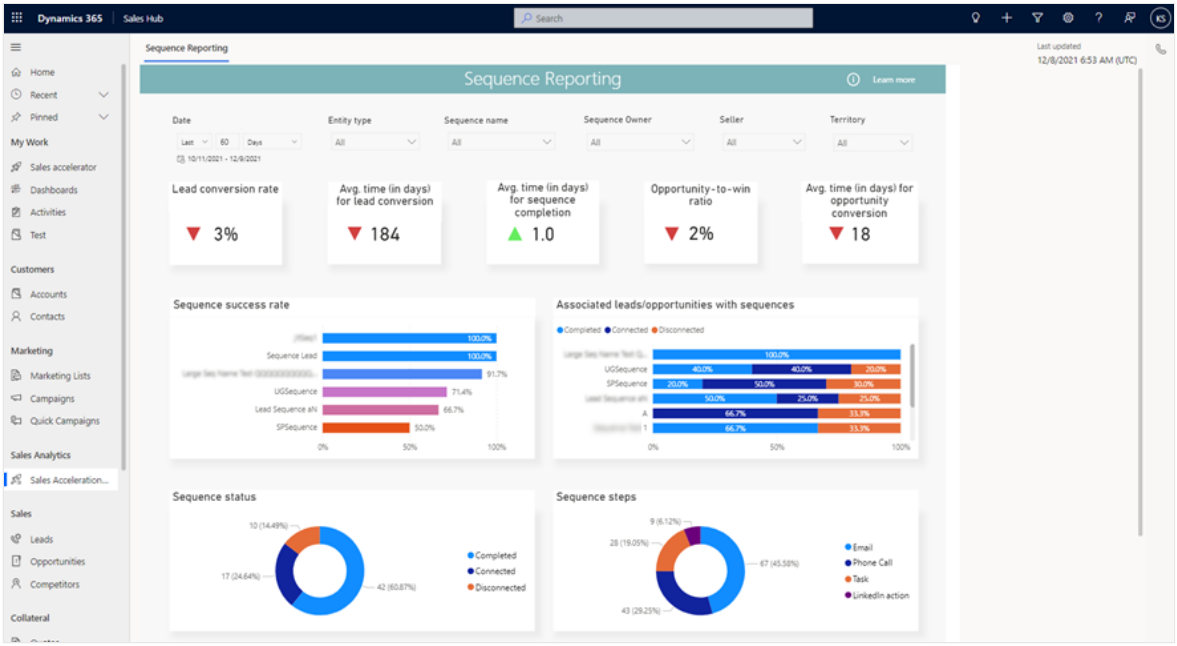
  Subsequently, the reports are refreshed every 24 hours. You can view the last updated date on the upper-right corner of the page.

Who can view the reporting page?

By default, the users with sales manager and sequence manager roles can view the reporting page. For other roles to view the reporting page, contact your administrator to get read access at the organizational level for the sales acceleration reports table. More information: Security roles and privileges

View sales acceleration reporting

1. Go to the lower-left corner of the page, and select **Change area** > **Sales**.
2. On the site map, under **Sales Analytics**, select **Sales Acceleration Reporting**. The reporting page opens.



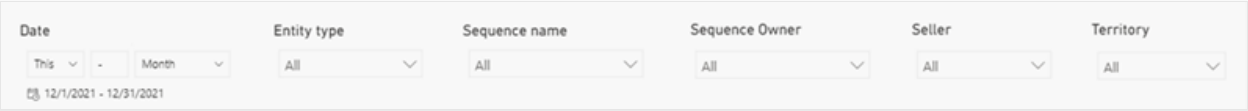
Understand sales acceleration reporting

By default, the report displays KPIs for all sequences that are related to leads and opportunities over the past month. The reporting view can be categorized into the following sections:

- Data filters
- KPI summary charts
- Metric charts

Data filters

Use the data filtering options to select data for specific time periods, entity type, sequence name, sequence owner, seller, and territory. To filter data by duration, channel, queue, or agent, select a value from the respective dropdown list.



KPI summary charts

The KPI summary charts summarize the key performance indicators for the specified time period and the percent change during the period. You can further filter these areas by entity type, sequence name, sequence owner, seller, and territory. Also, a trend is displayed corresponding to the value specifying how the KPI is doing in the selected timeframe when compared with the previous timeframe. A green upward triangle indicates an improvement in the score, and a red downward triangle indicates a decline in the score.

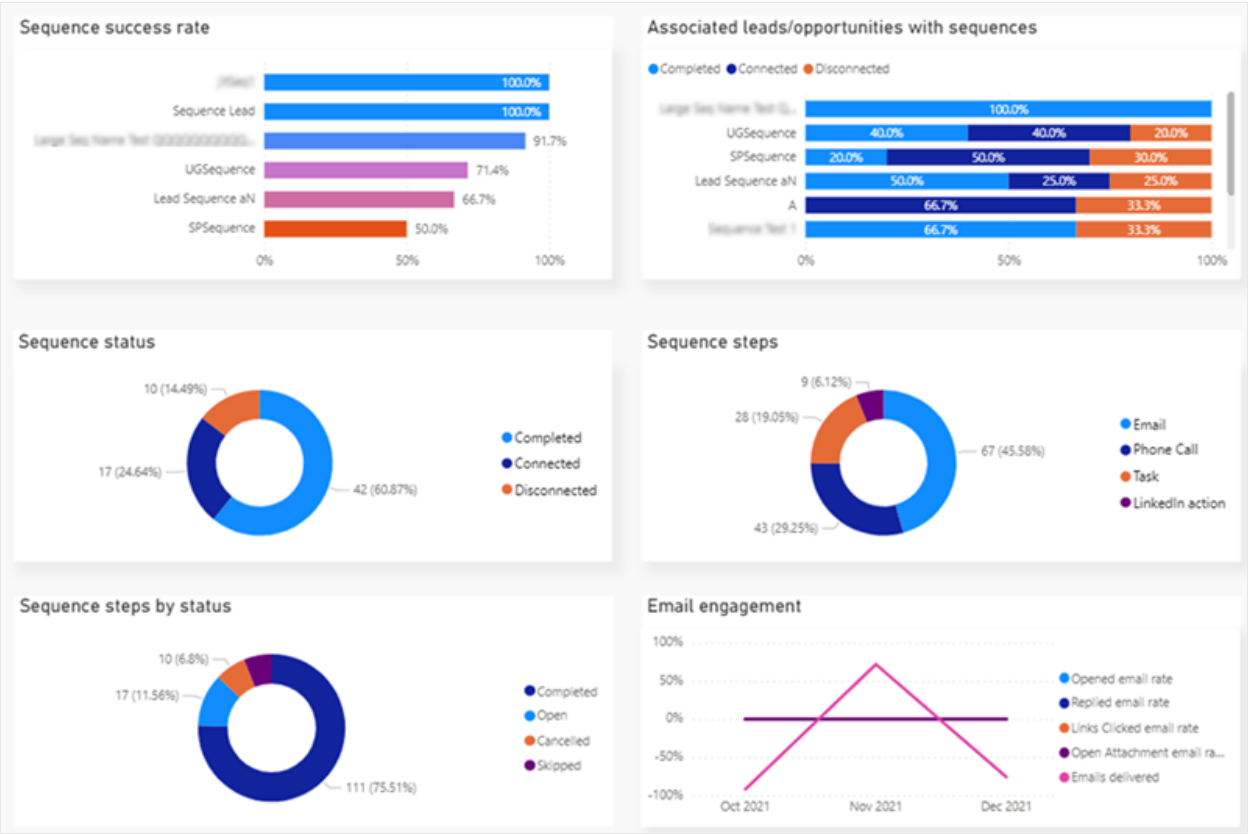
The following table shows the KPIs that are displayed in the report.

KPI	Description
Lead conversion rate	The percentage of leads in a sequence that are successfully converted into opportunities.
Avg.time (in days) for lead conversion	The average number of days a lead takes to be converted to an opportunity when it's connected to a sequence.
Avg.time (in days) for sequence completion	The average number of days it takes for a sequence to be completed in an attached record.
Opportunity-to-win ratio	The percentage of opportunities in a sequence that are successfully converted into win deals.
Avg.time (in days) for opportunity conversion	The average number of days that it takes for an opportunity in a sequence to be converted into a win deal.

Metric charts

The metric chart provides a detailed view into the individual values of a sequence, such as status, number of steps, and the status of the steps.

To view specific data that's related to a value in the charts, select the value. Other metric charts in the report will be refreshed to show data that's related to the value you select. Drilling down into these values helps you to identify the areas of improvements for the sequence.



The following metrics are displayed in the charts.

Metric chart	Description
Sequence success rate	A breakdown of sequences that are active in your organization, with the percentage of records that have been successfully converted.
Associated leads/opportunities with sequence	A breakdown of sequences with the status of their associated lead or opportunity records: • Completed • Connected • Disconnected
Sequence status	A breakdown of sequences by their status: • Completed • Disconnected • Connected
Sequence steps	A breakdown of sequence steps that are added to active sequences in your organization.

Metric chart	Description
Sequence steps by status	A breakdown of sequence steps by their status in all the sequences that they are added to: • Completed • Canceled • Skipped • Open
Email engagement	A breakdown of the status of emails that are linked to sequences through email steps. The status displayed in the chart is based on the status that's defined in the email engagement feature. More information: Use email engagement to view message interactions

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Sequence reporting
Understand the sequence stats page

Understand the sequence stats page

Article • 03/17/2023

The stats about sequences provide insights on the performance of a sequence, such as success rate and the state of records that are connected. The data helps you view the sequences that are doing better and emerging with high conversion rates.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Sales Manager or Sequence Manager More information: Predefined security roles for Sales

Who can view the stats page?

https://www.microsoft.com/en-us/videoplayer/embed/RE4Vmxe?postJsllMsg=true

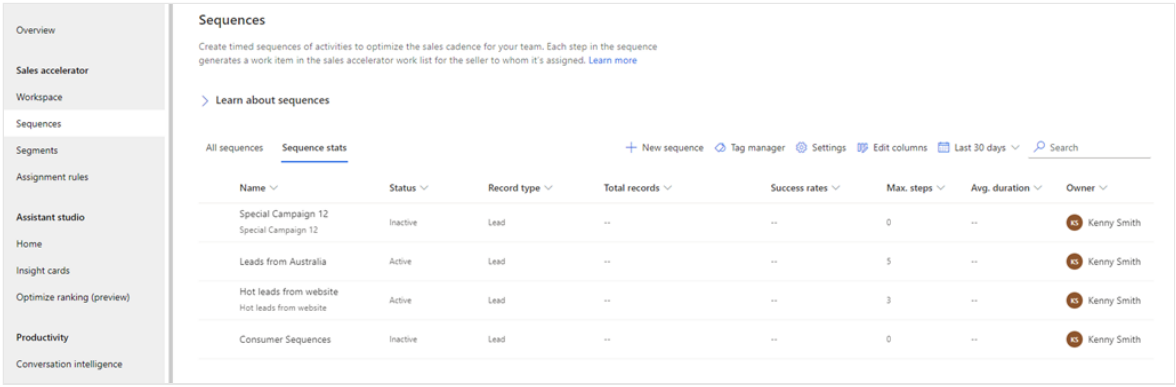
By default, the users with sales manager and sequence manager roles can view the stats page. For other roles to view the reporting page, contact your administrator to get read access at the organizational level for the sales acceleration reports table. More information: Security roles and privileges

View the sequence stats page

> **Note**
>
> - Verify that an administrator has enabled the sales acceleration reporting in your organization. More information: **Sequence reporting**
> - After an administrator enables reporting, the application might take up to 24 hours to display data on the stats page for the first time. Subsequently, data in the stats page is refreshed every four hours.

To view the sequence stats

1. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. On the **Sequences** page, select the **Sequence stats** tab. The **Sequences** tab opens.



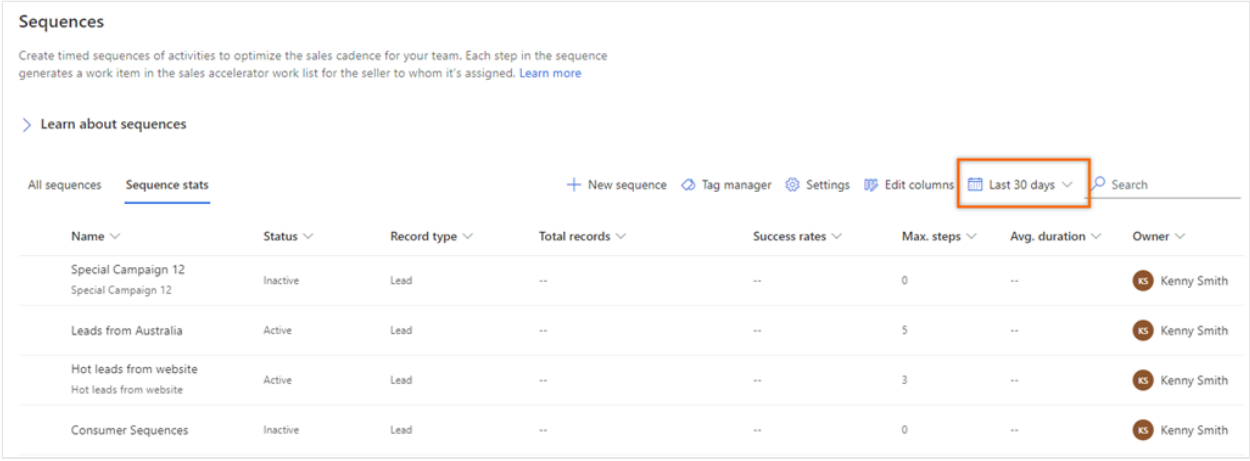
Understand the sequence stats page

The **Sequence stats** page consists of information on data related to each sequence that's available in your organization and the timeframe for which you want to view the data.

Select the timeframe

Select the timeframe for which you want to view the data. When you've made your selection, the table is refreshed to show data for that timeframe. By default, the timeframe is selected as 30 days, but you can choose from the following timeframes:

- 30 days
- 90 days
- 180 days
- 1 year
- 2 years



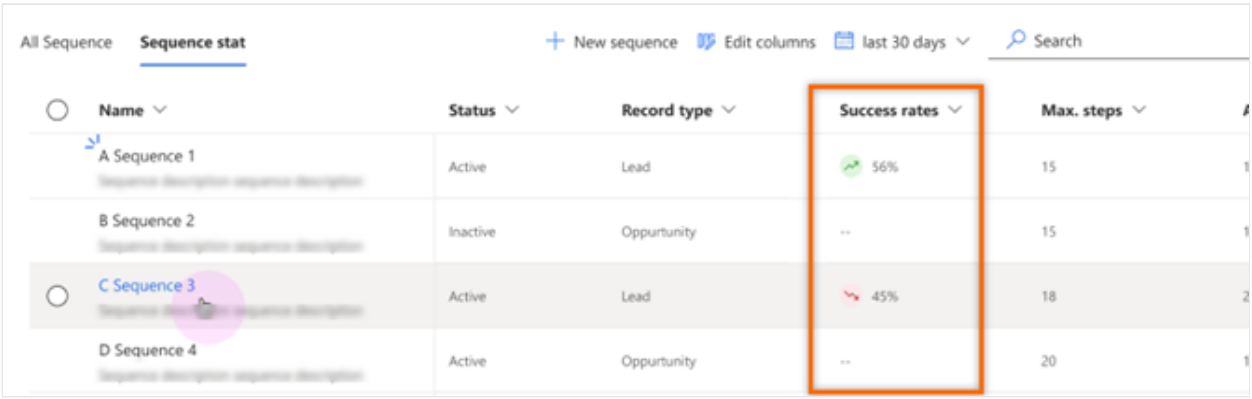
For example, if you want to view the data for the last 90 days, select **Last 90 days** from the date dropdown list. The table will be refreshed to show data for the last 90 days.

Sequence stats list

The sequence stats list consists of sequences—including inactive ones—that are available in your organization, for all record types. For the timeframe you selected, you can view information such as success rate.

The **Success Rate** column displays the trend of the sequence with its successful conversion rate for the connected records in the selected timeframe.

> ⓘ Note
>
> The **Success Rate** column is available only for lead and opportunity record types.



The trend shows how a sequence is performing in the selected timeframe compared to that of the previous timeframe. For example, if you select 30 days and a sequence related to the lead record type shows an upward trend (green), this shows that the sequence has performed better in converting leads into opportunities in the current 30 days when compared to the previous 30 days. Green indicates improvement, red

indicates a downward trend, and orange indicates that there has been no change in the success rate.

The percentage shows the average number of records that are successfully converted into win deals or opportunities when compared to the previous timeframe.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Sequence reporting
Understand sales acceleration reporting

Work assignment

Article • 08/25/2023

Work assignment helps in creating segments to group records and prioritize them as per your sales strategy. Further, you can create a set of rules (assignment rules) to automatically assign records to sellers and connect records to sequences to guide sellers with their next steps.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Review prerequisites

Before you start, be sure that the sales accelerator is configured in your organization.
More information: Configure the sales accelerator

What are segments?

Segments help you to categorize records based on specific criteria such as location, deal value, language, and product. By using segments, you can automatically connect records to sequences and create assignment rules to automatically assign sellers to records. You can create segments for all entities, including custom entities.

You can use the segment builder to:

- Create and activate segments.
- Manage assignment rules.
- Connect a segment to a sequence.
- View and edit properties of a segment.
- Edit a segment
- Prioritize a segment.

- Delete or deactivate a segment.

What are assignment rules?

Assignment rules enable new leads, opportunities, and seller insights to be automatically assigned to sellers or sales teams. This helps reduce the amount of time and effort required to manually assign records, prevent the loss of unassigned records, and balance assignments among sellers.

Assignment rules are supported for lead, opportunity, and suggestions record types.

> ⓘ **Note**
>
> For more information about seller insights, see **Get seller insights to improve seller effectiveness**

https://www.microsoft.com/en-us/videoplayer/embed/RE4VjOo?postJsllMsg=true

You can create rules that match attributes (such as location and language) with seller or team attributes (such as location and language). For example, when a lead is created and satisfies the conditions of a specific rule, the lead is automatically assigned to a seller.

You can use the assignment rules designer to do the following tasks:

- Create and activate assignment rules.
- Edit an assignment rule.
- Change priority of an assignment rule.
- Delete or deactivate an assignment rule.

Permissions required

The following permissions are required to perform tasks in the work assignment feature.

Task	Entity name	Privileges required
Apply seller attributes to sellers	Attribute	Read
	Attribute Value	Read, Append, and Append To
	User	Read, Append, and Append To

Task	Entity name	Privileges required
Assign unassigned records from monitor tab	Sales routing run, Segment, Team, and User	Read
		Note: To assign record to a seller you must assign privileges on that record.
Create, connect, disconnect sequence to segment	Segment	Read, Write, and Append
	Sequence	Read, Write, Create, Append, and Append to
	Sequence Stat and Sequence Target Step	Read
	Sequence Template	Append To
Create, modify, or delete assignment rules	Assignment Rule	Read, Create, Write, Delete, and Append
	Attribute, Attribute Value, Team, and User	Read
	Segment	Read and Append To
Create, modify, or delete segments	Segment	Read, Create, Write, and Delete
Create, modify, or delete seller attributes	Attribute	Read, Create, Write, Delete, and Append To
	Attribute Value	Read, Create, Write, Delete, and Append
View assigned or unassigned records in monitor tab	Sales routing run and Segment	Read
View assignment rules	Assignment Rule, Attribute, Attribute Value, Segment, Team, and User	Read
View segments	Segment	Read
View seller attributes	Attribute and Attribute Value	Read
View seller capacity	Assignment Map and User	Read

Task	Entity name	Privileges required
View sequences connected to segment	Segment, Sequence, Sequence Stat, Sequence Target Step, and Sequence Template	Read
Update seller capacity	Assignment Map	Read and Write
	User	Read

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Manage work assignment settings

Article • 10/19/2023

Using the work assignment settings, you can configure the following settings for your sales teams:

- Add attributes to sellers
- Shortlist sellers through advanced filters
- Set capacity for sellers
- Turn off record assignment to sellers

Along with the above settings, you can also manage the following settings for your sales teams:

- Configure security roles to assign records
- Manage seller attributes
- Manage seller availability

Before you configure, verify that the security roles that are assigned to your sellers were selected when the sales accelerator was configured. More information: step 4 in Set up the sales accelerator

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Add attributes to sellers

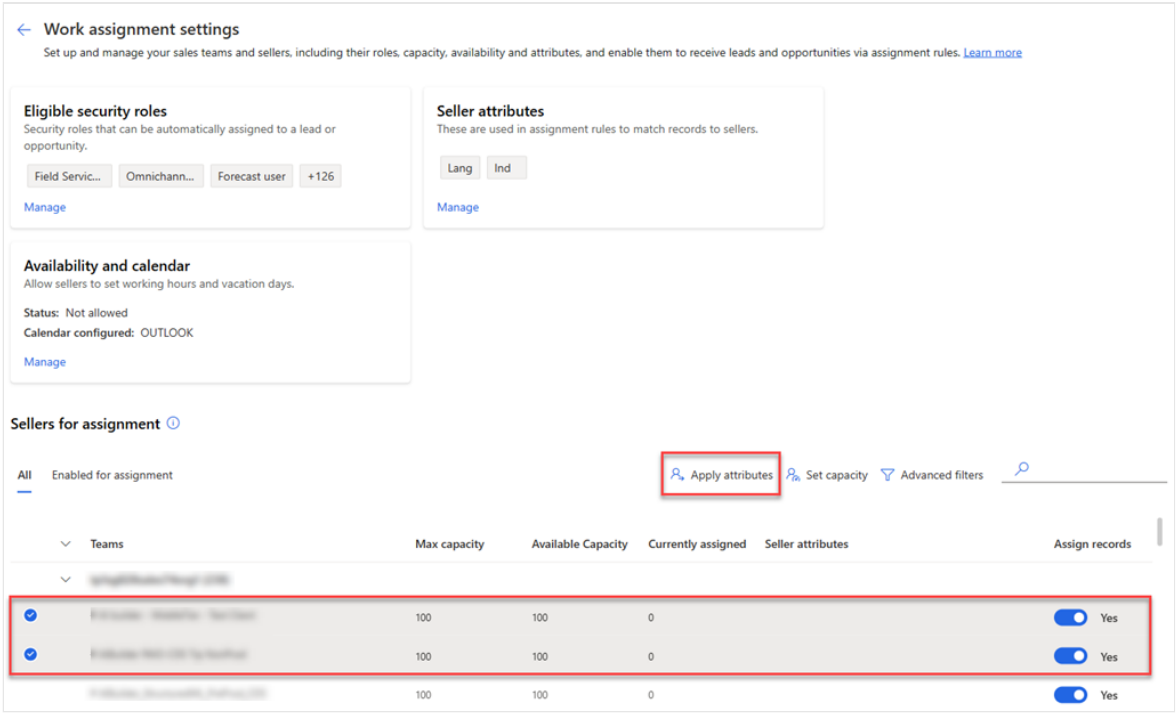
Attributes define the characteristics of a seller, such as skills, location, and language. Before you apply attributes to sellers, verify that the attributes have been defined. More information: Manage seller attributes

You can apply attributes in bulk by selecting multiple sellers at a time.

To add attributes

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, select **Settings**.
4. From the **Sellers for assignment** section, select a team or sellers that you want to apply attributes for and then select **Apply attribute**.

> **Note**
>
> - The list consists teams that include sellers whose security roles were configured during the initial setup of the sales accelerator.
> - To bulk-apply the attributes, select multiple sellers.



5. On the **Apply attribute** pane, select **Add attribute**, and then choose the attribute and its corresponding values. Repeat this step for each attribute you want to add.

> **Note**
>
> If you're adding attributes to a seller who already has defined attributes, choose one of the following options and proceed with adding the attributes:

- **Replace existing attributes with new attributes**: This option replaces the existing attributes that were already applied to the seller. If any leads were assigned to the seller based on the previous attributes, those leads won't be affected.
- **Keep existing attributes and add more**: This option adds more attributes to the seller, in addition to the attributes that were already applied.

6. Select **Apply**.

The attributes are applied to the sellers.

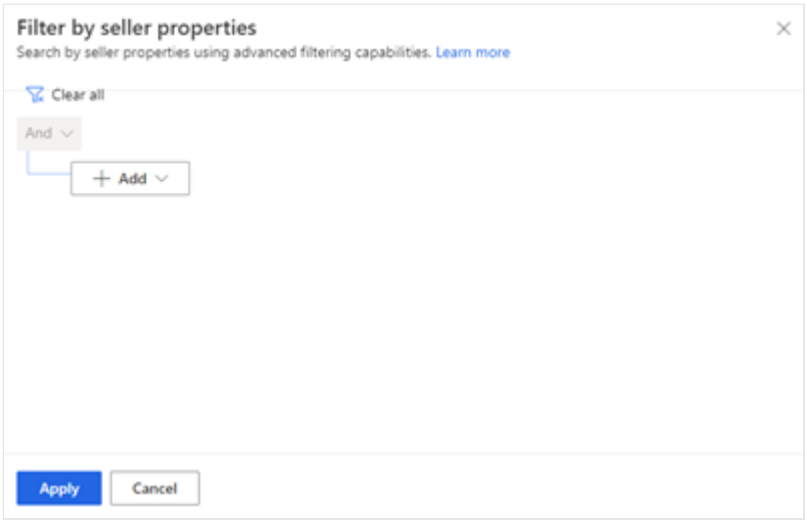
Shortlist sellers through advanced filters

You can shortlist sellers from a huge list to apply attributes, set capacity, and more. The filters are based on the seller attributes such as account, city, country, region, sale amount, and other information. Only the sellers that match the criteria are displayed on the list, which helps in reducing the time taken to search for sellers.
The filters you apply are available only for that session and can't be saved. You must create a filter every time you sign in to your organization.

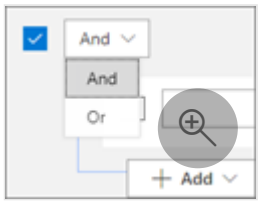
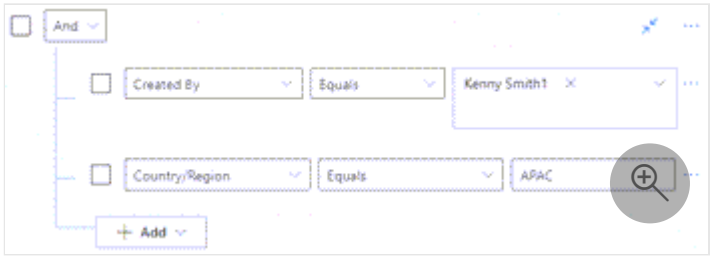
> ⓘ **Note**
>
> Before you apply the filters, verify that the sellers with required security roles are granted access to the auto-assignment of rules. More information: **Configure security roles to assign records**

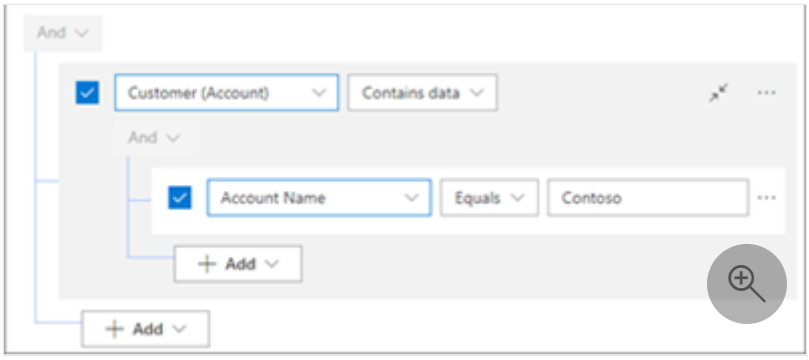
To create and apply filters

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, select **Settings**.
4. On the **Settings** page, select **Advanced filters**.
   The **Filter by seller properties** pane opens.



5. Select **Add** and then choose the filter options as described in the following table:

Filter option	Description
Add row	Add conditions for which the sellers should be listed. In the following example, we add a row to view sellers only from the city **Seattle**. 1. Select the attribute **City** from the dropdown list in the first column. 2. Select the operator as **Equals** from the dropdown list in the second column. 3. Enter the value as **Seattle** to filter by in the third column. Similarly, you can create more conditions to further filter the sellers as required.
Add group	Add multiple conditions as a group to filter sellers by using more than one field: 1. Select **And** or **Or** to group the conditions.  2. Select the conditions that you want to add to the group.  When you select **And**, the filter is applied to sellers that meet both criteria. When you select **Or**, the filter is applied to sellers that meet any of the filter criteria. For example, to filter sellers that were created by Kenny Smith and are from APAC region, select **And**.

Filter option	Description
	Similarly, you can create multiple groups and further filter the leads based on the conditions defined in the groups.
Add related entity	Add a condition based on the attributes of related entities. Select an attribute from the **Related Entity** list in the topmost field, and then choose **Contains data** or **Does not contain** data. This enables the condition section. 

For more information on filters with grouped and nested conditions, see Create or edit filters in model-driven app views.

6. After you define the filter criterion, select **Apply**.

   The list is filtered based on the selected criterion.

Set capacity for sellers

When you set capacity, you set a combined upper limit of leads and opportunities that a seller can be assigned at any given time. When a seller reaches this limit, even though a lead or an opportunity record is created and ready to be automatically assigned to the seller, the record won't be assigned. You can view unassigned records for leads and opportunities in their respective open record views.

For example, Kenny is a seller whose capacity limit is set to 10. A new lead is generated, and the assignment rule qualifies the lead to be assigned to Kenny. However, Kenny is currently handling a maximum of 10, so the newly generated lead won't be assigned to Kenny.

To set capacity

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

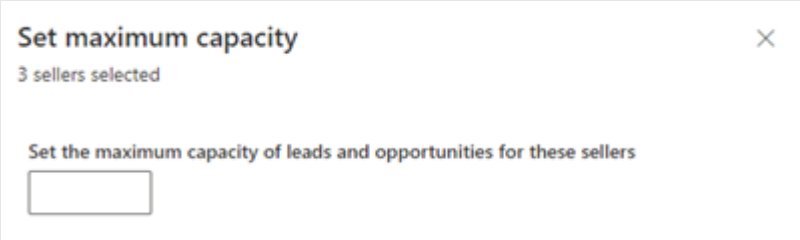
2. Under **Sales accelerator**, select **Work assignment**.

3. On the **Work assignment** page, select **Settings**.

4. From the **Sellers for assignment** section, select a team or sellers that you want to apply attributes for and then select **Set capacity**.

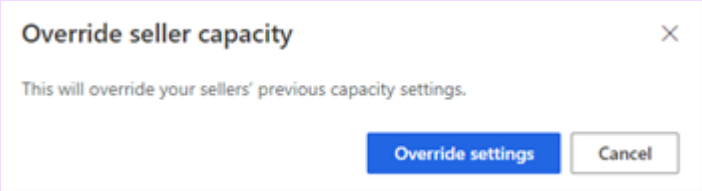
   > **Note**
   >
   > - The list consists teams that include sellers whose security roles were configured during the initial setup of the sales accelerator.
   > - To bulk-apply the attributes, select multiple sellers.

   The **Set maximum capacity** pane opens.

5. In **Set the maximum capacity of leads and opportunities for these sellers**, enter the value you want.

6. Select **Apply**.

   > **Note**
   >
   > If you're changing the existing maximum capacity, a confirmation message appears. Select **Override settings**.
   >
   > 
   >

The maximum capacity limit is set for the seller.

Set a seller availability

To set a seller's availability, select the seller and then select **Set availability**. The seller's calendar opens, where you can configure the seller's work hours and vacation days. For more information, see How can I manage seller availability?.

Turn off record assignment to sellers

When a seller is on vacation or otherwise unavailable, you can disable record assignment until the seller is available again.

To turn off assignment

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, select **Settings**.
4. Under the **Assign records** column, turn off the toggle.
5. In the confirmation message, select **Turn off availability**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure security roles to assign records
Manage seller attributes
Manage seller availability

Configure security roles to assign records

Article • 08/11/2023

Configure security roles for sellers to allow automatic record assignments by granting permissions.

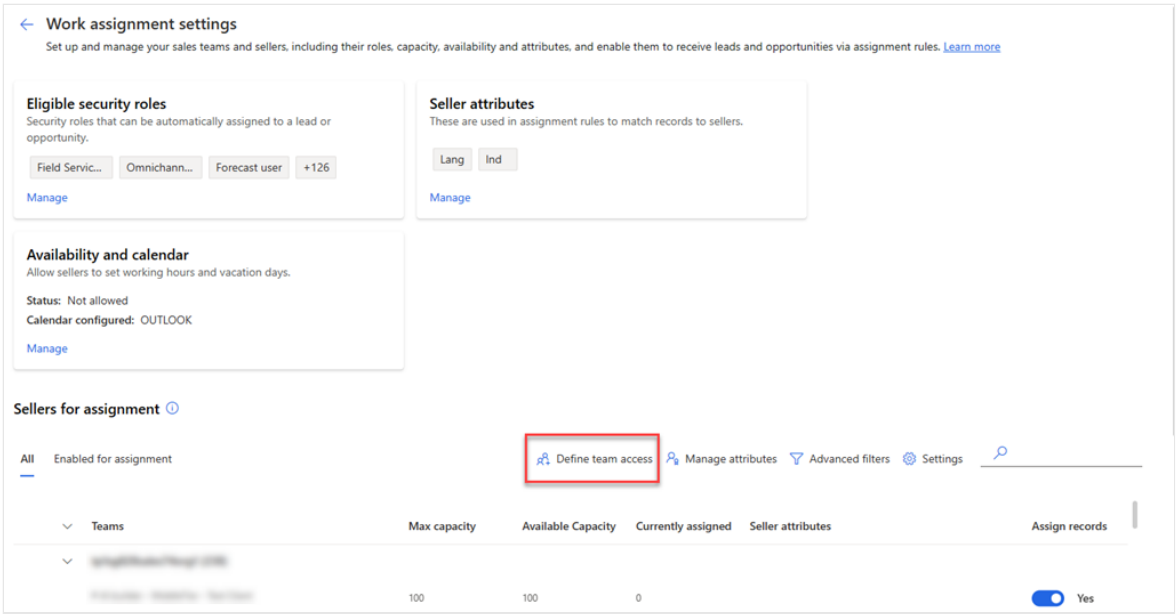
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Select security roles

Select security roles to grant permissions to automatically assign records.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, select **Settings**.
4. On the **Work assignment settings** page, select **Define team access**.



5. On the **Team settings** dialog box, choose one of the following options to grant permissions:

Security roles	Description
All security roles	Select this option to give access to view the Sales Hub app to all the security roles in your organization.
Specific security roles	Select this option to specify security roles to give access to view the Sales Hub app to just a few users. Use the lookup box to add the security roles.

6. Select **Save**.

The chosen security roles are given access to assign records, and you can review the permissions on the **Eligible Security Roles** card in the **Work Assignment Settings** page.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Manage seller attributes

Manage seller availability

Manage seller attributes

Article • 08/11/2023

Seller attributes help you define skills of sellers such as languages, location, country/region, and skills. After you define attributes, you can use these attributes while configuring the rules to automatically assign leads to sellers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Manage seller attributes

As an administrator or a sequence manager, you can create attributes and add values. For example, you want to group sellers according to the languages they know. Create an attribute with the name **Languages**, and add values for the attribute such as English, French, and Spanish. Assign the language attribute to sellers, and then an assignment rule can be configured to assign leads automatically to sellers who know the required language.

You can use the attribute designer to:

- Create an attribute.
- Edit an attribute.
- Delete an attribute.

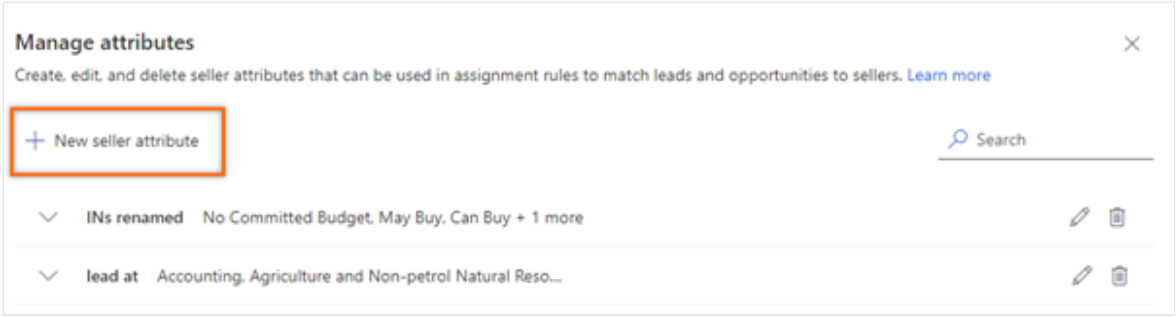
Create an attribute

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.

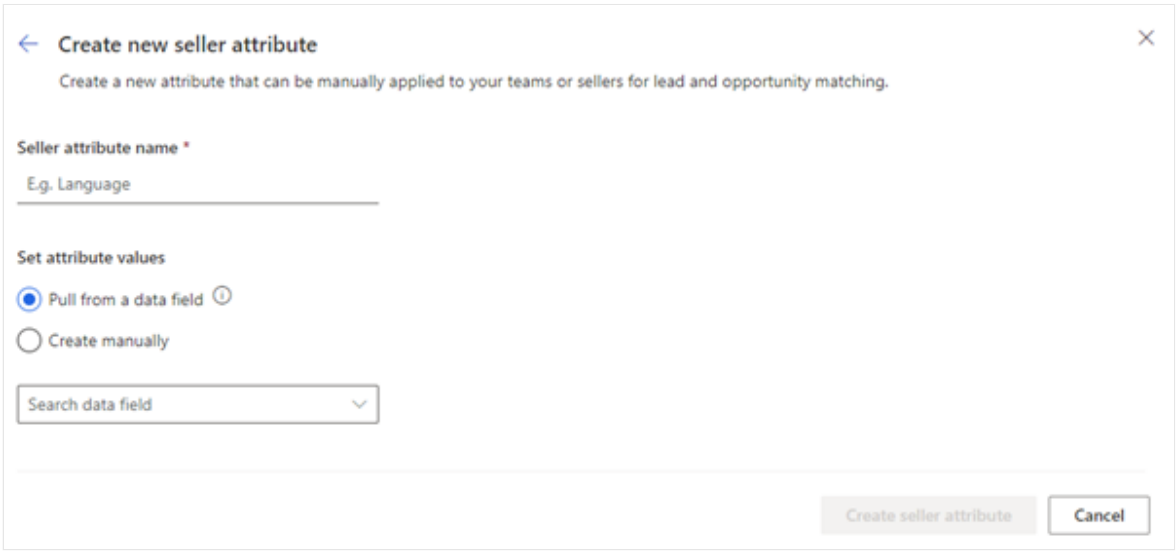
3. On the **Work assignment** page, select **Settings**.

4. On the **Work assignment settings** page, select **Manage attributes**.

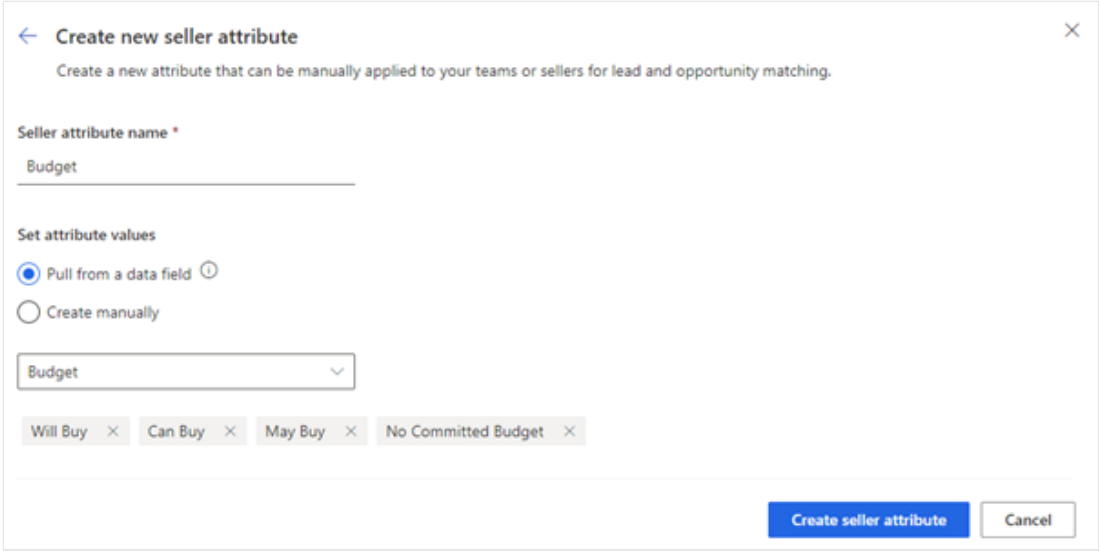
5. On the **Manage attributes** page, select **New seller attribute**.



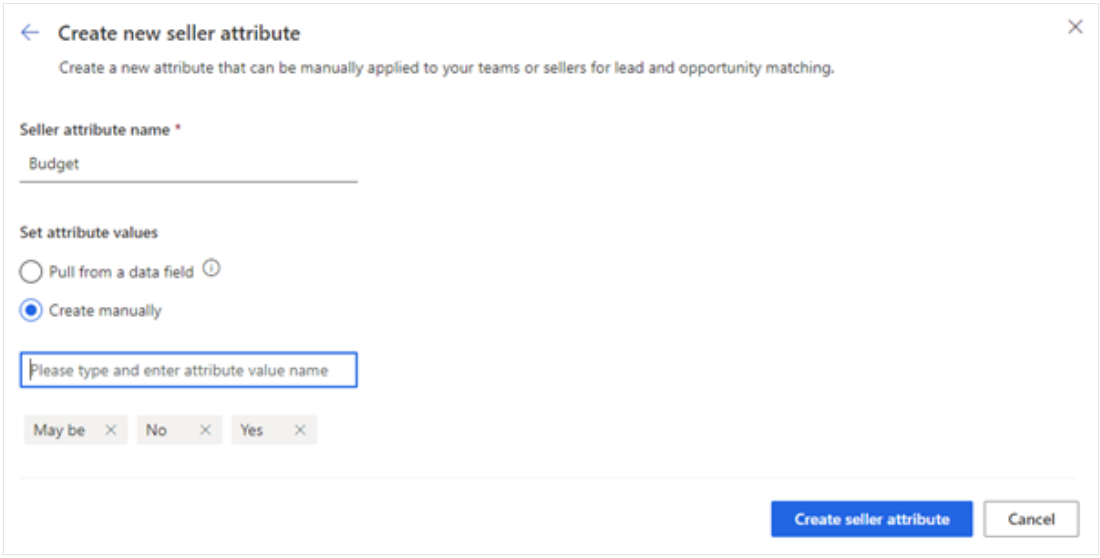
6. In the **Create new seller attribute** dialog, enter the information as follows:



- **Seller attribute name**: Enter a name for the attribute. For example, **Language**.
- **Set attribute values**: Select how you want to enter the values for the attribute.
  - **Pull from a data field**: The attribute values are fetched from a data field with an option set that is selected from the **Search data field** dropdown list. The list displays fields of type option set that is available lead, opportunity, and mutual. For example, when you select the field as **Budget** from **Mutual fields (same option set)**, the values that are defined for the field in both lead and opportunity form are added to the attribute values. You can remove the values and also add values.



- **Do not link with fields**: Enter the attribute values manually.



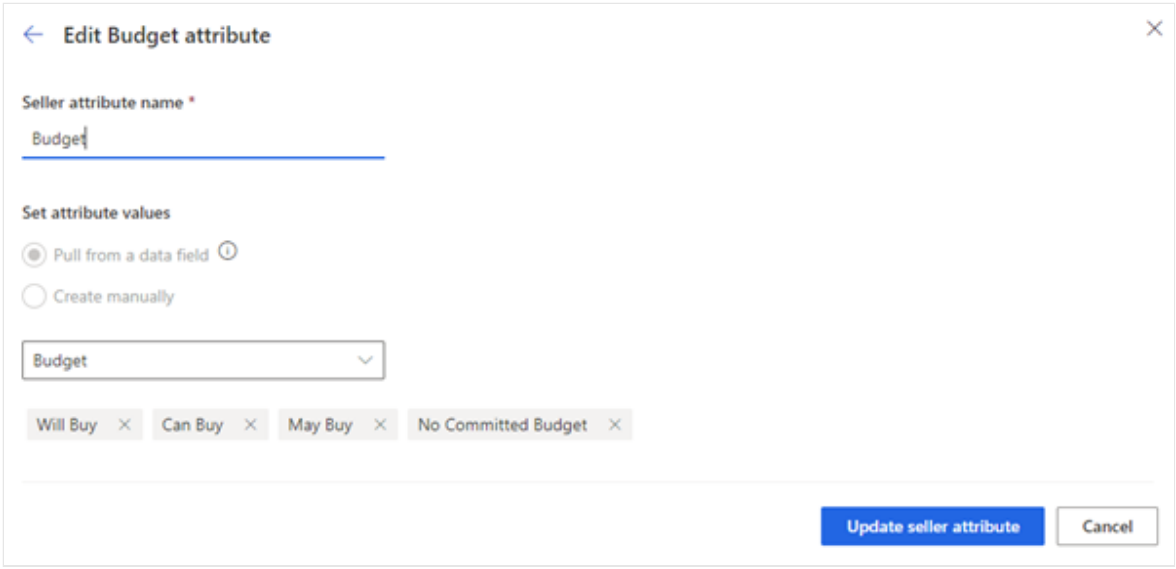
7. Select **Create seller attribute**.

The attribute is created and added to the list.

Edit an attribute

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **work assignment**.
3. On the **work assignment** page, select **Settings**.
4. On the **Work assignment settings** page, select **Manage attributes**.
5. On the **Manage attributes** page, select the pencil icon corresponding to the attribute that you want to edit.

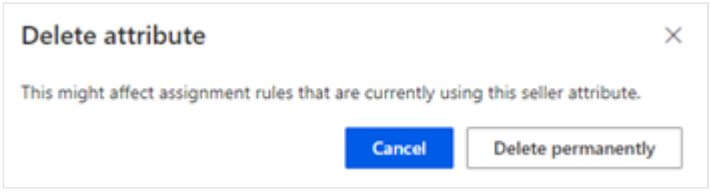
6. In the edit dialog, edit the values you want, and then select **Update seller attribute**.



The attribute is updated.

Delete an attribute

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **work assignment**.
3. On the **work assignment** page, select **Settings**.
4. On the **Work assignment settings** page, select **Manage attributes**.
5. On the **Manage attributes** page, select the delete icon corresponding to the attribute.
6. In the confirmation message, select **Delete permanently**.



The attribute is deleted from the application.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure security roles to assign records
Manage seller attributes

Manage seller availability

Article • 10/19/2023

Enable the seller availability option to let sellers configure their work hours through Outlook or CRM calendar.
Also, you can manage the availability of your sales team according to the needs of your business. In this way, you create a more flexible and accommodating work environment, where team members can take time off or switch shifts as needed. By helping your sales team become more productive, you can also help improve customer satisfaction and increase sales.

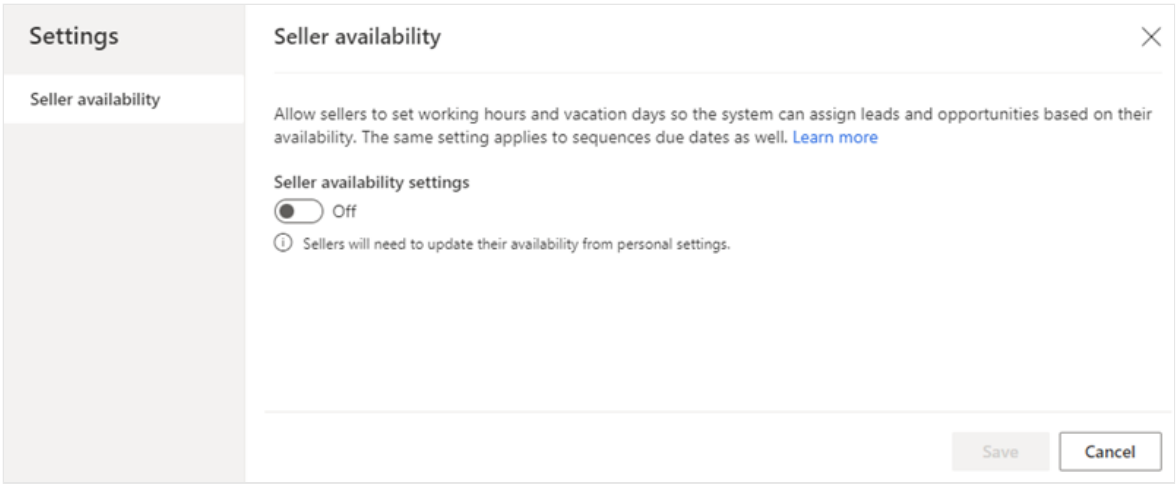
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Sales Manager More information: Predefined security roles for Sales

Enable seller availability

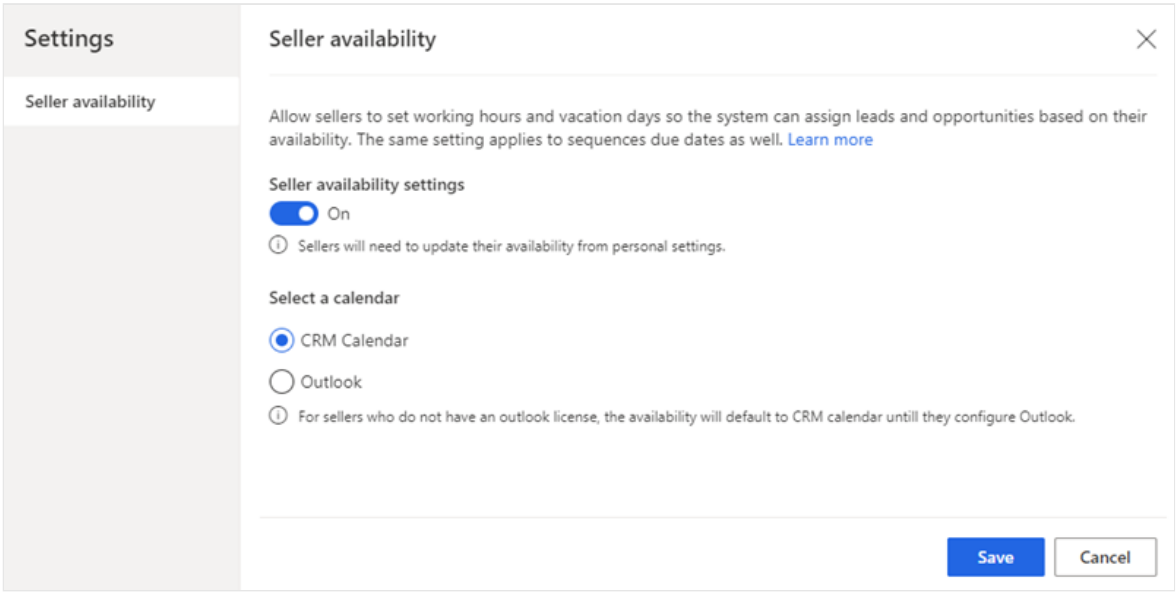
Enable the seller availability option to let sellers configure their work hours through Outlook or CRM calendar.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, select **Settings**.
4. On the **Work assignment settings** page, select **Settings**.
   The **Seller availability** dialog box opens.



5. On the **Seller availability** dialog box, configure the following options:

   - Turn on **Seller availability settings** to enable sellers to configure work hours.
   - From the **Select a calendar** option, choose one of the following calendar types that sellers can use to configure work hours and vacation days. Once configured, leads and opportunities are assigned based on seller availability.
     - **CRM calendar**: : Allows sellers to configure work hours and vacation days using the Dynamics 365 calendar in personal settings. By default, this option is selected. More information Configure your work availability.
     - **Outlook**: Allows sellers to configure work hours and vacation days through the Outlook calendar. Sellers should have an Exchange license to use this option.



6. Select **Save**.

How can I manage seller availability?

As a sales manager, you can manage sellers' availability in the following ways:

- **Work assignment settings**: Update the sellers' work hours through the seller's calendar.

    1. Go to **Sales insight settings** > **Sales accelerator** > **Work assignment** > **settings** .
    2. In the **Work assignment settings** page, select the seller from the list and then select **Set availability**.

        > ⓘ Note
        >
        > You can select only one seller at a time.

    3. In the seller's calendar, select **New** and choose an option to configure the seller's calendar. For more information, see step 4 in Through work list settings.

    The selected seller's calendar is updated according to your configurations. Also, the **Availability (Next 7 days)** column is updated with the seller's availability for the next seven days.

- **Calendar API**: Use the calendar API, and enter `msdyn_extendedusersetting` as the value of the `EntityLogicalName` string. Learn how to edit work hour calendars by using APIs.

- **Assignment rules**: In assignment rules, create a seller attribute that's based on seller availability. Then apply appropriate values to sellers, based on their availability. For example, create an attribute that has the values *Available* and *On vacation*. Then, when a seller goes on vacation, select the attribute, and assign the *On vacation* value to notify other users that the seller isn't available. Learn how to manage seller attributes in assignment rules.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure your work availability
Manage seller attributes

Create and activate assignment rules

Article • 10/19/2023

Create and activate assignment rules for leads, opportunities and seller insights, so that records that satisfy defined conditions in Dynamics 365 Sales are automatically assigned to sellers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Introduction

You create an assignment rule for lead, opportunity, and seller insights records by defining different conditions, such as the segment, sellers, and lead or opportunity distribution. After a rule is activated, any record that satisfies the conditions that are defined for the rule is automatically assigned to a seller. When records are created in Dynamics 365 Sales, you don't have to manually assign them to sellers.

> **Note**
>
> A rule considers only the records that are created or updated after it's activated.

When a lead, opportunity, or seller insight record is created in an organization, assignment rules are applied in the order that they're listed in, starting from the top. If the record satisfies the conditions that are defined for a rule, that rule is applied to the record.

By default, rules are listed in the order that they were created in, and the most recently created rule is at the bottom of the list. However, you can drag the rules into any order that you want.

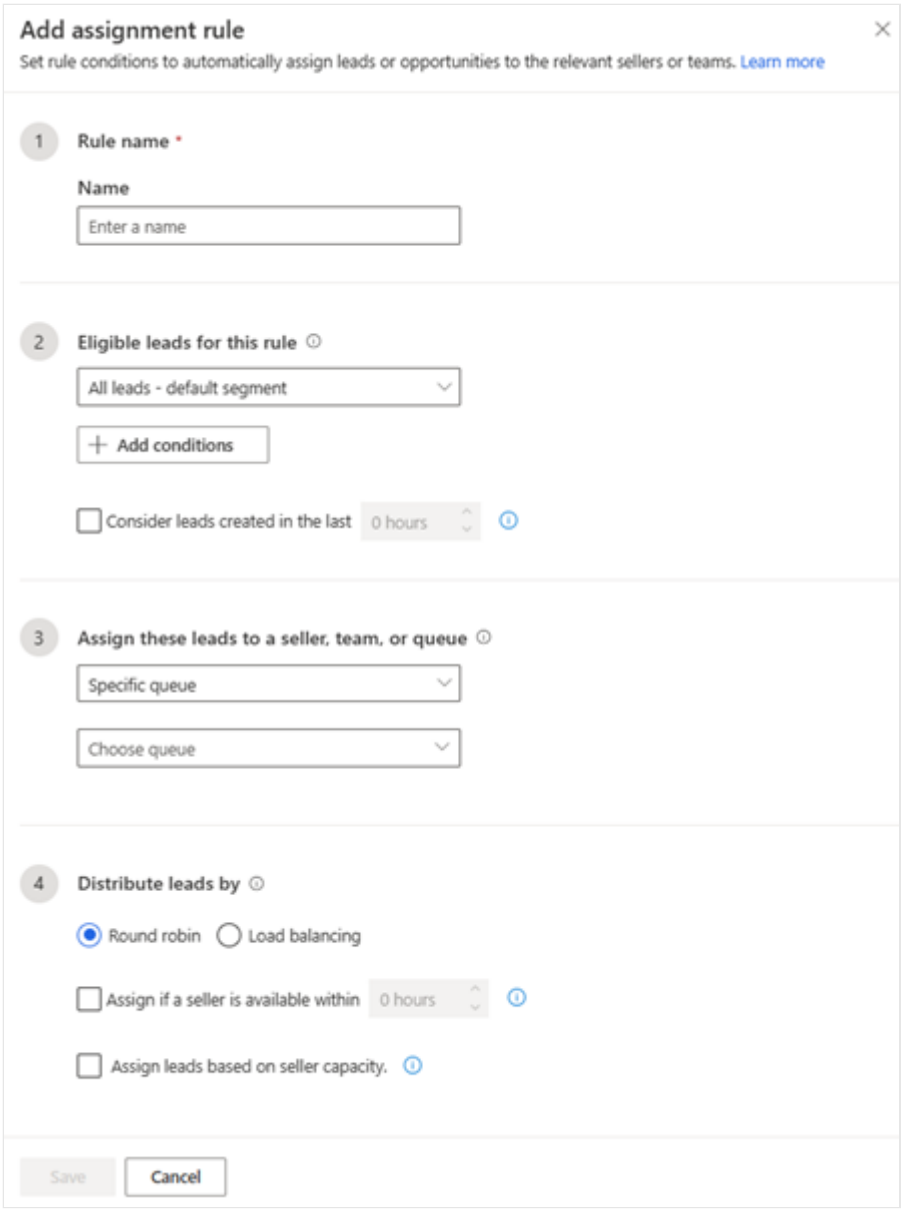
Prerequisites

Before you start creating assignment rules, make sure that you've added the security roles to assign records. More information: Configure security roles to assign records

Create and activate an assignment rule

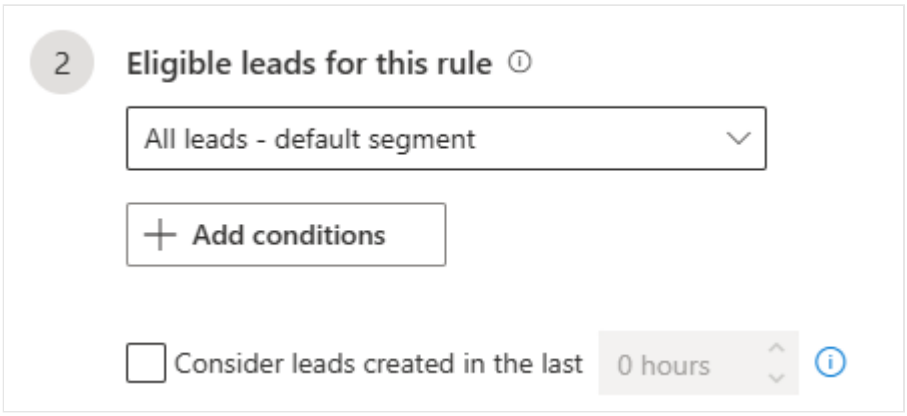
> **Note**
>
> This procedure provides an example that shows how to create a *lead* assignment rule. You can use the same steps to create an *opportunity* or *insight* assignment rule.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. Choose the record type as **Leads**.
4. For new segment or and an existing segment, under the **Assignment rule** tab, select **New rule**.
   The **Add assignment rule** pane opens.



5. Under **Rule name**, enter a name for the rule.

6. Under the **Eligible leads for this rule** section, select a segment and add condition. By default, the segment from which you're creating the rule is selected. However, if you wish to change the segment, choose a different segment from the list. The list includes all the active segments that are related to leads.



a. Select **Add conditions** to define set of criteria that determine how leads are assigned to sellers. Select **Add**. Use the following options to define conditions:

- **Add row**: Add conditions that define when the segment should be applied. In the following example, the row specifies that the segment should be applied to leads that are created by the user John Thomas:

  i. In the first column, select an attribute in the list. (For example, select *Created by*.)

  ii. In the second column, select an operator in the list. (For example, select *Equals*.)

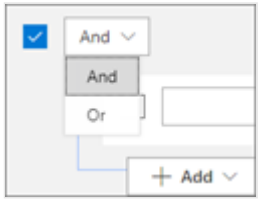
  iii. In the third column, enter a value to filter by. (For example, enter *John Thomas*.)

  You can create more conditions to further filter the leads that the segment should be applied to.

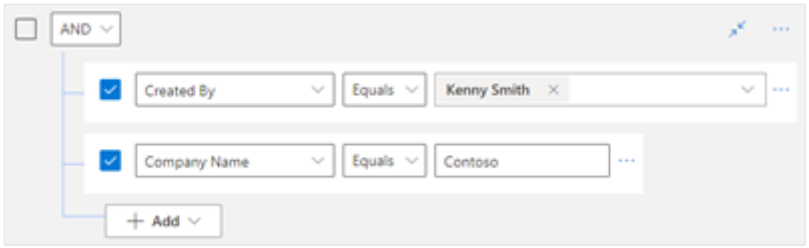
- **Add group**: Add multiple conditions as a group if you want to filter leads by using more than one field.

  i. In the list in the upper-left corner, select **And** or **Or** to group the conditions.

  If you select **And**, the segment is applied only to leads that meet all the conditions in the group. If you select **Or**, the segment is applied to leads that meet any condition in the group. For example, to apply the segment to leads that are created by Kenny Smith *and* that have the company name Contoso, select **And**.

  ii. Define the conditions to add to the group.



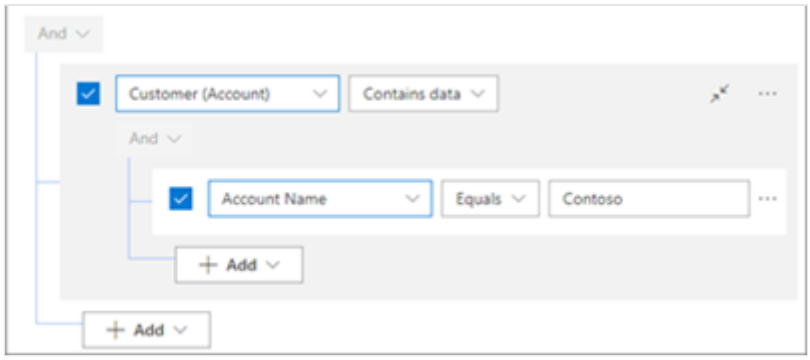
You can create multiple groups and further filter the leads based on the conditions that are defined in the groups.

- **Add related entity**: Add a condition that is based on the attributes of related entities.

  i. In the **Related Entity** list in the upper left, select an attribute.

  ii. In the list to the right, select either **Contains data** or **Does not contain data**.

  iii. Define the condition.

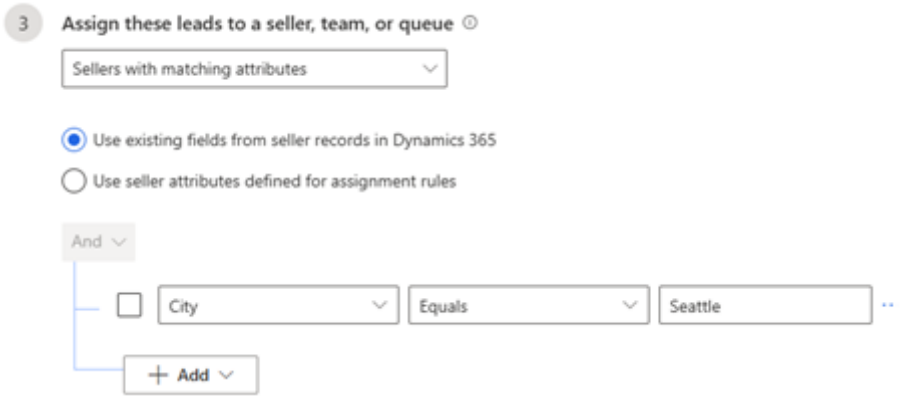
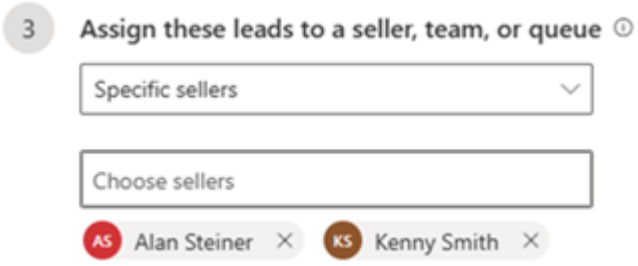


> ⓘ Note
>
> You can have a maximum of 10 conditions in a rule. **Learn more about conditions in assignment rules.**

b. To assign records that are created in the application during a specific timeframe to sellers, select the **Consider leads created in the last** checkbox, and then select a timeframe in the list.

   If no seller is available to take the record during the specified timeframe, the record is marked as overdue, and the status reason is set to *Seller not assigned as record is older than the set timeframe*. Learn more about unassigned records and status reasons.

7. Under the **Assign these leads to sellers, team, or a queue** section, select one of the following options in the dropdown list.

Option	Description
Any seller	Assign leads to any seller, based on their availability, capacity, or distribution pattern.
Sellers with matching attributes	Assign leads to sellers who satisfy the conditions that are defined through attributes that are selected from Dynamics 365 or assignment rules. The following options are available: • **Use existing fields from seller records in Dynamics 365** • **Use seller attributes defined for assignment rules** (Learn how to define and manage seller attributes.) For example, you want to assign leads to sellers who are based in Seattle. Select the **Use existing fields from seller records in Dynamics 365** option, and then select **Add** > **Add row**. Enter the condition as *City* (attribute) *Equals* (condition) *Seattle* (value).  **Note**: You can have a maximum of five conditions at any time, and only one row can be defined under a related entity condition. Learn more about conditions in assignment rules.
Specific sellers	Assign leads to specific sellers. Select the sellers in the **Choose sellers** lookup. **Note**: The security roles for the sellers in the list were added by defining team access. Learn more about how to grant permissions to use assignment rules. 
Teams with matching attributes	Assign leads to teams that satisfy the conditions that are defined through the condition builder.

Option	Description
	Note: You can have a maximum of five conditions at any time, and only one row can be defined under a related entity condition. When you make this selection, the **Distribute leads by section** displays options to either assign them to any seller from the team or not assign them to any team at all.
Specific team	Assign leads to specific team. Select the teams in the **Choose a team** lookup. The lead is available for all members of the team that you select. The teams must be defined in your organization, and you must add them to security roles by defining team access. Learn more about how to grant permissions to use assignment rules. If you select this option, the **Distribute leads by** section isn't shown.
Queues with matching attributes	Assign leads to queues that satisfy the conditions that are defined through the condition builder. **Note**: You can have a maximum of five conditions at any time, and only one row can be defined under a related entity condition. When you make this selection, the **Distribute leads by section** displays options to either assign them to any seller from the queue or not assign them to any queue at all. The queue must be enabled and defined in your organization. Learn more about how to enable queue for an entity..
Specific queue	Assign leads to specific queue. Select a queue from the **Choose queue** list. **Note**: The list only displays queues that are marked as public. Also, the queue must be enabled and defined in your organization. Learn more about how to enable queue for an entity.. If you select this option, the **Distribute leads by** section isn't shown.

Dynamic attributes in condition builder: When creating conditions in the condition builder, you can utilize dynamic attributes to minimize the number of conditions required for a specific attribute. For example, if you wish to assign leads from the United States to sellers from the same country, and likewise for India, Japan, and Brazil, you would need to create four separate conditions for this. However, by using dynamic attributes, you can consolidate this into a single condition as follows: **Country** > **Equals** > **Lead.Country**, where, if a lead's country matches the country of the seller, it will automatically be assigned to the corresponding seller from that country. For more information, see Route leads with dynamic assignment rules

8. Under **Distribute leads by**, select one of the following options. Learn more about lead distributions in assignment rules.

   > ⓘ **Note**
   >
   > This section is available only if you selected one of the seller options in the **Assign these leads to** section (**Any seller**, **Seller with matching attributes**, or **Specific sellers**). It isn't available for options **Teams** and **Queues**, and the records are assigned randomly or will be unassigned.

   - **Round robin**: Leads are distributed on a cyclical basis to sellers who are qualified to receive the lead based on the conditions of the assignment rule.
   - **Load balancing**: Leads are distributed among sellers based on their current workload. This option helps ensure that all sellers are equally busy.

   a. (Optional) To consider the seller's work schedule when leads are assigned, select the **Assign if seller is available within** checkbox. Then, in the list, select the number of hours that a lead record that is created in the application can wait to be assigned to a seller or a team. You can select a maximum of 120 hours. Learn more how to configure work availability.

      To assign leads, the application first considers those sellers who are currently available to work on the lead records. If no seller is currently available (because of a day off or because the time is outside of working hours), the application considers sellers who will be available within the specified hours.

      If sellers don't update their work availability, the application considers them always available and assigns leads to them.

      For example, if you select 10 hours, the application considers sellers who will be available within 10 hours for record assignment. If no seller is available within the 10-hour limit, the record isn't assigned and is marked as overdue. Learn how to manage overdue records.

      If you selected the Consider leads created in the last checkbox in step 7, the rule first checks for the configured timeframe to assign the record. It then considers seller availability.

   b. (Optional) To consider the maximum number of leads that a seller can handle at a time, select the **Assign leads based on seller capacity** checkbox. Learn more about how to set lead capacity for sellers.

9. Select **Save**.

The rule is created and activated. It's then listed in the **Assignment rules** tab for the segment, which is organized in ascending order by date. The most recently created rule is always listed at the bottom of the list unless you move it.

Conditions in assignment rules

A condition limit is added to optimize the runtime experience and therefore ensure faster execution and improved efficiency. The condition limit is applicable to the following configurations:

- If you select the **Specific <*entities*>** option in the **Select eligible <*entities*> for this rule** section of the **Create assignment rule** dialog box, a maximum of 10 conditions are allowed. This number includes conditions in groups and related entities.
- If you select the **Sellers with matching attributes** option in the **Assign these <*entities*> to sellers or a team** section, a maximum of five conditions are allowed. This number includes conditions in groups and related entities.

If you exceed the limit, a message informs you that the limit has been reached and the rule can't be saved.

> ⓘ **Note**
>
> To increase the limit for conditions, contact Microsoft Support for help.

Recommendations for adding conditions

- **Split condition between assignment rules and segments**: If you exceed the condition limit, move some conditions to segments to help improve the runtime efficiency of assignment rules. For example, if you have 15 conditions in the **Select eligible <*entities*> for this rule** section of an assignment rule, move five conditions to the associated segment. This approach helps streamline the conditions in the assignment rule and improve overall performance.
- **Create rollup attributes**: You might experience performance issues when you use conditions that involve related entities. By using rollup attributes, you can avoid adding conditions that involve related entities that have many-to-many relationships, one-to-many relationships, or nested related entities. Learn more about how to define rollup columns that aggregate values.
- **Avoid duplicate conditions**: Avoid using attributes in conditions that are already used in the connected segment. For example, if you have a segment that has the

condition *City* (attribute) *Equals* (condition) *Seattle* (value), avoid using the same *City* attribute in the assignment rule.

- **Use expression builder only**: Always use the expression builder in the user interface (UI) to define or update assignment rules. Don't update assignment rules through Dataverse. Otherwise, unexpected behavior can occur that affects the records that are related to the assignment rules. As a result, the records might remain unassigned.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Understand lead distributions in assignment rules

Prioritize assignment rules

Article • 10/25/2023

When assignment rules run, a lead or an opportunity might meet the criteria of multiple rules. To determine which rule should take precedence, you can set their priority. A record that matches more than one rule is assigned by the rule that has a higher priority.

Segments and assignment rules are part of the work assignment feature. Work assignment is available in sales accelerator version 9.1.23074.10021 and is rolling out in phases in different regions. Learn more about work assignment.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise or Microsoft Relationship Sales
Security roles	System Administrator, Sequence Manager, or Sales Manager

Change the priority of an assignment rule

1. Sign in to your Sales Hub app.
2. In the lower-left corner of the page, select **Change area** > **Sales Insights settings**.
3. Under **Sales accelerator**, select **Work assignment**.
4. Select a **Record type** to view the segments of that type.
5. Open a segment that has at least two assignment rules, and then select the **Assignment rules** tab.
6. Change the priority of the rules using either of these methods:
   - Hover your pointer over a rule and use the drag handle (⋮⋮) to drag the rule up or down in the list. The change is saved automatically.
   - Select a rule, select **Change rule priority**, type the new priority number, and then select **Save**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

- Create and activate assignment rules

Edit an assignment rule

Article • 08/11/2023

To modify your process for automatically assigning leads, opportunities, or seller insights to sellers, you can update the conditions that you've defined in the rule.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

To edit an assignment rule

> **Note**
>
> In this procedure, we are using lead as an example to edit an assignment rule. Similarly, you can use this procedure to edit opportunity or insight assignment rule.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. Choose the record type as **Leads**.
4. Open the segment and then under the **Assignment rules** tab, select the rule and then select **View and edit**.
   The **Edit Assignment rule** pane opens.
5. Edit the information according to your needs, and then select **Save**.

The changes will be applied to new leads that are created in the future in the application. The leads that were already assigned through the rule won't change.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate assignment rules

Delete or deactivate an assignment rule

Article • 08/11/2023

You can deactivate or delete an assignment rule that's no longer required in your organization. Deactivation keeps the rule, but it won't be used to assign leads to any sellers in the future. Deleting the rule removes it from the application, but leads that were already assigned to sellers through the rule won't be affected.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

To delete or deactivate an assignment rule

> **Note**
>
> In this procedure, we are using lead as an example to delete or deactivate an assignment rule. Similarly, you can use this procedure to delete or deactivate opportunity or insight assignment rule.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. Choose the record type as **Leads**.
4. Open the segment and then under the **Assignment rules** tab, select the rule and then one of the following:

    - **Deactivate**: Turn off the toggle in the **Active** column and on the confirmation message, select **Deactivate**.
    - **Delete**: Select **Delete** and on the confirmation message, select **Delete permanently**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate assignment rules

Understand lead distributions in assignment rules

Article • 11/11/2022

In Dynamics 365 Sales, assignment rules define how leads are automatically distributed to sellers. When a lead is created and meets certain conditions that are defined in assignment rules, the lead is automatically assigned to the right seller. The automated process saves time and optimizes the workload across your sales team.

The following factors help to determine how leads are assigned:

- How many active leads are already assigned to sellers
- When a seller was last assigned a lead

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sequence Manager More information: Predefined security roles for Sales

Basic lead distribution

There are two types of basic algorithms for lead distribution:

- Round robin
- Load balancing

Round robin

In a round-robin-based assignment, the system looks at all the matched sellers of the lead and assigns it to the one who was assigned a lead least recently. This includes lead assignments from other sources, such as manual assignment or via an add-in.

Let's take an example to understand round-robin distribution criteria.

A lead comes into the system, and an application identifies the following potential sellers who can work on the lead, based on the selection criteria defined in the

assignment rules.

Seller	Last assigned a lead
Seller 1	12 July 2021 11:00
Seller 2	12 July 2021 10:00
Seller 3	12 July 2021 12:00

The algorithm looks at the sellers' last assigned lead times and identifies that Seller 2 was assigned a lead least recently; thus, the lead is assigned to Seller 2. In this example, the routing takes place on 12 July 2021 at 13:30, so the algorithm updates Seller 2's last-assigned lead time to this value.

Now, taking this process through one more cycle, another lead comes into the system. But only Seller 2 and Seller 3 have the required attributes to work on the lead. So, the algorithm again looks at the following table and observes how the last assigned lead time has been updated for Seller 2.

Seller	Last assigned a lead
Seller 2	12 July 2021 13:30
Seller 3	12 July 2021 12:00

The algorithm finds that Seller 3 was assigned a lead least recently; thus, it assigns the lead to Seller 3 and updates Seller 3's last assigned lead time to the time of routing.

Load balancing

In a load-balancing-based assignment, the system looks at all the matched sellers of the lead and assigns it to the seller who has maximum available capacity. This method helps to ensure that all salespeople are equally busy and minimizes uneven workloads.

Let's take an example to understand load-balancing distribution criteria.

A lead comes into the system, and an application identifies the following potential sellers who can work on the lead, based on the selection criteria defined in the assignment rules.

Seller	Available capacity
Seller 1	10

Seller	Available capacity
Seller 2	12
Seller 3	15

Because Seller 3 has the maximum available capacity of all eligible sellers, the lead is assigned to Seller 3, whose available capacity is updated.

Seller	Available capacity
Seller 1	10
Seller 2	12
Seller 3	14

Now, to understand this better, consider the following series of events and assume that Sellers 1, 2, and 3 are all possible owners for the incoming leads.

- **Event 1**: Two new leads that match the rule come into the system.

  Both leads are assigned to Seller 3, and the table looks like the following.

Seller	Available capacity
Seller 1	10
Seller 2	12
Seller 3	12

- **Event 2**: One more lead comes into the system.

  The lead is assigned to either Seller 2 or Seller 3, because they both have equal available capacity. Say that the lead is assigned to Seller 2. The table is updated to look like the following.

Seller	Available capacity
Seller 1	10
Seller 2	11
Seller 3	12

- **Event 3**: Seller 1 closes three active leads, and a new matching lead comes in for routing.

For the incoming lead, the available capacity looks like the following; thus, the lead is assigned to Seller 1.

Seller	Available capacity
Seller 1	13
Seller 2	11
Seller 3	12

Additional lead distribution criteria

In addition to being assigned leads through round-robin and load-balancing distribution criteria, sellers are sorted according to their respective priorities. This helps us to select the top candidate for the lead.

Let's consider the following table as an example.

Seller	Last assigned a lead	Available capacity
Seller 1	12 July 2021 11:00	10
Seller 2	12 July 2021 10:00	12
Seller 3	12 July 2021 12:00	15

In a round-robin distribution, the priority of sellers is as follows.

Seller	Last assigned a lead
Seller 2	12 July 2021 10:00
Seller 1	12 July 2021 11:00
Seller 3	12 July 2021 12:00

In a load-balancing distribution, the priority of sellers is as follows.

Seller	Available capacity
Seller 3	15
Seller 2	12
Seller 1	10

To fine-tune the lead assignment, we need to introduce additional processing to better prioritize sellers according to our requirements. The following additional options are available:

- Consider seller capacity
- Consider seller work schedule

Consider seller capacity

When this option is selected, leads are routed only to those sellers who have available capacity to work on the leads—that is, positive available capacity. If none of the eligible sellers have available capacity, the lead will be marked as unassigned. For more information on managing seller's capacity, go to Set capacity for sellers.

Let's take an example for round robin. A lead comes in, and the following matched sellers have the last-assigned lead times and available capacity shown in the table.

Seller	Last assigned a lead	Available capacity
Seller 1	12 July 2021 11:00	–2
Seller 2	12 July 2021 10:00	0
Seller 3	12 July 2021 12:00	4
Seller 4	12 July 2021 13:00	1

For round-robin distribution, the priority is defined as follows for the sellers.

Seller	Last assigned a lead	Available capacity
Seller 2	12 July 2021 10:00	0
Seller 1	12 July 2021 11:00	–2
Seller 3	12 July 2021 12:00	4
Seller 4	12 July 2021 13:00	1

Because Seller 1 and Seller 2 have negative available capacity, they won't be considered as eligible owners, and the table will be reduced to the following.

Seller	Last assigned a lead	Available capacity
Seller 3	12 July 2021 12:00	4
Seller 4	12 July 2021 13:00	1

The lead will be assigned to Seller 3.

When you select the **Consider seller capacity** option, it removes the sellers with negative or zero available capacity from the list of owners at the time of routing.

Consider seller work schedule

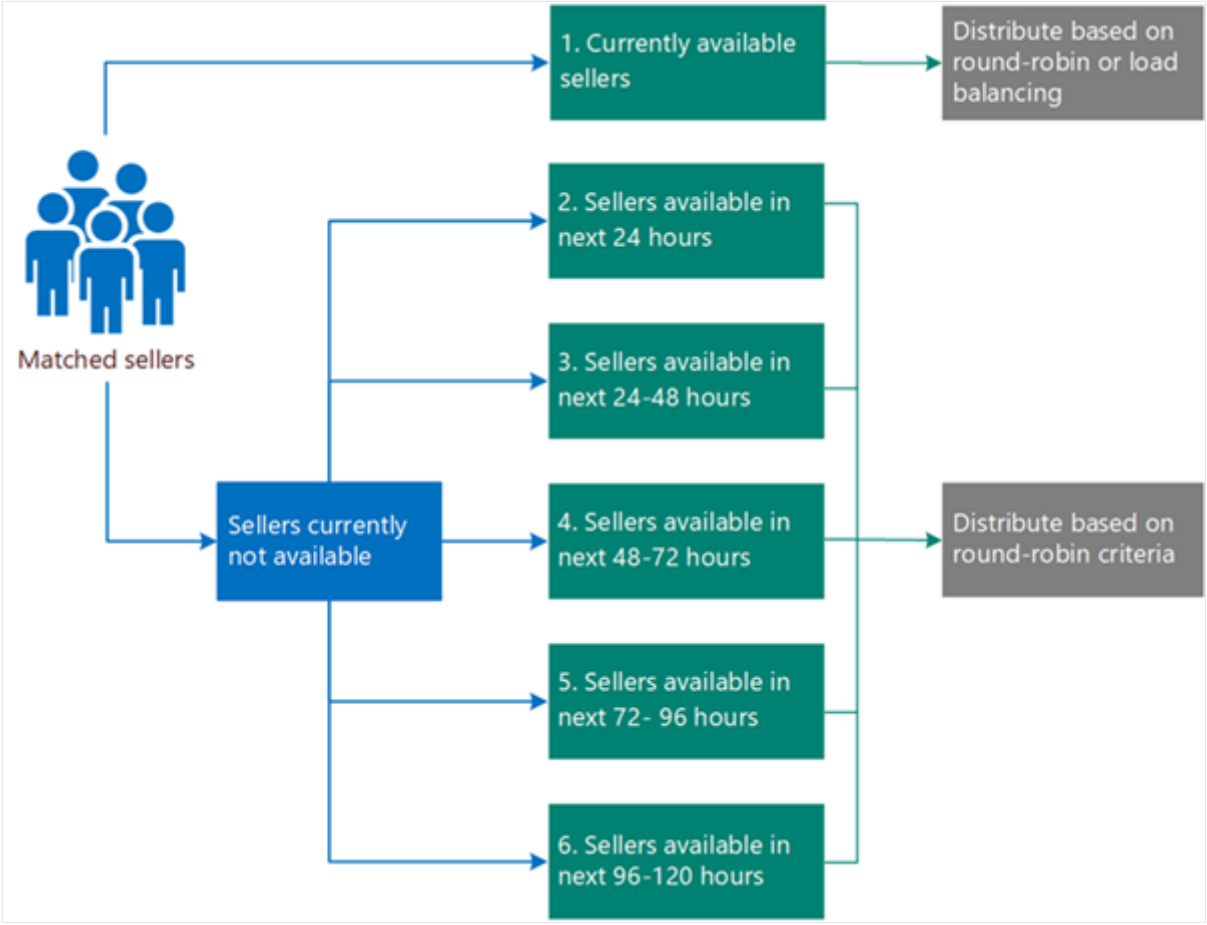
When this option is selected, the system considers the work schedule of sellers that has been defined in the sales accelerator and filters sellers based on their availability to work on the leads.

The algorithm analyzes sellers' availability in the order of the lead assignment priority (load balancing or round robin) and assigns the lead to a seller who is currently available.

In this example, you configured a time limit of 120 hours to assign a lead record that is created in the application.

If the matched sellers are currently unavailable, the leads are assigned to sellers who are available within the next 24 hours of the time of routing. If no sellers are available within the next 24 hours, the leads are assigned to sellers who are available within the next 48 hours, and so on up to 120 hours. If no seller is available within 120 hours, the leads are marked as unassigned.

The sellers are divided into six buckets, based on their availability. The buckets are viewed in top to bottom order. At the first non-empty bucket, the lead is distributed among the sellers in the bucket based on round-robin criteria. (For load balancing, only the first bucket is evaluated.)



To know more about how sellers update their personal work schedule in the sales accelerator, which is also used by assignment rules, go to Configure your work availability.

Let's take some examples to walk through this.

We'll use the following notation for availability at the time of routing:

- 0D - Currently available
- 1D - Earliest available within 24 hours
- 2D - Earliest available from 24 to 48 hours
- 3D - Earliest available from 48 to 72 hours
- 4D - Earliest available from 72 to 96 hours
- 5D - Earliest available from 96 to 120 hours

Example 1: We've matched Sellers 1 through 5 to the lead, and the primary distribution criteria is round robin.

Sellers	Availability	Last assigned a lead
Seller 1	1D	12 July 2021 11:00
Seller 2	1D	12 July 2021 10:00
Seller 3	0D	12 July 2021 12:00

Sellers	Availability	Last assigned a lead
Seller 4	2D	12 July 2021 13:00
Seller 5	0D	12 July 2021 10:30

Because we have two sellers who are available currently, the lead will be distributed between them based on round-robin criteria.

Sellers	Availability	Last assigned a lead
Seller 3	0D	12 July 2021 12:00
Seller 5	0D	12 July 2021 10:30

When a lead comes in, it will be assigned to Seller 5. Further incoming leads for this rule will be assigned to Seller 3 and Seller 5 in a round-robin distribution, until the availability of the matched sellers changes.

Example 2: We have matched Sellers 1 through 5, and the primary distribution criteria is load balancing.

Sellers	Availability	Available capacity
Seller 1	1D	14
Seller 2	1D	20
Seller 3	0D	5
Seller 4	2D	10
Seller 5	0D	2

Because Seller 3 and Seller 5 are currently available, and the primary distribution criteria is load balancing, the lead is assigned to Seller 3.

Example 3: We've matched sellers 1 through 5, the primary distribution criteria is load balancing, and **Consider seller capacity** has been selected.

Sellers	Availability	Available capacity
Seller 1	1D	14
Seller 2	1D	20
Seller 3	0D	–1

Sellers	Availability	Available capacity
Seller 4	2D	10
Seller 5	0D	0

Because **Consider seller capacity** has been selected, Seller 3 and Seller 5 aren't eligible for routing.

Sellers	Availability	Available capacity
Seller 1	1D	14
Seller 2	1D	20
Seller 4	2D	10

The earliest availability bucket is 1D; therefore, Seller 1 and Seller 2 are considered.

Sellers	Availability	Available capacity
Seller 1	1D	14
Seller 2	1D	20

Because the sellers aren't currently available, round-robin distribution will be used for these sellers.

> **Note**
>
> Remember that the primary selection criteria in this example is load balancing.

So, let's assume the following last-assigned times.

Sellers	Availability	Available capacity	Last assigned a lead
Seller 1	1D	14	12 July 2021 10:00
Seller 2	1D	20	12 July 2021 11:00

The lead will be assigned to Seller 1. Further leads for this rule and this seller match will be assigned to Seller 2 and Seller 1 using round-robin criteria.

See also

Create and activate an assignment rule

Create and activate segments in work assignment

Article • 08/11/2023

You can create segments (groups of records) by defining different conditions for each segment. After a segment is activated, any record that satisfies the conditions that are defined for the segment becomes a member of the segment. A sequence that is connected to the segment is then automatically connected to records in the segment. You don't have to manually connect the sequence to a new record when it's created in Dynamics 365 Sales.

> **Note**
>
> - Only active records are assigned to segments. For example, when a lead is qualified, it becomes a read-only record and creates a new opportunity record. This lead isn't considered for segmentation, because it's now read-only and is no longer active.
> - You can have a maximum of 250 active segments in an organization at any time. To increase the limit for active segments, contact Microsoft Support for help.
> - You can have a maximum of 10 active assignment rules in a segment at any time. Although you can create additional assignment rules within the segment, only 10 can be active at any time. To increase the limit, contact Microsoft Support for assistance.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

Create and activate a segment

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

2. Under **Sales accelerator**, select **Work assignment**.

3. On the **Work assignment** page, in the **Record type** list, select a record type.

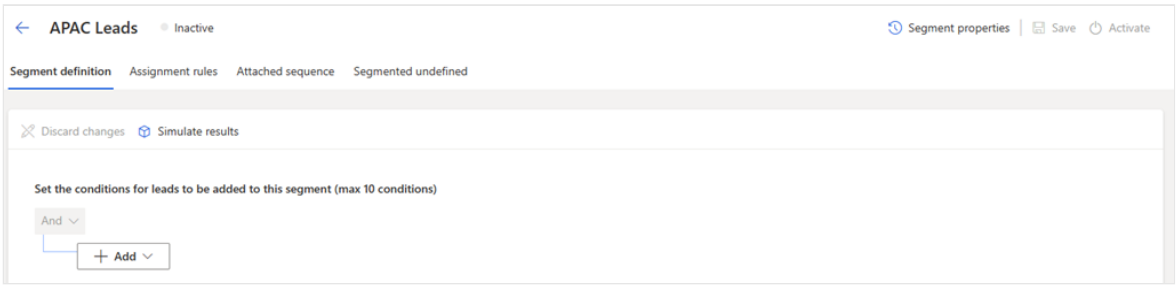
   By default, the lead and opportunity record types are available. The list also includes all the record types that you've selected in the Choose content and layout section of the sales accelerator configuration.

4. Select + **New segment**.

5. In the **Create a segment for** <***record type***> dialog box, enter the following information:

   - A name and description for the segment.
   - In the **Priority** field, enter a priority.
     Set a priority for every segment. Records that meet the criteria for multiple segments are assigned to the segment that has the highest priority. You can change the priority of a segment at any time. More information: Change the priority of a segment By default, the priority is set to the priority of the last segment that was created. The default, out-of-box segment always has the lowest priority.

6. Select **Next**.
   The segment condition builder page opens.



7. In the condition builder, under **And**, select **Add**. Use the following options to define the conditions that are used to evaluate records:

> **Note**
>
> You can have a maximum of 10 conditions in a segment at any time. This number includes conditions that are defined with groups and related entities.

The condition limit is added to optimize the runtime experience for segments and therefore ensure faster execution and improved efficiency. If you exceed the limit, a message informs you that the limit has been reached and the segment can't be saved. **Learn about best practices for adding conditions** section.

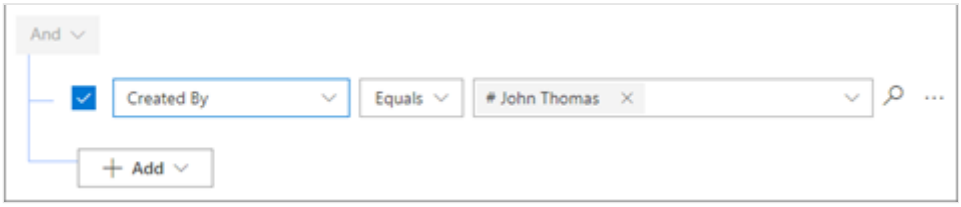
To increase the limit for conditions in segments, contact Microsoft Support for help.

- **Add row**: Add conditions that define when the segment should be applied. In the following example, the row specifies that the segment should be applied to leads that are created by the user John Thomas.

  a. In the first column, select an attribute in the list. (For example, select *Created by*.)

  b. In the second column, select an operator in the list. (For example, select *Equals*.)

  c. In the third column, enter a value to filter by. (For example, enter *John Thomas*.)

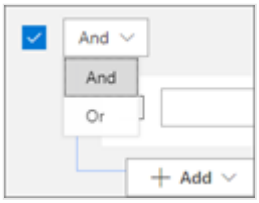
  

  You can create more conditions to further filter the leads that the segment should be applied to.

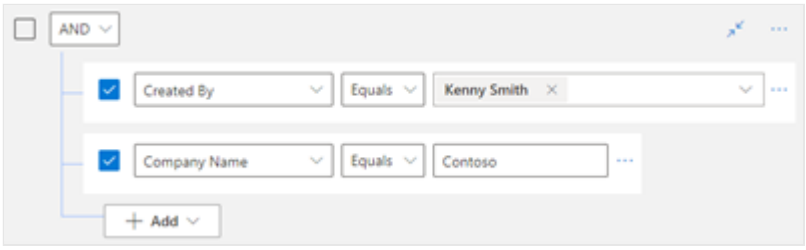
- **Add group**: Add multiple conditions as a group if you want to filter leads by using more than one field.

  a. In the list in the upper-left corner, select **And** or **Or** to group the conditions.

  If you select **And**, the segment is applied only to leads that meet all the conditions in the group. If you select **Or**, the segment is applied to leads that meet any condition in the group. For example, to apply the segment to leads that are created by Kenny Smith *and* that have the company name Contoso, select **And**.



b. Define the conditions to add to the group.



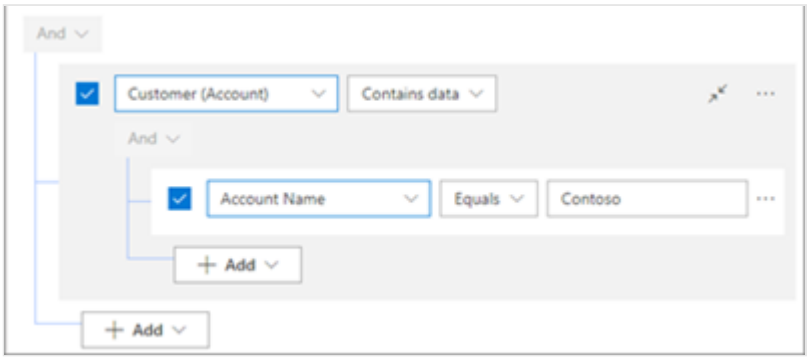
You can create multiple groups and further filter the leads based on the conditions that are defined in the groups.

- **Add related entity**: Add a condition that is based on the attributes of related entities.

  a. In the **Related Entity** list in the upper left, select an attribute.

  b. In the list to the right, select either **Contains data** or **Does not contain data**.

  c. Define the condition.

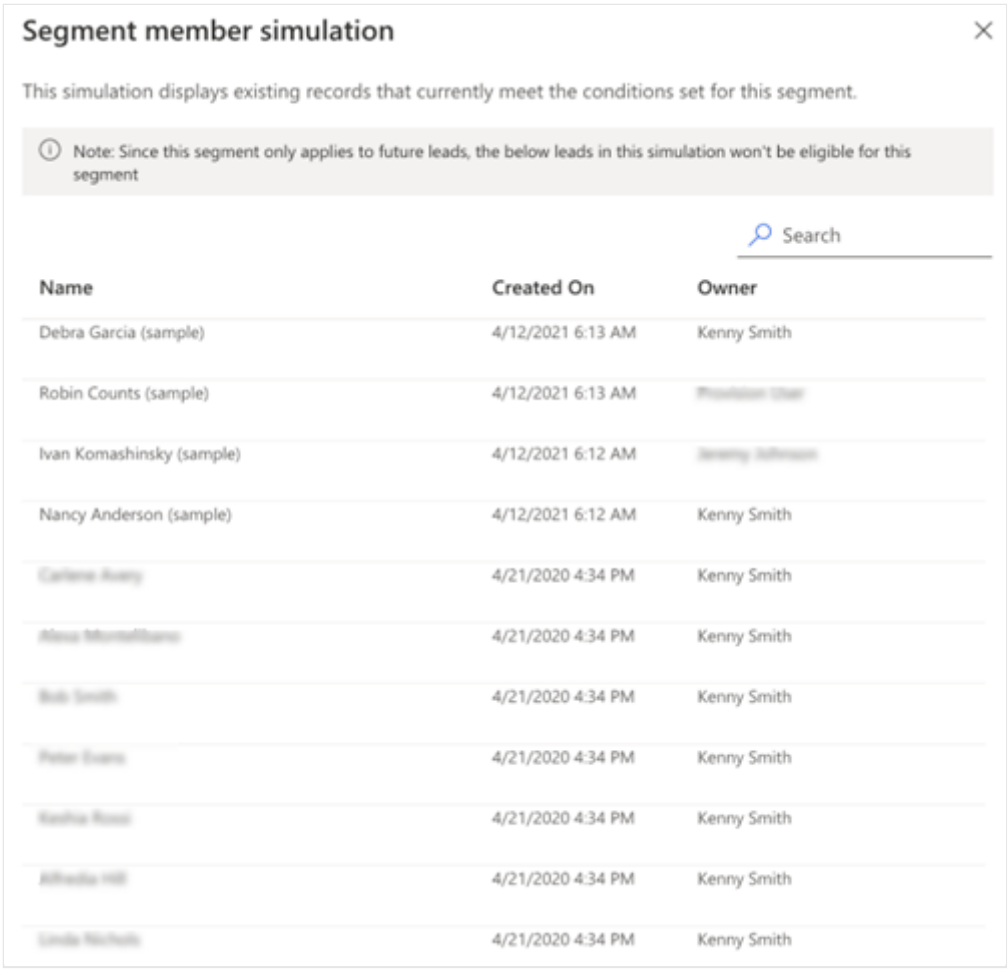


8. (Optional) When you've finished defining the conditions for the segment, select **Simulate results** to verify that they work as intended.

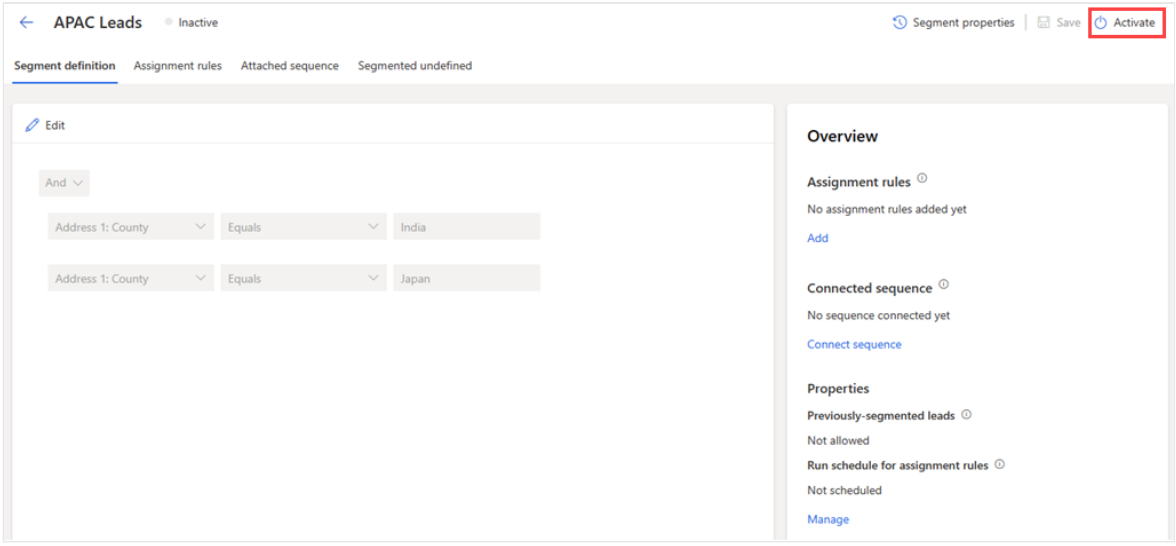
   A list of records that satisfy the conditions that you defined for the segment is shown.

> **Note**
>
> - The records in the list are only simulated results. They might not be records that the segment can actually be applied to.

- To activate the segment, select **Activate**.



9. Select **Save** and then **Activate**.



10. On the confirmation message, select **Activate**.

The segment is activated. You can now connect it to a sequence or a record.

> **Note**

All segments that are related to a primary entity (such as lead or opportunity) run every time that you update the attributes of the primary entity that are added to the conditions.

Next steps

After you create a segment, you can do the following tasks:

- Connect a segment to a sequence
- Create an assignment rule for a segment
- View and edit properties of a segment

Recommendations for adding conditions

You can have a maximum of 10 conditions in segments at any given time. However, you can optimize the conditions by following these recommendations, which help improve the runtime efficiency of segments.

- **Distribute the segments**: Create multiple segments that have proper distribution of conditions. You can then connect those segments to the same sequence or a different sequence and similar or different assignment rules. This approach helps improve the performance of connecting sequences and assignment rules.
- **Create rollup attributes**: Use rollup attributes to prevent performance issues when you use conditions that involve related entities. This approach helps avoid the performance overhead of conditions that involve related entities that have many-to-many relationships, one-to-many relationships, or nested related entities. Learn more about how to define rollup columns that aggregate values.
- **Use expression builder only**: Always use the expression builder in the user interface (UI) to define or update the segments. Don't update segments through Dataverse. Otherwise, unexpected behavior can occur that affects the records that are related to the segment and the subsequent automations, such as connecting sequences and assignment rules.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate assignment rules
Edit a segment
View and edit properties of a segment

Connect a segment to a sequence

Article • 08/11/2023

After you create a segment, you connect the segment to a sequence that matches the entity.

> **Note**
>
> You can also use sequences designer to connect segments to a sequence. Open the sequences to view their details, and then add segments to them. More information: **View details of a sequence and its connected records**.

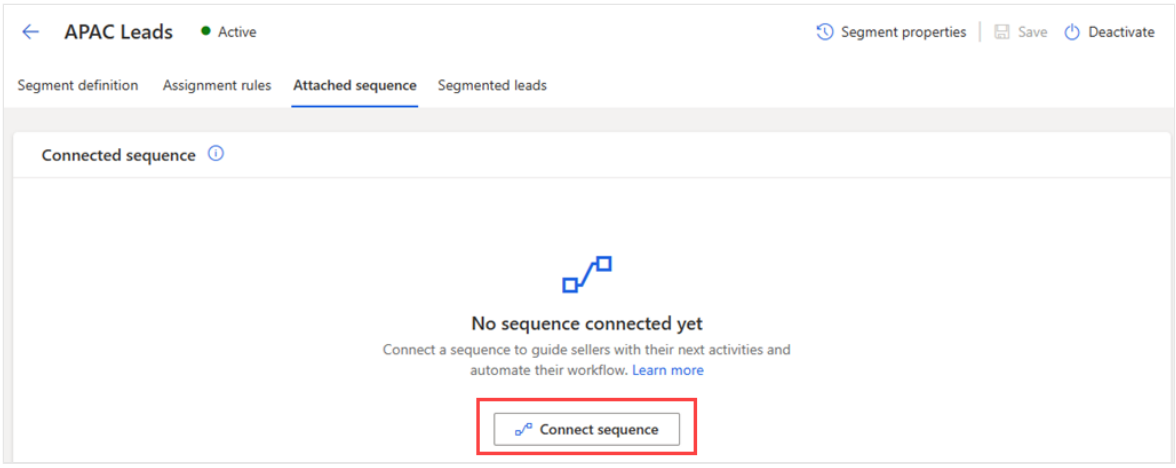
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

To connect a segment to a sequence

> **Note**
>
> In this procedure, we are using leads as example.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. From the **Record type** list, choose **Leads** and then open the segment.
4. On the segment page, go to the **Attached sequence** tab and select **Connect sequence**.



5. From the list of sequences, select the sequence that you want to connect and then select **Connect**.

   > **Note**
   >
   > If no sequences are available, select **Create new sequence** to create a sequence. More information: **Create and activate a sequence**.

   The sequence is connected to the segment.

If you want to connect a different sequence to the segment, you must first disconnect the current sequence and then connect the new sequence.

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See also

Create and activate a segment
Edit a segment
View and edit properties of a segment

Edit a segment

Article • 08/11/2023

To modify your process for choosing the records, you want as members of a segment, you can update the conditions that you've defined in the segment.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

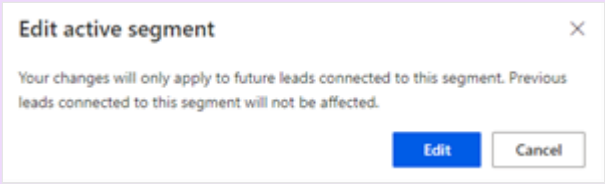
To edit a segment

> **Note**
>
> In this procedure, we are using leads as example.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. From the **Record type** list, choose **Leads** and then open the segment.
4. On the segment page, under the **Segment definition** tab, select **Edit**.

   > **Note**

If you are editing an active segment, you will see a confirmation message. Select **Edit** to continue.



5. Edit the conditions and then select **Save**.

The changes will be applied to records that are created in the future in the application. The records that the segment has already been applied to won't change.

> ⓘ **Note**
>
> All segments that are related to a primary entity (such as lead or opportunity) run every time you update the attributes of the primary entity that are added to the conditions.

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See also

Create and activate a segment

Delete or deactivate a segment

Article • 08/11/2023

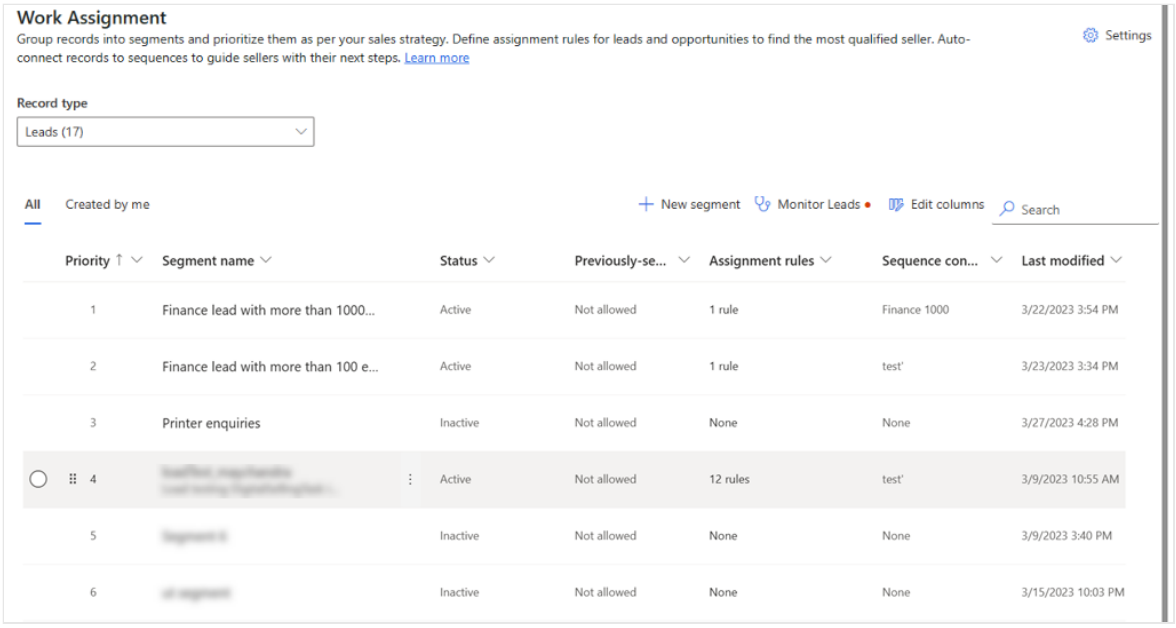
You can deactivate or delete a segment that's no longer required in your organization. Deactivation retains the segment in the application, the records that were already connected to it remain connected but future records won't be connected to it. When a segment is deleted, segment records that are already connected to a sequence won't be affected.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

To delete or deactivate a segment

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. From the **Record type** list, choose a record type from the **Record type** list.
   The **Work assignment** page opens with the list of available segments for the selected record type.



4. Hover over the segment, select **More options**, and then do one of the following:

   - Select **Deactivate segment**, and in the confirmation message that appears, select **Deactivate**.

     > **Note**
     >
     > If there are any sequences attached to the segment, the names of the sequences are displayed in the message.

     The segment is deactivated in the application.

   - Select **Delete**, and in the confirmation message that appears, select **Delete permanently**.

     > **Note**
     >
     > If there are any sequences attached to the segment, the names of the sequences are displayed in the message.

     The segment is removed permanently from the application.

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- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create and activate a segment

View and manage unassigned records

Article • 08/11/2023

Monitoring of unassigned records allows you to view the lead or opportunity records that aren't assigned to any seller. As an administrator, sales manager, or sequence manager, you can view these unassigned records and assign to sellers.

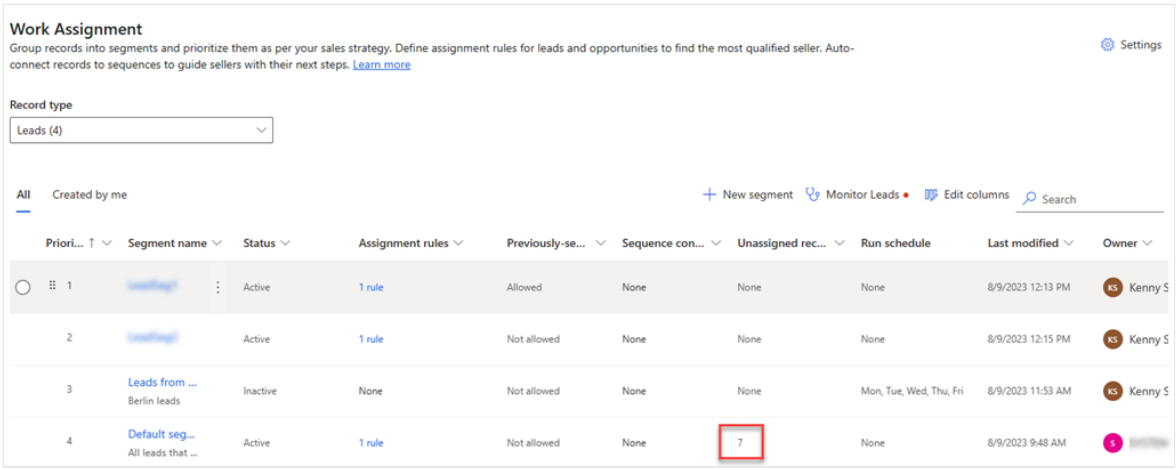
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator, Sequence Manager, or Sales Manager More information: Predefined security roles for Sales

View unassigned records

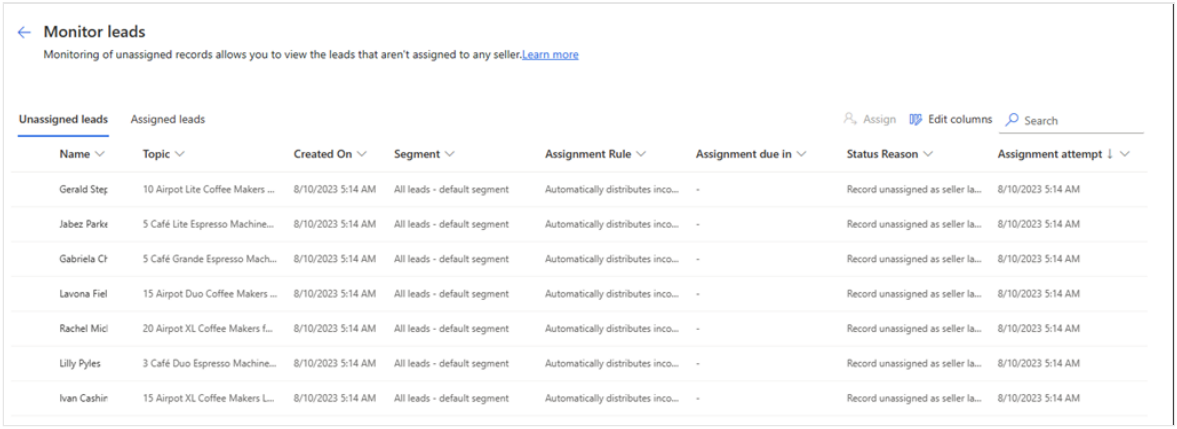
You can view the unassigned records through the **Work assignment** homepage. The **Work assignment** homepage displays the number of unassigned records for each segment under the **Unassigned records** column.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Work assignment**.
3. On the **Work assignment** page, in the **Record type** list, select a record type as **Leads**, **Opportunities**, or **Insights**.
   The number of unassigned records that belong to a segment are displayed under the **Unassigned records** column.



4. Select **Monitor *record***.
   The monitor record type page opens with the list of records that are unassigned for segments.

> **Note**
>
> When a segment is deleted, the attached rules will be automatically linked to default segment.



- Use the **Segment** column to filter the records by segment.
- The **Assignment due in** column displays the number of hours left for the record to be assigned to a seller or a team. If the record isn't assigned to any seller or team within the timeframe, the record is marked as overdue. You must assign these records manually or schedule a reassignment run. The time limit is configured through the **Consider seller work schedule** option while configuring the distribution of records in assignment rules. To understand the **Consider seller work schedule** option, see step 8 in To create and activate an assignment rule.

  When the the **Consider seller work schedule** option isn't selected for the rule, the dash (-) icon is displayed corresponding to the records.

- The **Status Reason** column displays why the record isn't assigned to a seller. By analyzing the reason, you can take appropriate action by assigning these records to sellers, creating an assignment rule, or by adding conditions to existing assignment rule. More information: Create and activate an assignment rule.

Reason for unassigned records

The records aren't assigned automatically because of one of the following reasons:

Reason	Description
Eligible sellers don't have availability	Record couldn't be assigned as eligible sellers aren't available.
Eligible sellers don't have capacity	Record couldn't be assigned as eligible sellers don't have the capacity.
No assignment rule for this record's segment	Record doesn't match any assignment rule that is currently active and available in the organization.
No sellers meet the conditions	Record isn't assigned as none of the sellers meet the conditions that are defined in the matched assignment rule.
Owner assigned manually	Owner is manually assigned to the record.
Owner assigned successfully	Owner is assigned to the record.
Record doesn't meet any conditions	Record isn't assigned as it doesn't match any conditions that are defined for the assignment rule.
Record unassigned as seller lacks security role privileges	Seller doesn't have sufficient roles to access the record.
Run is in progress	Specifies that the assignment is in progress for the record.
There was an issue with the server	Record isn't assigned as there's an issue with the server that your organization is hosted on.

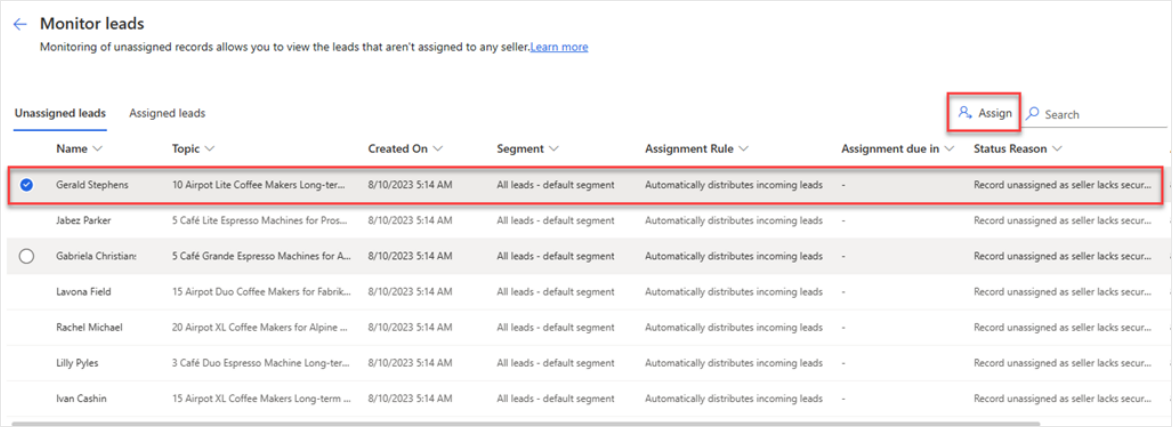
Assign records manually

You can assign the unassigned records to sellers or a team.

1. Select the record that you want to assign to a seller and then select **Assign**.

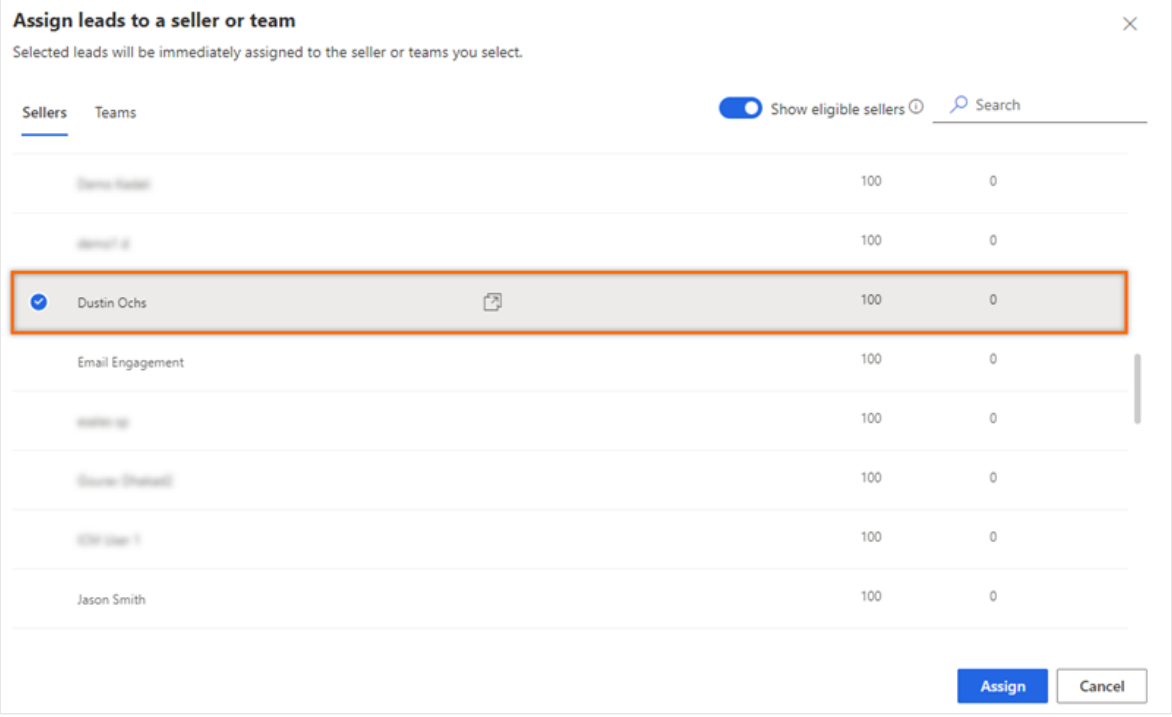
> ⓘ Note

You can select multiple records at once to assign to a seller.



2. On the **Assign *records* to a seller or team** page, select a seller or teams to who you want to assign the record.

> **Note**
>
> - Enable the **Show eligible sellers** option to view only the seller who are added to assignment rules through team settings. More information: Manage sales teams in assignment rules
> - To assign the record to a team, select **Team** tab.



3. Select **Assign**.

The record is assigned to the seller and the list refreshes to remove the assigned record.

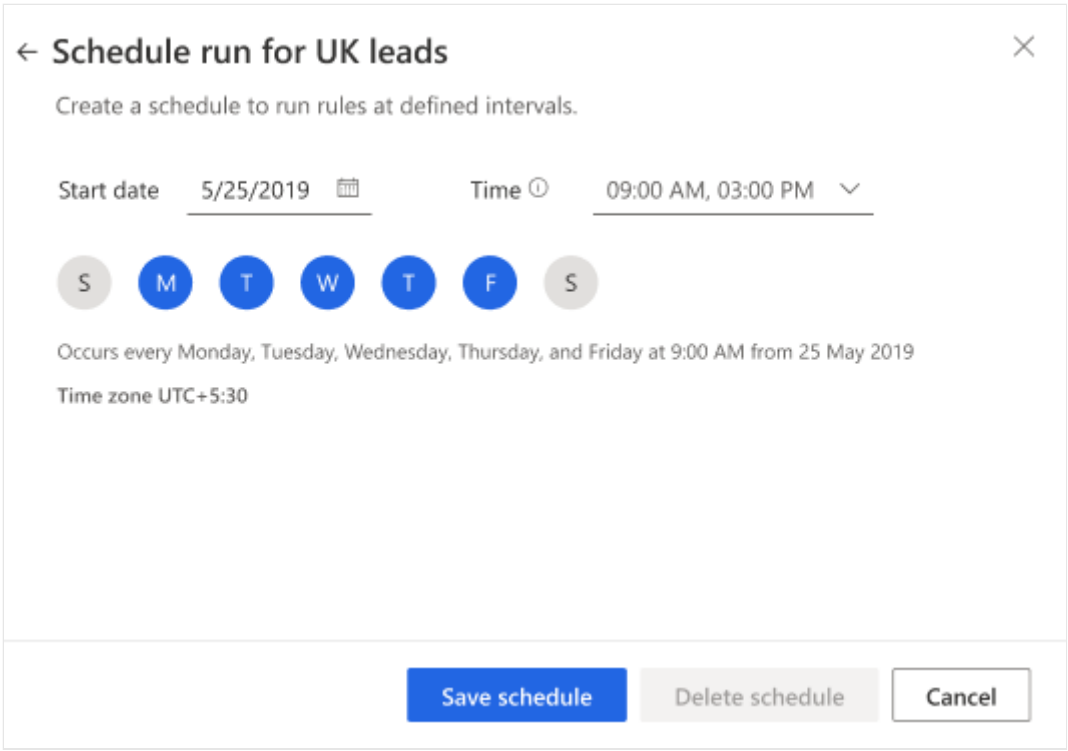
Schedule reassignment of unassigned records

You can schedule the reassignment of unassigned records to run automatically on a recurring basis by choosing the start date, time, and days to run. You can have up to one run scheduled for a segment, and the reassignment can run twice daily. For example, you can schedule the reassignment of unassigned records to run every weekday at 6:00 AM and 2:00 PM.

Once the scheduled run is complete, the history is updated with the latest time. More information: View reassignment run history

1. On the **Work assignment** page, open the segment for which you want to schedule the reassignment of unassigned records.
2. Select **Segment properties**.
   The **Segment properties** pane opens.
3. In the **Run assignment rules for unassigned leads (*number*)** section, select **Add schedule**.
4. On the **Schedule run for *segment name*** pane, provide the required information.

Option	Description
Start date	Select the start date of the scheduled run.
Time	Select the time at which you want to run the schedule. You can't have more than two schedules a day.
Days of the week	Select the days of the week on which you want to run the schedule.



5. Select **Save schedule**.

   The schedule is added to the segment and runs at the configured time. A calendar icon is displayed corresponding to the segment name to indicate that reassignment is scheduled.

   > **Note**
   >
   > - To edit the schedule, hover over the **Run scheduled** section and then select the pencil icon.
   > - To delete the schedule, hover over the **Run scheduled** section and then select the delete icon.

Run reassignment of unassigned records

The number of unassigned records for a segment is displayed in the **Unassigned records** column in the **Assignment rules** page. Run the rules again in the segment and try to assign the records to the sellers. After the records are assigned, you can view the history of assigned records.

By default, a maximum of 500 records are considered for reassignment on each run. Older records are prioritized for assignment.

> **Note**

To learn how to schedule a time to run the reassignment, go to **Schedule reassignment of unassigned records**.

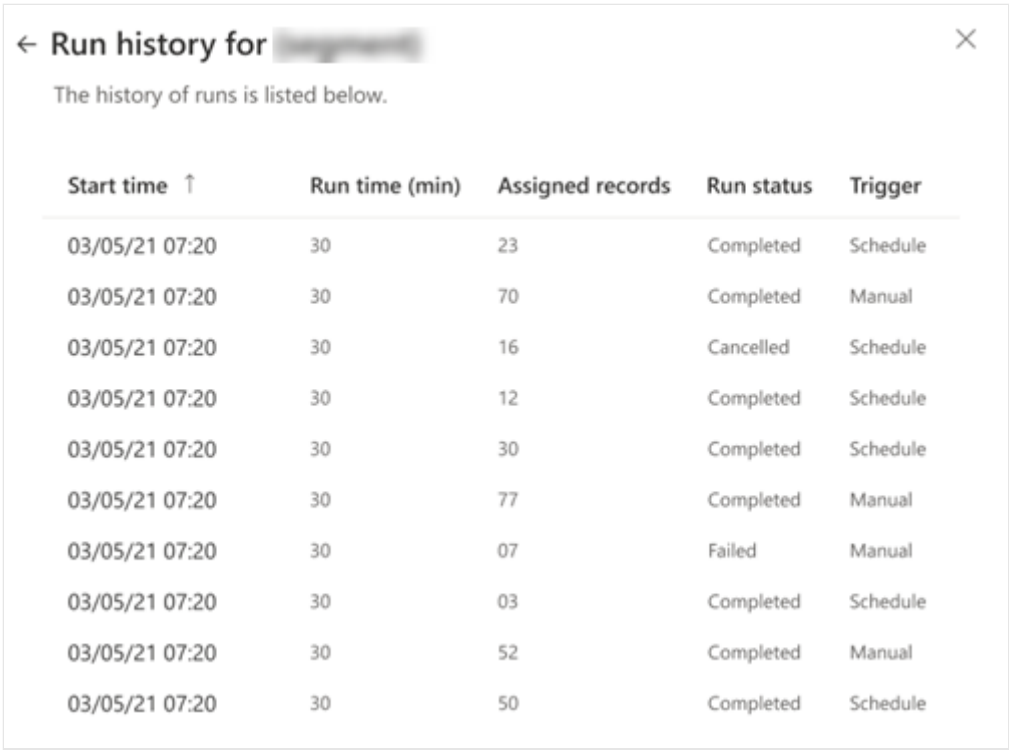
1. On the **Work assignment** page, open the segment.
2. Select **Segment properties**.
   The **Segment properties** pane opens.
3. In the **Run assignment rules for unassigned leads (*number*)** section, select **Run now**.

   The rules run and assign the records to the sellers who are available and have the capacity to work and the **Last run** section is updated with the latest run time. To view the history of each run and the list of records that are assigned to sellers, select **Show history**. More information: View reassignment run history

View reassignment run history

The reassignment run history provides information on each run such as the time it ran, the number of records that were reassigned, the time taken to complete the run, the status of the run, and how it was triggered.

1. On the **Work assignment** page, open the segment.
2. Select **Segment properties**.
   The **Segment properties** pane opens.
3. On the **Run assignment rules for unassigned leads (*number*)** section, under the **Last run** subsection, select **Show history**.
   The history pane opens.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Manage assignment rules

Get intelligent insights to improve sales (preview)

Article • 07/21/2023

> **ⓘ Important**
>
> This topic is pre-release documentation and is subject to change.

Seller insights provide sellers with valuable insights and workflows for customer engagement. Therefore, sellers can efficiently engage with customers, save time on information gathering, and increase productivity by focusing on tasks that matter.

Seller insights are generated based on data from custom insights models. These models are imported into Dataverse and used to generate contextual and intelligent insights. Based on these insights, sellers can assign tasks, create activities, and establish connections with other sellers. For example, if there is risk from an account that isn't well engaged, the following suggestions might be displayed for the account:

- Engagement is low as number of activities are going down.
- Customer didn't respond to the last email since 3 weeks.
- Negative intent detected in last call. Check call summary.

How can I use the seller insights feature?

Depending on your role, you can use the seller insights feature in the following ways:

- **System administrator or a similar role**:
  - Import your custom insights model, and map the attributes with the `msdyn_salessuggestion` entity attributes. For more information, go to Import a custom insights model into Dataverse.
  - Enable the seller insights feature. For more information, go to Enable seller insights.
  - Configure who can use the seller insights feature. For more information, go to Manage access to view insights.
  - Configure assignment rules to automatically assign insights to sellers. For more information, go to Configure assignment rules to automatically assign insights.
- **Sales manager, seller, or any other similar role**:
  - View insights on records.

- Perform actions based on insights. These actions include connecting a sequence, creating an activity, assigning an insight to a seller, reassigning an insight to yourself, and declining or closing an insight.

For more information, go to View and work on seller insights.

Import a custom insights model into Dataverse (preview)

Article • 07/21/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

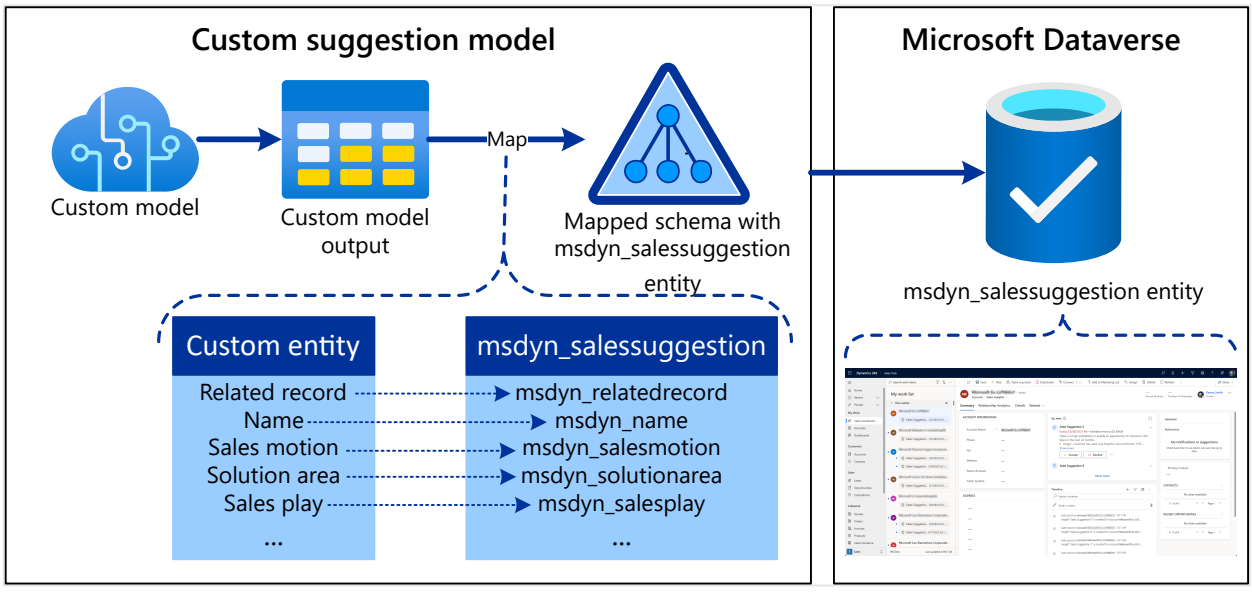
Because seller insights are generated from your custom insights model, you must import that model into Dataverse. However, before you import the model, map your custom attributes with the attributes in the `msdyn_salessuggestion` entity in Dataverse.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Import the data model into Dataverse

The following diagram illustrates the process of importing the custom model into Dataverse.



To import and map the attributes, follow these steps:

1. Make sure that you understand the msdyn_salessuggestion entity.
2. Map the attributes from your custom model with attributes in the `msdyn_salessuggestion` entity. You can use various methods to map the custom attributes, such as Web APIs, comma-separated values (.csv) files, or XML Spreadsheet 2003 (.xml) files.
3. Import your mapped attribute schema into Dataverse, so that Dynamics 365 Sales can access your data and display the insights. For more information, go to the Map the schema and import it into Dataverse section.

Understand the msdyn_salessuggestion entity

The `msdyn_salessuggestion` entity helps you import your custom insights data into Dynamics 365 Sales. The custom attributes in your data might vary, based on the data. To help ensure that the insights are surfaced in the correct place and with the correct actions, map your custom attributes to the attributes in the `msdyn_salessuggestion` entity.

Use the following table to get a detailed understanding of the `msdyn_salessuggestion` entity attributes.

Attribute	Logical or schema name	Attribute type	Description
Related record	`msdyn_relatedrecord`	Lookup	This attribute stores the parent record for the insight and is customized for other entities that support one-to-many (1:N) relationships. By default, the relationship is provided through the account entity.
Name	`msdyn_name`	Primary field	The name of the suggestion.
Sales motion	`msdyn_salesmotion`	Optionset	The type of insight, such as *New*, *Relationship Management*, or *True Up*.
Solution area	`msdyn_solutionarea`	Optionset	The broad category of the product or stockkeeping unit (SKU).
Sales play	`msdyn_salesplay`	Optionset	The narrow category of the product, SKU, or sales strategy.

Attribute	Logical or schema name	Attribute type	Description
Suggestion reason	`msdyn_suggestionreason`	String	The rationale or justification behind a specific insight that is provided.
Suggestion insights	`msdyn_insight`	Multiline string	A list of insights. The multiline text is separated by Windows or Unix newline characters (\r\n or \n). For example, *Line1\nLine2\nLine3* is displayed in the widget as: • Line1 • Line2 • Line3
Potential revenue	`msdyn_potentialrevenue`	Currency	The estimated revenue that the insight can bring.
Owner	`ownerid`	User/team lookup	The owner's name on the record.
statecode statuscode	`statecode` `statuscode`	Optionset	The customizable state and status of the insight. The out-of-box values are: • *Open* (shown in the work list) • *Completed* (positive disposition) • *Declined* (negative disposition) • *Qualified* (converted to an opportunity or engagement)
Expiry date	`msdyn_expirydate`	DateTime	The expiry date of the insight.
Suggested date	`msdyn_suggesteddate`	DateTime	The due date of the insight.
Feedback reason	`msdyn_feedbackreason`	String	The capture reason that the seller gave for positive or negative feedback when the feedback is *Others*.

Map the schema and import it into Dataverse

Use methods such as Web APIs, comma-separated values (.csv) files, or XML Spreadsheet 2003 (.xml) files to map custom attributes and create the schema. After you map the custom attributes with the `msdyn_salessuggestion` entity, you must import the schema into Dataverse. The insights can then be displayed in the records in Dynamics 365 Sales.

To learn more about how to import data into Dataverse, go to:

- For Web APIs: Work with data using code in Microsoft Dataverse.
- For comma-separated values (.csv), XML Spreadsheet 2003 (.xml), or text files: Import data.

See also

Enable seller insights
Get intelligent insights to improve sales

Enable seller insights (preview)

Article • 07/21/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

The seller insights feature provides intelligent insights about customers, so that sellers can focus on tasks that matter, close deals, and enhance their productivity.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

- Enable sales accelerator.
- Import custom insights data into Dataverse.

Enable the seller insights feature

1. Sign in to your sales app.
2. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
3. Under **Productivity**, select **Insights (preview)**.
4. On the **Insights (preview)** page, enable the feature.

By default, the feature is enabled for all users in your organization, and insights are displayed for records. To learn how to restrict access to selected users in your organization, go to Manage access to view insights.

See also

Get intelligent insights to improve sales

Manage access to view insights

Manage access to view insights (preview)

Article • 07/21/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

By default, all security roles in your organization have permission to view seller insights. However, you can restrict the access to seller insights to a specific security group in your organization.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Grant permissions to use seller insights

1. Sign in to your sales app.
2. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
3. Under **Productivity**, select **Insights (preview)**.
4. On the **Insights (preview)** page, in the **Configure access** section, select **Configure**.
5. On the **Configuration access** page, select one of the following options to grant permissions.

Security roles	Description
All security roles	Allow all the security roles in your organization to view seller insights.

Security roles	Description
Specific security roles	Allow only users who have specific security roles to view the insights.

6. Select **Publish**.

See also

Enable seller insights

Get intelligent insights to improve sales

Configure assignment rules to automatically assign insights (preview)

Article • 07/21/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Create assignment rules to assign insights to sellers. In this way, you ensure that the insights that are displayed to the sellers are relevant to them. These rules also prevent every insight from being displayed to every seller.

For the **Seller insights** option to appear in assignment rules, the **Insights** record type and the **Insights** form must be added to the sales accelerator workspace. Learn how to add a record type and form.

> **Note**
>
> To learn more about assignment rules, go to **Manage assignment rules for routing**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure an assignment rule

1. Sign in to your sales app.
2. In the lower-left corner of the page, go to **Change area** > **Sales Insights settings**.
3. Under **Sales accelerator**, select **Assignment rules**.
4. On the **Assignment rules** page, in the **Select type** list, select **Insights (preview)**.

5. Select + **New rule**.

6. In the **Create assignment rule** dialog box, enter the following information:

   - Under **Rule name**, enter a name for the rule.

   - Under **Select eligible assign insights to a seller or a team for this rule**, in the **Choose segment** list, select a segment to group the insights.

     If a segment doesn't exist, select + **New segment** in the **Choose segment** list. When you create segments for insights, select **Insights** as the record type to help when you select the attributes that are related to the `msdyn_salessuggestion` entity. Learn more about how to create segments.

   - Under **Assign insights to a seller or a team**, select the ownership type and sellers to assign the insights to.

Ownership type	Description
Accounts team	Assign insights based on existing account ownership. If a seller already has an established relationship with a specific account, it's beneficial to assign insights from that account to the same seller. Select the attribute in the **Within accounts team, assign insights to** list, based on how you want to assign the insights.
Access team	Assign insights based on individuals who have specific access and permissions to collaborate on customer accounts. Access teams are used to facilitate teamwork, information sharing, and coordination among sellers.

     After you've selected the ownership, select + **Seller attributes** to add the primary and secondary owners for the rule. In this way, you define who the insights are assigned to.

     Primary owner:

     - A star next to a name identifies the primary owner.
     - Each rule can have only one primary owner at a time.
     - Insights are always displayed in the records that the primary owner is assigned to, and the primary owner can perform the following tasks:
       - View and accept the insights.
       - Decline the insights.

- Assign the insights to secondary owners or other sellers.

Secondary owner:
- In the account team, secondary owners can view the insights but can't work on them until the primary owner assigns them.
- You can add multiple secondary owners to the rule, or you can assign a security role as the secondary owner.

7. Select **Create rule**. The rule is created, and appropriate insights are displayed to the appropriate sellers or team.

Examples

This section provides some example scenarios to help you understand the suggestion rules.

Scenario 1: An account has a single owner or a team

Assign the Contoso insights for an account where potential revenue is between 0 (zero) and 30,000 US dollars (USD) to the account owner. A single owner is assigned to the relevant insights, and primary ownership is given to the first identified seller.

Configure the rule as follows for this scenario:

- Under **Rule name**, enter *Contoso insight rule*.
- Create a segment to select eligible insights:
    1. Enter the name as *Contoso insights*, and provide a description.
    2. Select **+ Add**, and enter the following conditions:
        - *Suggestion – Equals – Contoso*
        - *Potential revenue – Is less than or equal to – 30,000*
    3. Select **Create segment**.
- Select an ownership type and owner to display insights. For a single user or a team, select **Owner** as the attribute type in the **Within accounts team, assign insights to** list.

> **Note**

- The account entity includes attributes that are related to users. Those attributes include custom attributes. You can select any attribute that references a single user or a team.
- The assumption is that the **Owner** attribute is mapped to a single user or a team. In addition, because you're configuring the rule for a single user or a team, you don't have to include seller attributes.

Scenario 2: Specific sellers should receive insights in a team

Assign the Contoso insights for an account that has potential revenue between 0 (zero) and 30,000 USD to the following members of a team: area manager (primary ownership), specialist (secondary ownership), and sales representative (secondary ownership).

Configure the rule as follows for this scenario:

- Under **Rule name**, enter *Contoso insight rule*.
- Create a segment to select eligible insights:
    1. Enter the name as *Contoso insights*, and provide a description.
    2. Select **+ Add**, and enter the following conditions:
        - *Suggestion – Equals – Contoso*
        - *Potential revenue – Is less than or equal to – 30,000*
        - *Account. segment – Equals – Enterprise account*
    3. Select **Create segment**.
- Select an ownership type and owner to display insights:
    1. In the **Within accounts team, assign insights to** list, select **Owning Team** as the attribute.

        > ⓘ **Note**
        >
        > The assumption is that the **Owner Team** attribute is mapped to a team.

    2. To add the seller attributes, select **+ Seller attributes**.
    3. Enter a name, add a row, and define it as *Title – Equals – Area manager*.

4. Repeat the previous step, and add rows that are defined as follows:
    - *Title – Equals – Specialist*
    - *Title – Equals – Sales representative*

    Here, the area manager role can have multiple users in the team. One user is randomly selected as the primary owner to assign insights to. All other users in the same group are secondary owners. The specialist and sales representative roles can also have multiple users. They are all considered secondary owners.

See also

Enable seller insights
Manage assignment rules for routing
Group records based on segments

Engage with customers through text messages

Article • 06/23/2023

Sending and receiving text messages through SMS is an effective way for sellers to reach out to potential customers. It's fast, convenient, and allows for quick responses. Sellers use SMS to stay in touch with their customers, by responding to questions or concerns, and providing updates and information on products and services.

Dynamics 365 Sales enables your sellers to send and receive SMS from customers through the text message feature. Also, sellers can refer to their past communication in context without leaving the application or losing their view of their customers' details.

In the sequences, SMS can be included as a step to send reminders or updates about key events.

> **Note**
>
> The text message feature is only supported in web browsers.

How can I use the text message feature?

Depending on your role, you can use the text message feature as described in the list:

- System administrator or similar role:
  - Configure the SMS provider in your organization for sellers to use. More information: Configure SMS provider
  - Assign or remove phone numbers of users. More information: Edit phone numbers
  - Add the text message option to custom forms. More information: Add text message option to custom forms
- Sales manager, seller, or any other similar role:
  - Choose a service provider to send and receive SMS. More information: Understand the conversation pane
  - Add text message and automated text message as steps in a sequence. More information: Send a text message and Send an automated text message
  - Create and add SMS templates. More information: Personalize text messages through templates

- Send SMS from the Sales accelerator workspace or the Up next widget. More information: Send a text message to customers
- Access past SMS interactions in context with relevant sales records such as lead and opportunity. More information: Manage text message conversations

In which regions is the text message feature available?

The text message feature is available in the following regions:

- Asia Pacific (APAC)
- Canada (CAN)
- Europe (EUR)
- France (FRA)
- Great Britain (GBR)
- India (IND)
- Japan (JPN)
- North America (NAM)
- Oceania (OCE)
- South America (SAM)
- Switzerland (CHE)
- United Arab Emirates (UAE)

> **Note**
>
> Currently, the text message feature is not available in the following datacenters—Germany, China, South Africa, Korea, Norway, and Government Community Cloud (GCC), including USG, Department of Defense (DoD).

Permissions required

Verify that the users who need to use the text message feature have the following permissions.

> **Note**
>
> If you've already enabled Sales accelerator and provided access to the required security roles, no additional permissions are required for the SMS feature. To provide permissions in Sales accelerator, see **Sales accelerator first-run setup**.

For salesperson or similar role:

Tab name	Entity name	Access level	Privileges required
Core Records	- Activity - Note	User	- Create - Write - Delete - Append
Core Records	- Activity - Note	Business Unit	Read
Core Records	Lead	Business Unit	- Create - Read
Custom Entities	Channel Instance	User	Append To
Custom Entities	- Channel Instance - Channel Instance Account - Channel Definition - SalesOmnichannel Message - Transcript	Business Unit	Read
Custom Entities	- Environment variable definition - Consuming Application	Organization	Read
Custom Entities	Model-driven App User Setting	Organization	- Create - Read - Write - Append
Custom Entities	Notification	User	Read
Custom Entities	SalesOmnichannel Message	User	- Create - Write - Delete - Append - Assign
Custom Entities	Setting definition	Organization	- Read - Append
Custom Entities	Text message template	Business Unit	- Create - Write - Read - Delete
Custom Entities	Transcript	User	- Create - Write - Delete

Tab name	Entity name	Access level	Privileges required
			- Append - Append To

For sales manager, sequence manager, or similar role:

The following roles are required along with the roles defined in the salesperson section:

Tab name	Entity name	Access level	Privileges required
Custom Entities	Channel Instance	Business Unit	- Assign - Write
Custom Entities	- Channel Definition locale - Telesign channel instance account - Twilio channel instance account	Business Unit	Read
Custom Entities	- Telesign channel instance - Twilio channel instance	Business Unit	- Read - Write - Assign

See also

Configure SMS provider
Edit phone numbers

Configure SMS provider

Article • 04/11/2023

This article explains how to set up the SMS service provider with phone numbers in Dynamics 365 Sales.

Currently, the following providers are supported:

- Infobip
- LINK Mobility
- Telesign
- Twilio

Prerequisites

Before you configure the SMS provider, do the following:

- Verify whether the SMS channel is enabled in your organization. If it's not enabled, you'll see a message while configuring the SMS provider. Select **Activate**.
- Get a subscription with phone number for either Twilio or Telesign to send and receive text messages.
  - To get the Infobip account, see Sign up for and configure an Infobip account.
  - To get the LINK Mobility account, see Sign up for and configure a LINK Mobility account.
  - To get the Telesign account, see Sign up for and configure a Telesign account.
  - To get the Twilio account, see Sign up for and configure a Twilio account.

> **Note**
>
> You can purchase or reuse an existing SMS account to send text messages. **The integration works for all countries** in which a phone number can be purchased through Infobip, LINK Mobility, Telesign, or Twilio.

Sign up for and configure an Infobip account

Infobip integration uses its public APIs to send and receive text messages. You need to sign up for an Infobip account to enable the real-time SMS integration. To create an Infobip account:

1. Go to Infobip and sign up for a free account that can be upgraded to pay-as-you-go or a monthly subscription later.
2. In your Infobip account homepage, navigate to the **Developers** tab and note the **API key** and **API Base URL** values. These values are required to create the integration between Dynamics 365 Sales and Infobip.
3. Purchase SMS phone numbers through your Infobip account.

Sign up for and configure a LINK Mobility account

Like Infobip, LINK Mobility integration uses its public APIs to send and receive text messages. You need to sign up for a LINK Mobility account to enable the real-time SMS integration. To create a LINK Mobility account:

1. Go to LINK Mobility and sign up for a trial account that can be upgraded later.
2. Contact the link mobility team to purchase numbers and get all the account integration details required to create the integration between Dynamics 365 Sales and LINK Mobility.

Sign up for and configure a Telesign account

Telesign integration uses Telesign's public APIs to send and receive text messages. You need to sign up for a Telesign account to enable Telesign as an SMS provider in Dynamics 365 Sales. To create a Telesign account:

1. Go to Telesign and sign up for a trial account. If you expect to send high volumes of SMS traffic (more than 100,000 messages per month), contact Telesign to request an invoiced enterprise account.
2. In your Telesign account dashboard, note the CUSTOMER ID and API KEY values. These values are required while configuring Telesign as the SMS provider in Dynamics 365 Sales.
3. Purchase SMS phone numbers through your Telesign account.
4. On the Telesign SMS Settings page, switch the **Status Callback** toggle to Enabled. This applies to **Standard** accounts. If you have an **Enterprise** account, you'll need to contact Telesign to enable the status callback setting for you.

5. You're provided with a callback URL that must be sent to Telesign support. This callback URL is specific to your organization and is available when you add SMS support for your organization.

Sign up for and configure a Twilio account

Twilio integration uses Twilio's public APIs to send and receive text messages. You need to sign up for a Twilio account to enable Twilio as an SMS provider in Dynamics 365 Sales. To create a Twilio account:

1. Go to Twilio and sign up for a trial account that can be upgraded to pay-as-you-go. If you expect to send high volumes of SMS traffic (more than 100,000 messages per month), contact Twilio to request an invoiced enterprise account.
2. In your Twilio account General Settings, note the ACCOUNT SID and AUTH TOKEN values. These values are required while configuring Twilio as the SMS provider in Dynamics 365 Sales.
3. Purchase SMS phone numbers through your Twilio account.

Set up the SMS provider in Dynamics 365 Sales

To set up the SMS provider number in Dynamics 365 Sales:

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **App Settings** > **SMS providers**.
2. From the tool bar, select **New**.
3. Select the provider. Accept the **Microsoft privacy statement** and the provider's consent to handle opt-out commands properly. Then select **Next**.

   > **Note**
   >
   > The prompt to provide consent is displayed only while configuring a provider for the first time. Once accepted, the options to provide consent are not displayed.

4. On the **Set up provider** page, enter the values depending on the provider you've selected. Then select **Next**.

   - **For Infobip**:

Parameter	Description
Name	Enter a name for the provider.
Description	(Optional) Specify a description for the number.
API Base URL	Enter the unique Base URL which you got from your Infobip account.
API key	API key generated from the Infobip account.
Incoming callback URL	This callback URL is specific to your organization and is available when you add SMS support for your organization. Copy the provided callback URL and send it to Infobip customer support for receiving SMS replies.

- **For LINK Mobility**:

Parameter	Description
Name	Enter a name for the provider.
Description	(Optional) Specify a description for the number.
Platform ID	Enter the platform ID provided by LINK Mobility.
Platform Partner ID	Enter the platform Partner ID provided by LINK Mobility.
Gate ID	Enter the gate ID that you received from LINK Mobility to receive delivery reports.
Username	Enter the username that is used to sign in to the LINK Mobility messaging platform.
Password	Enter the password that is used to sign in to the LINK Mobility messaging platform.
Base URL	Enter the URL that is assigned to you when creating the LINK Mobility account.
Delivery report callback URL	This delivery report URL helps in receiving a callback with delivery report. Copy the provided URL and send it to LINK Mobility customer support for delivery report.
Incoming callback URL	This callback URL is specific to your organization and is available when you add SMS support for your organization. Copy the provided callback URL and send it to LINK Mobility customer support for receiving SMS replies.

- **For Telesign**:

Parameter	Description
Name	Enter a name for the provider.
Description	(Optional) Specify a description for the number.
Customer SID	Customer ID generated from the Telesign account.
API key	API key generated from the Telesign account.
Incoming callback URL	This callback URL is specific to your organization and is available when you add SMS support for your organization. Copy the provided callback URL and send it to Telesign support for receiving SMS replies.

- **For Twilio**:

Parameter	Description
Name	Enter a name for the provider.
Description	(Optional) Specify a description for the number.
Account SID	Account SID generated from the Twilio account.
Auth token	Auth token generated from the Twilio account.
Incoming callback URL	This callback URL is specific to your organization and is available when you add SMS support for your organization. Paste the URL in the numbers' configuration page in the **A MESSAGE COMES IN** field to receive SMS replies.

5. On the **Add phone numbers** page, select **New phone number**.

   A pane opens on the right to enter the phone number details.

6. On the **Add phone number** pane, enter the following details:

   - **Phone number**: Specify the SMS number that you purchased from the provider in the <*country_code*><*phone_number*> format; for example, +12345678910. Make sure not to enter blank spaces or special characters.

     > **Note**
     >
     > The phone number should be unique for Dynamics 365 Sales. Don't include numbers that were used to configure message features in other Dynamics 365 apps.

- **Name**: Enter a unique name for the number.
- **Owner**: Use the lookup to add teams or users who will use this number to send SMS. Only the teams or users added here will have access to this number.
- **Type**: (Optional) Select the type of phone number, such as Geo, Short code, or Toll free.

7. Select **Add**.

   The phone number is added to the list of phone numbers. You can add multiple numbers for different teams and users according to your organizational requirements.

   > **Note**
   >
   > Select **View additional properties** from the **Properties** column to edit the properties of the phone number, such as permissions and type.

8. Select **Next**.
9. On the **Review and finish** page, review the information that you've provided for the channel and then select **Done**.

   The provider is added to your SMS provider list.

See also

Engage with customers through text messages
Edit phone numbers

Add custom SMS channel

Article • 06/23/2023

Dynamics 365 Sales supports certain SMS channels natively and can add SMS channels that aren't supported natively.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Steps to add custom SMS channel

1. Define an extended configuration entity for a channel instance
2. Define an extended configuration entity for a channel instance account
3. Define the message parts (solution-aware component)
4. (Optional) Define the localization for the admin interface
5. Define custom APIs
6. Define the custom channel (solution-aware component)

Dynamics 365 Sales provides base components for creating a custom channel, including custom APIs and required entities like msdyn_channeldefinition, msdyn_channelmessagepart, msdyn_channellocale, msdyn_channelinstanceaccount and msdyn_channelinstance.

The following table describes the implementation requirements for SMS channels.

Component	Required
Extended configuration entity for the channel instance	Required
Extended configuration entity for the channel instance account	Required

Component	Required
Message parts	Required; should contain only a single message part with `msdyn_name` = `text`
Localization for admin UI	Optional
Custom APIs	Required
Channel definition	Required

Sample solutions

The following sample includes unpacked solutions for Dataverse and plugins projects. To pack and import the solutions, first build the plugin project. The project copies the assembly to the solution project. Then, pack the solution using the Solution Packager tool.

- SampleSmsChannel.zip

Build the plugins project and pack the solution

1. Build the plugins project with MSBuild or Visual Studio.

   Building the project creates a DLL in the PluginAssemblies folder inside the Dataverse solution folder.

2. Pack the unmanaged folder with the Solution Packager using either:

   - pac CLI (**preferred**)
   - Solution packager

   ```
   pac solution pack --zipfile C:\tmp\SampleSmsChannelSolution.zip -f src\Solutions\Samples\SampleSmsChannel\SampleSmsChannel.Solution\unmanaged --packagetype Both
   ```

Define an extended configuration entity for a channel instance

Article • 06/23/2023

A *Custom instance* is the representation of a provider in Dynamics 365 Sales. When you create the channel, you need to configure a sender—for example, the sender of a text message. Each instance of a channel—that is, the entity **Channel Instance**—represents a single sender.

For each channel solution, you need to:

1. Create a custom table to represent the extended configuration of the **Channel Instance** table (**msdyn_channelinstance**) defined in the base solution.

   The name of the table is assigned to the attribute **msdyn_channeldefinitionexternalentity** at the channel definition step.

2. Create and edit One-to-many or Many-to-one table relationships to the base **Channel Instance** table in the `msdyn_extendedentityid` attribute.

   This attribute is a polymorphic lookup. Here's an example of the relationship in XML:

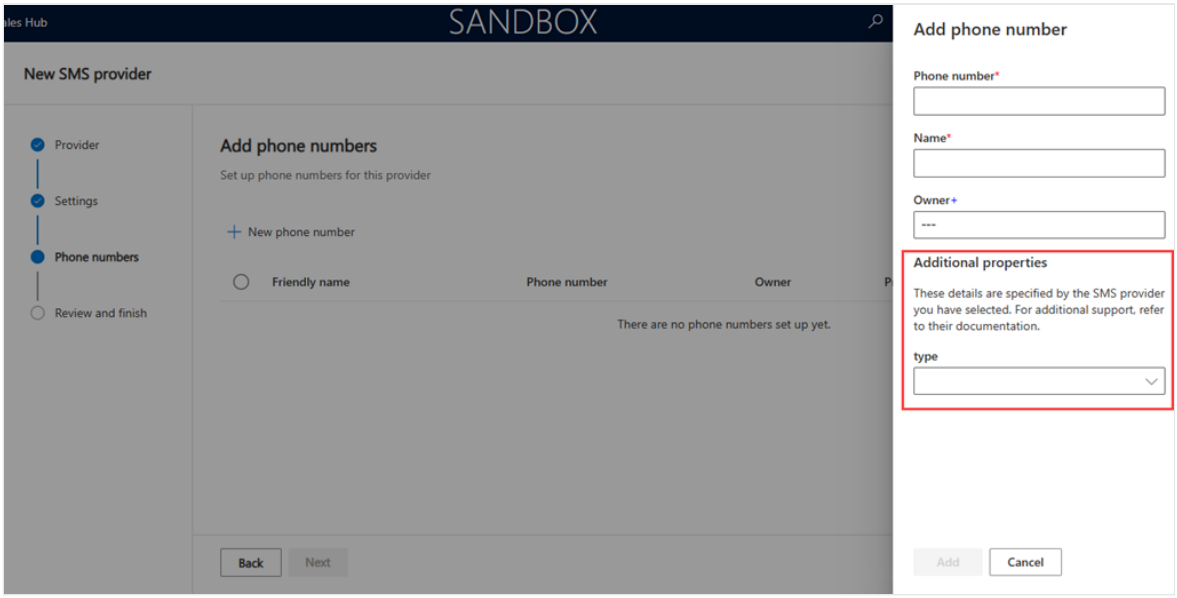
   XML

```
<EntityRelationship
Name="msdyn_ChannelInstance_extendedentityid_cr65f_samplechannelinstanc
e">
    <EntityRelationshipType>OneToMany</EntityRelationshipType>
    <IsCustomizable>0</IsCustomizable>
    <IntroducedVersion>1.0.0.0</IntroducedVersion>
    <IsHierarchical>0</IsHierarchical>

<ReferencingEntityName>msdyn_ChannelInstance</ReferencingEntityName>

<ReferencedEntityName>cr65f_samplechannelinstance</ReferencedEntityName
>
    <CascadeAssign>NoCascade</CascadeAssign>
    <CascadeDelete>RemoveLink</CascadeDelete>
    <CascadeReparent>NoCascade</CascadeReparent>
    <CascadeShare>NoCascade</CascadeShare>
    <CascadeUnshare>NoCascade</CascadeUnshare>
    <CascadeRollupView>NoCascade</CascadeRollupView>
    <IsValidForAdvancedFind>1</IsValidForAdvancedFind>

<ReferencingAttributeName>msdyn_extendedentityId</ReferencingAttributeN
ame>
```

```
    <RelationshipDescription>
      <Descriptions>
        <Description description="" languagecode="1033" />
      </Descriptions>
    </RelationshipDescription>
    <EntityRelationshipRoles>
      <EntityRelationshipRole>
        <NavPaneDisplayOption>UseCollectionName</NavPaneDisplayOption>
        <NavPaneArea>Details</NavPaneArea>
        <NavPaneOrder>10000</NavPaneOrder>

<NavigationPropertyName>msdyn_extendedentityid_cr65f_samplechannelinsta
nce</NavigationPropertyName>
        <RelationshipRoleType>1</RelationshipRoleType>
      </EntityRelationshipRole>
      <EntityRelationshipRole>

<NavigationPropertyName>msdyn_ChannelInstance_extendedentityid_cr65f_sa
mplechannelinstance</NavigationPropertyName>
        <RelationshipRoleType>0</RelationshipRoleType>
      </EntityRelationshipRole>
    </EntityRelationshipRoles>
  </EntityRelationship>
```

3. Create a form to expose the configuration fields.

   The form is loaded in the Sales setup wizard. The form ID is assigned to the attribute **msdyn_channeldefinitionexternalformid** at the channel definition step.



Next steps

Define an extended configuration entity for a channel instance account

Define an extended configuration entity for a channel instance account

Article • 06/23/2023

When you create a custom SMS channel, you need to define an entity to represent the extended configuration for the *channel instance account* (**msdyn_channelinstanceaccount**). For example, you might have a **MessageBird** account for which you've enabled multiple phone numbers. The channel instance account has a 1:N relationship with the channel instances you created (in this example, the **MessageBird** phone numbers).

For each custom SMS channel solution, you need to:

1. Create a custom entity to represent the extended configuration of the **Channel Instance Account** entity defined in the base solution.

   The name of the entity is assigned to the attribute `msdyn_channeldefinitionaccountexternalentity` at the channel definition step.

2. Add a relationship to the base **Channel Instance Account** entity in the `msdyn_extendedentityid` attribute.

   This attribute is a polymorphic lookup. Here's an example of the relationship in XML:

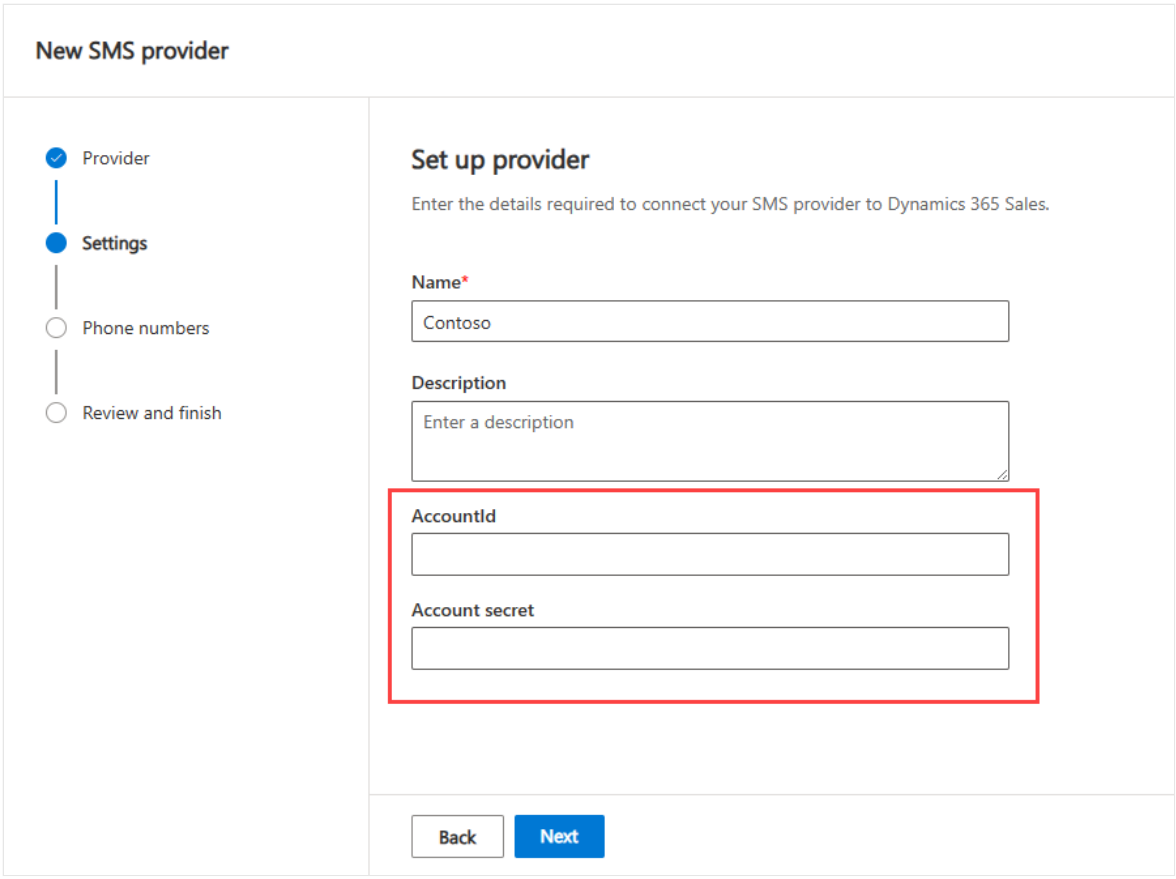
   XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<EntityRelationships xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
  <EntityRelationship
Name="msdyn_ChannelInstanceAccount_extendedentityid_cr65f_samplechannel
instanceaccount">
    <EntityRelationshipType>OneToMany</EntityRelationshipType>
    <IsCustomizable>0</IsCustomizable>
    <IntroducedVersion>1.0.0.0</IntroducedVersion>
    <IsHierarchical>0</IsHierarchical>

<ReferencingEntityName>msdyn_ChannelInstanceAccount</ReferencingEntityN
ame>

<ReferencedEntityName>cr65f_samplechannelinstanceaccount</ReferencedEnt
ityName>
    <CascadeAssign>NoCascade</CascadeAssign>
    <CascadeDelete>RemoveLink</CascadeDelete>
    <CascadeReparent>NoCascade</CascadeReparent>
```

```
    <CascadeShare>NoCascade</CascadeShare>
    <CascadeUnshare>NoCascade</CascadeUnshare>
    <CascadeRollupView>NoCascade</CascadeRollupView>
    <IsValidForAdvancedFind>1</IsValidForAdvancedFind>

<ReferencingAttributeName>msdyn_extendedentityId</ReferencingAttributeN
ame>
    <RelationshipDescription>
      <Descriptions>
        <Description description="" languagecode="1033" />
      </Descriptions>
    </RelationshipDescription>
    <EntityRelationshipRoles>
      <EntityRelationshipRole>
        <NavPaneDisplayOption>UseCollectionName</NavPaneDisplayOption>
        <NavPaneArea>Details</NavPaneArea>
        <NavPaneOrder>10000</NavPaneOrder>

<NavigationPropertyName>msdyn_extendedentityid_cr65f_samplechannelinsta
nceaccount</NavigationPropertyName>
        <RelationshipRoleType>1</RelationshipRoleType>
      </EntityRelationshipRole>
      <EntityRelationshipRole>

<NavigationPropertyName>msdyn_ChannelInstanceAccount_extendedentityid_c
r65f_samplechannelinstanceaccount</NavigationPropertyName>
        <RelationshipRoleType>0</RelationshipRoleType>
      </EntityRelationshipRole>
    </EntityRelationshipRoles>
  </EntityRelationship>
</EntityRelationships>
```

3. Create a form to expose the configuration fields.

   The form doesn't have to contain attributes like name or description since they come from Sales Custom controls. The form is loaded in the Sales SMS setup wizard (settings step). The form ID is assigned to the attribute **msdyn_channeldefinitionaccountexternalformid** at the channel definition step.



Next step

Define the message parts

Define message parts

Article • 06/23/2023

When you create a custom SMS channel, you need to define a record in the **Channel Message Part** entity for each message part that the channel operates with (for example, title, subtitle, text). A custom SMS channel requires at least one message part. When your solution is imported, a new row for every message part is created in the **msdyn_channelmessagepart** table.

Message Part contract

Entity logical name: **msdyn_channelmessagepart**

Entity set name: **msdyn_channelmessageparts**

Primary ID attribute name: **msdyn_channelmessagepartid**

- **msdyn_name**: string – Name of the message part. This value is used as a key to map message part information with outbound message content.
- **msdyn_displayname**: string – Display name.
- **msdyn_description**: string – Description.
- **msdyn_channeldefinitionid**: GUID – Channel definition ID. Must match the channel definition ID of the channel.
- **msdyn_type**: OptionSet – Message part type. Supported values:
  - **192350000 plaintext**: The message part is simple text.
  - **192350003 media**: The message part is a file ID of the msdyncrm_file entity.
  - **192350004 image**: The message part is an image ID of the msdyncrm_file entity.
  - **192350005 record**: The message part is a record ID of an external entity.
- **msdyn_isrequired**: bit - Indicates whether the part is required.
- **msdyn_maxlength**: int - Max length of the part.
- **msdyn_order**: int - (Optional) Defines the position of the message part field in the message editor. The larger the number, the higher the position.
- **msdyn_entityname**: string - (Optional) Defines the entity to be used for the record type.
- **msdyn_entityviewid**: string - (Optional) Defines the ID of the view to be used for the record type.

Message parts are defined in **customizations.xml** as solution-aware components. Place every **msdyn_channelmessagepart** under **ImportExportXml** > **msdyn_channelmessageparts** elements. Each message part element

msdyn_channelmessagepart must include its own unique ID in the form of the GUID as the XML attribute **msdyn_channelmessagepartid**.

Example of **customizations.xml** including message parts:

XML

```
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <msdyn_channelmessageparts>
    <msdyn_channelmessagepart msdyn_channelmessagepartid="15d57b1a-ddcd-
4bb1-9af6-c691567ab9ef">
      <msdyn_channeldefinitionid>
        <msdyn_channeldefinitionid>b1b25a46-6da0-4c08-9cf3-
505e613c8e30</msdyn_channeldefinitionid>
      </msdyn_channeldefinitionid>
      <msdyn_description>Text</msdyn_description>
      <msdyn_displayname>Text</msdyn_displayname>
      <msdyn_isrequired>1</msdyn_isrequired>
      <msdyn_maxlength>1000</msdyn_maxlength>
      <msdyn_name>text</msdyn_name>
      <msdyn_type>192350000</msdyn_type>
      <statecode>0</statecode>
      <statuscode>1</statuscode>
    </msdyn_channelmessagepart>
  </msdyn_channelmessageparts>
</ImportExportXml>
```

Next step

Define localization for the admin interface

Define localization for the admin interface (optional)

Article • 06/23/2023

If you want to localize your admin interface for a diverse audience, you need to define a **Channel Definition Locale** entity. When your solution is imported, a new row for every message part is created in the **msdyn_channeldefinitionlocale** table.

Channel Definition Locale contract

Entity logical name: **msdyn_channeldefinitionlocale**
Entity set name: **msdyn_channeldefinitionlocales**
Primary ID attribute name: **msdyn_channeldefinitionlocaleid**

- **msdyn_localeid**: int - Language code ID (for example, English - United States 1033)
- **msdyn_channeldefinitionid**: GUID – Channel definition ID; must match the channel definition ID of the channel.
- **msdyn_localecontent**: string (JSON) - The localized content. The following keys are supported:
  - **ChannelDefinition.DisplayName** - override for msdyn_channeldefinition.msdyn_displayname attribute content in UI.
  - **ChannelDefinition.Description** - override for msdyn_channeldefinition.msdyn_description attribute content in UI.
  - **ChannelDefinition.SpecialConsentLabel** - override for msdyn_channeldefinition.msdyn_specialconsentlabel attribute content in UI.
  - **ChannelMessagePart.%partname%.DisplayName** - override for msdyn_channelmessagepart.msdyn_displayname attribute content in UI for the message part of the channel with name %partname%.
  - **ChannelMessagePart.%partname%.Description** - override for msdyn_channelmessagepart.msdyn_description description content in UI for the message part of the channel with name %partname%.

Channel definition locales are defined in **customizations.xml** as solution components. Place every **msdyn_channeldefinitionlocale** under **ImportExportXml** > **msdyn_channeldefinitionlocales** elements. Each message part element **msdyn_channeldefinitionlocale** must include its own unique ID in the form of the GUID as the XML attribute **msdyn_channeldefinitionlocaleid**.

Example of **customizations.xml** including channel definition locales:

XML

```
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <msdyn_channeldefinitionlocales>
  <msdyn_channeldefinitionlocale msdyn_channeldefinitionlocaleid="d21815c7-
5736-4a95-9b69-253b1e70c0a5">
    <msdyn_channeldefinitionid>e779b91e-02a0-4884-8cbe-
f217835b42d9</msdyn_channeldefinitionid>
    <msdyn_localeid>1033</msdyn_localeid>
    <msdyn_localecontent>{
            "ChannelDefinition.DisplayName":  "Twilio",
            "ChannelDefinition.Description":  "Connect an existing Twilio
account to send text messages",
            "ChannelDefinition.SpecialConsentLabel":  "To ensure that Twilio
provider handle STOP commands properly, you must configure your consent
settings with the provider directly.",
            "ChannelMessagePart.Text.DisplayName":  "Text",
            "ChannelMessagePart.Text.Description":  "Text part of SMS"}
    </msdyn_localecontent>
  </msdyn_channeldefinitionlocale>
</ImportExportXml>
```

Next steps

Define custom APIs for SMS channel

Define custom APIs for SMS channel

Article • 06/23/2023

Outbound custom API

When you create a custom SMS channel in Dynamics 365 Sales, you need to define an outbound custom API to call during the journey runtime. The custom API is the entry point for executing custom code. It calls the provider's APIs and must accept the contract defined by the Sales SMS and return the response. The outbound custom API is assigned to the attribute **msdyn_outboundendpointurltemplate** at the channel definition step.

The contract that the outbound custom API should implement must have one input parameter (payload) and one output attribute (response).

- The payload is a serialized JSON with the following contract:
  - **ChannelDefinitionId**: GUID – The channel definition ID.
  - **RequestId**: string – The request ID.
  - **From**: string – The sender (channel instance).
  - **To**: string – The recipient.
  - **Message**: Dictionary <string, string> - Contains all the message parts for a channel. Keys are the message part names, such as the values of the corresponding `msdyn_name` attribute.

- The response is a serialized JSON with the following contract:
  - **ChannelDefinitionId**: GUID – The channel definition ID.
  - **MessageId**: string – (Optional) The message ID. Optional; it may exist in the API response of a provider.
  - **RequestId**: string – The request ID. Should be equal to the request ID value inside the request payload.
  - **Status**: string – The possible values are:
    - **NotSent** – There was an attempt to execute the submission to the provider but it was rejected without a possibility to retry.
    - **Sent** – The submission request was successfully accepted by the provider.

Delivery report custom API

If your channel supports message delivery reports or statuses, you need to define a delivery report custom API. Your API is called by the provider and it must call the base

solution's **msdyn_D365ChannelsNotification** API, which returns the information to Dataverse. This information is available in Sales chat editor.

The delivery report custom API calls the **msdyn_D365ChannelsNotification** API with the contract as one input parameter:

- notificationPayLoad is a serialized JSON with the following contract:
  - **ChannelDefinitionId**: GUID – The channel definition ID.
  - **RequestId**: string – The request ID.
  - **MessageId**: string – The message ID.
  - **From**: string – The sender (channel instance).
  - **OrganizationId**: string – The organization ID.
  - **Status**: string – The delivery report status. The possible values are:
    - **Delivered** – The accepted message was successfully delivered to the target.
    - **NotDelivered** – The accepted message wasn't successfully delivered to the target.

Inbound custom API

If your channel supports inbound requests, you need to define an inbound custom API. Your API is called by the provider and it must call the base solution's **msdyn_D365ChannelsInbound** API, which returns the information to Dataverse.

The inbound custom API calls the **msdyn_D365ChannelsInbound** API with the contract as one input parameter:

- inboundPayLoad is a serialized JSON with the following contract:
  - **ChannelDefinitionId**: GUID – The channel definition ID.
  - **To**: string - The C1 phone number (channel instance).
  - **From**: string - C2 user contact point.
  - **OrganizationId**: string – The organization ID.
  - **Message**: Dictionary <string, string> - Contains all the message parts for a channel.

Next step

Define the custom SMS channel

Define the custom SMS channel

Article • 06/23/2023

Now that you've defined the parts of your custom SMS channel, it's time to define the channel. This step is where you connect all the previous pieces in one metadata file, which is a record of the **Channel Definition** entity (`msdyn_channeldefinition`).

> **Important**
>
> If you're configuring metadata records directly in the customization file, make sure that the GUIDs are in lowercase.

Channel Definition contract

Entity logical name: **msdyn_channeldefinition**

Entity set name: **msdyn_channeldefinitions**

Primary ID attribute name: **msdyn_channeldefinitionid**

- **msdyn_displayname**: string - Optional. Display name of the channel.
- **msdyn_description**: string - Optional. Description of the channel.
- **msdyn_channeltype**: string - Required. Supported values: Custom, SMS.
- **msdyn_outboundendpointurltemplate**: string – Required. Name of the custom API for the outbound flow.
- **msdyn_hasinbound**: bit - Required. Boolean value indicating whether the channel supports inbound messages.
- **msdyn_hasdeliveryreceipt**: bit - Required. Boolean value indicating whether the channel supports delivery receipt.
- **msdyn_supportsaccount**: bit - Required. Boolean value indicating whether the channel supports account-level configuration. For SMS, it must be true; otherwise, false.
- **msdyn_channeldefinitionexternalentity**: string - Required. Name of the CDS entity, representing an extended configuration of the channel instance.
- **msdyn_channeldefinitionexternalformid**: GUID - Required. ID of the form to be rendered to display configuration of the extended channel instance table.
- **msdyn_channeldefinitionaccountexternalentity**: string - Optional. Name of the CDS entity, representing an extended configuration of the channel instance account.

- **msdyn_channeldefinitionaccountexternalformid**: string - Optional. ID of the form to be rendered to display configuration of the extended channel instance account table.
- **msdyn_messageformid**: GUID - Optional. Defines a form representing the message editor for the channel.

Channels are defined in **customizations.xml** as solution components. Place every **msdyn_channeldefinition** under **ImportExportXml** > **msdyn_channeldefinitions** elements. Each message part element `msdyn_channeldefinition` must include its own unique ID in the form of a GUID as the XML attribute **msdyn_channeldefinitionid**. When your solution is imported, a new row is created in the **msdyn_channeldefinition** table.

In the following example, note that:

- The **msdyn_channeldefinitionexternalentity** and the **msdyn_channeldefinitionexternalformid** contain the name and the form ID of the entity you created when you defined the channel instance.
- The **msdyn_channeldefinitionaccountexternalentity** and the **msdyn_channeldefinitionaccountexternalformid** contain the name and the form ID of the entity you created when you defined the channel instance account.
- The **msdyn_outboundendpointurltemplate** contains the custom API that you created when you defined custom APIs.

Example of customizations.xml including channel definition:

XML

```
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <msdyn_channeldefinitions>
    <msdyn_channeldefinition msdyn_channeldefinitionid="af0c2a3c-85a5-43b3-
84be-2a4a171249f3">

<msdyn_channeldefinitionaccountexternalentity>cr65f_samplechannelinstanceacc
ount</msdyn_channeldefinitionaccountexternalentity>
      <msdyn_channeldefinitionaccountexternalformid>3071133f-1208-4dc1-8eba-
4d4724961029</msdyn_channeldefinitionaccountexternalformid>

<msdyn_channeldefinitionexternalentity>cr65f_samplechannelinstance</msdyn_ch
anneldefinitionexternalentity>
      <msdyn_channeldefinitionexternalformid>7d2b885a-80eb-479d-b0c3-
600bc41e9789</msdyn_channeldefinitionexternalformid>
      <msdyn_channeltype>Custom</msdyn_channeltype>
      <msdyn_description>Metadata definition for sample custom
channel</msdyn_description>
      <msdyn_displayname>Sample custom channel</msdyn_displayname>
      <msdyn_hasdeliveryreceipt>0</msdyn_hasdeliveryreceipt>
      <msdyn_hasinbound>0</msdyn_hasinbound>
      <msdyn_messageformid>69723cfe-3835-4126-ab9a-
```

```
a82a5b88c21d</msdyn_messageformid>

<msdyn_outboundendpointurltemplate>/cr65f_OutboundCustomApi</msdyn_outbounde
ndpointurltemplate>
      <msdyn_specialconsentrequired>0</msdyn_specialconsentrequired>
      <msdyn_supportsaccount>0</msdyn_supportsaccount>
      <msdyn_supportsattachment>0</msdyn_supportsattachment>
      <msdyn_supportsbinary>0</msdyn_supportsbinary>
      <statecode>0</statecode>
      <statuscode>1</statuscode>
    </msdyn_channeldefinition>
  </msdyn_channeldefinitions>
</ImportExportXml>
```

Sample solutions

The following sample includes unpacked solutions for Dataverse and plugins projects. To pack and import these solutions, first build the plugin project. The project copies the assembly to the solution project. Then, pack the solution using the Solution Packager tool.

- SampleSmsChannel.zip

How to build the plugins project and pack the solution

1. Build the plugins project with MSBuild or Visual Studio.

   Building the project creates a DLL in the PluginAssemblies folder inside the Dataverse solution folder.

2. Pack the unmanaged folder with the Solution Packager using either:

   - pac CLI (**preferred**)
   - Solution packager

   ```
   pac solution pack --zipfile C:\tmp\SampleSmsChannelSolution.zip -f
   src\Solutions\Samples\SampleSmsChannel\SampleSmsChannel.Solution\unmanaged --
   packagetype Both
   ```

See also

Add custom SMS channel
Configure SMS provider

Edit phone numbers

Article • 05/03/2023

Edit phone numbers to assign them to new users or to remove users who are no longer working in your organization or have moved to a different team.

How to edit the phone numbers

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **App Settings** > **SMS providers**.
2. Select the SMS provider.
3. On the SMS service provider page, go to the **Phone numbers** tab.

   > **Note**
   >
   > To add a phone number, select **New phone number** and do steps 6 and 7 from **Set up the SMS provider in Dynamics 365 Sales**

4. Under the **Properties** tab, corresponding to the phone number that you want to edit, select **View additional properties**.

   The Phone number pane opens.

5. In the **Owner** field, remove the existing user and use the lookup to add a new user or team accordingly.
6. Select **Update**.

The phone number is updated and the new user or team is assigned.

See also

Engage with customers through text messages
Configure SMS provider

Add text message option to custom forms

Article • 05/03/2023

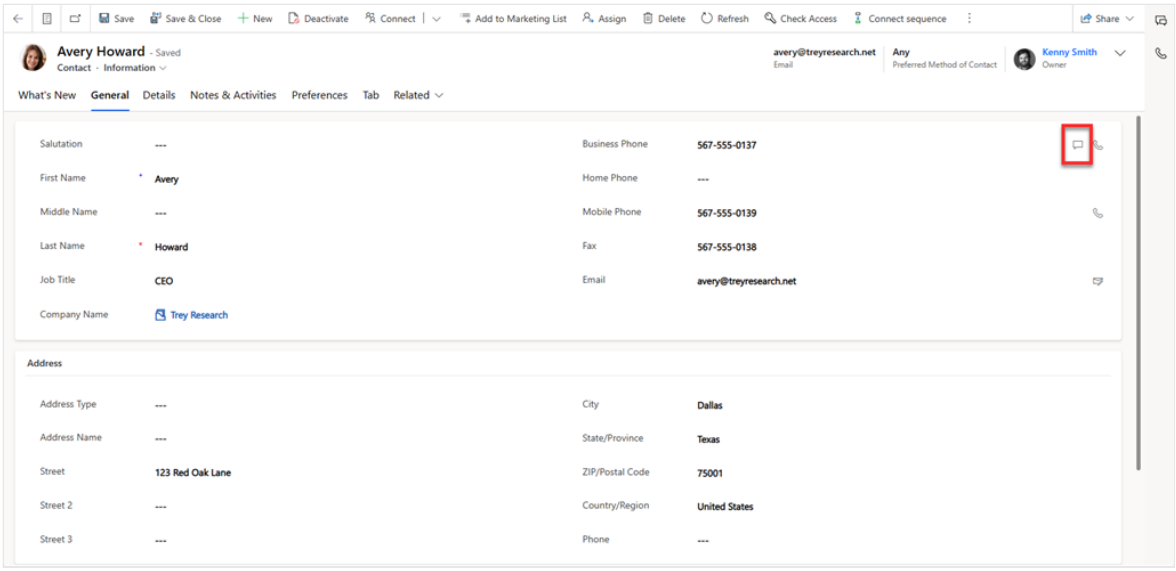
Add the text messaging to phone number fields in custom forms, allowing sellers to send text messages directly from within the form.

Add text message option

1. Sign in to your sales app and go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. Under **Components** > **Entities**, choose an entity and then select **Forms**.
3. From the list of forms, select the form to which you want to add the text message option.
4. Under the **Summary** section, double-click the phone field, such as **Business phone** or **Mobile phone**.
5. In the **Field Properties** dialog, go to the **Controls** tab and then select **Add control**.
6. In the **Add Control** dialog, select and add the **Sales phone number control** option.

   The **Sales phone number control** option is added to the list of controls.
7. Select the devices (**Web**, **Tablet**, and **Phone**) you want the control to appear on.
8. Save and publish the form.

   The customizations are published. The text message option is available for the phone number field you've selected in your custom form. The following image shows an example of including the text message option in the **Business Phone** section of the **Information** form for contacts.



See also

Engage with customers through text messages

Configure SMS provider

Configure in-app marketing settings

Article • 01/25/2023

Configure the in-app marketing settings to define various aspects of campaigning. For example, you can specify whether you want to create a campaign response automatically when a customer responds to a campaign email.

License and role requirements

License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System administrator See Predefined security roles for Sales

To configure in-app marketing settings

Depending on the Dynamics 365 Sales license you have, select one of the following tabs for specific information:

Sales Premium and Sales Enterprise

1. In the Sales Hub app, go to the **Change Area** and select **App Settings**.
2. Under **Sales Administration**, select **Marketing settings**.
3. Configure the following settings in accordance with your requirements.

Setting	Description
Create campaign responses for incoming email	If this option is set to **Yes**, the app automatically creates a campaign response when an email is received in response to a specific marketing campaign. **Note:** If a customer sends multiple replies to campaign email, only the first reply is tracked as a campaign response. **Default:** Yes

Setting	Description
Set "Do Not Send Marketing Material" option when an unsubscribe email is received	If this option is set to **Yes**, when an unsubscribe email is received, the preference setting for the account, contact, or lead gets updated automatically to not send marketing materials. If this option is set to **No**, the unsubscribe email will be ignored and the user will continue to get marketing email communications. If you're providing an option to unsubscribe in the campaign emails, we recommend that you set this option to **Yes**. More information: Let your customers unsubscribe from marketing communications **Default:** No
Send acknowledgement to customers when they unsubscribe	If **Set "Do Not Send Marketing Material" option when an unsubscribe email is received** is set to **Yes**, you can use this setting to send a response to customers when they unsubscribe.
Template for Acknowledgement Email	If the previous two options are set to **Yes**, select an email template to use for responding to customers when they unsubscribe.

4. Save the changes.

Business process flows overview

Article • 03/10/2023

You can help ensure that people enter data consistently and follow the same steps every time they work with a customer by creating a business process flow. For example, you might want to create a business process flow to have everyone handle customer service requests the same way, or to require that people get approval for an invoice before submitting an order. Business process flows use the same underlying technology as other processes, but the capabilities that they provide are very different from other features that use processes. To learn how to create or edit a business process flow, go to Create a business process flow.

Watch a short video about business process flows.

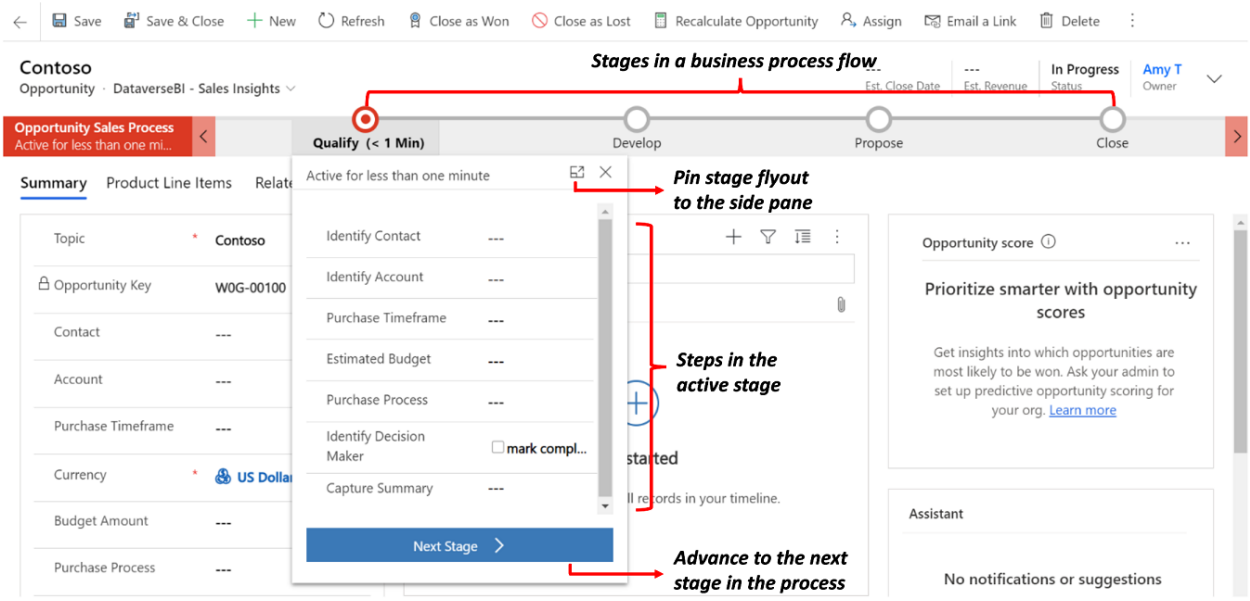
Why business process flows are used

Business process flows provide a guide for people to get work done. They provide a streamlined user experience that leads people through the processes their organization has defined for interactions that need to be advanced to a conclusion of some kind. This user experience can be tailored so that people with different security roles can have an experience that best suits the work they do.

Use business process flows to define a set of steps for people to follow to take them to a desired outcome. These steps provide a visual indicator that tells people where they are in the business process. Business process flows reduce the need for training because new users don't have to focus on which table they should be using. They can let the process guide them. You can configure business process flows to support common sales methodologies that can help your sales groups achieve better results. For service groups, business process flows can help new staff get up-to-speed more quickly and avoid mistakes that could result in unsatisfied customers.

What business process flows can do

With business process flows, you define a set of *stages* and *steps* that are then displayed in a control at the top of the form.



Each stage contains a group of steps. Each step represents a column where data can be entered. You can advance to the next stage by using the **Next Stage** button. In the unified interface, you can work with a business process flow stage inside the stage flyout or you can pin it to the side pane. Business process flows doesn't support expanding the stage flyout to the side pane on mobile devices.

You can make a step *required* so that people must enter data for a corresponding column before they can proceed to the next stage. This is commonly called "stage-gating". If you are adding a business-required or system-required column to a business process flow stage, we recommend that you add this column to your form as well.

Business process flows appear relatively simple compared to other types of processes because they don't provide any conditional business logic or automation beyond providing the streamlined experience for data entry and controlling entry into stages. However, when you combine them with other processes and customizations, they can play an important role in saving people time, reducing training costs, and increasing user adoption.

> **Note**
>
> If any stage, including the current stage, has required columns (except hidden columns), you must fill in the columns on those stages *before* you save the form or move to a new stage. Disabled columns will still block stage navigation if they are empty and required.

Business process flows integrated with other customizations

When you or your user enters data using business process flows, the data changes are also applied to form columns so that any automation provided by business rules or form scripts can be applied immediately. Steps can be added that set values for columns that are not present in the form and these columns will be added to the `Xrm.Page` object model used for form scripts. Any workflows that are initiated by changes to columns included in a business process flow will be applied when the data in the form is saved. If the automation is applied by a real-time workflow, the changes will be immediately visible to the user when the data in the form is refreshed after the row is saved.

Although the business process flow control in the form does not provide any direct client-side programmability, changes applied by business rules or form scripts are automatically applied to business process flow controls. If you hide a column in a form, that column will also be hidden in the business process flow control. If you set a value by using business rules or form scripts, that value will be set within the business process flow.

Concurrent process flows

Concurrent business process flows let customizers configure multiple business processes and associate them with the same starting row. Users can switch between multiple business processes running concurrently, and resume their work at the stage in the process that they were on.

System business process flows

The following business process flows are included. To understand how business process flows work, review these system business process flows:

- Lead to Opportunity Sales Process
- Opportunity Sales Process
- Phone to Case Process

Multiple tables in business process flows

You can use a business process flow for a single table or span multiple tables. For example, you may have a process that begins with an opportunity, then continues to a quote, an order, and then an invoice, before finally returning to close the opportunity.

You can design business process flows that tie together the rows for up to five different tables into a single process so that people using the app can focus on the flow of their

process rather than on which table they are working in. They can more easily navigate between related table rows.

Multiple business process flows are available per table

Not every user in an organization may follow the same process and different conditions may require that a different process be applied. You can have up to 10 active business process flows per table to provide appropriate processes for different situations.

Control which business process flow will be applied

You can associate business process flows with security roles so that only people with those security roles can see or use them. You can also set the order of the business process flows so that you can control which business process flow will be set by default. This works in the same way that multiple forms for a table are defined.

When someone creates a new table row, the list of available active business process definition is filtered by the user's security role. The first activated business process definition available for the user's security role according to the process order list is the one applied by default. If more than one active business process definitions is available, users can load another from the Switch Process dialog. Whenever processes are switched, the one currently rendered goes to the background and is replaced by the selected one, but it maintains its state and can be switched back. Each row can have multiple process instances associated (each for a different business process flow definition, up to a total of 10). On form load, only one business process flow is rendered. When any user applies a different process, that process may only load by default for that particular user.

To make sure a business process is loaded by default for all user (behavior equivalent to "pinning" the process), a custom Client API script (web resource) can be added on form load that specifically loads an existing business process instance based on the business process definition ID.

Business process flow considerations

You can define business process flows only for those tables that support them. You also need to be aware of the limits for the number of processes, stages, and steps that can be added.

Business process flows that call a workflow

You can call on-demand workflows from inside a business process flow. You can configure this from the new business process flow designer by dragging a workflow component to a process stage or to the Global Workflows section. For more information about using workflows in business process flows, see Blog: Business process flow automation in Dynamics 365.

When you include a workflow that you want to trigger on Stage Exit of a stage in your business process flow, and that stage is the last stage in the flow, the designer gives the impression that the workflow will be triggered when that stage is completed. However, the workflow won't be triggered because a stage transition does not take place. You won't receive a warning or error preventing you from including the workflow on the stage. When a user interacts with the business process flow, finishing or abandoning the process does not result in a stage transition, and therefore the workflow is not triggered. Consider the following examples:

- You create a business process flow with two stages, S1 connects to S2, with a workflow on stage S2 and set the trigger to **Stage Exit**.
- You create a business process flow with three stages, S1 connect to S2, then S2 branches to S3. You include a workflow on S2 and set the trigger to **Stage Exit**.

The workflow won't trigger in either case. To work around this issue, you can add a Global Workflow and add the workflow you want to trigger to it so that the workflow is triggered for the business process rather than a stage of the process. You can set the trigger for a Global workflow to Process Abandoned or Process Completed to cause the workflow to trigger when a user abandons or completes the business process.

Tables that can use business process flows

All custom tables can use business process flows. The following standard tables can also use business process flows:

- Account
- Appointment
- Campaign
- Campaign Activity
- Campaign Response
- Competitor
- Contact
- Email

- Entitlement
- Fax
- Case
- Invoice
- Lead
- Letter
- Marketing List
- Opportunity
- Phone Call
- Product
- Price List Item
- Quote
- Recurring Appointment
- Sales Literature
- Social Activity
- Order
- User
- Task
- Team

To enable a custom table for business process flows, select the **Business process flows (columns will be created)** check box in the table definition. Note that you can't undo this action.

> ⓘ **Note**
>
> If you navigate to the business process flow stage that contains the `Social Activity` table and choose the **Next Stage** button, you'll see the **Create** option. When you choose **Create**, the **Social Activity** form loads. However, because `Social Activity` isn't valid for `Create` from the app user interface, you won't be able to save the form and you'll see the error message: "Unexpected error."

Maximum number of processes, stages, and steps

To ensure acceptable performance and the usability of the user interface, there are some limitations you need to be aware of when you plan to use business process flows:

- There can be no more than 10 activated business process flow processes per table.
- Each process can contain no more than 30 stages.

- Multi-table processes can contain no more than five tables.

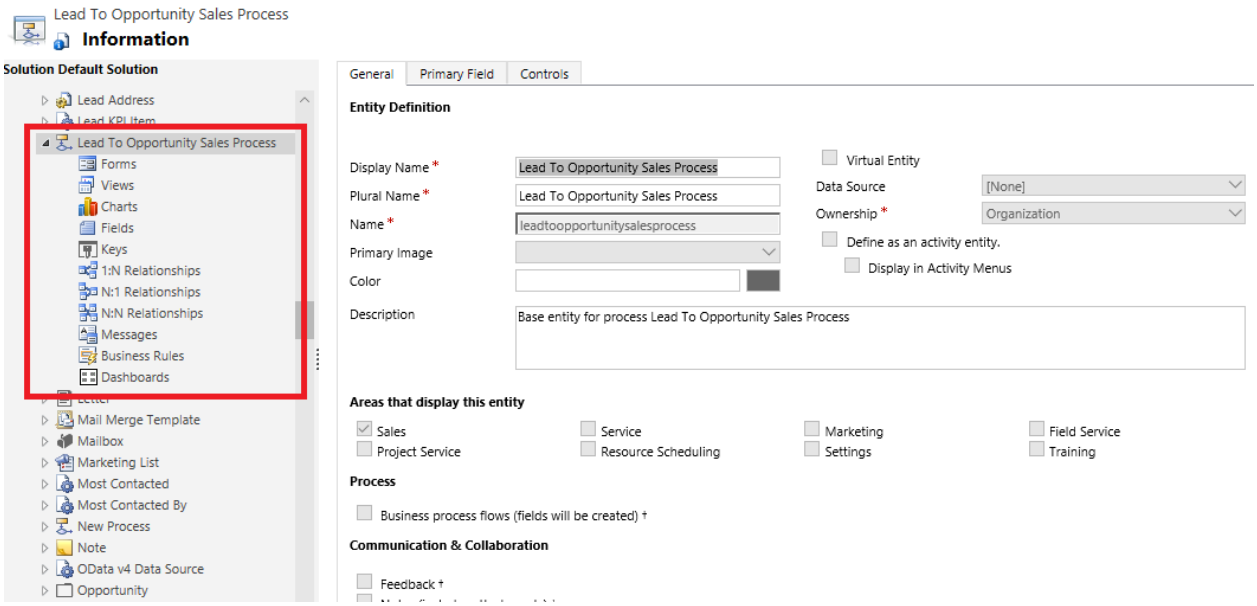
Business process flow table customization support

Introduced in the Dynamics 365 (online), version 9.0 update, business process flow tables can appear in the system so that table row data can be made available in grids, views, charts, and dashboards.

Use business process flow table rows with grids, views, charts, and dashboards

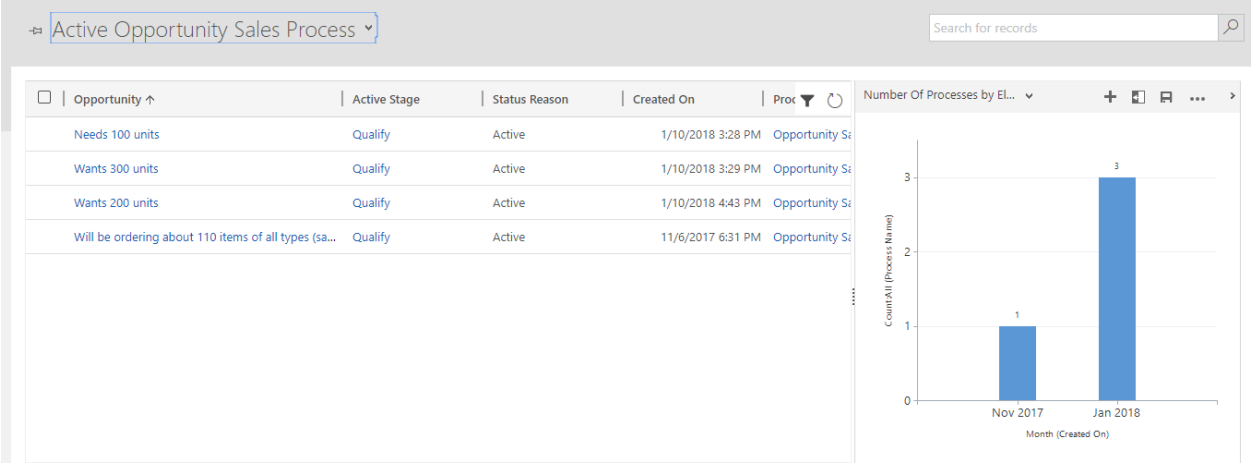
With business processes flows available as a table, you can now use advanced finds, views, charts, and dashboards sourced from business process flow data for a given table, such as a lead or opportunity. System administrators and customizers can create custom business process flow grids, views, charts, and dashboards similar to those created with any other table.

Business process flows, such as **Lead To Opportunity Sales Process**, appear as a customizable table in solution explorer.



To access a default business process flow view, open solution explorer, expand **Tables** > expand the process that you want, such as **Lead To Opportunity Sales Process**, select **Views**, and then select the view that you want.

Several default views are available that you can view as a chart, such as the **Active Opportunity Sales Process** view.



Interact with the business process flow table from a workflow

You can also interact with business process flow tables from a workflow. For example, you can create a workflow for the Business Process Flow table row to change the Active Stage when a column on the Opportunity table row is updated. For more information about how to do this, see Automate business process flow stages using workflows.

Run business process flows offline

You can use business process flows offline if the following conditions are met:

- The business process flow is used from a Power Apps app.
- The Power Apps app is enabled for offline use.
- The business process flow has a single table.

Specifically, the three commands that are available for a business process flow when the Power Apps app is offline are:

- Next stage
- Previous stage
- Set Active stage

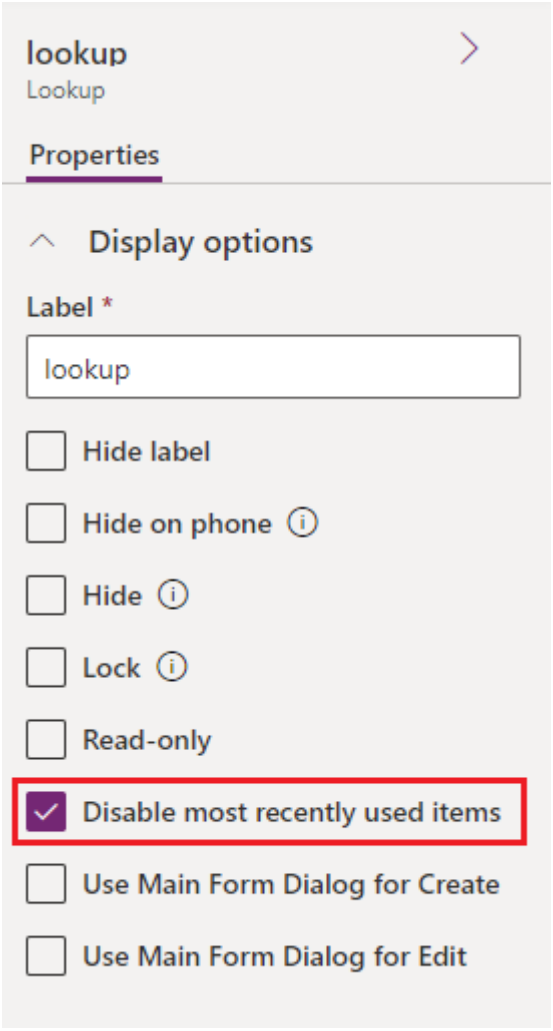
Lookup column in a business process flow stage

Recent rows are visible in a lookup column in the unified interface. To prevent the most recently used items from showing up in the lookup, follow these steps:

1. Sign in to Power Apps.

   To learn more about using the Power Apps interface, go to Get started with Power Apps.

2. Select the correct environment from the top right.
3. On the left navigation pane, select **More** > **Tables**.
4. Search for your table and select your business process flow table.
5. In the **Data Expressions** group, select **Forms**.
6. On the **Forms** screen, select **Information**.
7. Select your lookup data step from the **Tree view**, and then check **Disable most recently used items**.



8. Save and then publish.

Limitations of using business process flow tables

- Currently, you can't create custom forms for tables based on a business process flow.
- If a solution includes a business process flow table, the business process flow table must be manually added to the solution before you export it. Otherwise, the

business process flow table won't be included in the solution package. To learn more, go to create and edit tables.

- Adding the process table to a model-driven app may result in limited functionality. To learn more, go to creating and editing business process flows.
- Business process flows will show the name of the BPF instance, which is set at the time that the BPF instance is created. This means if the name in the BPF definition changes, new BPF instances will display the updated name, but older BPF instances will display the original name. It also means localized BPF definition names aren't displayed.

See also

- Get started with Power Apps
- Get started with Power Apps
- Whitepaper: Process Enablement with Dynamics 365

Customize business process flows

Article • 03/30/2022

With Dynamics 365 Sales, you can help ensure that users enter data consistently and follow the same steps every time they work with a customer by creating a business process flow. For example, you might want to create a business process flow to have everyone handle customer service requests the same way, or to require that users get approval for an invoice before submitting an order.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	System Administrator or System Customizer More information: Predefined security roles for Sales

How do business process flows help?

Business process flows use the same underlying technology as other processes, but the capabilities that they provide are very different from other features that use processes.

With business process flows, you define a set of stages and steps that are displayed in a control at the top of a form. Each stage contains a group of steps. Each step represents a field where data can be entered. Users advance to the next stage by using the **Next Stage** button. You can make a step required so that users must enter data for the corresponding field before they can proceed to the next stage. This is called "stage-gating."

Business process flows appear relatively simple compared to other types of processes. This is because they do not provide any conditional business logic or automation beyond providing a streamlined experience for data entry and controlling entry into stages. However, when you combine them with other processes and customizations, they can play an important role in saving users time, reducing training costs, and increasing user adoption.

Entities available for business process flows

Entities are sets of records. You can use the following entities to create business process flows in Dynamics 365 Sales Professional:

- Account
- Contact
- Invoice
- Lead
- Opportunity
- Quote

You can use the following entities in additional stages added to a business process flow:

- Account
- Appointment
- Contact
- Email
- Invoice
- Lead
- Opportunity
- Phone Call
- Product
- Quote
- Task
- Team
- User

Create a business process flow

Depending on the license you have, select one of the following tabs for more information:

Sales Premium and Sales Enterprise

1. From the Sales Hub app, select the **Settings** icon , and then **Advanced settings**.
2. Select **Settings** > **Customizations** > **Customize the System**, and then select the customization area that you want.
3. Follow the instructions in Create a business process flow to create or customize a business process flow.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Customize forms
Customize views

Assistant for Dynamics 365 Sales

Article • 10/18/2023

The assistant (formerly known as Relationship Assistant) is part of Dynamics 365 Sales. The assistant keeps an eye on your daily actions and communications, and helps you stay on top of your day with insight cards that are displayed prominently throughout the application to provide tailored and actionable insights.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

How can I use the assistant feature?

Depending on your role, you can use the text message feature as described in the list:

System administrator or any similar role:

- Configure the assistant for your organization. More information: Configure the assistant
- Create custom insight cards. More information: Create custom insight cards
- Edit insight cards. More information: Edit insight cards
- Optimize the ranking of insight cards. More information: Optimize ranking of insight cards
- Add the assistant widget to custom forms. More information: Add assistant widget to custom forms
- Disable teaser cards. More information: Disable teaser cards

Sales manager, seller, or any other similar role:

- Use the assistant to stay on top of your day. More information: Use the assistant to guide customer communications
- Manage your insight cards by turning on or off. More information: Turn on or off insight cards
- Reference of default insight cards. More information: Insight cards reference

Assistant studio tutorials

Assistant tutorials are available for you to learn how to create custom insight cards by using minimal or no code through Power Automate. Using the tutorials, you learn from

creating a basic custom insight, a "hello world" equivalent, and gradually increase the complexity as you go along.

More information: Assistant studio tutorials for Dynamics 365 Sales Insights

Configure the assistant

Article • 10/18/2023

Configure the assistant to help sellers track their daily actions and communications through a collection of actionable insight cards.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure the standard and premium assistant

The assistant in Dynamics 365 Sales helps sellers track their daily actions and communications through a collection of actionable insight cards.

The assistant is available in two forms:

- **Assistant (standard)**: This feature is included with Dynamics 365 Sales Enterprise. The assistant comes with a set of out-of-the-box standard cards. As an administrator, you can configure which insight cards to present to users to help them stay on top of their day. Some insight cards are enabled by default; you can enable, disable, or customize the standard cards. To configure the standard assistant, see Standard assistant.
- **Assistant (premium)**: The premium assistant is available in Sales with the Dynamics 365 Sales Premium license. With premium assistant capabilities, you can use Power Automate directly from the assistant studio to create custom insight cards, tailored to the specific needs of your team. To configure the premium assistant, see Premium assistant.

Standard assistant

Prerequisites

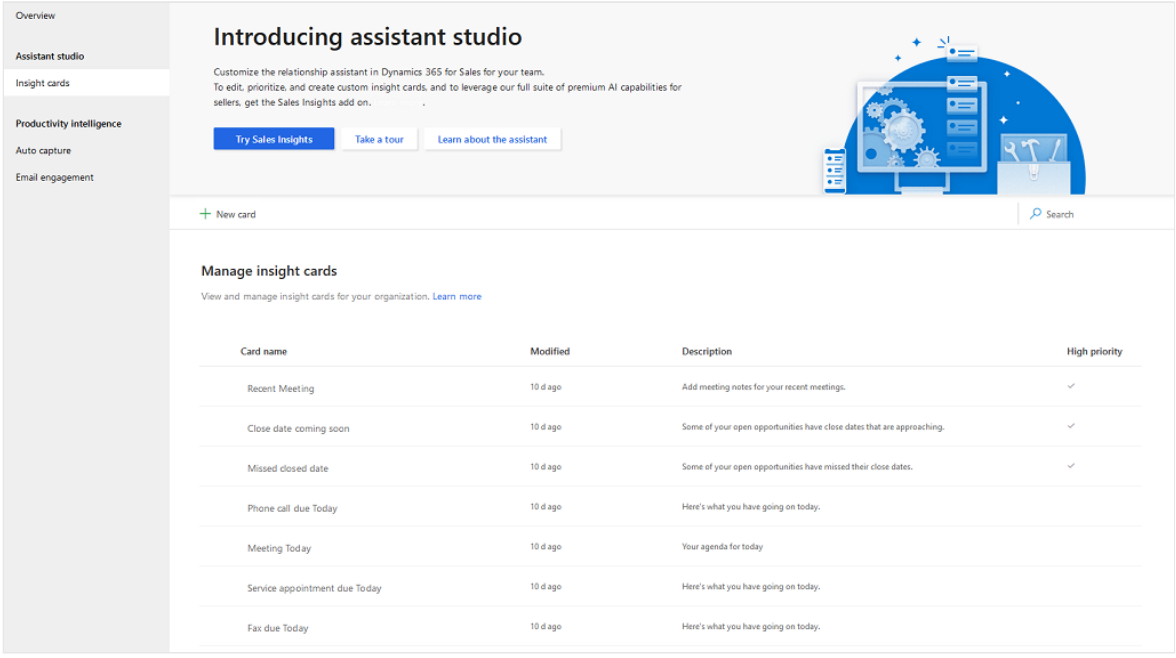
Assign user privileges to give access to the assistant features. The privileges required to access Sales Premium features are automatically enabled for all out-of-the-box security roles, but they're initially disabled for all custom roles. If you enable any Sales Premium features, you must check the settings listed in the following table to help ensure that your users can access those features, and to help ensure that other features don't stop working because of privilege cascades related to these features.

Privilege	Security role tab	Description and requirements
Action card	**Core records**	Gives the ability to view and interact with insight cards that are generated by the assistant. **Warning:** If the assistant is enabled, all users *must* have a role with read access for this privilege. Because of cascading, users without this privilege will lose access to many Dynamics 365 Sales features when the assistant is enabled.
Action card user settings	**Core records**	Gives the ability to view and change user preferences for insight cards that are generated by the assistant. **Warning:** If the assistant is enabled, all users *must* have a role with read access for this privilege. Because of cascading, users without this privilege will lose access to many Dynamics 365 Sales features when the assistant is enabled.

More information: Security roles and privileges

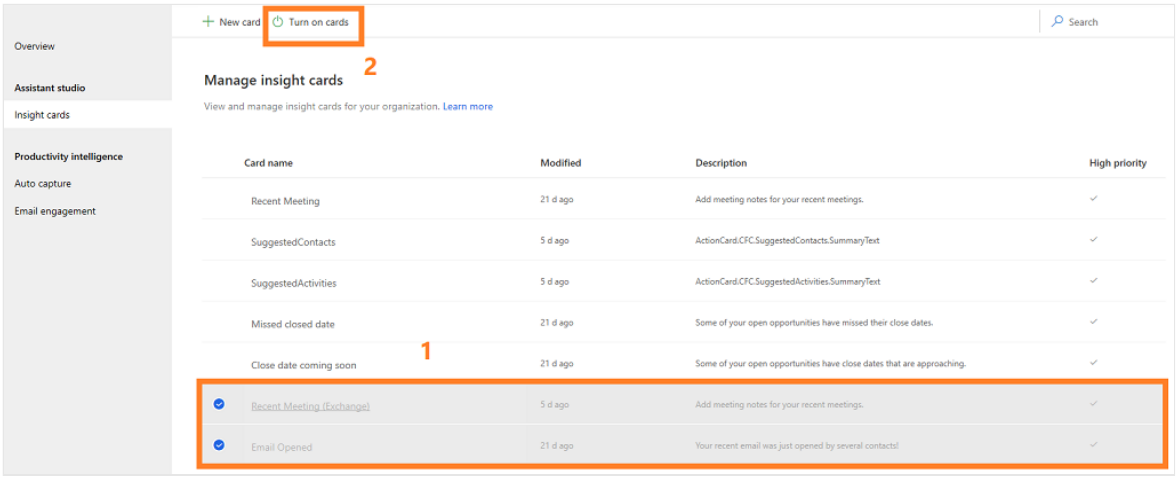
Configure and manage standard insight cards

1. On the site map under **Assistant**, select **Insight cards**.



2. To turn on (enable) the insight cards, select the cards that are shaded, and then select **Turn on cards**.

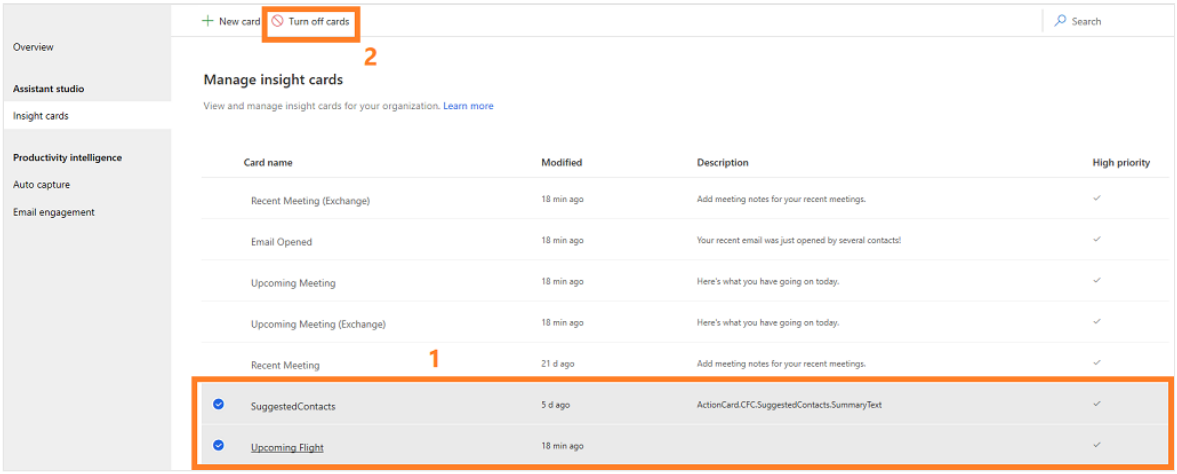
   In this example, we've selected the cards **Recent Meetings (Exchange)** and **Email Opened**.



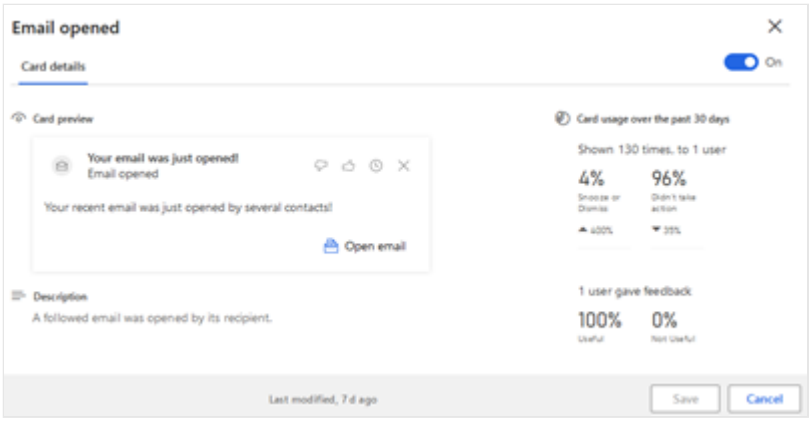
   More information: Turn on or off the insight cards

3. To turn off (disable) the insight cards, select the cards that have been turned on, and then select **Turn off cards**.

   In this example, we've selected the cards **SuggestedContacts** and **Upcoming Flight**.



4. To see a preview of a card, get more details about it—such as a description and the time it was last modified—or turn it on or off, select the card.



Sellers can also set their own personal preferences for their insight cards. They can't add cards that you disable here, but they can disable cards that you've enabled if they don't find them useful. They can also change the configuration settings for those cards that have them, though your settings will be the defaults. More information: Turn on or off the insight cards

Premium assistant

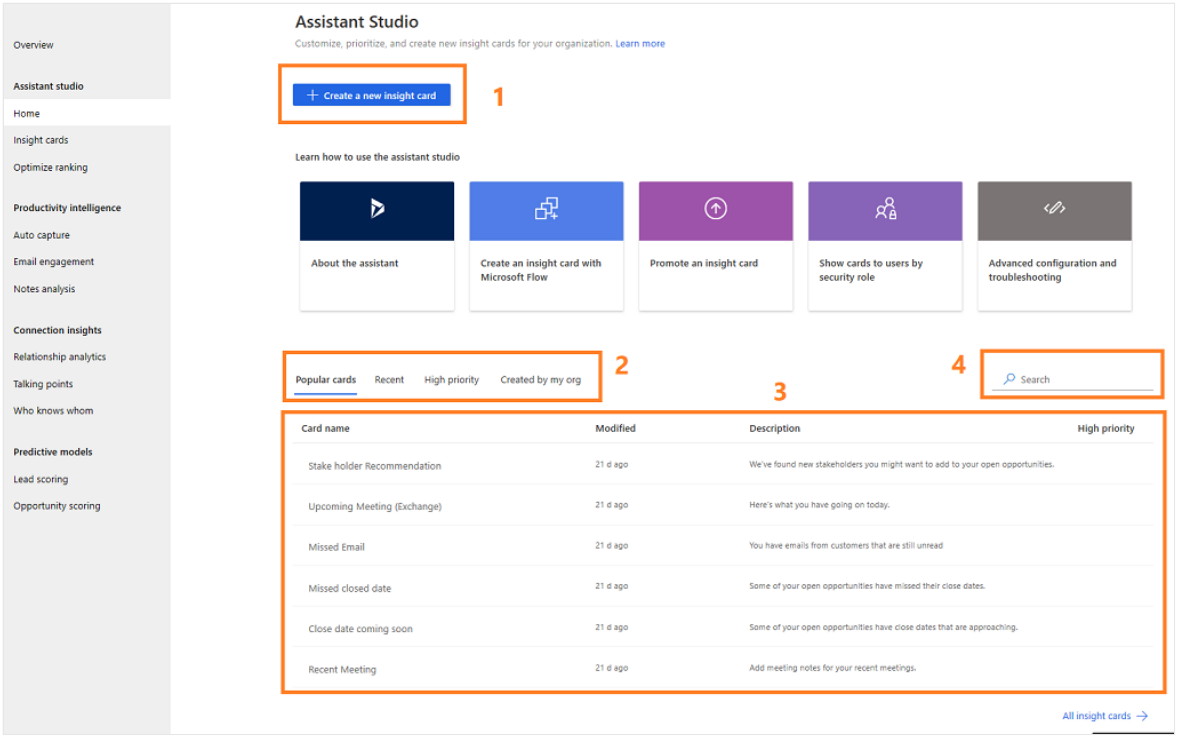
The premium assistant that's part of the Sales Premium license offers advanced capabilities, including:

- Creating custom insight cards.
- Prioritizing individual cards.
- Optimizing card ranking.
- Assigning cards to users by roles.
- Turn on or off insights cards.
- Edit flow of an insight card.
- View card usage metrics.

> **Note**
>
> You can create custom cards not only from the assistant studio but also directly by using the solution. More information: **Create custom cards in the assistant**

1. Verify that you have enabled and configured premium Sales Premium features
2. Go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
3. On the site map under **Assistant**, select **Home**.

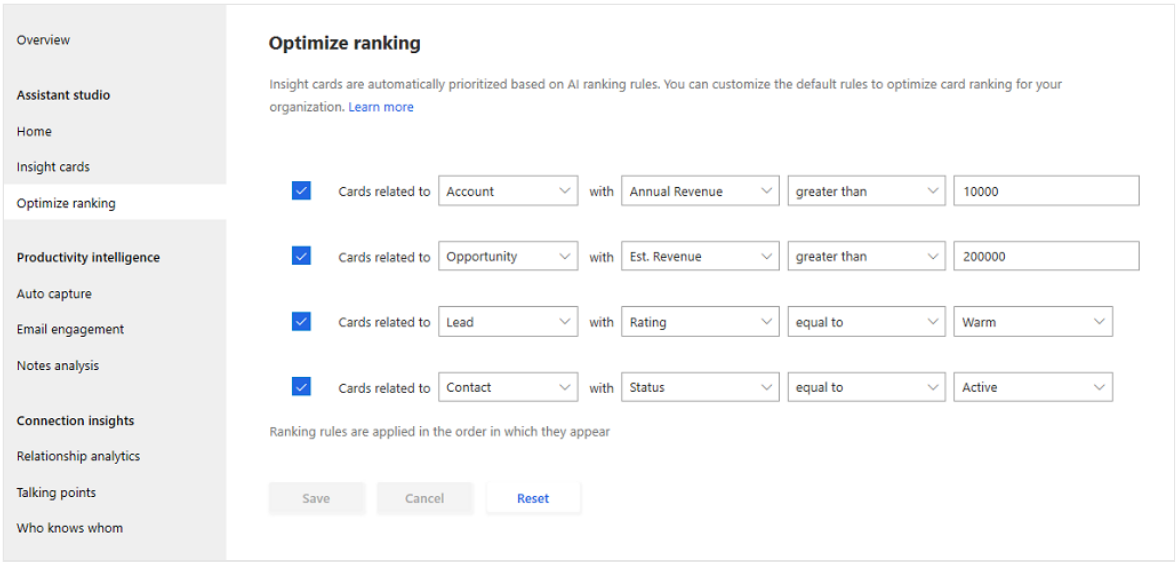
4. On the **Home** tab (**Assistant Studio** page), you can perform actions as described in the following table.



Number	Description
1	Create cards that are customized for your organization by using Power Automate. More information: Creating custom insight cards
2	Quickly view cards by using tabs to view cards that are most popular, recently used, high in priority, and created by your organization.
3	Table with card details displays the cards that are available in your organization. More information: Edit insight cards
4	Search for cards that you want to view or manage.

5. On the **Optimize ranking** tab, you can create rules to prioritize cards to appear in the application.

   The following is an example of the **Optimize ranking** tab:

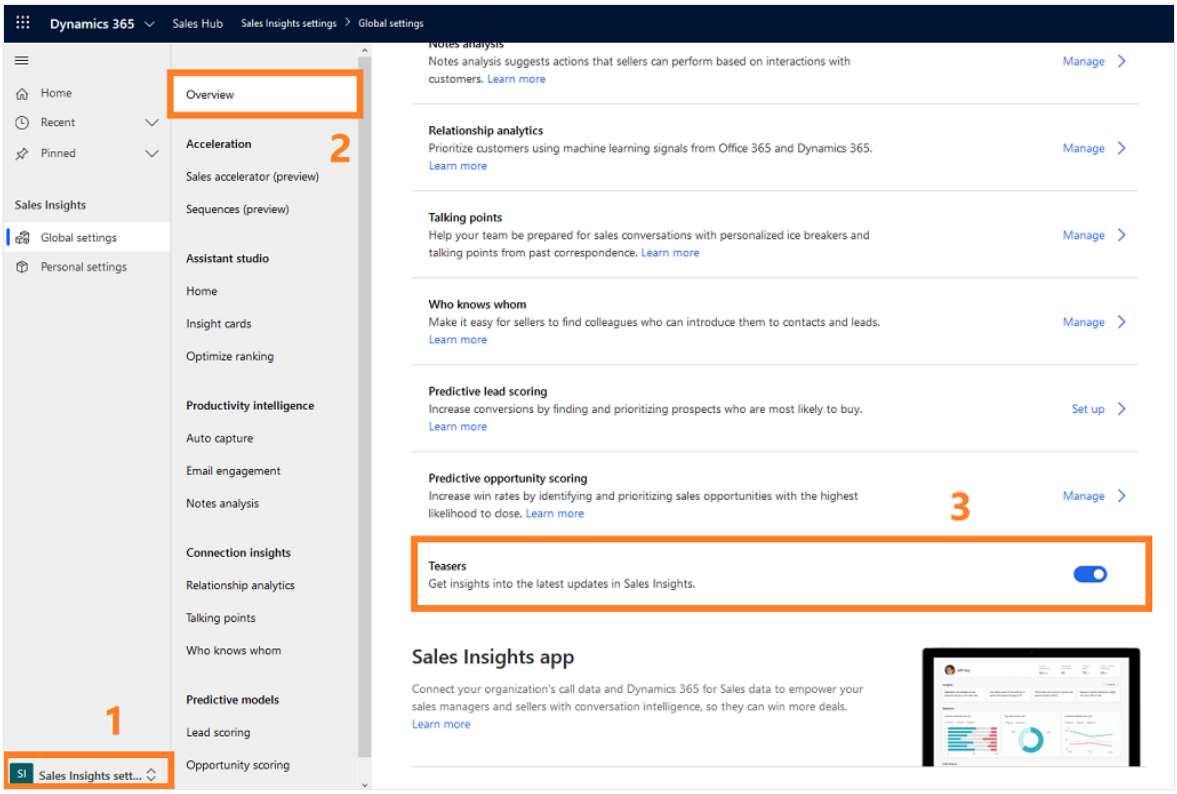


To learn more, see Optimize ranking of insight cards.

Disable teasers

The updates in Sales Insights are displayed to sellers as teasers in the assistant. By default, teasers are enabled in your organization. However, you can disable them if you don't want to display the teasers. To disable, follow these steps:

1. Sign in to the Dynamics 365 Sales Hub app, and go to **Change area** > **Sales Insights settings**.
2. On the site map, select **Overview**.
3. In the **Teasers** section, turn off the toggle.



Teasers will be disabled in your organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Introduction to administer Sales Insights
Create insight cards
Edit insight cards
Optimize ranking of insight cards
Create custom cards in Assistant
Assistant FAQs
Sales Insights privacy notice

Create custom insight cards

Article • 09/11/2023

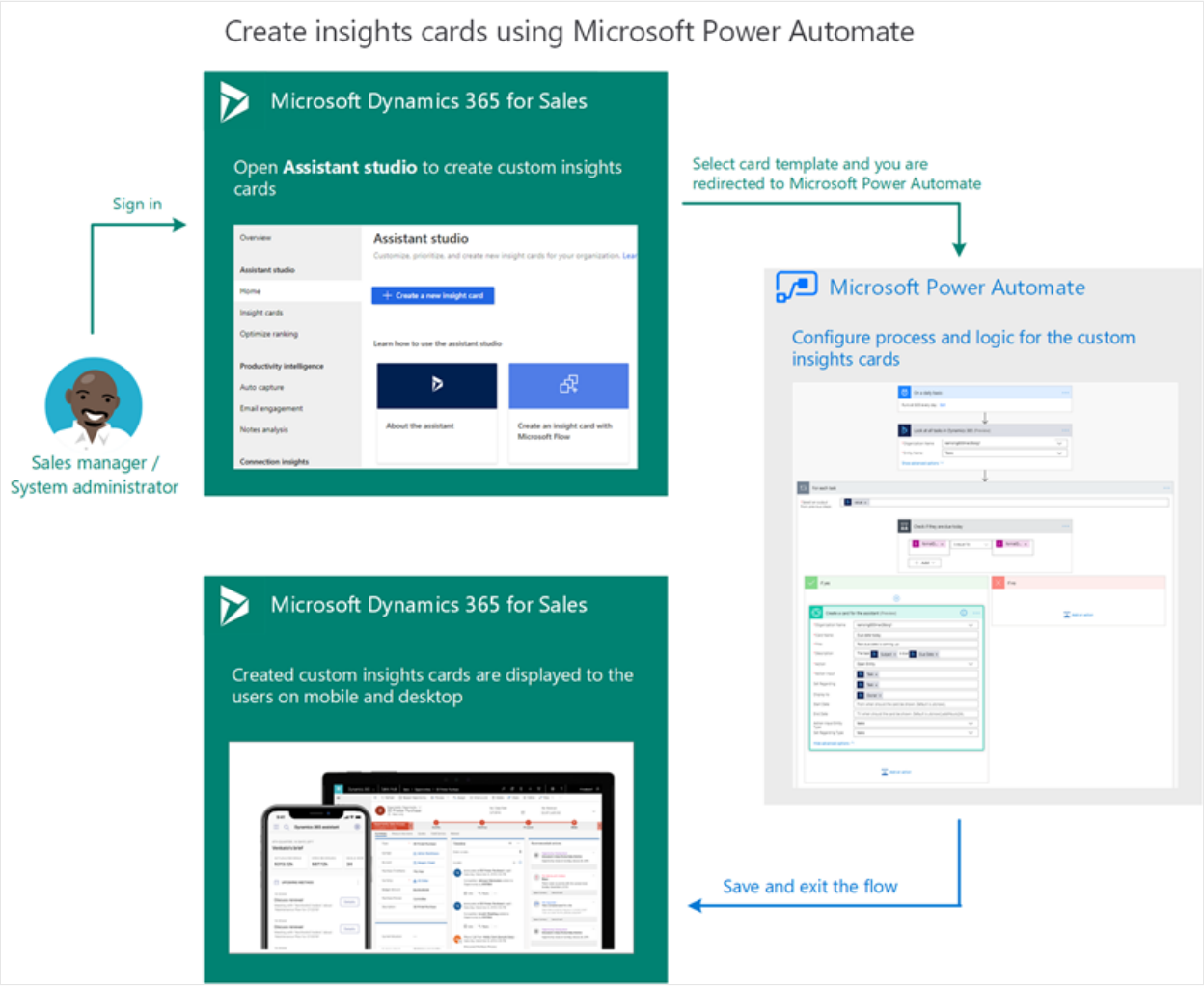
As a system administrator or sales manager, you can create your own suggested actions that are more relevant to your organization through the assistant management feature. By using events and conditions, you can customize the circumstances on when to create suggestions and push information into the seller's workflow. This helps the sellers to close deals faster.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

Create a custom insight card

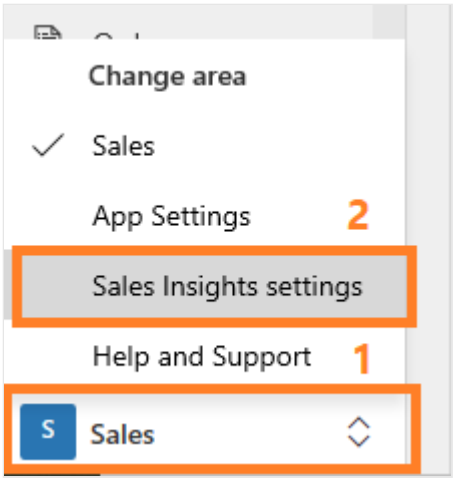
The following diagram illustrates a high-level flow of insight card creation:



In this procedure, we will show as an example how to create an insight to act when a property is updated. Let's create the **When property is updated, create an insight to act** card.

> ⓘ Note
>
> - To create custom insight cards with the assistant studio, ensure that Microsoft Power Automate is installed.
> - The custom insight card is displayed in the list of insight cards in **Assistant studio** only after a card is generated based on the defined flow. For example, you defined a flow to display a card when an opportunity is created with an estimated value above $5,000. When an opportunity is created for the first time in the organization with the estimated value of $6,000, the card is generated and will be available in the list of insight cards in **Assistant studio**.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.



2. On the site map, under **Assistant**, select **Home** to go to the **Assistant Studio** page.

> **Tip**
>
> Alternatively, on the **Sales Insights settings** page, select **Manage** from the **Assistant (full capabilities)** section to go to the **Assistant Studio** page.

3. On the Assistant Studio page, select **+ Create a new insight card**.

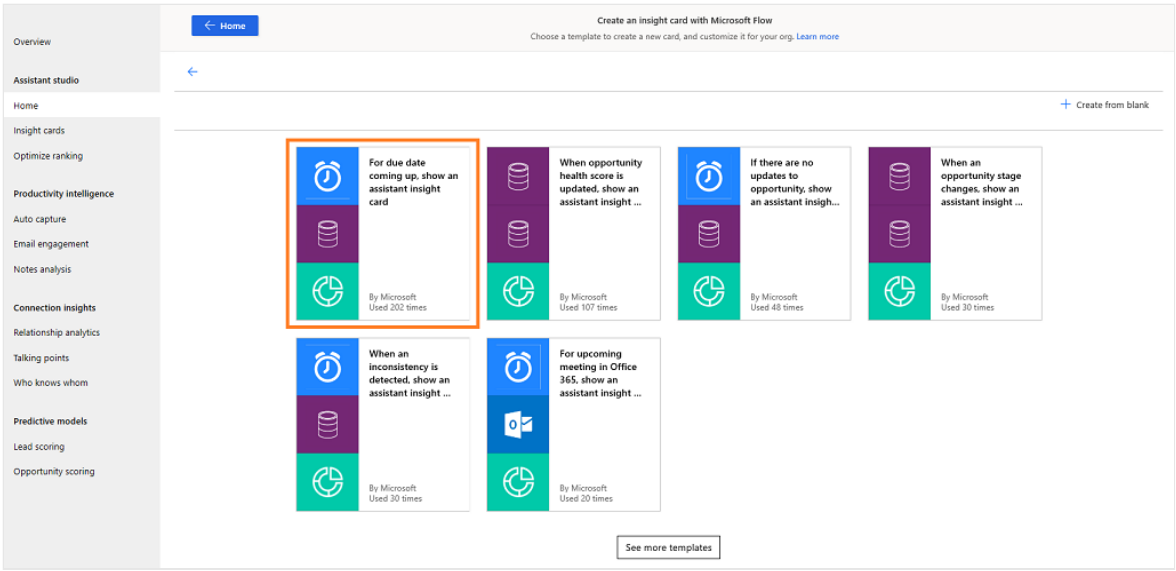
   A template selection page opens.

> **Note**
>
> We recommend you use templates to create insight cards.

4. Select a template to create the card.

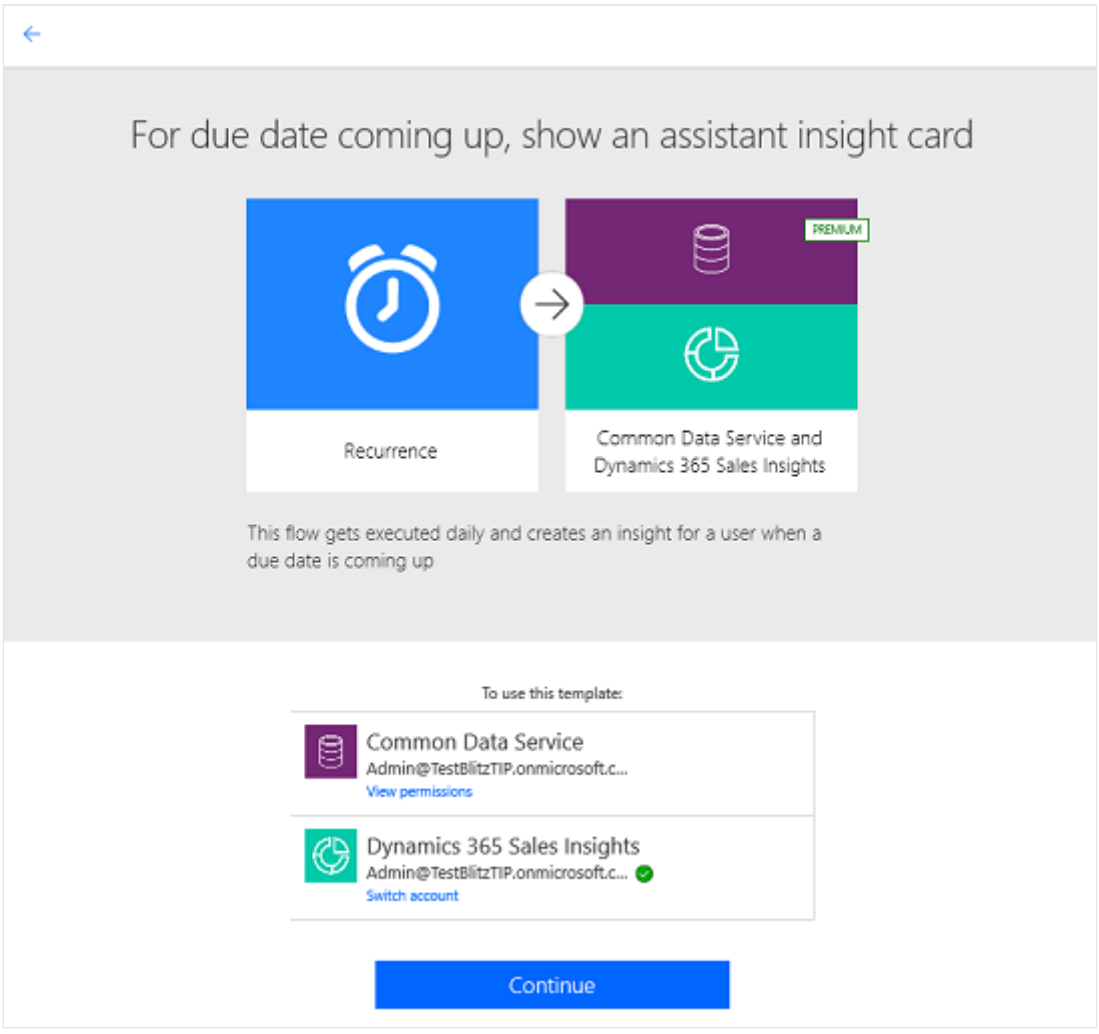
> **Note**
>
> If you want to create insight cards from an empty flow, select **Create from blank**. To learn more, see Create a flow in Power Automate.

   In this example, we selected the **Due date is coming up** template to create the custom card.



The flow validates your accounts of the applications that the flow is going to connect. In this example, the flow is connecting to Microsoft Dataverse and Sales Insights for Dynamics 365 Sales. Once you are successfully signed in, you can continue creating the card.

If any of the accounts are not valid, the **Continue** button appears dimmed and you cannot proceed. Select **Update** to sign in with a valid credential.

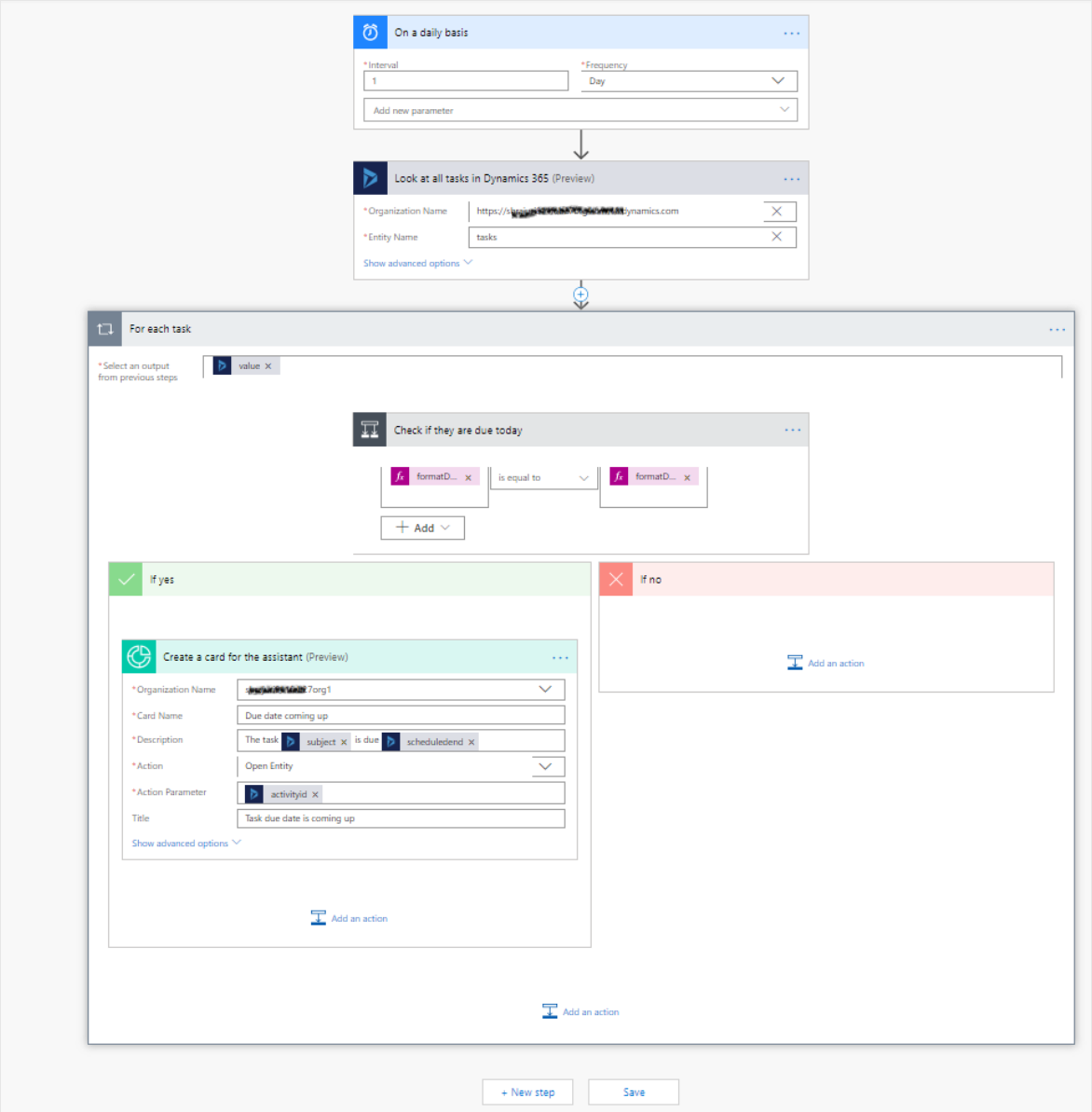


5. Select **Continue**.

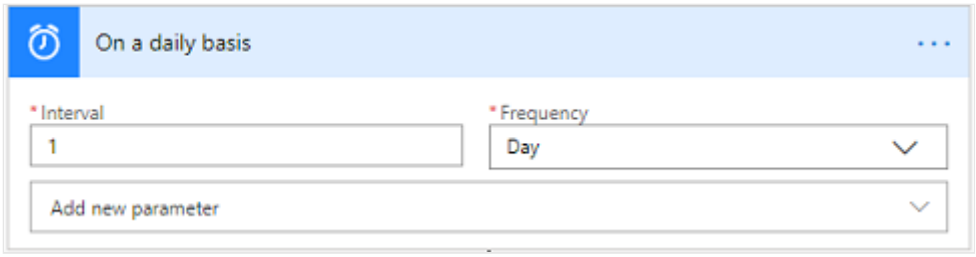
   The predefined flow is displayed. In this example, we are creating an insight when a due date is coming up for an opportunity. There are three steps associated with the predefined flow with the prepopulated data:

   - **Step 1**: Create schedule
   - **Step 2**: Define operation
   - **Step 3**: Define control

   You can edit the steps according to your requirements.



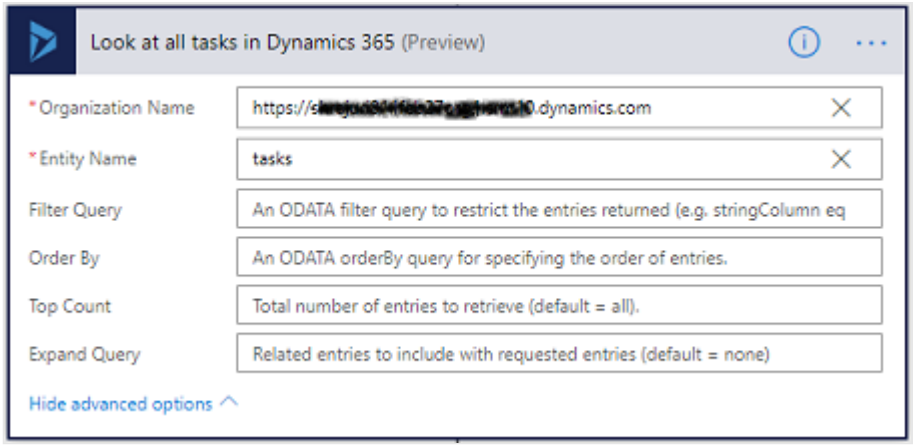
6. In step 1, a schedule for when you want to display the card is defined. In this example, the frequency is set to daily and you can add other parameters such as time zone.



If you want to change the flow, select the plus (+) icon on the connector that links to the next step and then select **Add an action** as per your organizational requirements. To learn more, see Add multiple actions and advanced options to a flow.

7. In step 2, an operation is defined to get records from an organization to the selected entity. In this example, we have selected the entity as task and the organization.

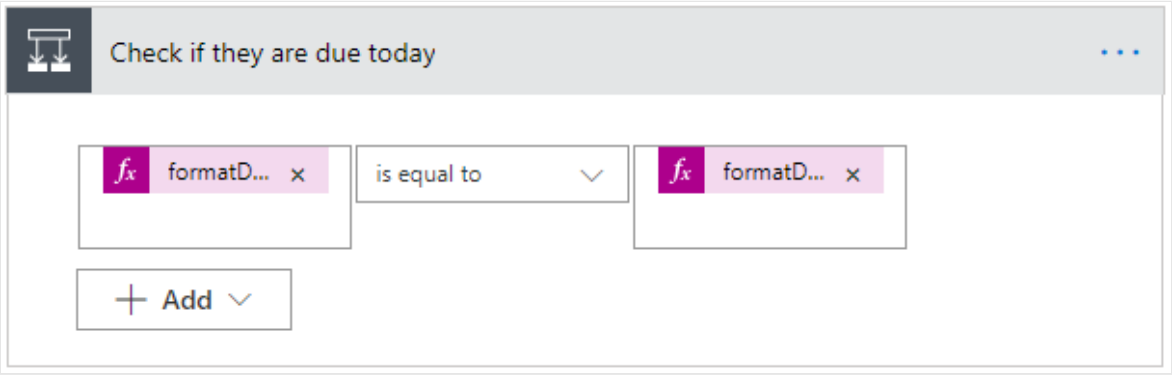
   Select **Show advanced options** to further update the step by configuring the parameters **Filter Query**, **Order By**, **Top Count**, and **Expand Query**.



8. In step 3, select an **apply to each** control and enter the necessary information.

   a. The **Value** token is added to the **Select an output from previous steps** box. This value is obtained from the previous step where we defined the entity.

   b. The condition step is defined to match the date of the task that is defined in step 2 to the current date to trigger the condition. Here, we are defining the value as **formatDateTime(item()?['scheduledend'],'yyyy-MM-dd')**, the condition as **is equal to**, and the threshold value as **formatDateTime(utcNow(),'yyyy-MM-dd')**.

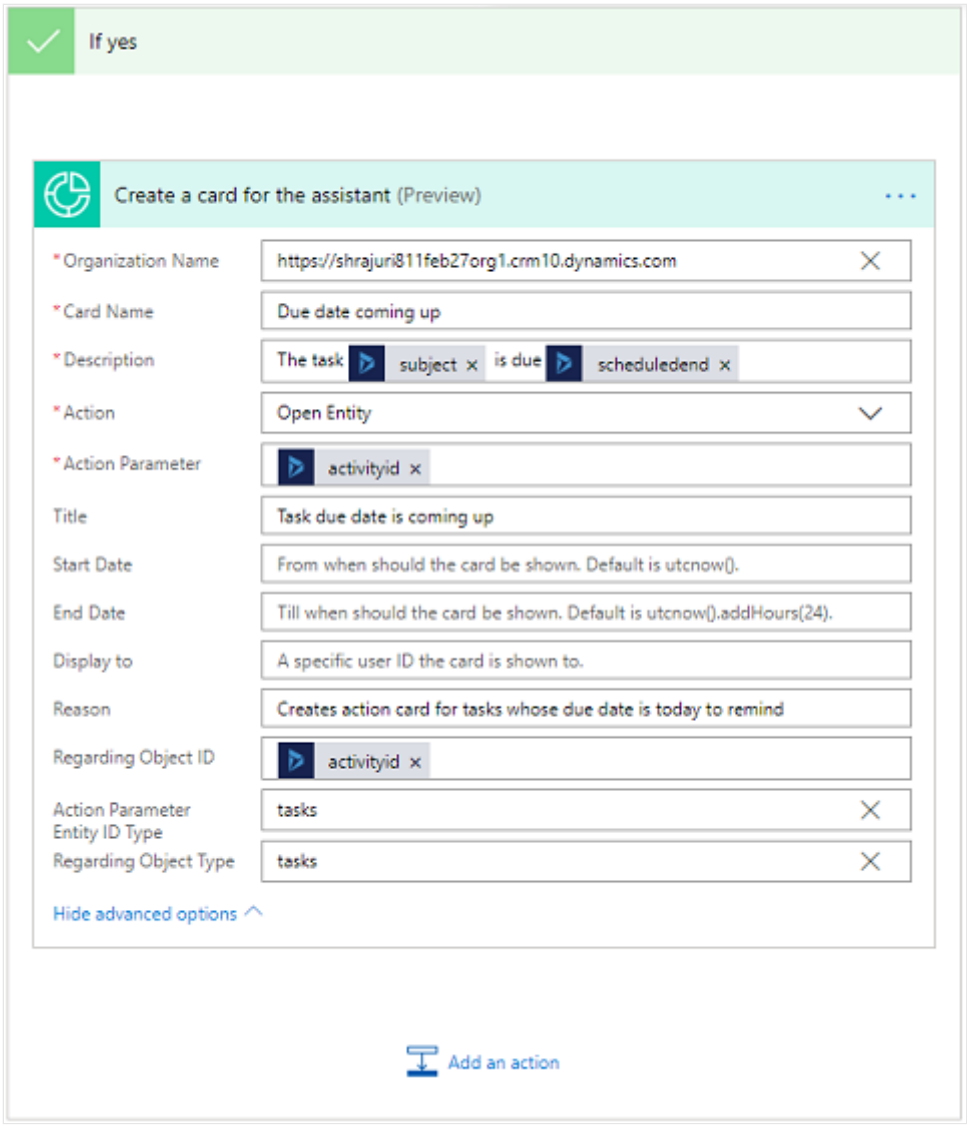


To learn more about conditions, see Add a condition to a flow.

c. The **If yes** section defines the properties of the card and actions you can take. Here we have selected an action to **Create a card for the assistant**. Enter the following information:

- **Organization Name**: The name of the organization for which you want to trigger the card.
- **Card Name**: Name of the card to refer to in the list of available cards in the **Manage insight cards**.
- **Description**: The summary or the basic information of the card that is to be displayed.
- **Action**: The convenient links that will help you complete whatever type of action the card is recommending. The number (up to two) and types of links provided here vary by card type. To learn more, see Add actions to cards.
- **Action Parameter**: The ID of the created action.
- Optionally, you can configure the advanced options for the condition. Select **Show advanced options** and update the parameters **Title**, **Start Date**, **End Date**, **Display to**, **Reasons**, **Regarding Object ID**, **Action Parameter Entity ID Type**, and **Regarding Object Type**.

When you select a text box, the dynamic content pane appears. You can select and add the relevant fields. These dynamic content field variables and values displayed by these fields change according to the information passed.

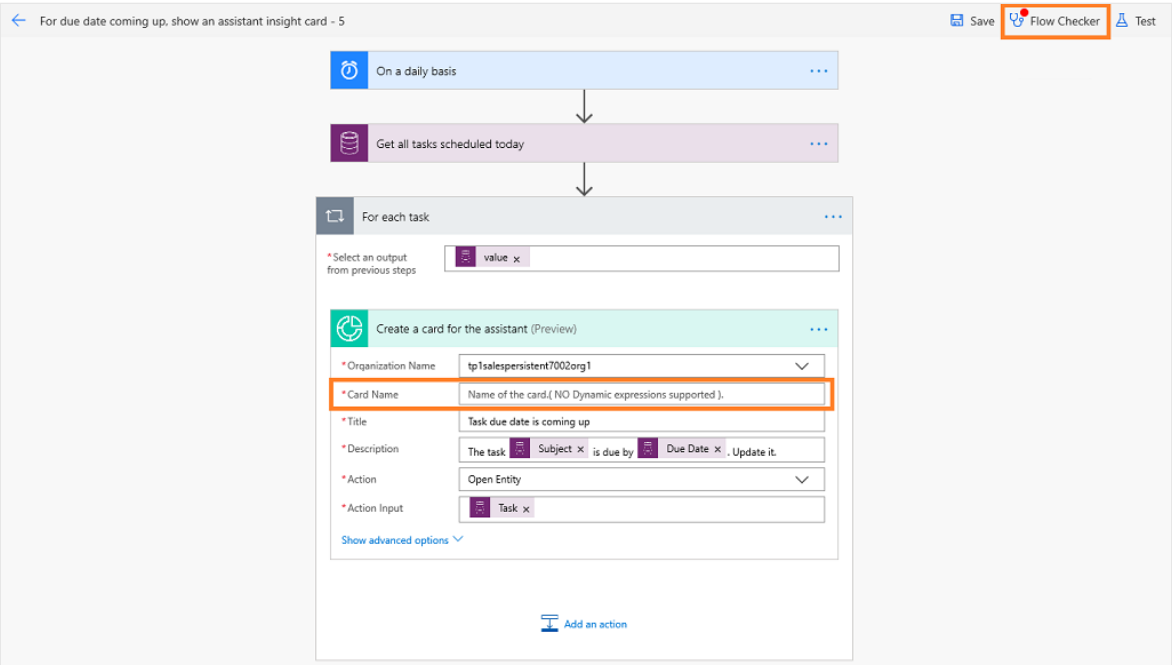


To learn more about expression conditions, see Use expressions in conditions to check multiple values.

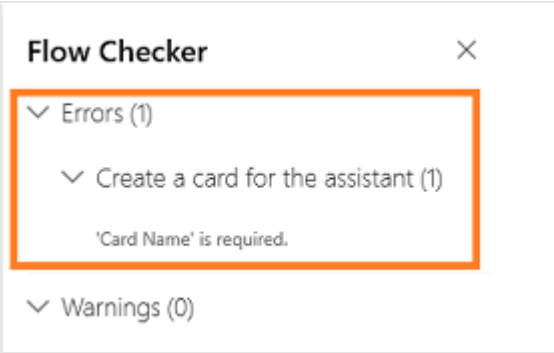
9. Use **Flow Checker** to verify errors and warnings in the flow.

   Errors and warnings in the flow cause performance or reliability issues. Ensure that the flow is free of errors and warnings. The checker is always active, appearing in the command bar in the designer. The checker shows a red dot when it finds one or more errors in your flow.

   For example, while creating a **For due date coming up** card, you haven't entered **Card Name**. The flow checker identifies the error and displays a red dot.



When you select **Flow Checker**, the corresponding error is displayed with more details. In this example, the error specifies that the **Card Name** is not entered. Resolve the error to continue.

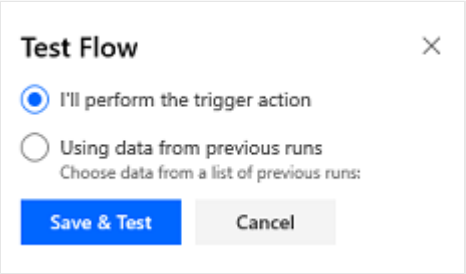


> **Note**
>
> You must resolve all errors and warnings to save the flow.

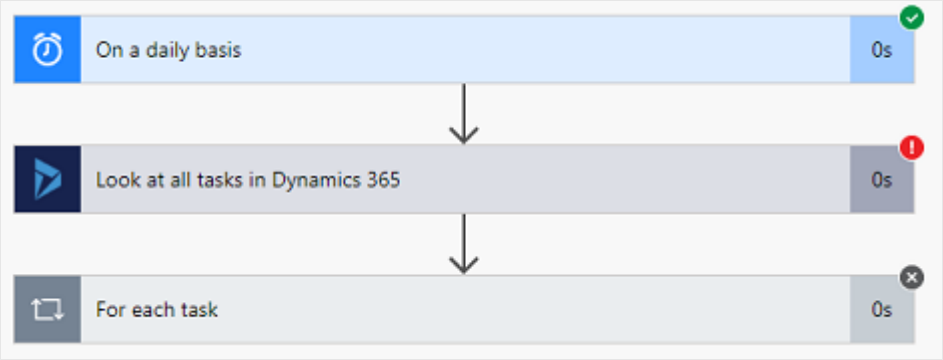
10. (Optional) Select the **Test** button to test your flow.

    Ensure that all the configured steps are working as required. The test feature runs and validates each step in the flow and highlights any error that occurs on a step. You must resolve the error to proceed.

    Select an option to test the flow by triggering actions or by using the data from previous test runs, and then select **Save & Test**.



In this example, you see that the step **Look at all tasks in Dynamics 365** has failed the test. Select the step and more information on the error is displayed. You must resolve the error to proceed.



11. Save the flow.

    When the card is saved, the **Manage insight cards** list gets updated and the **Due date coming up** card displays. Now you can edit the card to set priority and assign to different security roles.

View your saved flows

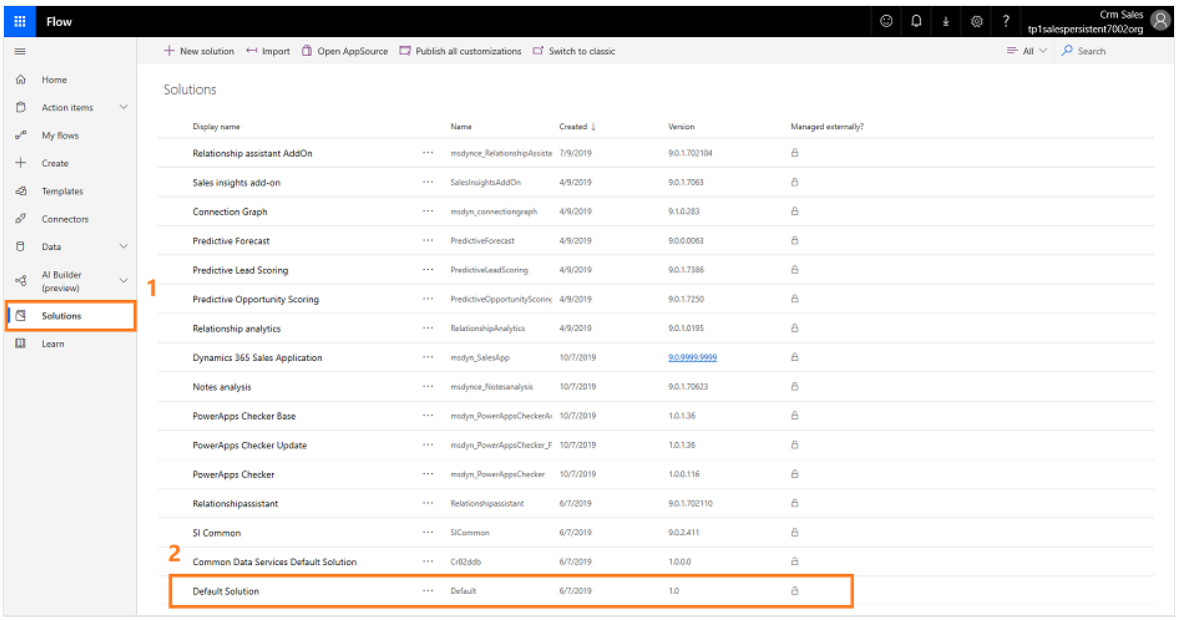
After you create a flow, a card must be generated based on the created flow to access the flow in the designer. Sometimes, cards may not be generated immediately and you may not find the created flow to update or view.

To access the saved flows, follow these steps:

1. Go to Microsoft Power Automate and sign in with your Dynamics 365 Sales credentials.

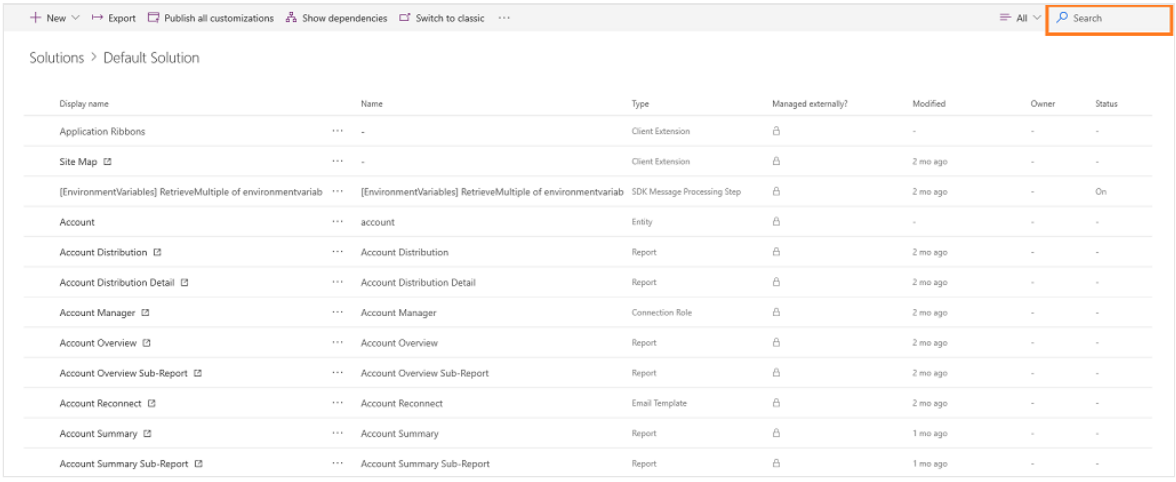
    > **Note**
    >
    > By default, your organization is selected based on your latest association. If you have multiple organizations associated with you, select the proper organization from your profile settings.

2. Select **Solutions** and then select **Default Solution**.



All default solutions are listed.

3. On the tool bar, go to Search and search for the flow that you want update or view.



Add actions to cards

> **ⓘ Important**
>
> This topic is pre-release documentation and is subject to change.

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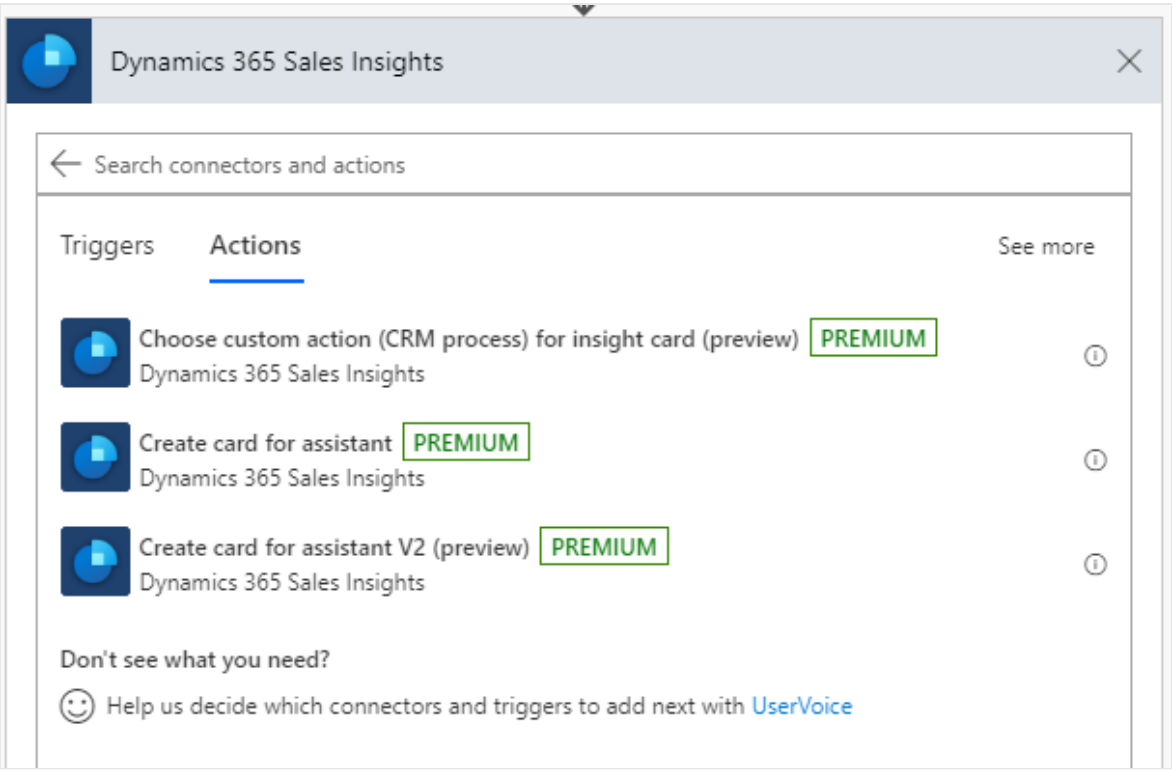
>
> - A preview feature is a feature that is not complete, but is made available before it's officially in a release so customers can get early access and provide

feedback. Preview features aren't meant for production use and may have limited or restricted functionality.

- We expect changes to this feature, so you shouldn't use it in production. Use it only in test and development environments.
- Microsoft doesn't provide support for this preview feature. Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. Preview features aren't meant for production use and are subject to a separate **supplemental terms of use**.

You can add actions that a user can do on a card. To select an action, follow these steps:

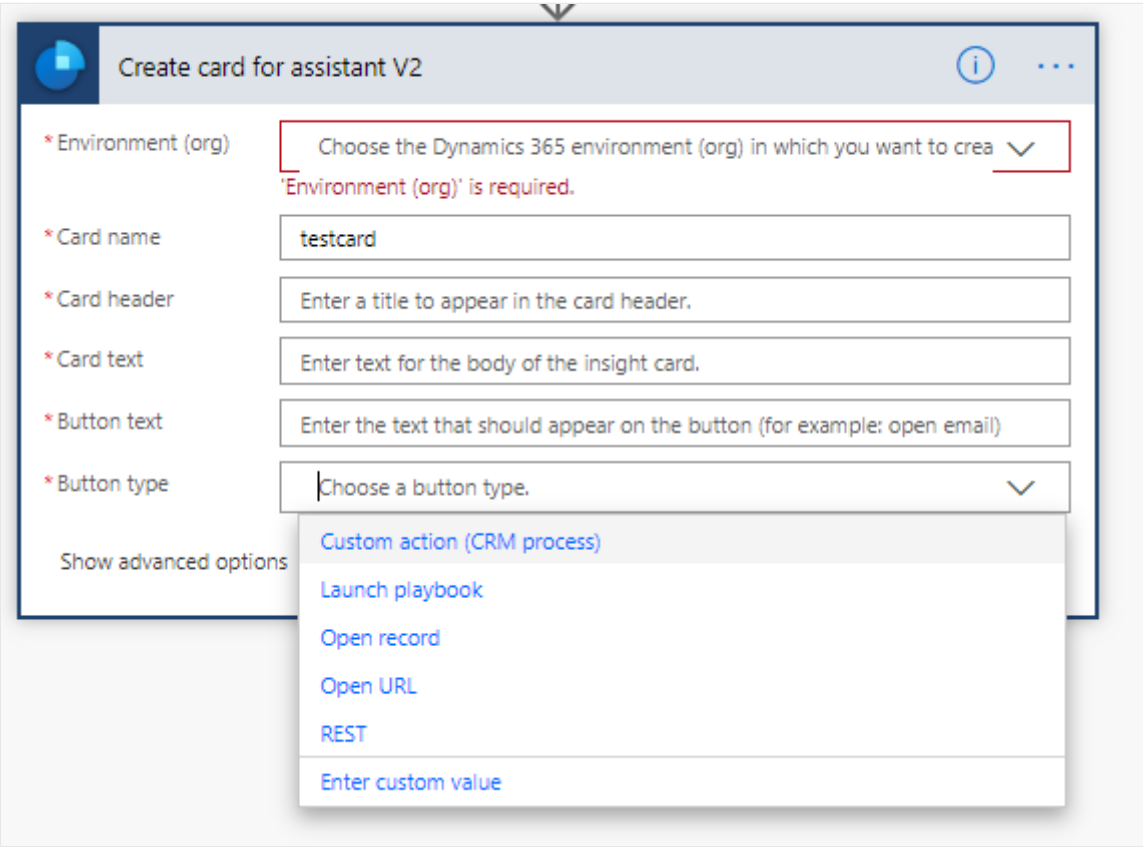
1. In the **Search connectors and actions** box, enter **Sales Insights**.
2. Select the **Create card for assistant V2 (preview)** connector.



3. In **Button type**, select one of the following actions:

   - **Custom action (CRM process)**: Perform the steps in Custom action (CRM process) to invoke a custom action that is defined in Dynamics 365 Sales for an entity.
   - **Launch playbook**: Perform the steps in Launch playbook to launch a playbook with the custom action.
   - **Open record**

- **Open URL**
- **REST**: Perform the steps in REST to invoke a REST API with the custom action.

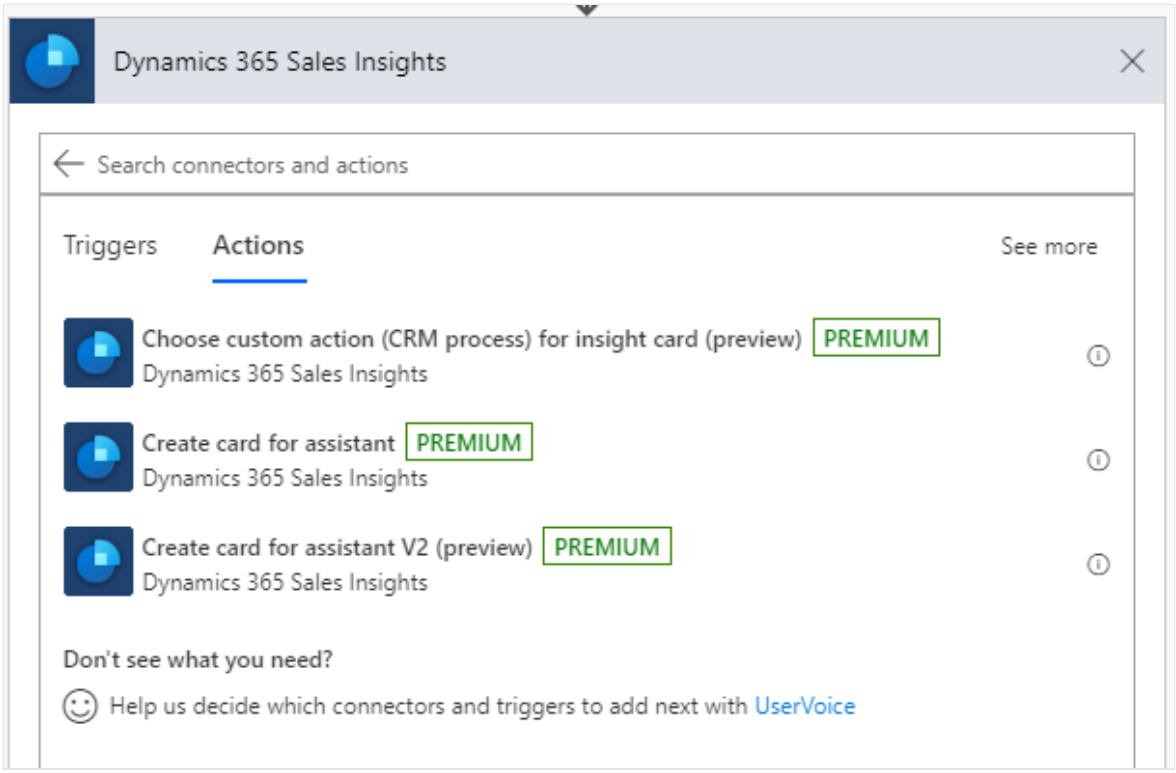


Custom action (CRM process)

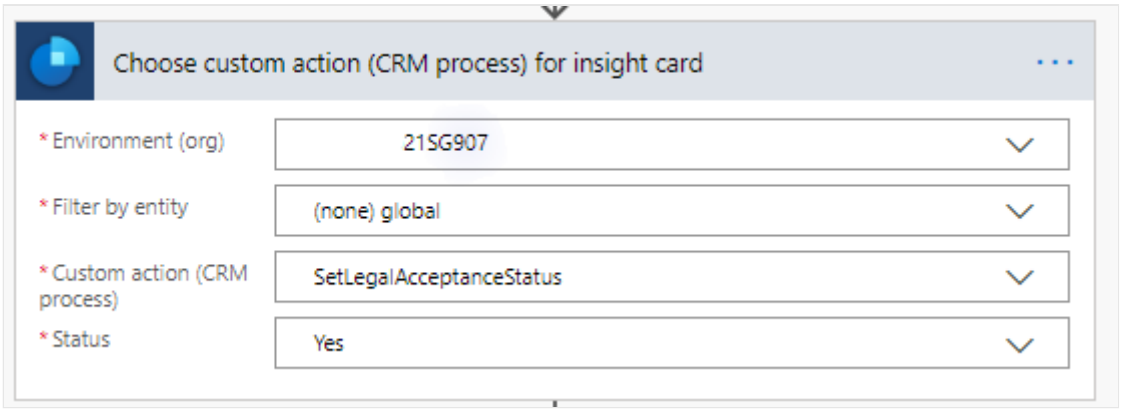
Use the **Custom action (CRM process)** option to invoke a custom action that is defined in Dynamics 365 Sales for an entity. To learn more, see Use Web API actions.

To add a custom action, follow these steps:

1. In the **Search connectors and actions** box, enter **Sales Insights**.
2. Select the **Choose custom action (CRM process) for insight card (preview)** connector.



A step to choose a custom action appears.

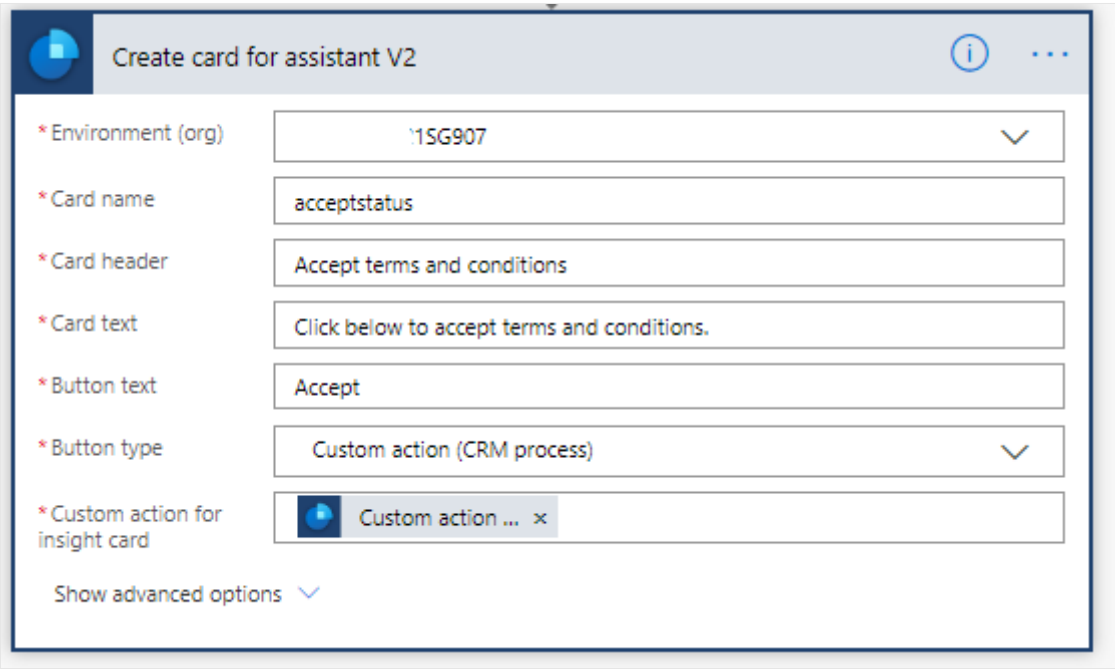


3. In the **Choose custom action (CRM process) for insight card** step, enter the required information.

Parameter	Description
Environment (org)	Select your organization name.
Filter by entity	Choose the entity that is associated with the action.
Custom action (CRM process)	Select the custom action that you want to perform on the card.
Status	This is a dynamic field and the values that are displayed here are based on the selected custom action.

4. Define the card by using the chosen custom action. In the **Create card for assistant V2** step, enter the required information.

Parameter	Description
Environment (org)	Select your organization name.
Card name	Enter a name for the card.
Card header	Enter a name to appear on the header of the card.
Card text	Enter a message to appear in the body of the card.
Button text	Enter a name for the button that should appear on the card.
Button type	Select the button type as **Custom action (CRM process)**.
Custom action for insight card	Select the box. The custom action that is defined in the previous step is added automatically. This option appears only for the **Custom action (CRM process)** button type.



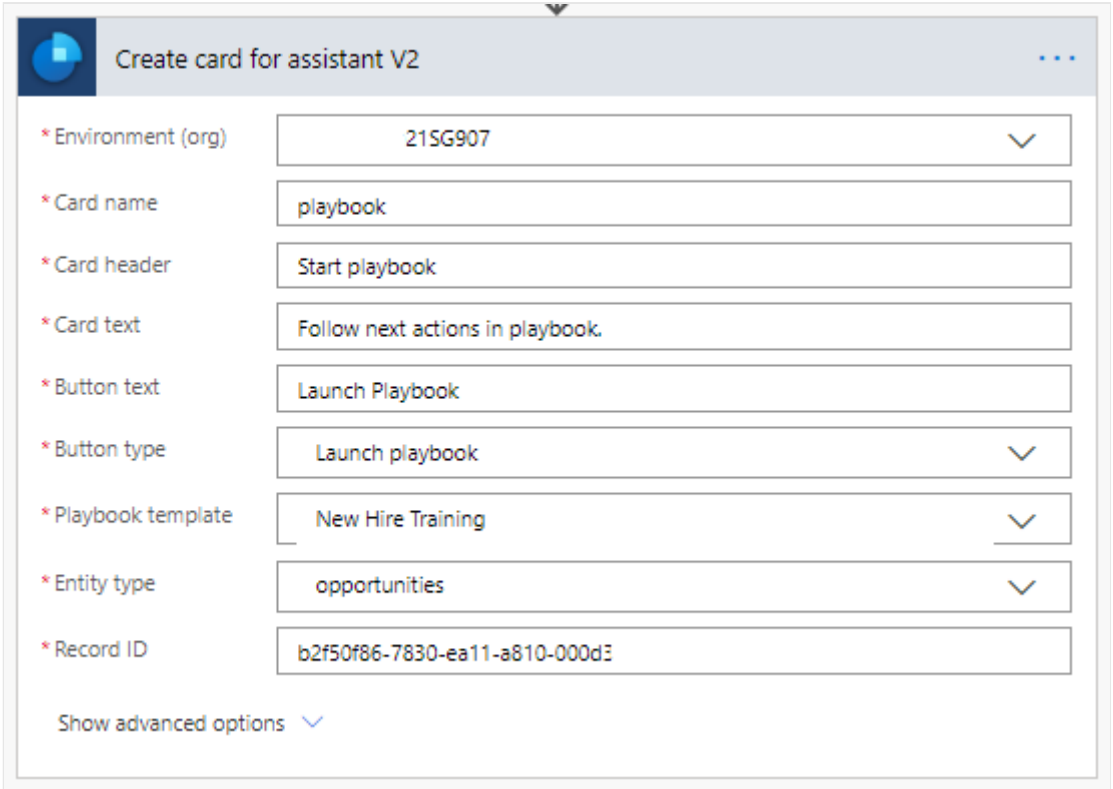
Launch playbook

Use the **Launch playbook** option to launch a playbook from the card. Before you use the playbook option, verify that playbook solution is available in your organization. To learn more, see Enforce best practices with playbooks.

1. On the **Create card for assistant V2 (preview)** step, select the **Button type** as **Launch playbook**.

2. Enter the information as required.

Parameter	Description
Environment (org)	Select your organization name.
Card name	Enter a name for the card.
Card header	Enter a name to appear on the header of the card.
Card text	Enter a message to appear in the body of the card.
Button text	Enter a name for the button that should appear on the card.
Button type	Select the button type as **Launch playbook**.
Playbook template	Select a template in the list of playbook templates. This option appears only for the **Launch playbook** button type.
Entity type	Select the entity type of which you want to launch the playbook template for. This option appears only for the **Launch playbook** button type.
Record ID	Enter the unique ID of the selected entity. This option appears only for the **Launch playbook** button type.



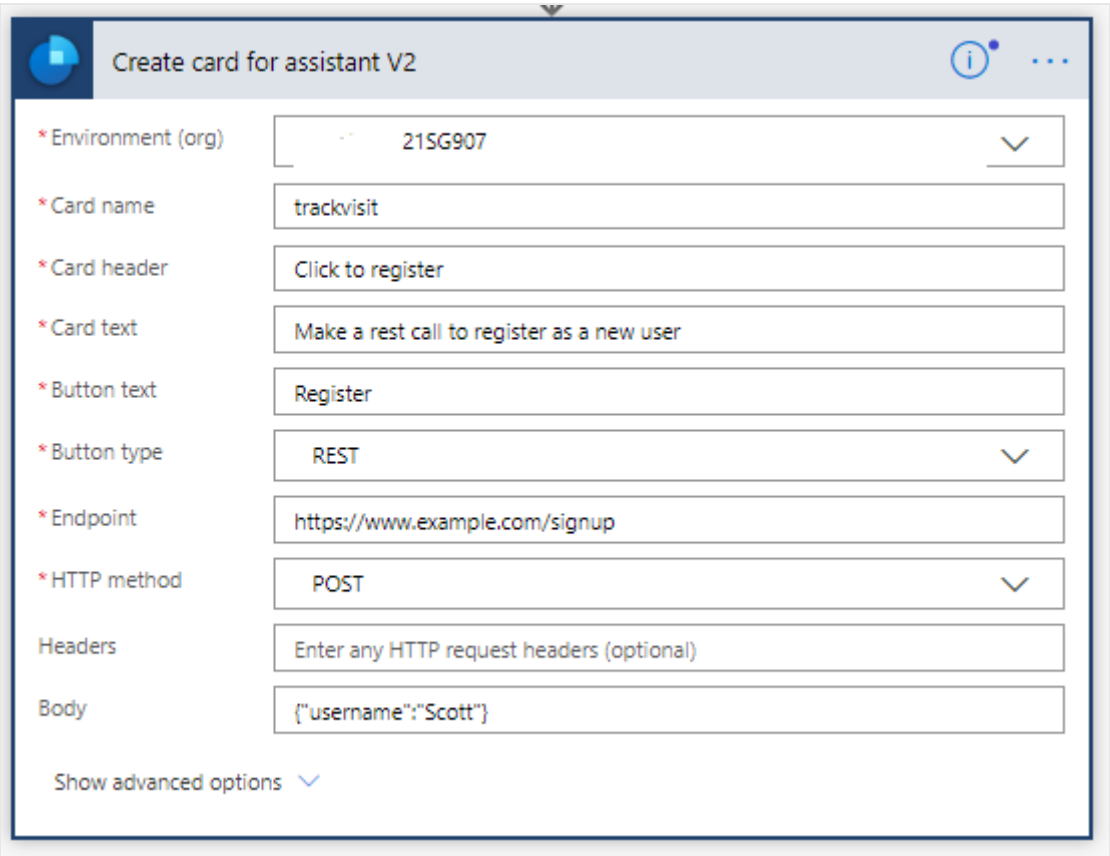
REST

Use the **REST** option to invoke REST API.

1. On the **Create card for assistant V2 (preview)** step, select the **Button type** as **REST**.

2. Enter the information as required.

Parameter	Description
Environment (org)	Select your organization name.
Card name	Enter a name for the card.
Card header	Enter a name to appear on the header of the card.
Card text	Enter a message to appear in the body of the card.
Button text	Enter a name for the button that should appear on the card.
Button type	Select the button type as **REST**.
Endpoint	Enter the URL of the corresponding API to call. This option appears only for the **REST** button type.
HTTP method	Choose an HTTP method for the API to call. This option appears only for the **REST** button type.
Body	Enter request parameters for the REST API. This option appears only for the **REST** button type.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure and manage insight cards for the premium assistant
Edit insight cards
Optimize ranking of insight cards

Edit insight cards

Article • 03/30/2022

Editing the cards allows you to do the following tasks based on the card:

- Turn cards on or off
- Assign to or remove roles from a card
- Set priority of a card
- Edit flow of a card
- View card usage metrics

License and role requirements

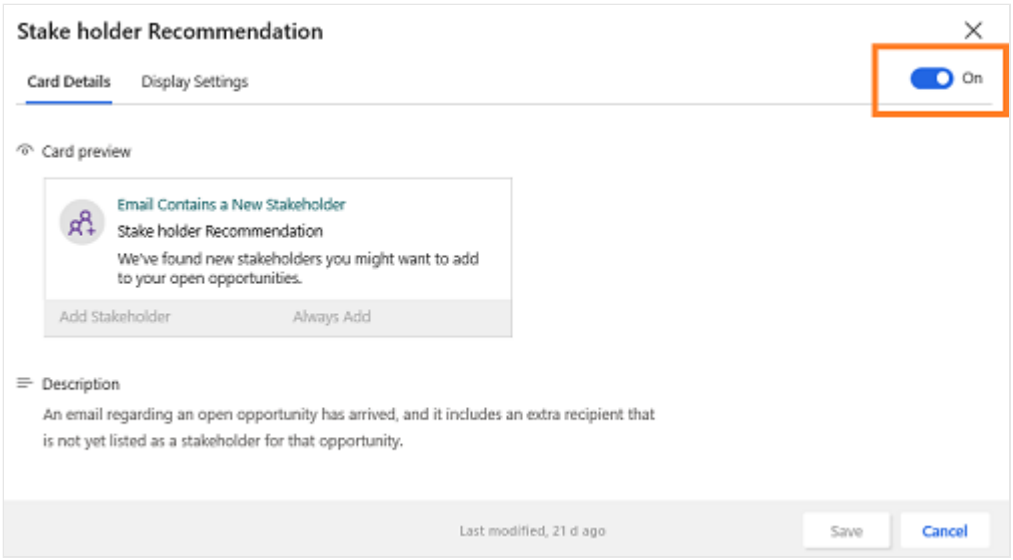
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Turn cards on or off

Different users have different needs in using the cards, and you don't want to show the card for some users at this point in time. Similarly, you don't want to show certain cards in your organization or you might not need them to be displayed at this time. You can turn the cards on or off depending on the need to show them to specific user roles in the **Personal settings** section of the **Sales Insights settings** setup center.

When you turn off a card, the assistant feature disables the card for the security roles you've assigned the card to. However, the assistant feature doesn't disable other properties that are associated with the card. For the card that you generated using Microsoft Power Automate, you can disable the card but you can't delete the flow. Even after you disable the card, the flow remains active because other custom insight cards might use the flow.

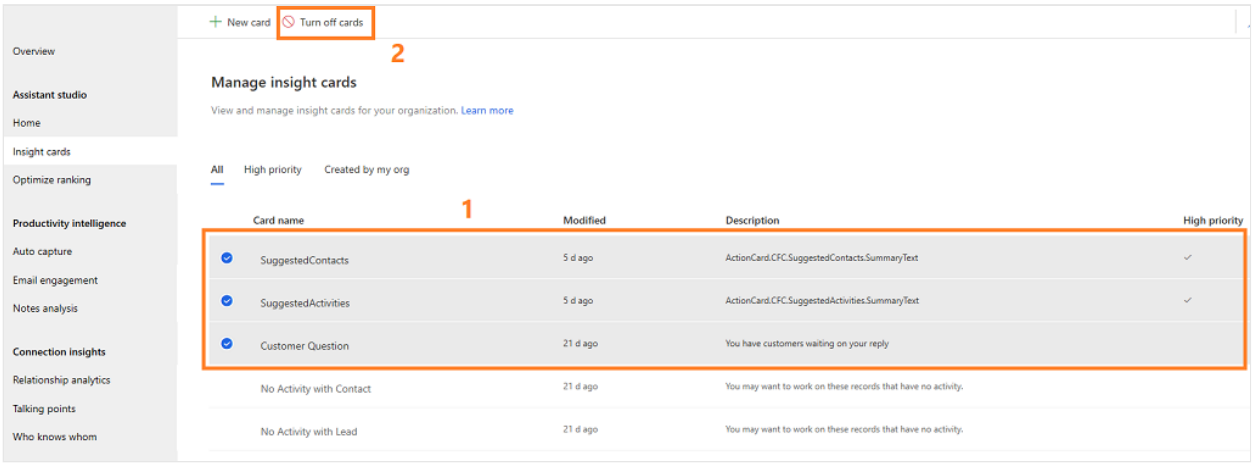
Go to the **Assistant Studio** page (**Home** tab) under **Assistant** and open a card from the list that you want to turn on or off. Select the **On/Off** toggle as required. In this example, we turned on the **Stake holder Recommendation** card.



Turn multiple cards on or off

To turn multiple cards on or off, go to the **Manage insight cards** page (**Insight cards** tab) under **Assistant** and select the cards that you want to turn on or off. Select **Turn on cards** or **Turn off cards** as per your requirement.

In this example, we want to turn off the cards **SuggestedContacts**, **SuggestedActivities**, and **Customer Question**. After choosing the cards, select **Turn off cards** and the three cards are disabled.

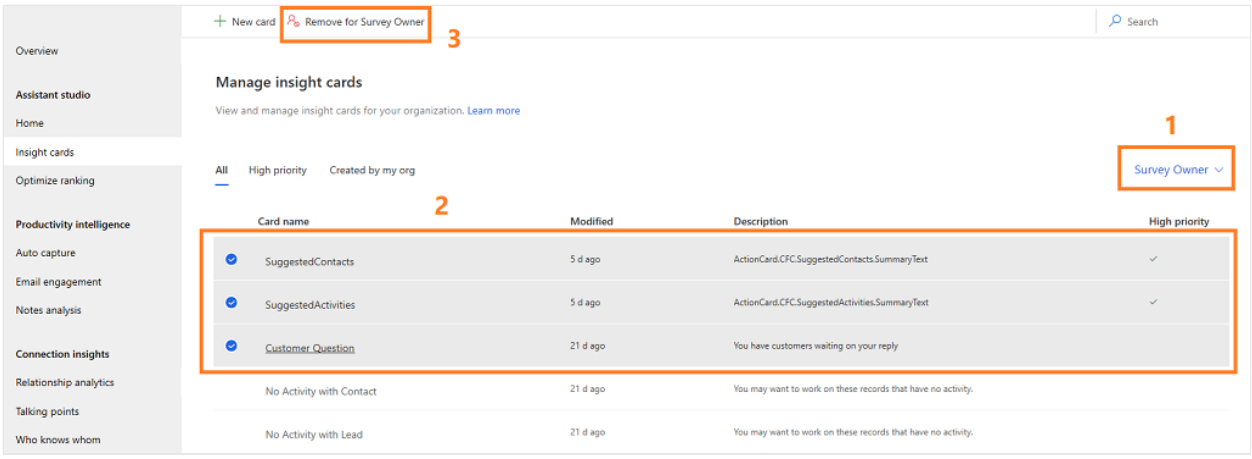


Turn cards on or off for a security role

If you want to turn off cards for a particular security role, go to the **Manage insight cards** page (**Insight cards** tab) under **Assistant** and filter the cards based on the role. Choose the cards that you want to turn off for the selected role and select **Remove for *role name***. The cards will not show for the role that you have selected.

In this example, we have filtered the cards with the security role **Survey Owner** and chosen the cards **SuggestedContacts**, **SuggestedActivities**, and **Customer Question**.

Select **Remove for Survey Owner** and the cards are turned off only for the **Survey Owner** role.

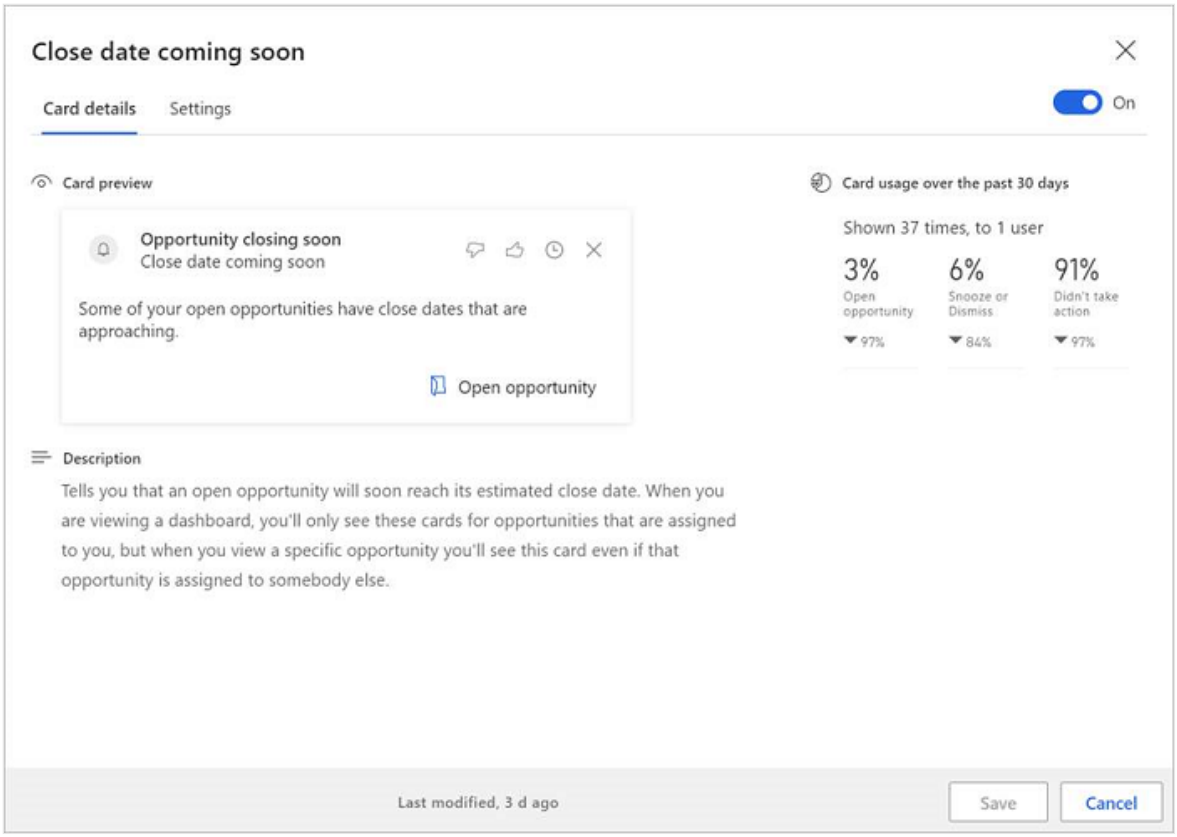


Assign roles to or remove roles from a card

When you create a card, you can specify the security roles to whom you want the card to display. By default, the cards are assigned to all the security roles in your organization. You can edit the card to assign or remove the security roles to the card.

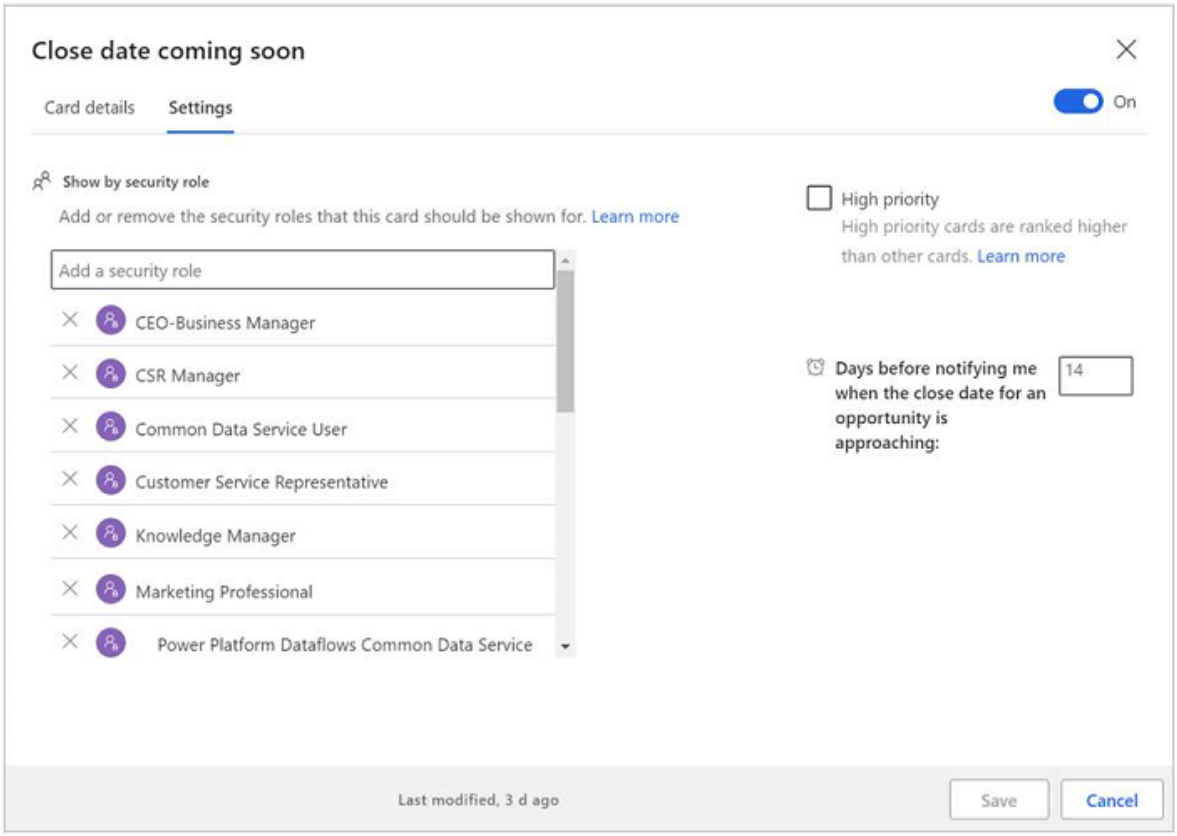
> **Note**
>
> The security roles you see in the cards are defined in the Microsoft Power Platform admin center. To learn more on security roles, see **Security roles and privileges**.

1. Go to the **Manage insight cards** page (**Insight cards** tab) under **Assistant** and select the card for which you want to add the security roles. In this example, we've selected the **Close date coming soon** card.

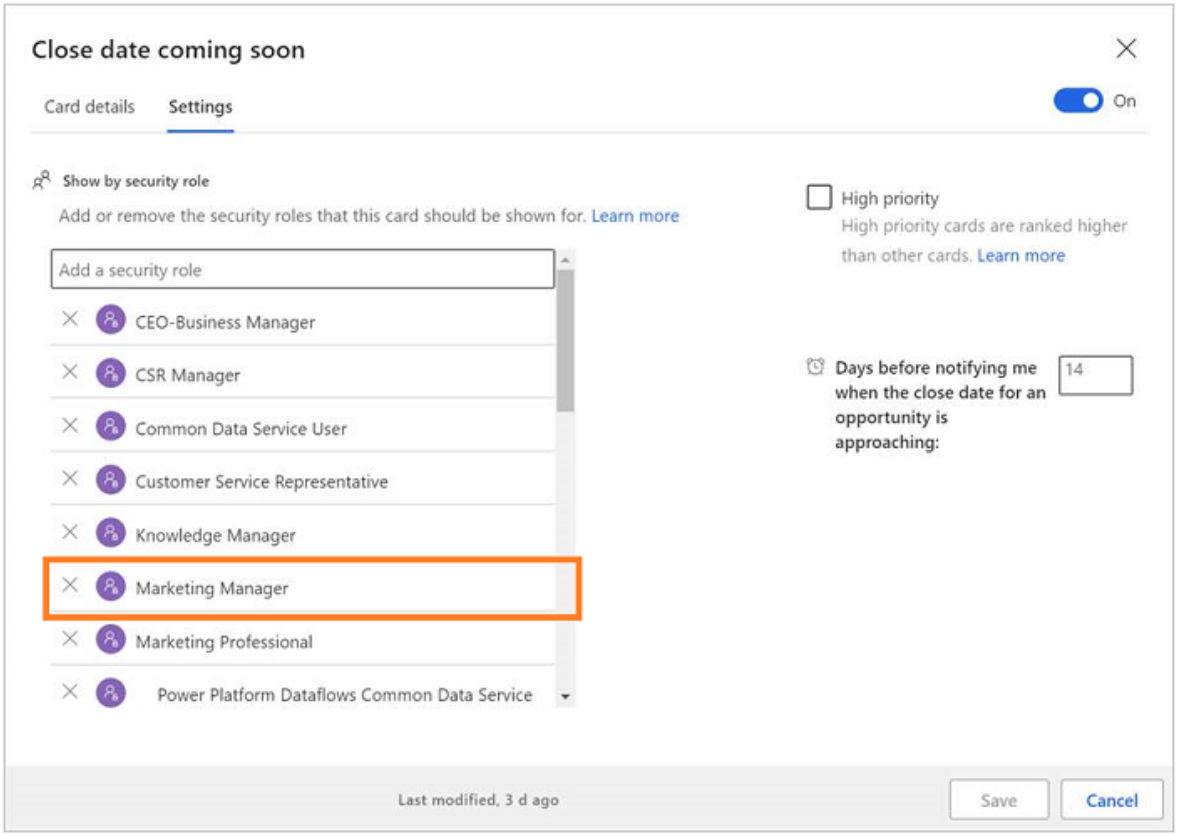


2. Go to the **Display Settings** tab. You can see that by default the card is assigned to all the security roles.

3. Under the **Show by security role (preview)** section, select the **Add a security role** search box. A list of security roles that are available in your organization is displayed.

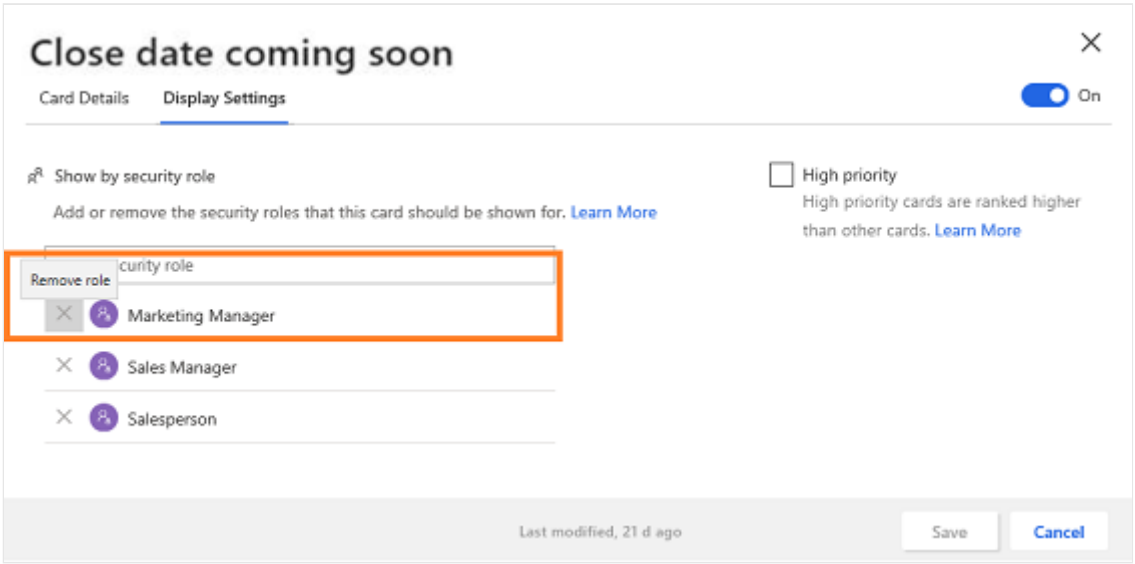


In this example, we have added the **Marketing Manager** security role to the **Close date coming soon** card.



4. Save the card.

5. To remove security roles, select the role to remove. In this example, we're removing the **Marketing Manager** security role from the **Close date coming soon** card.



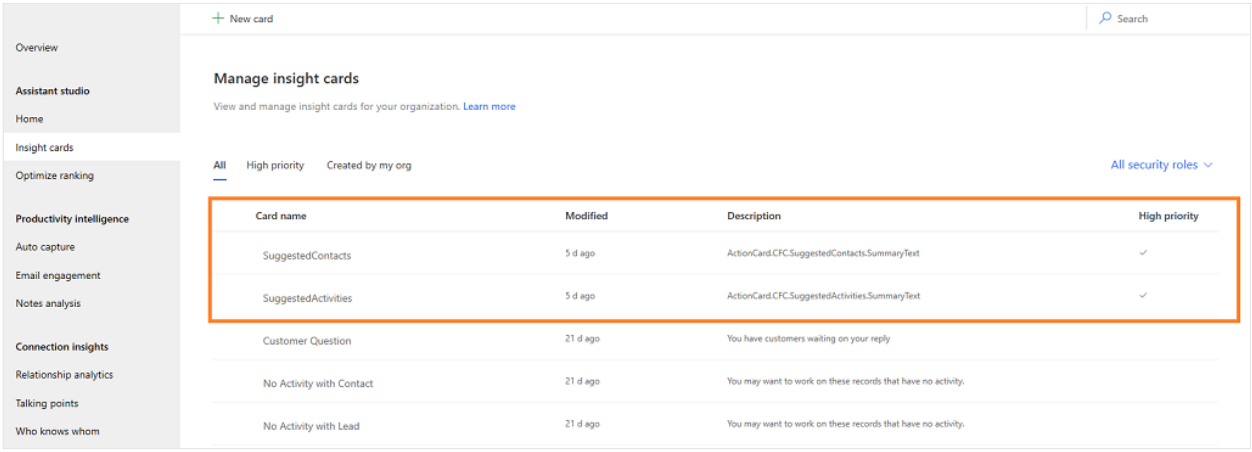
Set priority for a card

You can prioritize the cards that display in your organization. When you set a card as a priority, the card is displayed to the user at the top.

When you open the **Manage insight cards** page (**Insight cards** tab), the list of cards that are defined for your organization is displayed. A check mark corresponding to the card in the **High priority** column specifies that the card is set as priority.

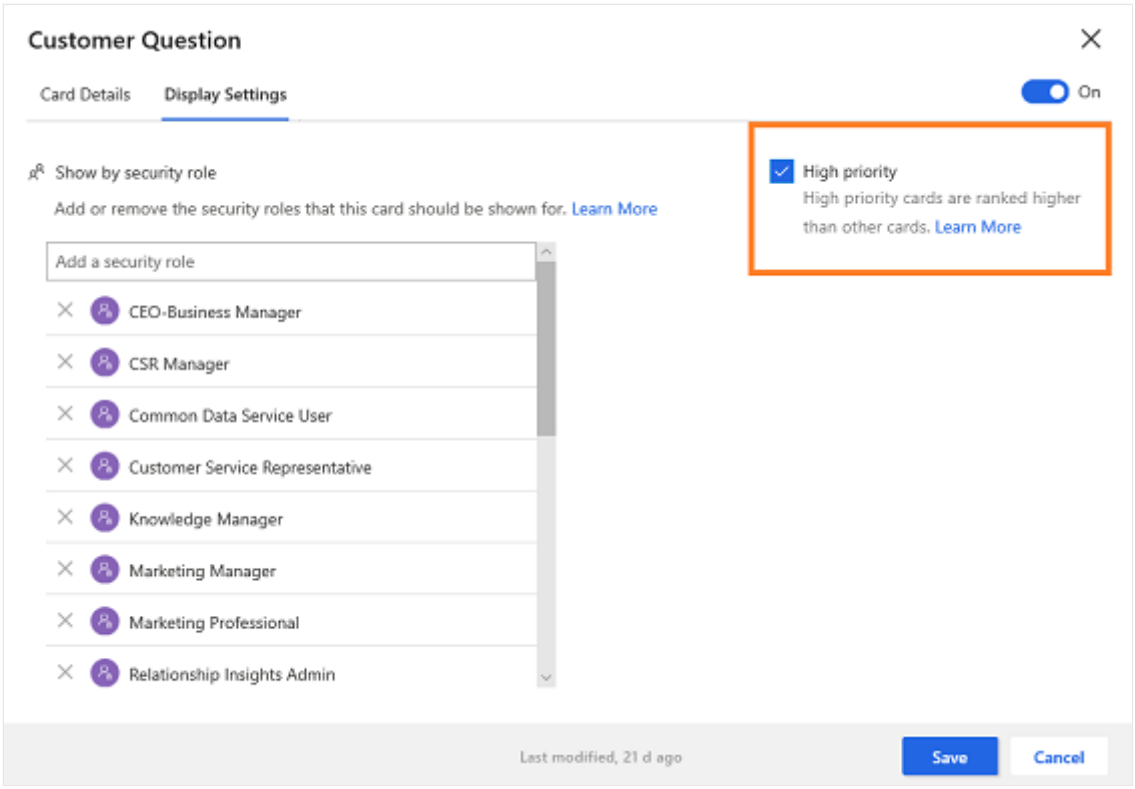
> **Note**
>
> You can also select the **High priority** tab to view the high priority cards.

In this example, the **SuggestedContacts** and **SuggestedActivities** cards are set as high priority. These cards will be promoted above other cards and displayed on top of the others.



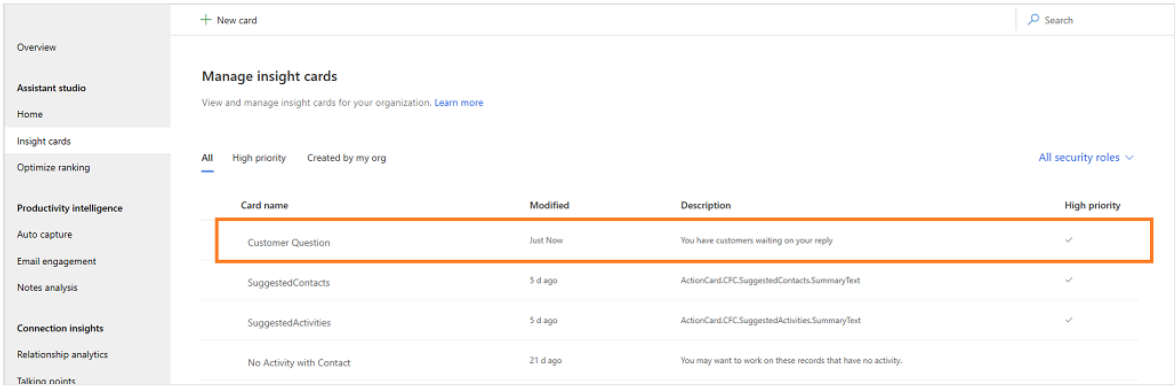
1. Go to the **Manage insight cards** page (**Insight cards** tab) under **Assistant** and open the card that you want to set as a priority.

2. Go to the **Display Settings** tab and select **High priority**. In this example, we're selecting and prioritizing the **Customer Question** card.



3. Save the card.

   The **Customer Question** card is set as priority and you can verify that the **High priority** column corresponding to the card is updated with a check.



To know how to optimize ranking of cards, see Optimize ranking of insight cards.

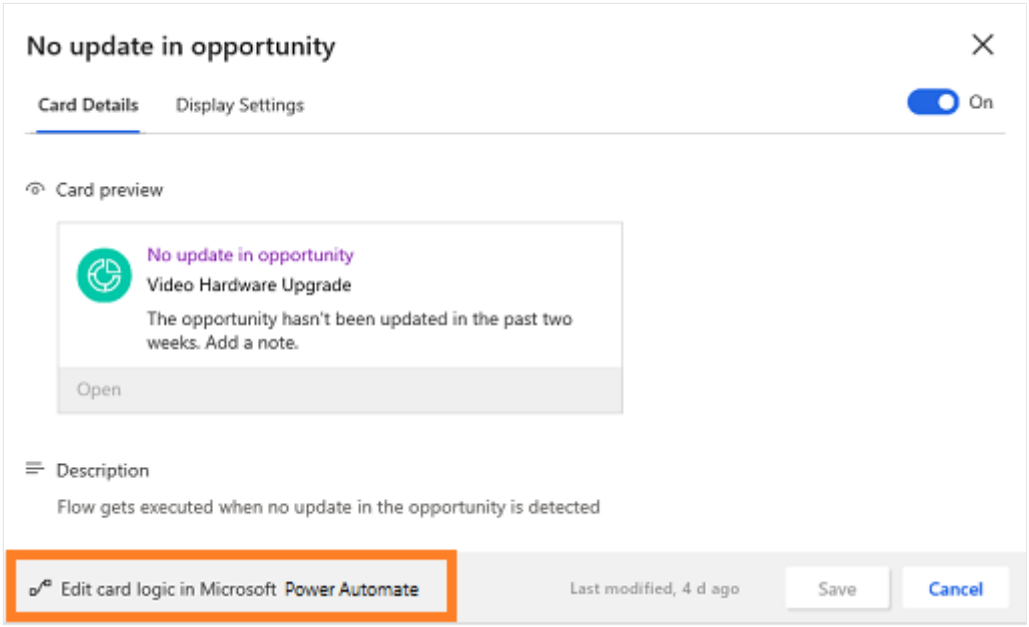
Edit flow of a card

You can always edit the flow of the card when there is a business need to update it. You can add or update conditions and steps, and update the properties of a condition.

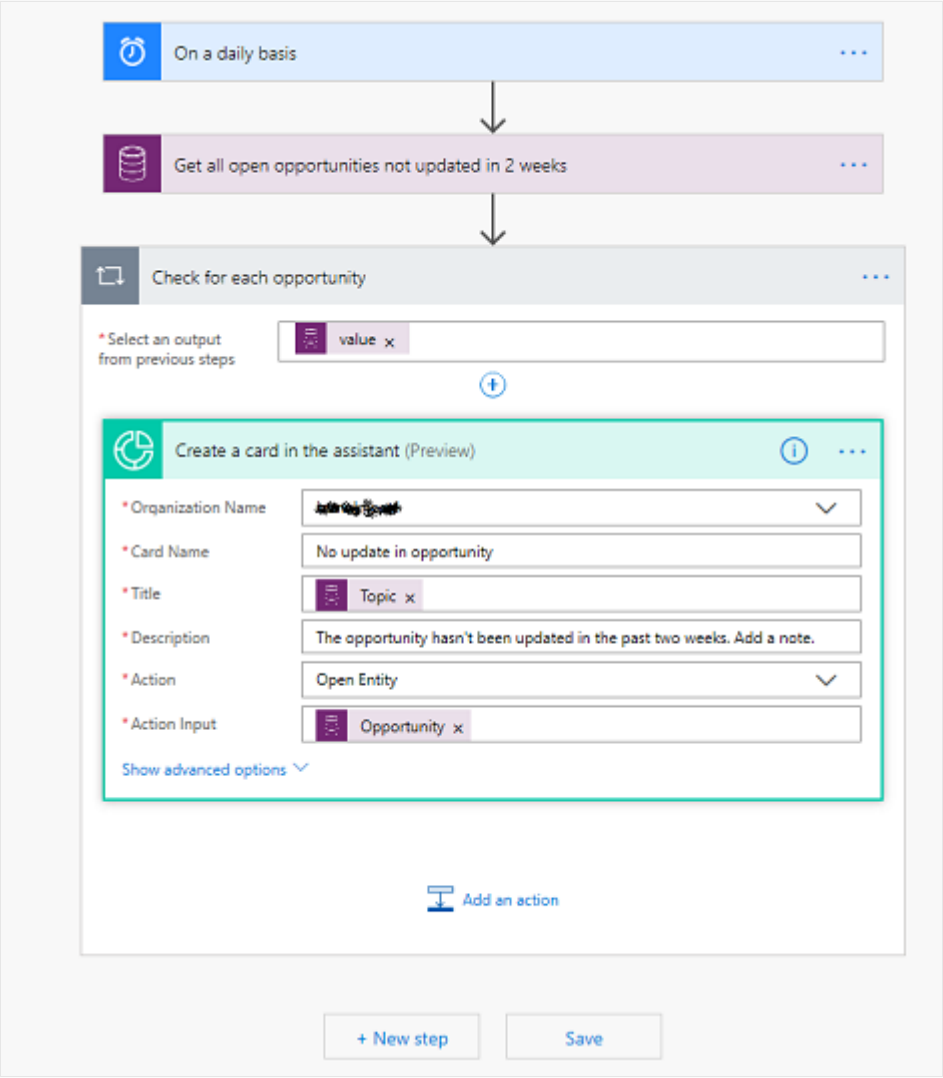
> **Note**

The **Edit card logic in Microsoft Power Automate** option appears only for the cards that are created in Microsoft Power Automate. You can see a flow icon corresponding to the name of the cards that are created using Power Automate.

1. Go to the **Manage insight cards** page (**Insight cards** tab) under **Assistant** and select the card for which you want to change the flow. In this example, we have selected the **No update in opportunity** card.



2. Select **Edit card logic in Microsoft Power Automate** and the flow opens in a tab to edit.



3. Edit the flow as required and select **Save**. The flow of the card is updated.

To learn more about editing the flow, see Add an action and Add a condition.

View card usage metrics

Each insight card that is available in Assistant shows usage metrics based on the views and actions that users perform. These metrics help to get real-time data on how the card is used. Also, you can analyze what updates are necessary for the card, if it is underused.

The metric values are for the last 30 days and calculated as follows:

```
Percentage value = (Number of actions performed * 100) / Number of views
```

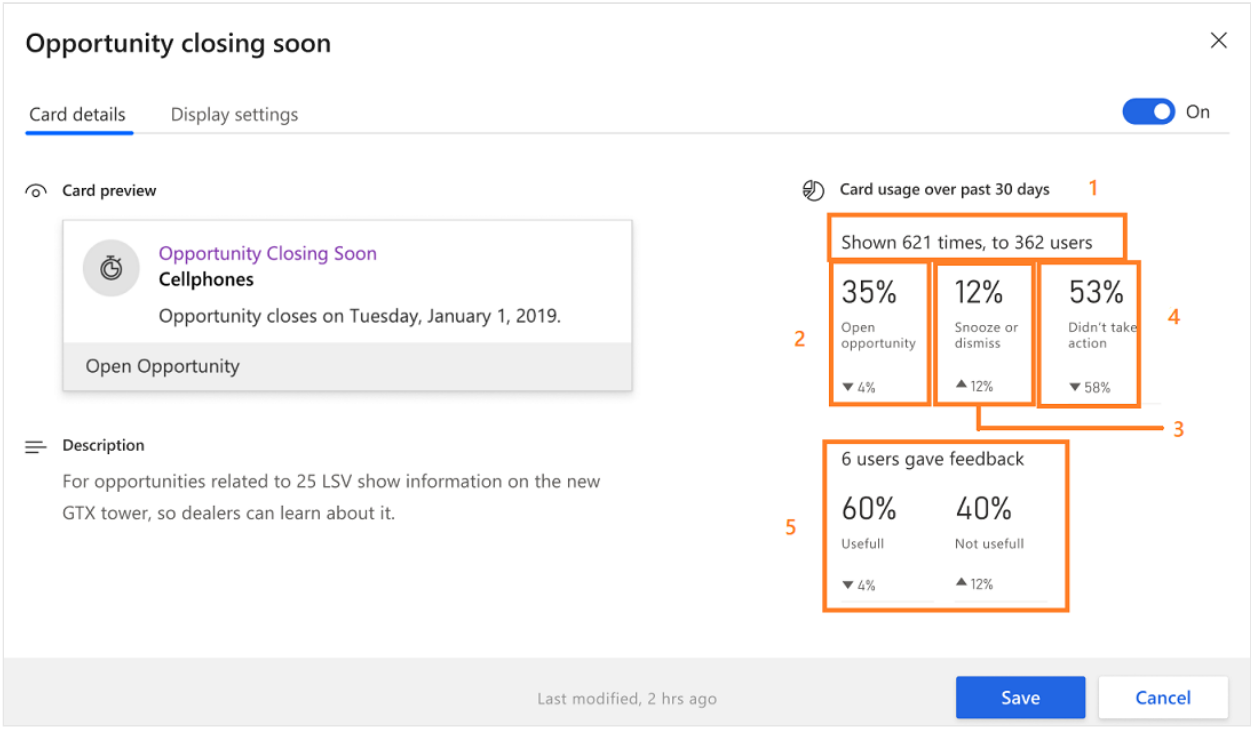
For example, when a card is displayed for 10 users and only four users have performed an action, the value displayed is 40%.

Also, at the bottom of each metric, a trend value is displayed for the last 30 days from the current date. For example, the metric value was 30% in the last 30 days and 40% on the current date, so the trend value displays a 10% increase in usage.

> **Note**
>
> The metric values are refreshed every 24 hours.

The following metrics are available on the card.

Number	Metrics	Description
1	Header	Specifies the number of times the card has been displayed to the number of users. For example, if a card is displayed 621 times to 362 users, then the header shows **Shown 621 times, to 362 users**.
2	Action	Displays in percentage value the number of times the users performed actions on the card.
3	Snooze or dismiss	Displays in percentage value that users have performed snooze and dismiss actions on the card.
4	No action	Displays in percentage value that users didn't perform actions on the card.
5	Feedback	Displays in percentage value the number of times the users liked and disliked the card. Also, a header displays the total number of users who gave the feedback.



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See also

Configure and manage insight cards for the premium assistant

Create custom insight cards

Optimize ranking of insight cards

Optimize ranking of insight cards

Article • 07/21/2023

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> **Note**
>
> Rank optimization of insight cards will be deprecated starting from Sunday, October 1, 2023. **Learn more**.

Several cards are defined for your organization and all will be displayed to the users through an externally prioritized list. In this list of cards, users might miss those that are important and need follow-up. The **Optimize ranking** option in assistant allows you to optimize the ranking of cards that are important and promotes those cards to display at the top.

You can define up to four rules in the ranking section, based on entities such as account, leads, and opportunity. Also, the cards are given a priority in the order you define. For example, you created two rules—the first is to prioritize cards for which annual revenue is above $100,000 and the second is to prioritize cards for which estimated revenue is above $10,000. The assistant analyzes the cards and displays those with annual revenue

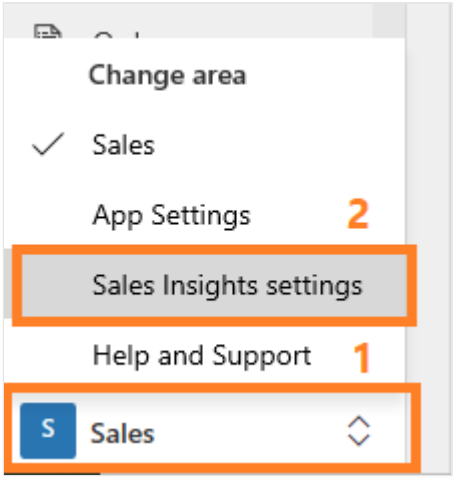
of more than $100,000, followed by those with estimated revenue of more than $10,000, and then followed by the cards that are not prioritized.

License and role requirements

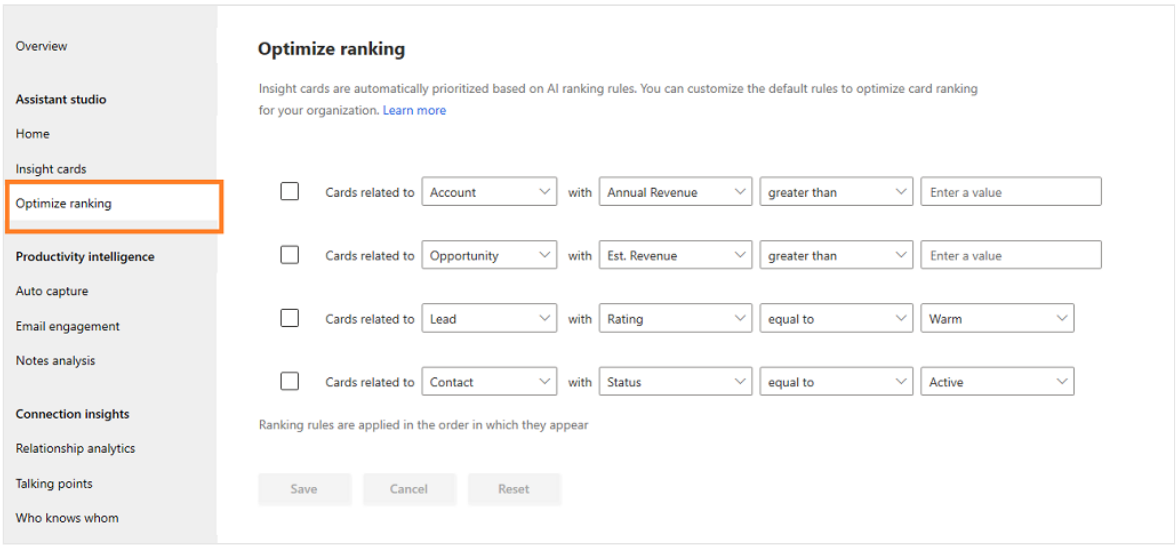
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

To rank the cards

1. Sign in to **Dynamics 365 Sales** and go to **Sales Hub**.
2. Go to **Change area** and select **Sales Insights settings**.



3. On the sitemap, select the **Optimize ranking** tab under **Assistant**.



The list of rankings that are defined in your organization is displayed.

When ranking rules are checked, it specifies that the rules are active. If any rule is not required in your organization, deselect the rule and select **Save**.

4. There are four properties you can edit for a rule. The rules are set using these four properties. The basic structure of rules displays as: **Cards related to** '*Name of the entity*' **with** '*Attribute type*' '*Condition*' '*Value*'.

   The four properties are:

   - **Name of the entity**: The entities such as account, leads, and opportunities are used to model and manage business data in Dynamics 365 Sales.

     After you select the entity, the values in the Attribute type, Condition, and Value dropdown lists change accordingly.

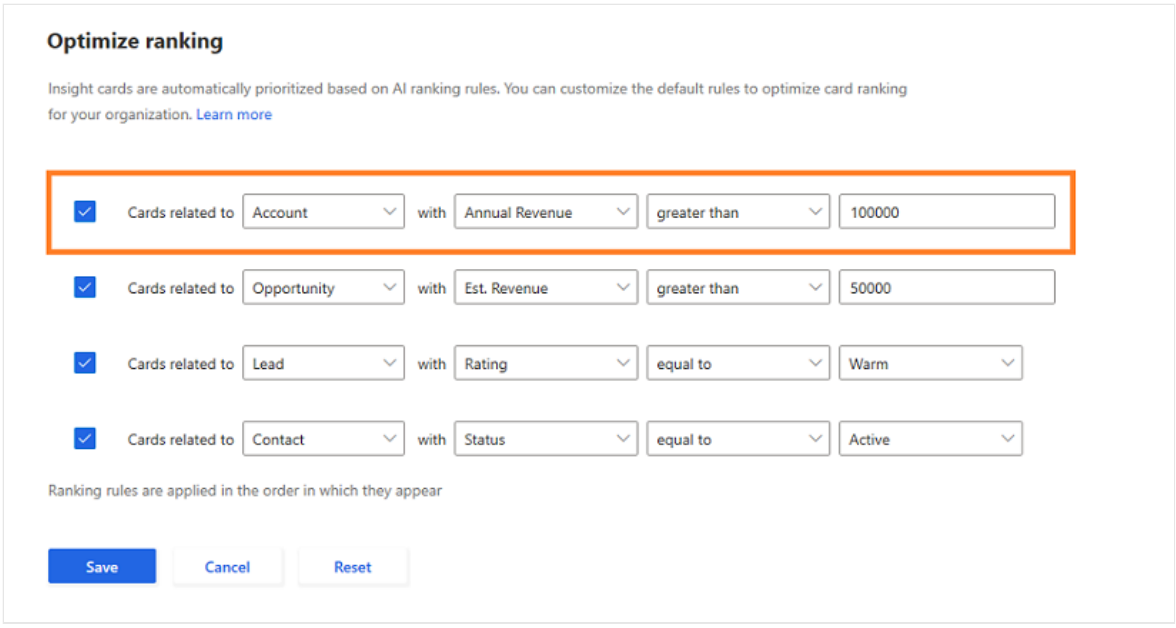
   - **Attribute type**: An entity has a set of attributes. For example, the account entity contains attributes such as Name, Address, and OwnerId.

     The attribute types displayed in the dropdown list vary depending on the entity selection and are related to the fields defined within CRM.

   - **Condition**: The condition specifies that a card is displayed when the set condition is met. For example, some common conditions are above, equal, and below.

   - **Value**: The value specifies the unit of measure for a condition to validate for the attribute type.

     For example, you want to prioritize cards of accounts where the annual revenue is more than $100,000 and display it to your user in your organization. You define the rule as, **Cards related to** *account* **with** *annual revenue above 100,000*.



5. Save the rule.

   The ranking rule is created, processed, and applied to the cards in your organization.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure and manage insight cards for the premium assistant
Create insight cards
Edit insight cards

Add the assistant widget to custom forms

Article • 03/30/2022

By default, the assistant widget is available only in the out-of-the-box forms—contact, opportunity, lead, account, and case. If you're using customized forms, you can display the assistant widget on custom forms.

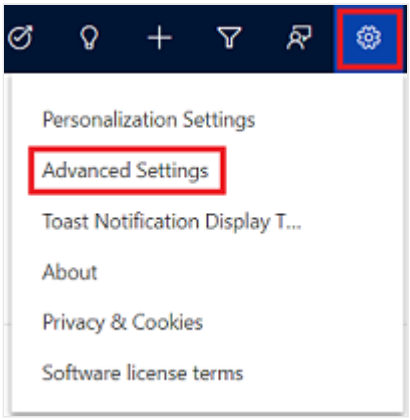
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add the widget

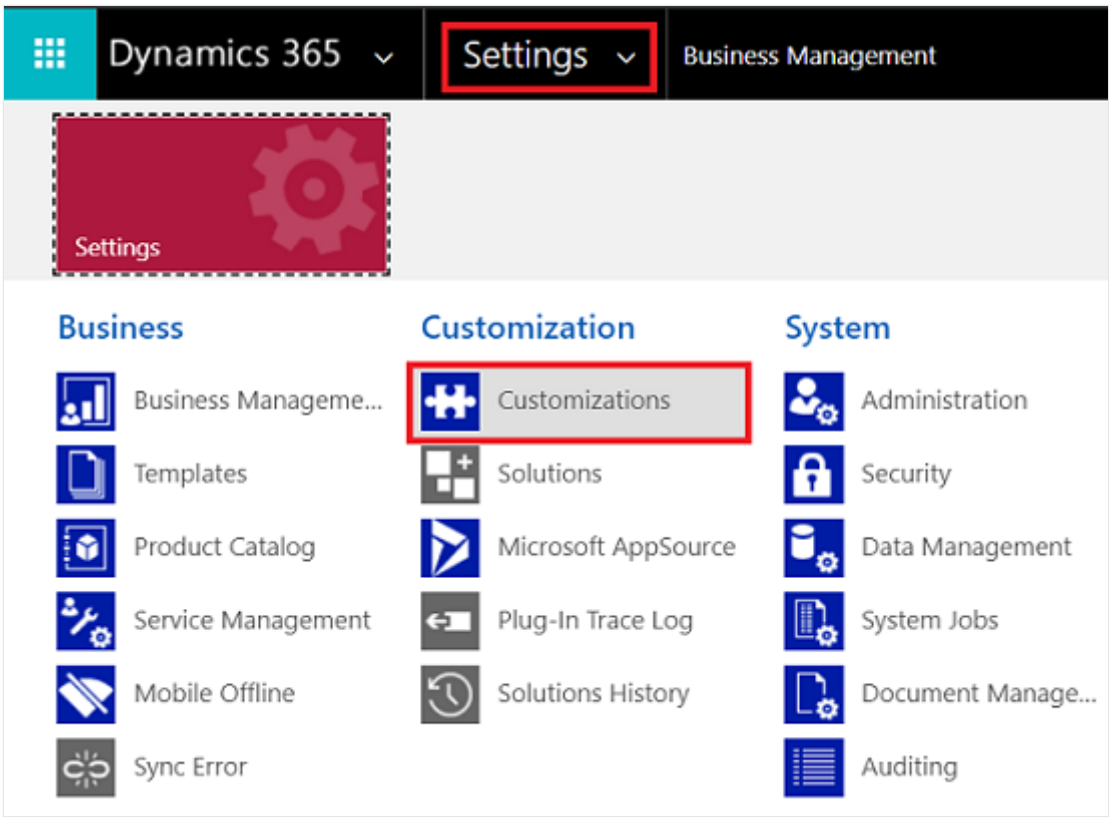
> **Note**
>
> - Adding the assistant widget is only supported in Unified Interface apps.
> - The assistant widget can't be added by using the new experience in Power Apps.

1. In Dynamics 365 Sales Hub app and go to **Advanced settings**.



The **Business Management** page opens.

2. On the navigation bar, select **Settings**, and then select **Customizations**.

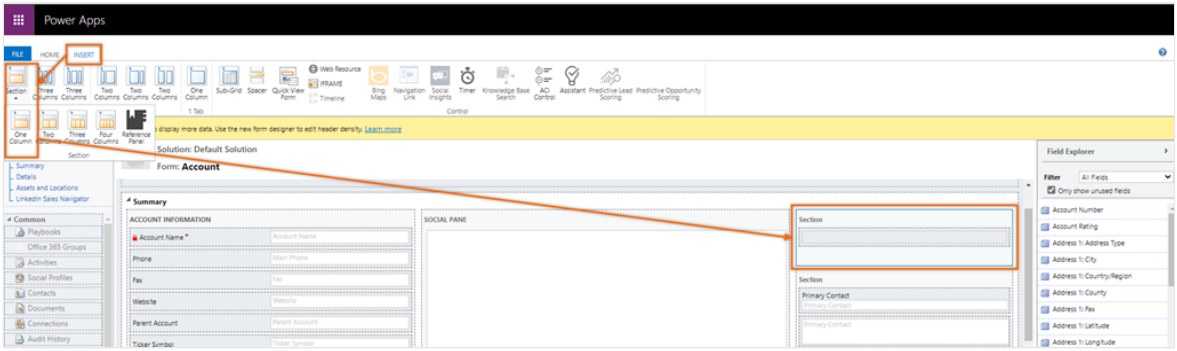


3. On the **Customization** page, select **Customize the System**.

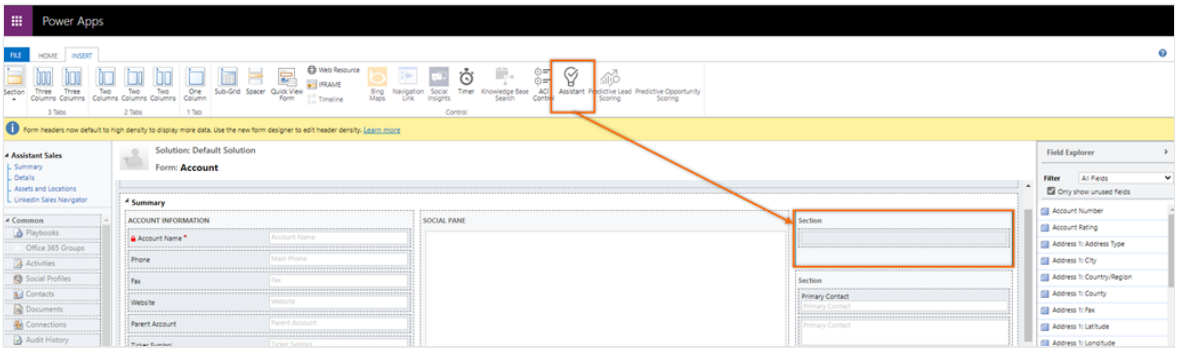
4. Under **Components**, expand *Entities*, and then the entity you want, and select **Forms**.

5. In the list of forms, select the form to which you want to add the assistant widget.

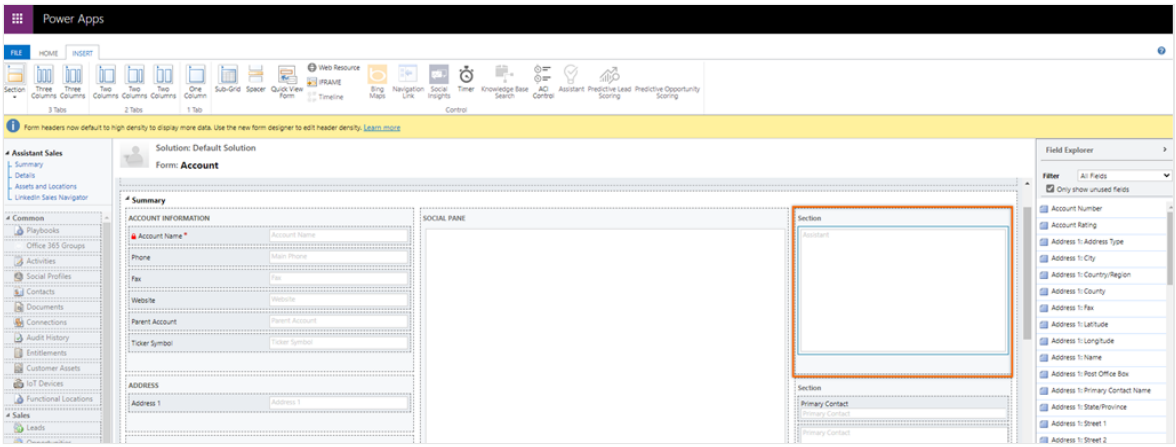
6. Go to the **Insert** tab and add a section with column to the form.



7. Select the added section and then on the tool bar, select **Assistant**.



The assistant widget is added to the section.



> **Note**
>
> - When you add the widget to the form, the assistant icon in the tool bar becomes inactive and you can't add it to the same form.
> - When you open the form and see that the assistant icon is inactive, specifies that the assistant widget is already added to the form.

8. Save and publish the form.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure the assistant
Guide customer communications with assistant

Relationship intelligence overview

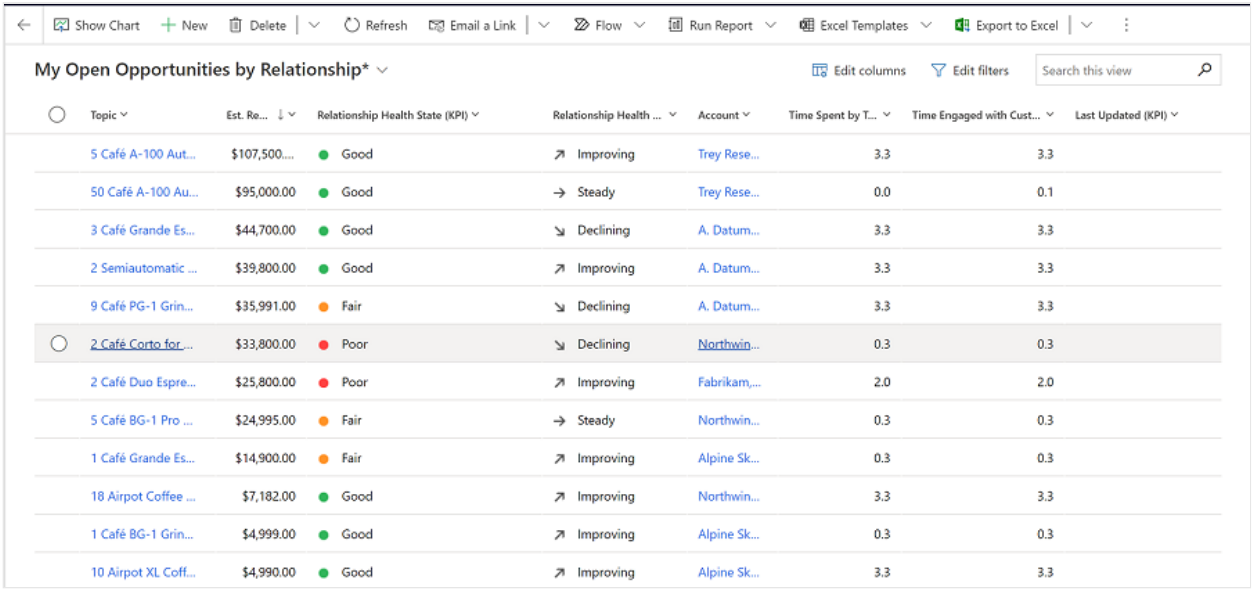
Article • 08/10/2023

Relationship intelligence helps you stay on top of your customer relationships by providing insights around relationship health, who knows whom, and so on.

Relationship analytics and health

Your organization's sales teams can use the relationship analytics in Dynamics 365 Sales to monitor the health and risks of their customer relationships. Graphical representations of KPIs and activity histories are available for any contact, opportunity, lead, or account. Detailed analytics about customer interactions, patterns, and trends are based on interaction data from Dynamics 365 and Microsoft Exchange. With more accurate and complete relationship information, sales teams can more effectively identify customers who need their attention.

Relationship analytics appears on Sales Insights opportunity record forms. Relationship health appears on opportunity record forms, list views, and charts.

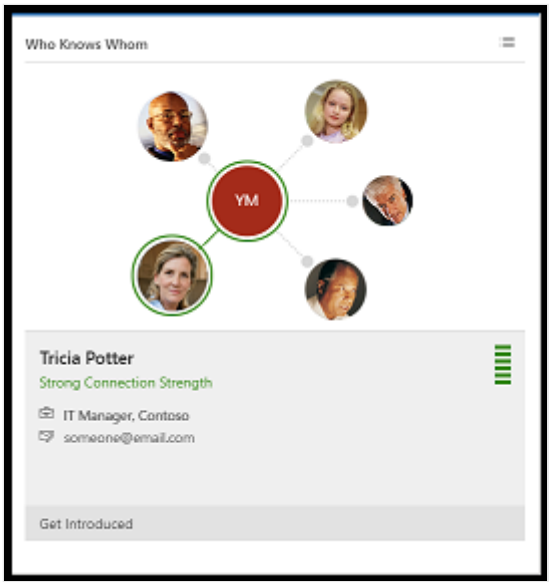


For more information on how the relationship analytics and health scores appear for sellers, see Use relationship analytics to gather KPIs. For more information on configuring this feature, see Configure relationship analytics and health

Who knows whom

As a sales representative, you often interact with leads whom you've never talked to or even met before. If only you knew someone who knew the lead, an introduction could

increase the chances of a positive outcome. Who knows whom in Dynamics 365 Sales does exactly that. Who knows whom suggests the names and email addresses of your colleagues who know the lead. It even helps you quickly email your colleagues to request an introduction.



Who knows whom relationships are calculated based on users' email interactions and meetings in your Microsoft Exchange environment. This data helps you to connect others users within your Microsoft Exchange environment who can help make a connection. Contacts or leads who are outside of your Microsoft Exchange organization can be queried for and, in some cases, users internal to your Microsoft Exchange organization can also be queried for. For example, this is possible if a user within your Microsoft Exchange organization has added an internal user's email address to their Microsoft Exchange address book.

For more information on how sellers can use who knows who, see How to get introduced to leads or contacts. For more information on configuring this feature, see Configure who knows whom.

Enable relationship intelligence

Article • 08/19/2022

Enable relationship intelligence in Dynamics 365 Sales Premium to give your sales team important insights based on their interactions with customers. Relationship analytics KPIs, customer relationship health scores to know which customers need attention, and who knows whom suggestions for introductions to leads help your sellers be more effective.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

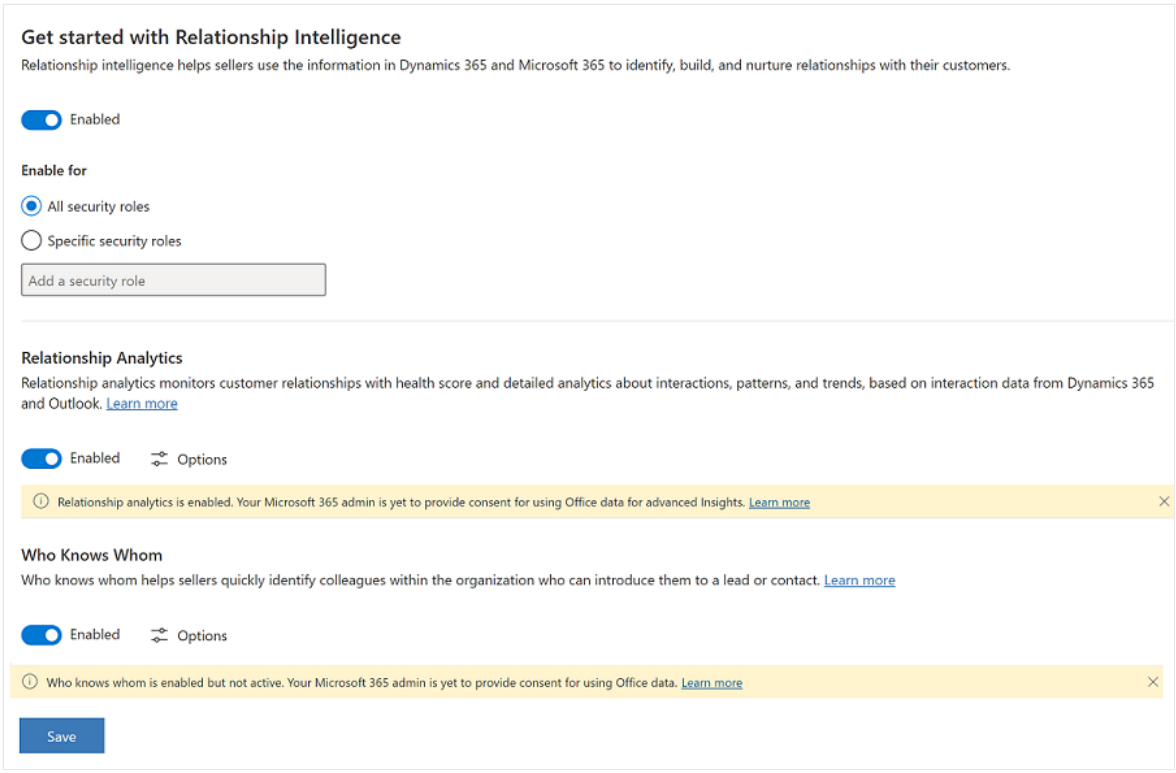
Prerequisite

- Ensure that advanced Sales Insights features are enabled. To learn more, Enable and configure premium Sales Insights features.

Enable relationship intelligence

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

2. Under **Relationship insights**, select **Overview**.



3. Under **Get started with Relationship Intelligence**, select **Enable**. The relationship intelligence features—relationship analytics and who knows whom—are turned on by default.

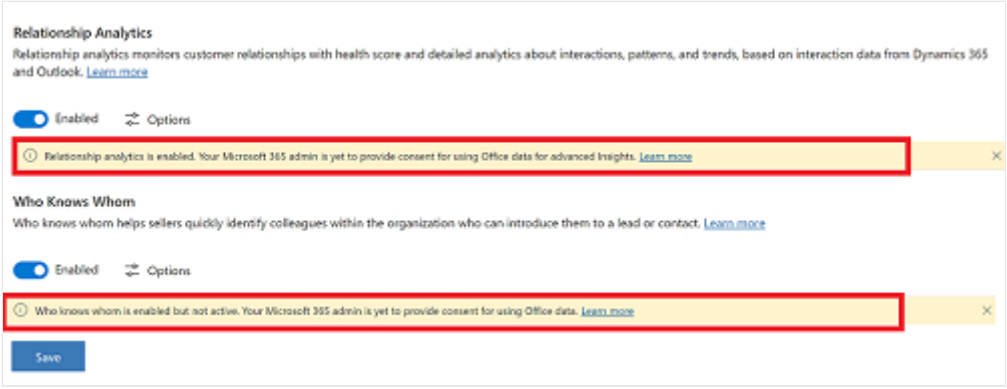
4. Select the security roles of users whose Exchange data will be used to generate relationship insights.
   The security role selection only applies to Exchange data. Data and emails stored in Dynamics 365 will be used to generate insights by default.

   > **Note**
   >
   > - If you don't want to collect Exchange data at all, you can **turn off exchange integration**

5. Save the changes.
   Relationship intelligence features are enabled but you must complete the next steps, for the features to be fully functional.

Next steps

- Work with your Microsoft 365 admin to provide consent to use Exchange data.
  - Until the consent is provided, a banner is displayed on the Relationship insights **Overview** page to notify the pending action.



  - Make sure to get the consent within 14 days of turning on the relationship intelligence features. Otherwise, who knows whom and Exchange integration for relationship analytics will be automatically turned off on the 14th day.

- Select **Options** in the respective feature section to configure the feature. For more information on what you can configure, see:
  - Configure relationship analytics and health
  - Configure who knows whom

- Add Relationship intelligence widgets to custom forms if your organization is using a custom sales app or a custom form for lead or contact.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Configure relationship analytics and health

Article • 04/21/2023

Configure relationship analytics to specify whether you want to use Exchange data for enhanced insights. You can also configure parameters that would determine the customer relationship health. These configurations are only supported for Sales Premium customers.

> **Note**
>
> No specific configuration is required for basic relationship intelligence; it's enabled by default. For more information, see **Basic relationship insights**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

> **Important**
>
> This feature is intended to help sellers or sales managers enhance their team's performance. This feature is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with users. This also includes adequately notifying users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with users may be monitored, recorded, or stored.

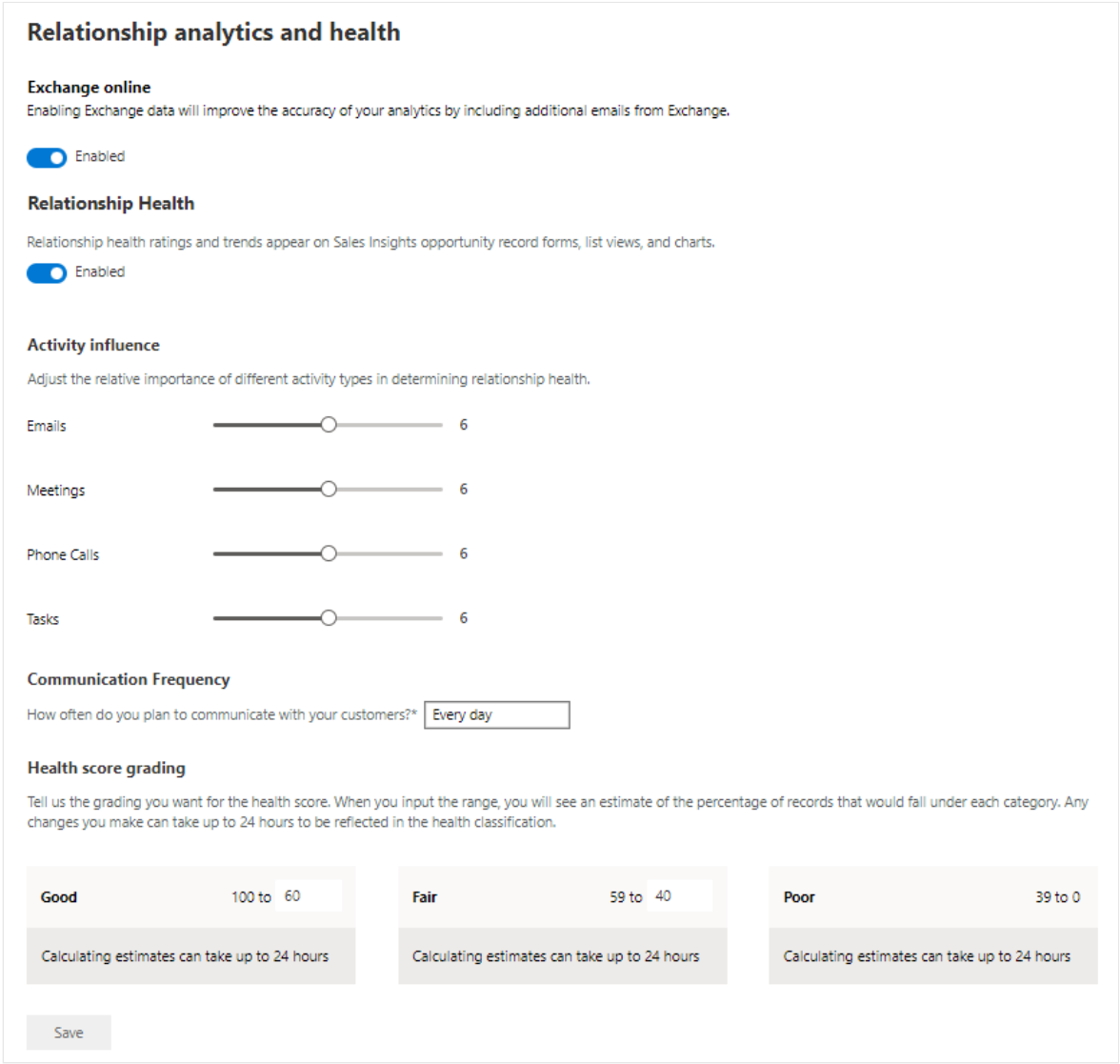
Prerequisite

- Enable relationship analytics

Configure relationship analytics

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

2. Under **Relationship insights**, select **Analytics and Health**.

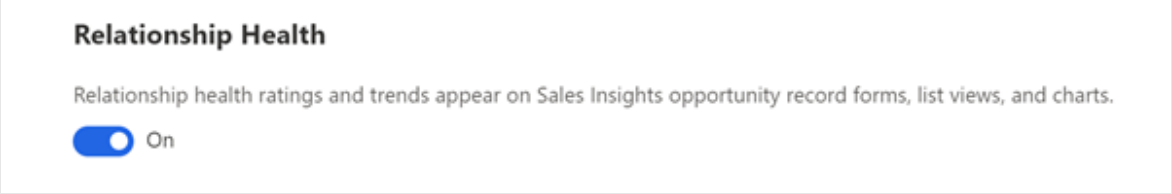


   When you enable the relationship analytics feature, exchange integration is also automatically enabled. However, the integration won't work until your Microsoft 365 admin provides consent for Dynamics 365 to collect the data.

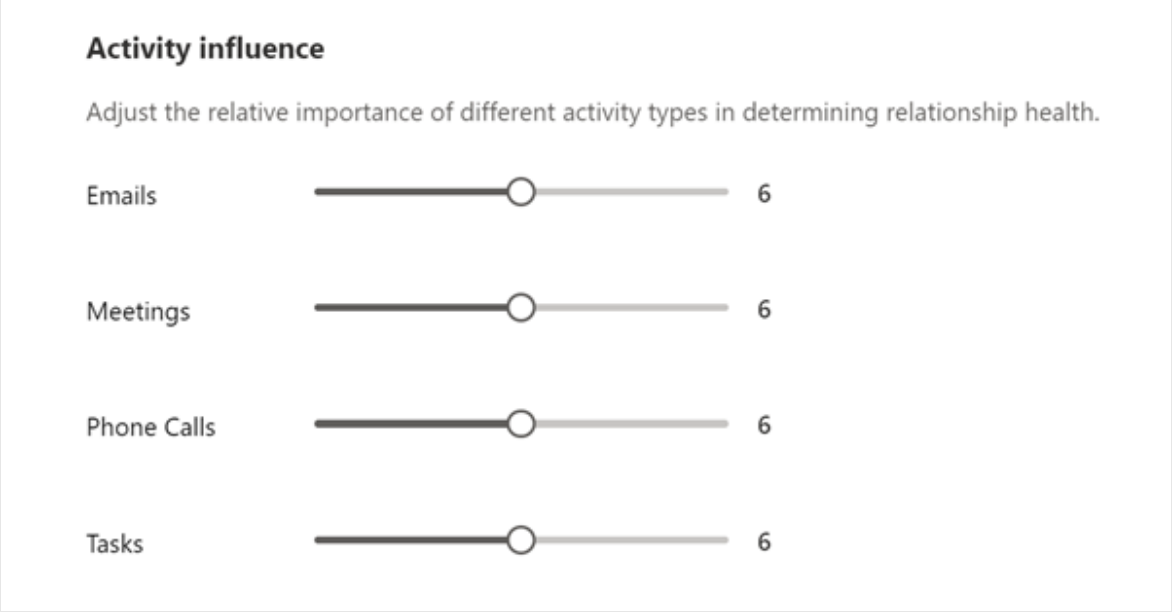
3. Turn off **Exchange Online** if you don't want to include emails and meetings from Exchange Online in KPI calculations and analytics. In this case, relationship analytics will be generated from emails and data stored in Dynamics 365.

4. Turn on **Relationship Health** to show the relationship health score in opportunities, views, and charts.

   > **Note**
   >
   > You can turn off this option if you don't want to show the score. However, relevant health data is still collected.

5. Under **Activity influence**, adjust the sliders according to the relative importance of common activities in calculating the relationship health score.

6. In **Communication Frequency**, select how often your organization expects sales teams to communicate with customers.

   The value you select influences the expectation of more recent frequent communications in the health score. Less frequent communication reduces the expectation. More frequent communication increases it.

7. Under **Health score grading**, set the range of health scores to grade opportunities. To change the default values, point to the minimum value in the range and select the up or down arrow or type a new value.

   When the health score is calculated, the opportunities in your organization's pipeline are graded as Good, Fair, or Poor, according to the ranges you defined.

Grading can take up to 24 hours.

If you change a grade's minimum value, the adjacent grade's maximum value changes automatically with it. For example, if you change the minimum value for Good to *50*, the maximum value for Fair changes to *49*.

8. Select **Save**. Relationship analytics is now enabled and configured for your organization.

For more information about how to view the analytics, see Use relationship analytics to gather KPIs.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System and application users who can push data to Dataverse
Add Relationship intelligence widgets to custom forms
Sales Insights and privacy
View and export KPI data
Relationship analytics and health FAQ

Configure who knows whom

Article • 08/07/2023

The Who knows whom feature helps your sales organization quickly identify colleagues who can introduce them to leads or contacts, based on their interactions through emails and meetings. Configure the feature to select an email template to use for introductions.

> **Note**
>
> - **Basic who knows whom information** is available out-of-the-box in all regions for Sales Enterprise users and doesn't require any setup.
> - **Enhanced who knows whom information** is available for Sales Premium users and is available only in **specific regions**.
> - For Office 365 data, your organization's data location must be in one of the following locations and not in your region-specific datacenter location:
>   - Global Geography 1 – EMEA (Austria, Finland, France, Ireland, Netherlands)
>   - Global Geography 2 – Asia Pacific (Hong Kong SAR, Japan, Malaysia, Singapore, South Korea).
>   - Global Geography 3 – Americas (Brazil, Chile, United States).
>
>   To learn more on data center locations, see **Data Center Locations**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisite

- Enable premium Sales Insights features.
- Turn on who knows whom in relationship intelligence.
- Set up server-side synchronization of email, appointments, contacts, and tasks

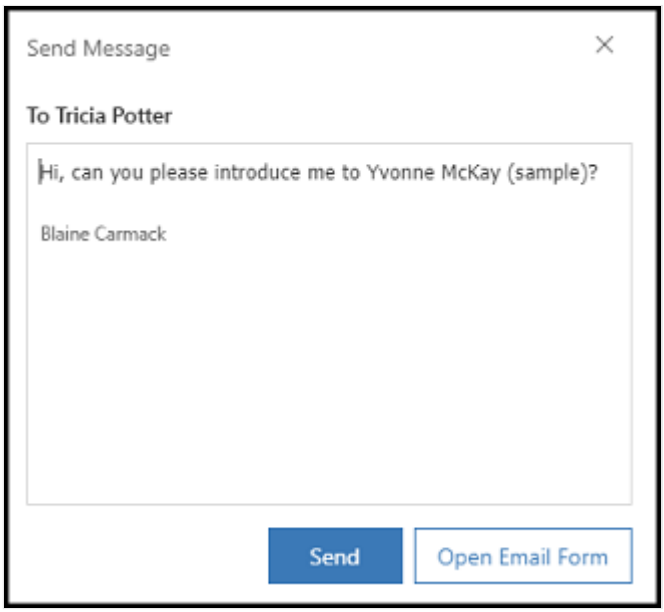
Configure who knows whom

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.

2. Under **Relationship insights**, select **Who Knows Whom**.

3. Select an email template to use for requesting introductions. This email template is used when a seller contacts a colleague to get introduced to a lead or contact.

   The following screenshot shows an example introduction email using the default email template:

   Learn how to create an email template.

4. Select **Save**. After you enable who knows whom, you must complete the next steps for the feature to be fully functional.

Next steps

- Work with your Microsoft 365 admin to provide consent to use Exchange data.

  Make sure to get consent within 14 days of turning on the relationship intelligence features. Otherwise, who knows whom will be automatically turned off on the 14th day. However, you'll continue to get the out-of-the-box who knows whom information from Dynamics 365 data.

- If you'd like roles other than Salesperson and Sales Manager to access the who knows whom information, grant access to those roles.

- Add relationship intelligence widgets to custom forms if your organization is using a custom sales app or a custom form for leads or contacts.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System and application users who can push data to Dataverse
Get introduced to a lead
Who knows whom FAQs

Provide consent to collect data from Microsoft 365

Article • 03/21/2023

Dynamics 365 Sales uses Microsoft 365 data to generate the following insights based on users' email interactions and meetings:

- Relationship analytics KPIs and health score
- Who knows whom suggestions

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium and Microsoft 365 More information: Dynamics 365 Sales pricing
Security roles	Global administrator in Microsoft 365

Things to consider

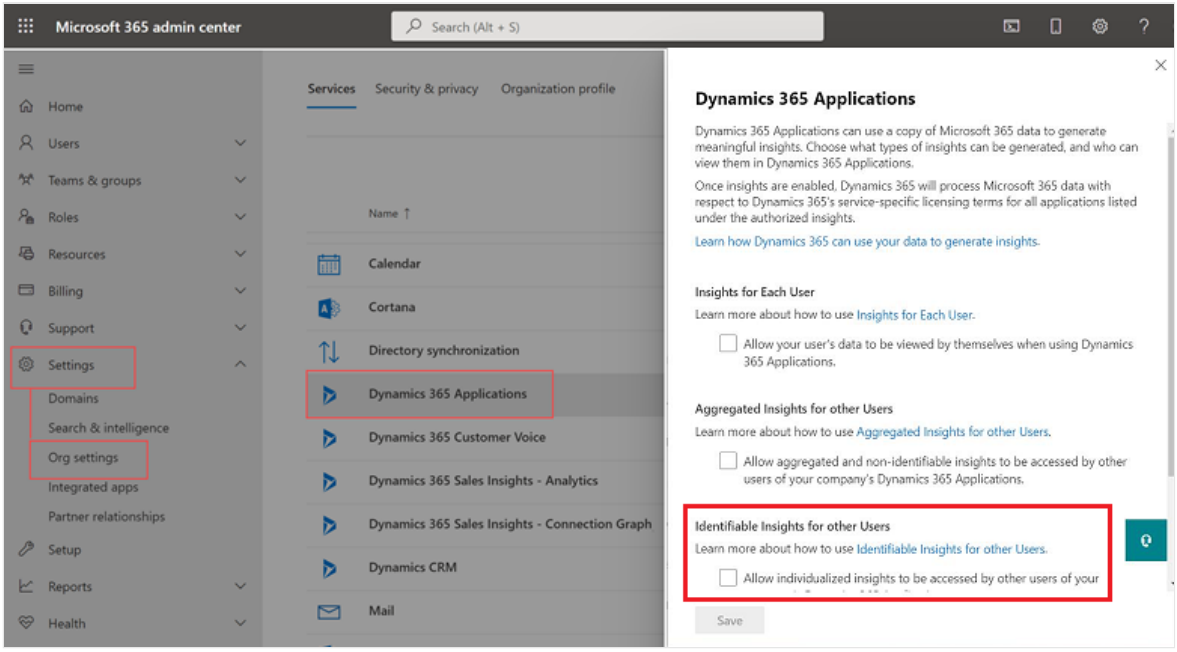
Before you provide consent, review the following information:

- Both relationship analytics and who knows whom require the same consent. You only need to consent once. For more information about the different consent types, see Consent required to use Microsoft 365 data.
- The consent applies to all the Dynamics 365 applications that require permission to access Microsoft 365 data.
- When consent is provided, Dynamics 365 analyzes Exchange emails pertaining to the last one year to provide relationship insights and who knows whom suggestions. The analysis is done in 12 batches, with each batch containing emails from one month. Dynamics 365 can handle up to 8 million emails per batch in this process. The live data is then processed after every 24 hours.
- After you provide consent, all Dynamics 365 users in the tenant are automatically opted in to share their data. To opt out, do one of the following:
  - Inform users to turn off data sharing if they don't want to share their data.
  - Enable relationship intelligence for specific security roles and add users to one of the security roles to collect only their data.

- The following data is collected from Exchange: Email ID, Date, and so on.
- The who knows whom insights are visible only to the Salesperson and Sales Manager security roles by default. The Dynamics 365 administrator can grant access to other roles if required.
- When you withdraw consent, the system can take up to 24 hours to remove data from all apps and up to 30 days to remove backed-up data from Microsoft 365 storage accounts. After you withdraw consent, users will be automatically opted out.

Provide consent

1. In **Microsoft 365 admin center**, select **Settings** > **Org settings** > **Dynamics 365 Applications**.

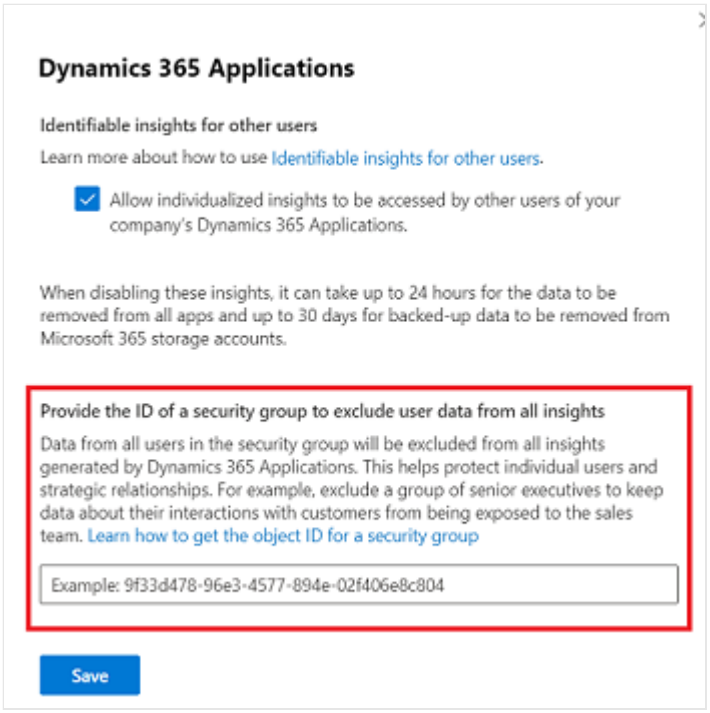


2. Select **Identifiable insights for other users**.

> **Note**
>
> The consent applies to all the Dynamics 365 applications that require the **Identifiable insights for other users** permission. Dynamics 365 Sales uses this consent for both relationship analytics and who knows whom.

3. (Optional) In the textbox that appears, enter the security group IDs of users who want to opt out of sharing their Exchange data. For example, opt out groups such

as C-suite, M&A, finance, and so on.



> **Important**
>
> The opt out is only applicable for future data collections. Existing data of users in the security group will remain in the system. Let's suppose Amber moved from the Sales team to the M&A team, which is opted out by the admin. In this case, Amber's data before the move will be available in the system but not after she joins the M&A security group.

4. Save the changes. The user opt-in is automatically turned on for all tenant users unless they've manually turned off data sharing.

See also

Consent required to use Microsoft 365 data
Insights generated from Microsoft 365 data
Configure relationship analytics and health
Use relationship analytics to gather KPIs
Configure who knows whom
How to get introduced to leads or contacts

Insights generated from Microsoft 365 data

Article • 09/30/2022

Dynamics 365 Sales uses your emails and meeting information from Exchange to generate the following relationship insights:

- Relationship analytics and health
- Who knows whom

> **Note**
>
> If your organization is using Dynamics 365 Customer Insights, then your Exchange data will be used to enrich customer data. For more information, see **Enrich customer profiles with data from Microsoft Office 365**.

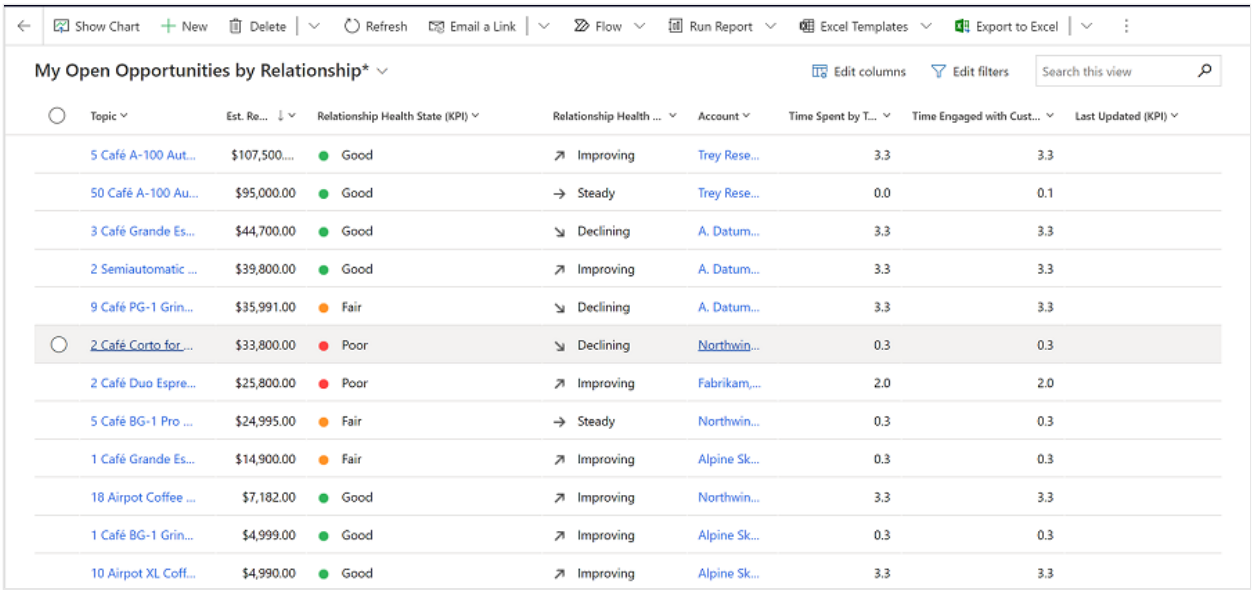
Your Microsoft 365 admin needs to provide consent to let Dynamics 365 collect and use Microsoft 365 data. For information about the different consent types, see Consent required to use Microsoft 365 data.

As a user, if you'd like to opt out of sharing your data, you can turn off data sharing with Dynamics 365 applications.

Relationship analytics and health

Relationship analytics provides a comprehensive view of the overall health and trend of your business relationships based on your sellers interactions with your customers through emails and activities in Dynamics 365 and Exchange. It calculates the KPIs and activity histories for any contact, opportunity, lead, or account. With these insights, you can identify critical opportunities and customer relationships that need your attention.

The following screenshot is an example of how relationship analytics data appears for open opportunities:

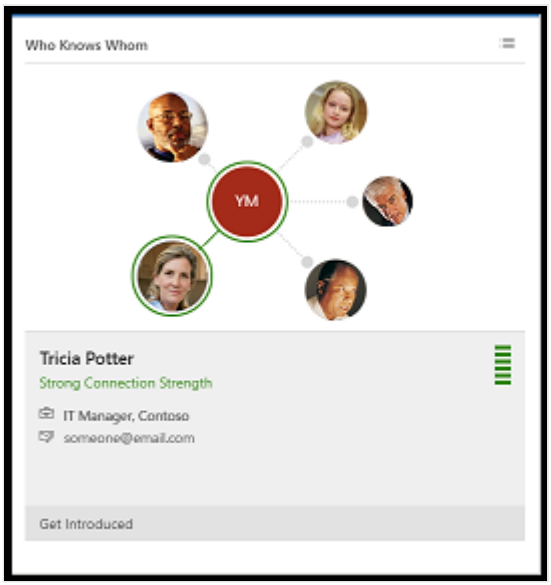


For more information on how to set up and use this feature, go to Configure relationship analytics and health and Use relationship analytics to gather KPIs.

Who knows whom

Who knows whom helps you identify colleagues who can introduce you to a lead or contact based on their email interactions with the lead. An introduction can increase the chances of a positive outcome. This feature provides you with details such as the names and email addresses of your colleagues and the strength of their connection to the lead.

The following screenshot is an example of the **Who Knows Whom** widget on a lead page:



For more information on how to set up and use this feature, go to Configure who knows whom and How to get introduced to leads or contacts.

Microsoft 365 consent types

Article • 09/30/2022

Your Microsoft 365 admin needs to provide consent to let Dynamics 365 collect, store, and use Microsoft 365 data. This article describes the different consent types required by Dynamics 365 to generate insights. For more information about the insights generated by Dynamics 365 Sales, see Insights generated from Microsoft 365 data.

> **Important**
>
> Microsoft 365 and Dynamics 365 each have their own service-specific licensing terms. The service-specific terms that apply depend on which service processes your data. For example, when a copy of your Microsoft 365 data is transferred to Dynamics 365, your Microsoft 365 data in that copy becomes Dynamics 365 data and the Dynamics 365 service-specific terms apply.

The following table lists the consent types and the list of Dynamics 365 applications that use the shared Microsoft 365 data. The list of applications is subject to change.

> **Note**
>
> Depending on the Dynamics 365 application that you use and the insights you need, you can request the Microsoft 365 admin to provide the appropriate consent. More information: **Provide consent to collect data from Microsoft 365**

Consent Type	Possible insights	Type of insight	Results visible to	Dynamics 365 app using the consent
Insights for each user	Personal insights can be generated based on users' Microsoft 365 data.	Detailed and aggregate	User running the Dynamics 365 application	None yet

Consent Type	Possible insights	Type of insight	Results visible to	Dynamics 365 app using the consent
Aggregated insights for other users	Aggregated insights are generated based on Microsoft 365 data belonging to members of a Dynamics 365 organization. The aggregated data is de-identified. The insights are only made available to users in your company, including authorized guest users of Dynamics 365, and don't include data specific to individual users. It can be used to understand overall patterns and behaviors of groups.	De-identified and aggregate	Users across the tenant	Dynamics 365 Customer Insights: Office enrichment Example: Office enrichment uses data from Office 365 to enrich customer account profiles with insights about engagements through Office 365 apps. The engagement data consists of email and meeting activity, which is aggregated at the account level. More information: Enrich customer profiles with data from Microsoft Office 365

Consent Type	Possible insights	Type of insight	Results visible to	Dynamics 365 app using the consent
Identifiable insights for other users	Microsoft 365 data about individual users, and insights derived from this data, are made available to other users in your organization.	Detailed and aggregate	Users across the tenant	Dynamics 365 Sales: Who knows whom Dynamics 365 Sales: Relationship analytics Example: Users can take advantage of their network of colleagues to determine who can introduce them to a sales target at an external organization. More information: Relationship insights generated from Microsoft 365 data

Add Relationship intelligence widgets to custom forms

Article • 09/19/2022

By default, the health score widget and who knows whom widget are available only in the out-of-the-box **Sales Insights** form. If you're using customized forms, you can display these widgets on your custom forms by manually adding them to your form.

License and role requirements

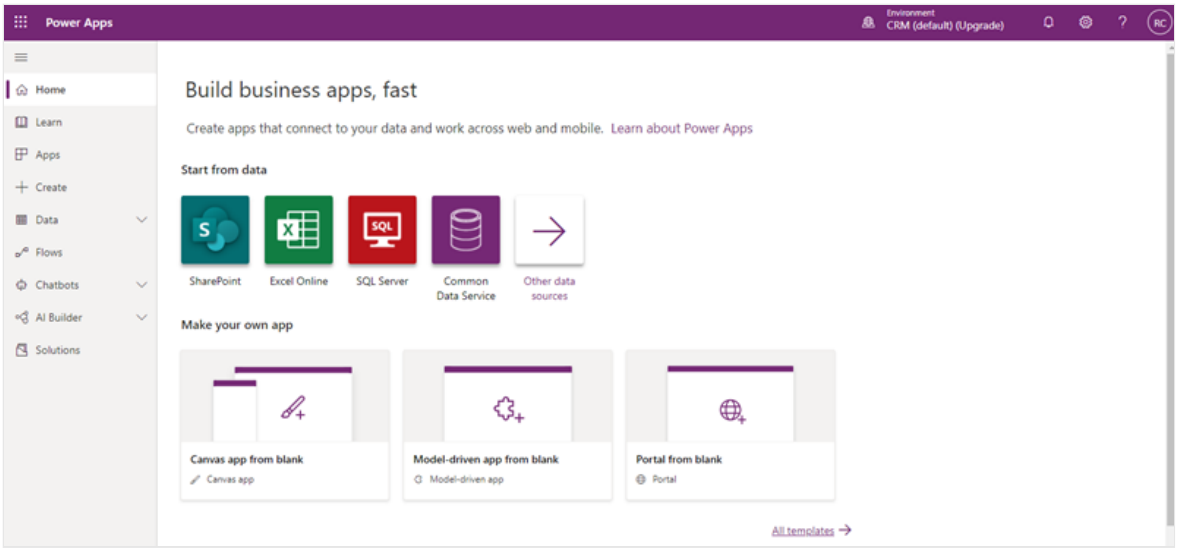
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Add widgets to a custom form

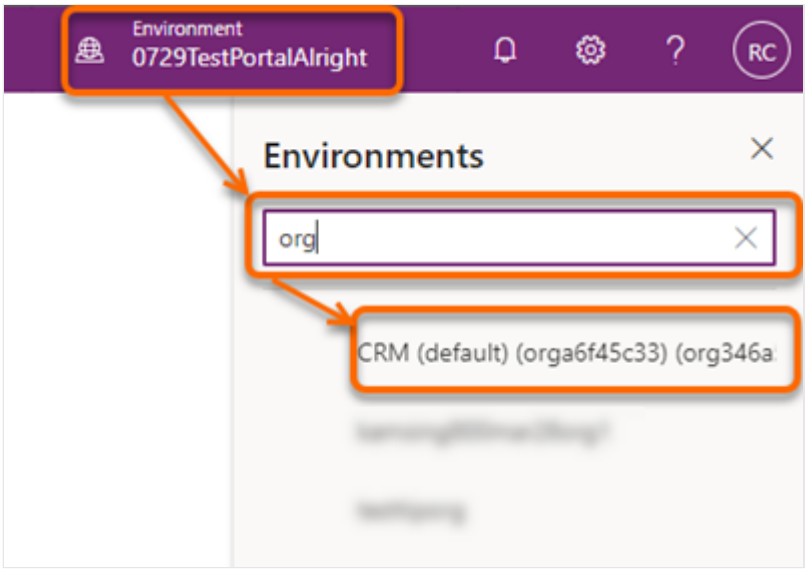
To add the health score widget or who knows whom widget to your custom form, follow these steps:

> **Important**
>
> - Widgets are only supported in Unified Interface apps.
> - You can't use the legacy form designer to add the widgets to a form.

1. Sign in to the Power Apps portal.

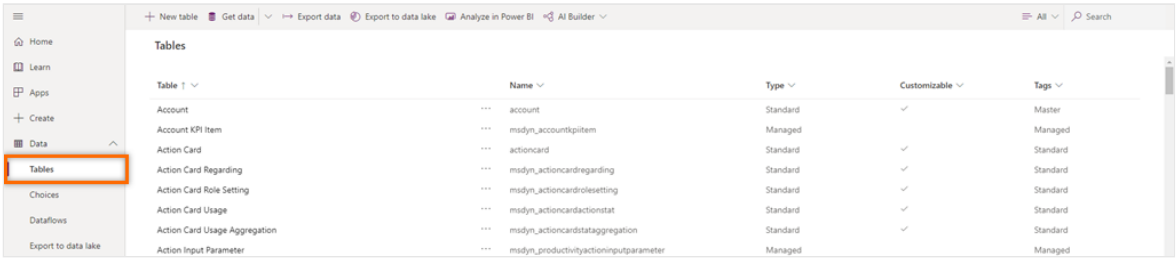


2. Search for and select your organization's environment.



3. Select **Data** > **Tables**.

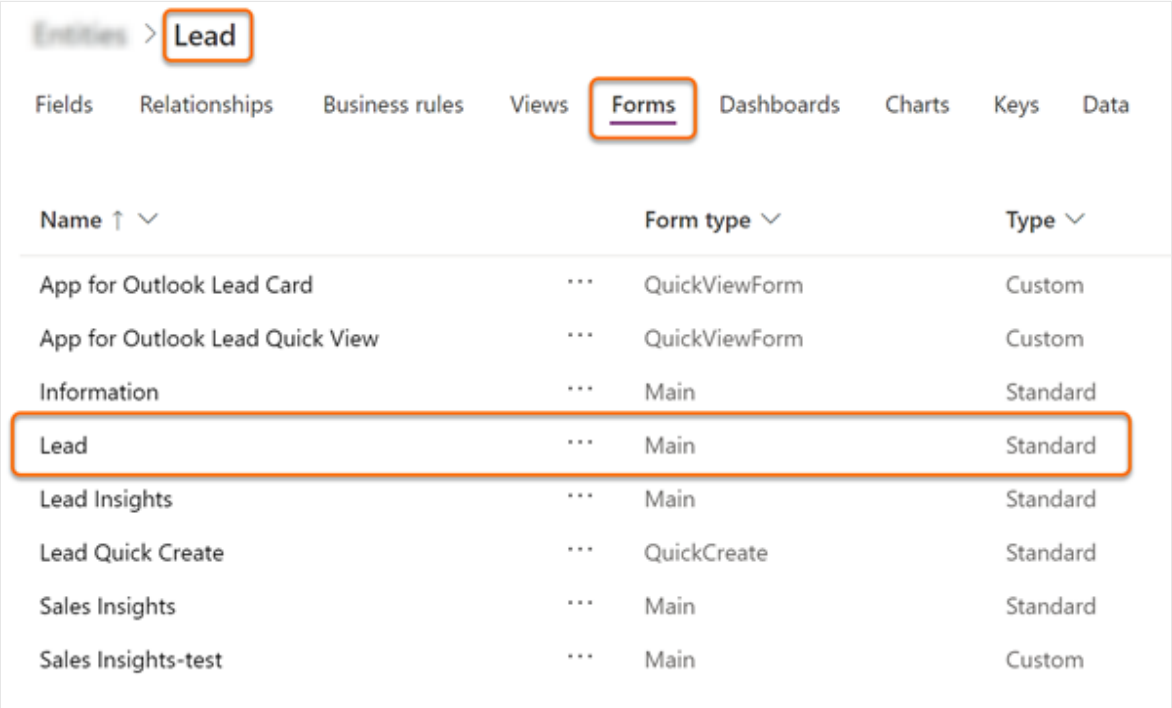
   The **Tables** page opens with the list of tables.



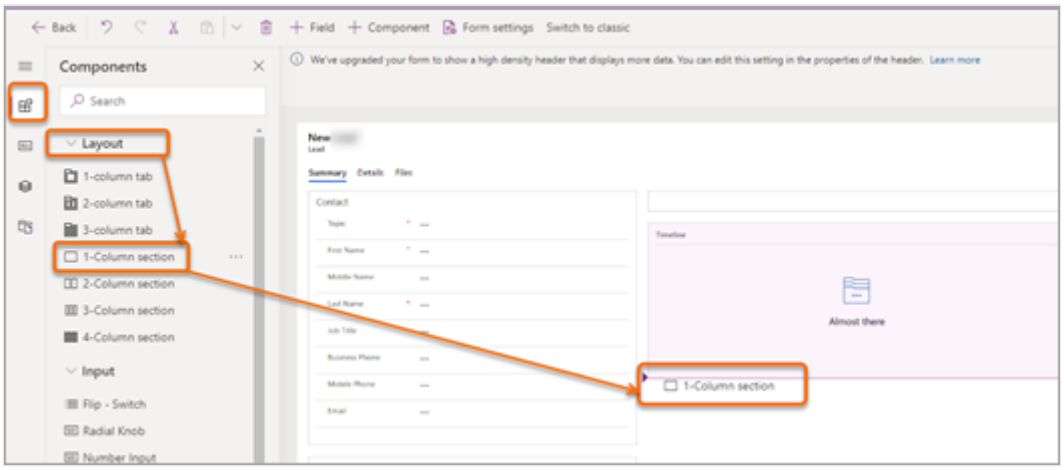
4. Open the table, select the **Forms** tab, and then select a main form to add the widget to. In this example, the table **Lead** is selected and the main form **Lead** is selected.

> **Note**

If you're unable to view the table to which you want to add the widget, in the upper-right corner of the page, change the filters settings to **All**.



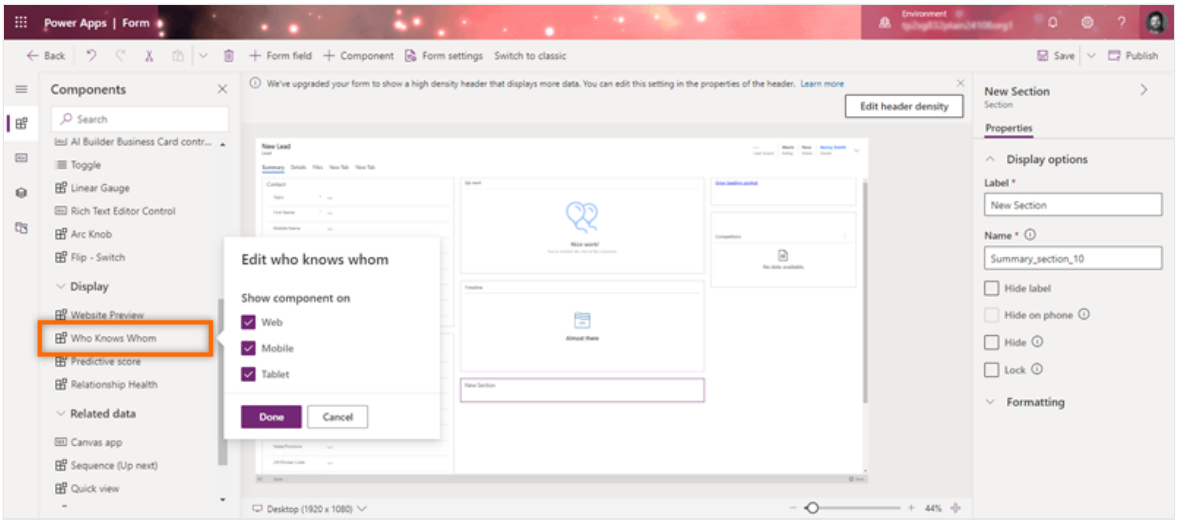
5. In the form designer, select **Component**, and then from **Layout**, add a column to the form as a placeholder to add the widget.



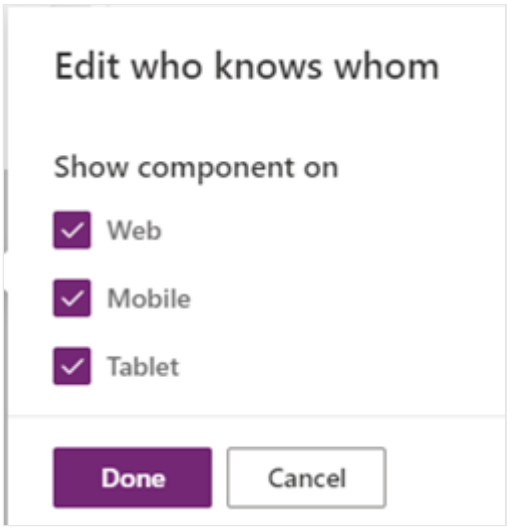
6. Depending on the widget you want to add, do one of the following actions:

   - To add the health score widget, select **Display** > **Relationship Health**.
   - To add the who knows whom widget, select **Display** > **Who Knows Whom**.

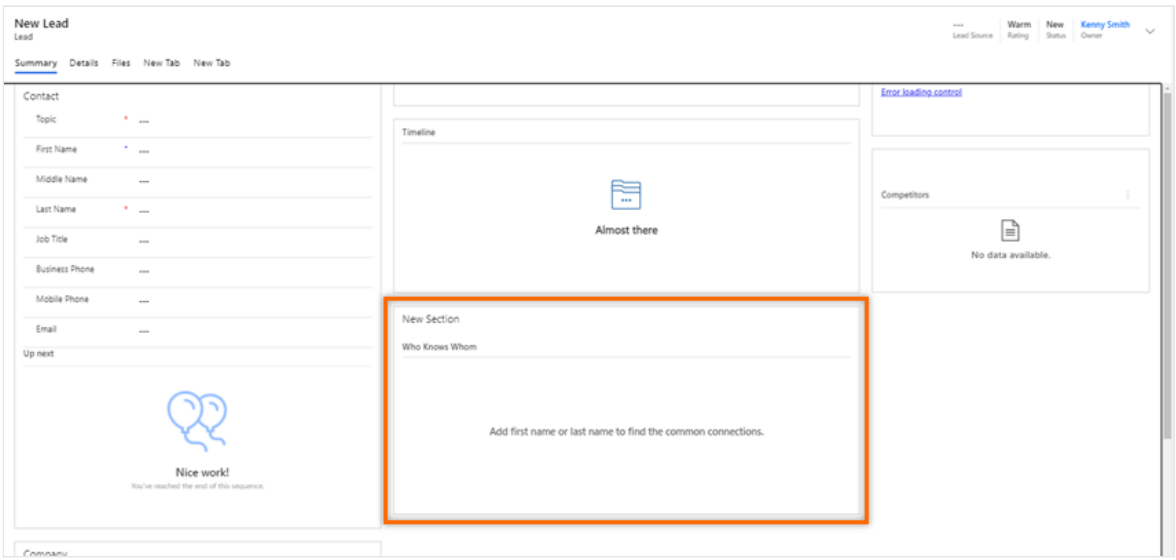
> ⓘ **Note**
>
> Ensure that the added placeholder column is selected. If it isn't, the widget will be added at a random place in the form.
> In this example, let's select the **Who Knows Whom** widget.



7. In the pop-up window, select the components on which you want to display the widget, and select **Done**.



The widget is added to the form, as shown in the following image.



> ⓘ **Note**

To hide the **New section** label, go to the **Properties** tab of the **New Section** settings pane, and then select **Hide label**.

8. Save and publish the form.

> **Note**
>
> If you'd like roles other than Salesperson and Sales Manager to access the who knows whom widget, **grant access to those roles**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Grant access to who knows whom information

Article • 03/03/2023

By default, the Salesperson and Sales Manager roles have permissions to view the who knows whom information in the contact and lead pages. As an administrator, you can grant access to other roles if they too would benefit from the who knows whom information.

> **Note**
>
> The who knows whom widget will appear for all users who can view the Sales Insights view in the contact and lead pages. Users who don't have the permissions will see a message that they don't have sufficient privileges.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

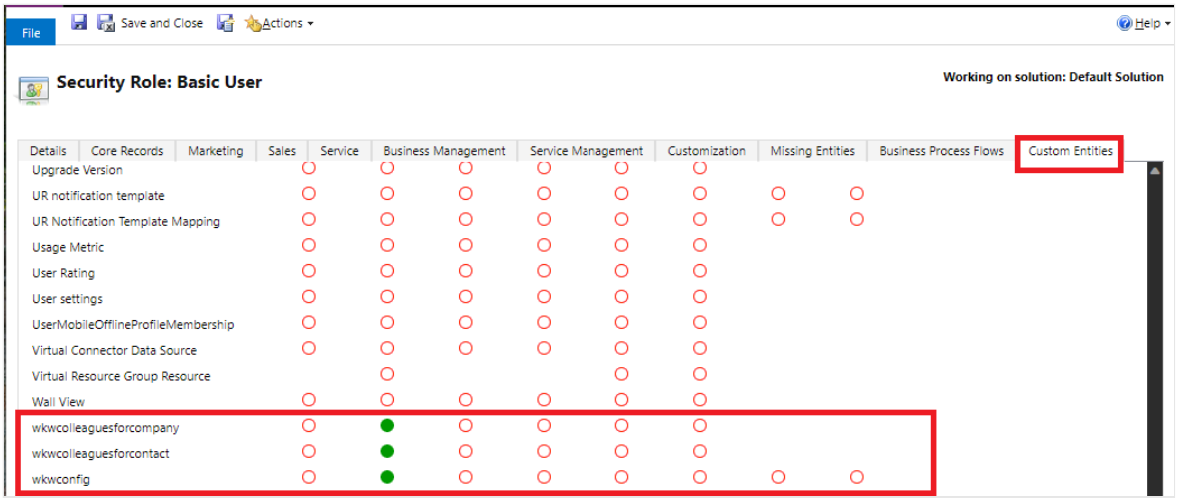
To grant access

1. In the Sales Hub app, select **Settings** in the upper-right corner and select **Advanced Settings**.
2. On the **Business Management** page, select **Settings** > **System** > **Security**.
3. Select **Security Roles**.
4. Select the security role that you want to grant access for.
5. In the **Custom Entities** tab, provide read permissions to the following entities:

   `wkwcolleaguesforcompany`

   `wkwcolleaguesforcontact`

`wkwconfig`



6. Save the changes.

See also

View who knows whom

Set up conversation intelligence in Sales Hub app

Article • 07/06/2023

Using Microsoft Teams or other third-party dialers together with conversation intelligence in Dynamics 365 Sales helps organizations transform customer interactions into revenue. Calling with these dialers allows sellers to view business-critical insights both during the call—in real-time—and after.

As an administrator, configure conversation intelligence for the dialer that your sellers use.

If you have the Dynamics 365 Sales Enterprise license, you can enable Teams call recording through quick setup. Go to the **Get started with digital sales** page under **App Settings** in your sales app.

Learn more about conversation intelligence for Sales Enterprise license.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites for Microsoft Teams

- An installation of Microsoft Teams Phone System along with a valid license to use it. Set up your phone system.
- A license to use Teams. Learn more about Microsoft Teams add-on licenses.
- Teams dialer enabled and configured for your organization
- If you want to use your own storage for conversation intelligence, create a v2 storage account with an Azure subscription. The account will include a blob container to configure call data. To learn more, see Create a call recording repository in Azure.

Prerequisites for third-party dialers

- A valid license and subscription to use the third-party dialers. Refer to your telephony provider's documentation to set up the phone system and dialer.
- Integrate the third-party dialer with Dynamics 365 Sales.

Open the conversation intelligence settings page

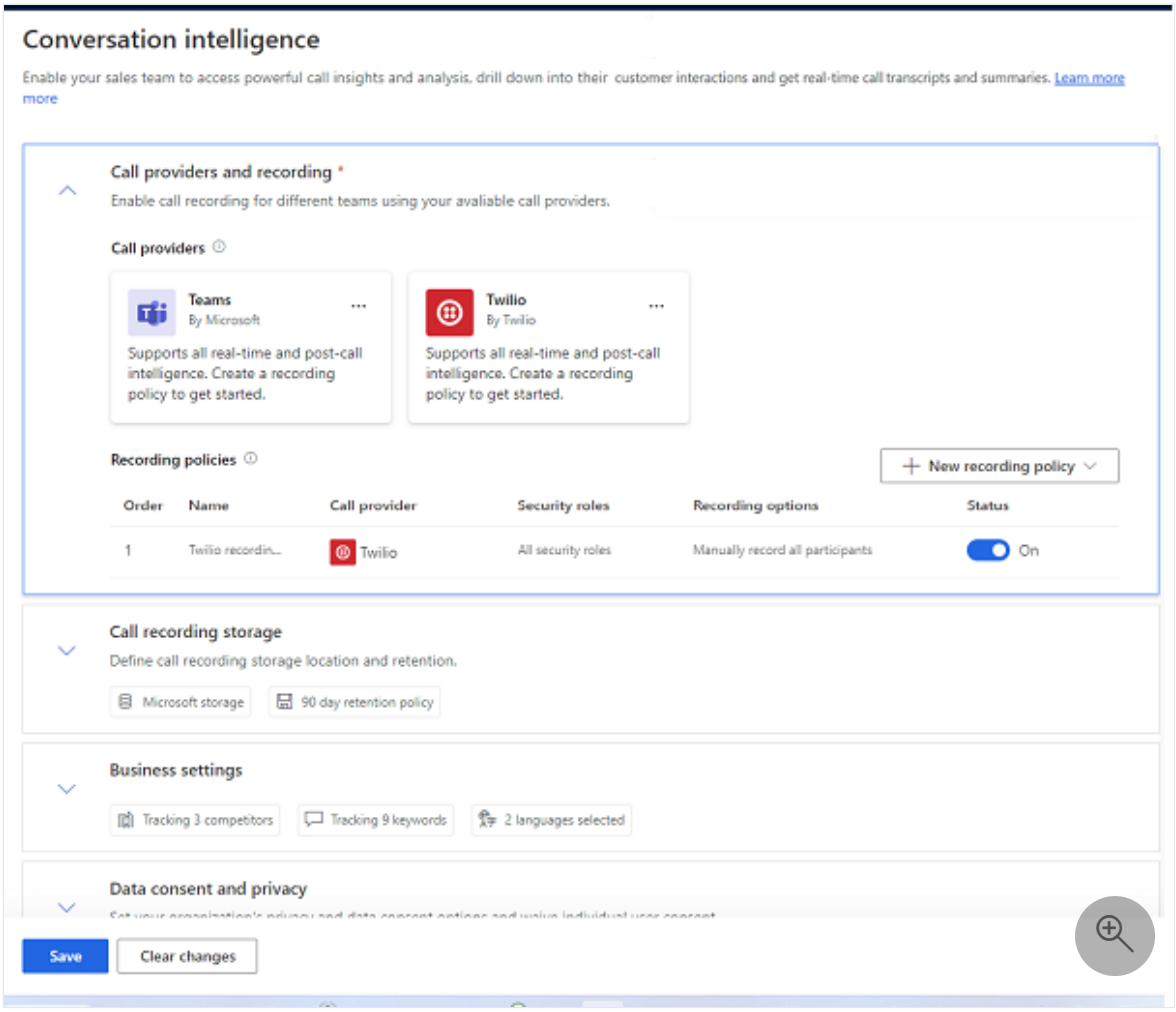
1. Select **Change area** in the lower-left corner of the page, and then select **Sales Insights settings**.
2. Under **Productivity**, select **Conversation intelligence**.

Create or edit a recording policy

Recording policies define the call provider, security roles, and recording options. You can create multiple recording policies and assign them to different security roles. For example, you can create a recording policy for your sales managers that allows them to record calls automatically and another one for your sales representatives that allows them to record calls manually. If your sellers use multiple call providers, you can create a recording policy for each provider.

1. Open the **Conversation intelligence settings** page.
2. In the **Call providers and recording** section, select your call provider. For example, select **Teams** to create a recording policy for your Teams calls. To edit an existing policy, select the policy from the **Recording policies** table in this section.

> **Note**
>
> This section lists only those providers that are configured and integrated. If you don't see your provider listed, verify the prerequisites listed in this article.



3. In the **New recording policy** pane, specify a unique name for the policy.

4. Configure the security roles and recording options as described in the following table.

Option	Description
Recording options	Select an option for initiating call recordings: • **Manually record all participants**: Select this option to allow sellers to manually start the recording when a call begins and record all participants. • **Manually record all participants, sellers are automatically recorded**: Select this option to record sellers automatically when a call begins. Sellers can start or stop recording the customer at any time. • **Automatically record all participants**: Select this option to automatically record all the participants in the call. • **Automatically record all participants, sellers can stop recording**: Select this option to automatically record all the participants in the call. Sellers can stop the recording at any time.
Enable recording	Specifies the security roles that the policy is applicable for. Make sure that the selected security roles have read privileges to **Recording** records.

Option	Description
policy for	**Tips:** • To implement the feature for your entire organization, select all security roles. • For a phased implementation, create different security roles for each group of users and then assign the security role accordingly.

5. Save the changes. If you're configuring conversation intelligence for the first time, continue with the next section to configure the conversation intelligence settings.

Configure conversation intelligence settings

Configure the settings to specify where your call recording data is stored, the retention period, and the keywords and competitors that you want to track during calls.

1. Open the **Conversation intelligence settings** page.

2. In the **Call recording storage** section, configure the storage-related options as described in the following table.

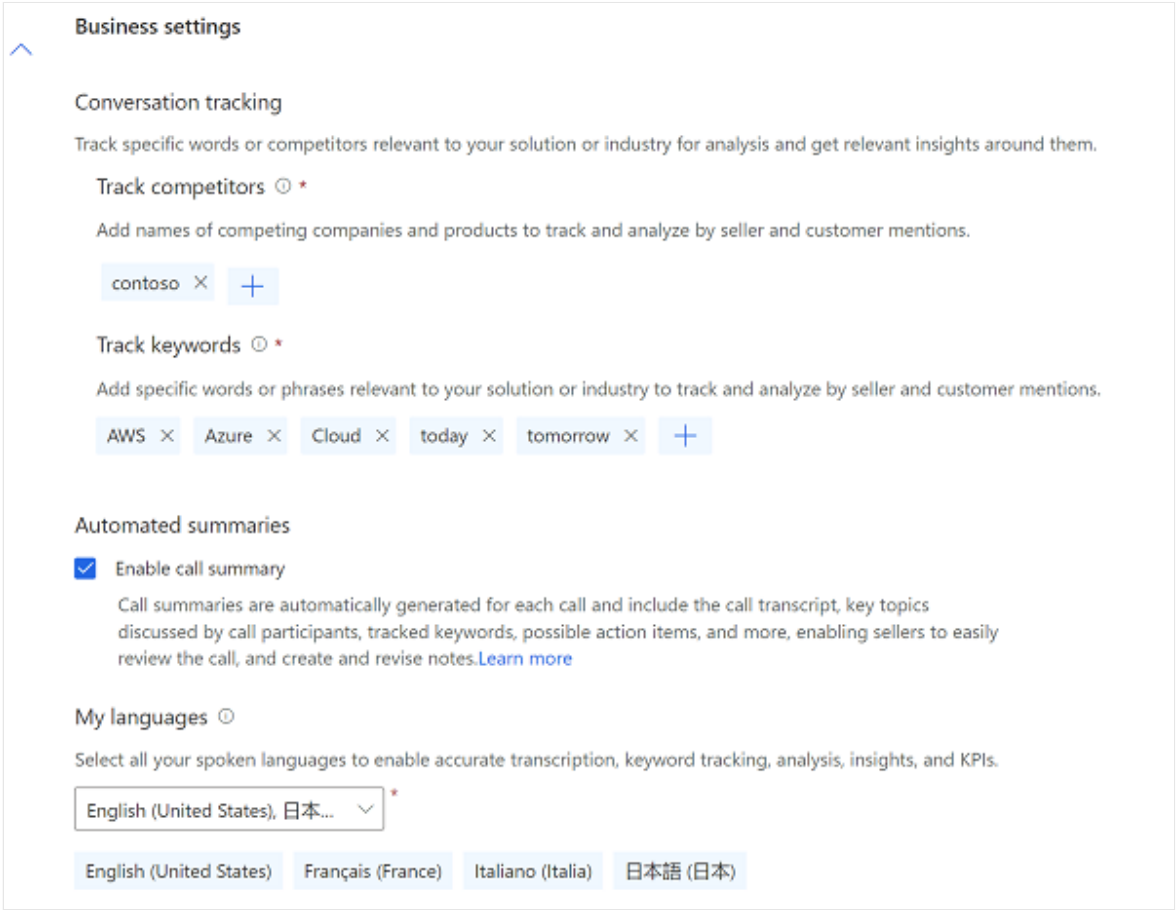
Option	Description
Storage for call recordings	Select an option to store your call recordings for analysis: • **Microsoft provided storage**: Select this option to use storage provided by Microsoft. This option is selected by default, and we recommend that you don't change it unless you need to retain call recording data for longer than 90 days. • **Your own Azure storage**: Select this option to use your custom Azure storage. You must select this option to retain call recording data for longer than 90 days. After you select this option, enter the **Storage connection string** and **Container name** of your Azure storage.
Retention policy	Select how long to retain call recording data. The application deletes the data when it reaches the time limit. Learn more about data retention and access. For Microsoft-provided storage, the available retention periods are 30 days and 90 days. If your organization requires a longer retention period, you'll need to use your own storage.

3. Under **Business settings**, configure the following settings:

- In the **Conversation tracking** section, add the keywords and competitors that your organization wants to track during calls. Adding keywords and competitors is a required global setting that's applied to all sales calls in the organization. To enable conversation intelligence, you must set at least one keyword and at least one competitor. You can update keywords and competitors later if necessary. Learn more about configuring keywords and competitors in conversation content.

- In the **Automated summaries** section, leave **Enable call summary** selected to let your sellers view the notes after their calls. Learn more about the call summary page.

- In the **My languages** section, add the languages your sellers use during their calls with customers to ensure accurate transcription, keyword tracking, analysis, insights, and KPIs.



4. (Optional) In the **Data consent and privacy** section, select **Allow read-only access to data** to allow Microsoft to improve the quality of insights by giving read-only access to your organization's conversation intelligence data.

5. (Optional) In the **New and upcoming features** section, select the preview features that you want to enable for your Dynamics 365 org. Learn more about enabling new and upcoming features.

6. Select **Publish**. In the message that appears, read the terms and conditions and the privacy statement, and then select **Get started**.

Enable new and upcoming features

The following preview features are available for conversation intelligence:

- Hide personal data (preview)
- Enable call categorization for short calls (preview)

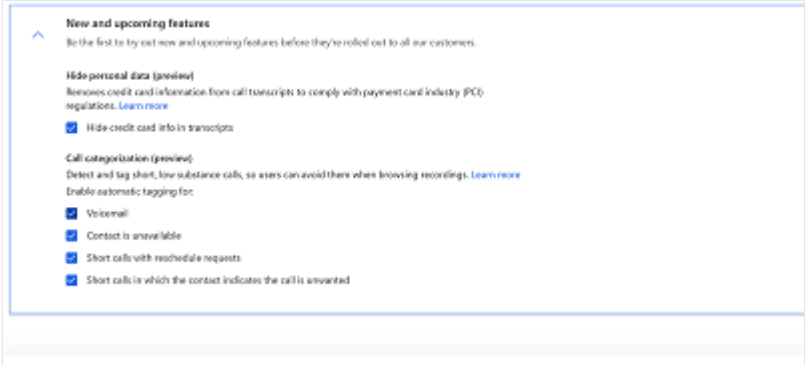
Hide personal data (preview)

To comply with the Payment Card Industry (PCI) regulations, organizations must protect personal data shared by customers during calls. When you enable the option to hide personal data, credit card details such as credit card number, expiry date, and CVV will be masked before saving a transcript. Learn more about call transcripts.

> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

To comply with Payment Card Industry regulations, organizations must protect personal data shared by customers during calls. When you enable the option to hide personal data, credit card details such as the account number, expiration date, and CVV are masked before the call transcript is saved.

1. Open the **Conversation intelligence settings** page.

2. Go to the **New and upcoming features** section, select **Hide credit card info in transcripts** to mask credit card information in the transcripts of future calls before they're saved. Currently, the credit card number mentions in the audio are not redacted. 

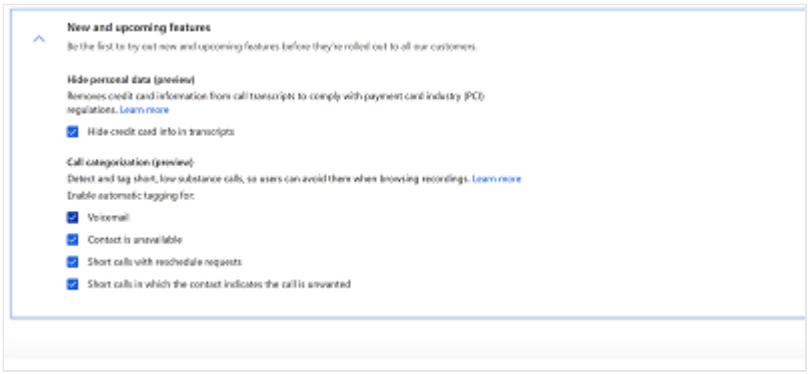
Enable call categorization for short calls (preview)

> **ⓘ Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

If you have chosen **Automatic recording** to record all customer calls, you can enable call categorization to help your sales team to quickly identify calls that don't have useful content such as calls that went to voicemail and calls that were not answered. More information: View categorization tag for short duration calls (Preview)

1. Open the **Conversation intelligence settings** page.

2. Go to the **New and upcoming features** section, select **Call categorization (preview)**, select the type of calls you want the system to detect and tag.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

- Configure sales team-level settings
- Introduction to administering conversation intelligence

Configure sales team–level settings

Article • 09/30/2022

As a sales manager, you can configure conversation intelligence to match your team's specific requirements. The following settings are available:

- Conversation trackers (keywords and competitors)
- Available languages
- Selection of top performers

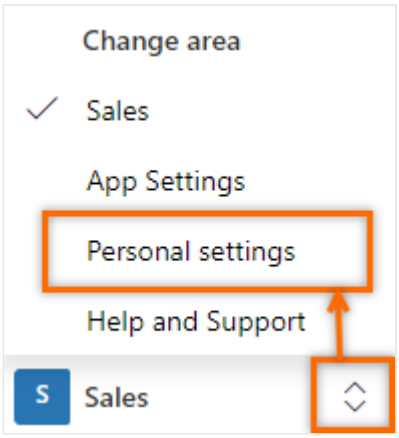
More information: Configure and view your team page

License and role requirements

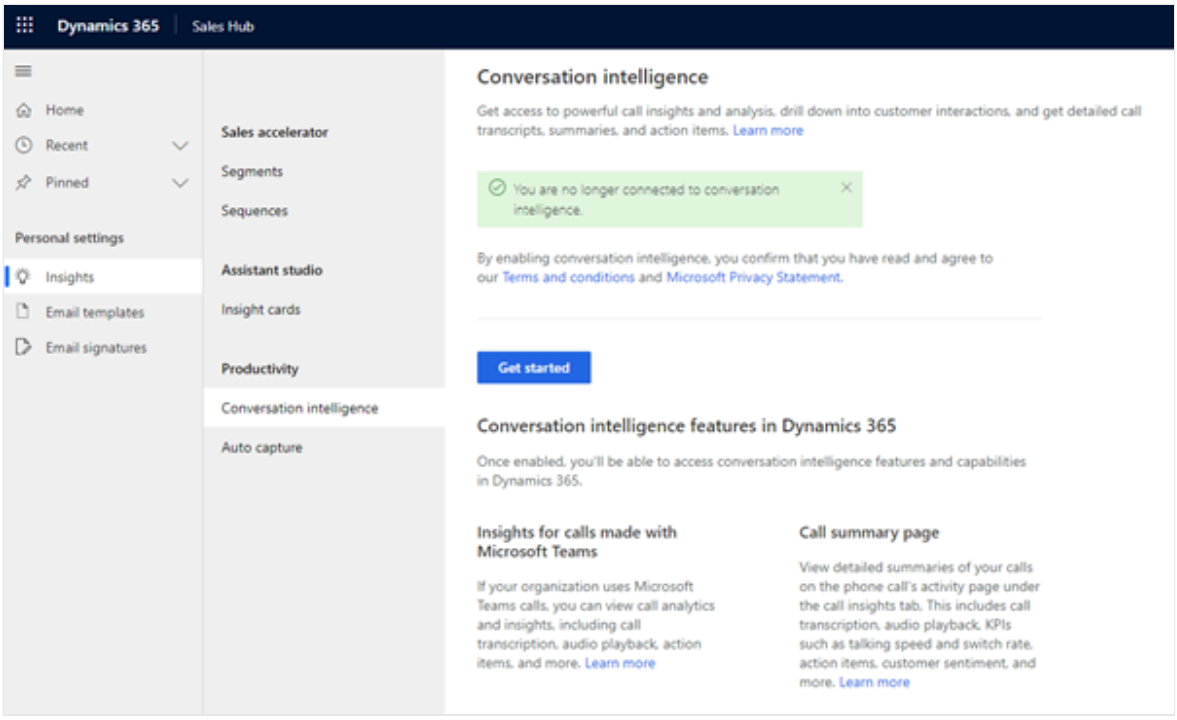
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Sales Manager More information: Predefined security roles for Sales

To configure sales team–level settings

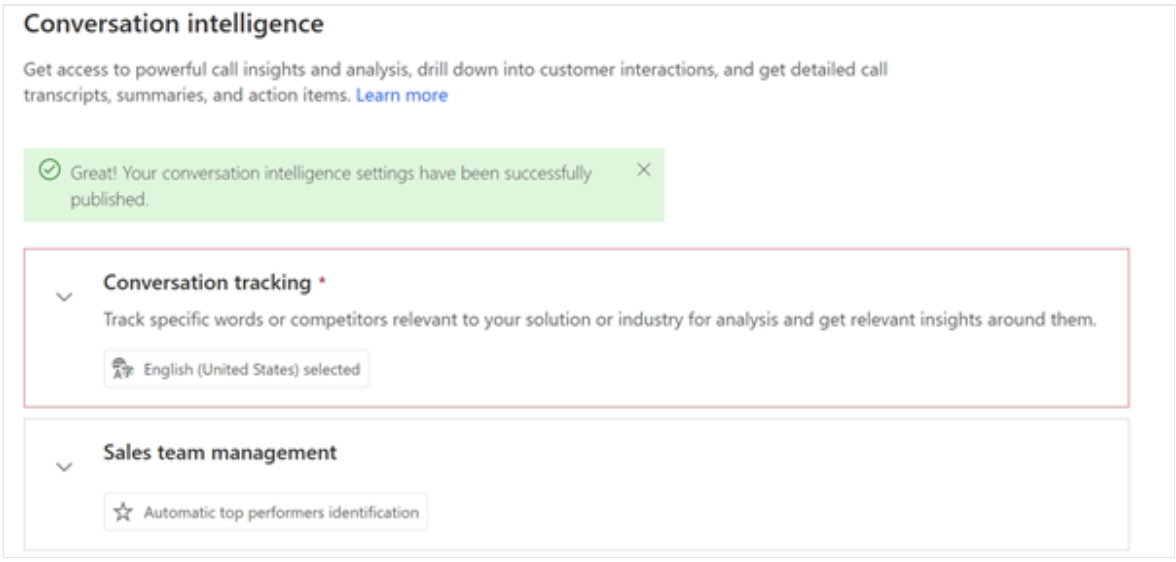
1. Sign in to the Dynamics 365 Sales Hub app with the sales manager security role.
2. Select the **change area** in the lower-left corner of the page, and then select **Personal settings**.



3. On the site map, under **Productivity**, select **Conversation intelligence**. The conversation intelligence home page opens.

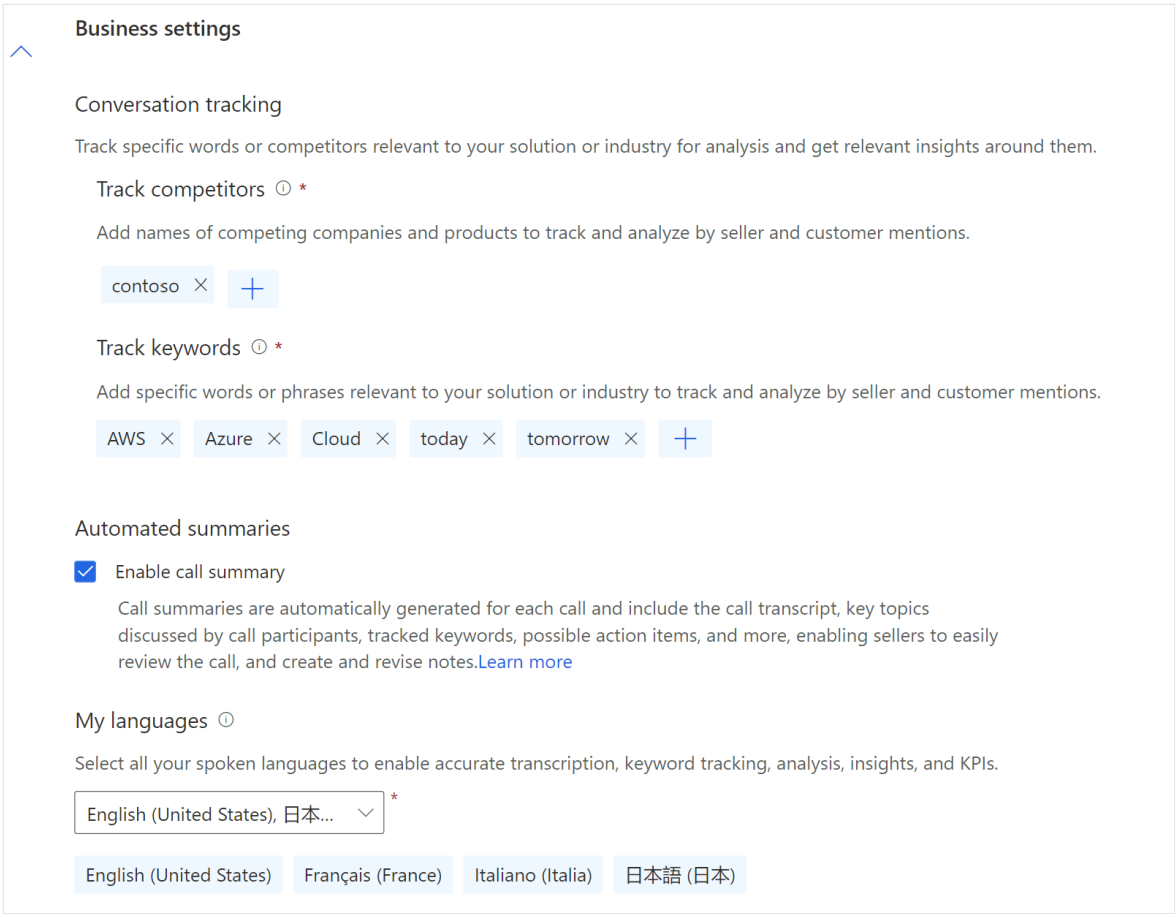


4. On the home page, select **Get started**. The conversation intelligence configuration page opens.



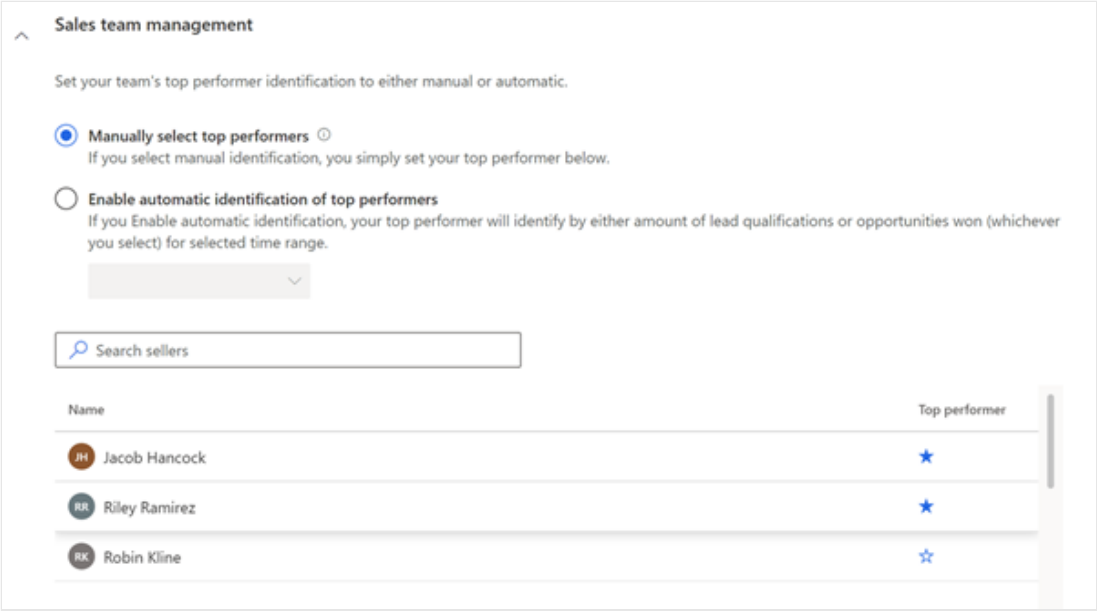
5. Under the **Conversation tracking** section, add the keywords and competitors that you want to track during your sales team's calls. Also, you can reduce the language list provided by the organizational admin to the languages that the sellers on your team use during their calls with customers.

> **Note**
>
> This is a local setting that will be applied only to your sales team. You can update these keywords, competitors, and languages later if you need. More information: **Configure conversation content**

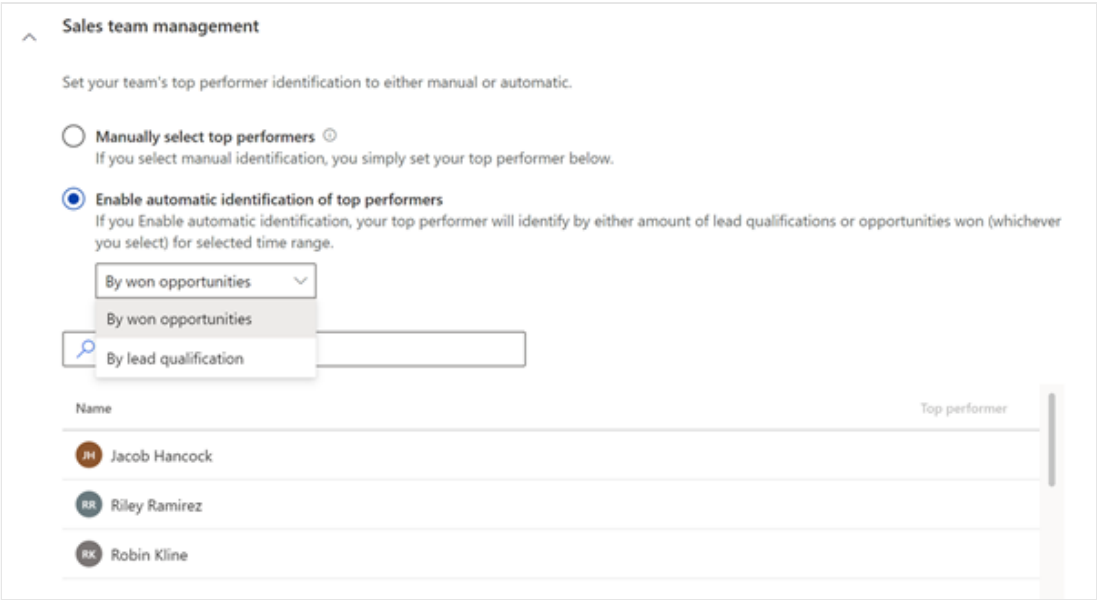


6. In the **Sales team management** section, configure the top performers. You can view the names of the team members whose calls are analyzed in conversation intelligence and select the sellers who are top performers. It's possible to choose the top performers manually, or let the application automatically select them. Select one of the following options:

    - **Manually select top performers**: Choose top performers from the list of sellers. In the **Top performer** column, select the star next to your top seller. The seller is added to the top performers list, where the seller's data will be compared to other sellers.



- **Enable automatic identification of top performers**: The application automatically selects the top performers based on the number of opportunities they won or the leads they qualified. When you select this option, you choose whether to rank performers **by won opportunities** or **by lead qualification**.



Conversation intelligence is now configured and ready for use in your sales organization for your sales team.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Introduction to administering conversation intelligence
First-run set up in sales app

Configure and view team page in sales app

Article • 09/30/2022

Configure and view your team page with information on levels of hierarchy, top performers, and delete sellers data.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

What can I configure

As an administrator, you can:

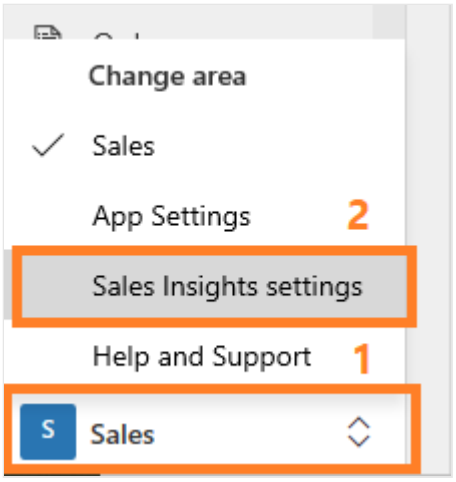
- Configure the levels of hierarchy that you can view.
- Configure a user to impersonate another to view information.
- Select the top performers in your hierarchy.
- Delete seller data.

As a sales manger, you can:

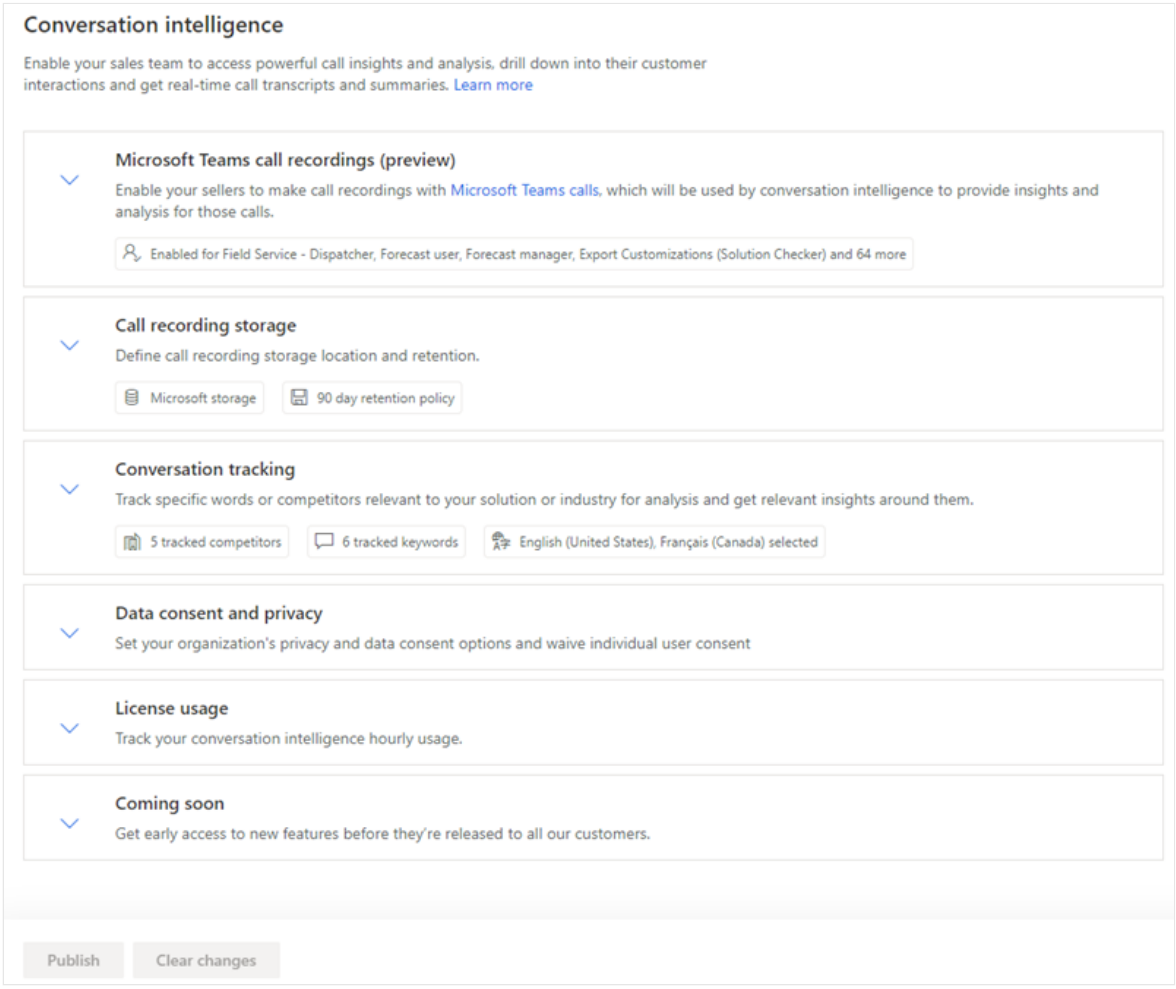
- View the list of employees who are part of your hierarchy.
- Select the top performers in your hierarchy.

Open your team settings page

1. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.



2. In the configuration page, under **Productivity**, select **Conversation intelligence**.



3. Select **Your team**.

   Your team page opens and you can perform the following tasks:

   - Configure hierarchy levels
   - Choose top performers
   - Delete seller data

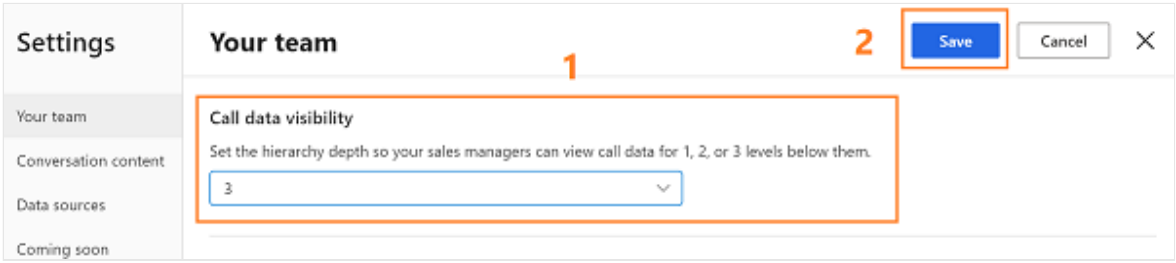
Configure hierarchy levels

1. Choose the hierarchy level from the **Call data visibility** list to display team members for managers. You can choose up to a maximum of three levels. To learn

more, see understand hierarchy levels.

A list of team members is displayed under **Team members and top performers**. The list consists of team members who report to the manager in Dynamics 365 and Microsoft Entra ID, including those who don't have access to conversation intelligence.

The application automatically updates the list every 24 hours and displays the current active team members in the manager's hierarchy.

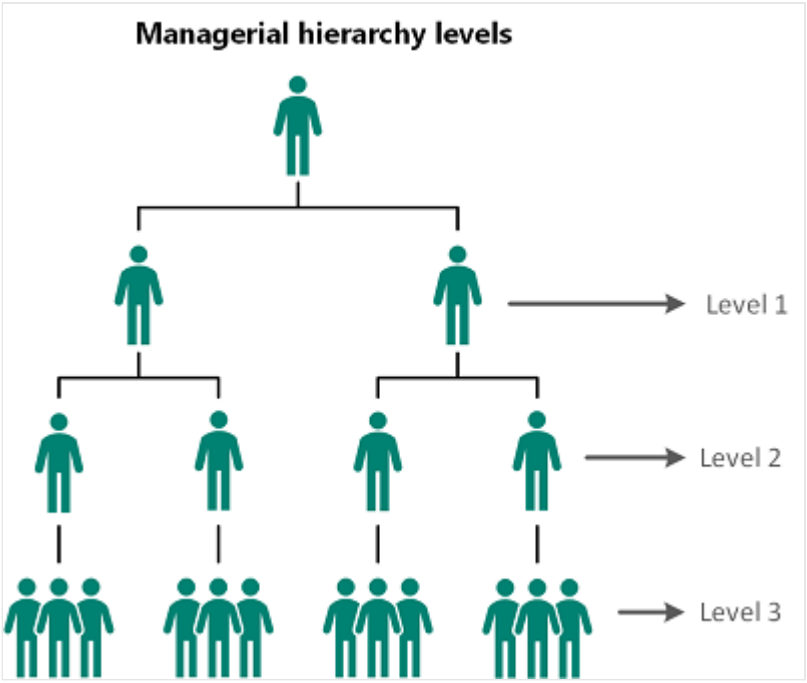


2. Save the configuration.

Understand the hierarchy levels

Let's look at the example to understand hierarchy levels:

The matrix explains which data you'll view as a sales manager, for different hierarchy levels.



Managerial level	View user hierarchy
Level 1	Choose this option to get insights on your direct team members.
Level 2	Choose this option to get insights on both your direct team members and their direct team members.

Managerial level	View user hierarchy
Level 3	Choose this option to get insights on level 1, level 2, and level 3's team members.

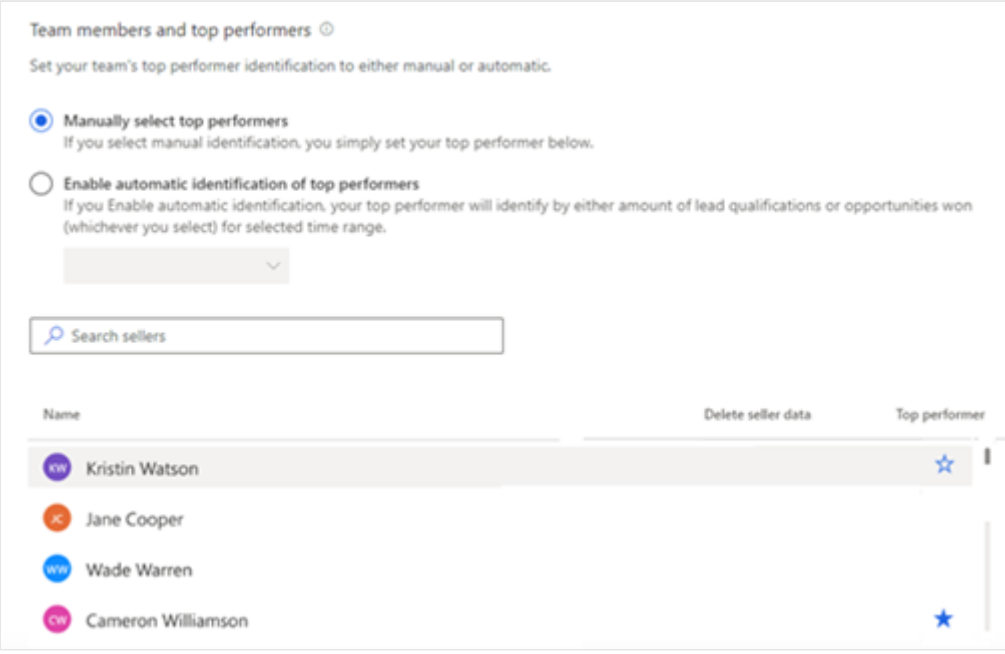
> ⓘ Note
>
> Conversation intelligence supports up to three levels of hierarchy. To learn more about hierarchy, see **Set up Manager and Position hierarchies**.

Choose top performers

The top performers who are selected here are compared against other sellers in your team to project how the other sellers are performing based on best practices conversational style KPIs. Those are displayed with relevant data on the home page in What characterizes top sellers?.

1. Under **Team members and top performers**, you can choose the top performers manually or let the application choose automatically. Select an option as necessary.

    - **Manually select top performers**: Allows you to manually choose the top performers from the list of sellers. Under the **Top performer** column, select the star icon corresponding to a seller.



    - **Enable automatic identification of top performers**: Allows the application to automatically select the top performers based on the amount of leads they qualified or opportunities they won. When you select to automatically select

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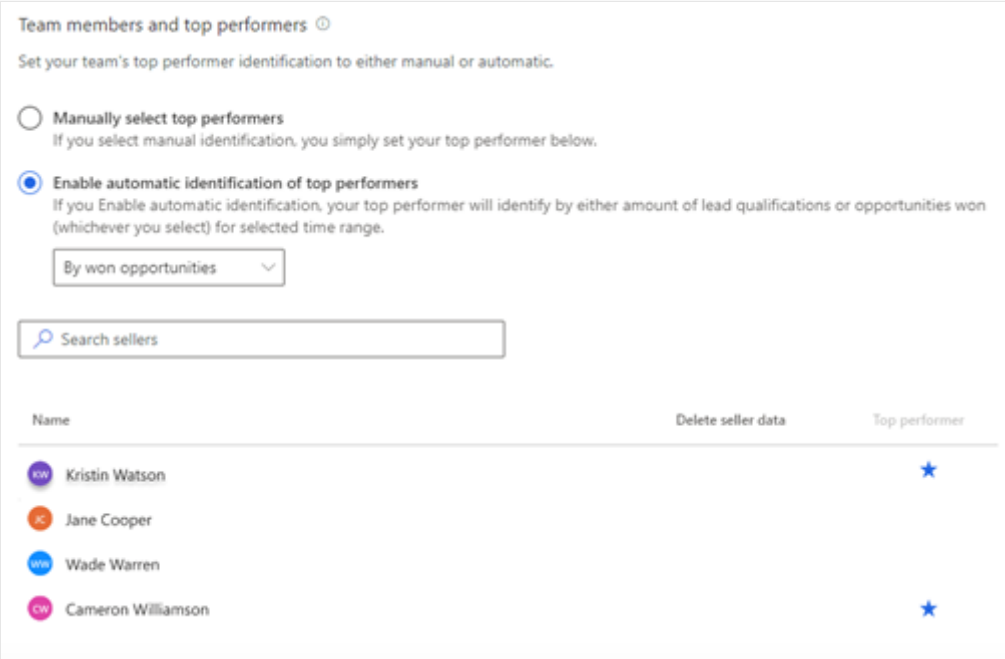

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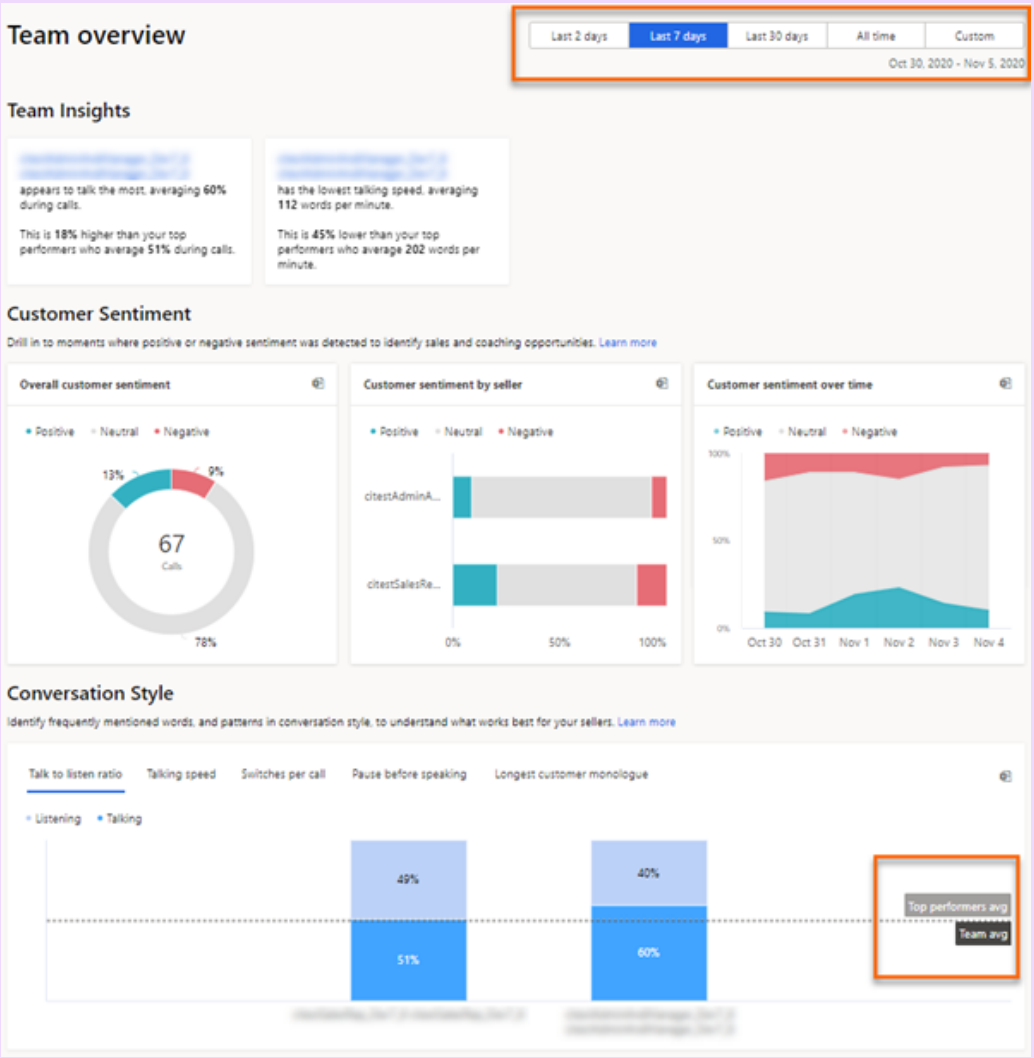
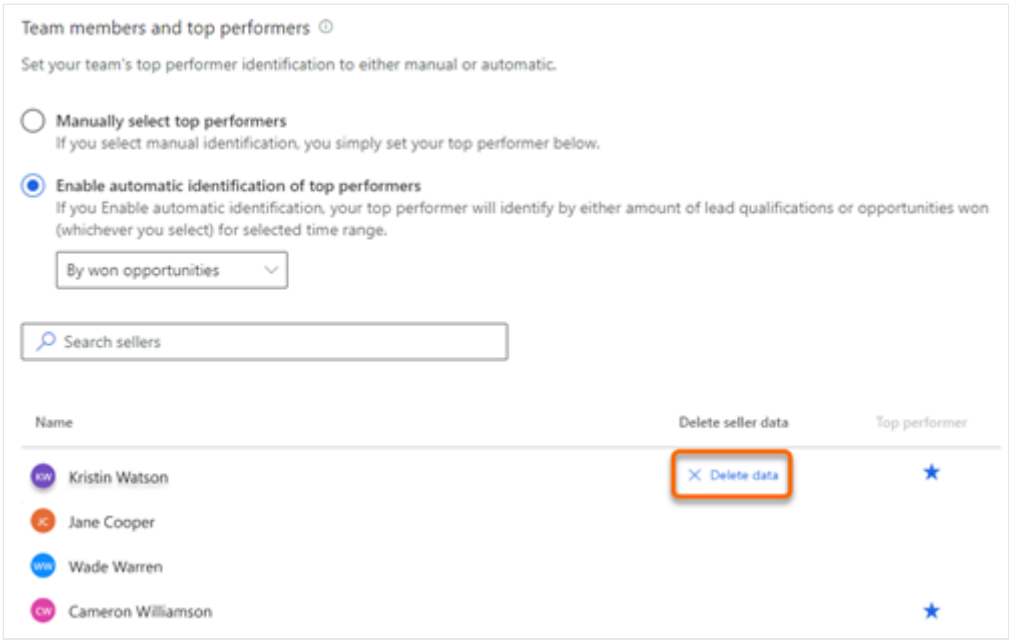


2. Save the configuration.

Delete seller data

You can delete seller's data when a seller is not reporting to you, moved to another team, leaving your organization, or seller requests to delete data. This data includes the seller's statistics and call history.

1. Hover over the seller's name for who you want to delete the data. Under the **Delete sellers data** column, select **Delete data**.



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View your team

As a sales manager, when you open the **Your team** page in settings, you can view the list of team members within your hierarchy, regardless of whether they have conversation intelligence licenses or not. Team members in the displayed list are based on Dynamics 365 and Microsoft Entra ID.
The list is updated every 24 hours to display the current active sellers in the manager's hierarchy. Also, you can select **Refresh now** to refresh the list right away and view any changes.

> **Note**
>
> To view this page, sales managers must have a manager hierarchy defined under them, with sellers or individuals added to the hierarchy. Currently, only administrators can change levels of hierarchy. For sales managers to change it, they should contact an administrator to change the hierarchy on their behalf. More information: **Configure hierarchy levels**.

Can't find the options in your app?

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- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Set up conversation intelligence in Sales Hub app
Improve seller coaching and sales potential with conversation intelligence

Configure conversation content in Sales Hub app

Article • 09/13/2023

Configure conversation content such as, keywords and competitors to track in conversation intelligence in Dynamics 365 Sales organization.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

Add keywords and competitors

Configure tracked keywords and competitors that are relevant to you and your organization so you can track them in calls. Whenever the defined keywords or competitors are mentioned in a call, conversation intelligence will gather the data and display it appropriately on the dashboard.

> **Note**
>
> - As a sales manager, you can define tracked keywords and competitors that are specific to your team. That is, you want to track these keywords and competitors only for your team member calls.
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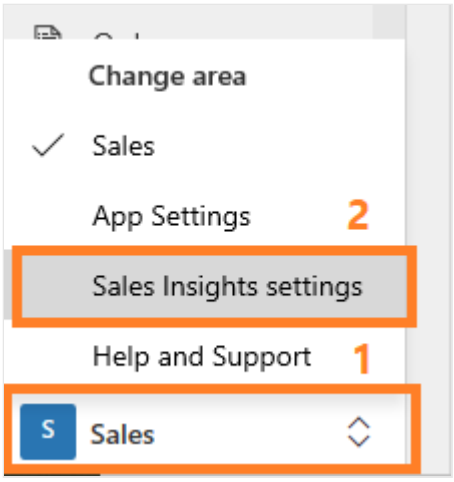
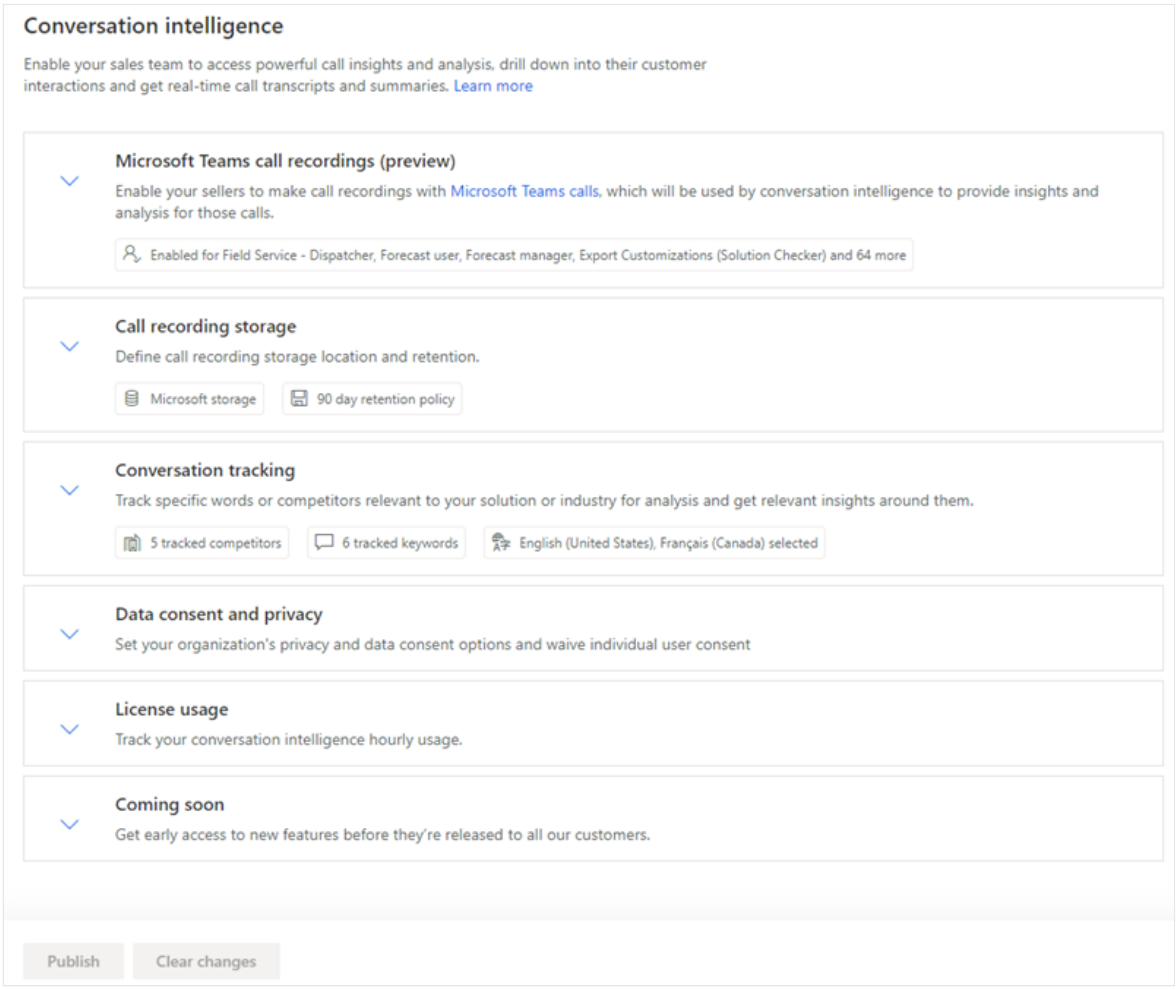
1. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.

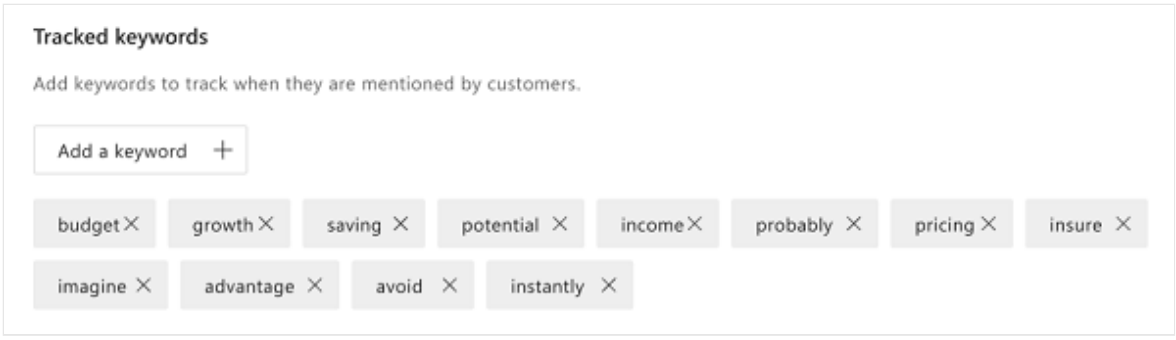


2. On the configuration page, under **Productivity**, select **Conversation intelligence**.

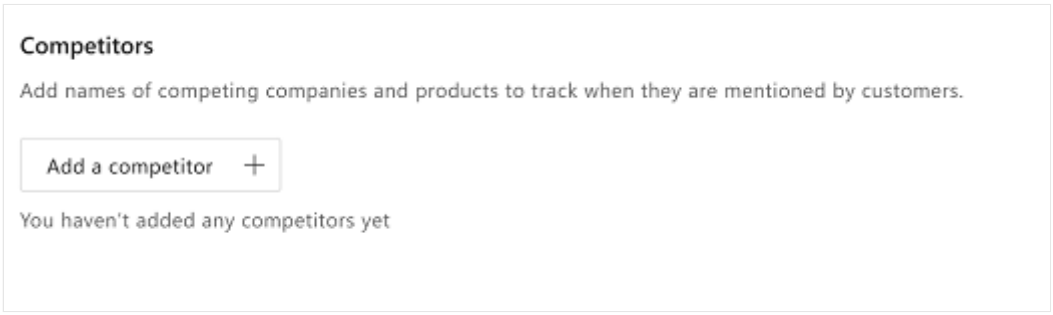


3. Select **Conversation tracking**.

4. On the **Tracked keywords** section, enter a keyword in **Add a keyword** and then press **Enter**.



5. Repeat **step 2** to add other keywords.
6. In the **Competitors** section, enter a competitor's name in **Add a competitor** and then press **Enter**.



7. Repeat **step 4** to add other competitors' names.
8. Select **Save**.

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See also

Set up conversation intelligence in Sales Hub app
Administer conversation intelligence

Data retention and deletion policy for conversation intelligence (Sales app)

Article • 09/13/2023

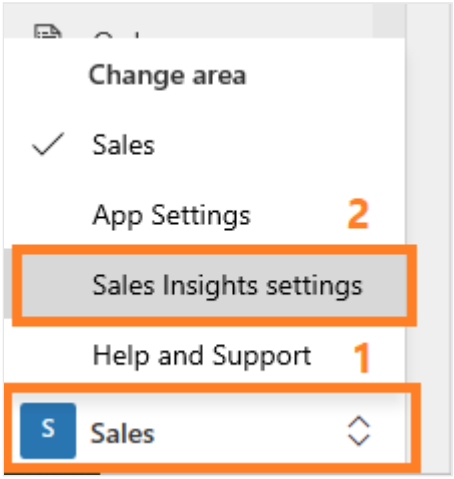
When you configure conversation intelligence, sales call recordings of sellers are processed and analyzed to provide necessary insights such as overall customer sentiments, sentiment trends, and identify keywords that customers have used during calls.

License and role requirements

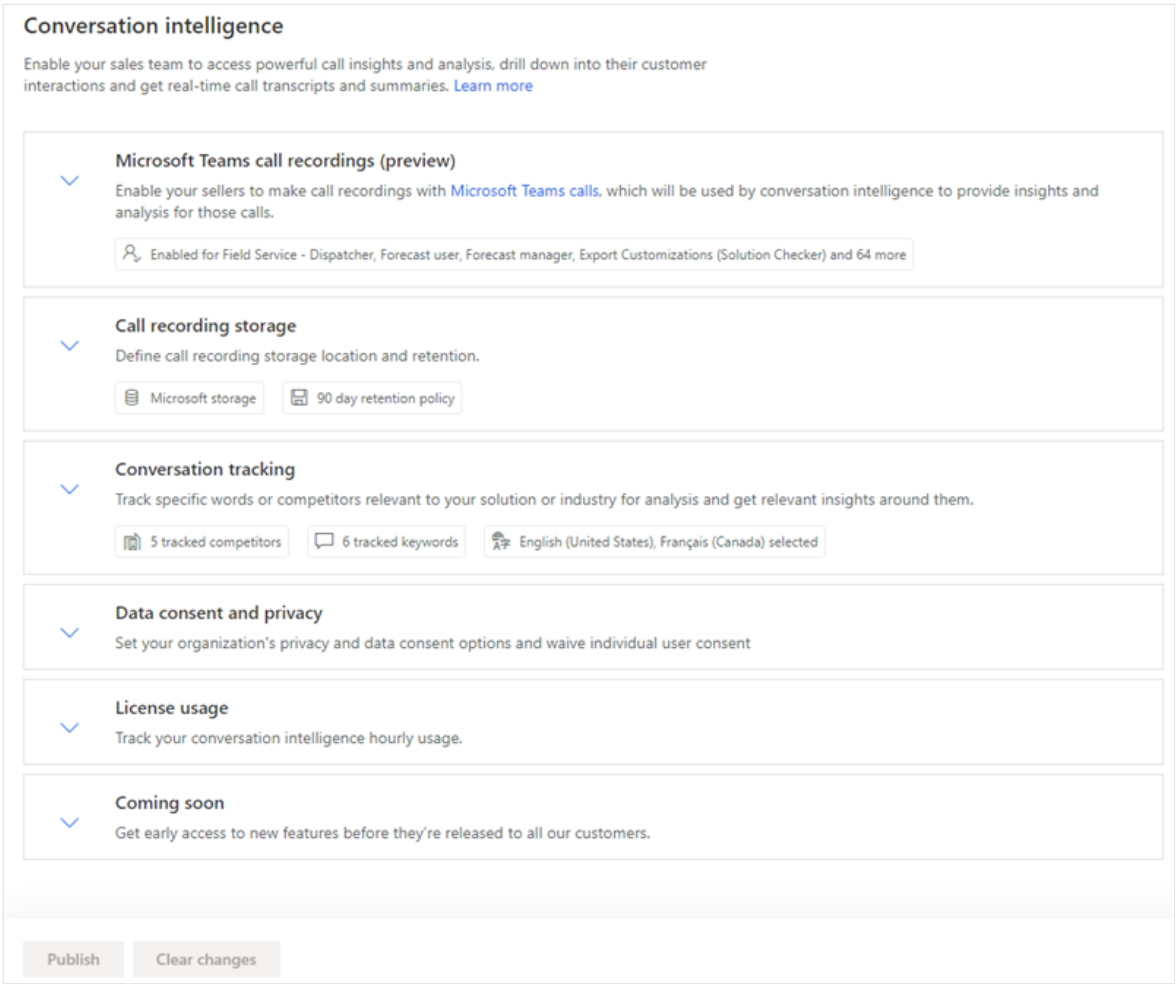
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure Call recording storage, Data consent and privacy

1. Go to **Change area** in the lower-left corner of the page and select **Sales Insights settings**.



2. In the configuration page, under **Productivity**, select **Conversation intelligence**.



3. On the **Settings** page, select the sections as required:

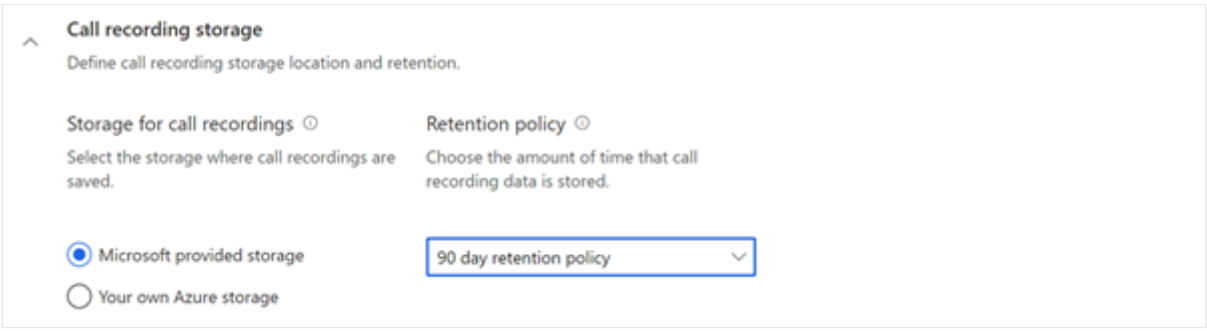
- Select the **Call recording storage** section to configure data retention policy for your organization. - Select the **Data consent and privacy** section to configure data consent and privacy for your organization.

Call recording storage

The **Call recording storage** section allows you to configure the data retention policy to determine how long you want to keep the analyzed call recording data in conversation intelligence by specifying a time limit. When you specify a retention time limit, the application keeps the call recording data for the specified time limit. The application deletes the data when the time limit is reached.
For example, retention time limit is set 30 days. At any given time, application keeps the call data from the time it's analyzed to 30 days. On the 31st day, the application deletes the analyzed call data.
Choose the storage option as described in the following table:

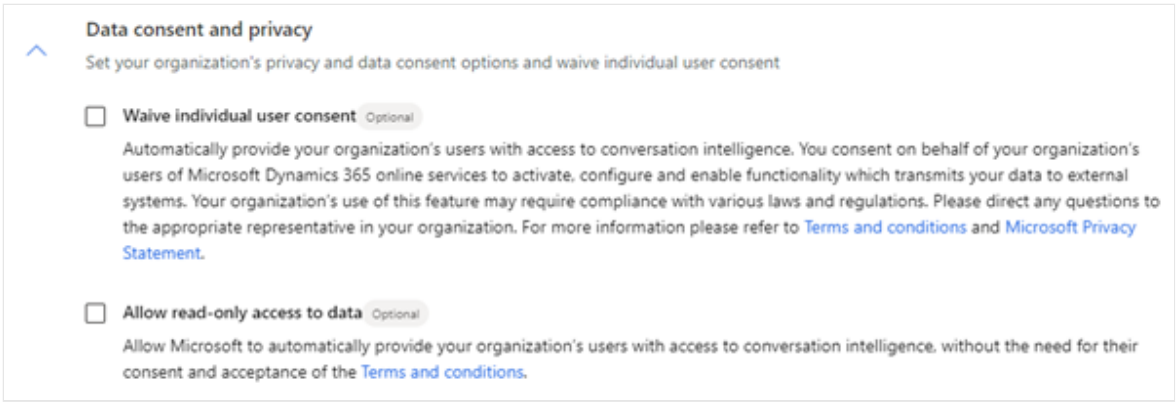
Option	Description
Storage for call recordings	Select an option to store your call recordings for analysis:

Option	Description
	• **Microsoft provided storage**: Select this option if you want to use the storage provided by Microsoft. By default, this option is selected, and we recommend that you use this storage. • **Your own Azure storage**: Select this option if you want to use your custom Azure storage. After you select this option, enter the **Storage connection string** and **Container name**.
Retention policy	Choose a retention time limit. The application keeps call recording data for the specified time limit, and deletes it when the time limit is reached. • For **Microsoft provided storage**, the available retention periods are 30 days and 90 days. • For **Your own Azure storage**, the retention period is available from 30 days until 10 years. Use this storage type if your organization requires longer retention periods.



Data consent and privacy

- **Waive individual user consent**: Select this option to automatically provide your organization's users with access to conversation intelligence. You provide consent on behalf of your organization's users of Microsoft Dynamics 365 online services to activate, configure, and enable functionality that transmits your data to external systems.
- **Allow read-only access to data**: Select this option to allow Microsoft to improve the quality of insights through manual (human) read-only access to your organization's data in conversation intelligence. More information: Terms and Conditions .



Learn more about Microsoft Dynamics 365 and data privacy.

> **ⓘ Important**
>
> This feature is intended to help sales managers or supervisors enhance their team's performance. This feature is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with end users. This also includes adequately notifying end users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from end users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with end users may be monitored, recorded, or stored.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Introduction to administer conversation intelligence
Set up conversation intelligence in Sales Hub app
Dynamics 365 Sales and privacy laws and regulations
Sales Insights and privacy laws

Set up the conversation intelligence app

Article • 09/13/2023

As an administrator, connect the conversation intelligent app to your Dynamics 365 Sales organization to fetch call data and enable sellers to view call insights.

License and role requirements

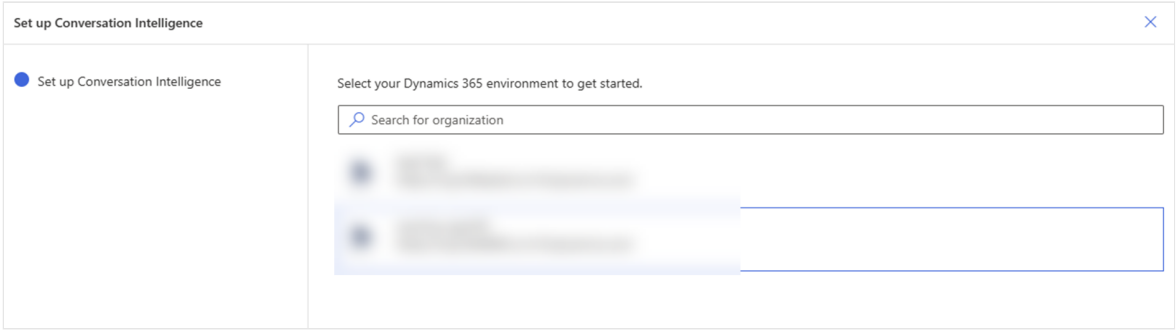
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Prerequisites

Before you can set up the Conversation intelligence app, set up conversation intelligence from the Sales Hub app and configure storage, app permissions, and tracked keywords and competitors. This setup is mandatory to use conversation intelligence in the Sales Hub app and Conversation intelligence app. For more information, see Set up conversation intelligence from the Sales Hub app.

Configure conversation intelligence

1. Sign in to the Conversation intelligence app as an administrator.
2. Select **Connect your data** and then select the Power Platform environment that hosts Dynamics 365 Sales, to connect with the application.



The application detects your environment.

3. In the **Terms and conditions** dialog, carefully read the Microsoft privacy statement, and and select the checkbox for the terms and conditions. Select **Next**.

   The application takes a few minutes to connect to your environment and data, during which a progress dialog is displayed.

4. Select **Finish** to complete the setup.

The Conversation intelligence app is now ready to use. Managers and sellers can use it to view call insights.

Can't find the options in your app?

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See also

Introduction to administering conversation intelligence
Conversation Intelligence FAQs

Configure and view team page

Article • 10/31/2022

Configure and view your team page with information on levels of hierarchy, top performers, and delete seller data.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

What can I configure

As an administrator, you can:

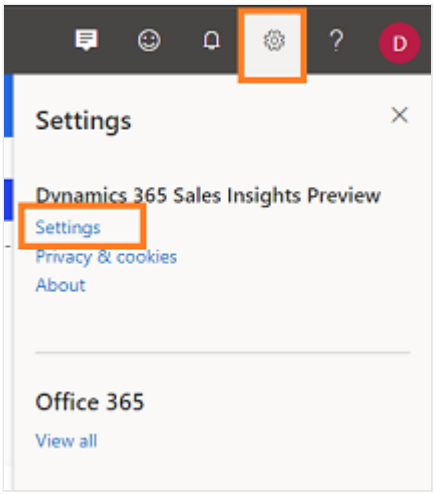
- Configure the levels of hierarchy that you can view.
- Configure a user to impersonate another to view information.
- Select the top performers in your hierarchy.
- Delete seller data.

As a sales manager, you can:

- View the list of employees who are part of your hierarchy.
- Select the top performers in your hierarchy.

Open your team settings page

1. Sign in to the Conversation intelligence app
2. Select the **Settings** icon on the top-right of the page and then select **Settings**.

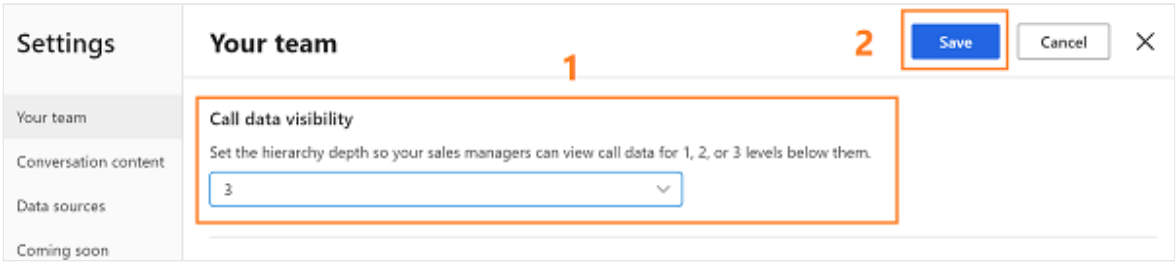


3. On the **Settings** page, select **Your team**.
   Your team page opens and you can perform the following tasks:
   - Configure hierarchy levels
   - Configure users to view as another user
   - Choose top performers
   - Delete seller data

Configure hierarchy levels

1. Choose the hierarchy level from the **Call data visibility** list to display team members for managers. You can choose up to a maximum of three levels. To learn more, see understand hierarchy levels.

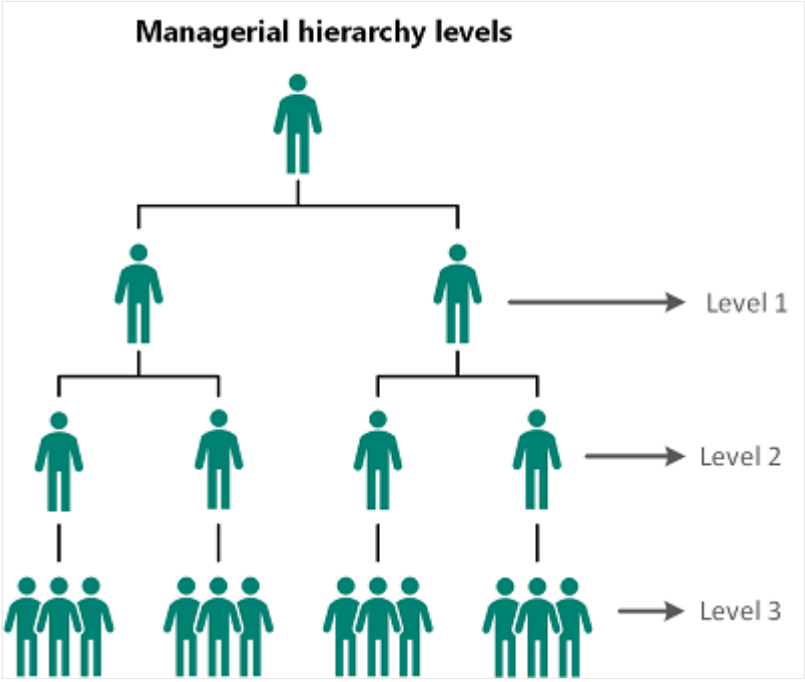
   A list of team members is displayed under **Team members and top performers**. The list consists of team members who report to the manager in Dynamics 365 and Microsoft Entra ID, including those members who don't have access to conversation intelligence.
   The application automatically updates the list every 24 hours and displays the current active team members in the manager's hierarchy.



2. Save the configuration.

Understand the hierarchy levels

Let’s look at the example to understand hierarchy levels:
The matrix explains which data you’ll view as a sales manager for different hierarchy levels.



Managerial level	View user hierarchy
Level 1	Choose this option to get insights on your direct team members.
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Level 3	Choose this option to get insights on level 1, level 2, and level 3’s team members.

> ⓘ Note
>
> Conversation intelligence supports up to three levels of hierarchy. To learn more about hierarchy, see **Set up Manager and Position hierarchies**.

Configure users to view as another user

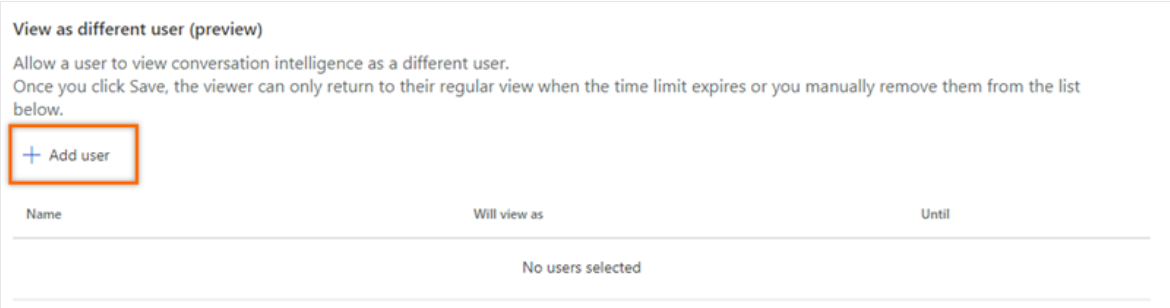
As an administrator, you can configure sales managers or sellers to impersonate another user in the organization to view information they wouldn't normally have access to. For example, you can:

- Provide a view of the sales team for sales managers from level 4 and above.

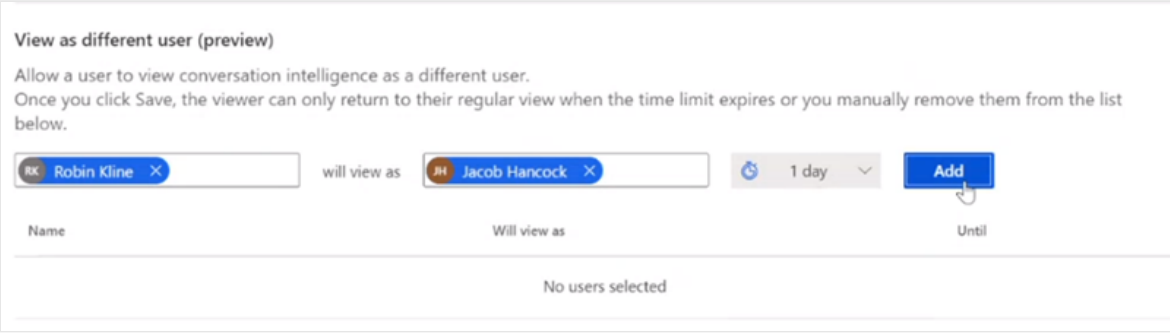
- Provide access to non–managerial executives to dashboards for conversation intelligence enablement or compliance workflows.
- Provide visibility to non–direct managers into the sales team's dashboards.

For example, Robert Kline is a sales enablement manager who doesn't have access to the conversation intelligence dashboard of Jacob Hancock's team. When Robert is given access to view the dashboard as Jacob, Robert can access the information in the conversation intelligence application by impersonating Jacob.

1. Open your team settings page.
2. In the **View as different user (preview)** section, select **Add user**.



3. Enter the name of the user who wants to view the information. In this example, we're selecting the name **Robert Kline**.
4. Corresponding to the selected user name (**Robert Kline**), enter the other user name for whom the information is to be viewed. In this example, we're selecting the name, **Jacob Hancock**.
5. Select the time limit during which **Robert Kline** can view the information for **Jacob Hancock**'s sales team.



6. Select **Add**. A row is added to the list.
7. Repeat steps 1 through 5 for any users you want to give the ability to view as other users.
8. After adding the users, select **Save**.

The users can impersonate the corresponding selected users and view information in conversation intelligence.

> ⓘ Note
>
> The users return to their regular views when the time limit expires or when you manually remove them from the list.

Choose top performers

The top performers who are selected here are compared against other sellers in your team to project how the other sellers are performing based on best practices conversational style KPIs. Those sellers are displayed with relevant data on the home page in What characterizes top sellers?.

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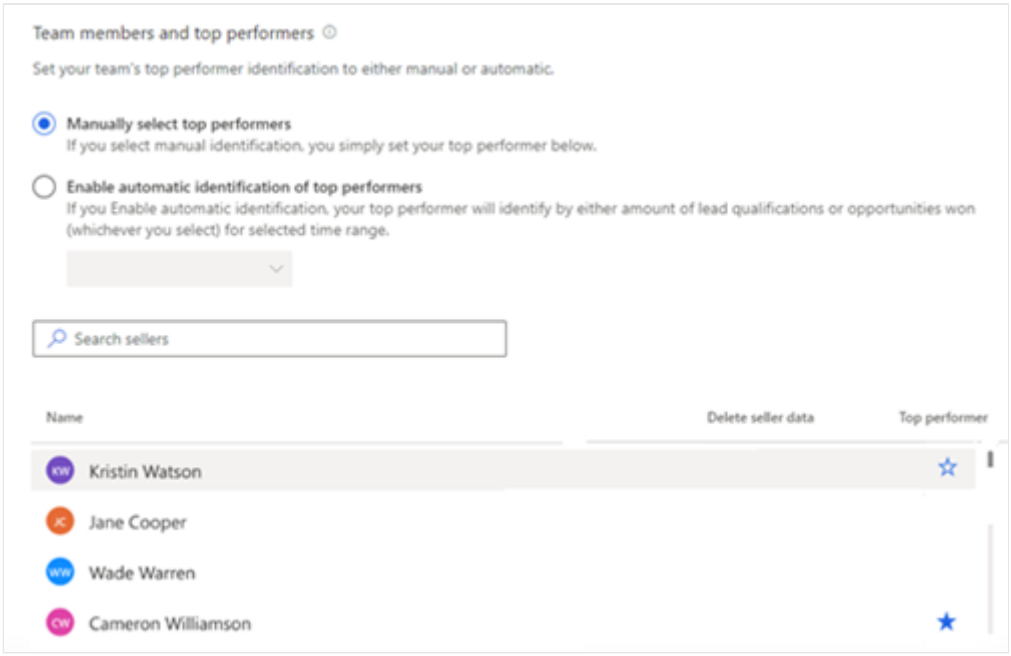

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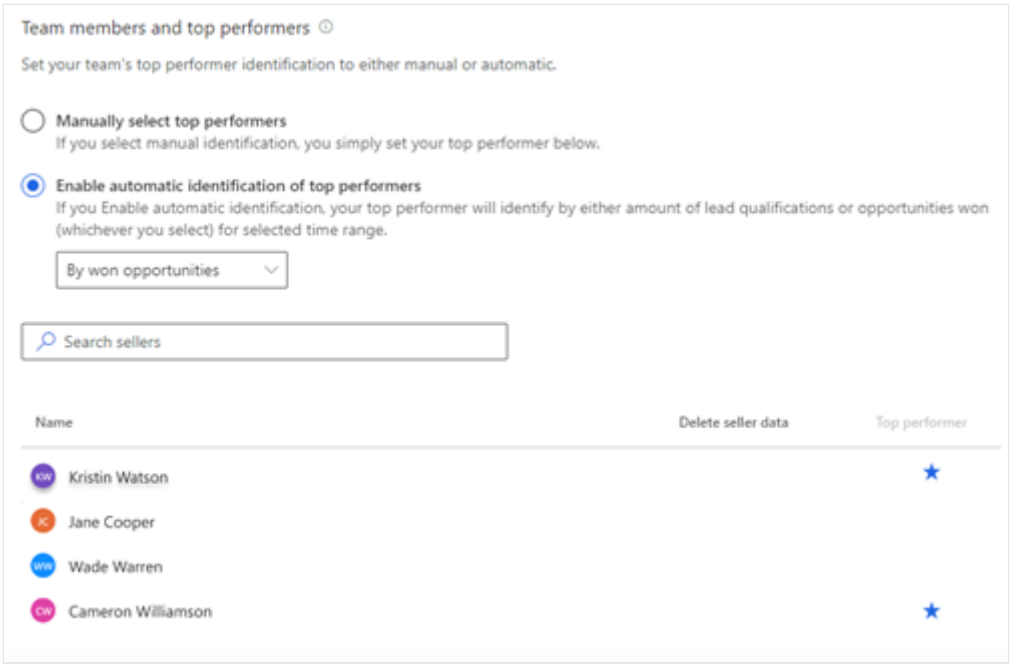

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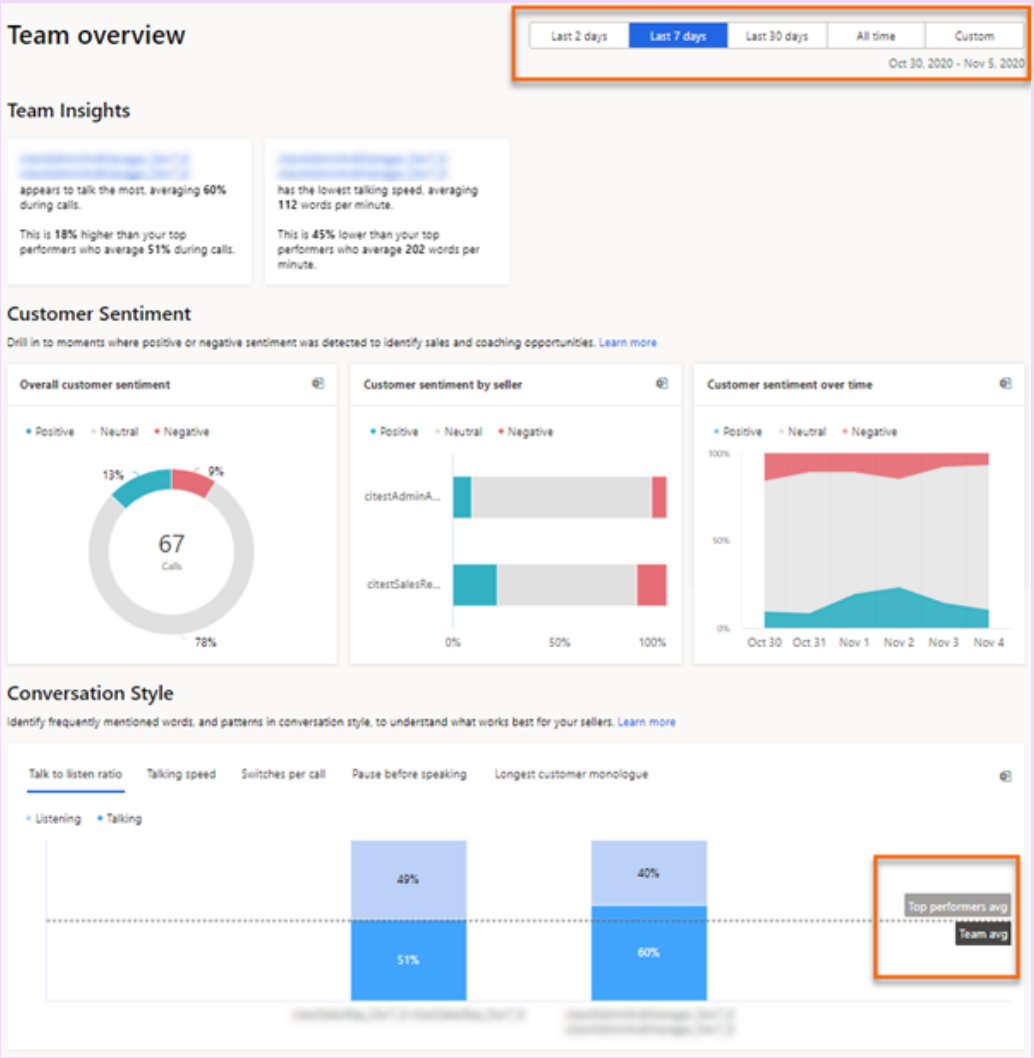

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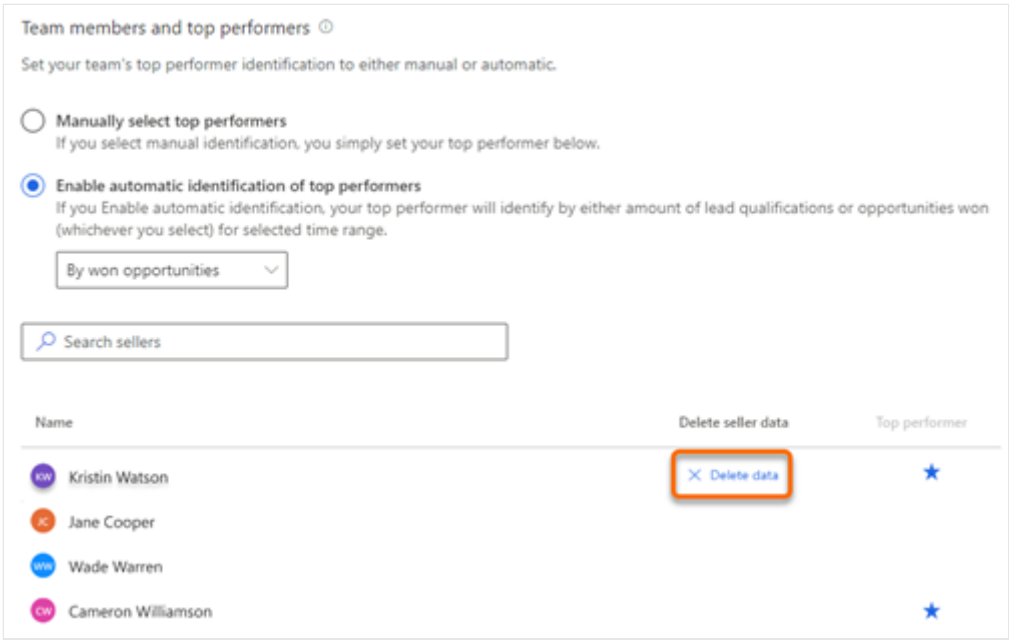

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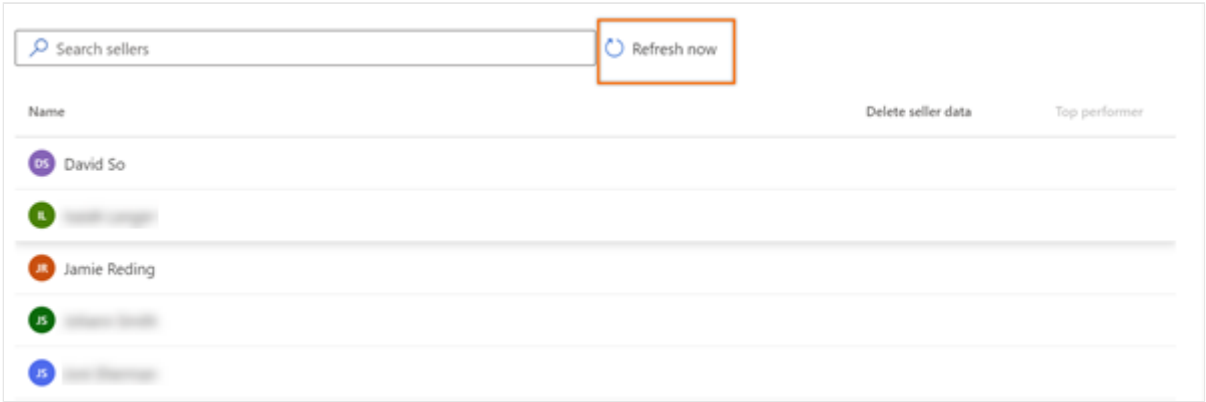

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See also

Improve seller coaching and sales potential with conversation intelligence

Configure conversation content

Article • 09/13/2023

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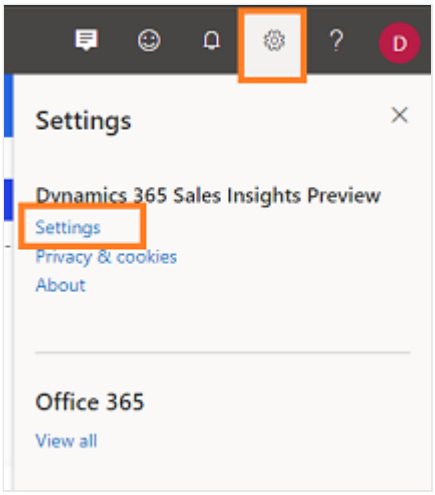
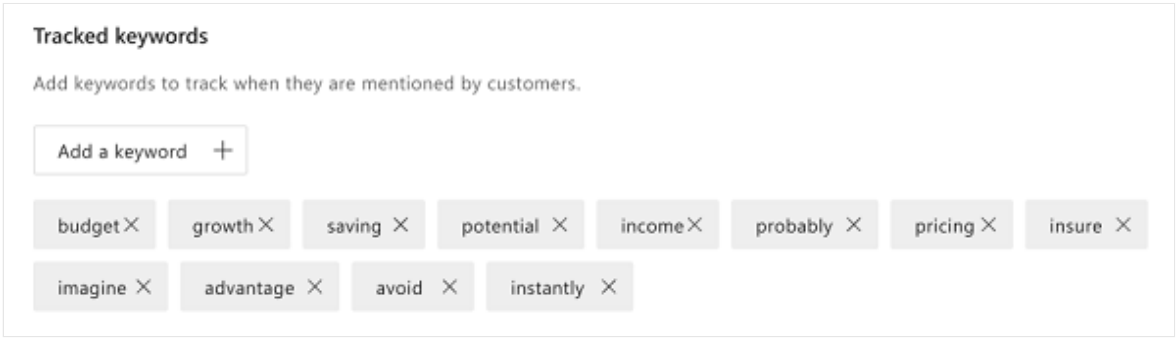
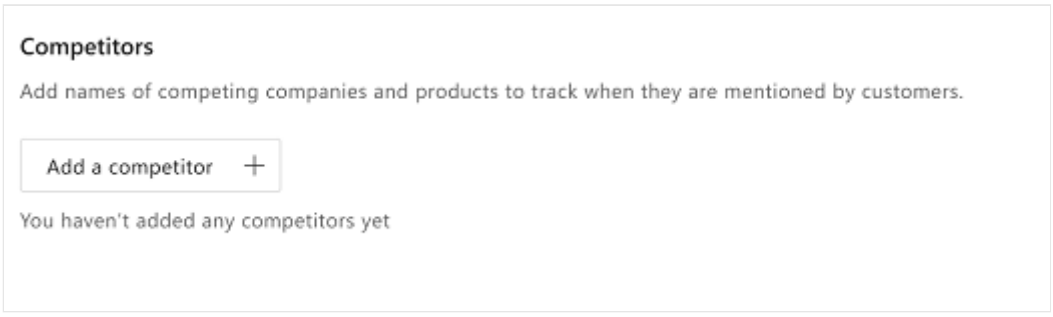
1. Sign in to the Conversation intelligence app.
2. Select the **Settings** icon in the upper-right corner of the page and then select **Settings**.



3. On the **Settings** page, select **Conversation content**.
4. On the **Tracked keywords** section, enter a keyword in **Add a keyword** and then press **Enter**.



5. Repeat **step 2** to add other keywords.
6. In the **Competitors** section, enter a competitor's name in **Add a competitor** and then press **Enter**.



7. Repeat **step 4** to add other competitors' names.
8. Select **Save**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Administer conversation intelligence

Connect Conversation intelligence app to an environment

Article • 09/13/2023

If you have multiple environments in your organization, you can connect the Conversation intelligence app to more than one environment. This will allow you to switch to different environments from the Conversation intelligence app and view the call insights.

At a time, you can have only one active environment that is connected to the application. When you activate an environment, the existing environment will automatically deactivate, and the new environment's data will be displayed on the application.

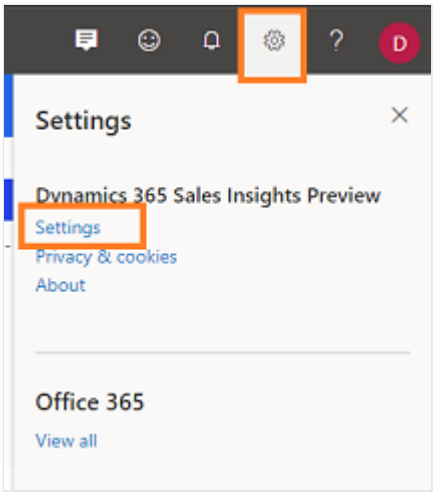
> **Note**
>
> Throughout this article, environment refers to a **Power Platform environment with a Dataverse database** that hosts Dynamics 365 Sales.

License and role requirements

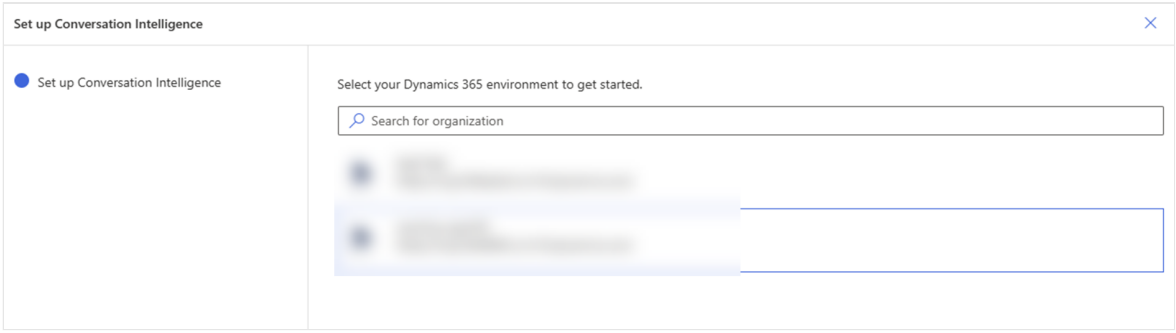
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

To connect to an environment

1. Sign in to the Conversation intelligence app.
2. Select the **Settings** icon on the top-right of the page and then select **Settings**.



3. On the **Settings** page, select **Data source**.
4. In the **Dynamics 365 environment** section, select **Add an environment**.
5. Select the Power Platform environment that hosts Dynamics 365 Sales, to connect with the application.



   The application now detects your environment.
6. In the **Terms and conditions** dialog box, accept the terms and conditions, and continue.

   The application takes few minutes to connect to your environment and data, and a progress dialog box is displayed.
7. Select **Finish** to complete the setup.

The Conversation intelligence app is now connected to the environment. Managers and sellers can use it to view call insights.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Introduction to administer conversation intelligence
Set up conversation intelligence in Sales Hub app

Data retention and deletion policy in conversation intelligence

Article • 09/13/2023

When you configure conversation intelligence, sales call recordings of sellers are processed and analyzed to provide necessary insights such as overall customer sentiments, sentiment trends, and identify keywords that customers have used during calls.

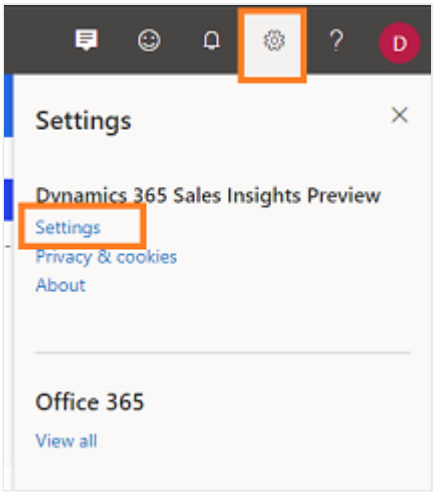
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure data retention and access

1. Sign in to the Conversation intelligence app.

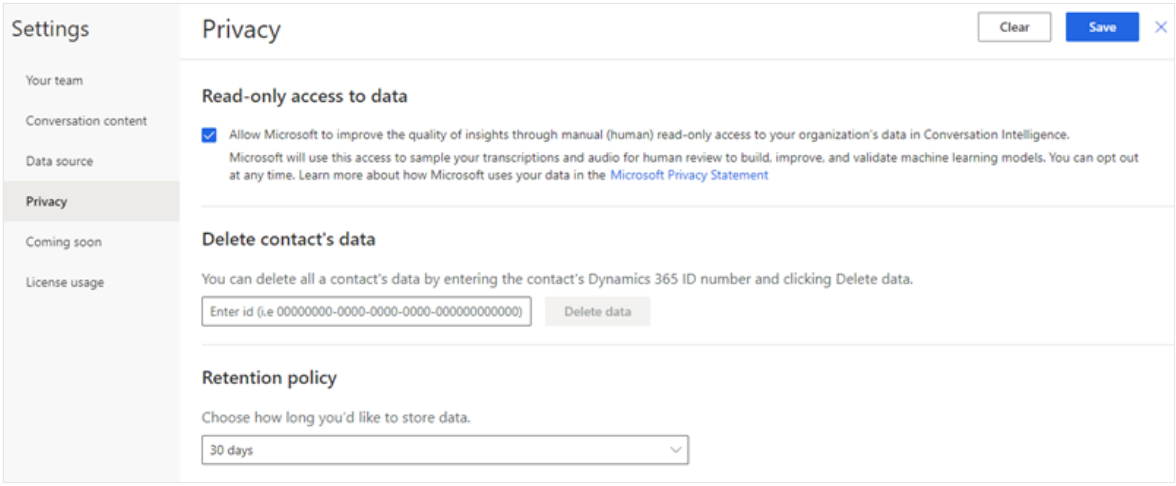
2. Select the **Settings** icon on the top-right of the page and then select **Settings**.



3. On the **Settings** page, select **Privacy**.

4. In the Privacy page, configure the following options as required:

- **Read-only access to data**: Select this option to allow Microsoft to improve the quality of insights through manual (human) read-only access to your organization's data in conversation intelligence. - **Delete contact's data**: Use this option to delete a contact's data by using the contact ID provided in Dynamics 365. Enter the contact ID in the text box and then select **Delete data**. - **Retention policy**: Choose a retention time limit. The application keeps call recording data for the specified time limit, and deletes it when the time limit is reached. The retention period is available from 30 days until 10 years.



5. Select **Save**.

Learn more about Microsoft Dynamics 365 and data privacy.

> **ⓘ Important**
>
> This feature is intended to help sales managers or supervisors enhance their team's performance. This feature is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with end users. This also includes adequately notifying end users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from end users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with end users may be monitored, recorded, or stored.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Introduction to administer conversation intelligence
Set up conversation intelligence in Sales Hub app
Dynamics 365 Sales and privacy laws and regulations
Sales Insights and privacy laws

Integrate third-party dialers with Dynamics 365 conversation intelligence (preview)

Article • 08/09/2023

[This article is prerelease documentation and is subject to change.]

With this integration, Dynamics 365 users can use dialers provided by third-party telephony companies such as Twilio Flex, to make and receive phone calls in Dynamics 365, and get real-time AI-generated insights and rich post-call analysis of their calls. Learn more about Dynamics 365 conversation intelligence

> **Important**
>
> - This is a preview feature.
> - Preview features aren't meant for production use and may have restricted functionality. These features are available before an official release so that customers can get early access and provide feedback.

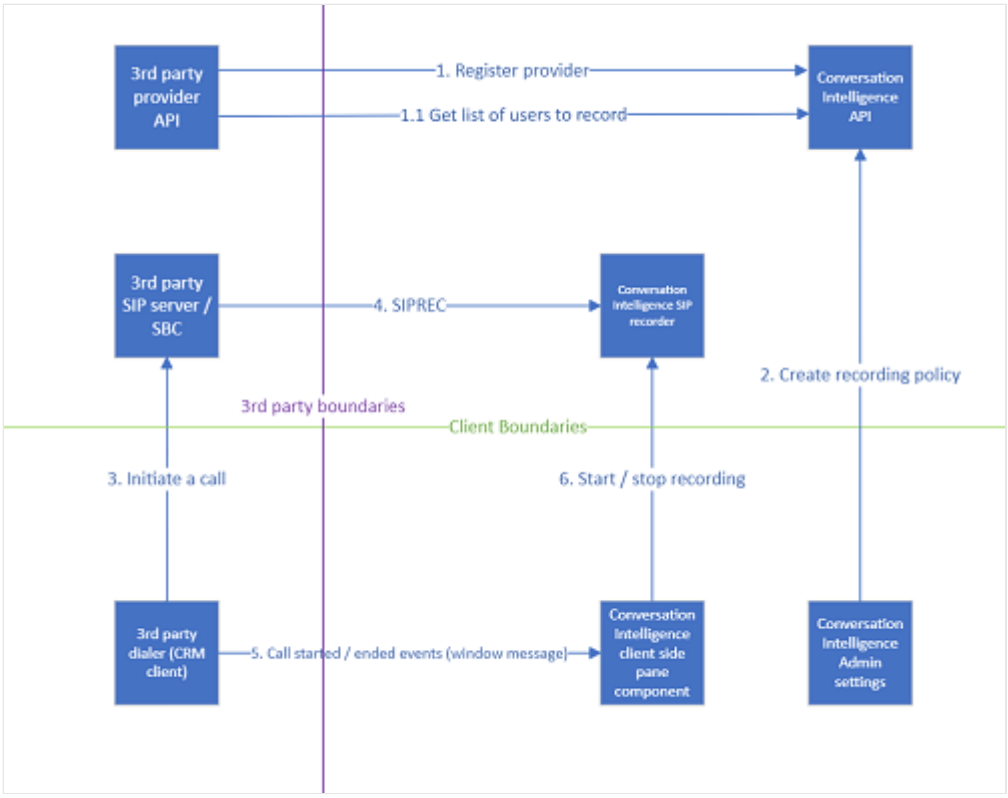
How the integration works

At a high-level, the integration consists of 3 parts:

1. **Register the provider:** Register the provider details and get the users list to be recorded by using the conversation intelligence API.
2. **Fork the media:** Fork the audio stream to the conversation intelligence recorders using a SIPREC protocol.
3. **Send real-time events:** Send UI events from the provider's client UI to Dynamics 365 conversation intelligence, to enable real-time transcription and call insights experience.

For an example integration between Dynamics 365 conversation intelligence and a third-party telephony provider, Twilio Flex, see Integrate Twilio Flex with Dynamics 365 conversation intelligence

The following diagram illustrates how the integration works:



Step 1: Register the provider

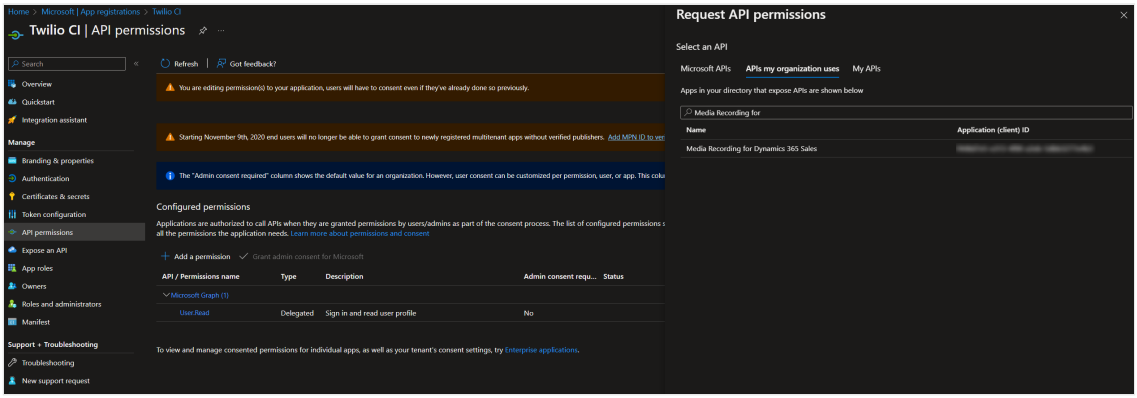
1. Create a Microsoft Entra ID application.

2. Add API permission for media recording:

   a. In the Microsoft Entra ID application that you've created, go to **API permissions**.

   b. Select **Add a permission**.

   c. Under **APIs my organization uses** search for **Media Recording for Dynamics 365 Sales** and select it:



   d. Add **Users.Read.All** permission and select **Add permission**

> ⓘ **Note**

> Make sure to get the admin consent for the permission to be able to call the conversation intelligence API in app context. **Learn more about permissions and consent**.

3. Get the token to run the Conversation Intelligence APIs using the app created in the previous section:

   ```
   curl -X POST -H 'Content-Type: application/x-www-form-urlencoded' https://login.microsoftonline.com/<tenant-id>/oauth2/v2.0/token -d 'client_id=<your app id>' -d 'grant_type=client_credentials' -d 'scope=f448d7e5-e313-4f90-a3eb-5dbb3277e4b3/.default' -d 'client_secret=<your app secret>'
   ```

   The `scope` parameter specifies the application ID of the Conversation intelligence app. Do not change this value.

   For more information about the curl command, see Get Microsoft Entra ID tokens for service principals.

4. Call the following conversation intelligence API to register the third-party service provider:
   `POST /api/v1.0/providers/tenants`

   Specify the following parameters in the request body:

   - **orgID:** Specify the Dynamics 365 org ID.
   - **Type:** Specify "custom" for third-party dialers.
   - **hosting:** Specify the hosting type of the telephony provider. For example, "cloud" or "on-premises".
   - **AccountId:** Specify the account ID of the telephony provider.
   - **CerfificateSubjectName and CertificateIssuer:** Specify the certificate details of the telephony provider.
   - **SourceIPNetwork:** Specify the IP address of the SIPREC client. Specify "0.0.0.0" if you don't want to restrict the IP address.
     The following snippet is an example of the request body:

     Java

     ```
     {
        "orgId": "ad3dca46-962a-4895-9f85-d25f3828781f",
     ```

```
    "Type": "custom",
    "hosting": "cloud",
    "displayName": "Test Custom Provider",
    "AuthenticationDetails":
    {
        "AccountId":"adxxxxx-xxxx-xxxx-xxxx-xxxxxxxx",
        "CertificateSubjectName": "certSubject",
        "CertificateIssuer": "issuer",
        "SourceIPNetwork": "0.0.0.0"
    }
}
```

For more information about the API, see the Swagger documentation.

<<Editor's note: Need info about the parameters and where they can get it from. Also, the request body in swagger doc is different from the above.>>

5. Call the following conversation intelligence API to get the list of users to record: `GET /api/v1.0/providers/users`

After the Dynamics 365 Sales admin creates the recording policy, the provider can use this endpoint to filter the media that will be forked to conversation intelligence recorders.

Step 2: Fork the media (SIPREC integration)

Conversation Intelligence recorders implement the standard SIPREC protocol.

The communication is secured using SIPS (port 5061) and SRTP protocols. The authentication is done using mTLS in the SIPS message connection, and is based on the certificate provided to the API – this means that the provider must be registered for a tenant to establish SIPS connection.

The following screenshot illustrates the communication between the SIPREC client and SIPREC server:

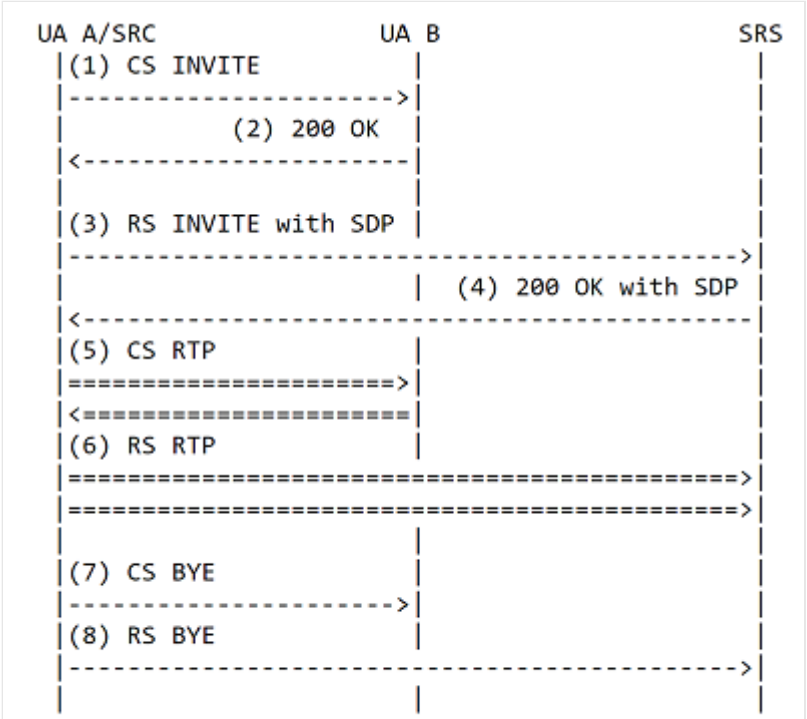


Figure 1: Basic Recording Call Flow with UA as SRC

The following metadata are required for conversation intelligence:

Headers:

Header Name	Description	Value Example
Call-ID	Unique identifier of the call. This is used to correlate SIP signals and user actions such as start/stop recording.	efxxxxxxxxxxxx
X-AccountId	Unique identifier of the account the call belongs to. This is used for authentication and authorization. This is the same account Id registered in the API for the tenant.	ACxxxxxxxxxxxxxxxxxxxxxxx

Metadata

Metadata key name	Description	Value Example
Role	Indicates whether it is an inbound or outbound call for the seller.	["inbound", "outbound"]
CallerDisplayName	Caller display name. If not available, phone number is displayed.	Kenny Smith
CalleeDisplayName	Recipient's display name. If not available, phone number is displayed.	Alex Baker

Here are examples of invite and bye messages with the required headers and metadata:

INVITE message:

```
INVITE sip:SRS@media.recording.dynamics.com:5061;transport=tls SIP/2.0
Via: SIP/2.0/TLS
84.172.x.x:5061;branch=z9hG4bK4fa2.cdabfe83d76d3c41987802096d3b342a.0;receiv
ed=172.16.x.x;rport=40334
Via: SIP/2.0/UDP 172.25.x.x:5060;rport=5060;branch=z9hG4bK917ce574-0345-
4c3d-9b63-d98c2c57dbe6_c3356d0b_599-10236398515455707148
To: <sip:SRS@media.recording.dynamics.com:5061;transport=tls>
From: <sip:SRC@sip.provider.com>;tag=66790678_c3356d0b_917ce574-0345-4c3d-
9b63-d98c2c57dbe6
Call-ID: efab0870bc597cb3fb56010921e2f57f
CSeq: 1 INVITE
Contact: <sip:SRC@172.25.x.x:5060;transport=udp>;+sip.src
Max-Forwards: 67
Record-Route: <sip:84.172.x.x:5061;transport=tls;r2=on;lr>,
<sip:84.172.x.x;r2=on;lr>
User-Agent: provider Gateway
Allow: INVITE,ACK,CANCEL,OPTIONS,BYE,REFER,NOTIFY
Require: siprec
Content-Length: 3194
Content-Type: multipart/mixed;boundary=\"----
=_Part_1253_283419664.1674116473425\"
Min-SE: 35
X-AccountId: ACxxxxxxxxxxxxxxxxxxx
------=_Part_1253_283419664.1674116473425

Content-Type: application/sdp
v=0
o=root 1176539620 1176539620 IN IP4 172.18.x.x
s=provider Media Gateway
c=IN IP4 84.172.x.x
t=0 0
m=audio 15352 RTP/SAVP 0 8 101
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:<Encryption_key>
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-16
a=ptime:20
a=maxptime:20
a=sendonly
a=label:inbound
m=audio 16022 RTP/SAVP 0 8 101
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:<Encryption_key>
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-16
a=ptime:20
```

```
a=maxptime:20
a=sendonly
a=label:outbound
------=_Part_1253_283419664.1674116473425

Content-Type: application/rs-metadata+xml
Content-Disposition: recording-session
<?xml version=\"1.0\" encoding=\"UTF-8\"?>
<recording xmlns='urn:ietf:params:xml:ns:recording:1'>
    <datamode>complete</datamode>
    <session session_id=\"Wd/putWgTWCW2z1lI5Db9w==\">
            <ExtensionParameters  xmlns=\"http://provider.com/siprec\">
                    <Parameter name=\"Role\" value=\"inbound\"/>
                    <Parameter name=\"CallerDisplayName\" value=\"Kiana
Anderson\"/>
                    <Parameter name=\"CalleeDisplayName\" value=\"Tomas
Richardson\"/>
            </ExtensionParameters>
    </session>
        <participant participant_id=\"bXCloPcETS6P/kfeeJtiow==\">
            <nameID aor=\"EE5C7EF0\"/>
        </participant>
        <participant participant_id=\"3nPi8XzBSzWrtSLlkU8Gjw==\">
            <nameID aor=\"230908\"/>
        </participant>
        <stream stream_id=\"9xff8FcdRUaJCSTxWFbV9g==\"
session_id=\"Wd/putWgTWCW2z1lI5Db9w==\"><label>inbound</label></stream>
        <stream stream_id=\"f/Qezx4jTMqiWSB1vW7oJA==\"
session_id=\"Wd/putWgTWCW2z1lI5Db9w==\"><label>outbound</label></stream>
    <sessionrecordingassoc session_id=\"Wd/putWgTWCW2z1lI5Db9w==\">
        <associate-time>2023-01-19T08:21:13.382512Z</associate-time>
    </sessionrecordingassoc>
        <participantsessionassoc participant_id=\"bXCloPcETS6P/kfeeJtiow==\"
session_id=\"Wd/putWgTWCW2z1lI5Db9w==\">
            <associate-time>2023-01-19T08:21:13.382512Z</associate-time>
        </participantsessionassoc>
        <participantsessionassoc participant_id=\"3nPi8XzBSzWrtSLlkU8Gjw==\"
session_id=\"Wd/putWgTWCW2z1lI5Db9w==\">
            <associate-time>2023-01-19T08:21:13.382512Z</associate-time>
        </participantsessionassoc>
        <participantstreamassoc participant_id=\"bXCloPcETS6P/kfeeJtiow==\">
                <send>9xff8FcdRUaJCSTxWFbV9g==</send>
                <recv>f/Qezx4jTMqiWSB1vW7oJA==</recv>
        </participantstreamassoc>
        <participantstreamassoc participant_id=\"3nPi8XzBSzWrtSLlkU8Gjw==\">
                <send>f/Qezx4jTMqiWSB1vW7oJA==</send>
                <recv>9xff8FcdRUaJCSTxWFbV9g==</recv>
        </participantstreamassoc>
</recording>
------=_Part_1253_283419664.1674116473425--
```

BYE message:

```
```

```
BYE sip:SRS@media.recording.dynamics.com:5061;transport=tls SIP/2.0
Via: SIP/2.0/TLS
84.172.x.x:5061;branch=z9hG4bK1fa2.d03c36b567136fcfae84281e926cda62.0;receiv
ed=172.16.x.x;rport=40334
Via: SIP/2.0/UDP
172.25.x.x:5060;rport=5060;received=84.144.x.x;branch=z9hG4bK917ce574-0345-
4c3d-9b63-d98c2c57dbe6_c3356d0b_600-2513288074170844985
To: <sip:SRS@media.recording.dynamics.com:5061;transport=tls>;tag=OXFWHPJQTL
From: <sip:SRC@sip.provider.com>;tag=66790678_c3356d0b_917ce574-0345-4c3d-
9b63-d98c2c57dbe6
Call-ID: efab0870bc597cb3fb56010921e2f57f
CSeq: 2 BYE
Max-Forwards: 68
User-Agent: provider Gateway
Require: siprec
Content-Length: 901
Content-Type: multipart/mixed;boundary=\"----
=_Part_29418_1017575873.1674116842924\"
X-AccountId: ACxxxxxxxxxxxx
```

Recorder endpoints and regions supported

The following table lists the supported recorder endpoints and their regions. You can configure the recorders you want to use in your telephony provider settings. To learn about how this is done for Twilio Flex, see Step 2: Install the SIPREC connector and route the calls to Dynamics 365.

Endpoint	Region
media.recording.dynamics.com	Global (closest region)
southeastasia.media.recording.dynamics.com	Southeast Asia
australiaeast.media.recording.dynamics.com	Australia
sam.media.recording.dynamics.com	South America
canadacentral.media.recording.dynamics.com	Canada
switzerlandnorth.media.recording.dynamics.com	Switzerland
eastus.media.recording.dynamics.com	US
francecentral.media.recording.dynamics.com	France
centralindia.media.recording.dynamics.com	India
japaneast.media.recording.dynamics.com	Japan

Endpoint	Region
uae.media.recording.dynamics.com	UAE
uksouth.media.recording.dynamics.com	UK
westeurope.media.recording.dynamics.com	West Europe
zaf.media.recording.dynamics.com	South Africa

Step 3: Send real-time events (Dialer's client Integration)

To allow conversation intelligence to provide real-time transcription and insights, the third-party dialer can use two events to notify when a call starts or ends.

- **Call started event:** When conversation intelligence gets the "call started" event,it will show the recording button and the real-time transcription and insights.
- Call ended event: When conversation intelligence gets the "call ended" event, it will wrap up the call and show the **Full summary** button to get the AI-generated call summary and insights.

To send the events, use the raiseEvent API in Dynamics 365 Channel Integration Framework (CIF).

Here's a sample code snippet to send the events:

Java

```
export interface CallStartedEvent {
  callId: string;
  startTime: Date;
  isIncomingCall: boolean;
  contactNumber: string;
  contactName: string;
}

export interface CallEndedEvent {
  callId: string;
  callDurationInSeconds: number;
  callTerminationReason: string; // ['success', 'error']
  callEndTime: Date;
  isCallStarted: boolean;
}

dialer.Actions.addListener('onCallStarted', (payload: any) => {
  const callStartedEvent : CallStartedEvent = {
```

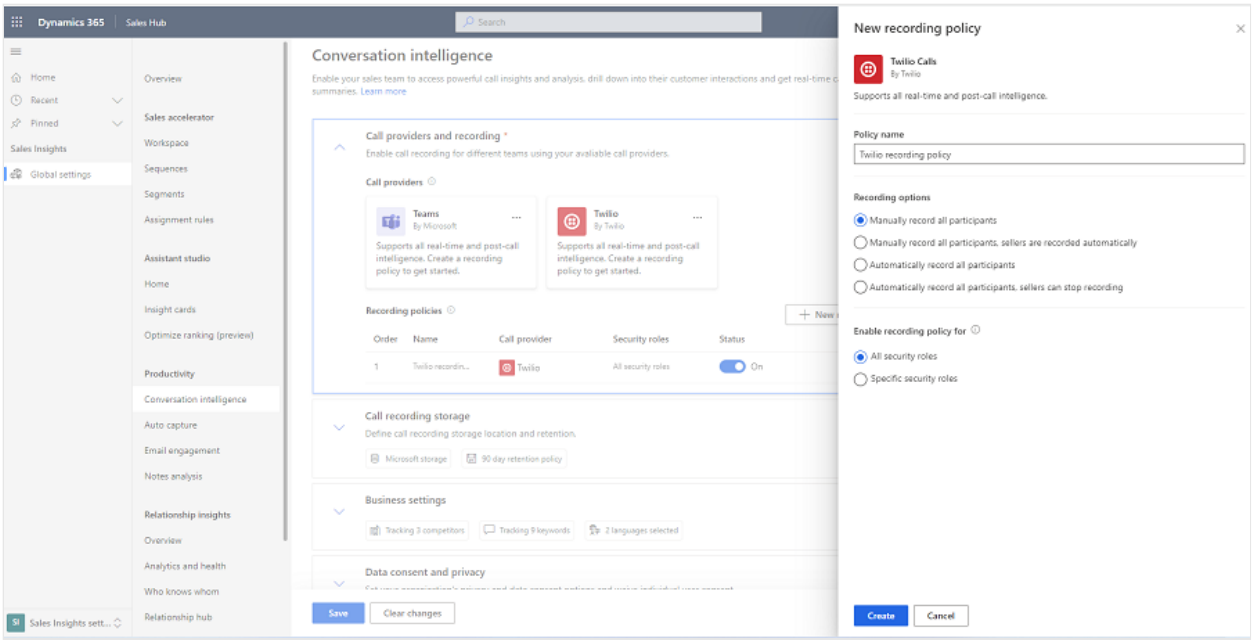
```
    callId: payload.call_sid,
    startTime: new Date(),
    isIncomingCall: payload.attributes.is_incoming_call,
    contactName: payload.attributes.caller_name,
    contactNumber: payload.attributes.caller_phone_number
  };

  // @ts-ignore
  Microsoft.CIFramework.raiseEvent('WIDGET_CALL_STARTED', callStartedEvent);
});

dialer.Actions.addListener('onCallEnded', (payload: any) => {
  const callEndedEvent : CallEndedEvent = {
    callId: payload.call_sid,
    callEndTime: new Date(),
    callTerminationReason: 'success',
    isCallStarted: true,
    callDurationInSeconds: payload.attributes.call_length
  };

  // @ts-ignore
  Microsoft.CIFramework.raiseEvent('WIDGET_CALL_ENDED', callEndedEvent);
});
```

Test the integration

After registering the new provider with the tenant and setting up the SIPREC forking and the client dialer events, you can test the integration by creating a new recording policy with the new provider.

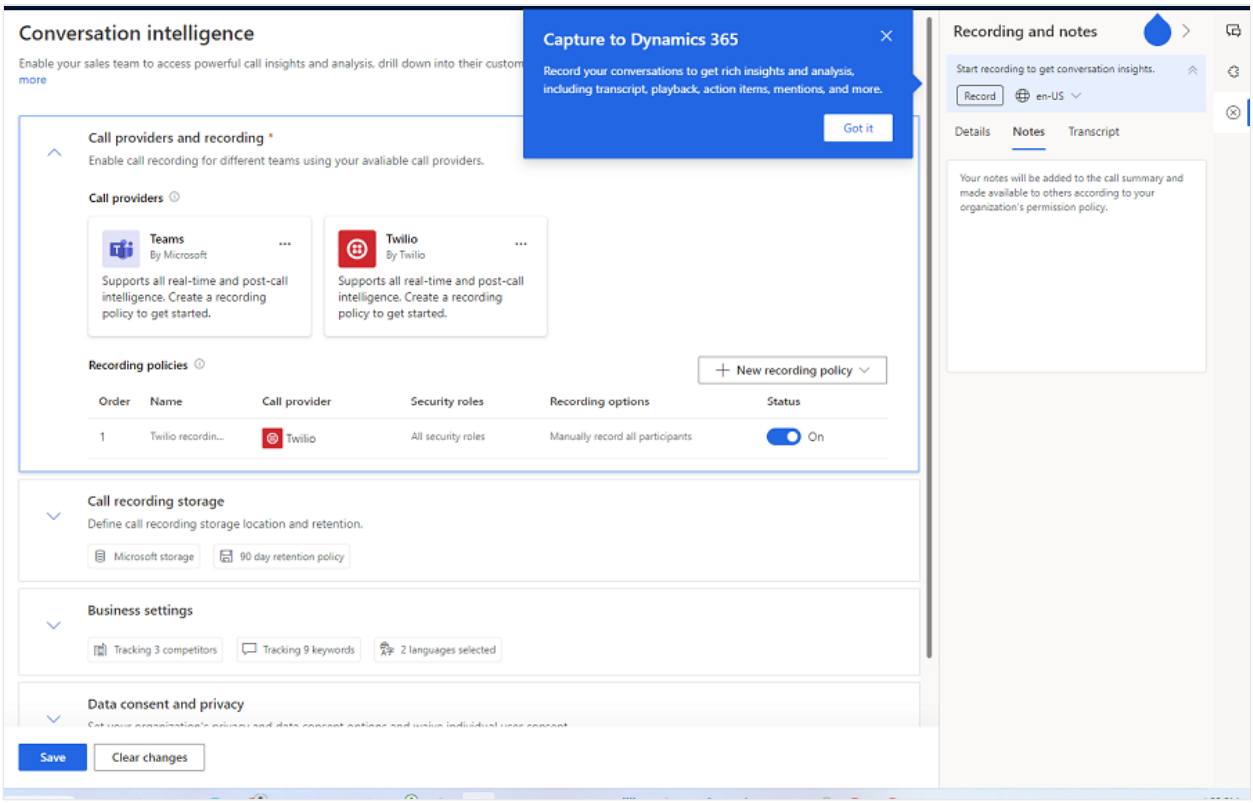
1. Log in as a System administrator in the Sales Hub app.
2. From Change area, select **Sales insights settings**.
3. Go to **Global settings** > **Conversation intelligence**. In the Call providers section, you'll see the third-party provider that you've registered.
4. Create a recording policy for the new provider. For more information, see Set up Microsoft Teams for conversation intelligence

The following screenshot is an example of a recording policy for Twilio.



Now, call a user who is part of the selected security role (in our example, the policy is enabled for all security roles).

When Dynamics 365 receives the **callStarted** event from the dialer, you'll have the option to start the recording:



After selecting **Record**, you'll be able to see the real-time transcription during the call and a full summary and call insights at the end of the call.

See also

View and understand the call summary page

Integrate Twilio Flex with Dynamics 365 conversation intelligence (preview)

Article • 08/09/2023

[This article is prerelease documentation and is subject to change.]

This integration lets your sellers make and receive Twilio Flex calls from Dynamics 365 and get real-time transcriptions during the call and AI-generated call insights after the call.

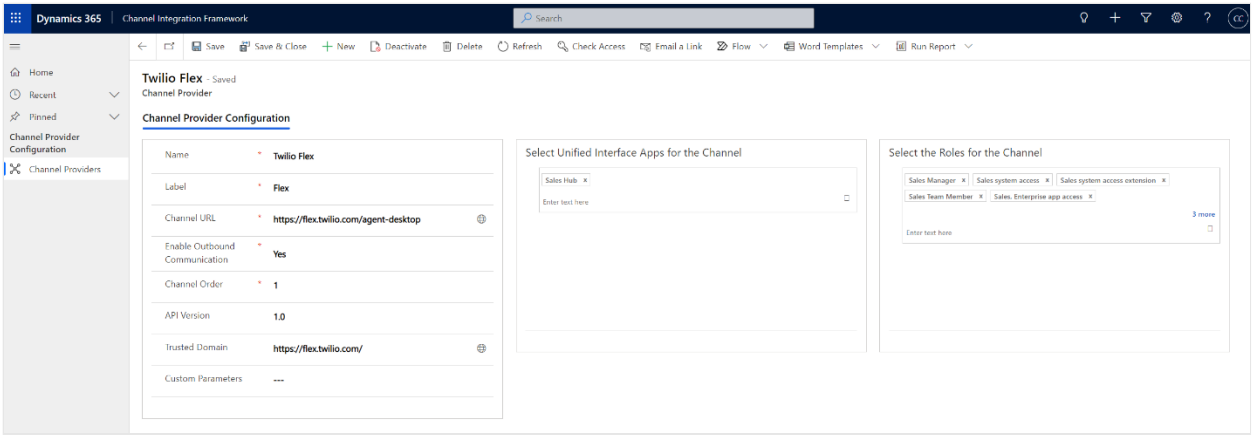
> **Important**
>
> - This is a preview feature.
> - Preview features aren't meant for production use and may have restricted functionality. These features are available before an official release so that customers can get early access and provide feedback.

Prerequisites

- A Twilio account
- A Twilio Flex account – see this link for more info on how to set up a Flex account
- A Microsoft Dynamics 365 Sales environment with the Sales Premium or Sales Enterprise license, along with system administrator privileges
- Conversation Intelligence installed and set up – Learn more
- Dynamics 365 Channel Integration Framework 1.0 installed. Learn more
- A local Node JS environment set up
- The create-flex-plugin application

Step 1: Configure Twilio Flex as a channel provider

In Dynamics 365 Channel Integration Framework, create a channel provider for Twilio Flex. See the screenshot below as an example:

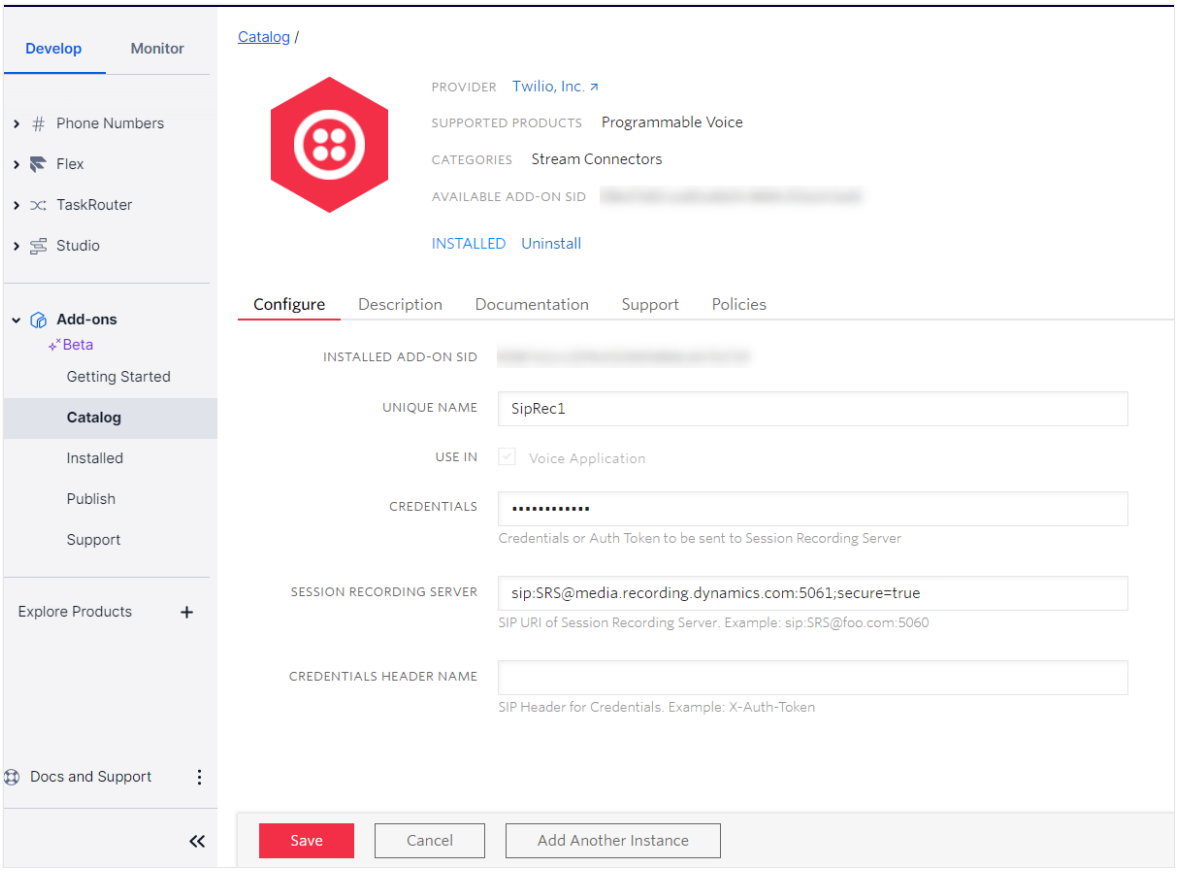


Enter the following values::

- **Channel URL:** https://flex.twilio.com/agent-desktop
- **Enable Outbound Communication:** Yes
- **API Version:** 1.0
- **Channel order:** 1
- **Trusted Domain:** https://flex.twilio.com/
- **Select Unified Interface Apps for the Channel:** Sales Hub (or any other app you would like the integration to be enabled for)
- **Select the security roles for the channel:** Add the roles that would be using Twilio Flex. For example, Salesperson, Sales Manager,and so on.To embed Twilio Flex as an iframe inside Dynamics 365, add the Dynamics 365 org URL to the Allowed URLs list. For more information, see this article.

Step 2: Install the SIPREC connector and route the calls to Dynamics 365

1. Install the SIPREC connector add-on.
2. Open the Twilio admin center settings and configure it to fork the media to Dynamics 365 recorder as illustrated in the following screenshot:

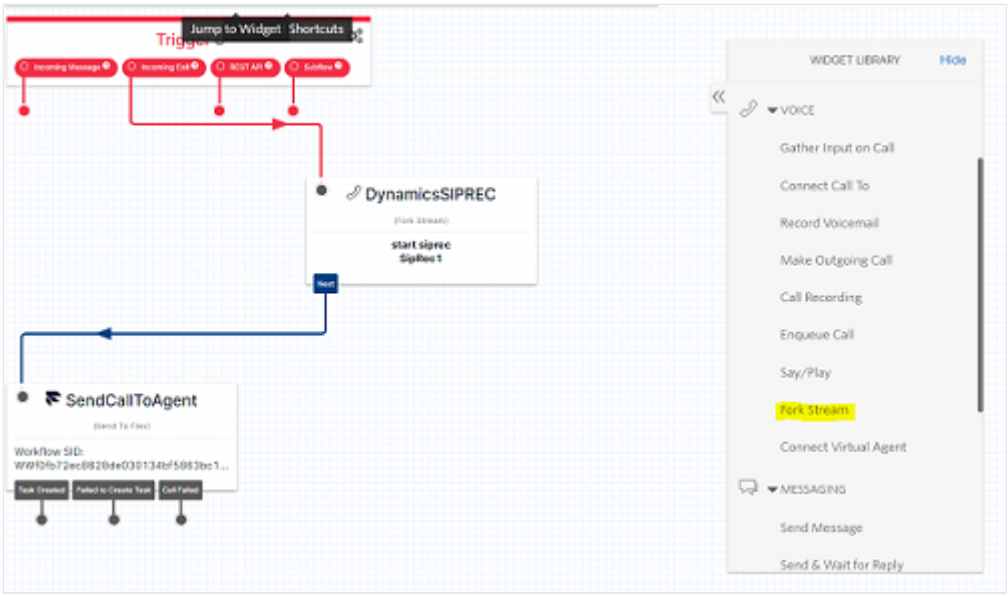


The following fields are important to note:

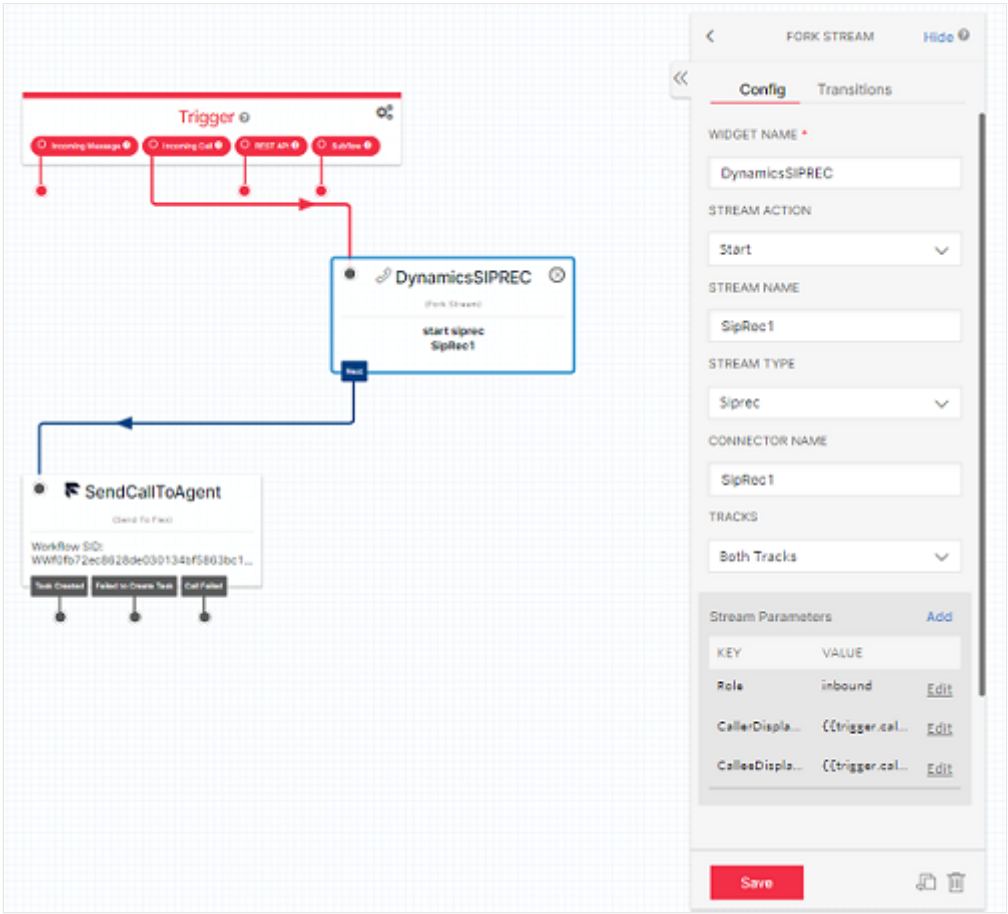
- **Unique name:** Specify a name and note it down. You'll have to use it in the next steps
- **Session Recording Server:** Specify the Dynamics 365 media recording server URL. For a list of recorders and regions supported, see Recorder endpoints and regions supported.
    - If you would like to fork the media to the closest recorder, use the following URL: **sip:SRS@media.recording.dynamics.com:5061;secure=true**
    - Credentials fields can remain empty. The authentication is done with certificate on the TLS setup between Twilio and Dynamics.

Step 3: Configure call flow to fork the media to Dynamics 365

1. Navigate to the Studio Flows section in the Console and select Voice IVR flow.
2. On the right side, under **Voice** section in the widget library, add the **Fork Stream** widget:



3. Now, configure the widget to fork the stream using the SIPREC connector you defined earlier:



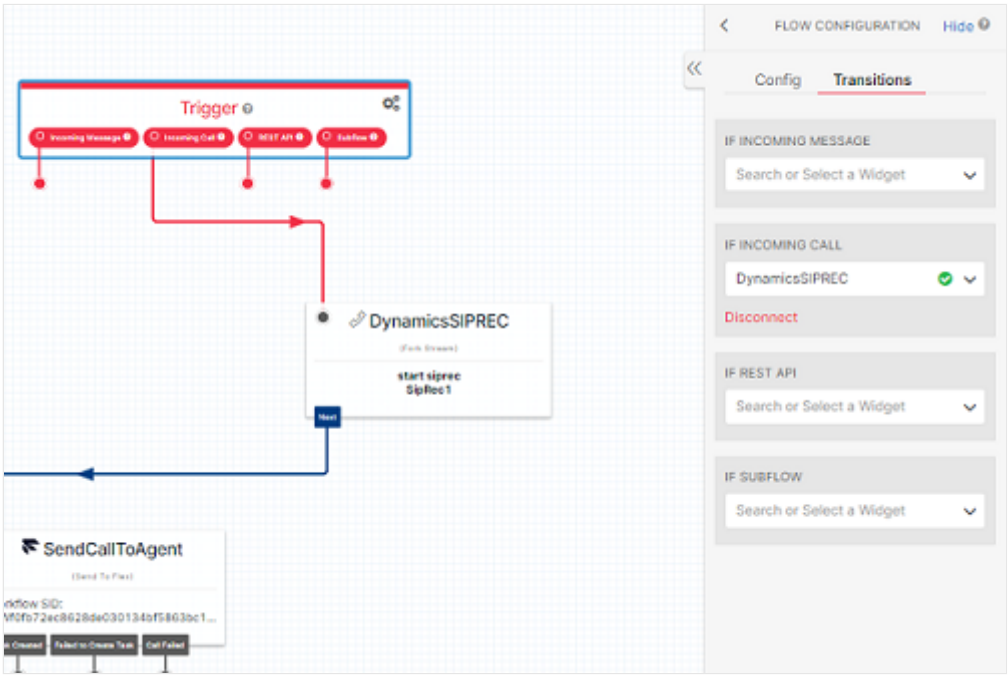
4. Enter the following values:

-**Stream Action:** Start

- **Stream Type:** Siprec
- **Connector Name:** The name that you gave to the SIPREC connector. In our example, it's SipRec1.
- **Tracks:** Both Tracks

- **Stream parameters:**
  - **Role:** inbound (In our example, we are going to record incoming calls)
  - **CallerDisplayName:** {{trigger.call.From}}
  - **CalleeDisplayName:** {{trigger.call.To}}

5. In the **Transitions** tab, configure the **Fork Stream** to be before the call is sent to the agent:

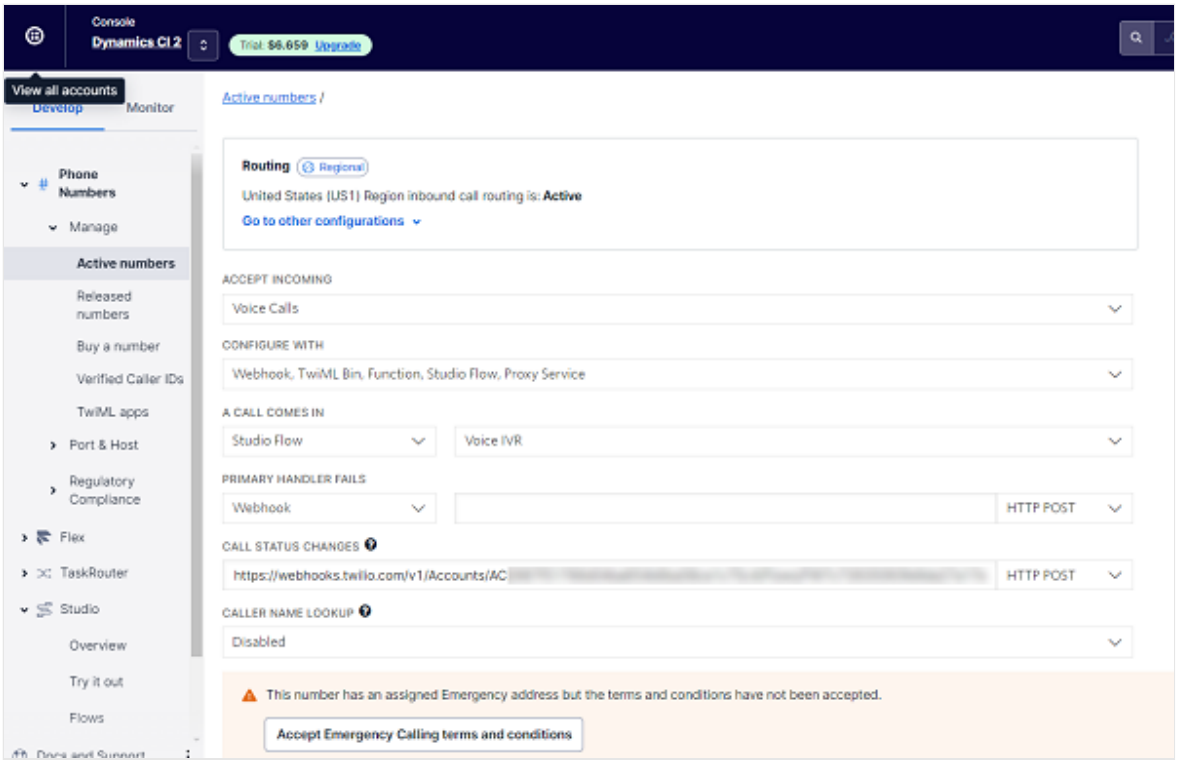


6. Save the flow and publish.

Step 4: Configure a Twilio phone number

You need to point a Twilio phone number to your newly created Studio Flow.

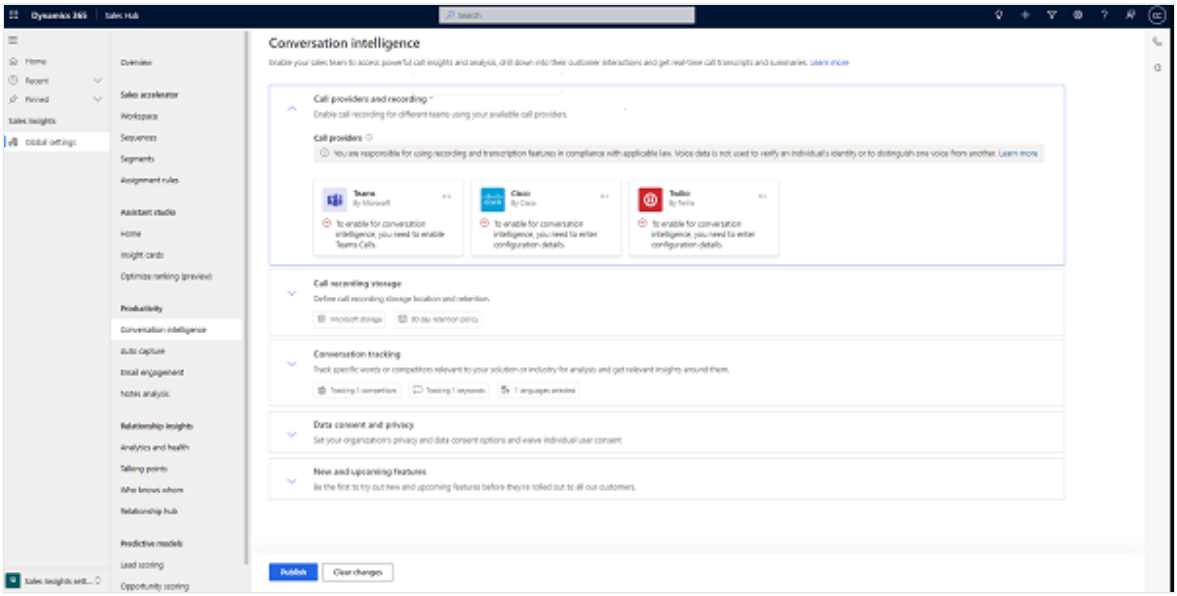
1. Select a number that you own – or buy a new number – from the Twilio Phone Numbers console.
2. Open the phone number by selecting it, then scroll down to the **Voice** section on the page.
3. Select the flow that you had defined earlier in the **Call Comes In** fields as illustrated in the following screenshot:



Step 5: Configure Dynamics 365 for the integration

Let's set up Twilio as a call provider and configure a recording policy to define who can record calls, and other information used for conversation insights.

1. In the Sales Hub app, go to the Change area and select **Sales Insights settings**.
2. Select **Conversation Intelligence**.



3. Select **Twilio** in the Call providers section and specify the Twilio account SID.
4. Save the changes.

5. Configure a recording policy using the Twilio call provider.

    a. Select **Create a recording policy** and configure the policy. Learn more.

    b. Select **Create** and then publish the settings.

Step 6: Prepare Flex plugin to integrate the real-time experience

Flex is a React project and customizations that you make to the UI are created as plugin components.

Preparing a Node environment and setting up an empty Flex plugin are outside the scope of this documentation. Refer to Twilio's documentation for a step-by-step tutorial on creating your first Flex plugin.

Create a fresh plugin that is ready for you to add your customization code for Dynamics.

At this point, your plugin JS file will look like this:

```
import { FlexPlugin, loadJS } from 'flex-plugin';
const PLUGIN_NAME = 'DynamicsPlugin';

export default class DynamicsPlugin extends FlexPlugin {
  constructor() {
    super(PLUGIN_NAME);
  }

  init(flex, manager) {

  }
}
```

Add the Microsoft CIF Client library to your plugin. The client library must be loaded asynchronously when Flex launches, so add the following code to the Flex init function.

Java

```
import React from 'react';
import \* as Flex from '@twilio/flex-ui';
import { FlexPlugin } from '@twilio/flex-plugin';
import reducers, { namespace } from './states';
const PLUGIN\_NAME = 'SamplePlugin';
export interface CallStartedEvent {
  callId: string;
  startTime: Date;
  isIncomingCall: boolean;
```

```
  contactNumber: string;
  contactName: string;
}

export interface CallEndedEvent {
  callId: string;
  callDurationInSeconds: number;
  callTerminationReason: string; // \['success', 'error'\]
  callEndTime: Date;
  isCallStarted: boolean;
}

export default class SamplePlugin extends FlexPlugin {
  constructor() {
    super(PLUGIN\_NAME);
  }
  /\*\*
   \* This code is run when your plugin is being started
   \* Use this to modify any UI components or attach to the actions
framework
   \*
   \* @param flex { typeof Flex }
   \* @param manager { Flex.Manager }
   \*/
  async init(flex: typeof Flex, manager: Flex.Manager): Promise&lt;void&gt;
{
    this.registerReducers(manager);
    this.loadCIF();
    flex.Actions.addListener('afterAcceptTask', (payload) =&gt; {
      const callStartedEvent : CallStartedEvent = {
        callId: payload.task.\_task.attributes.call\_sid,
        startTime: new Date(),
        isIncomingCall: true,
        contactName: payload.task.\_task.attributes.caller,
        contactNumber: payload.task.\_task.attributes.caller
      };
      // @ts-ignore
      Microsoft.CIFramework.raiseEvent('WIDGET\_CALL\_STARTED',
callStartedEvent);
    });

    flex.Actions.addListener('afterCompleteTask', (payload) =&gt; {
      // @ts-ignore
      Microsoft.CIFramework.raiseEvent('WIDGET\_CALL\_ENDED', {
        callId: payload.task.\_task.attributes.call\_sid,
        callTerminationReason: 'success',
        callEndTime: new Date(),
        isCallStarted: true
      });
      const callEndedEvent : CallEndedEvent = {
        callId: payload.task.\_task.attributes.call\_sid,
        callEndTime: new Date(),
        callTerminationReason: 'success',
        isCallStarted: true
      };
```

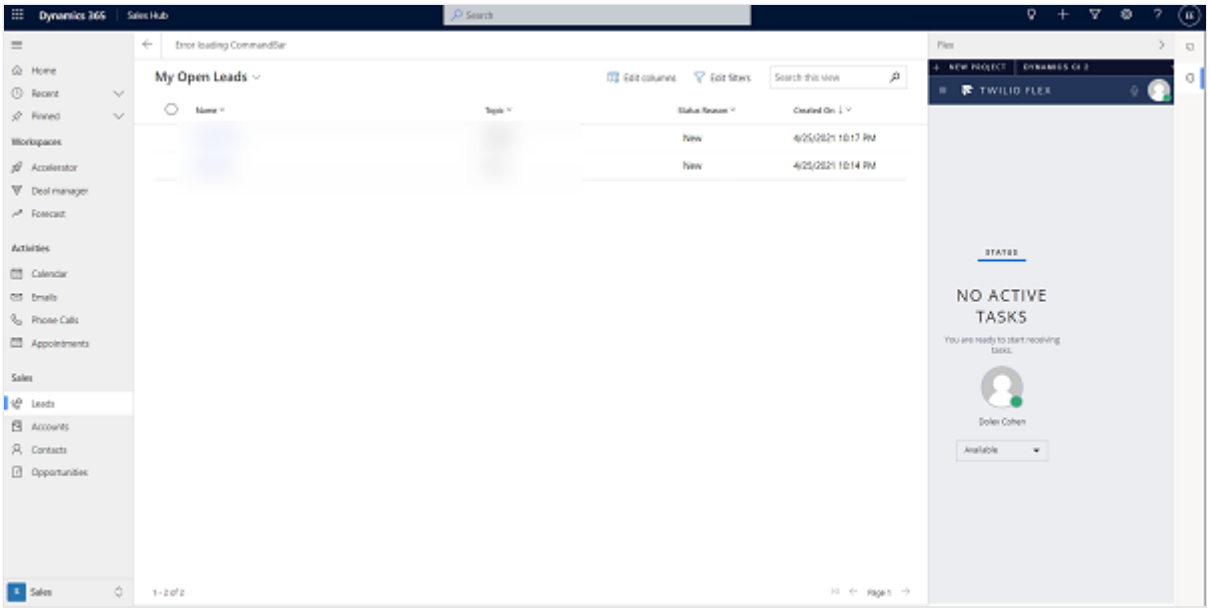
```
      // @ts-ignore
      Microsoft.CIFramework.raiseEvent('WIDGET\_CALL\_ENDED',
callEndedEvent);
    });

    const options: Flex.ContentFragmentProps = { sortOrder: -1 };
    flex.AgentDesktopView.Panel1.Content.add(&lt;div key="SamplePlugin-
component" &gt;Hello Partner!&lt;/div&gt;, options);
  }

  loadCIF = () =&gt; {
    const script = document.createElement("script");
    script.src = \`${window.location.ancestorOrigins\
[0\]}/webresources/Widget/msdyn\_ciLibrary.js\`;
    script.setAttribute('data-crmurl', window.location.ancestorOrigins\
[0\]);
    script.setAttribute('data-cifid', 'CIFMainLibrary');
    document.body.appendChild(script);
  }

  /\*\*

   \* Registers the plugin reducers
   \*
   \* @param manager { Flex.Manager }
   \*/
  private registerReducers(manager: Flex.Manager) {
    if (!manager.store.addReducer) {
      // eslint-disable-next-line
      console.error(\`You need FlexUI &gt; 1.9.0 to use built-in redux; you
are currently on ${Flex.VERSION}\`);
      return;
    }
    manager.store.addReducer(namespace, reducers);
  }
}
```

Publish the plugin.

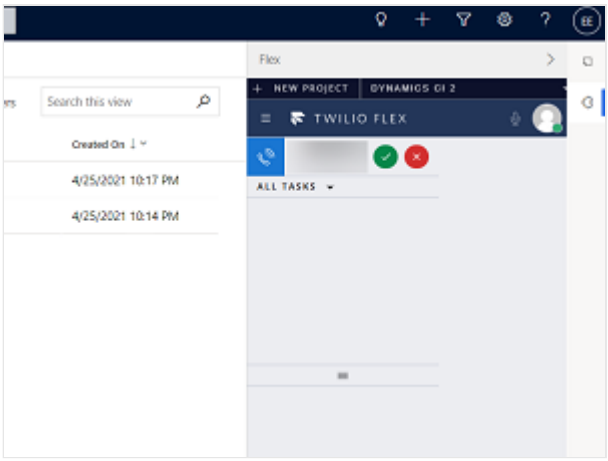
We now have a Flex plugin that is ready for us to test!

Step 7: Test Dynamics 365 conversation intelligence and Flex integration

Log into the Sales Hub app, select the **Call** icon. You'll see Twilio Flex embedded in the right pane.



Make sure you've set your status as **Available** in Twilio and place a call to the Twilio Phone Number that you set up in the Step 4: Configure a Twilio phone number.



Once you answer the call and start recording, navigate to the **Transcript** tab to view real-time transcription and then view call insights in the **Call Summary** page after the call ends.

See also

View and understand the call summary page

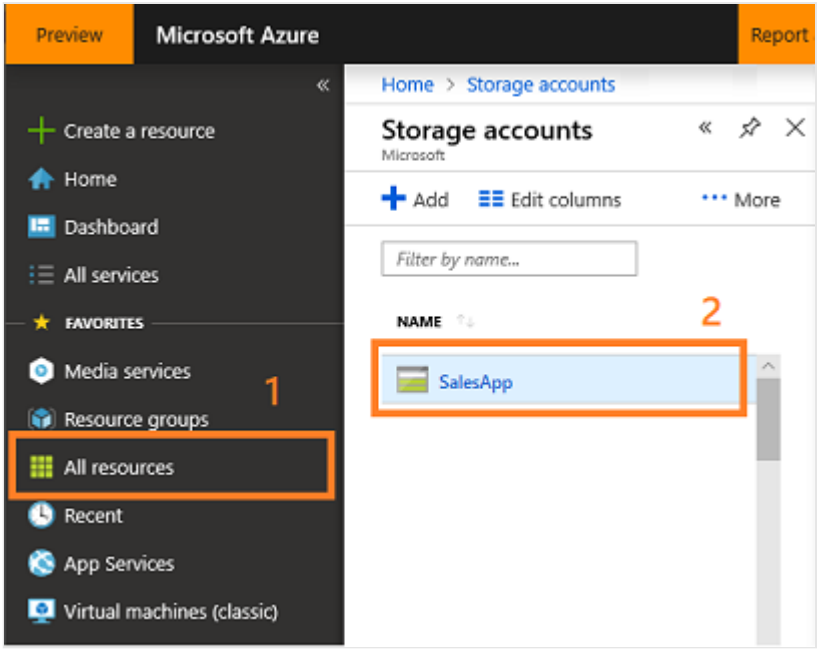
Create a call recording repository in Azure

Article • 06/29/2023

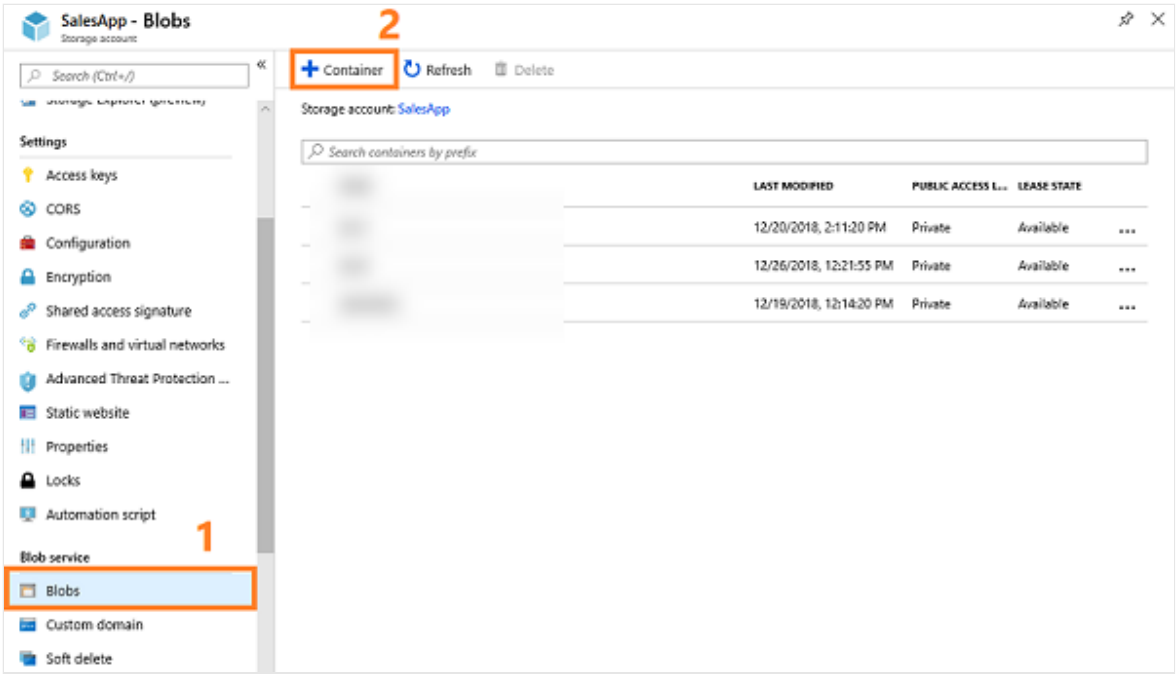
Create a call recording repository (blob container) in an Azure storage account to help you store call recordings in the repository for conversation intelligence to assess.

> **Note**
>
> While creating the repository, ensure that the repository is created in the same region as your tenant to store the call recordings. For example, if your tenant is in NAM (North America), ensure that you create the repository in the NAM region only.

1. Sign in to the Azure dashboard.
2. On the navigation pane, select **All resources**, and open the desired storage account.



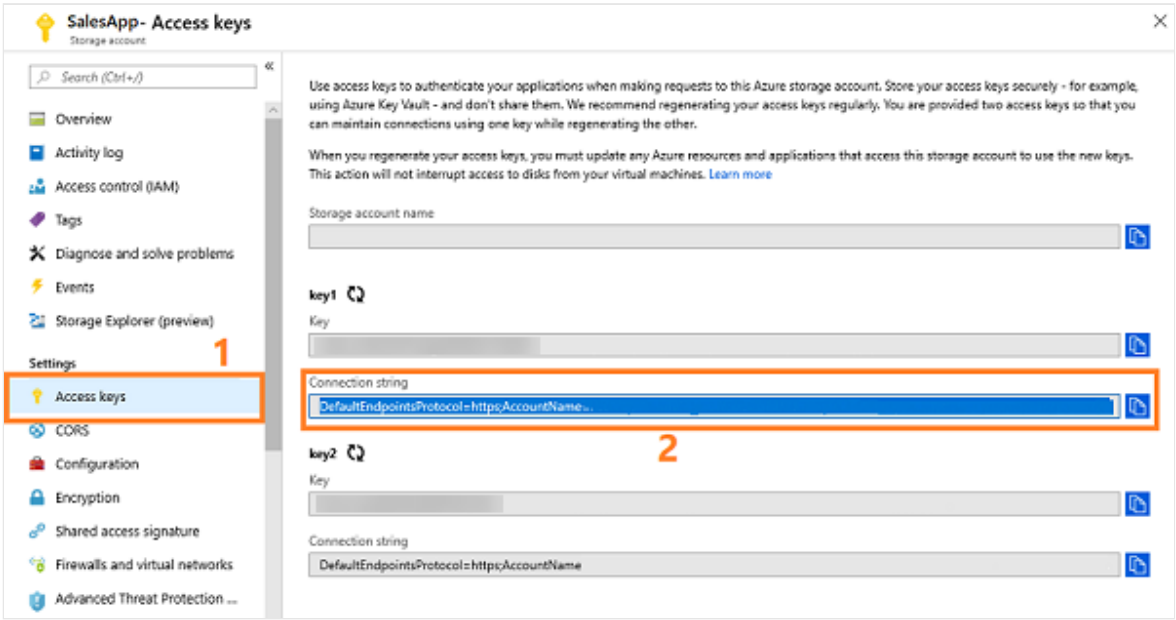
3. From **Blob service**, select **Blobs** then **+ Container**.



4. Specify the container information, such as name and public access level.

5. Select **OK**.
   The container is created. To learn more, see Create a container

6. From **Settings**, go to **Access keys** and note the **Connection string** of the storage account. This connection string is used to connect conversation intelligence to your Azure storage account.



Now you are ready to configure conversation intelligence to use your own Azure storage.

Languages supported for conversation intelligence

Article • 05/15/2023

Conversation intelligence generates various insights from call transcripts, including action items, brands, keywords, sentiments, and questions. These insights are available in multiple languages, either natively or through translation. When a language has native support, the transcript is analyzed and insights are generated in that language. For languages with non-native support, the transcript is first translated to English and then insights are generated in English.

In the following table, **Y** indicates native support and **N** indicates non-native support.

Language	Transcription	Tracked keywords and competitors	General Keywords mentions	People, prices, and times mentions	Brands mentions	Automated note suggestions and action items	Voicemail, reschedule requests, unwanted calls detection	Segmentation topics	Sentiment analysis	Sellers ar customer Question detection
English	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
English (UK)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
French	Y	Y	Y	Y	N	N	N	N	Y	N
French (Canadian)	Y	Y	Y	Y	N	N	N	N	Y	N
German	Y	Y	Y	Y	N	N	N	N	N	N
Spanish	Y	Y	Y	Y	N	N	N	N	N	N
Spanish (Mexico)	Y	Y	Y	Y	N	N	N	N	N	N
Chinese	Y	Y	Y	N	N	N	N	N	N	N
Dutch	Y	Y	Y	N	N	N	N	N	N	N
Italian	Y	Y	Y	N	N	N	N	N	N	N
Japanese	Y	Y	Y	N	N	N	N	N	N	N
Portuguese	Y	Y	Y	N	N	N	N	N	N	N
Portuguese (Brazil)	Y	N	N	N	N	N	N	N	N	N
Hebrew	Y	Y	Y	N	N	N	N	N	N	N
Danish	Y	Y	N	N	N	N	N	N	N	N
Swedish	Y	Y	N	N	N	N	N	N	N	N
Finnish	Y	Y	N	N	N	N	N	N	N	N
Norwegian	Y	Y	N	N	N	N	N	N	N	N
Arabic	Y	N	Y	N	N	N	N	N	N	N

All of the above insights are available in the **Call summary** page. For more information, see View and understand call summary page in the Sales Hub app.

Create and configure model-driven app interactive experience dashboards

Article • 02/24/2023

Introducing interactive dashboards

Interactive experience dashboards can be a **one-stop workplace** for app users, such as service reps, to see workload information and take action. They're fully configurable, security-role based, and deliver workload information across multiple streams in **real time**. Interactive dashboard users don't need to page through the application looking for a particular row; they can act on it **directly** from the dashboard.

Dashboard types

The interactive experience dashboards come in two forms: **multi-stream** and **single-stream**. In addition, multi-stream dashboards can be home page or table-specific dashboards. The table-specific dashboards are configured in a different part of the user interface and are partially preloaded with table-specific configuration information.

Multi-stream dashboards

The multi-stream dashboards display data in real time over multiple data streams. There’s no limit on how many streams you can configure on the dashboard. The data in a stream can be based only on one table, but, each stream can be based on a different table.

Single-stream dashboards

In the table-specific dashboards, all streams are based on the same table. The data flows from various views or queues, such as **My Activities**, **My Cases**, or **Cases in the Banking Queue**.

> ⓘ **Note**
>
> The examples described here use the Case table, which is available with the Dynamics 365 Customer Service app.

The single-stream dashboards display real-time data over one stream based on a table view or queue. The tiles are positioned on the right side of the dashboards and are always shown. The single-stream dashboards are typically helpful to Tier 2 service leads or managers, who monitor fewer, but more complex or escalated cases.

Dashboard charts

Multi-stream and single-stream dashboards contain interactive charts that provide a count of relevant rows, such as cases by priority or by status. These charts also act as visual filters. The visual filters (interactive charts) are based on multiple tables and in the single-stream dashboards, the table in the data stream defines the visual filter table.

Users can apply additional filtering with global filter and timeframe filter. The global filter works at a column level on all charts, and also on streams and tiles that are based on the filter table (you specify the filter table when you configure the visual filters).

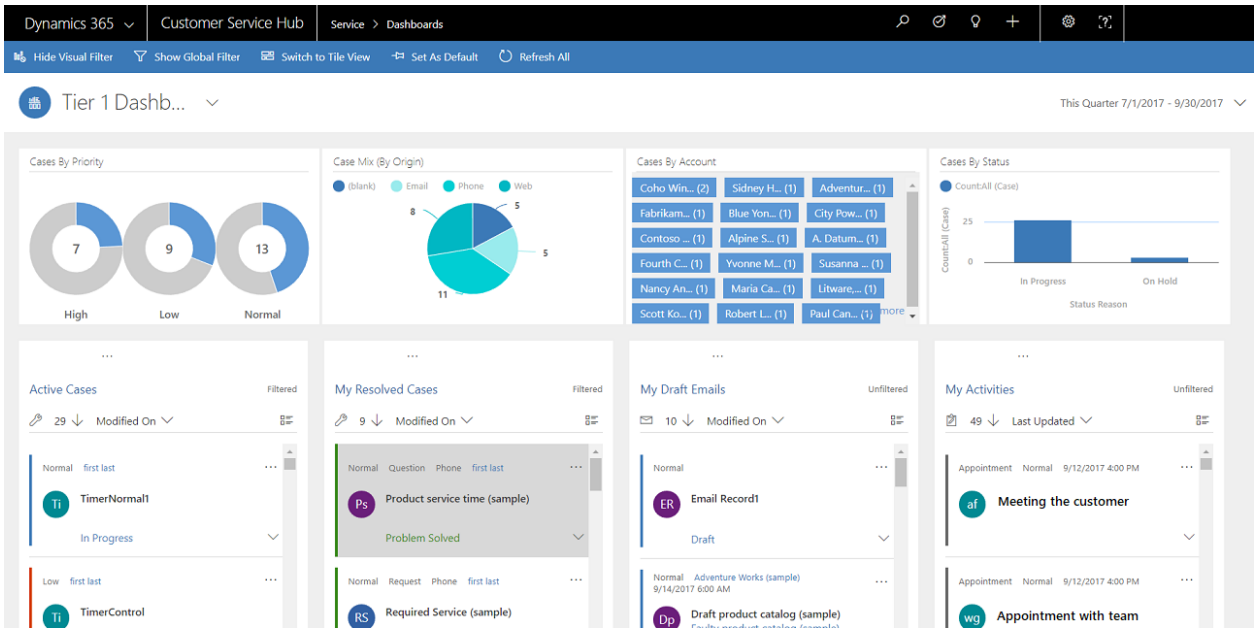
> **Note**
>
> The interactive dashboards are solution aware and can be exported and then imported into a different environment as a solution. However, the queues that the streams and tiles are based on aren't solution aware. Before importing the dashboard solution into the target system, the queues have to be manually created in the target system in **Settings** > **Service Management** > **Queues**. After you create the queues, import the dashboard solution to the target system, and then edit the streams or tiles that are based on the queues to assign the newly created queues appropriately.

The illustrations in this article show multi-stream and single-stream dashboards with the header pane. Below the header you see visual filters and streams. In the single-stream dashboard, you also see tiles. For each dashboard type, you can choose from several different layouts that are also shown. The dashboard header contains the following controls and select-able icons, from left to right: dashboard picker, refresh, visual filter icon, global filter icon, and time frame filter.

Dashboard layouts

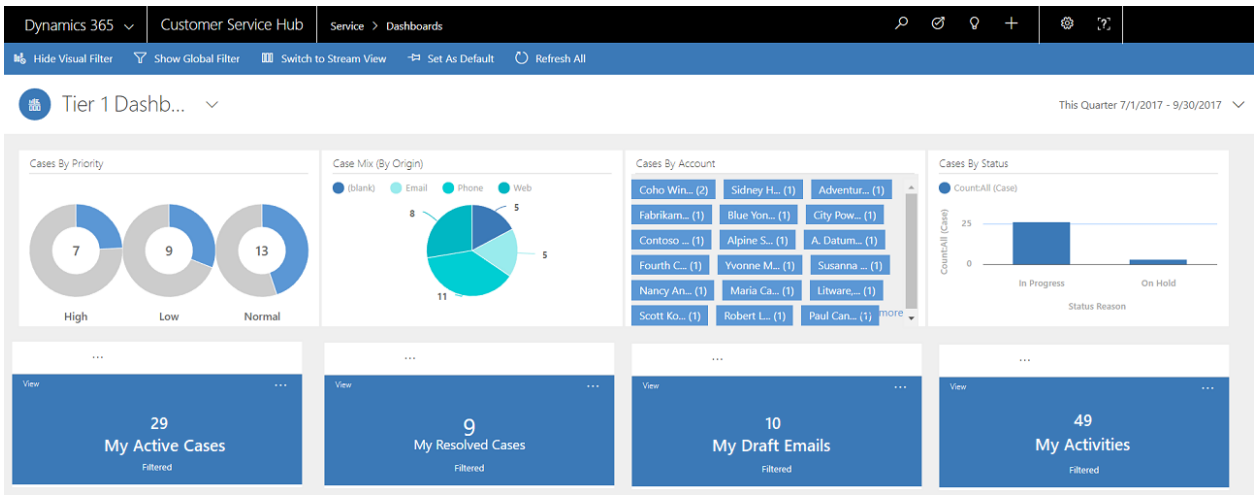
Multi-stream dashboard standard view

In the multi-stream dashboard, you see a row of visual filters at the top with the data streams below them.



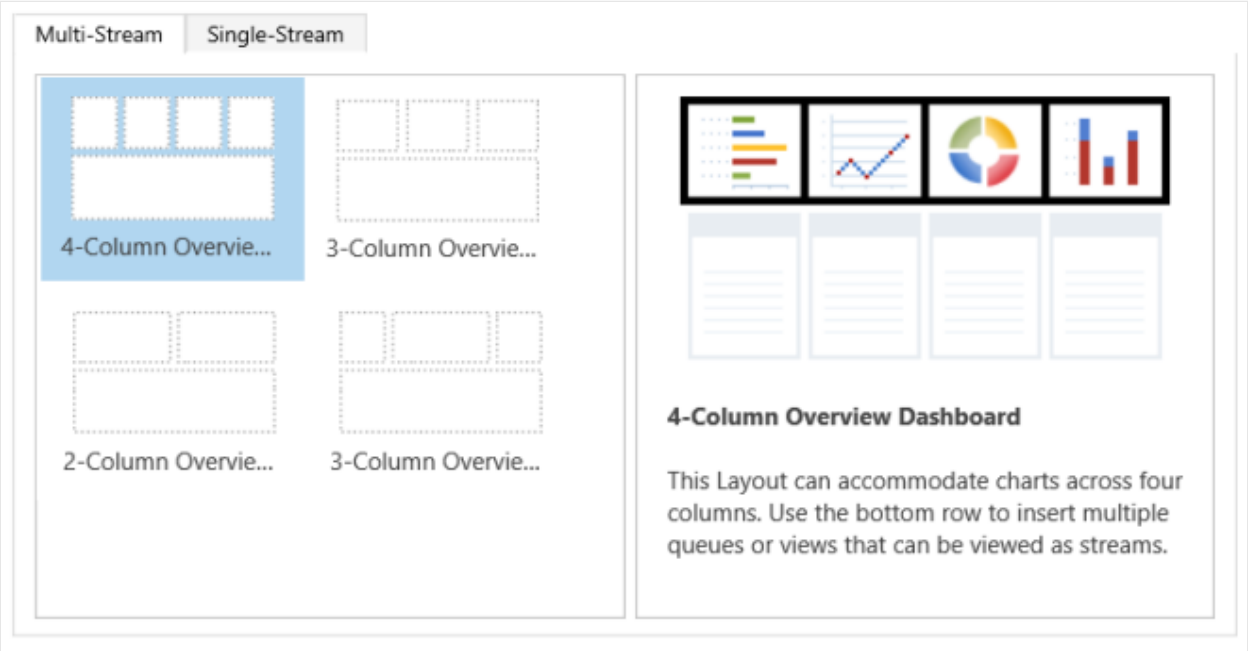
Multi-stream dashboard tile view

The same dashboard, only in the tile view.



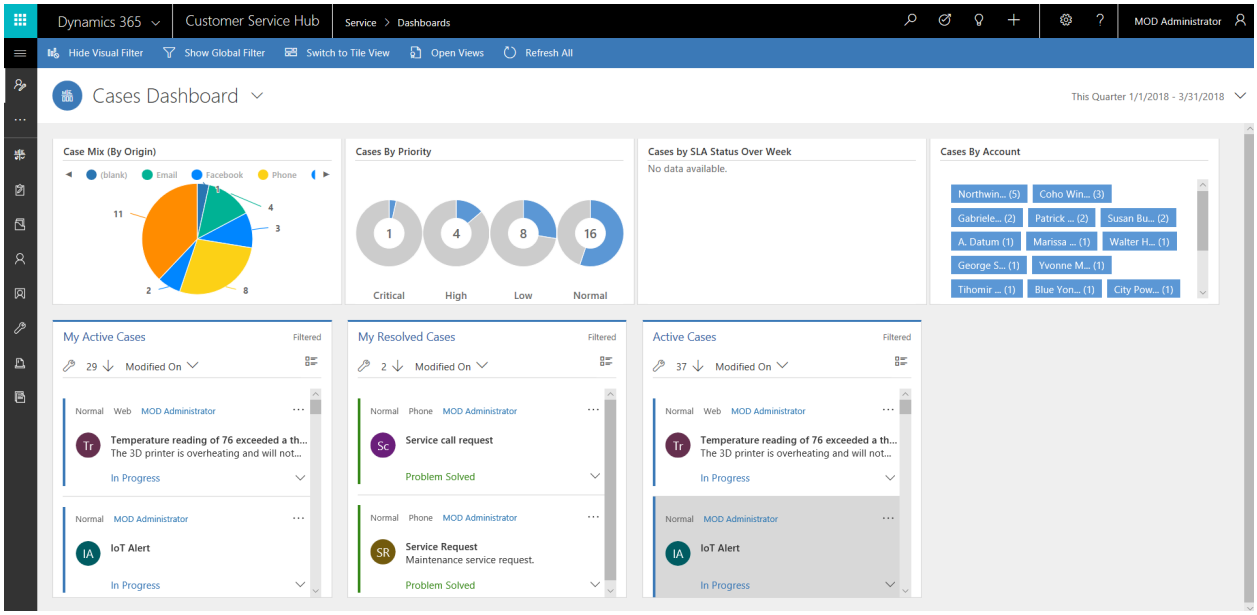
Multi-stream dashboard layouts

For multi-stream dashboards, you can choose from four different layouts.



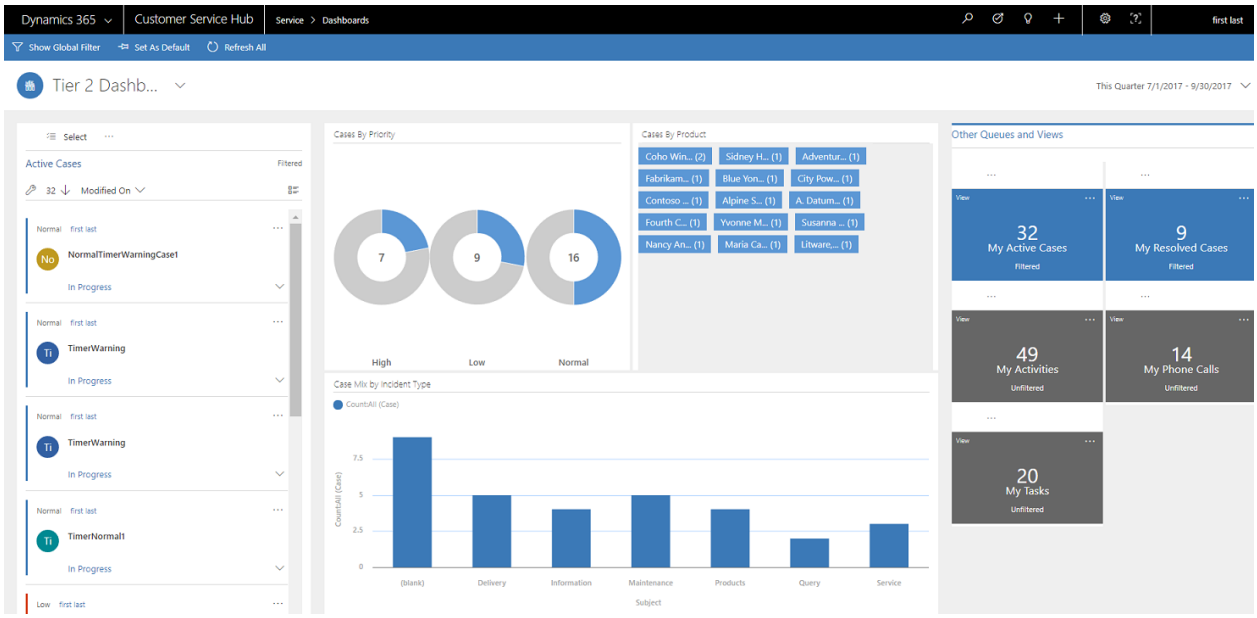
Multi-stream table-specific dashboard

The table-specific dashboard for the case table is shown here.



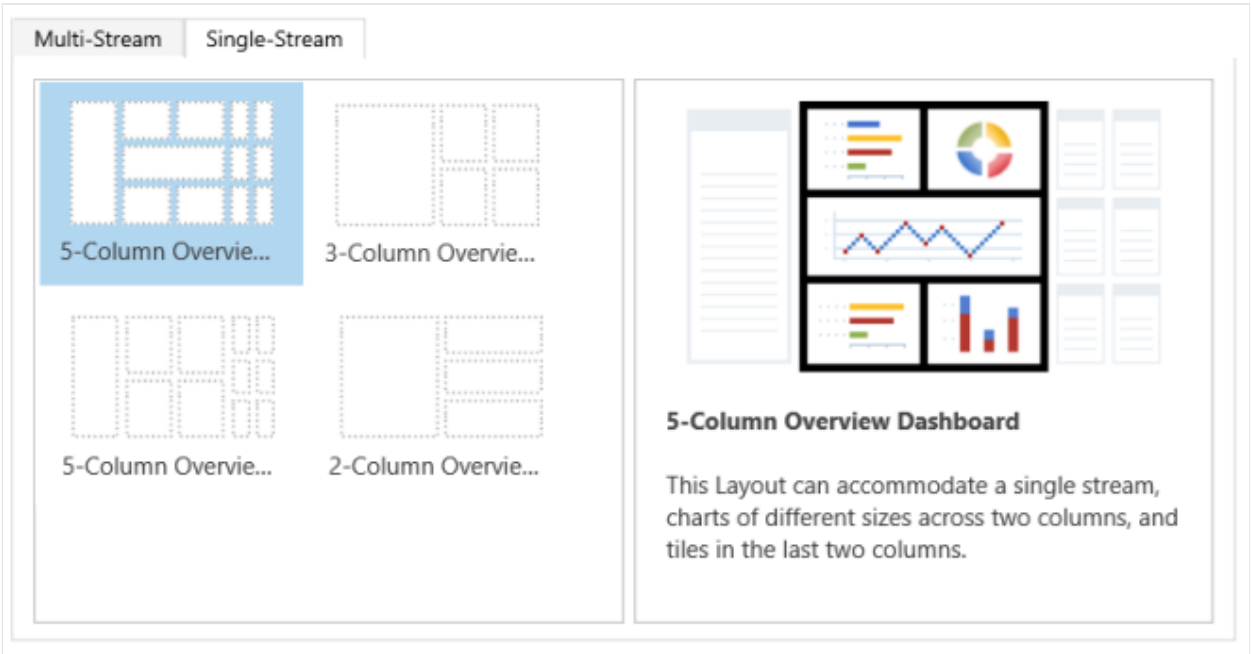
Single-stream dashboard

The single-stream dashboard contains the data stream on the left and visual filters and tiles on the right.



Single-stream dashboard layouts

Four different layouts can be chosen for single-stream dashboards.



Configure filter columns, and security roles for the interactive dashboards

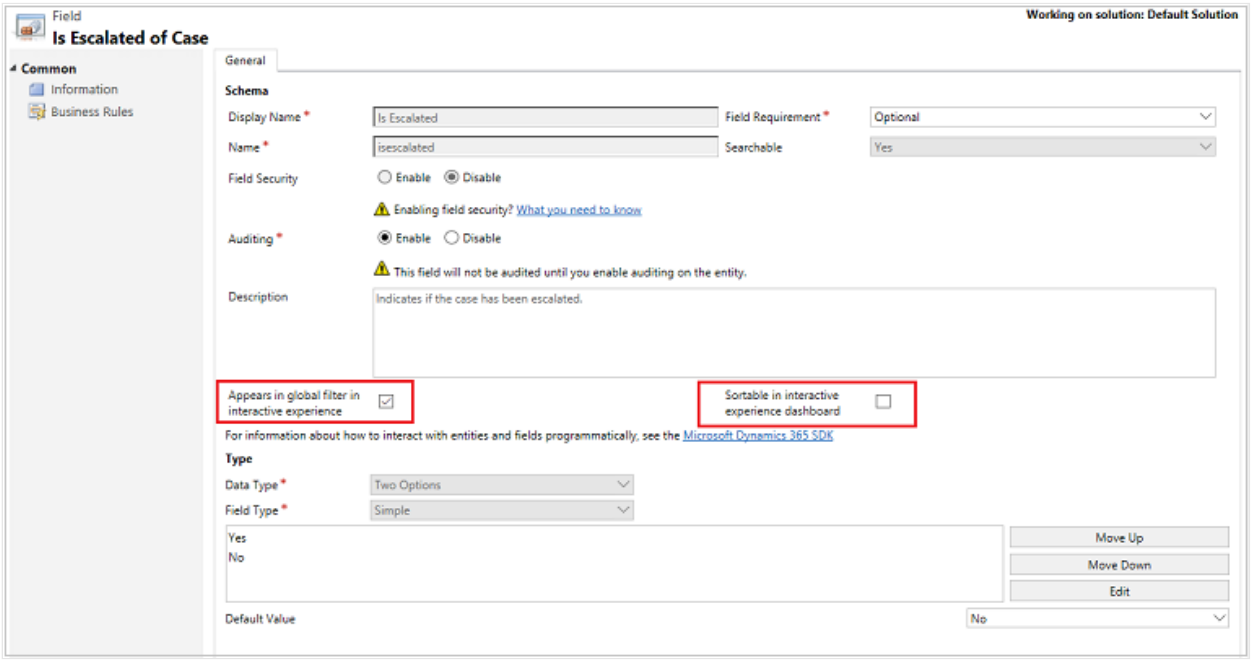
When interactive dashboards are configured, the first task is to enable filter columns and security roles, so that interactive dashboards can be configured for them. Notice that interactive dashboards are enabled for all tables and custom tables by default.

Configure filter columns

For a column to appear in the global filter and be included in the data stream sort, two flags must be set:

- Appears in global filter in interactive experience
- Sortable in interactive experience dashboard

In this example there are two interactive dashboard options available in the Case table for the **IsEscalated** column.



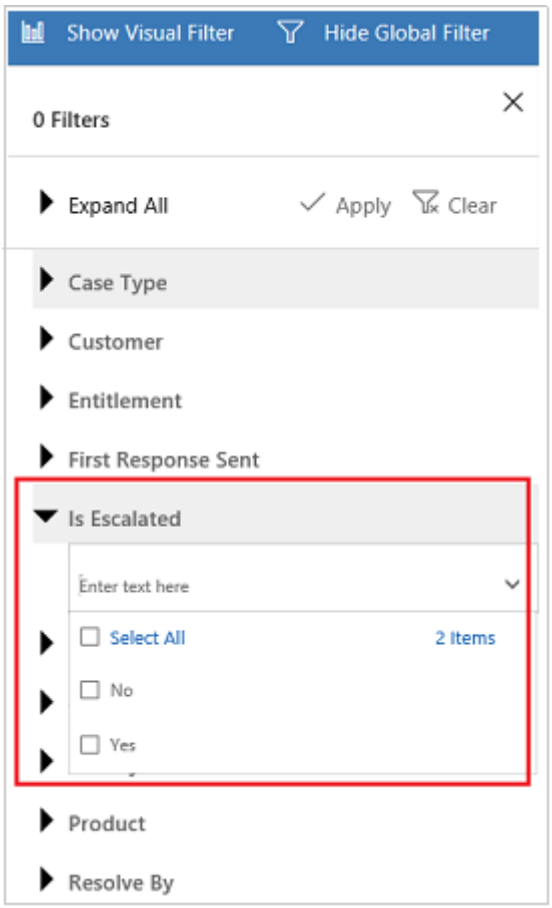
Configure the 'Appears in global filter in interactive experience' option

1. Sign in to Power Apps.
2. On the left navigation pane select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the solution you want, and then on the toolbar select **Switch to classic**.
4. Under **Components**, expand **Entities** (which are effectively tables), and then expand the specific table.
5. In the navigation pane, select **Fields** and in the grid, double-click the column, or data field, required.
6. In the **General** tab, select the **Appears in global filter in interactive experience** check box. Select **Save and Close**.
7. Select **Publish All Customizations** for the changes to take effect.

The columns that are enabled for **Appears in global filter in interactive experience** appear in the global filter flyout window when the global filter icon is selected on the dashboard header. In the flyout window, the service reps can select the columns on

which they want to filter globally, in charts, and also in streams and tiles that are based on the filter table.

The global filter flyout window is shown here:



> **Tip**
>
> When a visual filter is configured based on the columns like priority or status, a best practice is to also enable these columns (priority, status) to appear in the global filter.

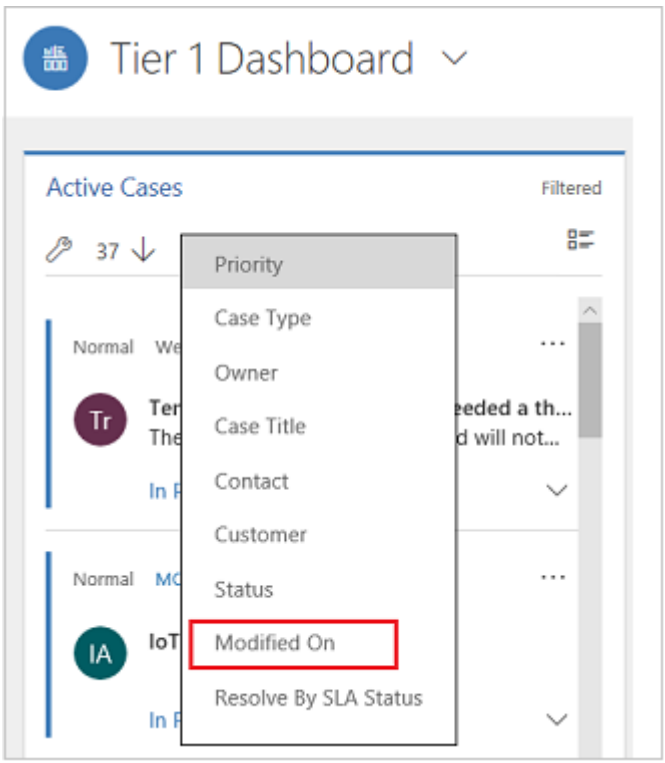
Configure the 'Sortable in interactive experience dashboard' option

1. Sign in to Power Apps.
2. On the left navigation pane, select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the solution you want, and then on the toolbar select **Switch to classic**.
4. Under **Components**, expand **Entities** (which are effectively tables), and then expand the specific table.
5. In the navigation pane, select **Columns** and in the grid, double-click the column for which sorting is required.

6. In the **General** tab, select the **Sortable in interactive experience dashboard** check box. Select **Save and Close**.
7. Select **Publish All Customizations** for the changes to take effect.

The columns that are configured for sorting appear in the drop-down list on the stream header.

The following screenshot shows the flyout dialog with the list of the available columns for sorting, in the drop-down list. The default sort is always set on the **Modified On** column.

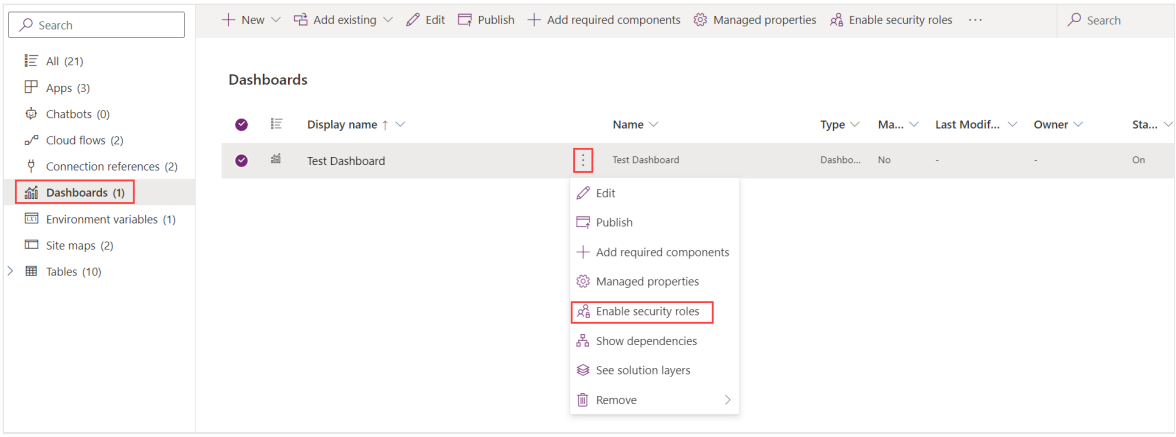


Enable security roles

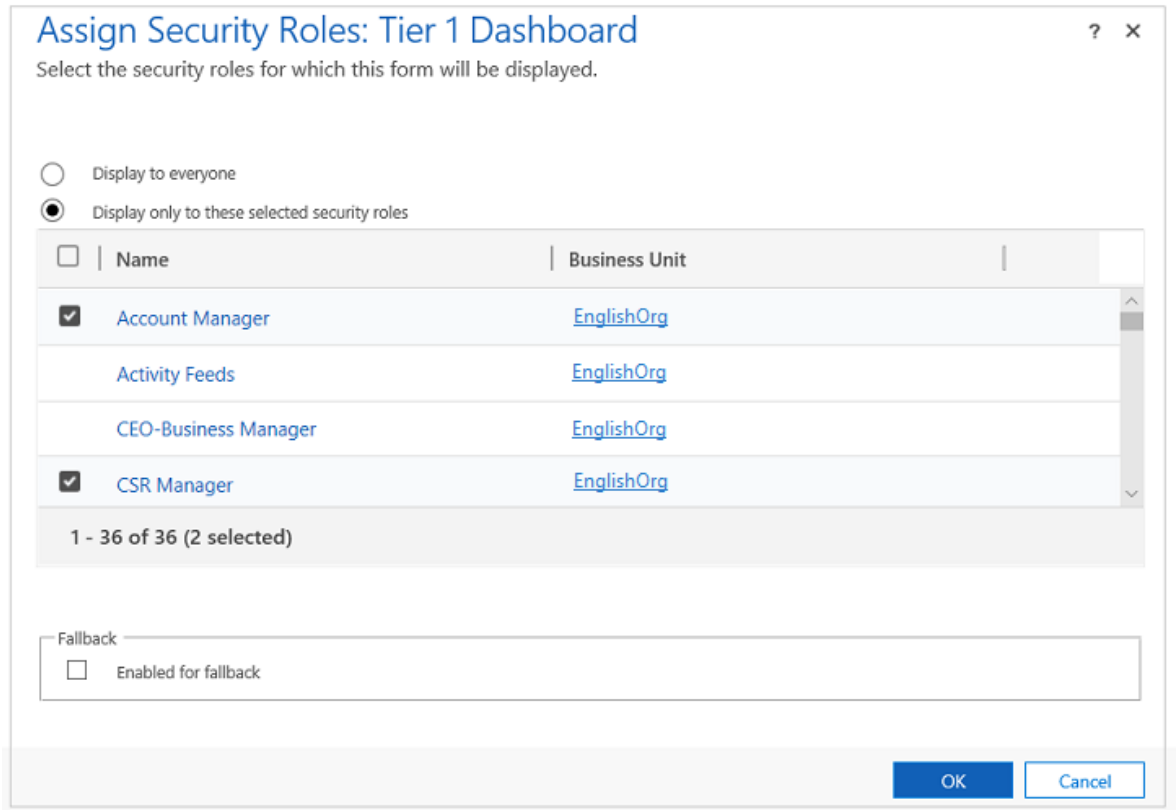
Select and enable security roles that will be able to view the interactive dashboards.

Enable security roles for interactive dashboards

1. Sign in to Power Apps.
2. On the left navigation pane, select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the required solution.
4. Select the dashboard and then on the toolbar select **Enable security roles**. This will open a new tab with the classic interface.



5. In the **Assign Security Roles** dialog, select the **Display only to these selected security roles** option and select the roles that you want to enable. Select **OK**.



6. Select **Publish** for the changes to take effect.

Create interactive experience dashboards

The following sections describe how to create and then configure the various types of interactive dashboards.

Configure a multi-stream interactive dashboard using the 4-column layout

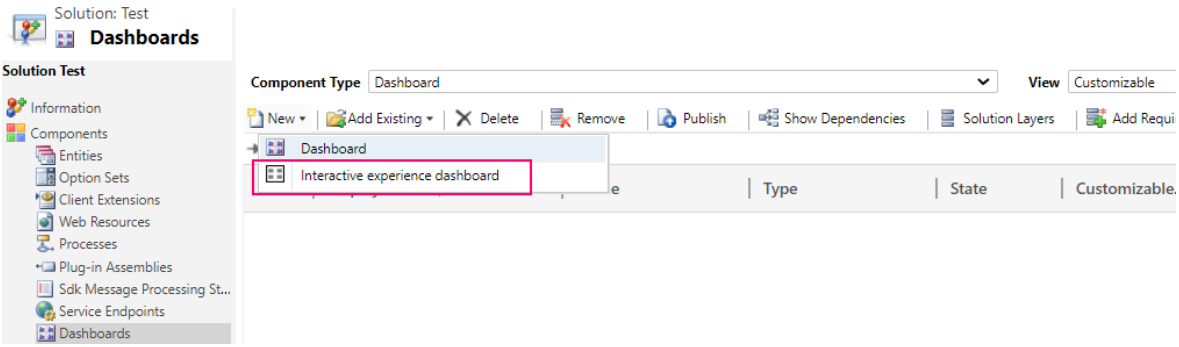
1. Sign in to Power Apps.

2. Select an environment with an unmanaged solution.

3. On the left navigation pane select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.

4. Open the solution you want, and then on the toolbar select **Switch to classic**.

5. In the left navigation pane, select **Dashboards**, on the toolbar select **New**, and then select **Interactive experience dashboard**.



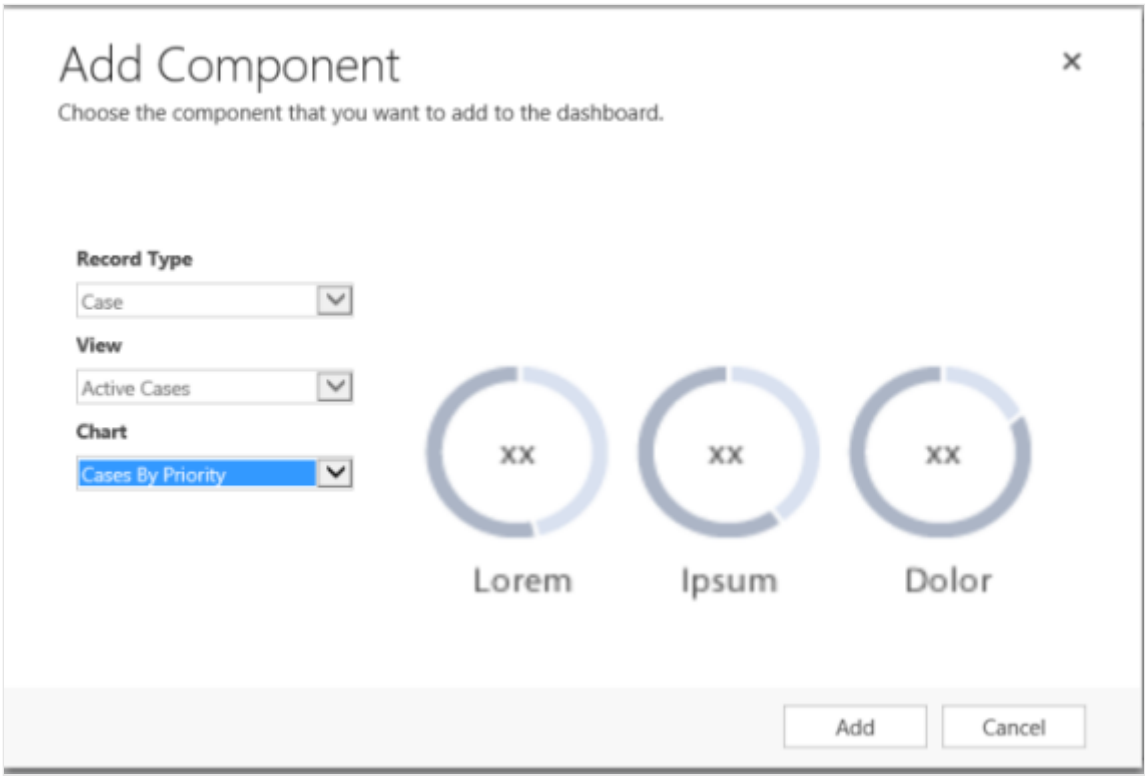
6. Choose the layout, either 2, 3, or 4 column width.

7. When the dashboard form opens, fill in the filtering information at the top of form, as shown here.

   - **Filter Table**: The visual filters and global filter attributes are based on this table.
   - **Table View**: The visual filters are based on this view.
   - **Filter By**: The column that the time frame filter applies to.
   - **Time Frame**: The default time frame filter value for the **Filter By** column.

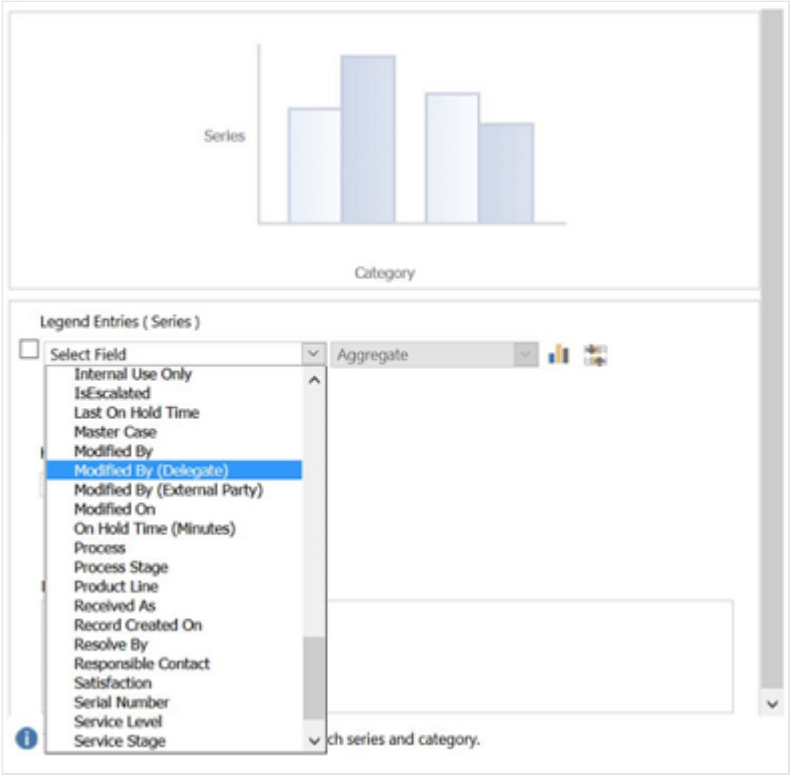
After filtering information has been specified, start adding components for the charts and the data streams. To add a component, simply select the element in the center of the chart or stream, and when the dialog appears, select the required information from the drop-down list, as shown in the following illustrations.

Add the **Cases By Priority** doughnut chart.



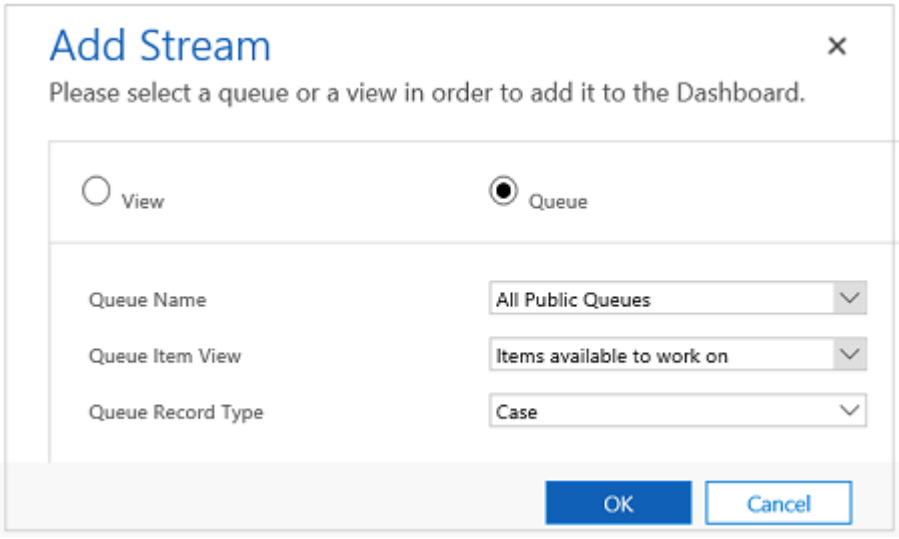
Some charts, such as bar charts or pie charts, render showing the data stored in the system. The doughnut charts and tag charts load as static images and don't show the preview of the actual data.

> ⓘ **Note**
>
> The charts configured for the visual filters can use the columns of the **Filter** table as well as related tables. When charts are based on related table columns, the customer service representatives can filter charts using these related table columns. The columns that are based on the related table usually have the following format in the chart configuration window: "field name (entity name)", such as the **Modified By (Delegate)** column. To create multi-entity charts, columns of a related table must be added to any of the views, and then use these columns while creating charts.



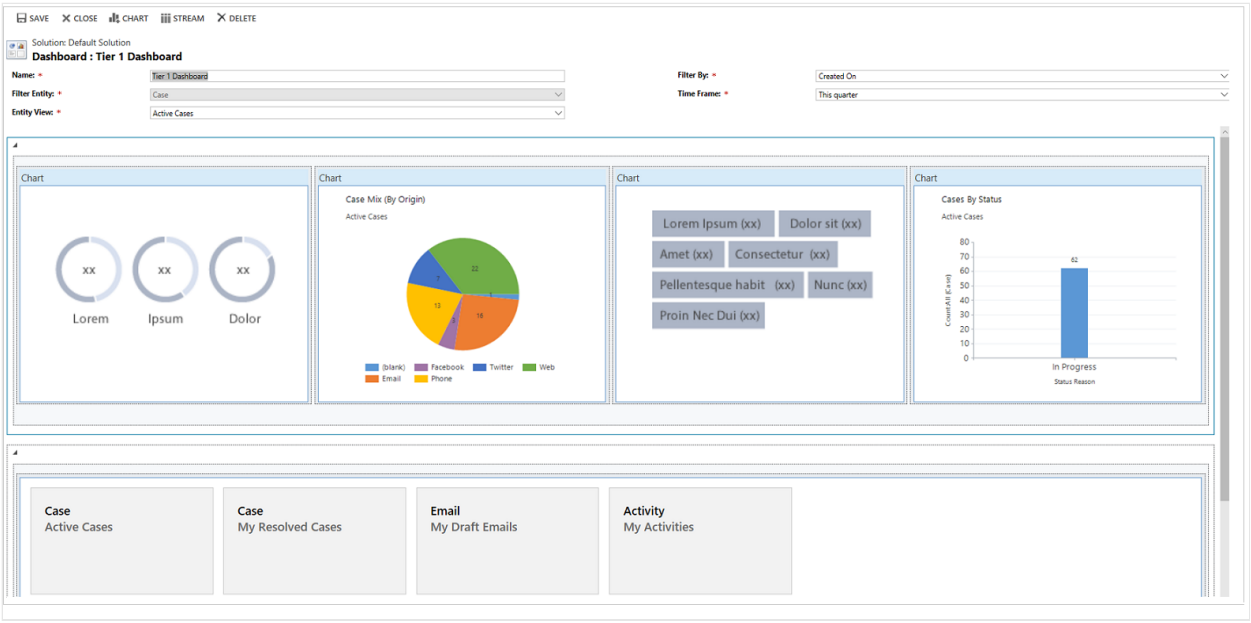
Next, configure the streams. Just like with adding components in the charts, select the element inside the stream panel. When the dialog appears, select **View** or **Queue** depending on what element you want the stream to use. Enter the required information, as shown in the following illustration.

Configure the stream for the **Items available to work on** as shown here:



> **Note**
>
> The **Queue** option is available in the dialog box only for queue-enabled tables. For table dashboards, if the table is not queue enabled, the **Queue** option will not be visible in the dialog box. It is only possible to use the **View option** in the stream of dashboards for tables that are not queue enabled.

The following illustration is an example of a fully configured chart panel and stream panel:



After the dashboard has been completely configured, save it and publish the customizations for the changes to take effect.

Edit or delete individual streams of an existing dashboard

1. Sign in to Power Apps.
2. On the left navigation pane select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the solution required, and then open the interactive dashboard.
4. Select the stream that you want to edit to select it, and then select **Edit Component**.
5. Depending on whether you want to add a view or queue to the stream, select the view or queue details for the stream, and then select **Set**.
6. Select **Save**.

It is also possible to delete an individual stream from a dashboard. To do this, select the stream, and then on the toolbar, select **Delete**.

Create a table-specific dashboard

A table-specific dashboard is a multi-stream dashboard. Configuring this dashboard is similar to configuring a home page multi-stream dashboard, but this is performed in a

different place in the UI and there are other minor differences.

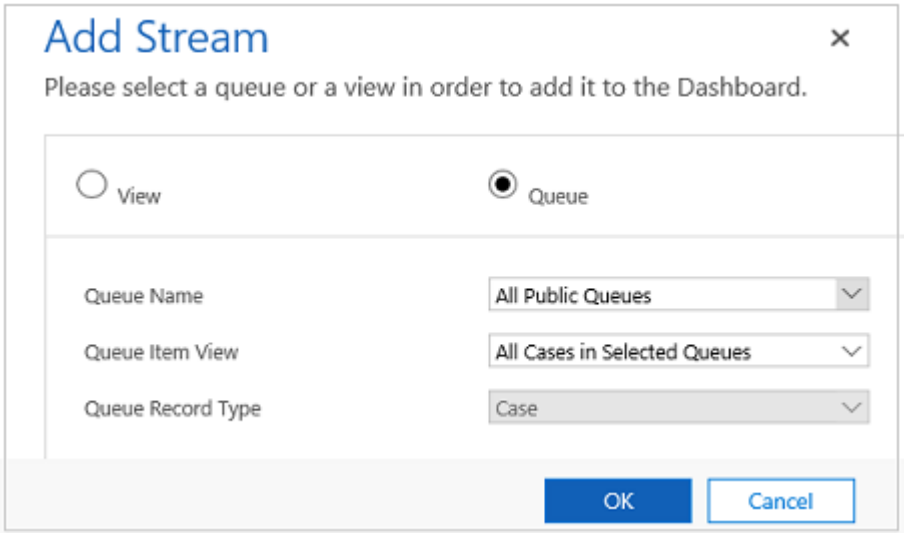
For example, instead of selecting a table, some columns in the table-specific dashboard are preset to the table relevant to the dashboard.

1. Sign in to Power Apps.
2. On the left navigation pane select **Tables**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the table you want.
4. Select the **Dashboards** area, and then on the toolbar select **Add dashboard**.
5. Choose the layout, either 2, 3, or 4 column width.
6. When the dashboard form opens, the **Filter Table** is preset to the table which is tied to the dashboard. The **Table View** drop-down list contains the available views for the table. Select the view and fill in the rest of the required information on the page.

The rest of the setup is very similar to the home page multi-stream dashboard setup described in the previous section.

Configure a single-stream dashboard

Configuring a single-stream dashboard is similar to the multi-stream dashboard. All UI navigation steps are the same as for the multi-stream dashboard. It is possible to choose a layout that includes tiles or the layout that doesn't include tiles. If the tiles are included, they are always displayed on the dashboard. To configure a tile, the icon in the center of the tile is selected. When the **Add Tile** window opens, fill in the required data. The following illustration is an example of the tile setup.



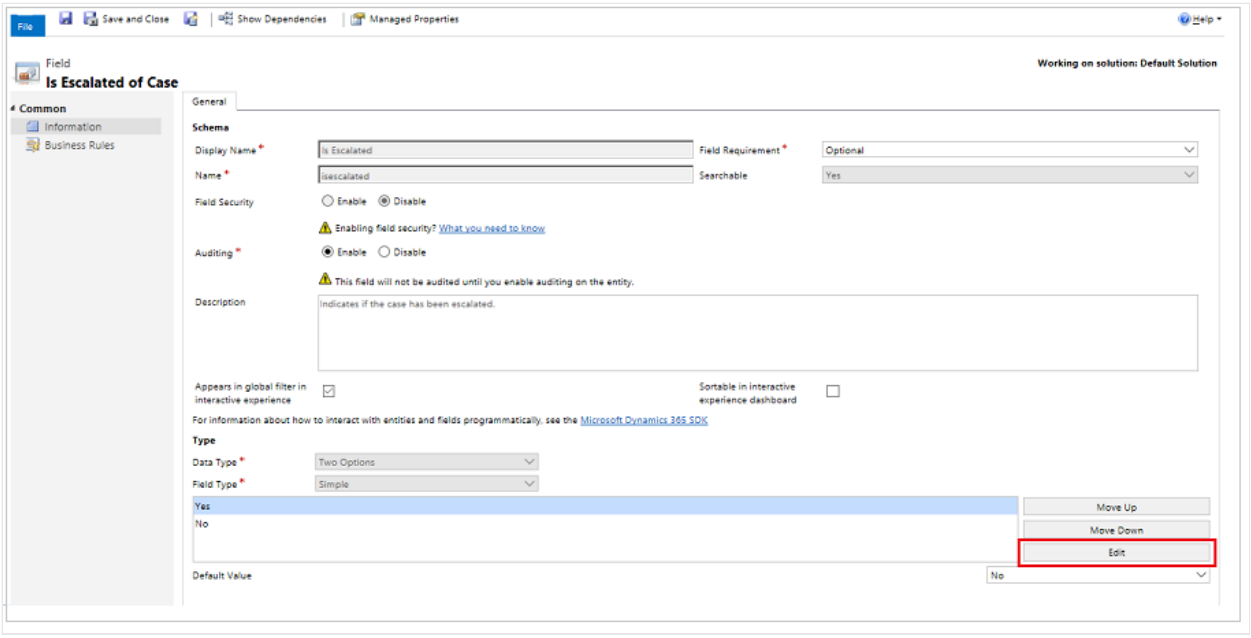
Configure dashboard colors

The color that will appear in the charts and streams for specific column values can be configured. For example, high priority cases can be shown in red, medium priority cases in blue, and low priority cases in green in the interactive charts. In the streams, there will be a thin vertical line in color next to the work item description.

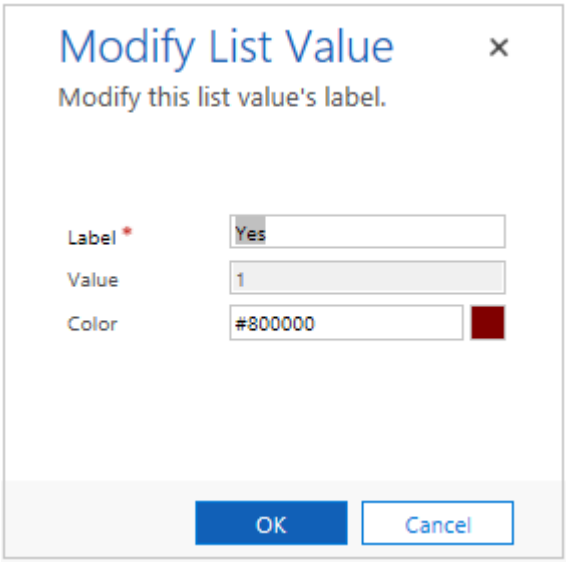
> **ⓘ Important**
>
> - The color coding isn't available for the tag charts and doughnut charts. These charts appear on the dashboard in white, gray, and black shades.
> - With interactive dashboards, a chart uses the color assigned to the categories that make up the different values, even if the chart is configured to use random colors, when the chart is configured to be grouped by any of the following column types:
>   - Choice
>   - Yes/No
>   - Status Reason
>
>   More information: **Chart colors are not correct on dashboards**

1. Sign in to Power Apps.
2. Select an environment with an unmanaged solution.
3. On the left navigation pane select **Solutions**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
4. Open the solution you want, and then on the toolbar select **Switch to classic**.
5. Under **Components**, expand **Tables**, and then expand the table required. If the table isn't displayed select **Add Existing** to add it.
6. In the navigation pane, select **Columns**. In the grid, double-click the relevant column.
7. In the **General** tab, in the **Type** sub-area, select **Yes** and then select **Edit**.
8. When the **Modify List Value** dialog appears, set the new value in the **Color** text box. Select **OK**.
9. Select **Save and Close**.
10. Select **Publish** for the changes to take effect.

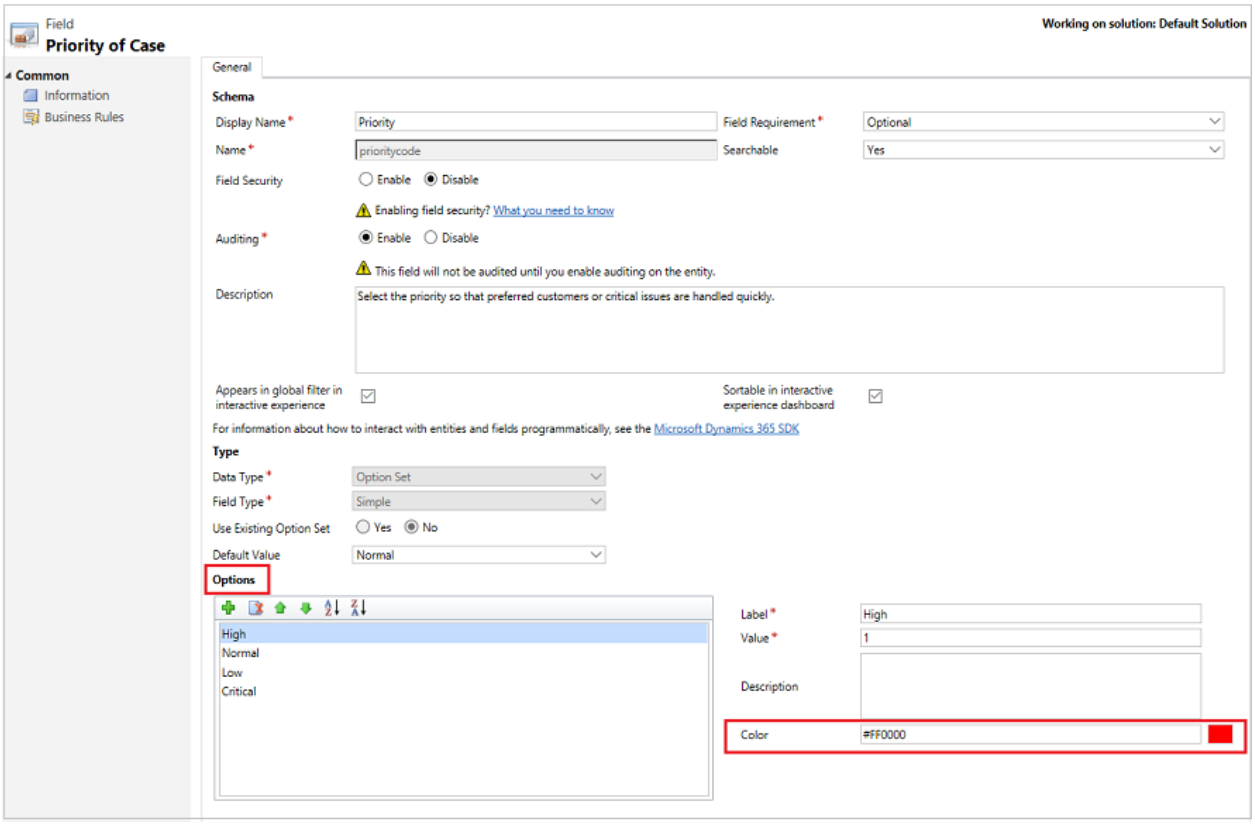
In the following example, the color for the **IsEscalated** column is changed. Use the **Edit** button to open the **Modify List Value** dialog box:



When the **Modify List Value** dialog box opens, enter the hexadecimal color code, such as #800000 shown here:



Similarly, if the **Priority** column is used to modify the colors of the case priority options, choose the color in the **Options** sub-area of the **General** tab, as shown below:



Next steps

Set properties for a chart or list

Create a model-driven app system chart

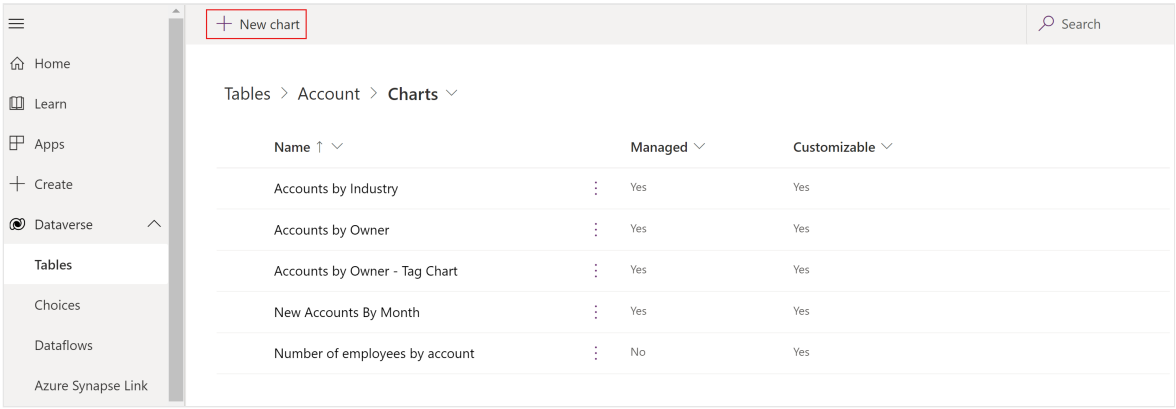
Article • 02/23/2023

In this article you learn how to create a system chart. System charts are organization-owned charts, which makes them available to anyone with access to read the data running the app. System charts can't be assigned or shared with specific app users.

> **Note**
>
> Model-driven apps not configured to display **All** charts for a table will need newly created charts selected for the table within the app designer. More information: **Add table assets**

Create a new chart

1. Sign in to Power Apps.
2. On the left navigation pane, select the **Tables**. If the item isn't in the left navigation pane, select ...More and then select the item you want.
3. Open the table that requires a chart, and then select **Charts**.
4. Select **New chart**.

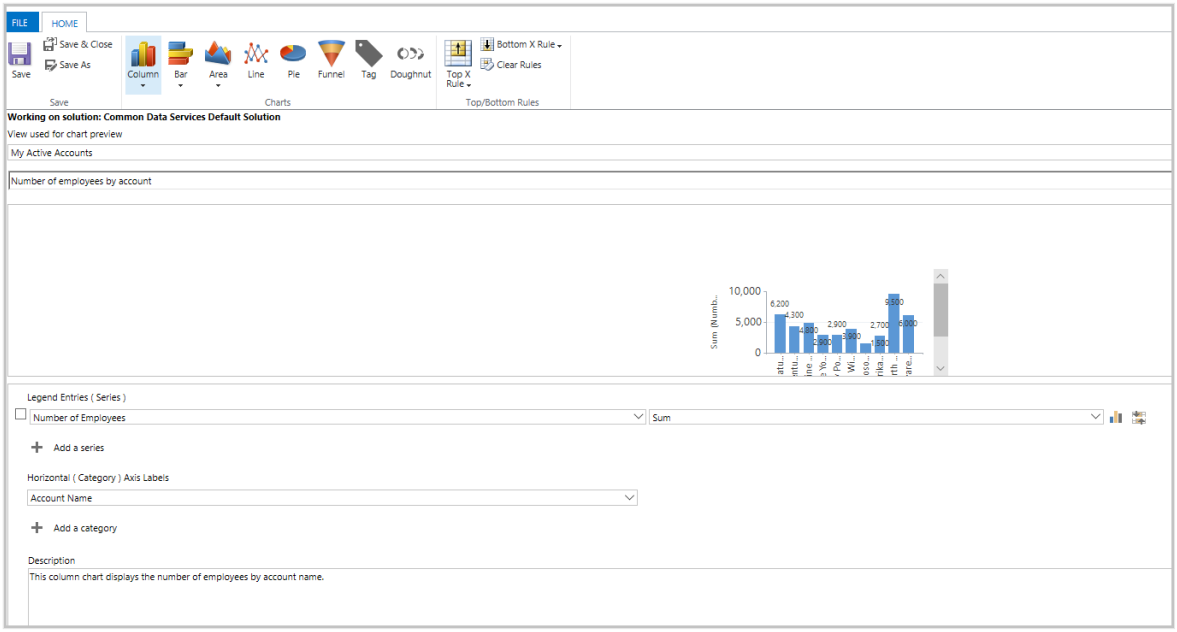


A new window opens where you can create a chart.

5. Specify the type of chart, and how the data is displayed in the chart.
   - Enter the chart name, such as *Number of employees by account*.
   - In the **Select Column** dropdowns:

- In the **Legend Entries (Series)** dropdown list select a column, such as **Number of Employees**.
- In the **Horizonal (Category) Axis** dropdown list select a column, such as **Account Name**.

- Add a description to identify the purpose of the chart, such as *This column chart displays the number of employees by account name*.



6. Select **Save and Close**.

The **Number of employees by account** chart is now displayed in the app designer list of charts available for the account table.

View your visualization in a model-driven app

Now that the chart has been created, it can be used to visualize table data in the model-driven app. Follow these steps to view the chart:

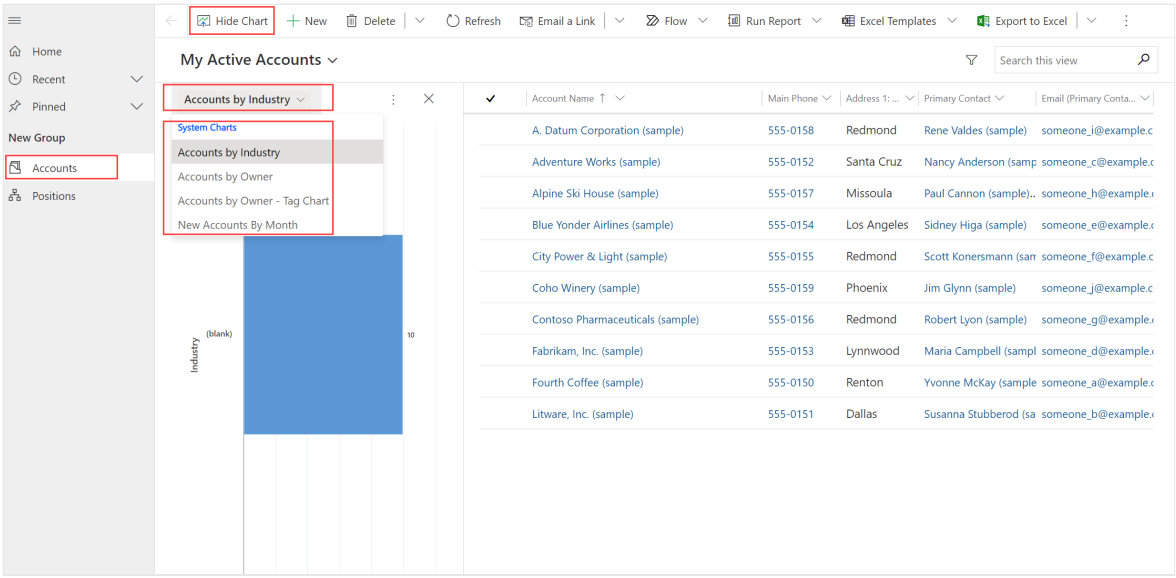
1. Open a model-driven app that contains your table via a solution or open the app directly from the **Apps** area.

2. Select **...** next to the app, and then select **Play**. The model-driven app opens in a separate browser tab.

3. On the left navigation pane, select a table such as **Accounts**.

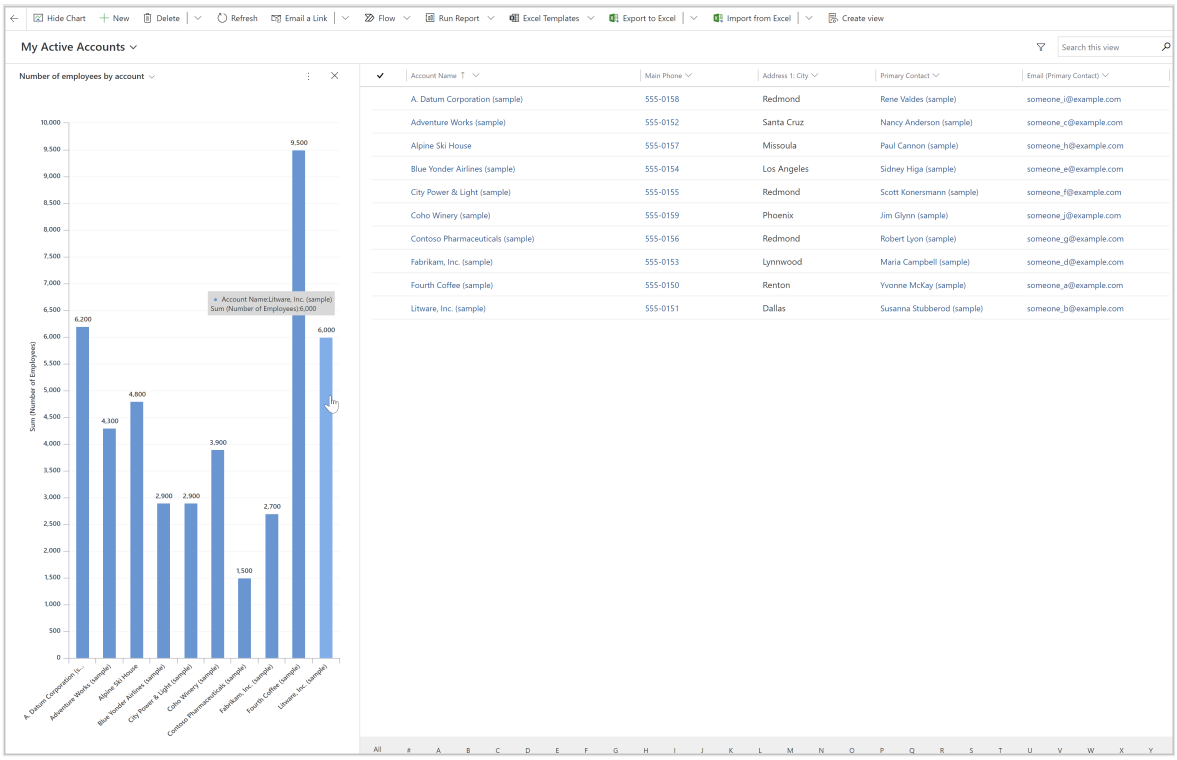
4. On the command bar, select **Show Chart**.

   The chart pane opens.



5. By selecting the dropdown chart list, any of the system charts in the app will be available to select.

   The chart appears in-line with the data view.

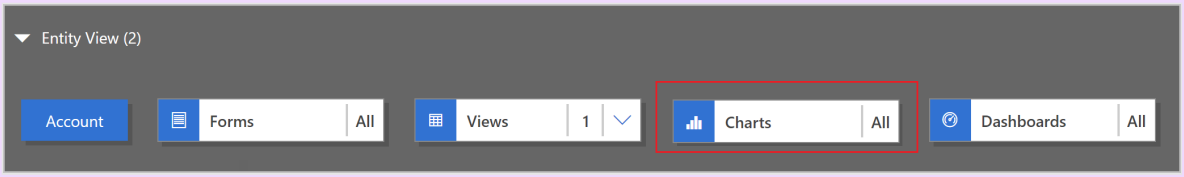


Use your chart:

- Select a bar on the chart to filter the data in the view.
- Refresh the chart to display other data by changing the view.
- Add the chart to a model-driven app dashboard. More information: Create or edit model-driven app dashboards

> **Note**

If the chart is not visible in the dropdown chart list then the model-driven app has been created with specific charts associated with it. To resolve this, open the model-driven app in design mode, select charts, and then select your newly created chart.



Then save and publish your app.

Maximum number of records displayed in a chart

Charts display views that return up to 50,000 records. Views that exceed 50,000 records display the message: The maximum record limit is exceeded. Reduce the number of records. More information: Reporting infrastructure

Known chart creation issues

In the chart designer, adding an order by on certain calculated columns is not supported and will cause an error. The calculated columns causing this are using another calculated column, a related table column, or a local column on the table.

Next steps

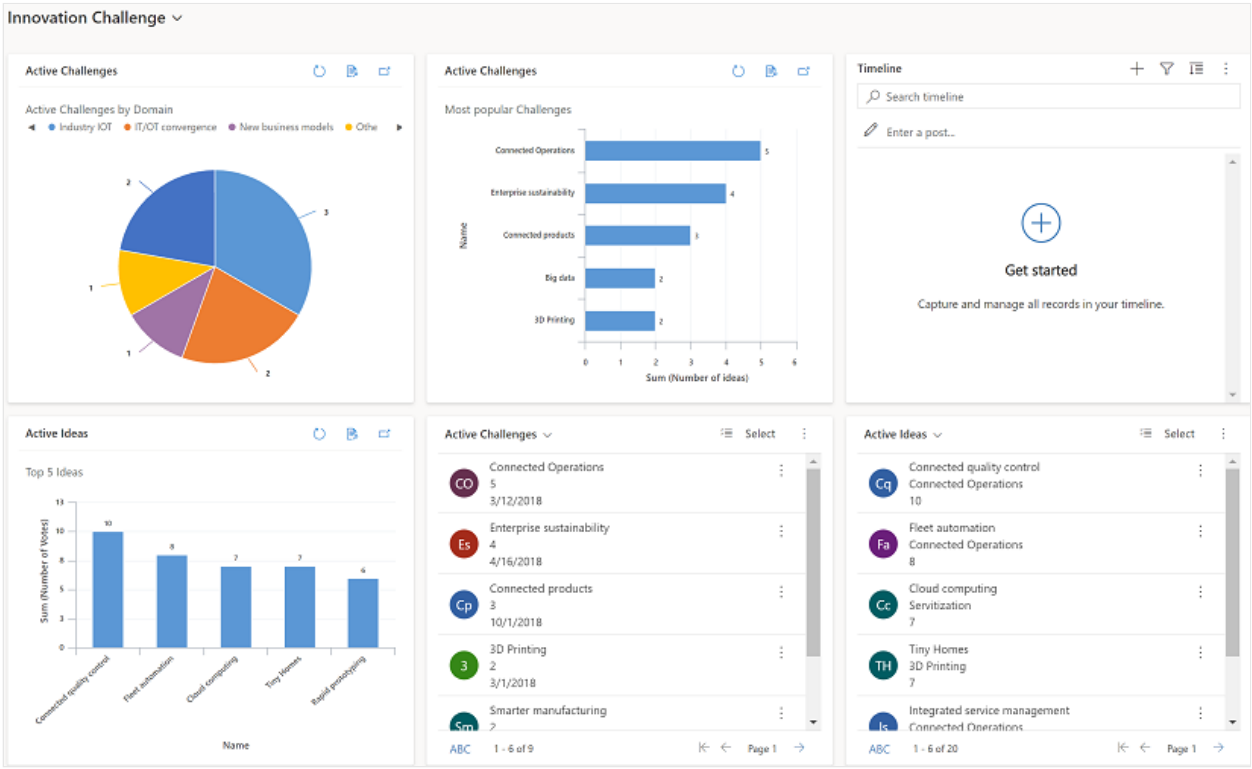
Create or edit dashboards

Track your progress with dashboards and charts

Article • 04/08/2023

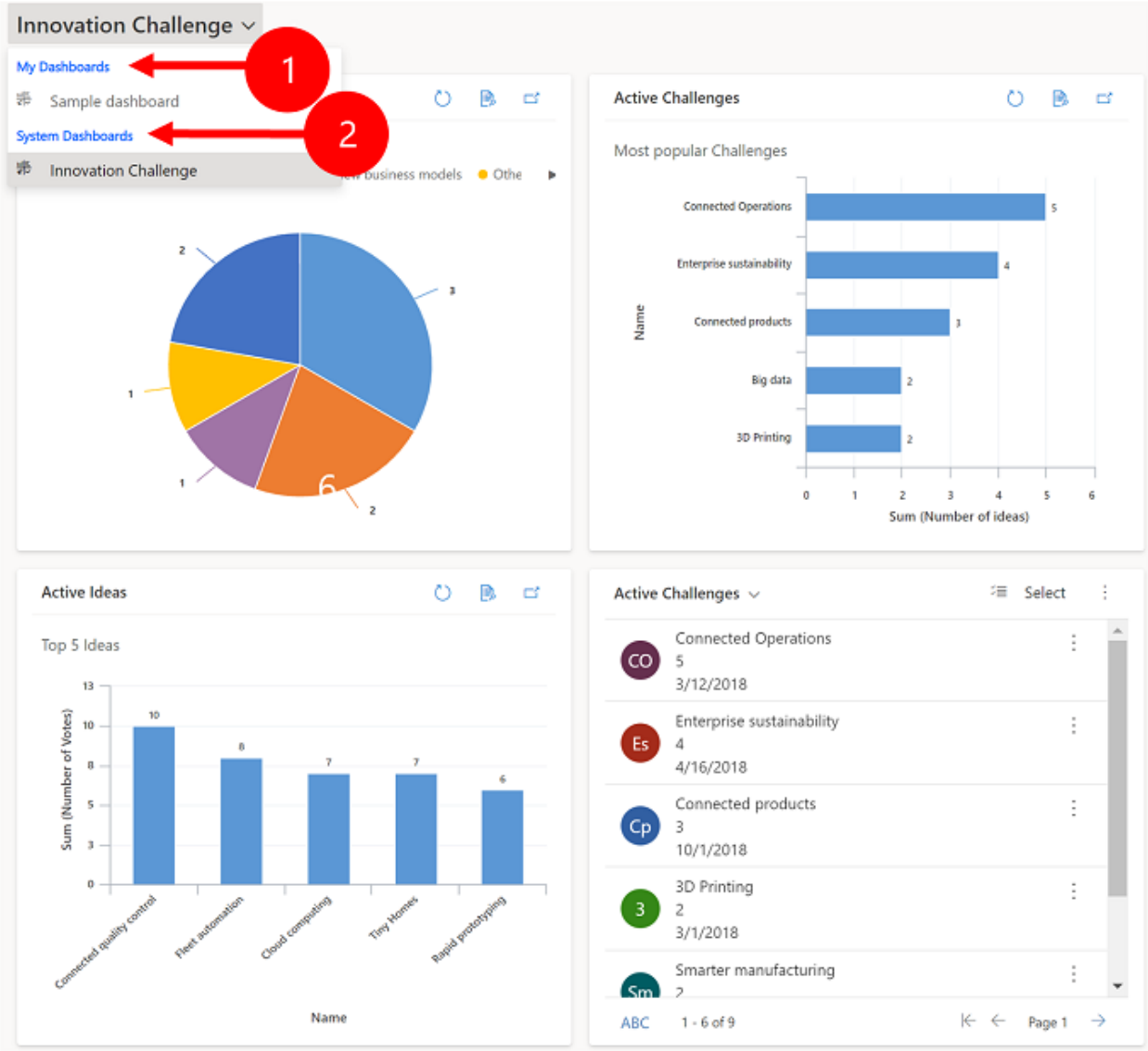
A dashboard is made up of a collection of easy-to-read charts and graphs that provide visual representation of filtered app data. The interactive charts and graphs on a dashboard display important data that gives you a 360-degree view of your business and helps you to understand key performance indicators (KPI).

Dashboards are available for all row types. Charts are available on the Dashboard page, Grid page, Associated Home page, and Edit Form page.



View dashboards

There are two types of dashboards, **System Dashboards** and **My Dashboards**.

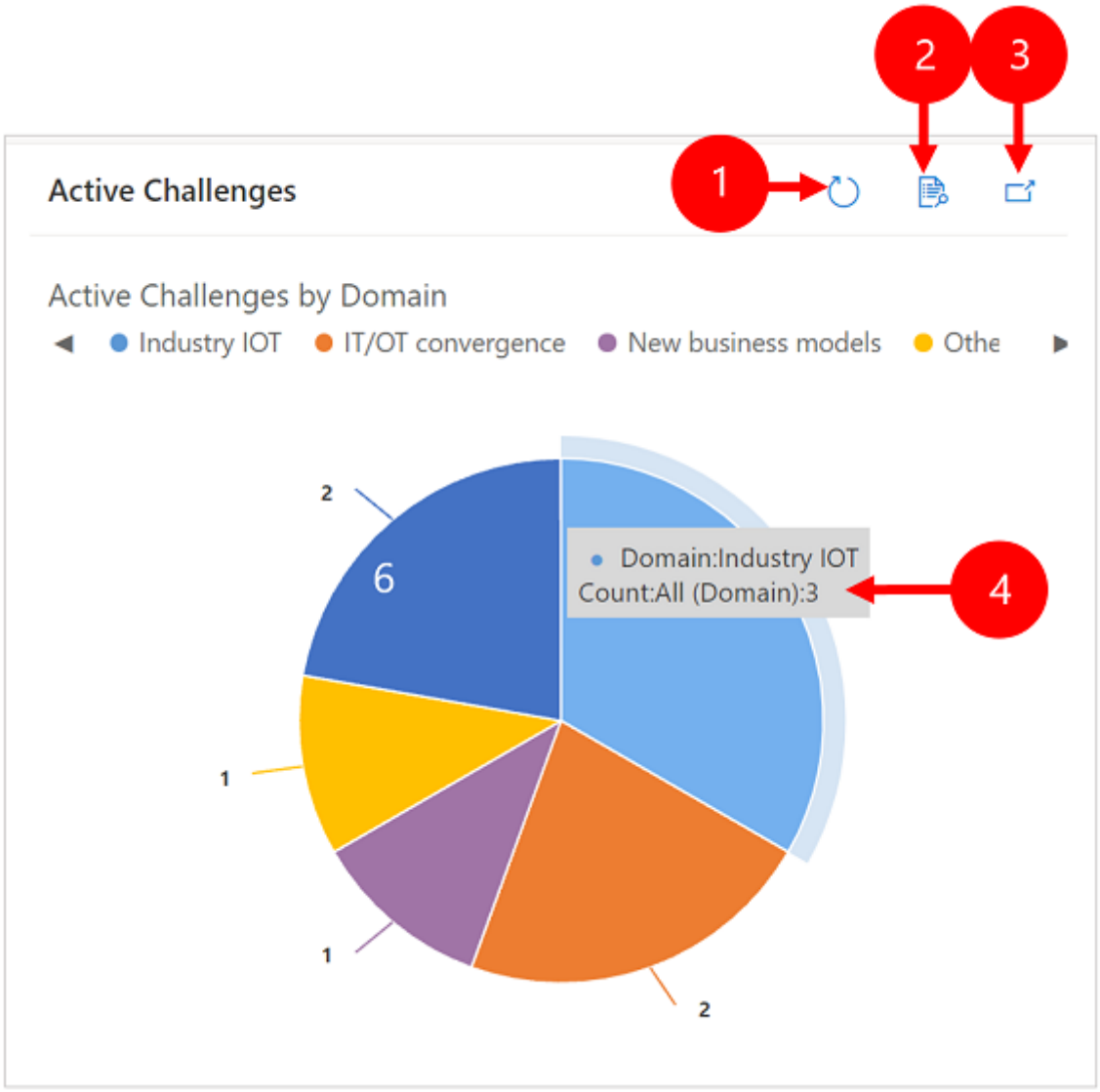


Legend:

1. **My Dashboards**: Personal dashboards that can only be seen by the user who creates them. The user can also share their personal dashboard with other users if the user has sharing privileges for their security role.

2. **System Dashboards**: Created by your administrator. By default, these dashboards are visible to all users.

Expand, refresh, and view rows

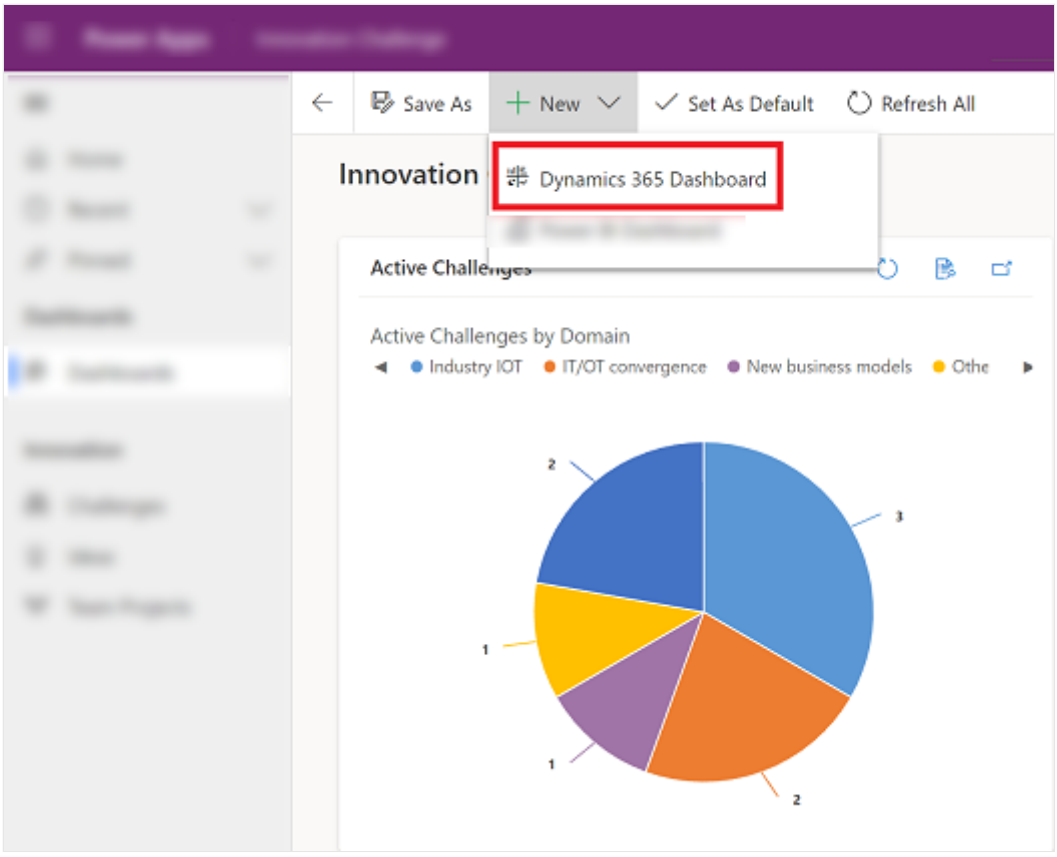


Legend:

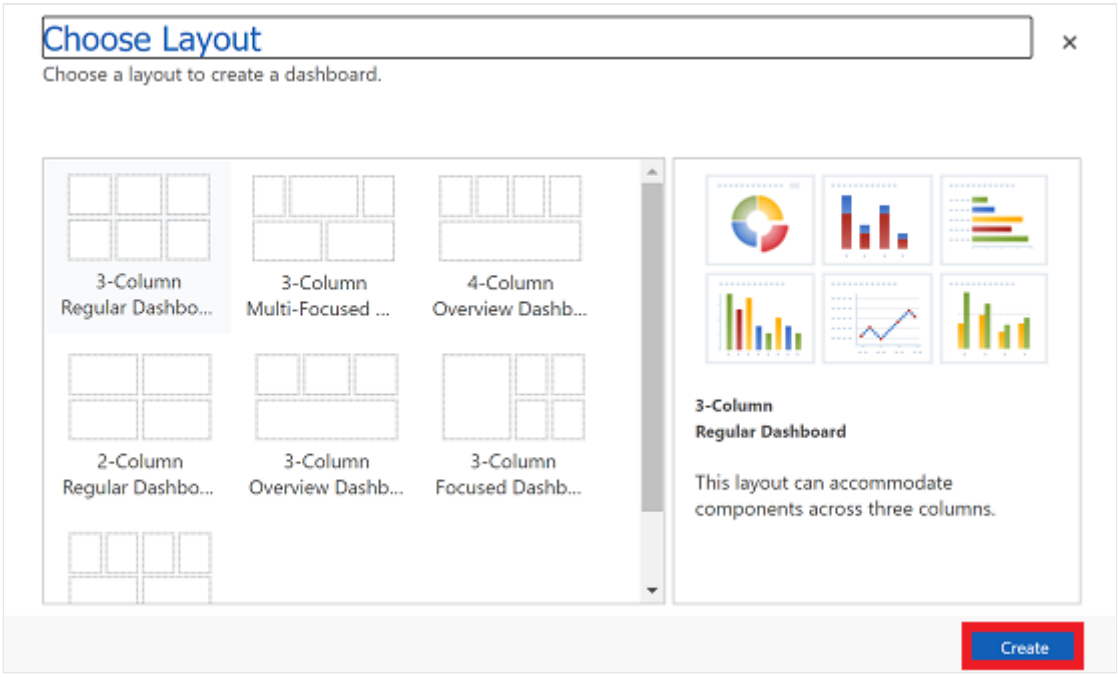
1. **Refresh**: Refreshes the rows in the chart.
2. **View Records**: See the chart and the underlying rows together. This opens the chart for the corresponding rows.
3. **Expand Chart**: Shows the chart in full screen mode. The chart is still interactive in expanded mode.
4. **Tool tips**: Hover your mouse over the chart to see a tooltip that provides quick information about that area of the chart.

Create a dashboard with charts

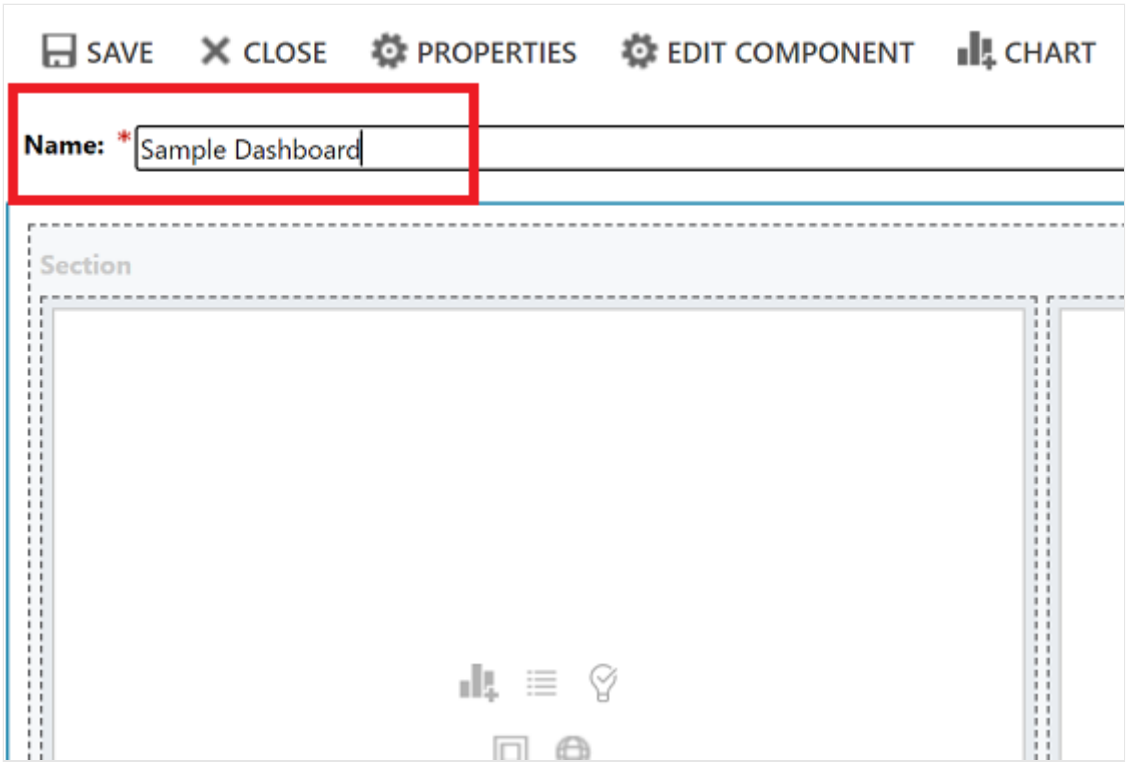
1. Go to **Dashboards** and then on the command bar select **New** > **Dynamics 365 Dashboard**.



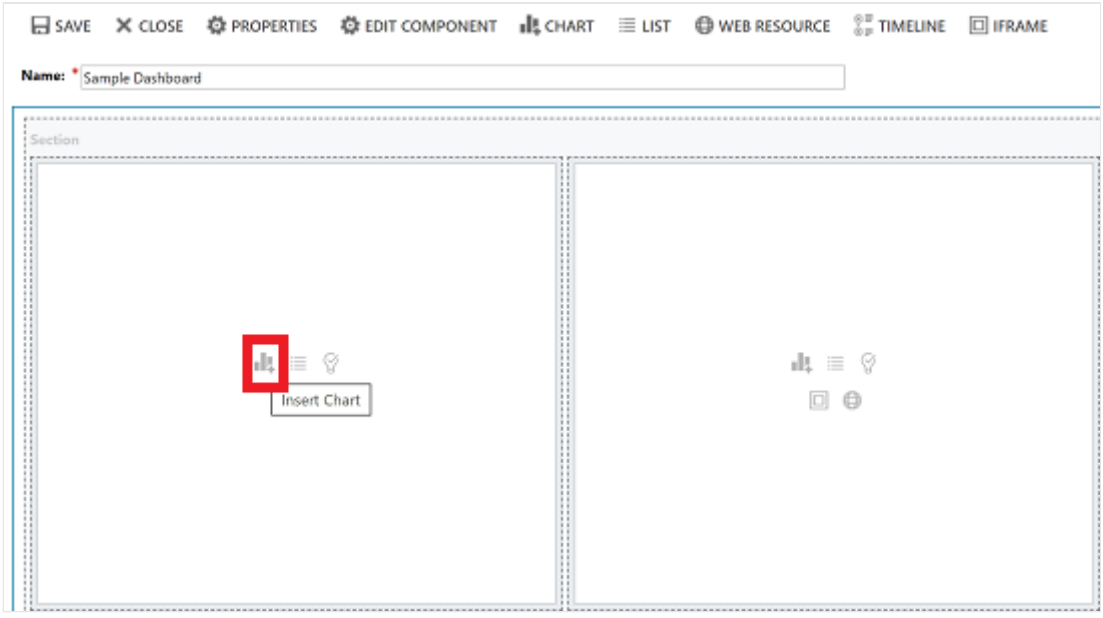
2. Choose a layout and then select **Create**. This is how your dashboard displays the charts, graphics, and numbers.



3. Type a name for the dashboard.

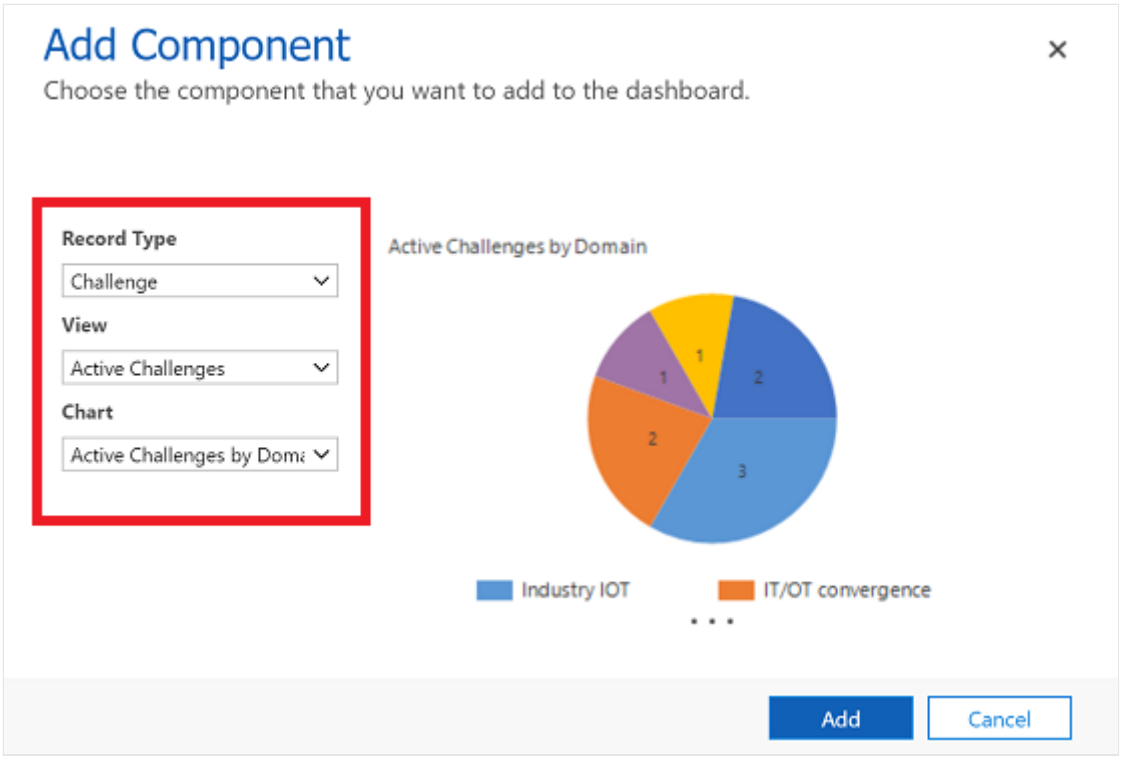


4. Add what you want to each area of your dashboard. For example, let's add a chart.



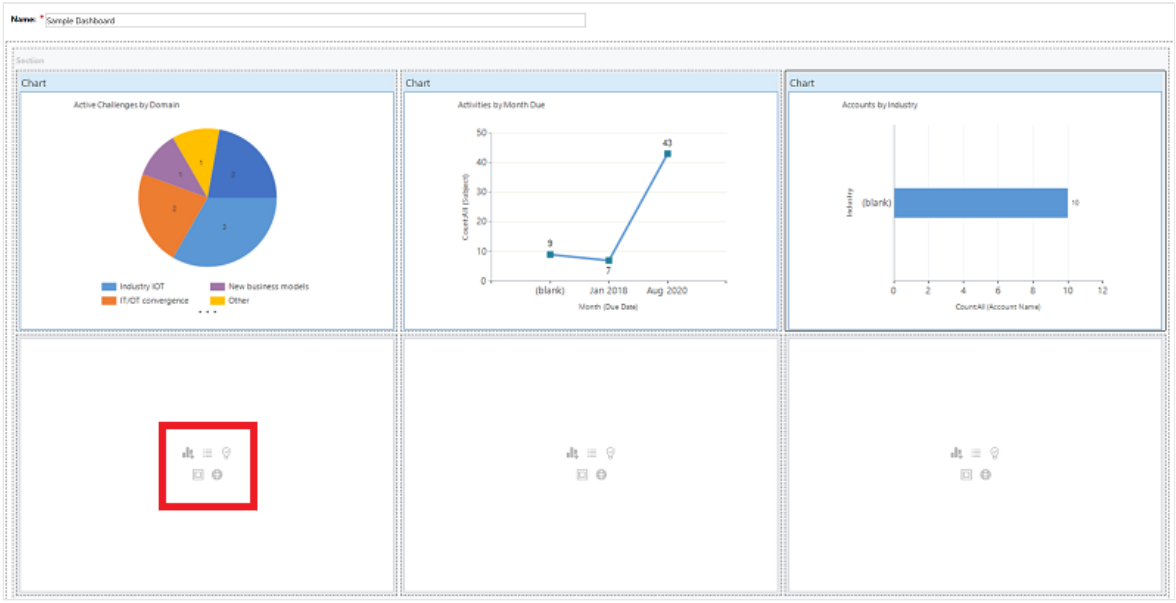
5. On the **Add Component** dialog box, select your options.

	Options
Row Type	Select a row.
View	Select a view for the row.
Chart	Select the type of chart that you want use.



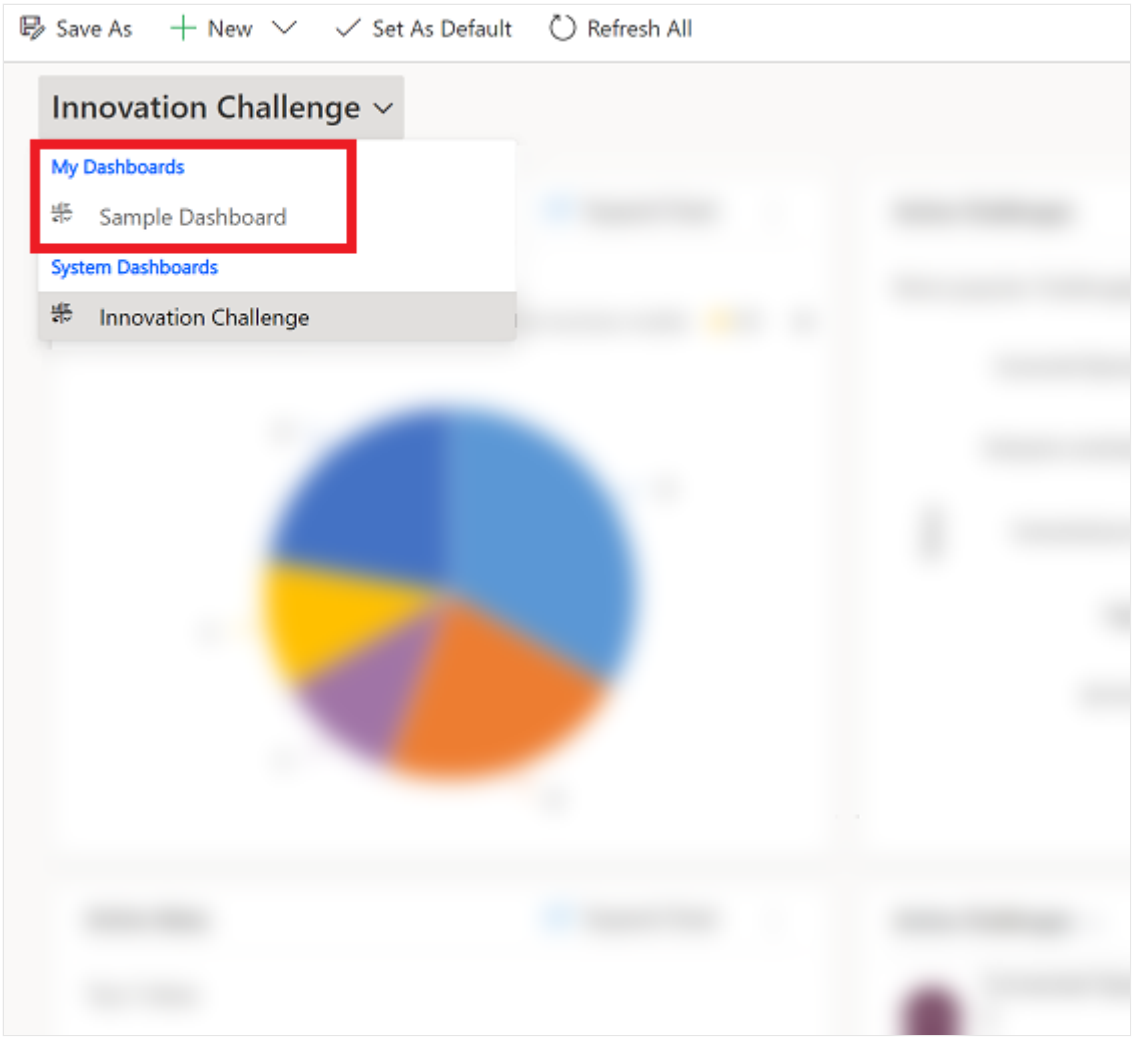
6. When you're done adding each component, select **Add**.

7. Continue adding components to the dashboard. You can add up to six components.



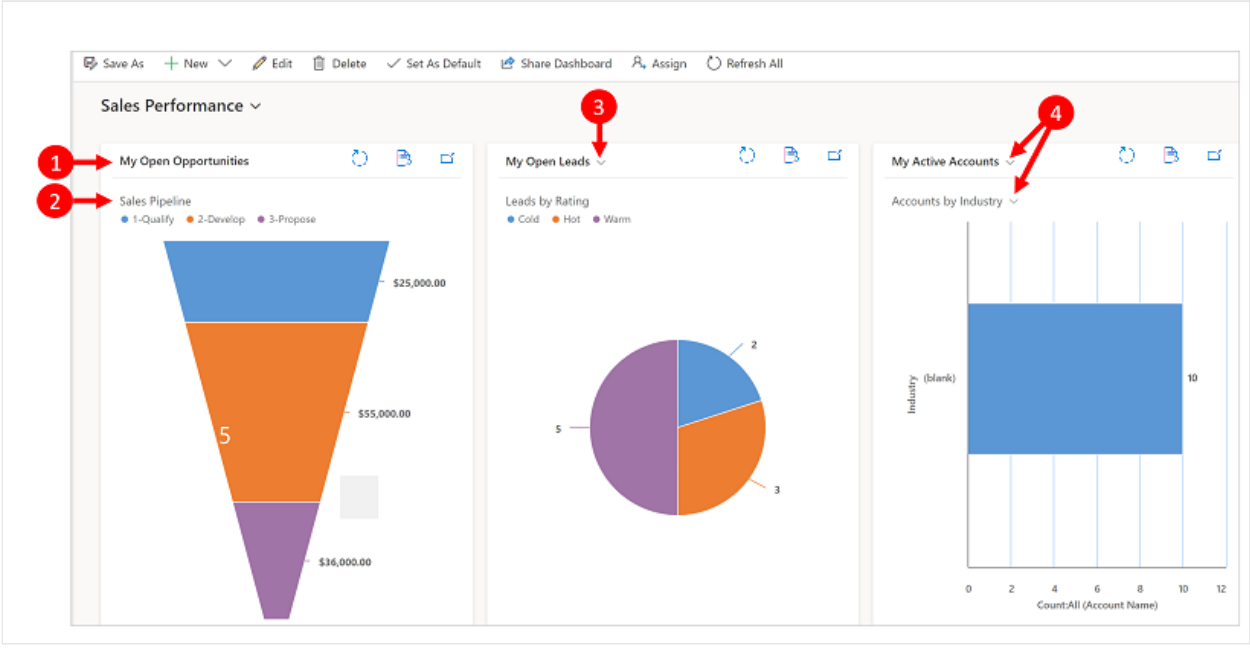
8. When you're done, on the command bar select **Save**.

9. The dashboard that you created will appear in the drop-down menu under **My Dashboards**.



Edit the properties of a chart

When you add a chart on a dashboard, you can edit the chart properties and modify the chart view and display options. The following screenshot shows how a chart will display based on the chart properties that you selected.

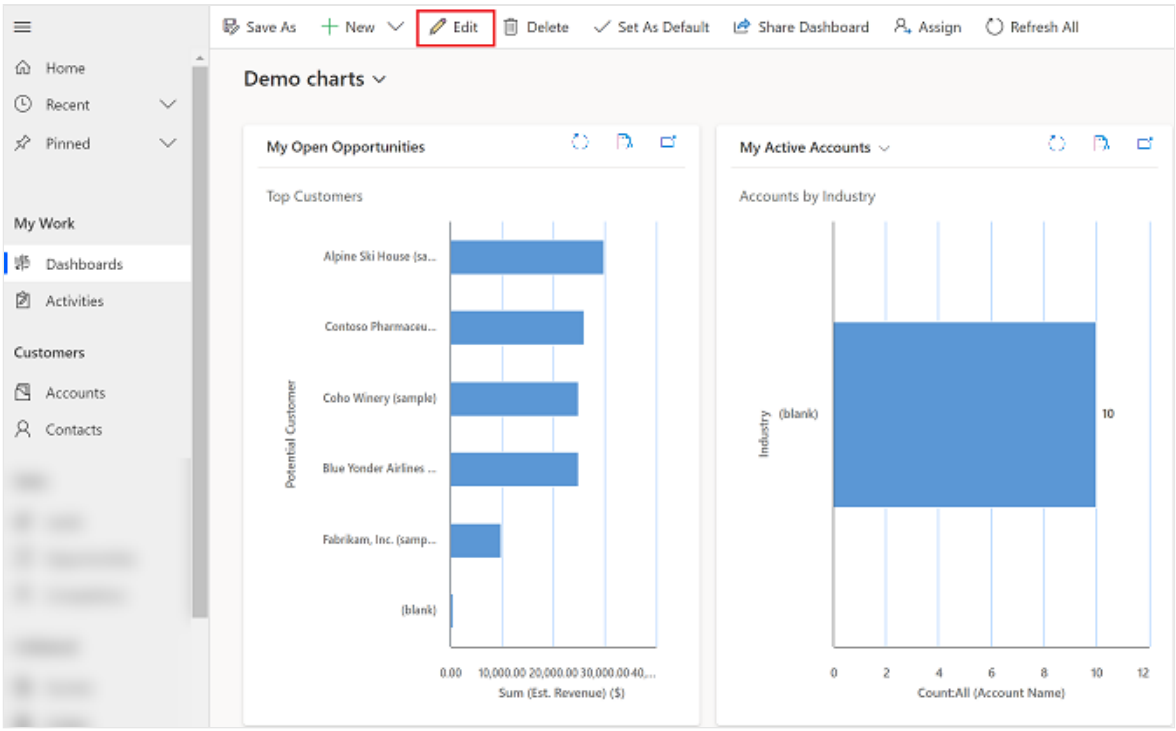


Legend:

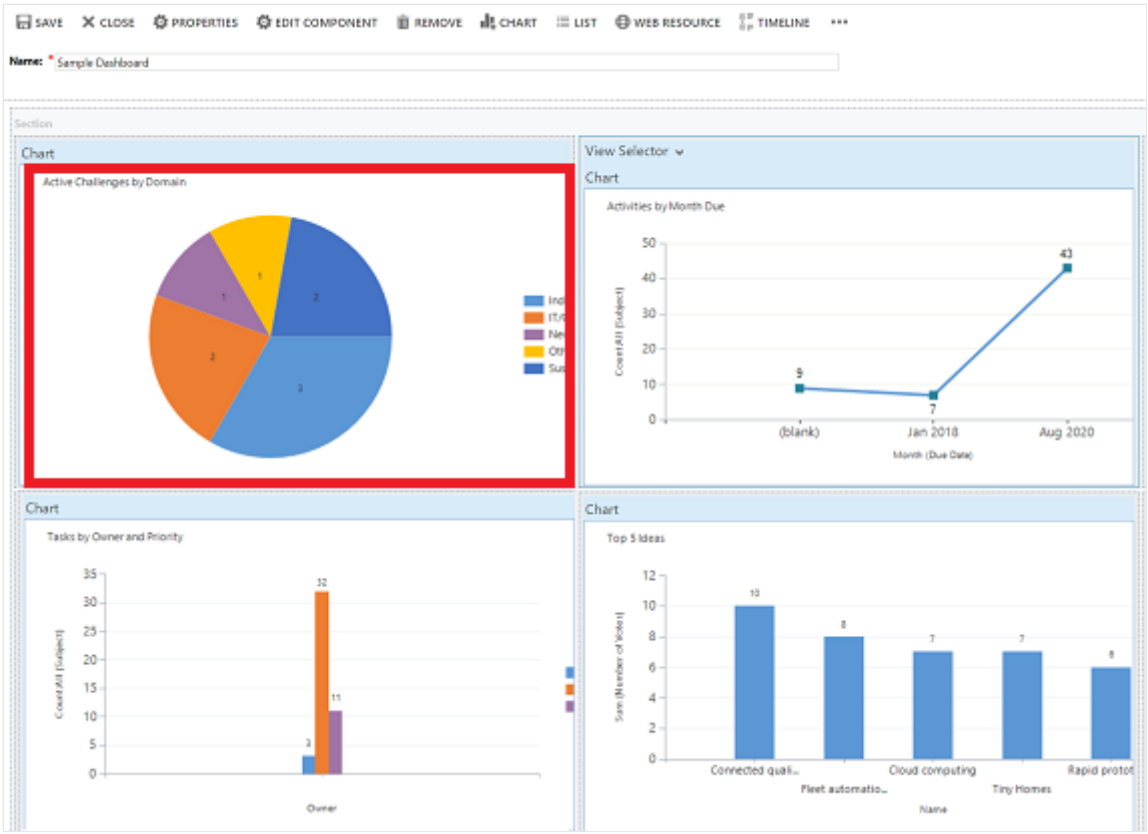
1. View title with **View Selector** turned off. You cannot toggle between different views. You only see the title.
2. Chart title with **Display Chart Selection** turned off. You cannot toggle between different charts for the table. You only see the title.
3. Only **View Selector** is turned on. You can toggle to a different view and the chart will render based on the underlying data for the selected view.
4. Both **View Selector** and **Display Chart Selection** is turned on. You can toggle to a different view and chart for the table.

To edit the chart properties, you need to edit the dashboard that the chart is in. If you're in the process of adding a new chart on a dashboard, then you're already in edit mode and can skip to step 2.

1. Go to the dashboard that the chart is in and on the command bar, select **Edit**.

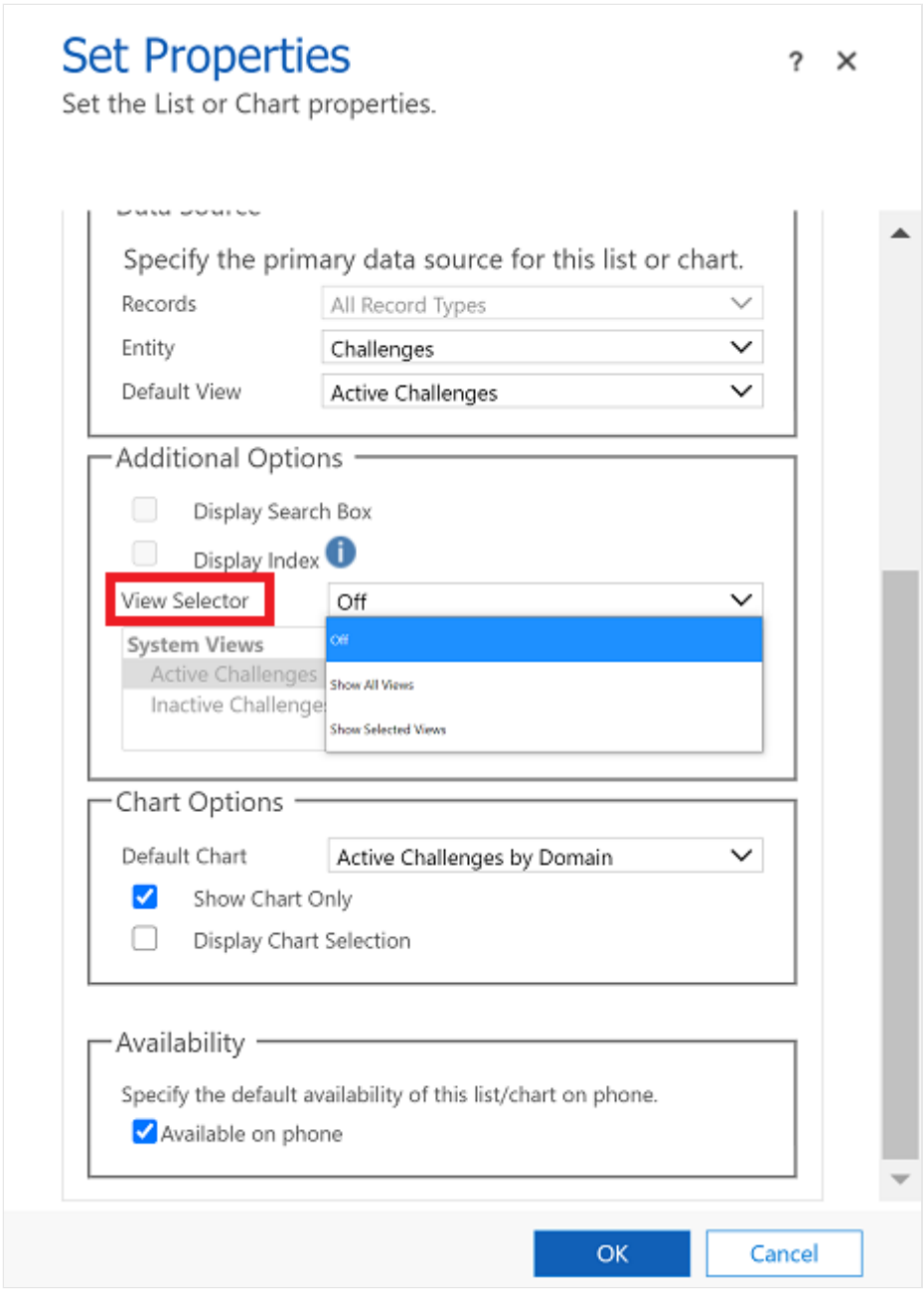


2. Double-select the chart that you want to edit.

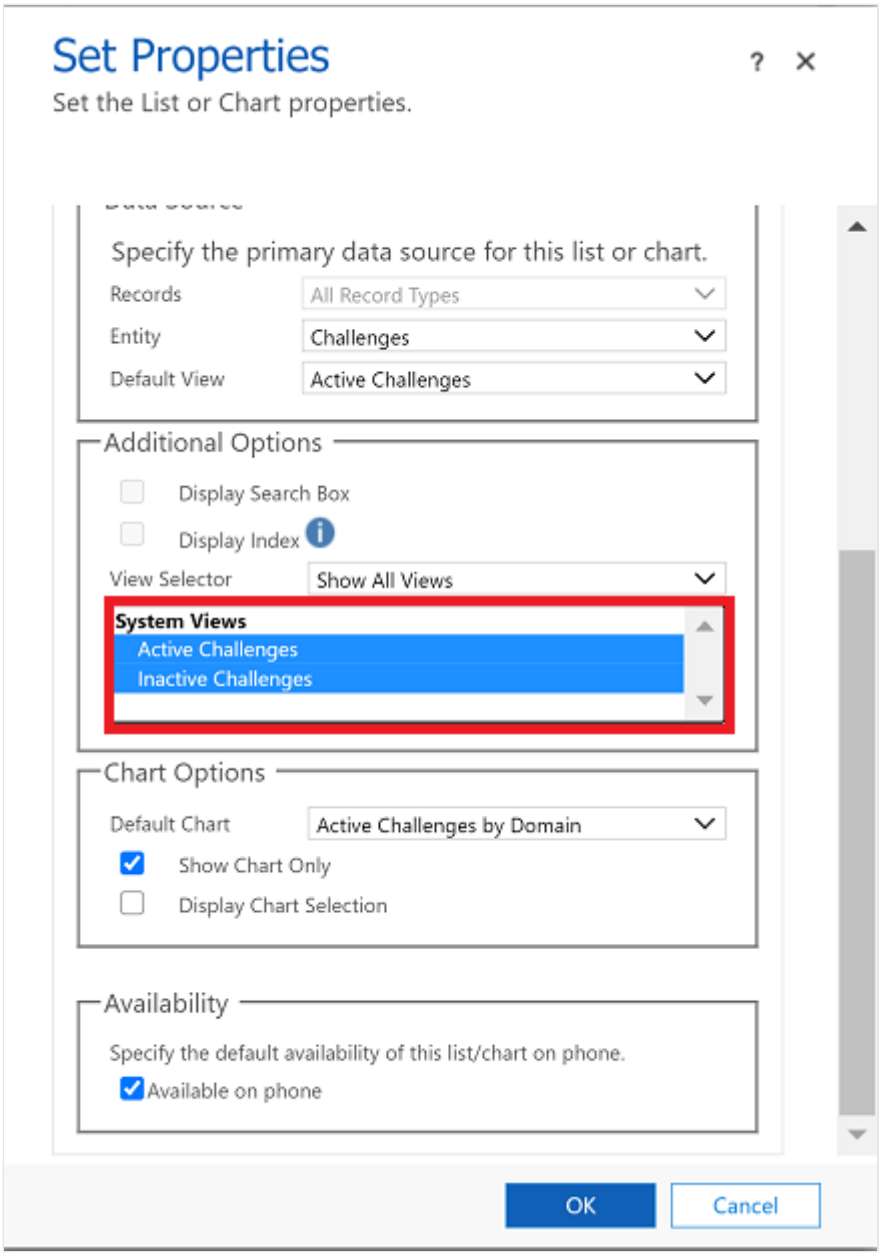


3. On the **Set Properties** dialog box, select a **View Selector** option.

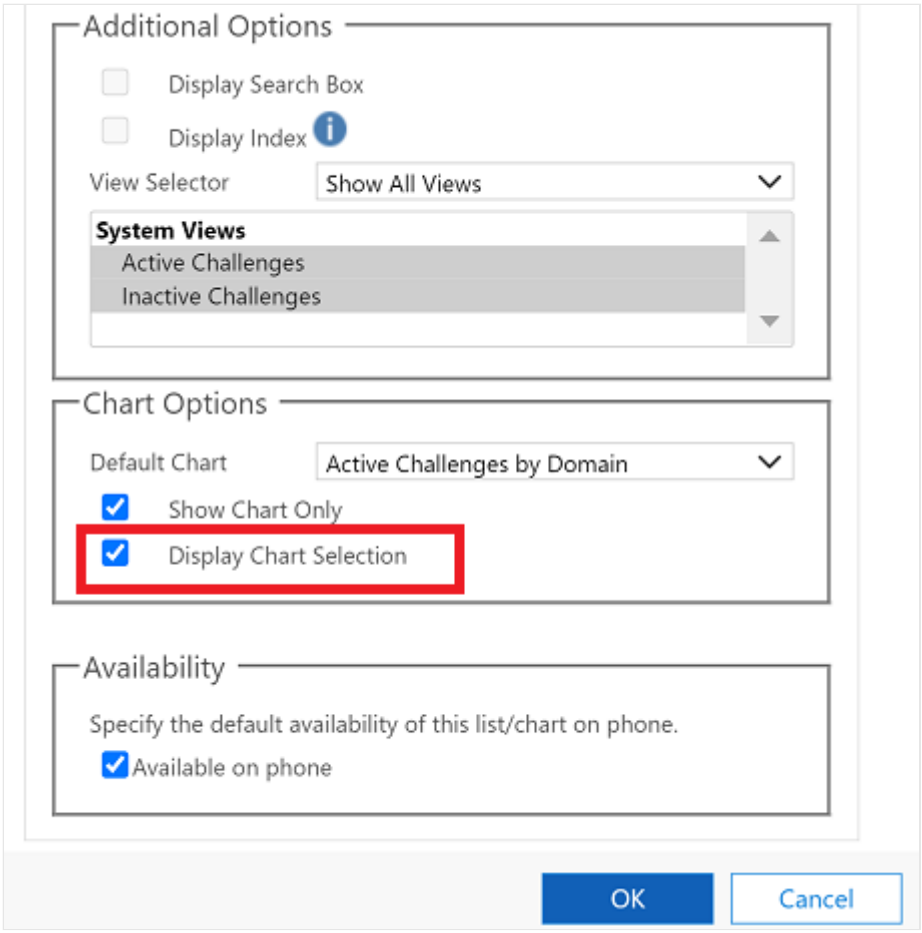
- **Off**: Do not show view selector, show the view title only.
- **Show All Views**: Show the view selector on chart and display all views in the view selector.
- **Show Selected Views**: Show the view selector on chart and display only the selected views in the view selector.



4. Once **View Selector** is turned on, you can select different views to see how the chart renders with different data associated with the view.



5. Select the **Display Chart Selection** check box to show the chart selector. When chart selector is enabled, you can toggle to a different chart for the table and see different visualizations of the data. If the box is unchecked, then you only see the chart title.



6. When you're done, select **OK**.

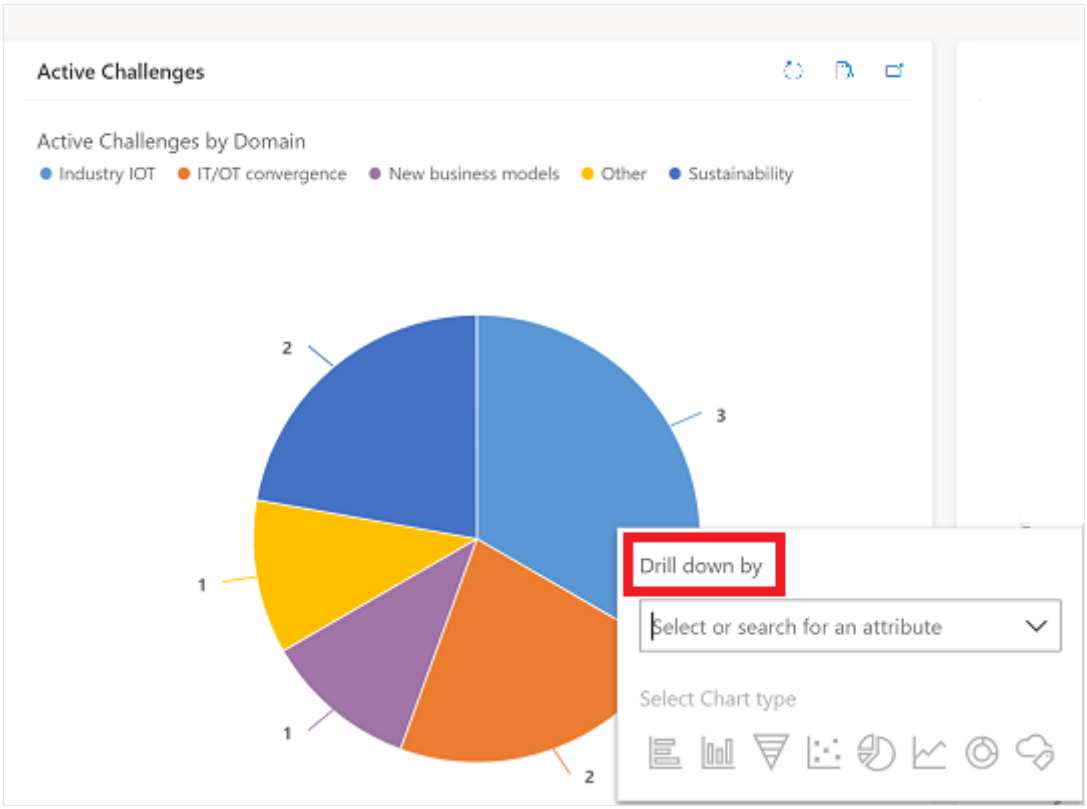
Drill-down in a chart

You can drill down into a segment on a chart and filter the data for that segment. For example, you can drill down on one segment of a chart and change the chart type as you drill down.

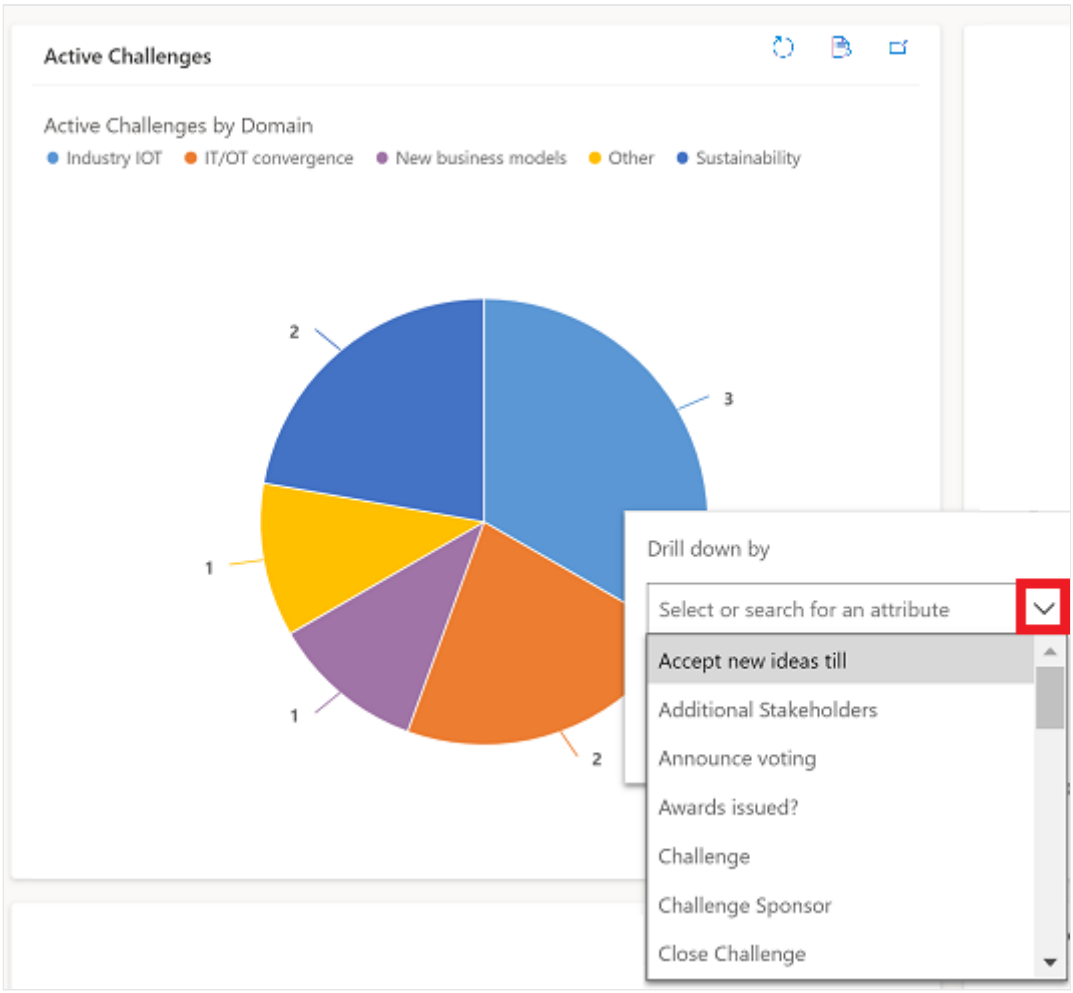
The chart drill-down feature is only available on the browser. It is not available on the mobile app for phones or tablets.

In the example below, let's further drill down into the chart.

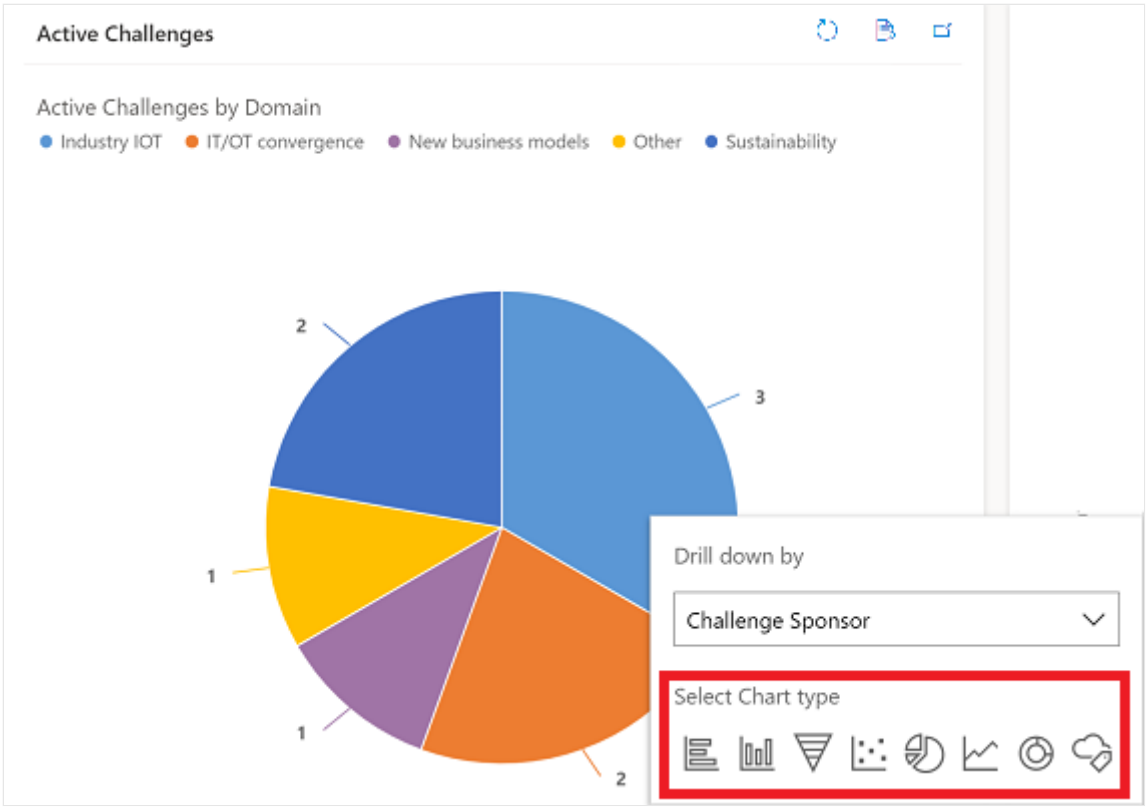
1. Select a data point on the chart to open the **Drill down by** dialog box.



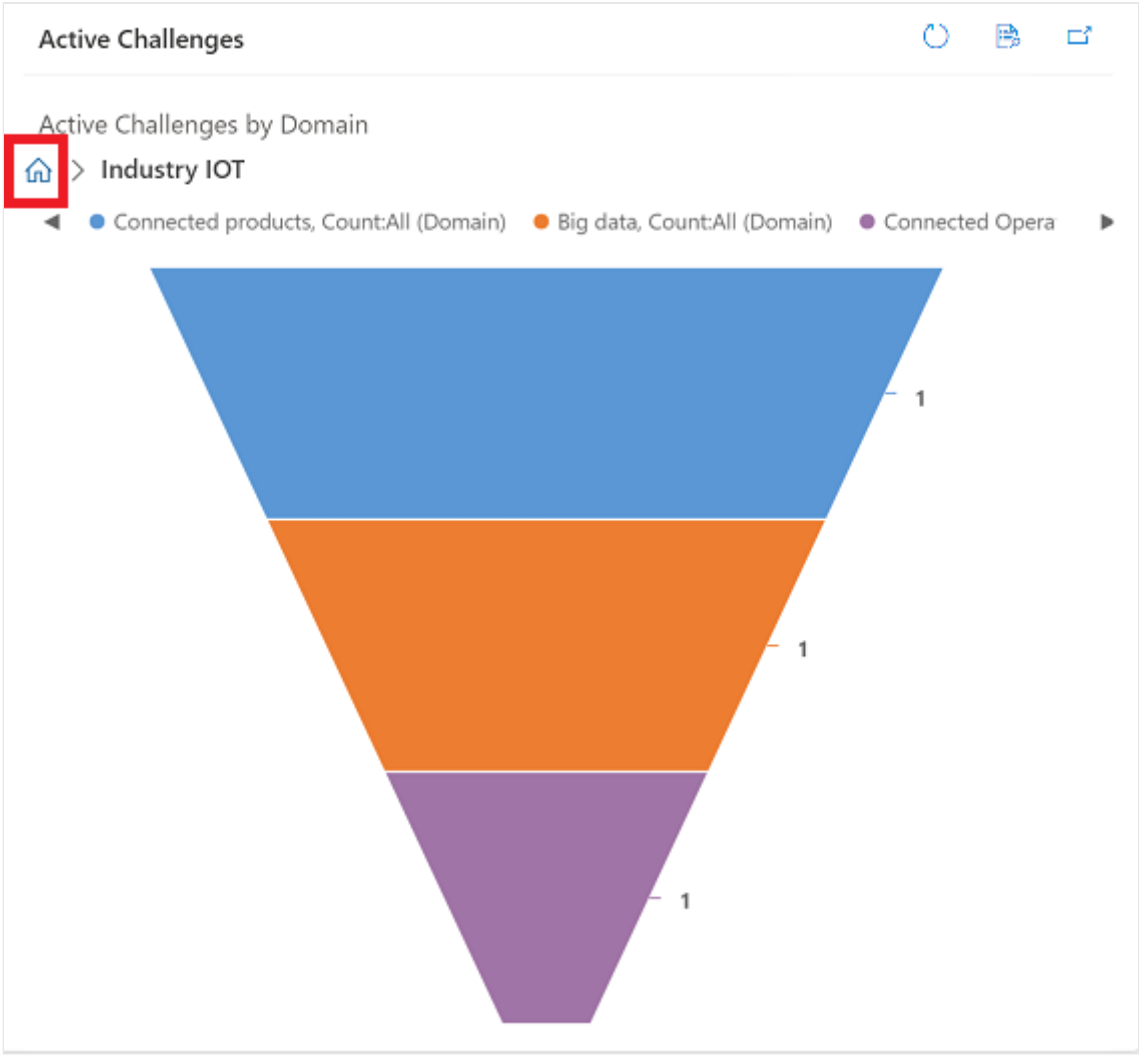
2. Select the drop-down menu and choose how you want to group the data.



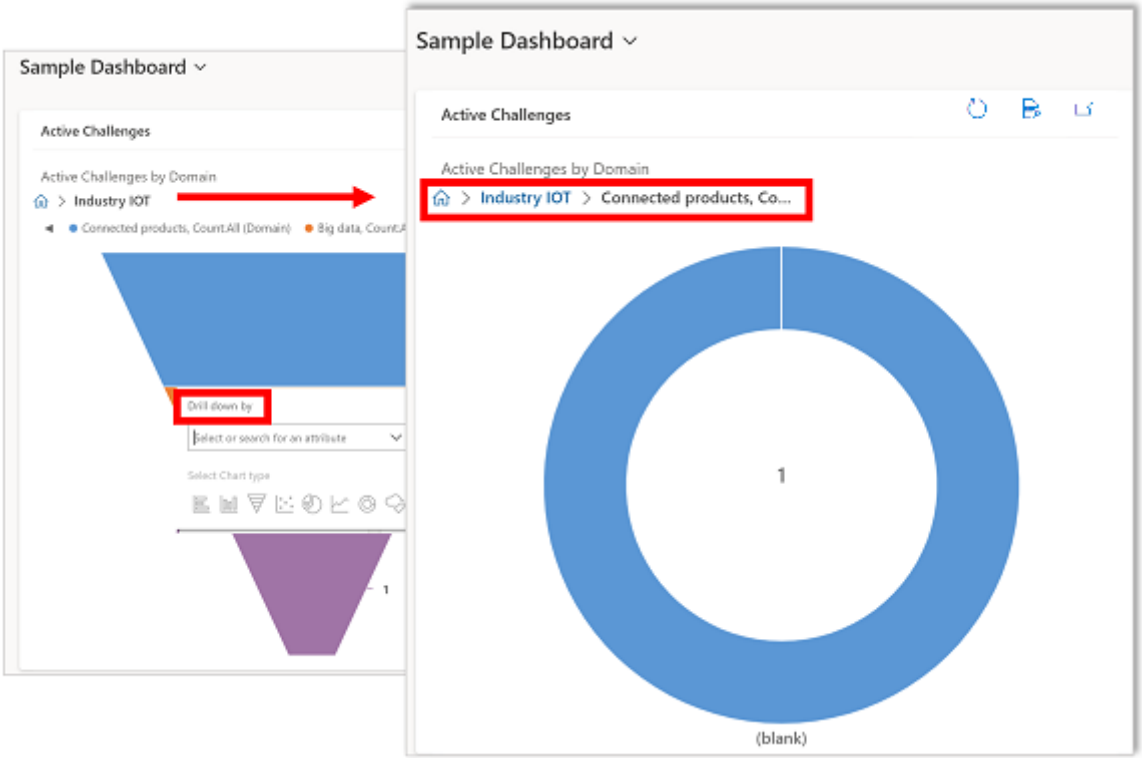
3. Select the type of chart that you want to see the drill-down data in.



4. The chart with the drilled-down data will show. The breadcrumbs at the top show the filter criteria of the drill-down data. You can select the breadcrumbs to go back home or to the previous screen.



You can continue drilling further into the chart data. As you drill down deeper, the breadcrumbs will expand and you can go back to the previous screen or select the Home button to go back to the Home screen.



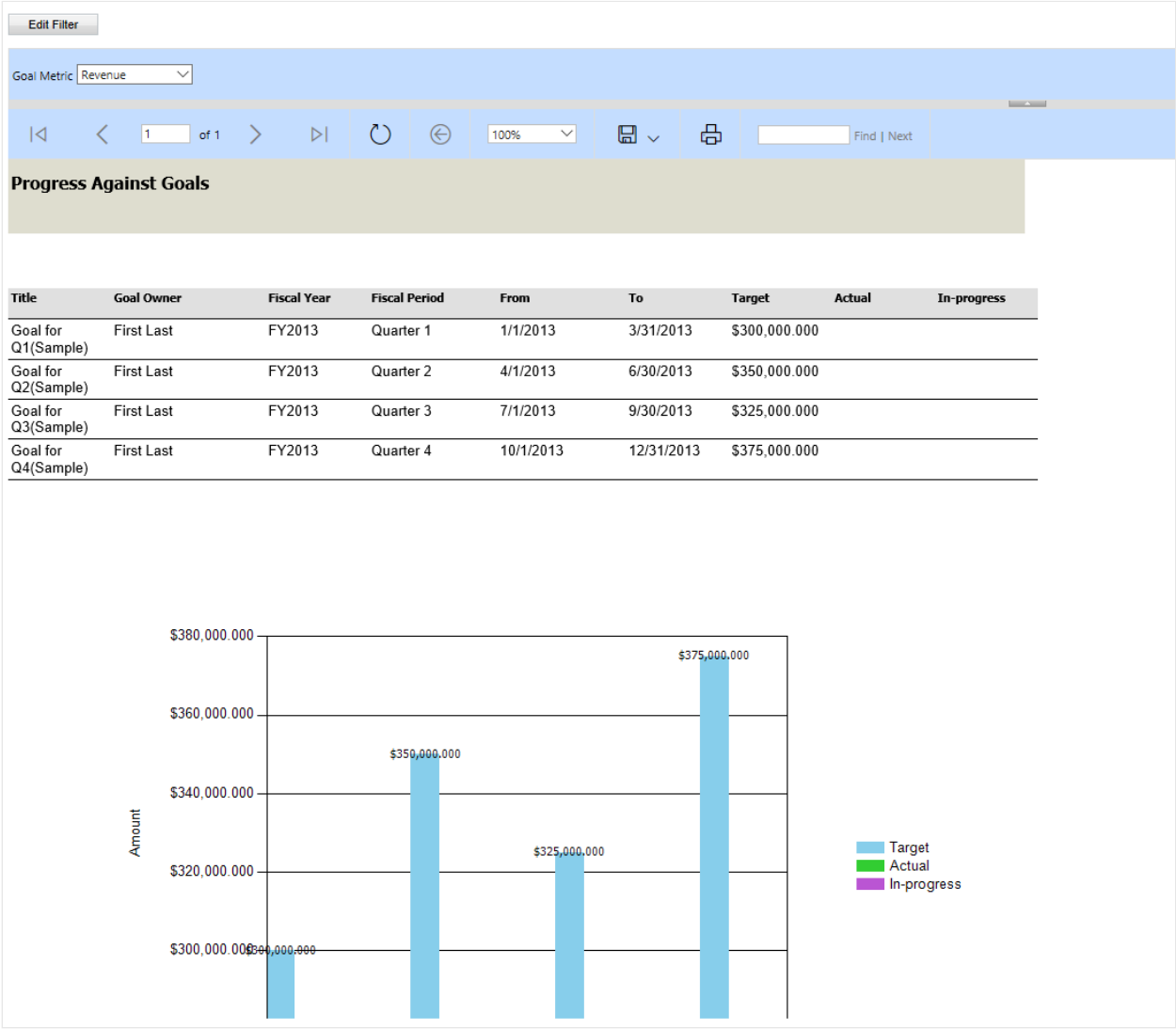
Known issues

- In the chart designer, adding an order on certain calculated columns is not supported and will cause an error. The calculated columns causing this are using other calculated columns, a related table column, or a local column on the table.
- Chart displays zero values when there is no data. With Unified Interface for model-driven apps you can still select a chart with zero value and drill down in to the data. More information: Chart displays zero values when there is no data
- By design, charts in rollup column can't be displayed because rollup columns contain an aggregate value computed over the rows related to a specified row.
- Chart drill-down functionality is not available on charts in a subgrid or an associated grid.
- When you add a list control to a dashboard and switch the control to the **Power Apps Read-Only grid** control, you will see a blank tile on the dashboard because the **Power Apps Read-Only grid** control is not supported on dashboards. We recommend that you use **Power Apps grid** control.

Add reporting features to your model-driven app

Article • 02/15/2022

Power Apps apps can include reports that provide useful business information to the user. These reports are based on SQL Server Reporting Services and provide the same set of features that are available for typical SQL Server Reporting Services reports.



System reports are available to all users. Individuals who create or otherwise own reports can share them with specific colleagues or teams, or can make the reports available to the organization, so that all users can run them. These reports use FetchXML queries that are proprietary to Microsoft Dataverse and retrieve data to build the report. Reports that you create in a Power Apps app are Fetch-based reports.

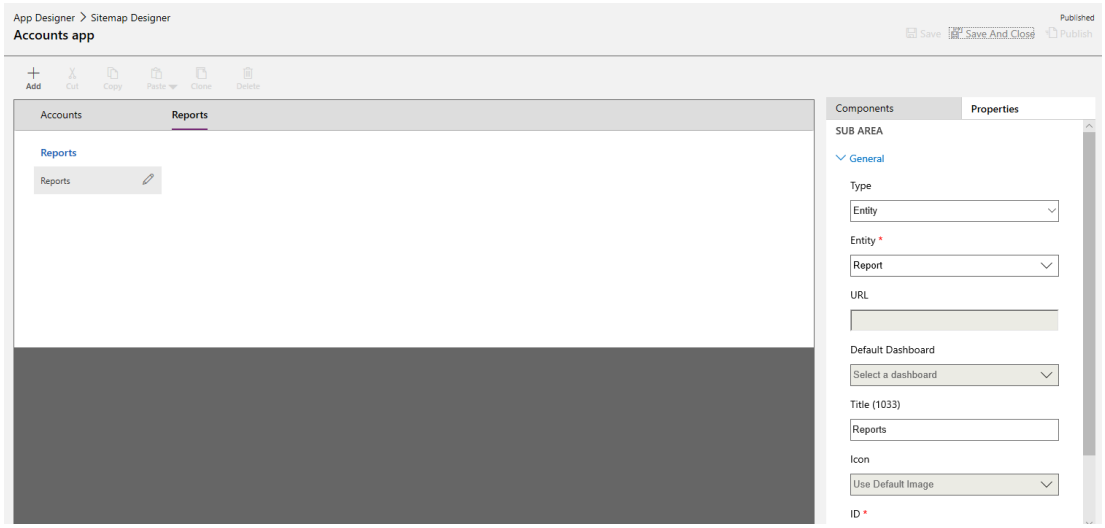
> **Note**

Report features don't work with canvas apps or model-driven apps running on mobile devices, such as tablets and phones.

Add reporting to a Unified Interface app

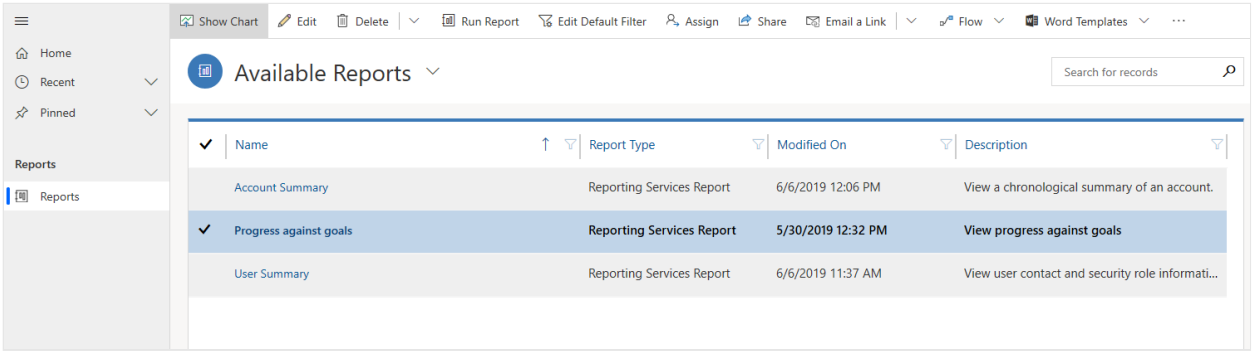
You can add fetch-based reporting functionality to your app so that users can run, share, create, and edit reports. To do this, you add the report table to your app's site map.

1. Sign in to Power Apps and open an existing app for editing.
2. In App Designer, select next to **Site Map**.
3. In the Sitemap Designer, select **Add** and then select **Area**.
4. In the **Title** box, enter a name for the area title, such as *Reports*.
5. Select the area that you named in the previous step, select **Add**, select **Group**, and then in the group **Title** box enter a name for the group title, such as *Reports*.
6. Select the group that you named in the previous step, select **Add**, select **Subarea** and then include the following properties:
   - **Type**. Select **Entity**.
   - **Entity**. From the list of tables, select the **Report** table.
   - **Title**. Enter a descriptive title, such as *Reports*.



7. Select **Save and Close** to return to the app designer.
8. In App Designer select **Save**, and then select **Publish**.

Now the app displays a **Reports** area where users can view, run, assign, share, and edit the reports they have permission to as well as create new reports using the report wizard.



Options for creating new reports

You can create a new report in one of two ways:

- Use the Report Wizard. Open a model-driven app that has been enabled for reporting and run the Report Wizard to create a new report. The Report Wizard can create table and chart reports, including drill-through reports and top N reports. More information: Create a report using the Report Wizard
- Use the Report Authoring Extension. You can write new or customize existing fetch-based Reporting Services reports with Visual Studio, SQL Server Data Tools, and the Report Authoring Extension. More information: Create a new report using SQL Server Data Tools

Report visibility

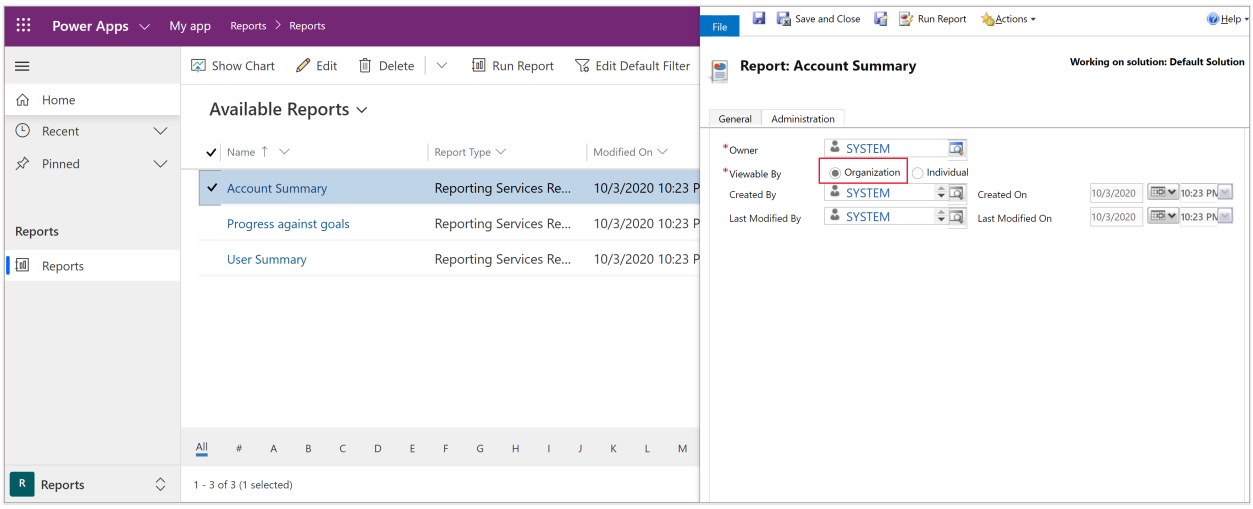
Standard table reports, such as the Accounts Summary report for the account table, are available to all app users. Users who own reports can share them with specific colleagues or teams. System administrators and system customizers can make reports available with organization-wide visibility, so that all users can use them. For information about how to share a report, see Share a report with other users and teams.

Reports in solutions

Reports are solution aware. Adding a report as a component to a solution makes it become a single unit of software that extends Power Apps functionality and the user interface. Only reports that are visible to the organization can be added to solutions.

To find if a report is viewable to the organization: In the list of reports, open a model-driven app, select a report, and then select **Edit**. On the **Administration** tab, see if

Viewable By is set to **Organization**.



You can add, import, or export snapshots of reports as part of a solution. In model-driven apps, reports, sub reports, report category, report display area, and report-related row type are considered as components of a report set. When you import a solution update in non-overwrite mode, any updates by the solution to a report will be ignored if any component of the report set has been customized.

Related topics

Work with reports
Create a report using the Report Wizard
Add a report from outside Power Apps
Edit the default filter of a report
Troubleshoot reports

Analyze your sales data with Power BI

Article • 03/31/2023

Power BI template apps are integrated packages of pre-built Power BI dashboards and reports. Using Power BI template apps with Dynamics 365 Sales provides a convenient, powerful, and quick way to access and analyze your sales data.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Power BI Template Apps

The following Power BI template apps are now available to analyze your sales data on Dynamics 365 Sales:

- Sales Analytics for Dynamics 365 Sales
- Process Analytics for Dynamics 365

You can connect to and analyze your Dynamics 365 Sales data by using these Power BI template apps. You can schedule automatic data updates to ensure that you can always make the most informed and timely decisions. You can also create your own custom Power BI dashboards based on the reports in these template apps and embed them directly in Dynamics 365 Sales.

Sales Analytics for Dynamics 365 Sales

Sales managers are responsible for managing sales representatives who work with customers to close deals every day. Sales managers need to have visibility over key operational and pipeline metrics to drive team performance.

Managers can see trends in these metrics over a period of time to understand how sellers are performing, so that they can take corrective measures, provide appropriate guidance to sellers, and improve the customer purchase experience.

As a sales manager, use this dashboard to perform the following tasks:

- Monitor the sales pipeline, sales leaderboard, and top deals.
- Analyze pipeline performance, won/lost deals, and lead closure.

Process Analytics for Dynamics 365

The Process Analytics for Dynamics 365 Power BI template app is designed to help sales enablement managers get insights into the performance of their business process flows.

Sales enablement managers can track key performance indicators, including the velocity of records through process stages to understand how efficient their organizational processes are, and fine-tune process definitions to achieve maximum efficiency.

As a sales enablement manager, use this template app to perform the following tasks:

- Track business process performance.
- Create custom dashboards that focus on just one business process.

> **Note**
>
> Contact your system administrator if you experience configuration errors or if you're unable to view the dashboards.

See also

Configure Power BI template apps to work with Dynamics 365 Sales
Customize Power BI template apps for Dynamics 365 Sales

Configure Power BI template apps to work with Dynamics 365 Sales

Article • 09/21/2022

In this article, you'll learn how to configure Power BI template apps to work with Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise • Power BI Pro More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

Configure Power BI template apps for Sales

You must perform the following steps to configure Sales Analytics for Dynamics 365 Sales or Process Analytics for Dynamics 365:

1. Review the prerequisites.
2. Install the Power BI template app.
3. Connect your Dynamics 365 Sales organization to the Power BI template app.
4. Configure the refresh frequency for the Power BI dataset.
5. Publish the application within your organization.
6. Step 6: Enable Power BI reporting in the Microsoft Dataverse platform.
7. Add the Power BI Dashboard to the Sales Hub app (optional).

> **Note**
>
> In the following steps, you'll configure the Sales Analytics for Dynamics 365 Sales app. You can follow the same steps to configure the Process Analytics for Dynamics 365 app.

Step 1: Review prerequisites

Review the following prerequisites before configuring the Power BI template apps:

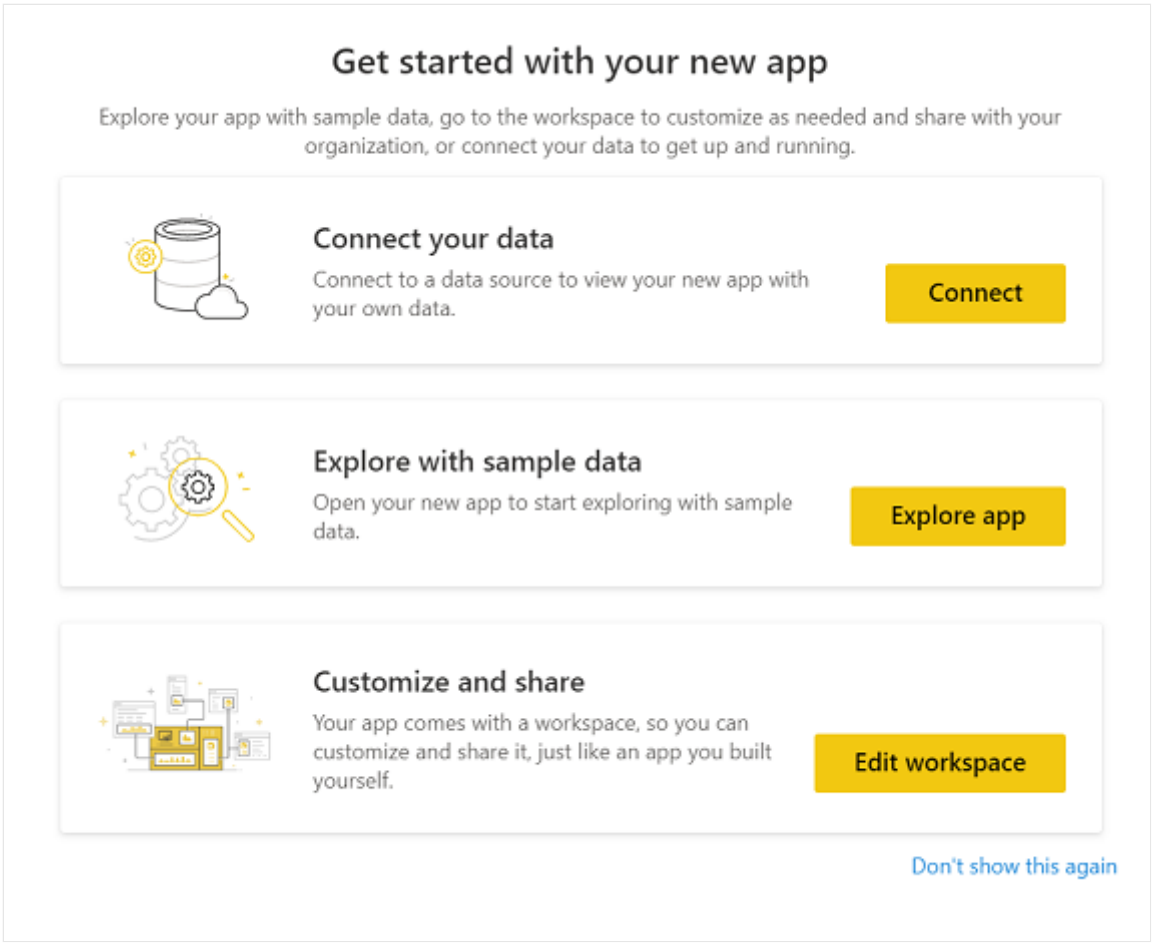
- You have administrative privileges for Dynamics 365 and Power BI.
- You have a Power BI Pro license for all users of the reports or dashboards in the Power BI template apps.

Step 2: Install the Power BI template app

1. Sign in to the Power BI app as an administrator.
2. Open the Sales Analytics template app link.

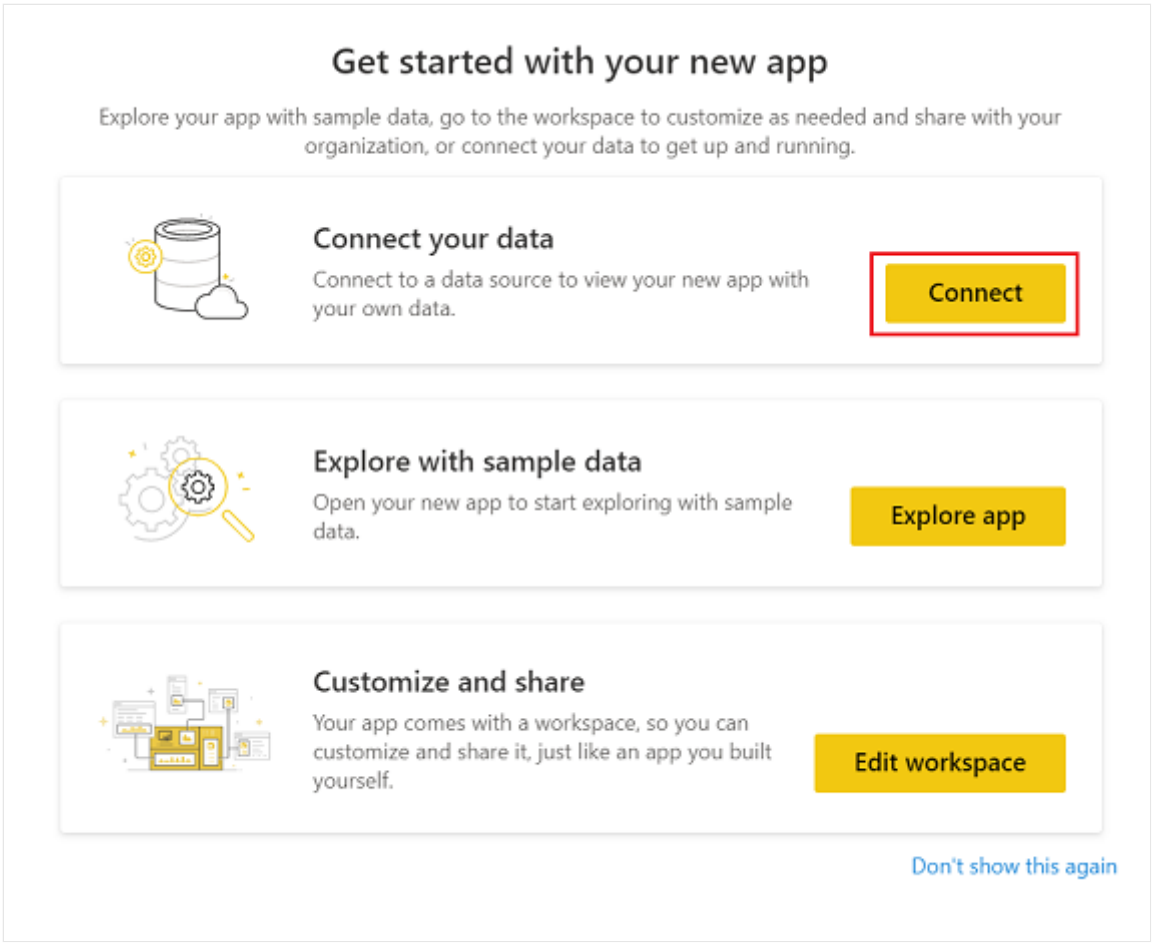
   > **Note**
   >
   > To get the Process Analytics for Dynamics 365 app, open the **Process Analytics template app** link.

3. Install the Power BI template app.
4. After the Power BI template app is installed, the app configuration options page is displayed.

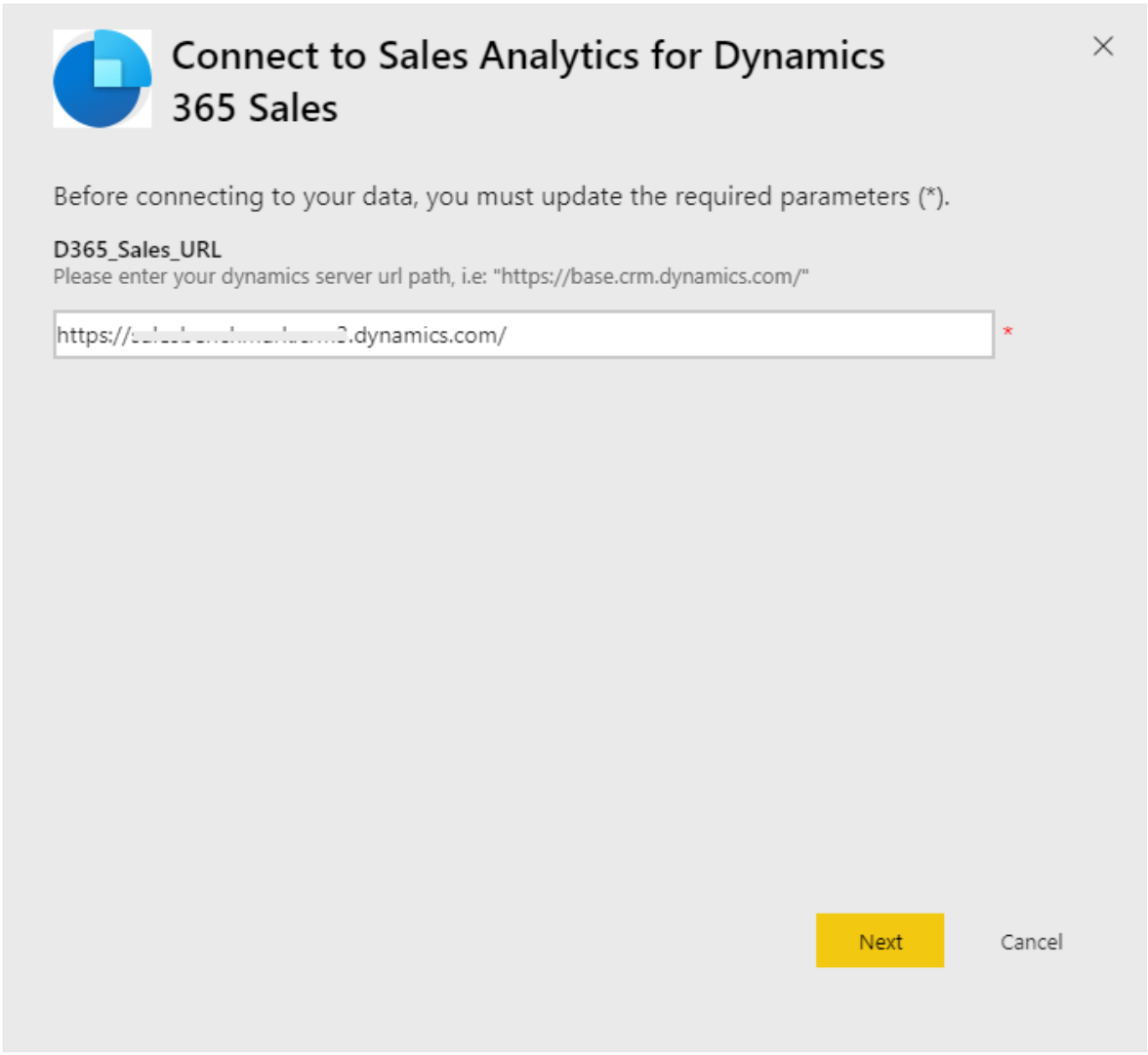


Step 3: Connect your Dynamics 365 Sales organization to the Power BI template app

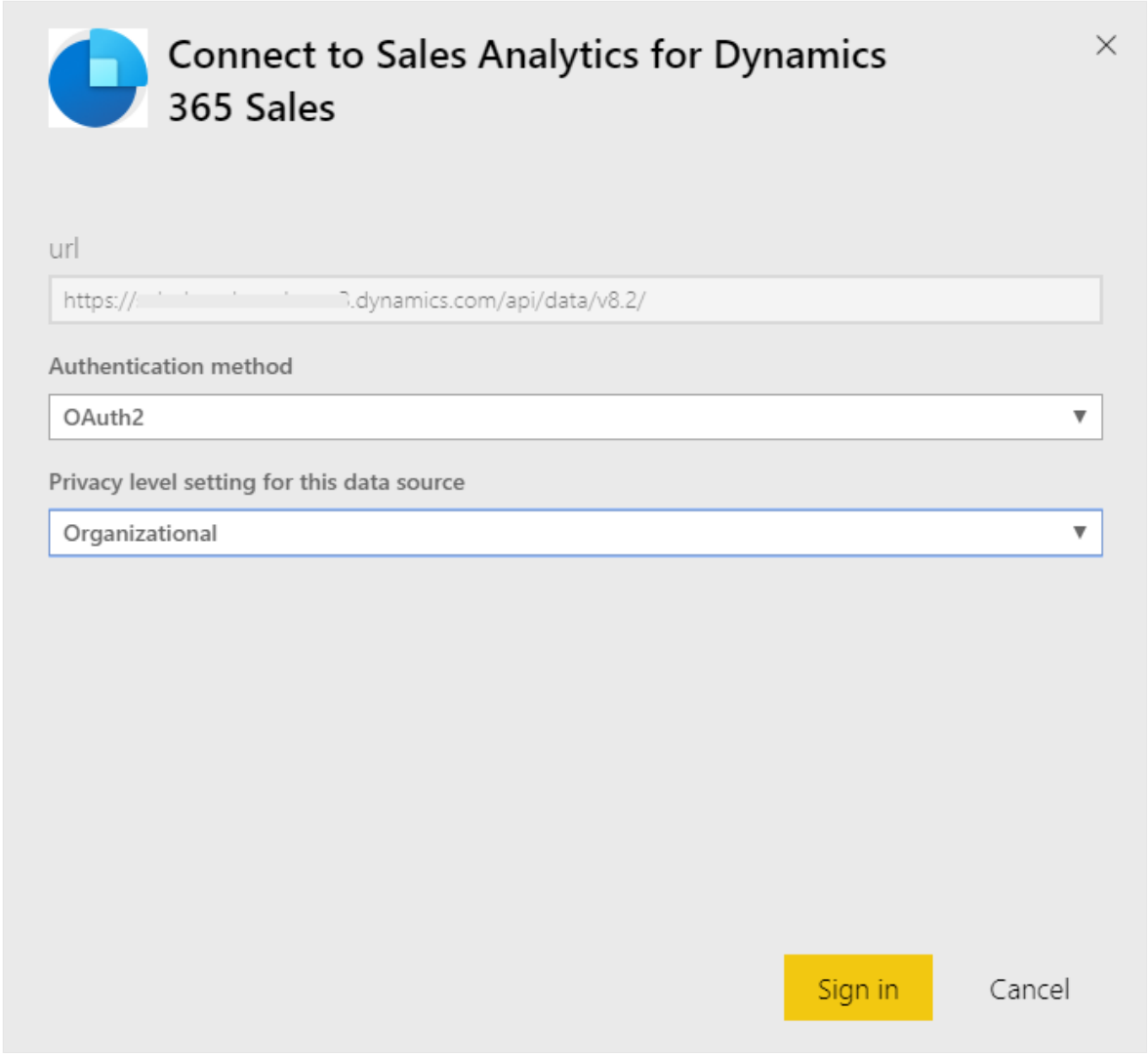
1. On the Power BI template app configuration options page, select **Connect**.



2. On the connect data page, enter the URL for your Dynamics 365 organization, and then select **Next**.



3. For **Authentication method**, select **OAuth2** and for **Privacy level**, select **Organizational**. Select **Sign in**.



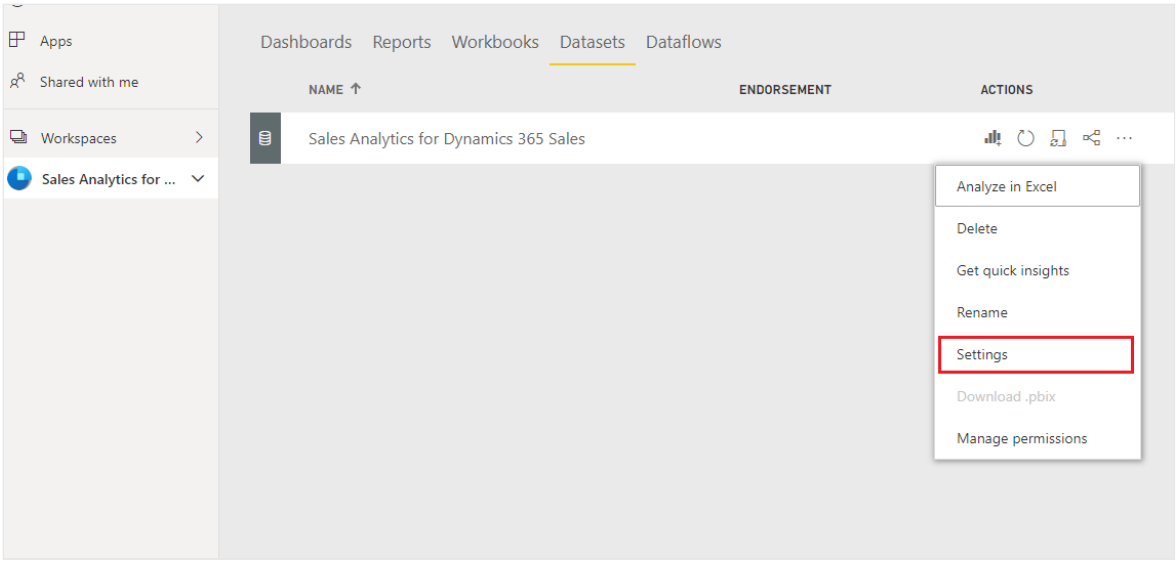
4. Enter your Dynamics 365 Sales credentials, and then select **Enter**.

When you're signed in, the existing report will be updated with the data from your organization.

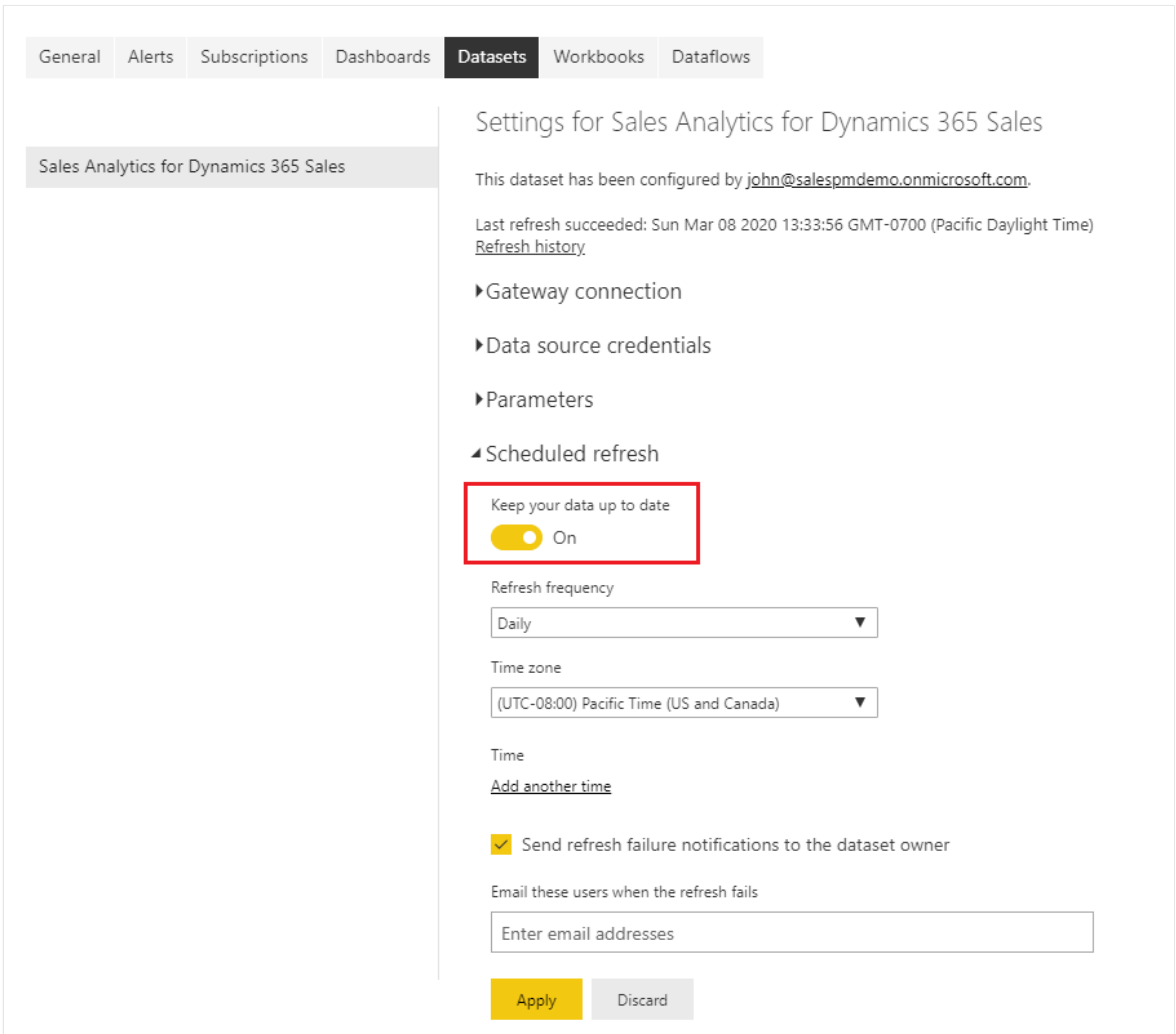
Step 4: Configure the refresh frequency for the Power BI dataset

After you connect the Power BI template app with Dynamics 365 Sales, you need to configure the refresh frequency on the Power BI dataset to update reports and dashboards properly.

1. Sign in to Power BI as an administrator.
2. Go to the Power BI template app workspace.
3. On the **Datasets** tab, select **Settings**.



4. Under **Scheduled refresh**, turn on the **Keep your data up to date** toggle.

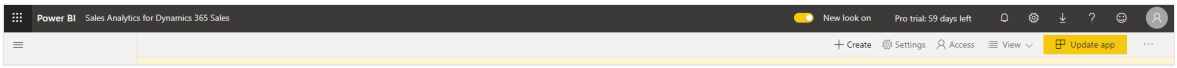


> **Note**
>
> We recommend that you set **Refresh frequency** to **Daily**.

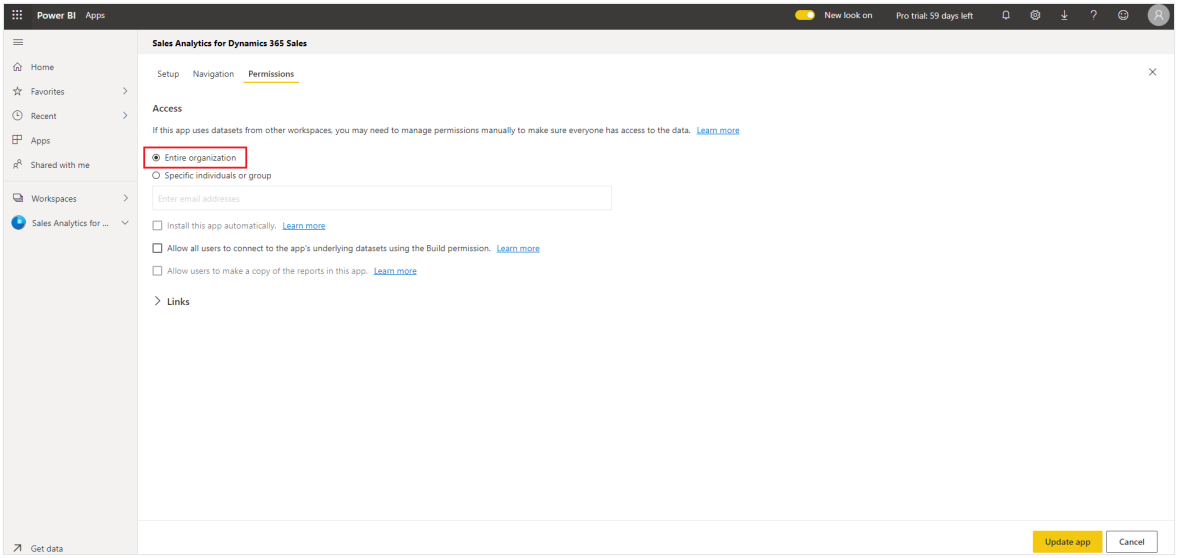
Step 5: Publish the application within your organization

You must share the configured application with your entire organization for users to view the dashboards and reports by using their own Power BI Pro accounts.

1. On the app workspace, select **Update app**.



2. On the **Permissions** tab, select **Entire organization**, and then select **Update app**.

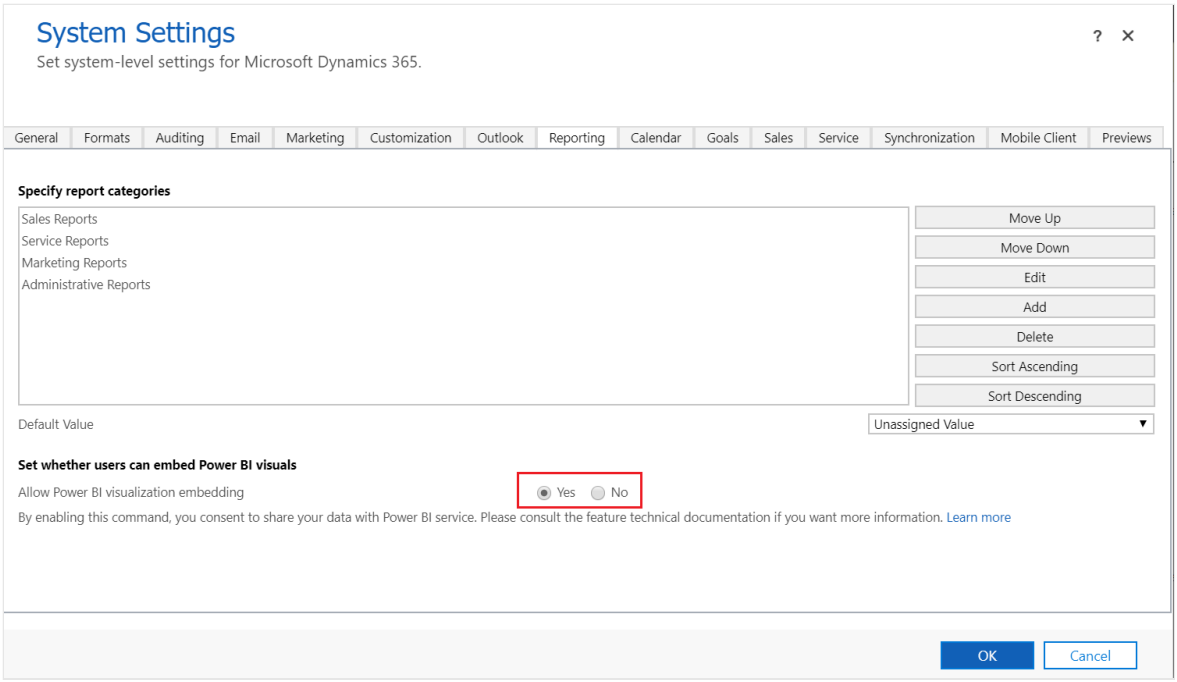


The app is now available to install for all individuals in your organization.

Step 6: Enable Power BI reporting in the Microsoft Dataverse platform

As an administrator, you must enable Power BI reporting in the Microsoft Dataverse platform for sales managers to view the dashboards in the Sales Hub app.

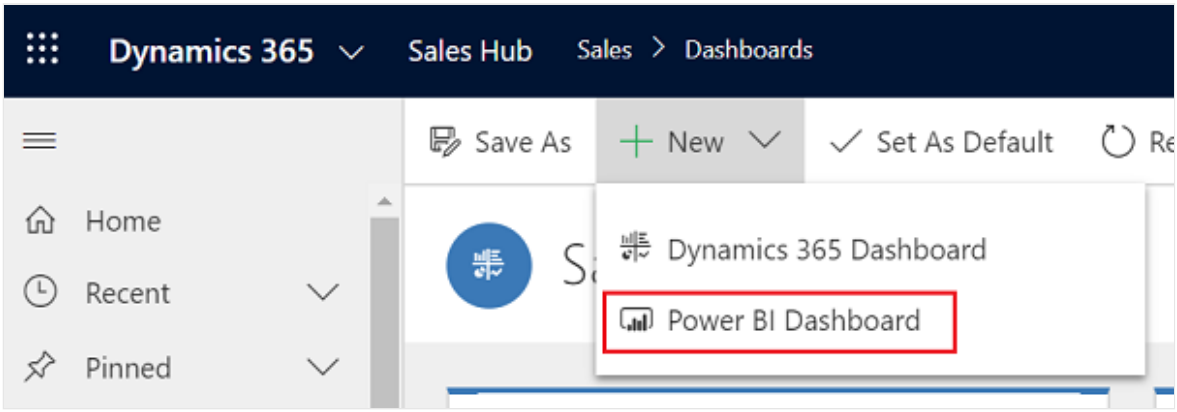
1. Sign in to the Microsoft Dataverse platform, and then go to **Settings**.
2. Select **Administration** > **System Settings**.
3. On the **Reporting** tab, turn on the **Allow Power BI visualization embedding** toggle.



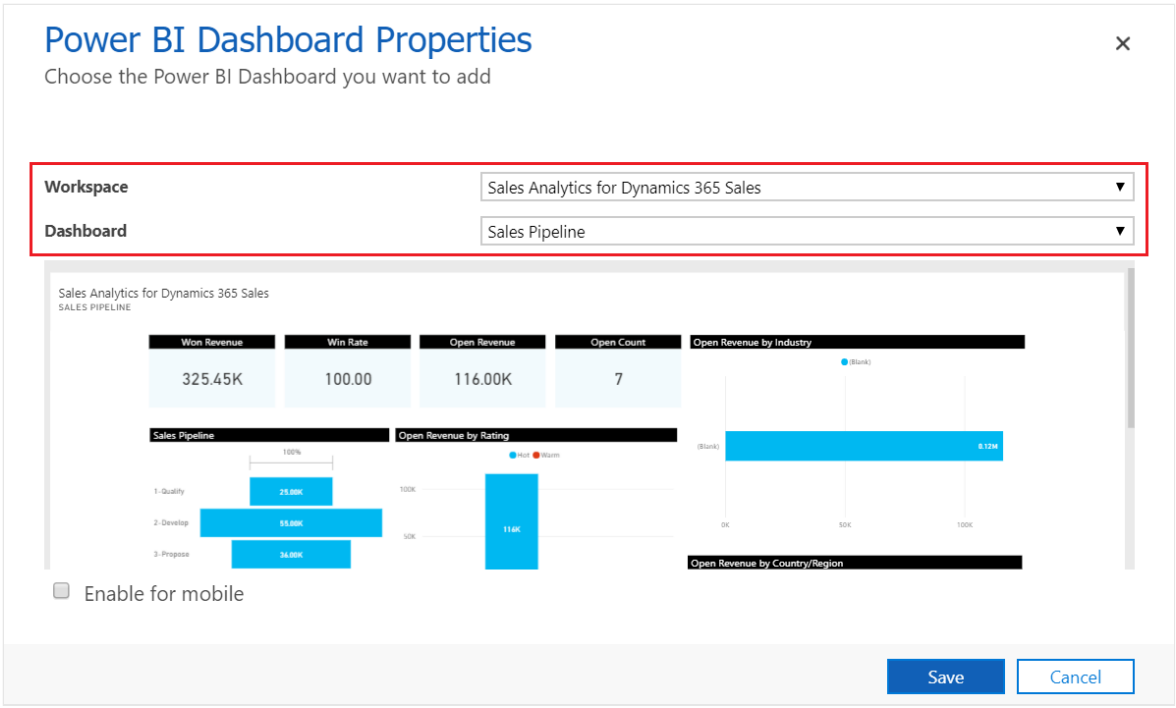
Step 7: Add Power BI dashboards to the Sales Hub app

Each sales manager must configure their environment to integrate the Sales Analytics for Dynamics 365 Sales dashboard.

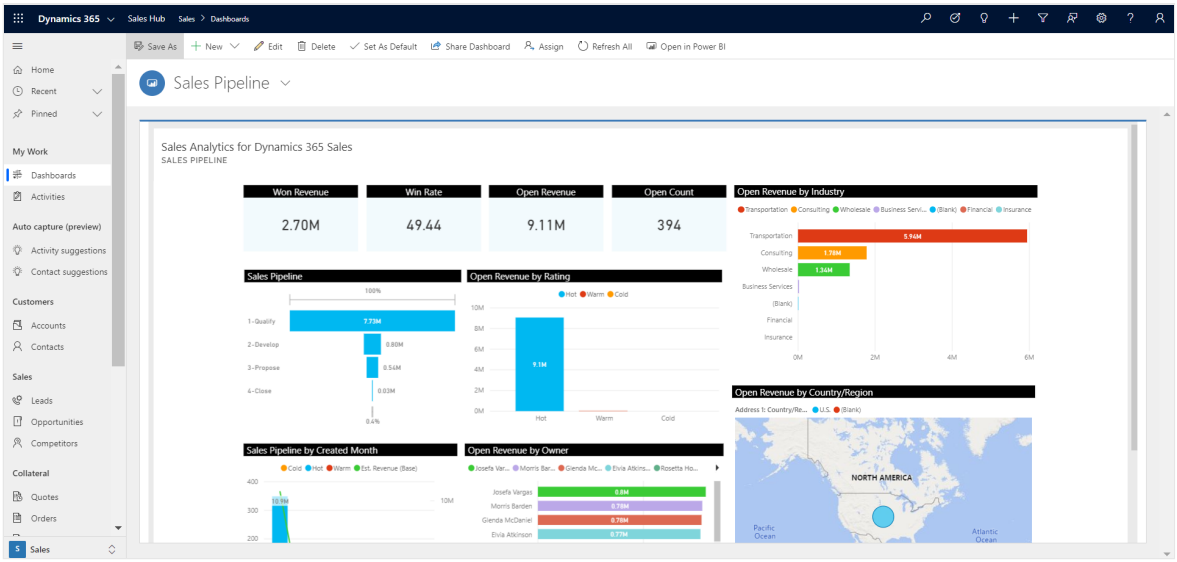
1. Sign in to Dynamics 365 Sales, and then open the **Sales Hub** app.
2. Under **My Work**, select **Dashboards**.
3. Select **New** > **Power BI Dashboard**.



4. For **Workspace**, select **Sales Analytics for Dynamics 365 Sales**. For **Dashboard**, select **Sales Pipeline**.



5. Select **Save**, and then select **Close**.



The Sales Analytics for Dynamics 365 Sales dashboard is now available in Dynamics 365.

See also

Analyze your sales data by using Power BI template apps

Customize Power BI template apps for Dynamics 365 Sales

Customize Power BI template apps for Dynamics 365 Sales

Article • 03/30/2022

You can use Power BI template apps to visualize and analyze the sales data.

> **Important**
>
> Microsoft doesn't support customizations made to the Power BI template app and doesn't provide updates after modifications are made

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise, and Power BI Pro More information: Dynamics 365 Sales pricing ; Power BI pricing
Security roles	System Administrator See Predefined security roles for Sales

Customize the template apps

Power BI is a comprehensive collection of services and tools that you use to visualize your business data. Power BI Template apps make it easy to visualize and analyze the sales data with Power BI based on a standard data model. The Sales Analytics for Dynamics 365 Sales and Process Analytics for Dynamics 365 Power BI template apps are built with a set of entities and fields that are useful for most reporting scenarios.

Dynamics 365 apps are often extended with custom fields. These custom fields don't automatically show up in the Power BI model. This section describes how you can edit and extend the report included in the template app to include custom fields in the Power BI model.

Before you customize the template app, read the information here and perform each task, as necessary.

Prerequisites

- Power BI service registration
- Power BI Desktop application for editing Power BI reports
- Power BI report for the template app that you want to customize:
  - Download the Power BI report for Sales Analytics for Dynamics 365 Sales
  - Download the Power BI report for Process Analytics for Dynamics 365

Prepare a PBIX for customization

1. Start Power BI Desktop.
2. Select **File** > **Open**. Select the .pbix file you want to edit, and then select **Open**.

   Several pages of reports are loaded and displayed in Power BI Desktop.
3. On the Power BI Desktop ribbon, select **Edit Queries**.
4. In the left navigation pane of the **Edit Queries** window, under **Queries**, select the D365_Sales_URL query, and then on the ribbon, select **Advanced Editor**.

   In the source definition, replace the placeholder value with the URL of your app's instance. For example, if the organization name is *Contoso*, the URL looks like this: Source = `https://contoso.crm.dynamics.com`
5. Select **Done**, and then select **Close & Apply** in the Query Editor.
6. When the **Access an OData feed** dialog box appears, select **Organizational account**, and then select **Sign in**.
7. When the sign-in field appears, enter your credentials to authenticate to your instance.
8. In the **Access an OData feed** dialog box, select **Connect**.

It might take several minutes for the queries to be updated.

See also

Analyze your sales data by using Power BI template apps
Configure Power BI template apps to work with Dynamics 365 Sales

Enable sales usage reports

Article • 02/03/2023

Sales usage reports provide a historical view of operational metrics and key performance indicators in Dynamics 365 Sales. This helps sales managers to view and analyze their team's operational metrics such as opportunities and leads usage, and make decisions that improve sales performance.

License and role requirements

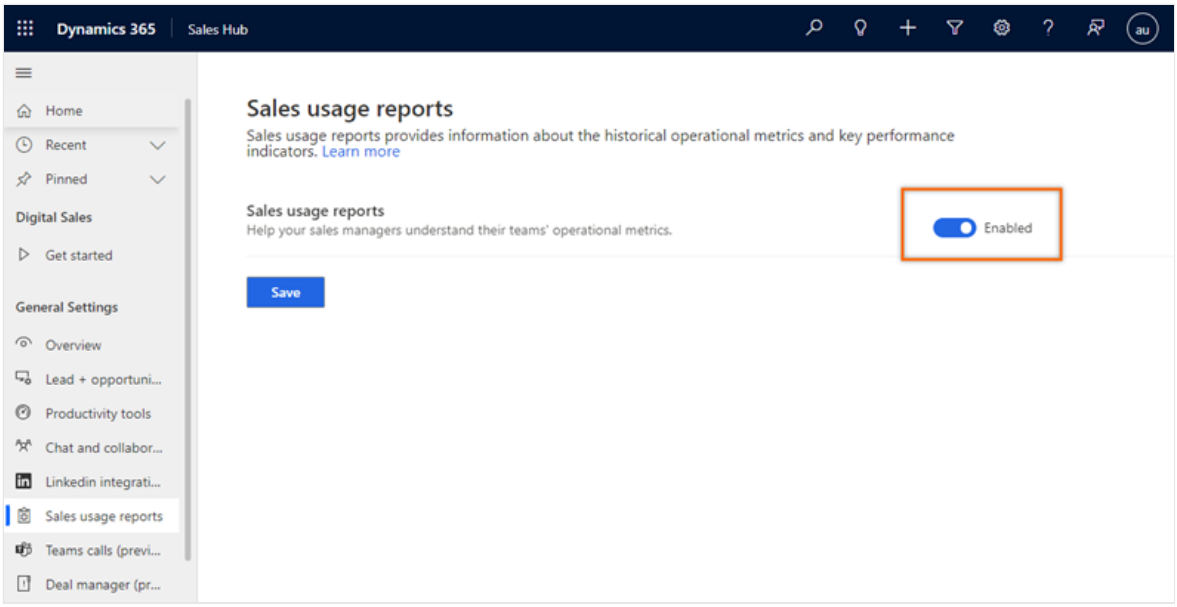
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security Role	System Administrator See Predefined security roles for Sales

Enable the reports

As an administrator, enable the sales usage reports in your organization for sales managers to use.

> ⓘ **Note**
>
> - Sales usage reports are not available on Government Community Cloud (GCC).
> - When enabled, the reports can take up to 24 hours to be displayed. Thereafter, reports are refreshed every 24 hours.

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **App settings**.
2. On the site map, select **General settings** > **Sales usage reports**.
3. On the **Sales usage reports** page, turn on the toggle to enable the reports.



4. Select **Save**.

The reports are enabled. The application might take up to 24 hours to display the reports.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

View and understand the sales usage reports

Set up the mobile experience for Dynamics 365 Sales

Article • 05/29/2023

The Dynamics 365 Sales mobile app is an intuitive mobile experience that offers quick access to customer information and makes it easy to keep this information current. This simplifies customer relationship management and helps sellers focus on selling.

Field sellers spend a lot of time on the road, traveling to meet customers. "On-the-go" time can become productive time with this mobile app, which is available on iOS and Android.

Before field sellers can use the Dynamics 365 Sales mobile app, you must ensure that the following prerequisites are met:

- To get the optimal mobile experience:
  - It is recommended to enable relevance search for the environment. More information: Configure relevance search to improve search results and performance
  - It is recommended to have Exchange Online.
- To set a regarding record for a meeting, you must:
  - Enable server-side synchronization in your environment. More information: Server-side synchronization.
  - Approve the email address. More information: Approve mailboxes
- The mobile app users must have the following permissions:
  - Read permission for Organization table.
  - Read permission for Mailbox table.
  - **Dynamics 365 for mobile** privilege.

> **Note**
>
> - If the Dynamics 365 Sales mobile app is launched by a user having **mobile offline profile** defined, the app's user interface is displayed using Unified Interface (same as in Dynamics 365 for phones).
> - If the Dynamics 365 Sales mobile app is launched on a tablet device, the app's user interface is displayed using Unified Interface (same as in Dynamics 365 for tablets).

What's next

After all the prerequisites are met for the Dynamics 365 Sales mobile app, field sellers can install it on their iOS and Android devices.

As an administrator, you can further refine the experience with the following customizations:

- Manage forms
- Create custom push notifications
- Configure tables for quick creation of records and activities

See also

Use the Dynamics 365 Sales mobile app
Learn the basics
Guidance on the best mobile experience for your sales users

Manage forms

Article • 02/27/2023

The Dynamics 365 Sales mobile app uses quick view forms by default to display tables. A quick view form is a lightweight view that doesn't include all the attributes of the table. Create or edit a quick view form.

You can use Unified Interface forms in the Sales mobile app instead of quick view forms. You need to turn on this option in the Power Platform admin center.

License and role requirements

You must have the following licenses and security roles to manage forms in the Sales mobile app.

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales For more information, refer to Dynamics 365 Sales pricing.
Security roles	System administrator For more information, refer to Predefined security roles for Sales.

Manage quick view forms

If you've created multiple quick view forms, the Sales mobile app uses the first one in the form order.

For example, here we've created three quick view forms for the **Contacts** table, ordered as shown:

Form order	Form name
1	Addresses
2	Various contacts
3	Contact details

The mobile app displays information based on the fields defined in **Addresses** since it's first in the list.

To change the fields the mobile app displays, modify the first quick view form in the list.

The order of the input fields in the mobile app is determined by their field types as follows:

1. Title (represents the primary attribute for the entity)
2. Text inputs without icons (String, Money, Integer)
3. Text inputs with icons (String, Money, Integer)
4. Value selection inputs (DateTime)
5. Assign inputs (State, SubGrid, PickList, PartyList, Lookup, Customer)
6. Multiline (Memo)

> **Note**
>
> When you **modify a quick view form**, the changes may take up to six hours to appear in the mobile app.

To change which quick view form the mobile app uses to display tables, set the form order so that the form you want is first in the list.

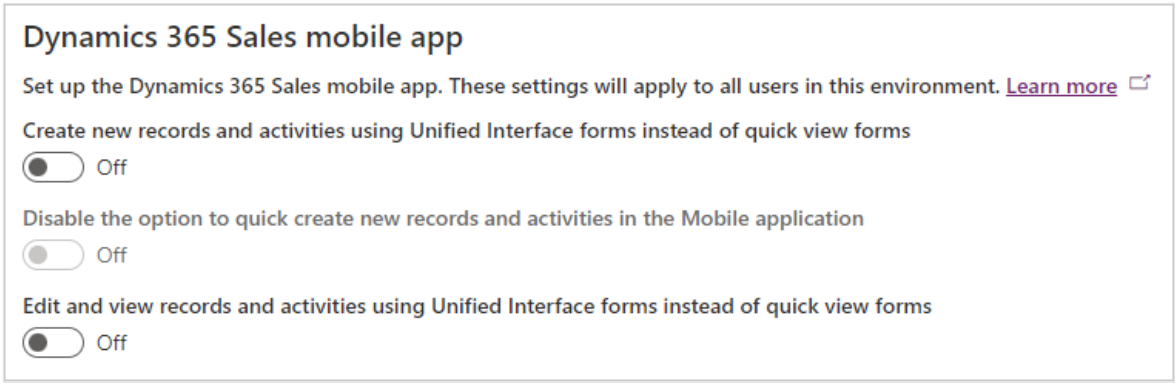
Use Unified Interface forms

To view, create, and update tables using Unified Interface forms instead of quick view forms, you need to change some settings in the Power Platform admin center. You can also turn off the mobile app's quick create functionality.

1. Sign in to Power Platform admin center.
2. In the **Environments** tab, select your environment.
3. Go to **Settings** > **Product** > **Features**.
4. In the **Dynamics 365 Sales mobile app** section, turn on the following settings as needed:

    - **Create new records and activities using Unified Interface forms instead of quick view forms**: Allows the mobile app to use Unified Interface forms for creating records and activities.
    - **Disable the option to quick create new records and activities in the Mobile application**: Turns off the quick create functionality in the mobile app. Available only when **Create new records and activities using Unified Interface forms instead of quick view forms** is turned on.

- **Edit and view records and activities using Unified Interface forms instead of quick view forms**: Allows the mobile app to use Unified Interface forms for viewing and editing records and activities.



See also

Use the Dynamics 365 Sales mobile app
Learn the basics
Create or edit a quick view form

Create custom push notifications

Article • 02/27/2023

Push notifications help to engage app users and help them prioritize key tasks.

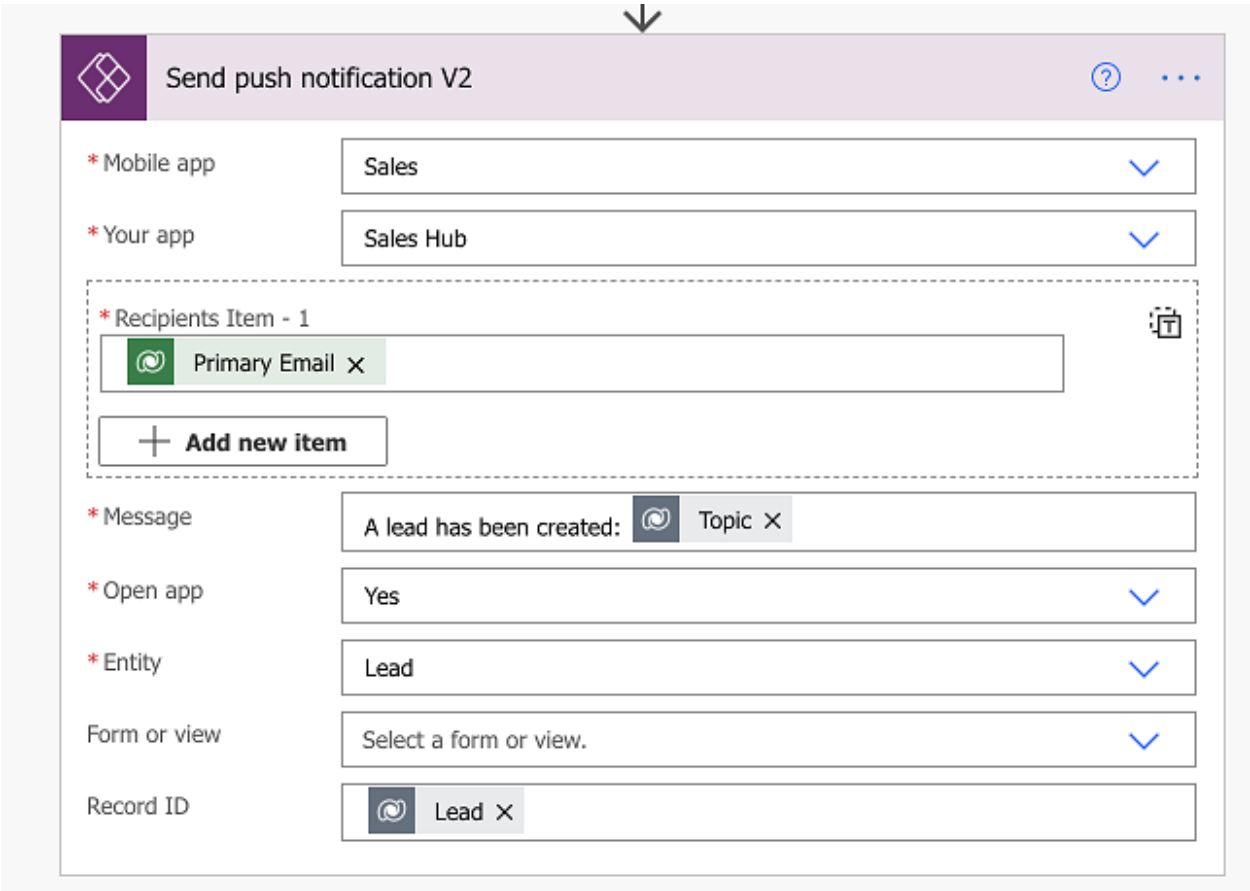
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System administrator More information: Predefined security roles for Sales

About push notifications

The Dynamics 365 Sales mobile app supports push notifications that can be created by using the **Send push notification V2** action with the following details:

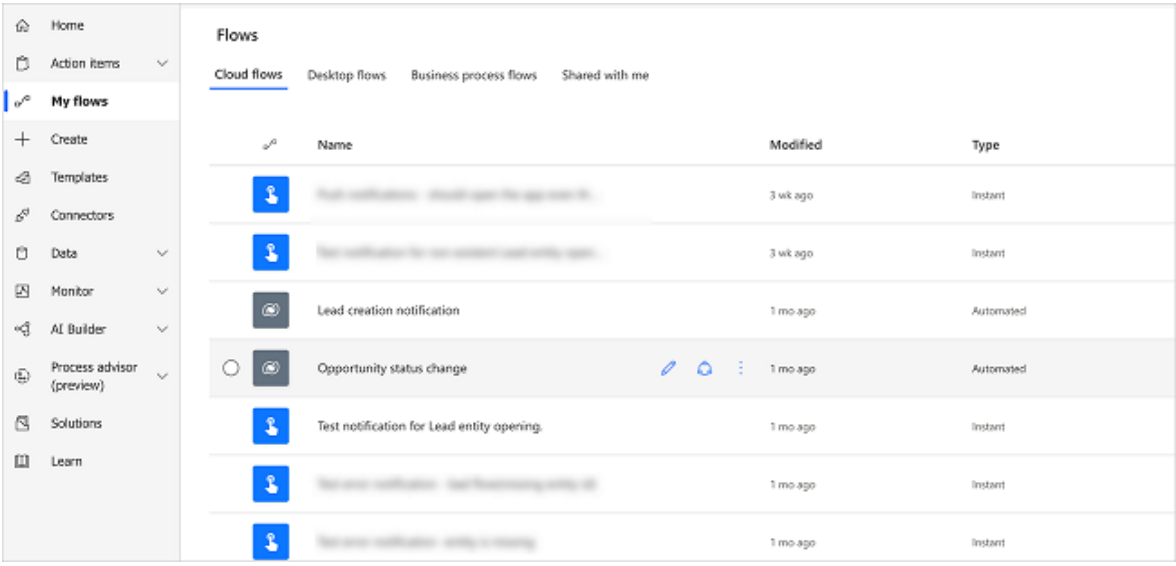
- **Mobile app**: Select **Sales**.
- **Your app**: Select the app that you want to set up the notification for.
- **Recipients Item-1**: Enter the user's email or the user's Microsoft Entra ID object ID.
- **Message**: Enter the notification message.
- **Open app**: Select **Yes**.
- **Entity**: Select which table the notification is for.
- **Record ID**: Enter the record ID. If you don't enter a record ID, the mobile app will open at the home screen when you tap the notification. If you enter the record ID, the mobile app will open the specified record when you tap the notification.



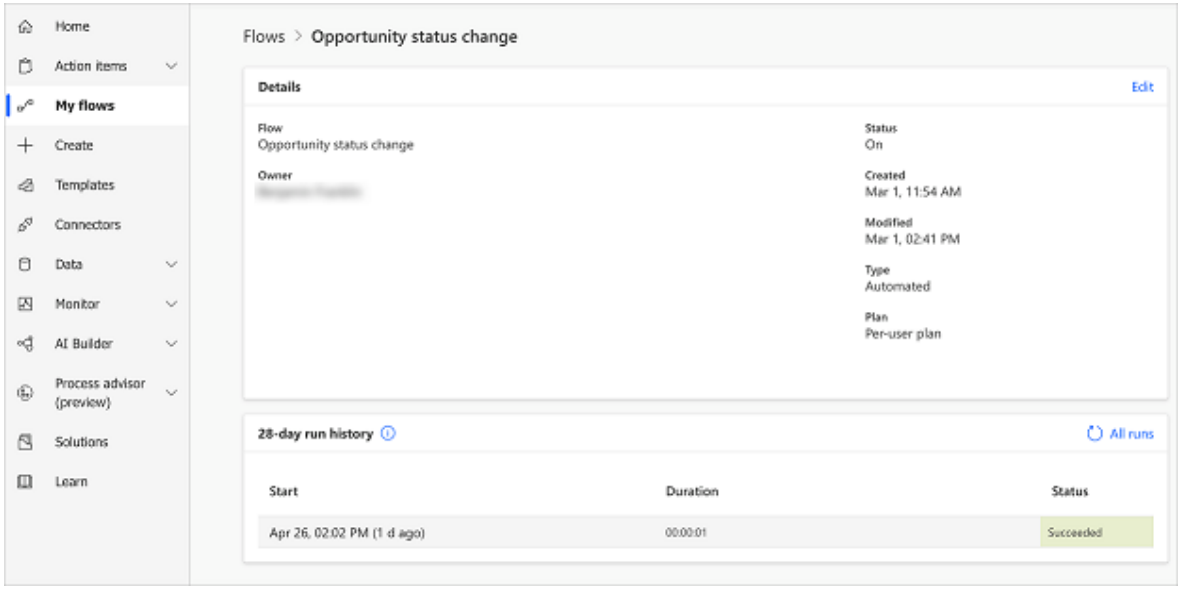
For information about creating push notifications, go to Create push notifications for Power Apps mobile.

Validate your flow

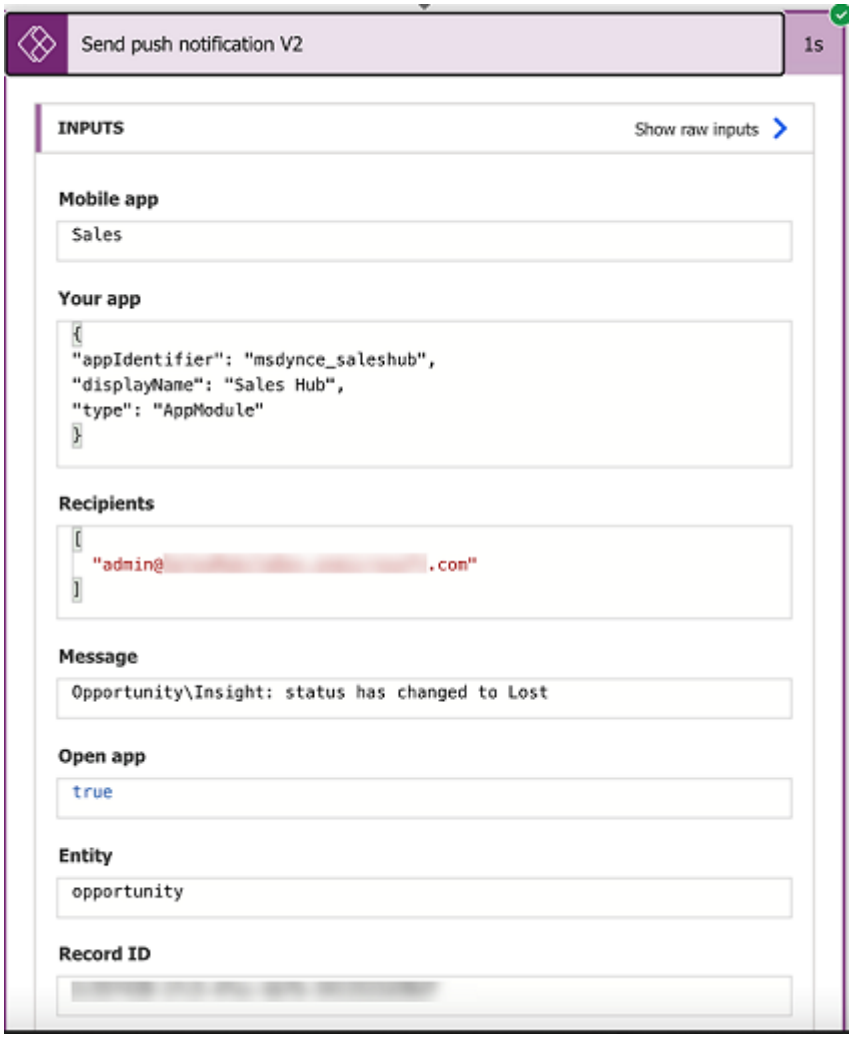
1. Sign in to Power Automate.
2. On the left pane, select **My flows**, and then select a flow.



3. From the run history, select an instance of the run.



4. Validate the inputs passed during the run.



See also

Use the Dynamics 365 Sales mobile app

Learn the basics

Configure tables for quick creation of records and activities

Article • 08/09/2022

The Dynamics 365 Sales mobile app supports quick creation of records and activities. As an administrator, you can control which records and activities are available for quick creation and which fields are available in the quick creation form.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System administrator More information: Predefined security roles for Sales

Enable a table or an activity for quick creation

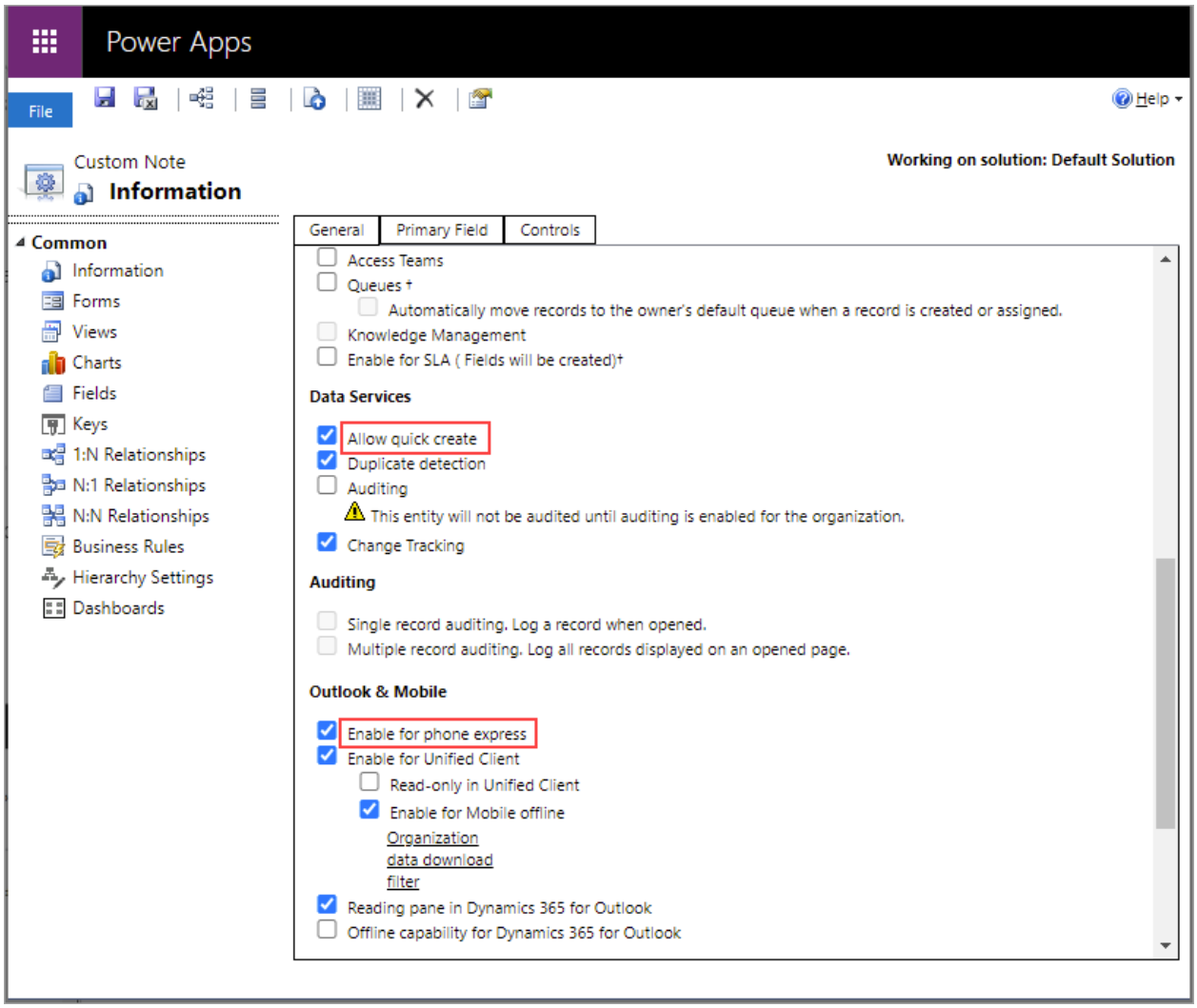
A table or activity should have the following properties to be available in the quick creation list:

- Enabled for quick creation and visible in the mobile app
- Has a quick view form

Enabled for quick creation and visible in the mobile app

For a table or an activity to be available for quick creation and visible in the mobile app, ensure that the following properties are selected in the table or activity metadata:

- Allow quick create
- Enable for phone express



When you select the checkboxes, the following metadata properties are set:

- IsQuickCreateEnabled is set to true
- IsVisibleInMobile is set to true

Has a quick view form

Quick creation is enabled only for a table or activity that has a quick view form. More information: Create a quick view form

Control which fields are displayed in the quick creation form

Fields are obtained as an aggregation of the following:

- Fields from the table's or activity's main quick view form
- Fields that are ApplicationRequired (see RequiredLevel)

Supported field types

Currently, quick creation supports the following field types:

- String
- DateTime
- Money
- Integer
- Picklist
- Lookup
- Customer
- Memo
- Generic Text

See also

Use the Dynamics 365 Sales mobile app
Learn the basics

Configure mobile apps with Microsoft Intune

Article • 02/27/2023

Microsoft Intune enables organizations to manage devices and applications. The Dynamics 365 Sales mobile applications for iOS and Android integrate with Intune. This integration enables you to manage the application on your devices, and to control security. Through configuration policies, you can control items like requiring an access pin, how data is handled by the application, and even encrypting application data when the app is not in use.

The Microsoft Dynamics 365 Sales mobile app allows you to get access to your important business information. You can view and interact with your dashboards and reports for all your organization's managed device and app business data. For more information about supported Intune apps, see Microsoft Intune protected apps.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	System administrator More information: Predefined security roles for Sales

General mobile device management configuration

This article assumes that Intune is configured properly and you have devices enrolled with Intune. The article is not meant as a full configuration guide for Microsoft Intune. For more information on Intune, see What is Intune?.

Microsoft Intune can co-exist with Mobile Device Management (MDM) within Microsoft 365. If you're using MDM, the device will show as enrolled with MDM, but is available to manage in Intune.

Before end users can use the Dynamics 365 Sales mobile app on their devices, an Intune admin must add the app to Intune and also assign the app to end users.

Step 1: Add the Dynamics 365 Sales mobile app to Intune

To add the Dynamics 365 Sales mobile app to Intune, use the steps provided in the following topics:

- Add iOS store apps to Microsoft Intune
- Add Android store apps to Microsoft Intune

Step 2: Assign the app to your end users

After you've added the Dynamics 365 Sales mobile app to Microsoft Intune, you can assign the app to users and devices. It's important to note that you can assign an app to a device whether or not the device is managed by Intune.

To assign the Dynamics 365 Sales mobile app to users and devices, use the steps provided in Assign apps to groups with Microsoft Intune.

Step 3: Create and assign app protection policies

App protection policies (APP) are rules that ensure an organization's data remains safe or contained in a managed app. A policy can be a rule that is enforced when the user attempts to access or move "corporate" data, or a set of actions that are prohibited or monitored when the user is inside the app. A managed app is an app that has app protection policies applied to it, and can be managed by Intune.

Mobile Application Management (MAM) app protection policies allows you to manage and protect your organization's data within an application. With MAM without enrollment (MAM-WE), a work or school-related app that contains sensitive data can be managed on almost any device, including personal devices in bring-your-own-device (BYOD) scenarios. For more information, see App protection policies overview.

To create and assign an app protection policy for the Dynamics 365 Sales mobile app, use the steps provided in How to create and assign app protection policies.

Step 4: Use the application on a device

Managed apps are apps that your company support can set up to help protect company data that you can access in that app. When you access company data in a managed app on your device, you may notice that the app works a little differently than what you expect. For example, you might not be able to copy and paste protected company data, or you might not be able to save that data to certain locations.

To understand how your end users can use the Dynamics 365 Sales mobile app on their device, review the steps provided in the following articles:

- Use managed apps on your iOS device
- Use managed apps on your Android device

See also

How to create and assign app protection policies

Resources for seller

Contains topics that describe how to do common sales tasks in Dynamics 365 Sales.

Basics

QUICKSTART

Overview of Sales and Sales Hub

Learn the basics

Gain insights with dashboards

Assign or share records

Track and manage activities

Work with business processes

Set personal options

Sales premium

CONCEPT

What is the Sales accelerator?

Use the assistant to guide customer communications

Prioritize leads through scores

Prioritize opportunities through scores

Overview of Conversation Intelligence

Project accurate revenue with sales forecasting

View customer activity history

Sales Copilot

CONCEPT

Sales Copilot overview

Use Sales Copilot

HOW-TO GUIDE

Compose and send email messages using Copilot

View and copy email summary

Keep track of your customers

HOW-TO GUIDE

Work with accounts and contacts

Deactivate or activate an account or contact

Add an appointment, email, phone call, note, or task activity to the timeline

Send email using the enhanced email experience

Understand organization charts

Increase sales

HOW-TO GUIDE

Understand the sales process

Create or edit leads

Qualify or convert leads

Reopen leads

Create or edit opportunities

Close opportunities as won or lost

Create and work with collateral

HOW-TO GUIDE

Create or edit quotes

Create or edit orders

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Manage data

HOW-TO GUIDE

Import data

Export data to Excel

Merge duplicate records

Search options in Microsoft Dataverse

Reports and printing

OVERVIEW

Work with reports

Print quote, invoice, or other records

Create a marketing campaign

HOW-TO GUIDE

Create a marketing list using in-app marketing

Create a quick campaign

Add assets to a campaign

Create or edit a campaign

Add an activity to a campaign

Track a marketing campaign response

Dynamics 365 Sales mobile app

HOW-TO GUIDE

Overview of the mobile app

Install the app on iOS and Android

Use the mobile app

Learn the basics

Work with Outlook

HOW-TO GUIDE

Dynamics 365 App for Outlook User Guide

Get better sales intelligence

CONCEPT

Boost sales with Versium Predict

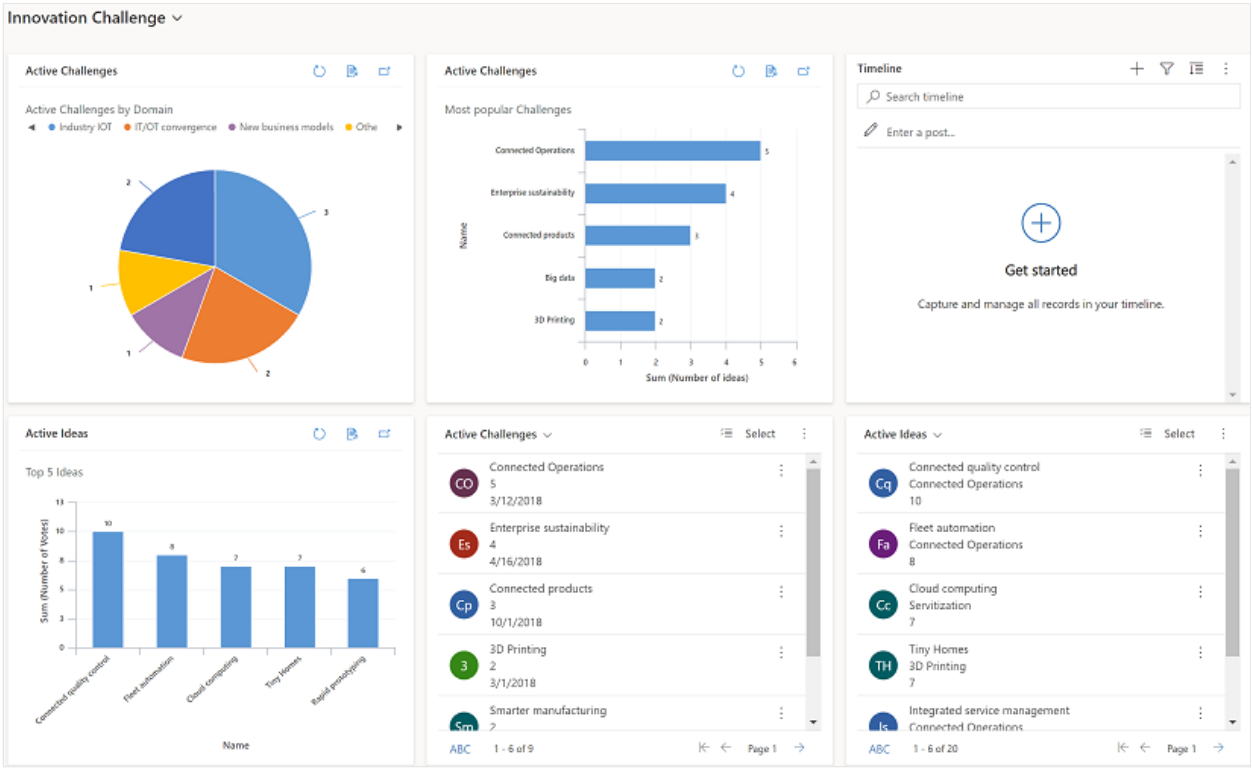
Get sales Insights, powered by InsideView

Track your progress with dashboards and charts

Article • 04/08/2023

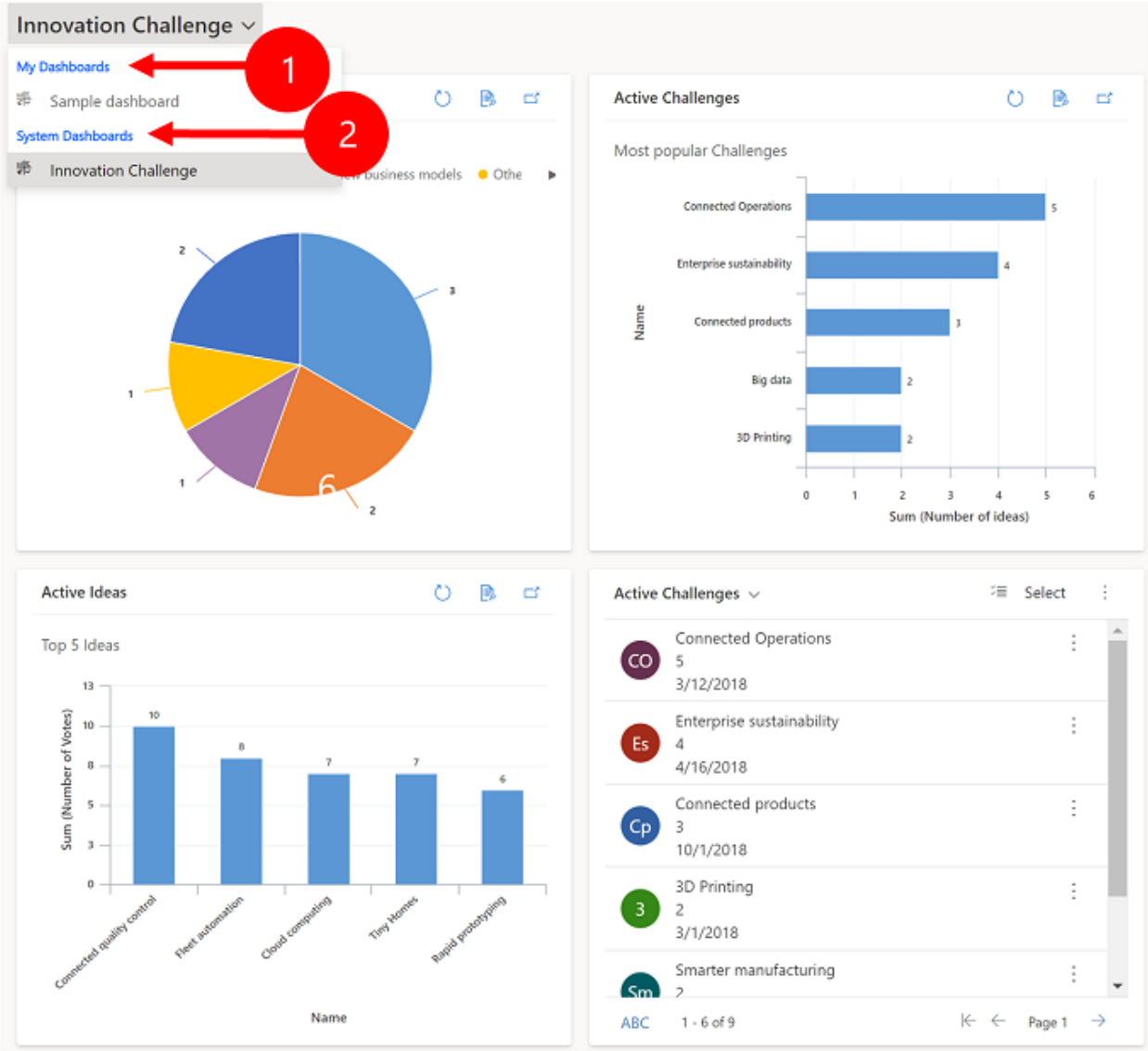
A dashboard is made up of a collection of easy-to-read charts and graphs that provide visual representation of filtered app data. The interactive charts and graphs on a dashboard display important data that gives you a 360-degree view of your business and helps you to understand key performance indicators (KPI).

Dashboards are available for all row types. Charts are available on the Dashboard page, Grid page, Associated Home page, and Edit Form page.



View dashboards

There are two types of dashboards, **System Dashboards** and **My Dashboards**.

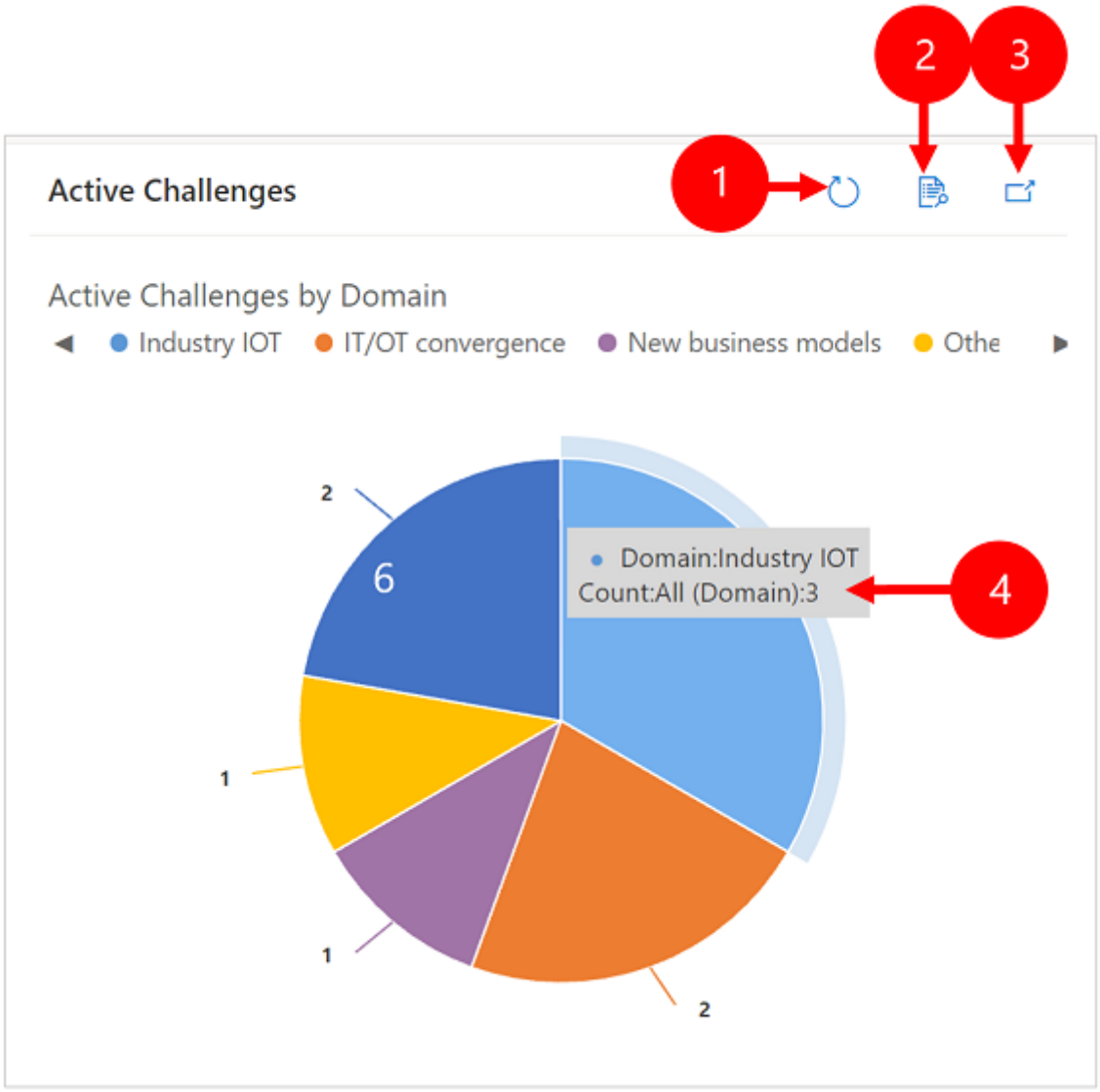


Legend:

1. **My Dashboards**: Personal dashboards that can only be seen by the user who creates them. The user can also share their personal dashboard with other users if the user has sharing privileges for their security role.

2. **System Dashboards**: Created by your administrator. By default, these dashboards are visible to all users.

Expand, refresh, and view rows

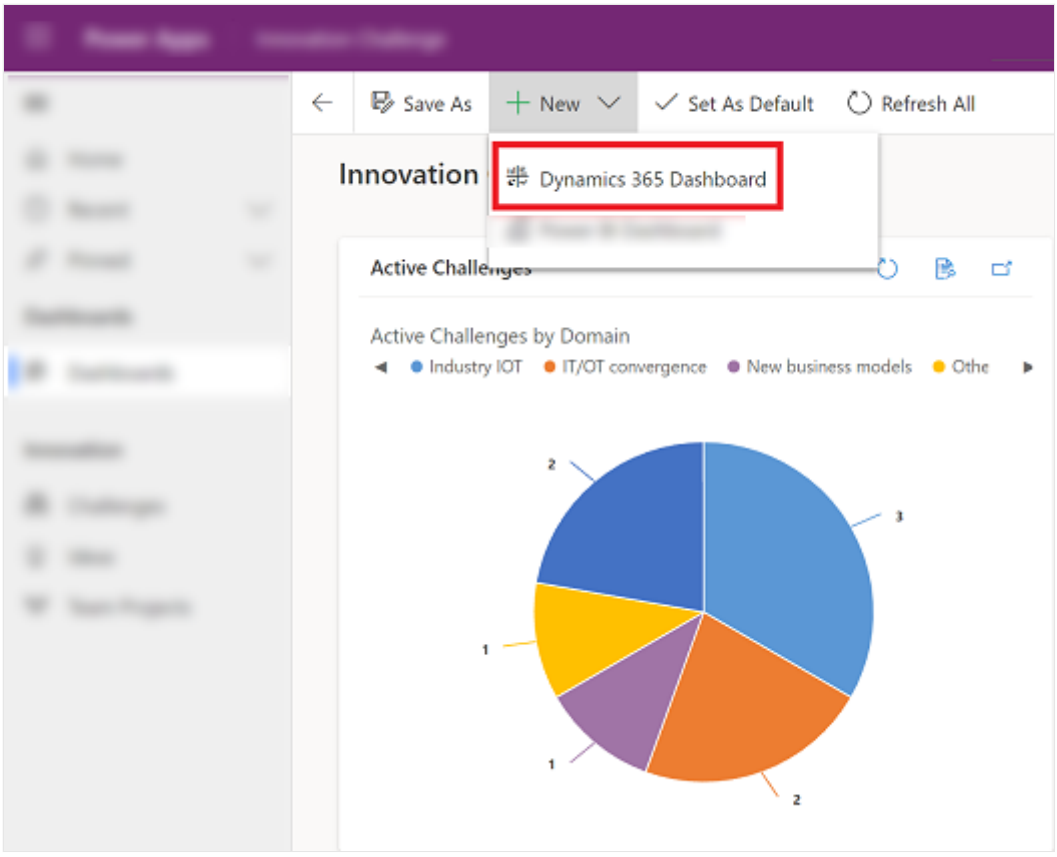


Legend:

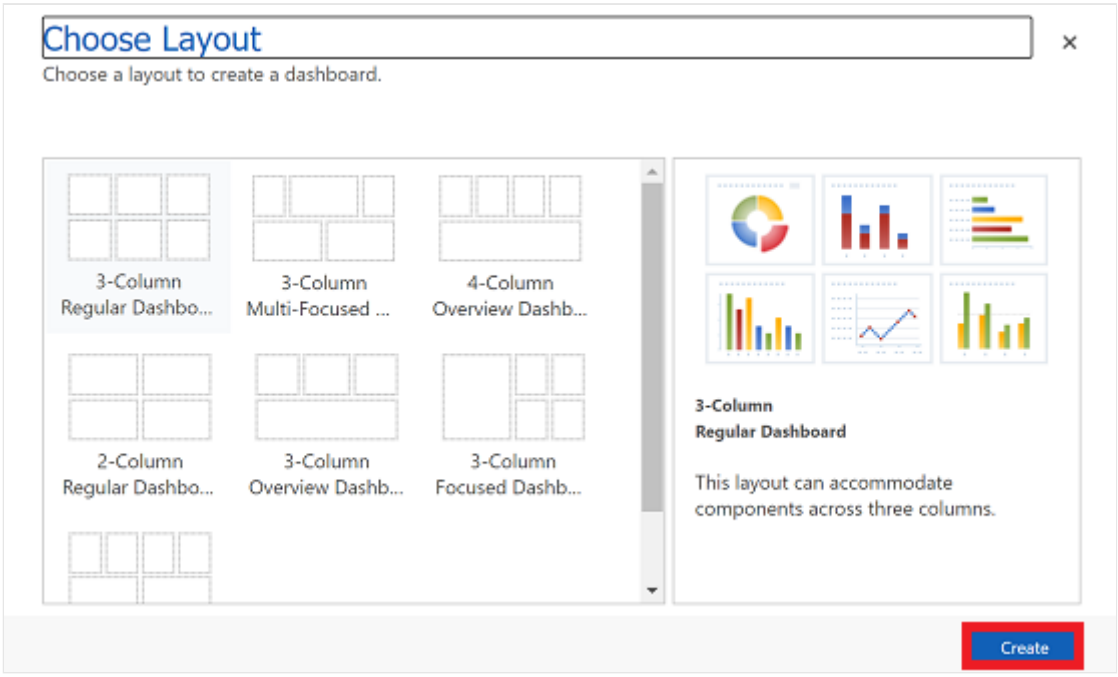
1. **Refresh**: Refreshes the rows in the chart.
2. **View Records**: See the chart and the underlying rows together. This opens the chart for the corresponding rows.
3. **Expand Chart**: Shows the chart in full screen mode. The chart is still interactive in expanded mode.
4. **Tool tips**: Hover your mouse over the chart to see a tooltip that provides quick information about that area of the chart.

Create a dashboard with charts

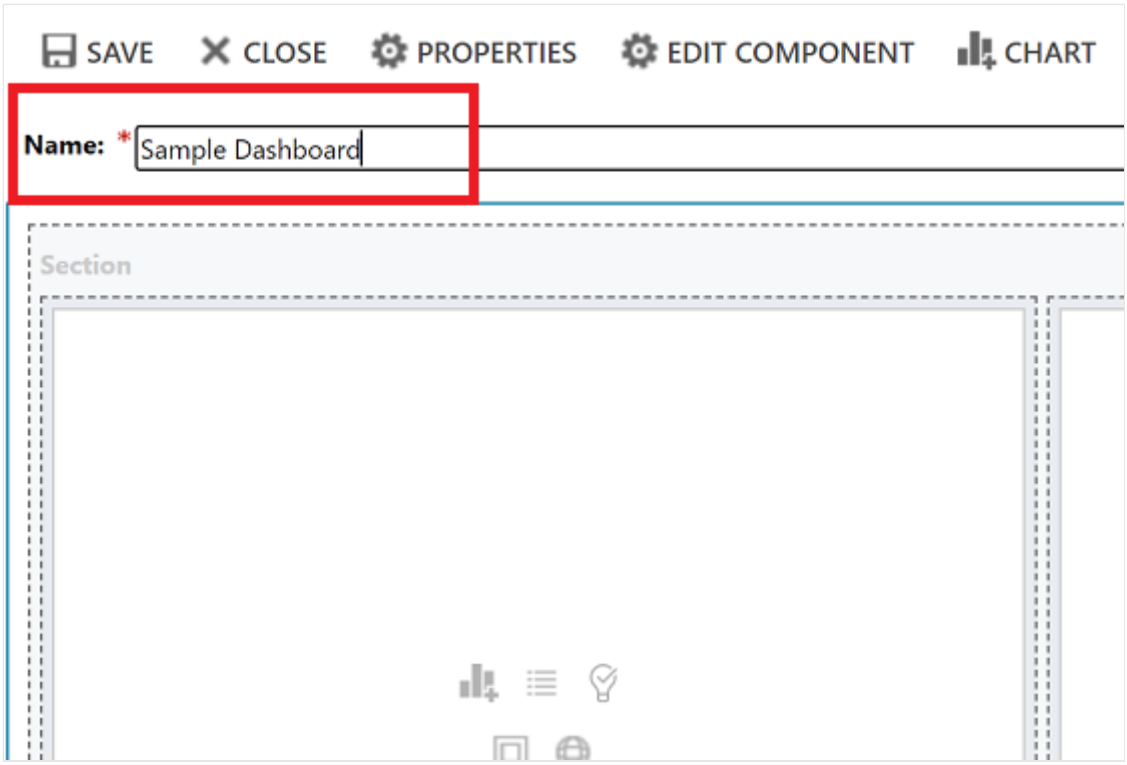
1. Go to **Dashboards** and then on the command bar select **New** > **Dynamics 365 Dashboard**.



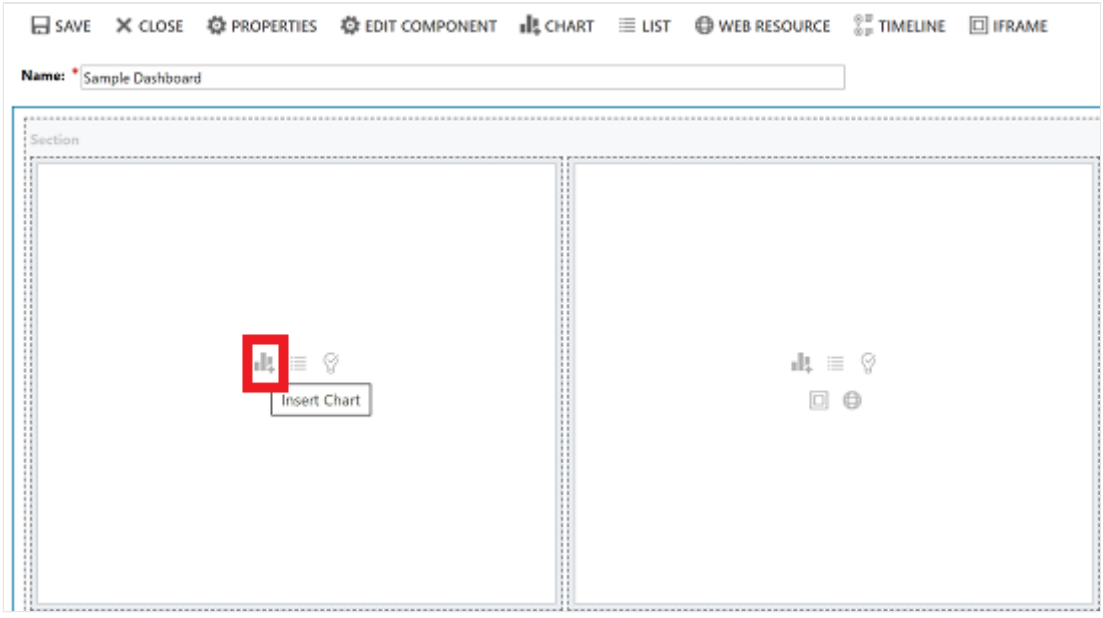
2. Choose a layout and then select **Create**. This is how your dashboard displays the charts, graphics, and numbers.



3. Type a name for the dashboard.

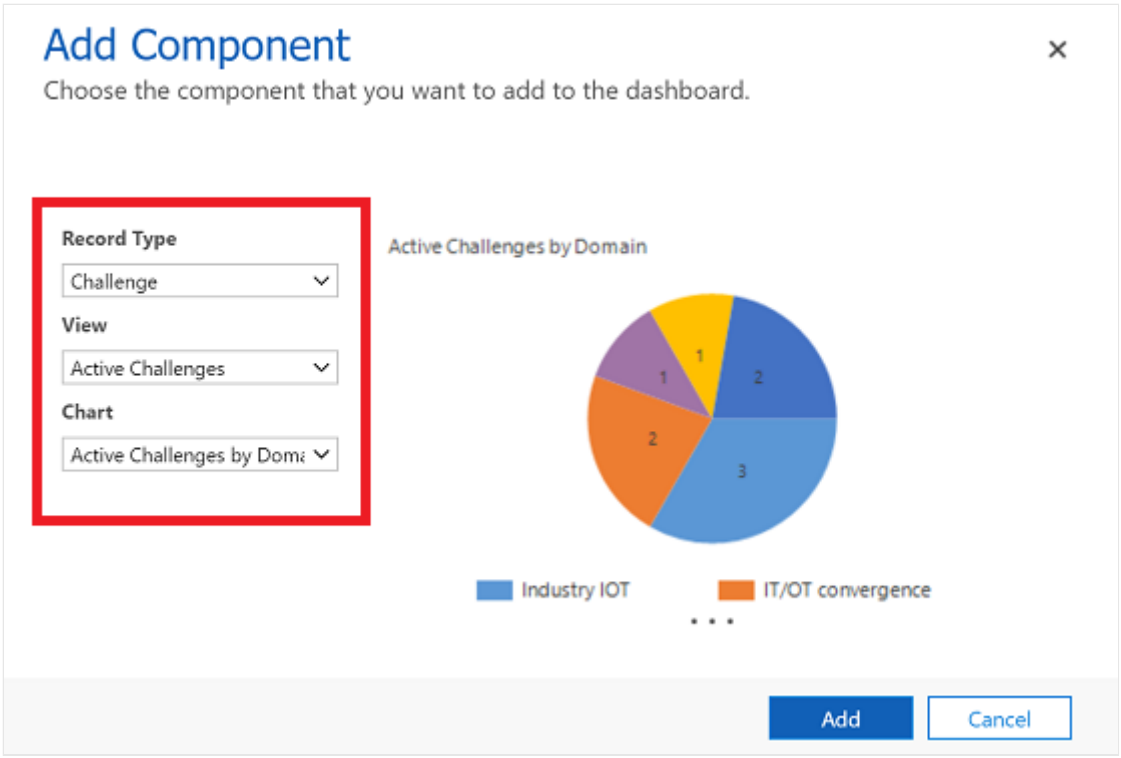


4. Add what you want to each area of your dashboard. For example, let's add a chart.



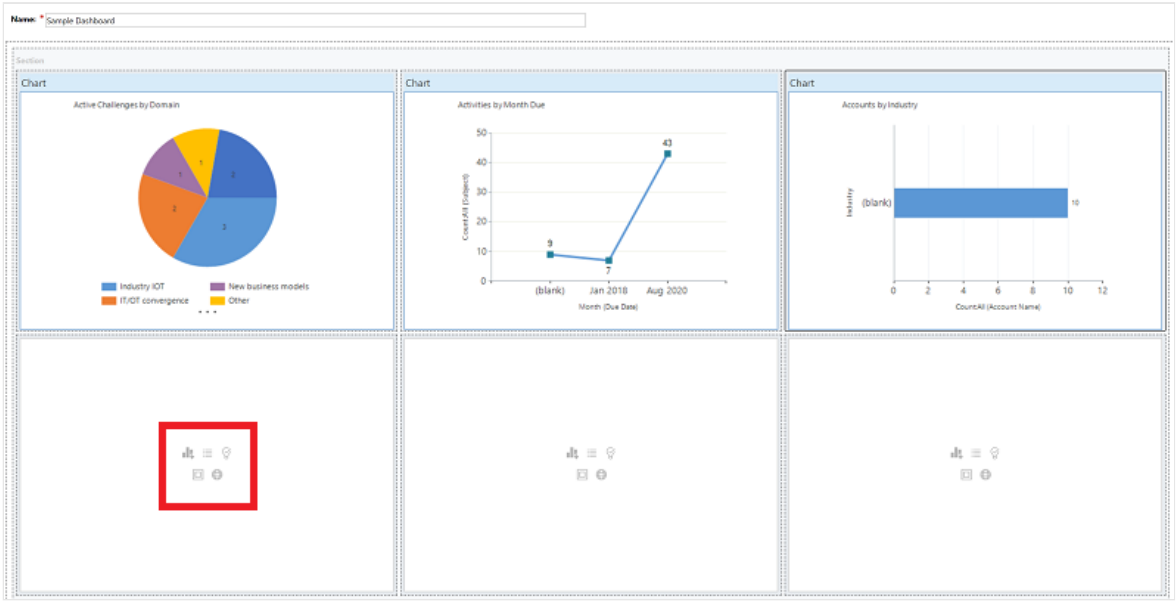
5. On the **Add Component** dialog box, select your options.

	Options
Row Type	Select a row.
View	Select a view for the row.
Chart	Select the type of chart that you want use.



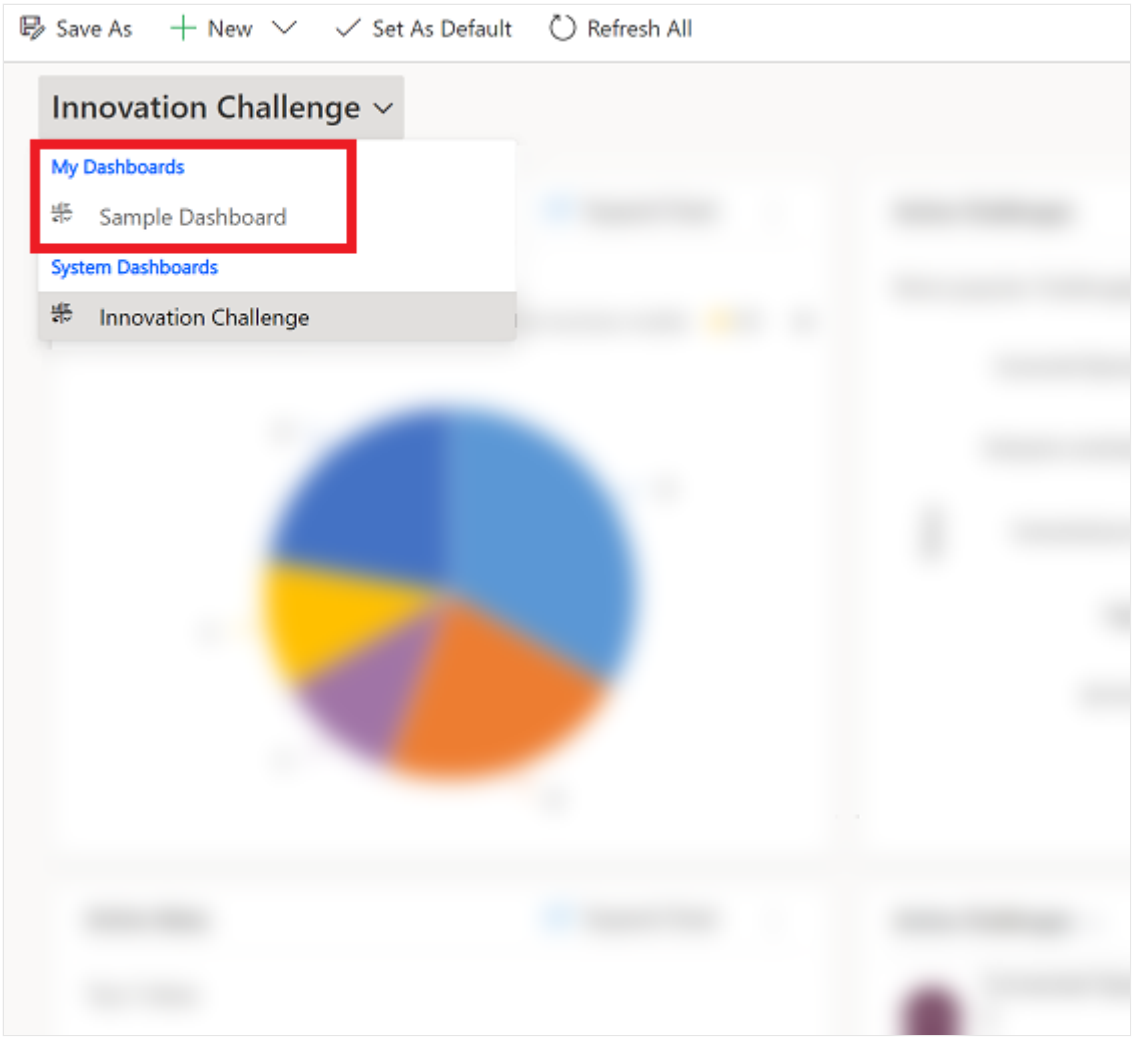
6. When you're done adding each component, select **Add**.

7. Continue adding components to the dashboard. You can add up to six components.



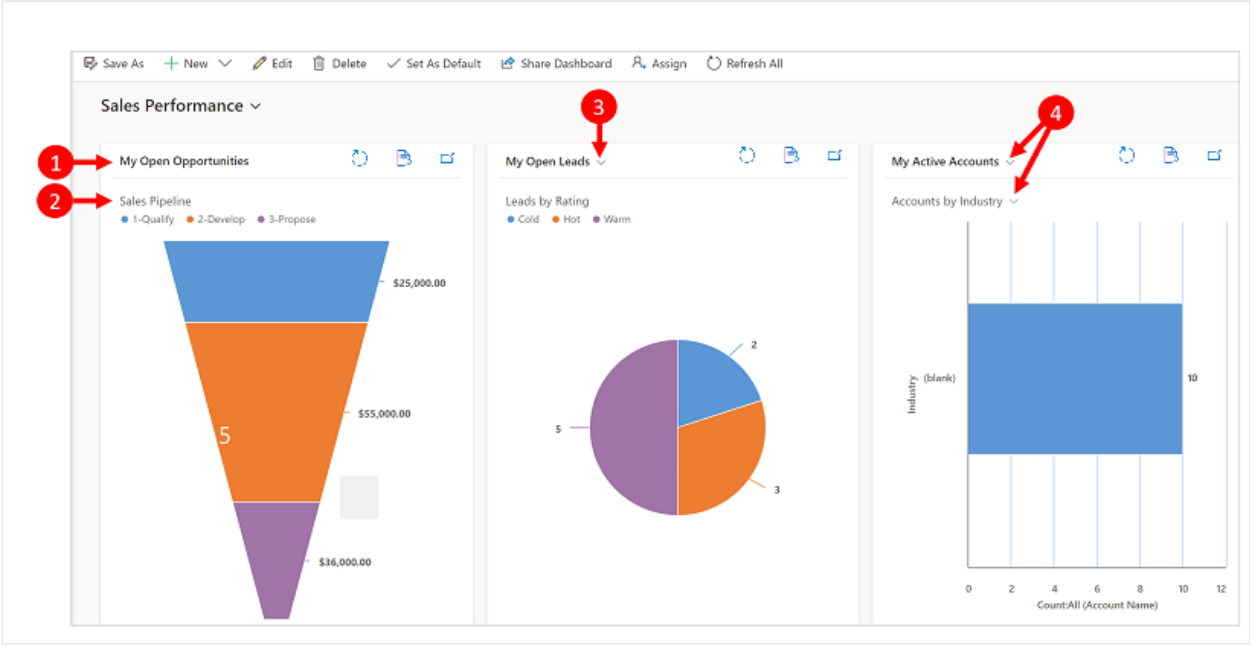
8. When you're done, on the command bar select **Save**.

9. The dashboard that you created will appear in the drop-down menu under **My Dashboards**.



Edit the properties of a chart

When you add a chart on a dashboard, you can edit the chart properties and modify the chart view and display options. The following screenshot shows how a chart will display based on the chart properties that you selected.

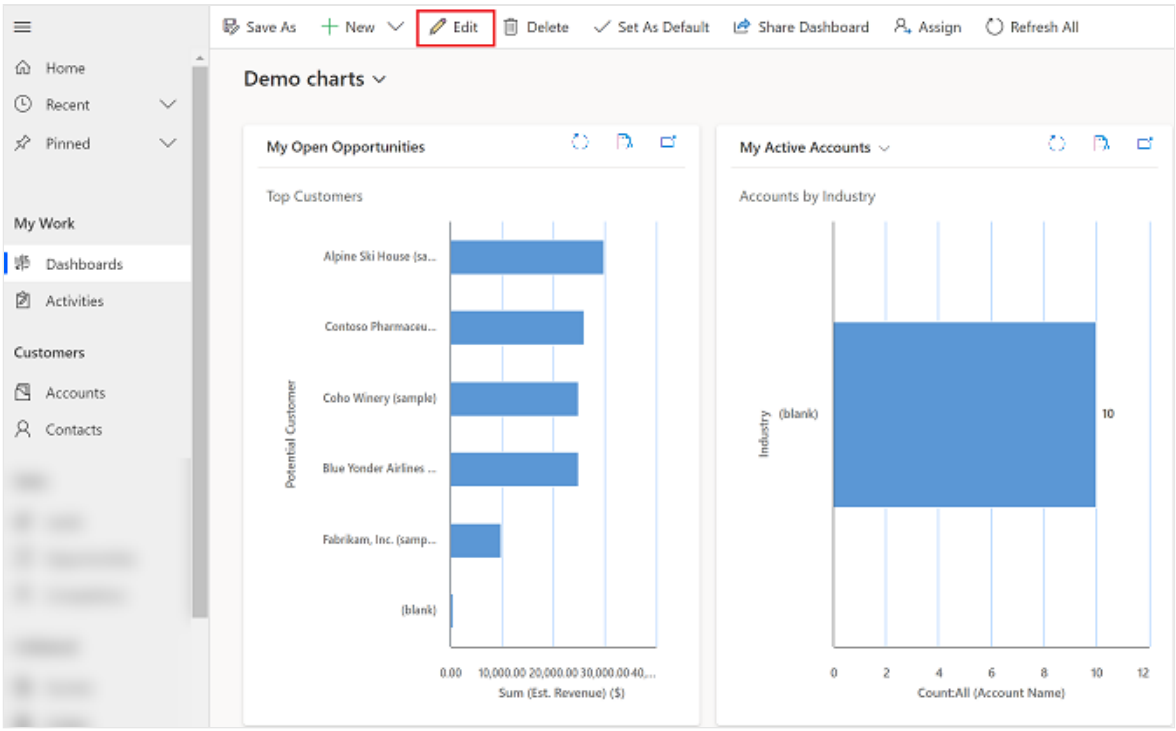


Legend:

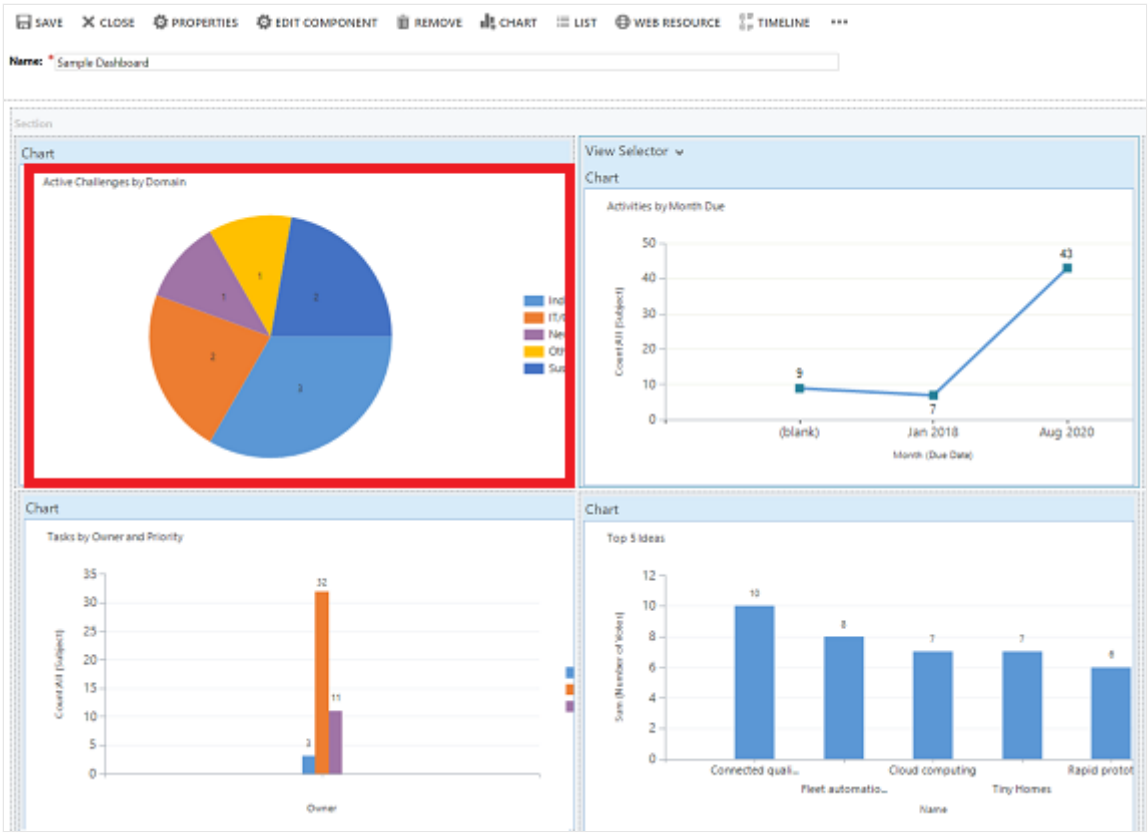
1. View title with **View Selector** turned off. You cannot toggle between different views. You only see the title.
2. Chart title with **Display Chart Selection** turned off. You cannot toggle between different charts for the table. You only see the title.
3. Only **View Selector** is turned on. You can toggle to a different view and the chart will render based on the underlying data for the selected view.
4. Both **View Selector** and **Display Chart Selection** is turned on. You can toggle to a different view and chart for the table.

To edit the chart properties, you need to edit the dashboard that the chart is in. If you're in the process of adding a new chart on a dashboard, then you're already in edit mode and can skip to step 2.

1. Go to the dashboard that the chart is in and on the command bar, select **Edit**.

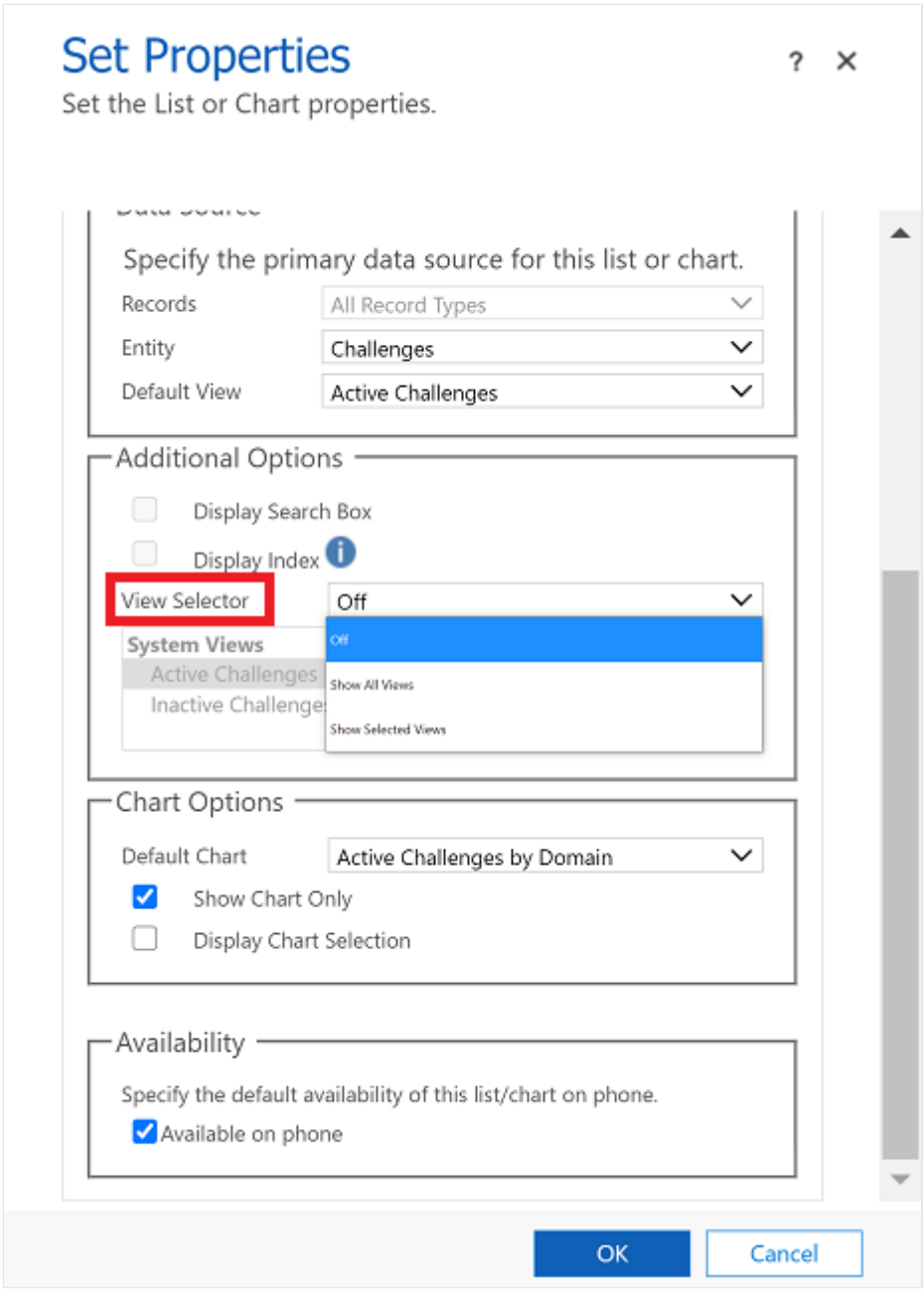


2. Double-select the chart that you want to edit.

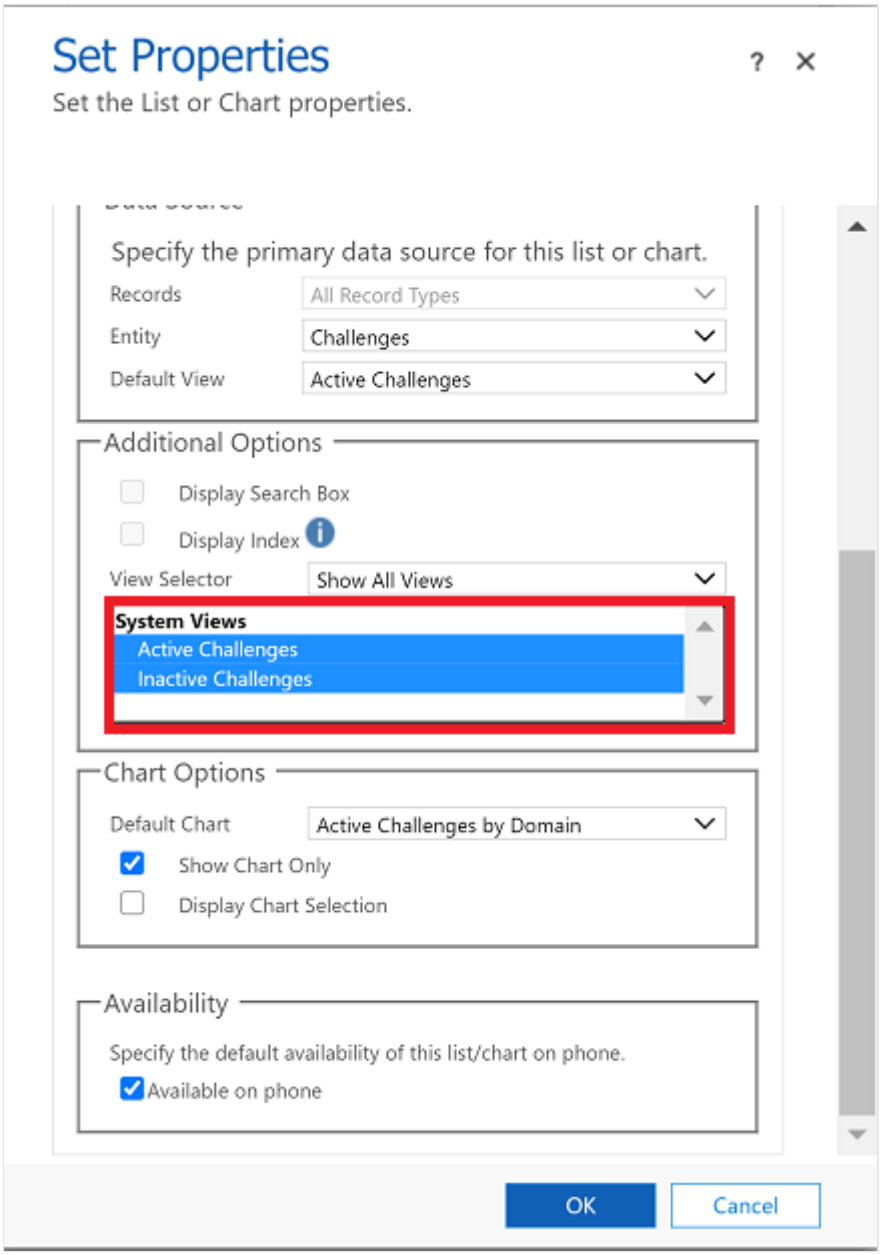


3. On the **Set Properties** dialog box, select a **View Selector** option.

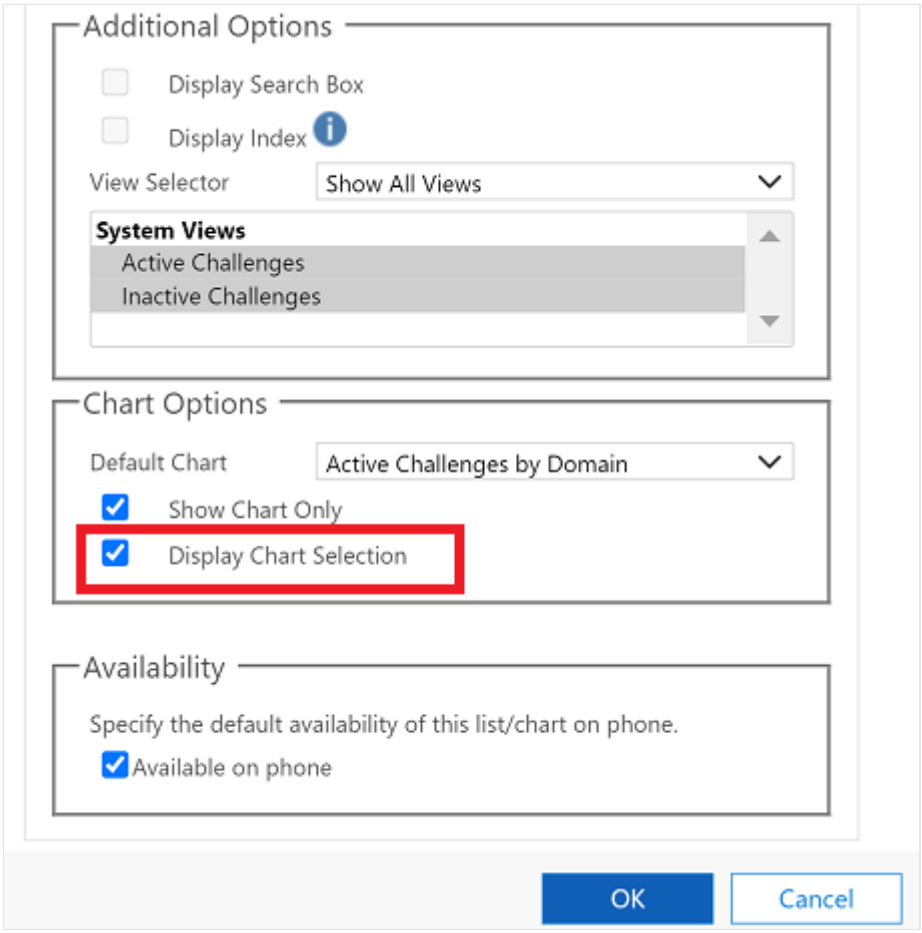
- **Off**: Do not show view selector, show the view title only.
- **Show All Views**: Show the view selector on chart and display all views in the view selector.
- **Show Selected Views**: Show the view selector on chart and display only the selected views in the view selector.



4. Once **View Selector** is turned on, you can select different views to see how the chart renders with different data associated with the view.



5. Select the **Display Chart Selection** check box to show the chart selector. When chart selector is enabled, you can toggle to a different chart for the table and see different visualizations of the data. If the box is unchecked, then you only see the chart title.



6. When you're done, select **OK**.

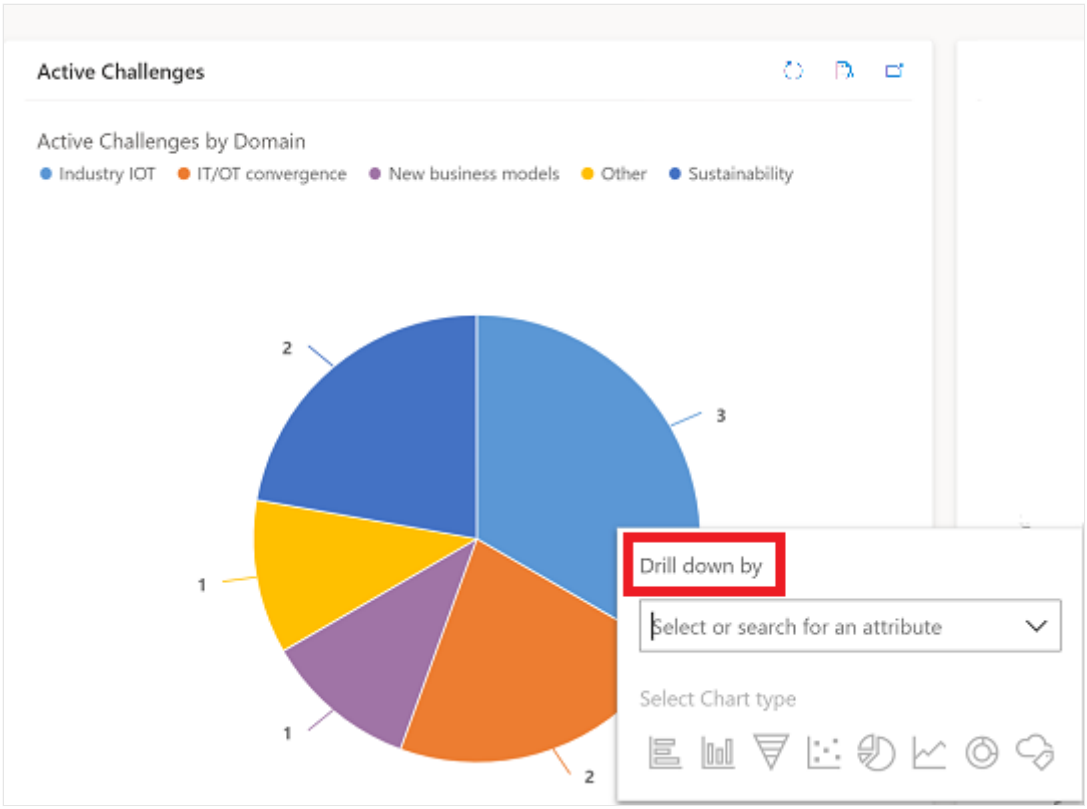
Drill-down in a chart

You can drill down into a segment on a chart and filter the data for that segment. For example, you can drill down on one segment of a chart and change the chart type as you drill down.

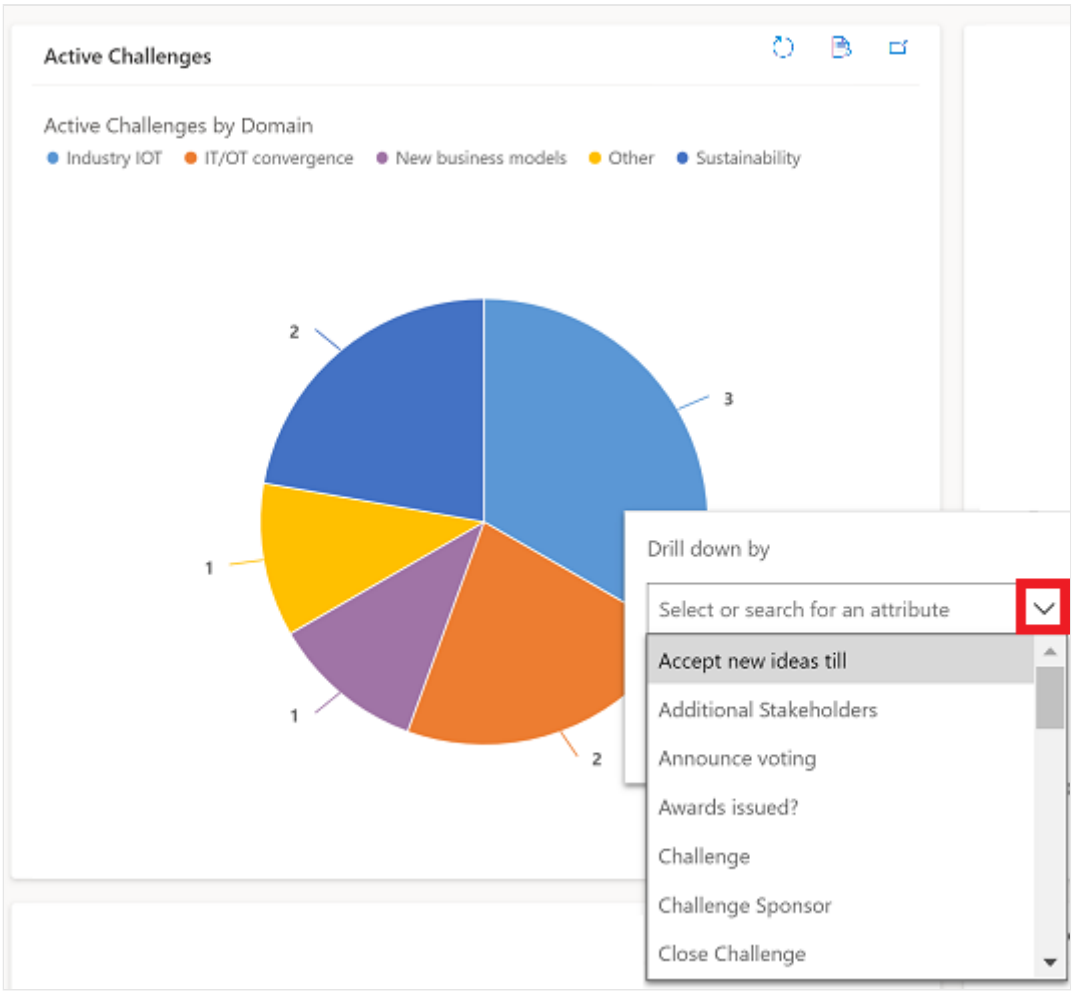
The chart drill-down feature is only available on the browser. It is not available on the mobile app for phones or tablets.

In the example below, let's further drill down into the chart.

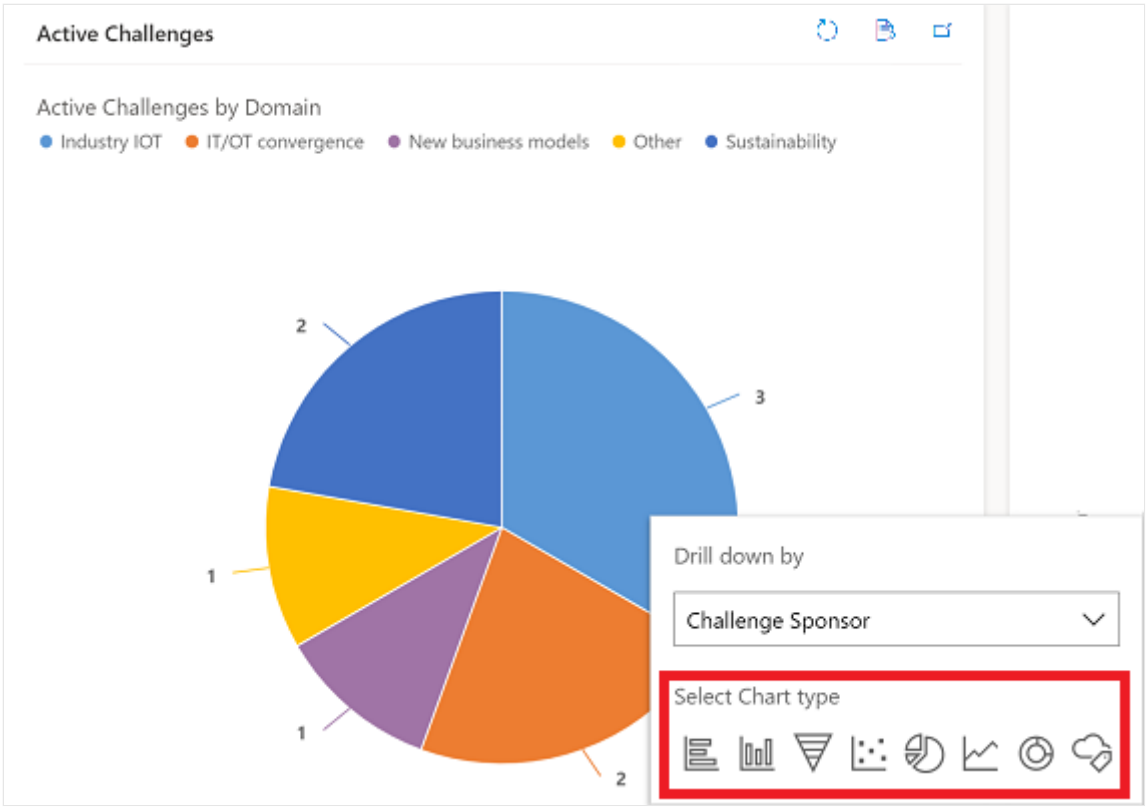
1. Select a data point on the chart to open the **Drill down by** dialog box.



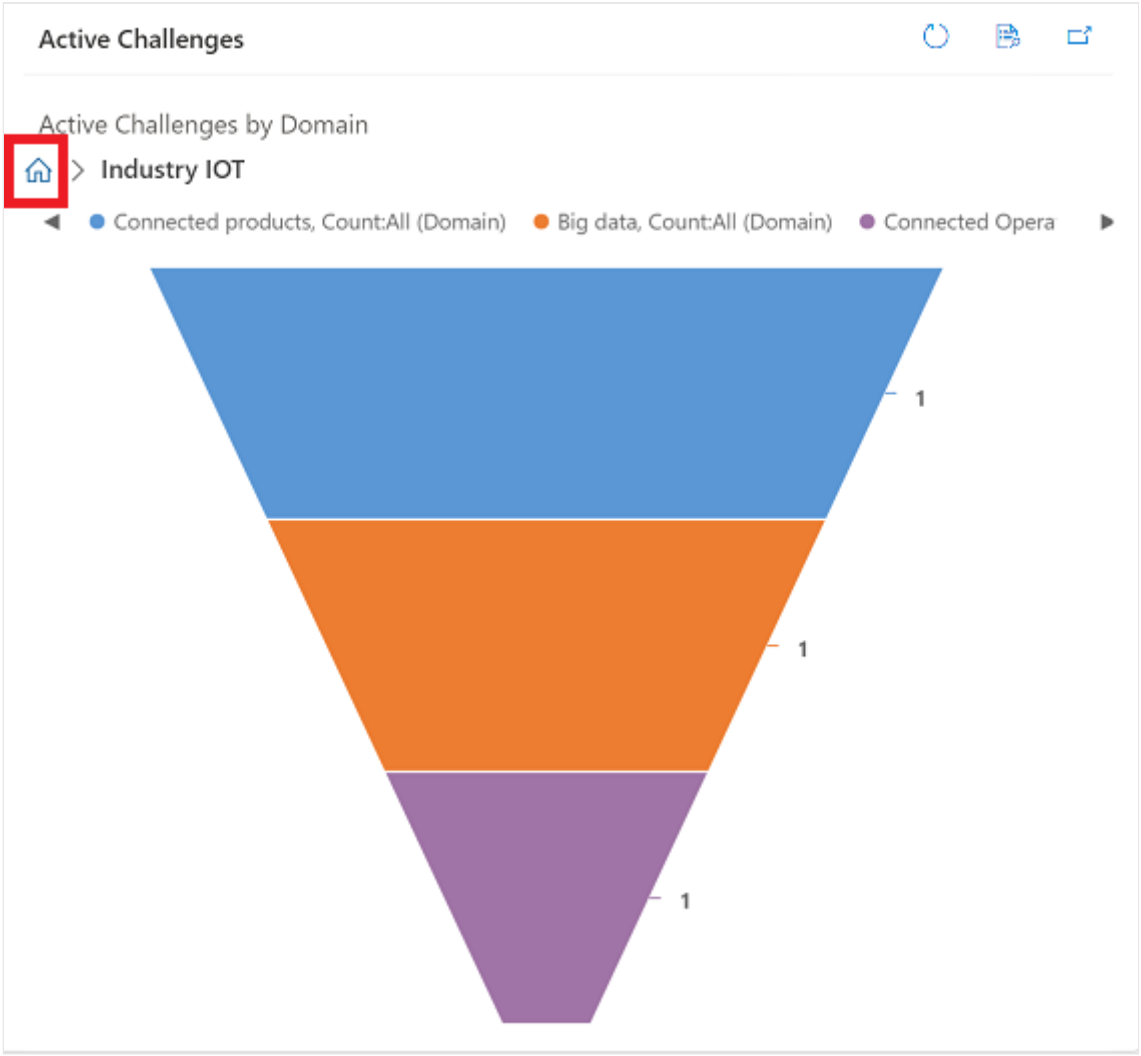
2. Select the drop-down menu and choose how you want to group the data.



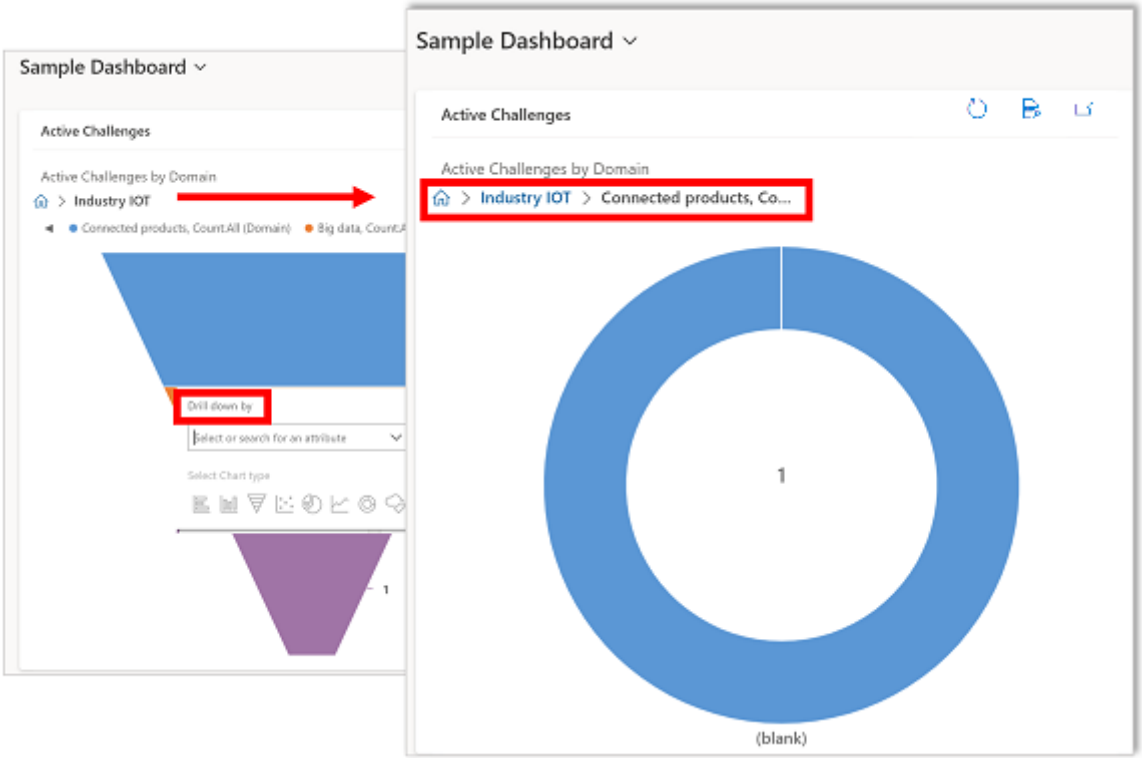
3. Select the type of chart that you want to see the drill-down data in.



4. The chart with the drilled-down data will show. The breadcrumbs at the top show the filter criteria of the drill-down data. You can select the breadcrumbs to go back home or to the previous screen.



You can continue drilling further into the chart data. As you drill down deeper, the breadcrumbs will expand and you can go back to the previous screen or select the Home button to go back to the Home screen.



Known issues

- In the chart designer, adding an order on certain calculated columns is not supported and will cause an error. The calculated columns causing this are using other calculated columns, a related table column, or a local column on the table.
- Chart displays zero values when there is no data. With Unified Interface for model-driven apps you can still select a chart with zero value and drill down in to the data. More information: Chart displays zero values when there is no data
- By design, charts in rollup column can't be displayed because rollup columns contain an aggregate value computed over the rows related to a specified row.
- Chart drill-down functionality is not available on charts in a subgrid or an associated grid.
- When you add a list control to a dashboard and switch the control to the **Power Apps Read-Only grid** control, you will see a blank tile on the dashboard because the **Power Apps Read-Only grid** control is not supported on dashboards. We recommend that you use **Power Apps grid** control.

Gain insights with dashboards

Article • 02/17/2022

Dashboards in Dynamics 365 Sales provide an overview of actionable business data that's viewable across the organization. Use dashboards to see important data at a glance.

Dashboards use views, lists, and charts to bring data that's meaningful to you to one place.

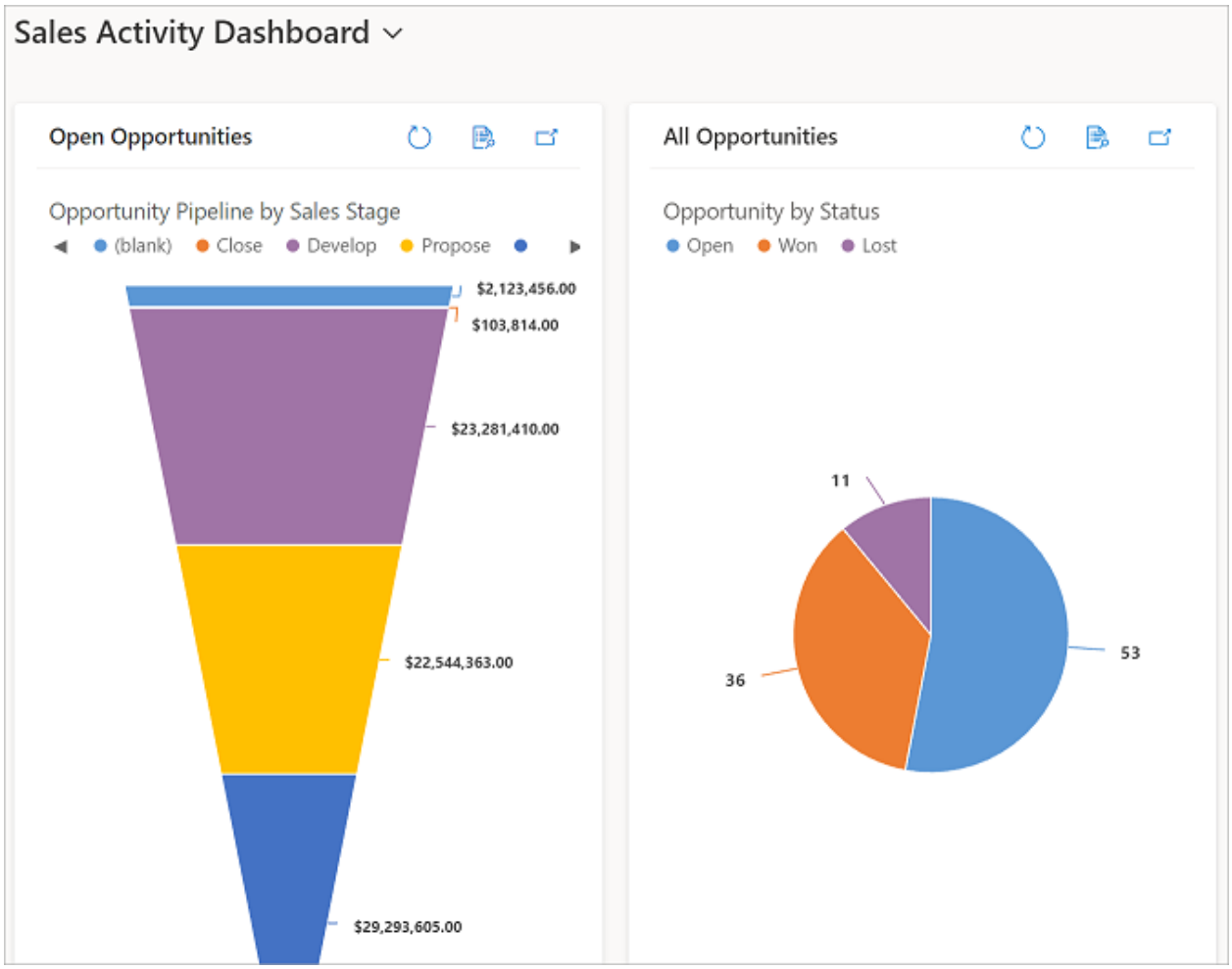
Where to find dashboards

To open dashboards, select **Dashboards** in the site map.

Dashboards in Sales Hub

Sales Hub comes with some prebuilt dashboards that you can use to quickly get insights on your sales data and team performance. The dashboards show daily work-related sales numbers, such as the activities you're working on, your sales pipeline, and your open opportunities and leads.

Sales reps or managers use the out-of-the-box Sales Pipeline chart to visualize the revenue for an opportunity based on each pipeline phase. More information: Understand the sales pipeline chart and its phases



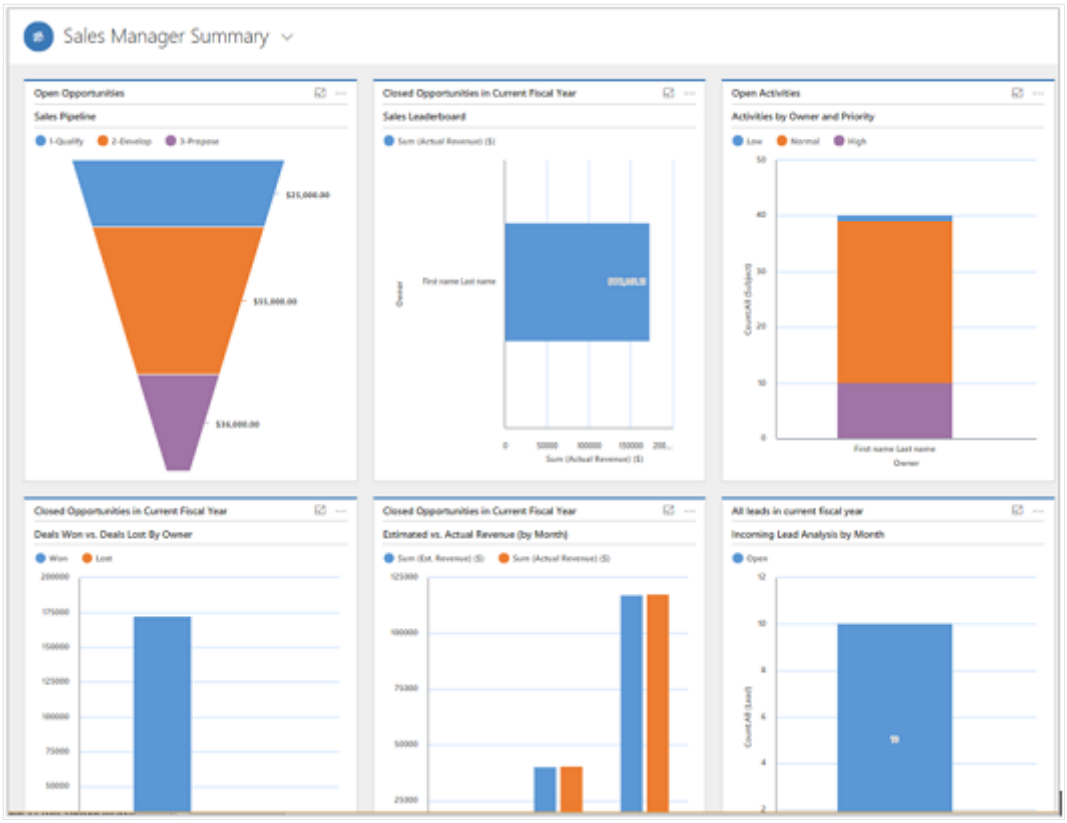
Dashboards in Sales Professional

Sales Professional comes with the following prebuilt dashboards that you can use to quickly get insights on your sales data and team performance.

Sales Manager Summary dashboard

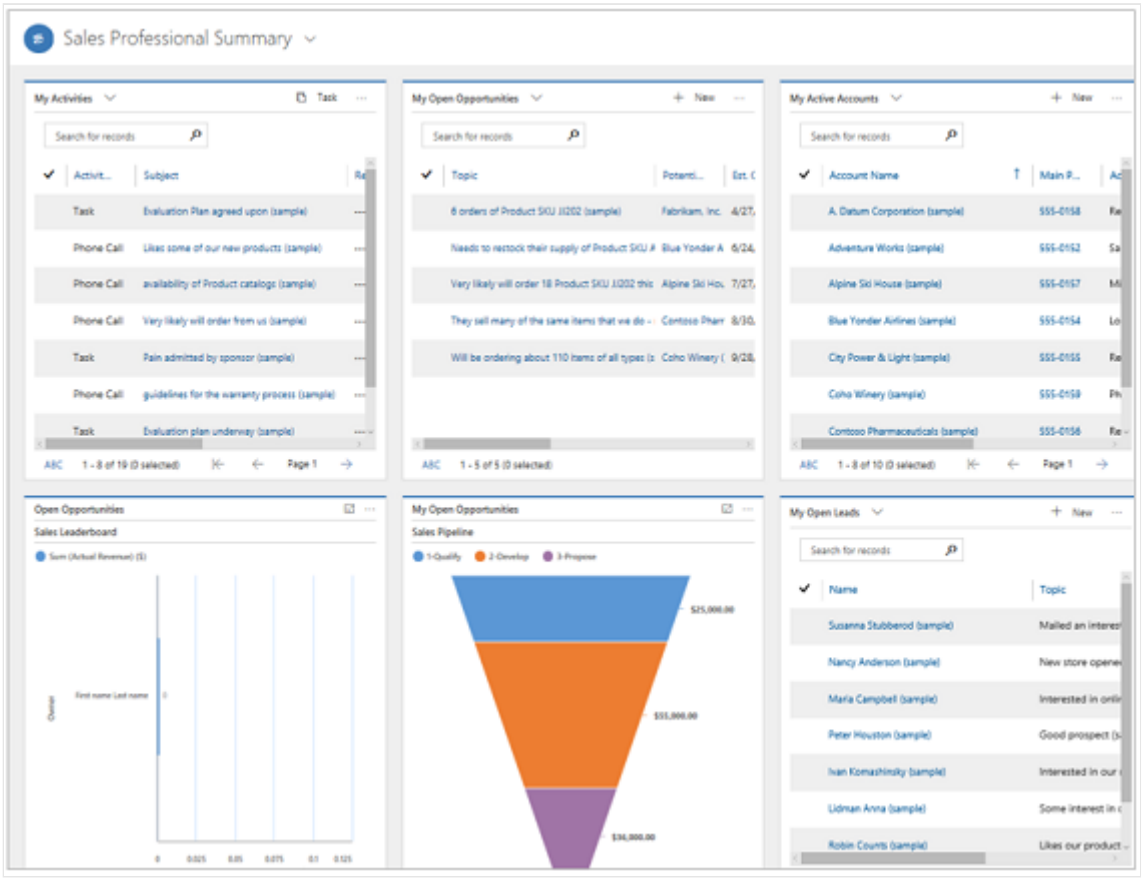
This dashboard shows data that helps sales managers get important insights on how their sales team is doing. The sales pipeline shows open opportunities in different stages.

The **Deals Won vs. Deals Lost** chart shows the number of opportunities won or lost by an owner. The dashboard also includes charts that show important financial data, such as estimated versus actual revenue by month.



Sales Professional Summary dashboard

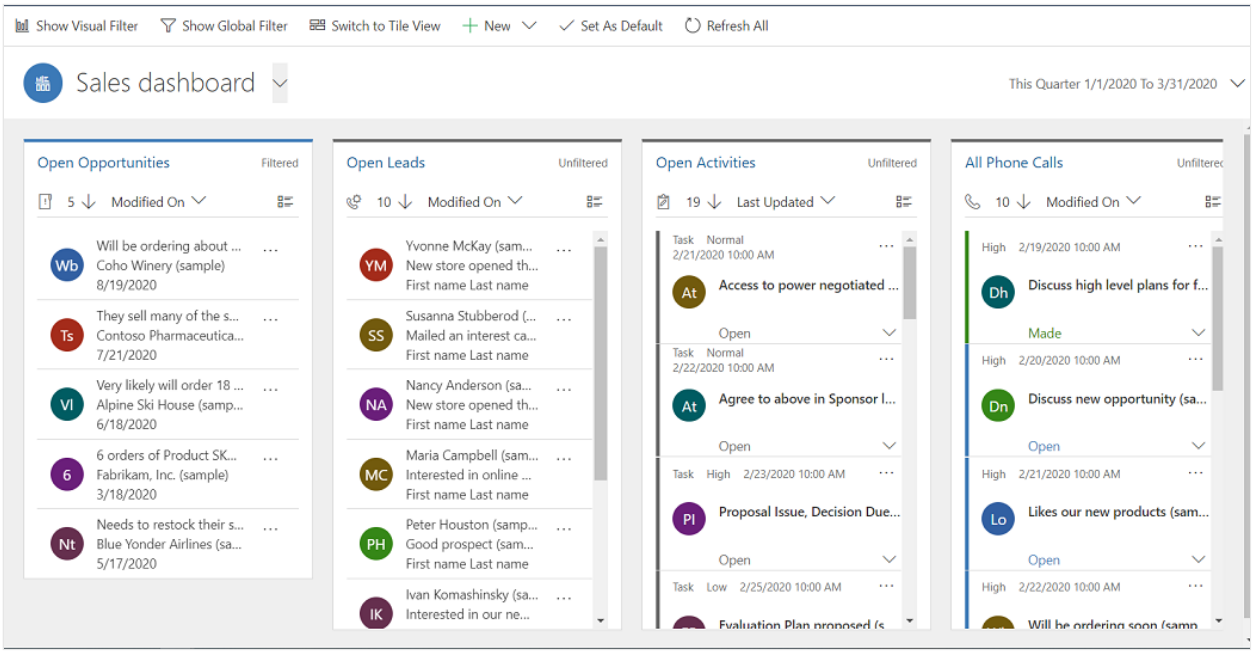
This dashboard shows daily work-related sales numbers, such as the activities you're working on, your sales pipeline, and your open opportunities and leads.



Sales dashboard

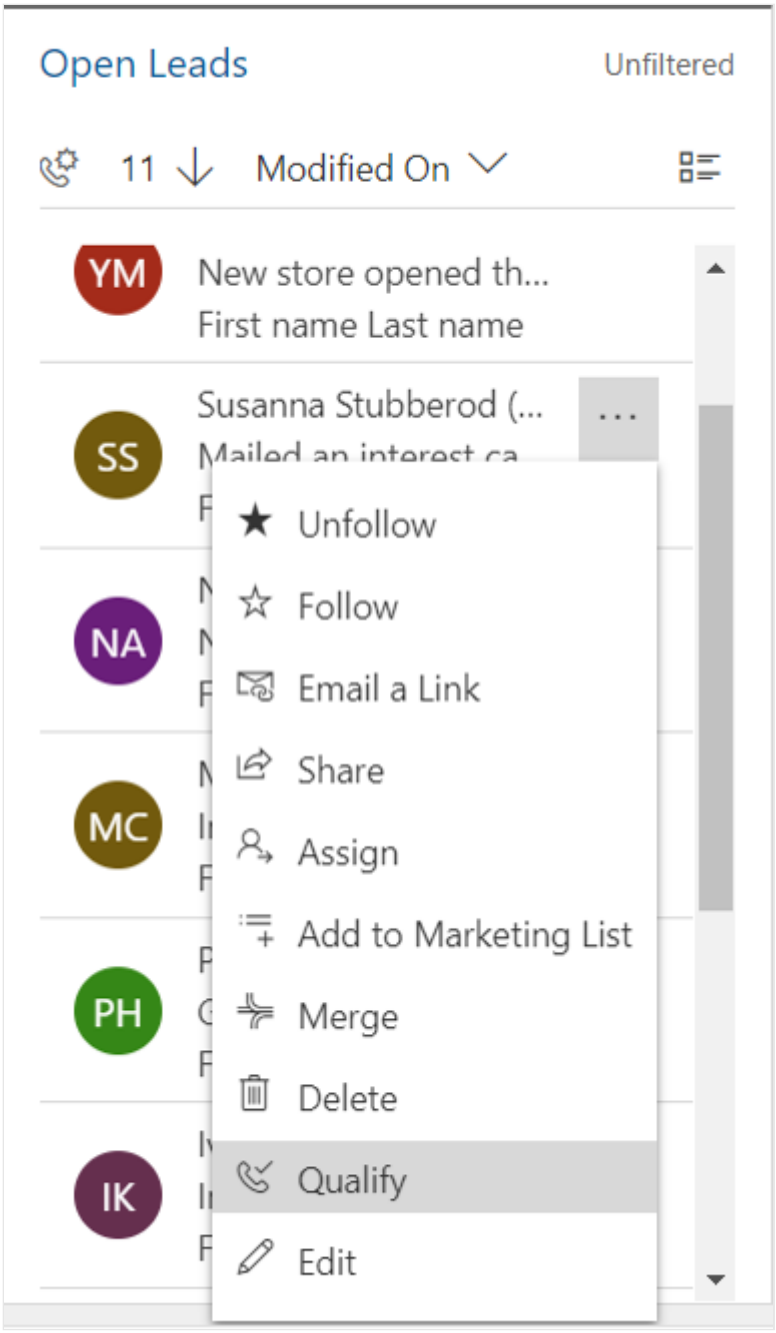
The interactive Sales dashboard helps you review information from various entities and act on it. You can use visual and global filters in the dashboard to quickly get to what's most important.

The Sales dashboard is a multi-stream dashboard, where each stream shows a view of an entity.



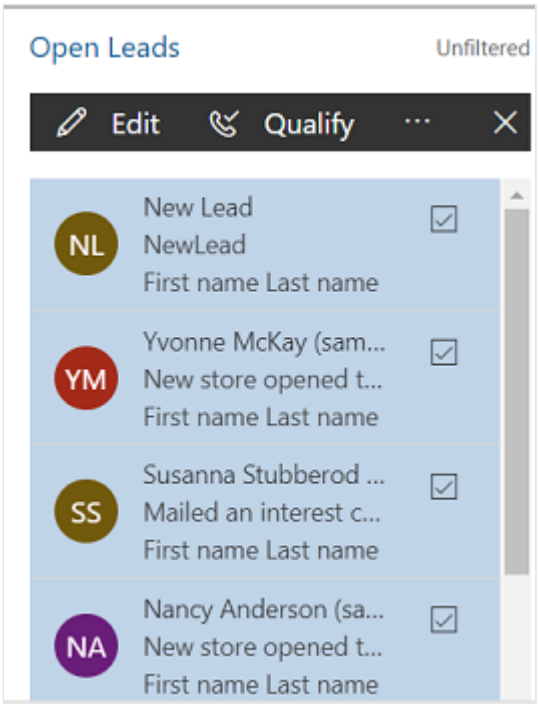
Take quick action on a record in the stream

You can take entity-specific actions right from the stream. For example, in the **Open Leads** stream, select **More options**. From the **More options** menu, you can quickly qualify a lead or assign it to other users.



Perform bulk actions

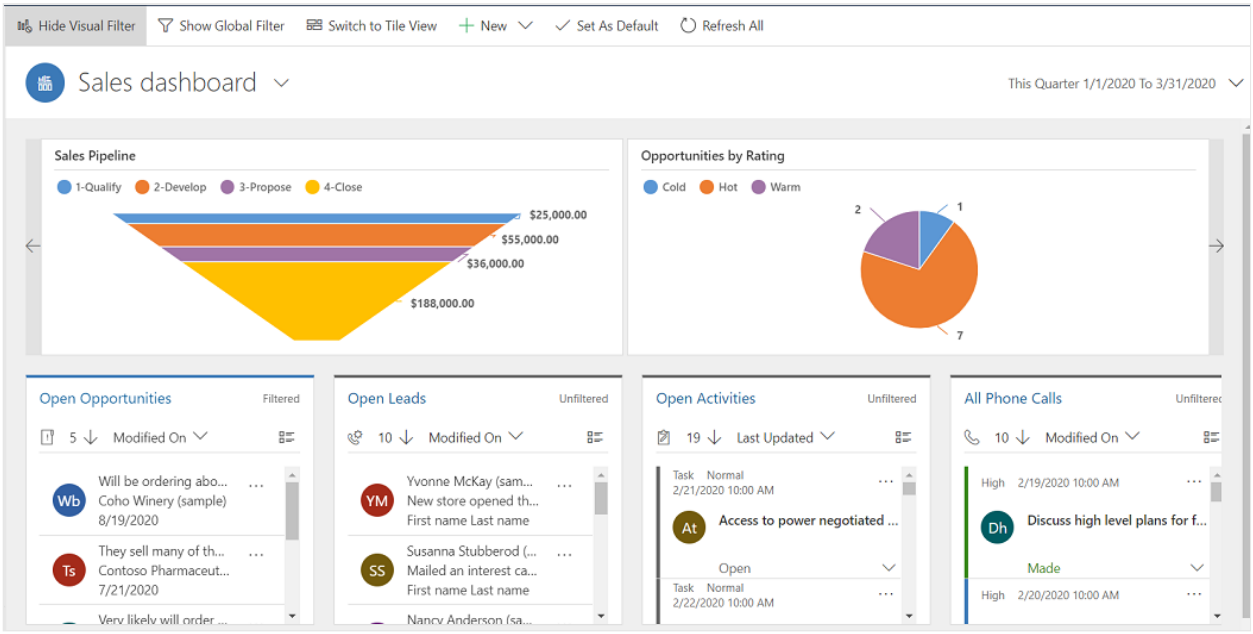
You can select multiple records and take action on all of them at once. Select **Select multiple records to perform bulk actions**, select multiple records by selecting the check boxes next to the records, and then select **More Commands** (...) to show the actions that can be performed on the selected records.



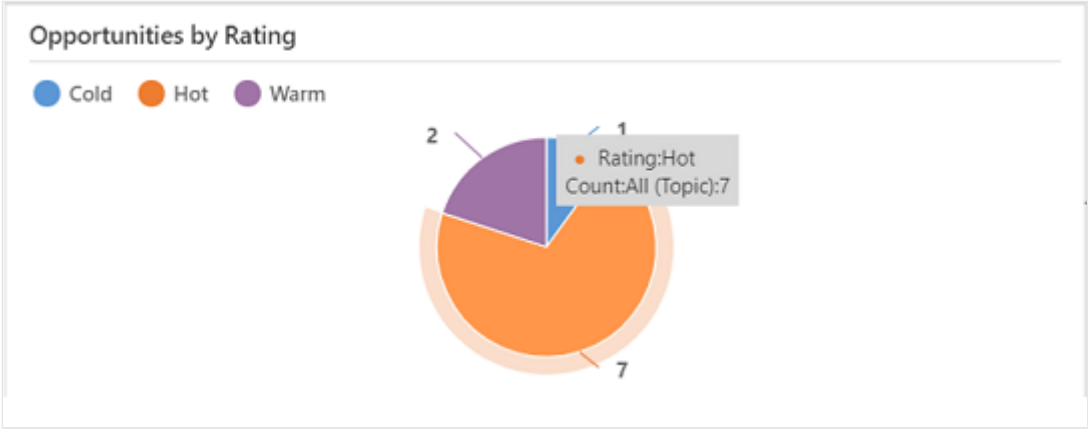
Visual filters in the Sales dashboard

When you select **Show Visual Filter** in a multi-stream dashboard, you see a row of visual filters at the top with the data streams below.

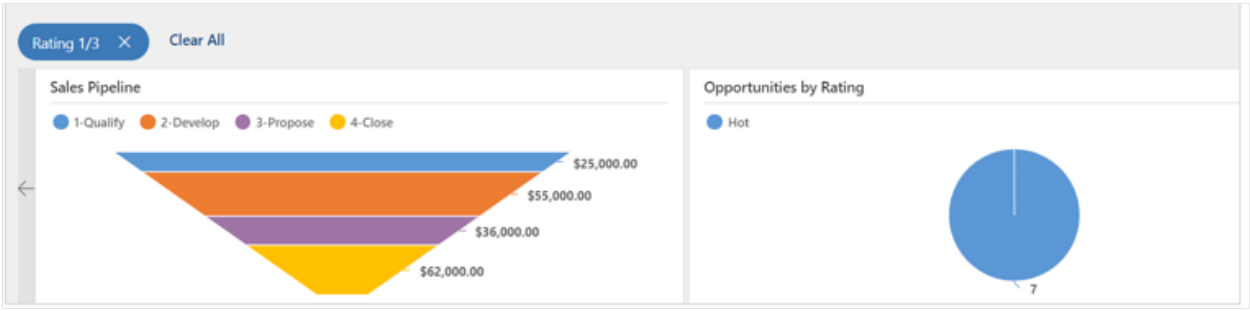
Visual filters provide a snapshot of key metrics, such as opportunities by account or by rating, or opportunities in different stages of a sales pipeline.



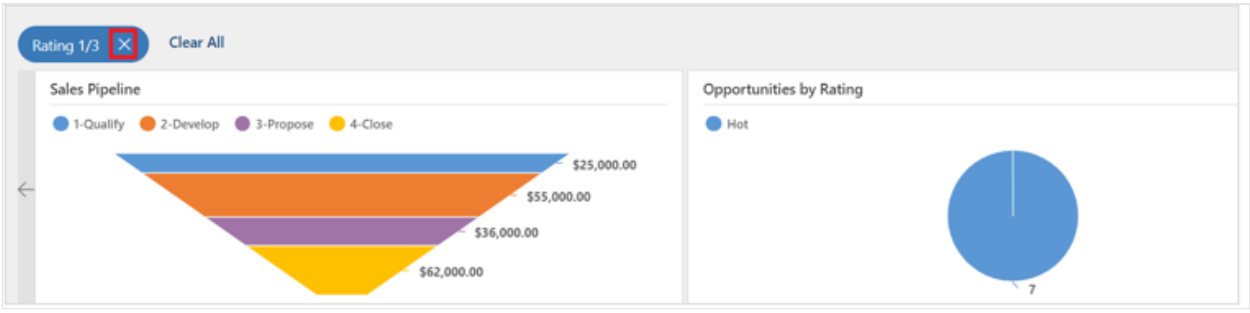
Use visual filters to display the information that interests you most. For example, when you select the **Hot** area of the **Opportunities by Rating** chart, the dashboard and the streams are refreshed to show only the opportunities that have a **Hot** rating.



You'll see the filter applied at the top of the charts.



To remove a specific filter, select the **Close** icon for the applied filter.

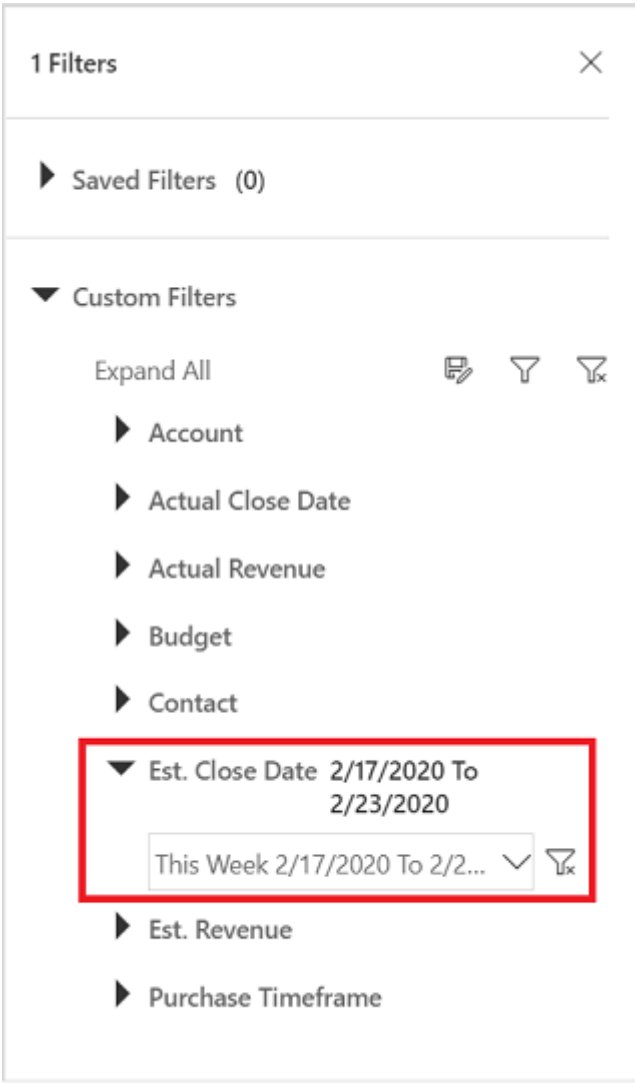


To remove all applied filters, select **Clear All**.

Global filters in the Sales dashboard

To drill down further into your data, use the global filter. For example, you can apply the global filter to see only those opportunities whose estimated close date is set to a date in the current week.

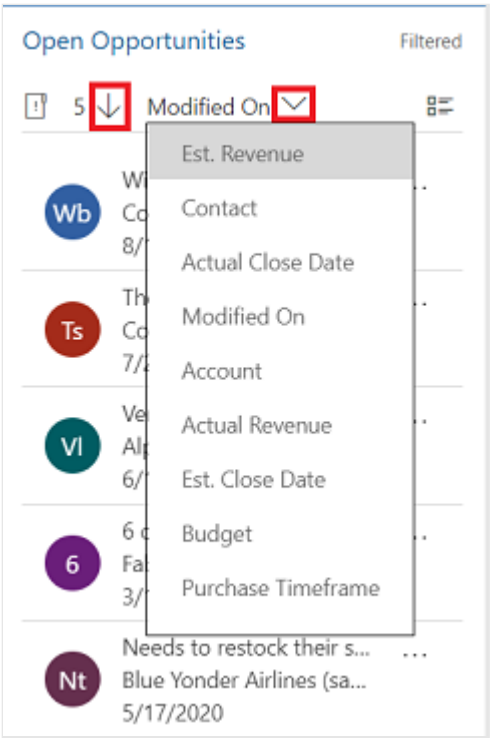
To apply a global filter, select **Show Global Filter** on the command bar.



After you choose a filter, select **Apply filter** . You can also save this filter for the future by selecting **Save as a reusable filter** .

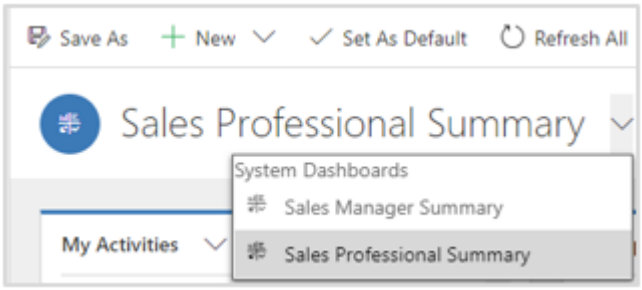
Set the sort order

You can easily switch the sort order in the stream by selecting the field on which you want the data to be sorted.



Open a different dashboard

You can use the view selector to select the dashboard of your choice. Select the view selector, and then select the dashboard you want to open from the drop-down list.



Set a dashboard as the default

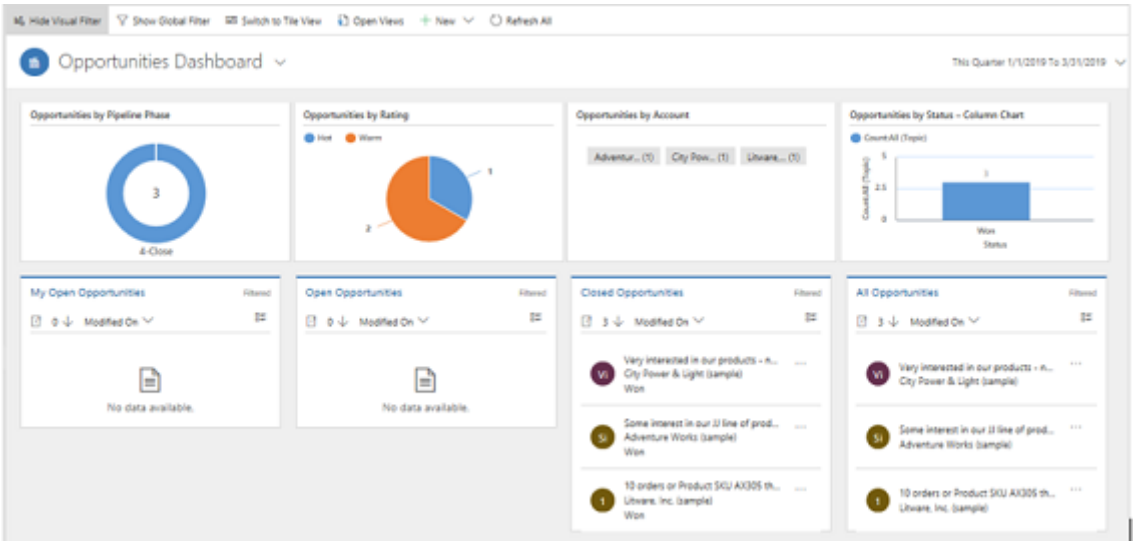
To see a specific dashboard every time you sign in to Sales Professional, set it as the default. To do this, open the dashboard, and then select **Set as Default** in the site map.

Entity dashboards

In addition to the dashboards described earlier, some dashboards display information specific to entities. These are available for Account, Contact, Lead, Opportunity, Quote, and Invoice entities. Remember, an entity is the same as a record type.

To see an entity dashboard, go to the list of records for the entity, and then select **Open Dashboards** on the command bar. For example, when you select **Open Dashboard** in

the list of opportunities, the following dashboard specific to the Opportunity entity is displayed.



You can use the global or visual filters to show only the data that's important to you.

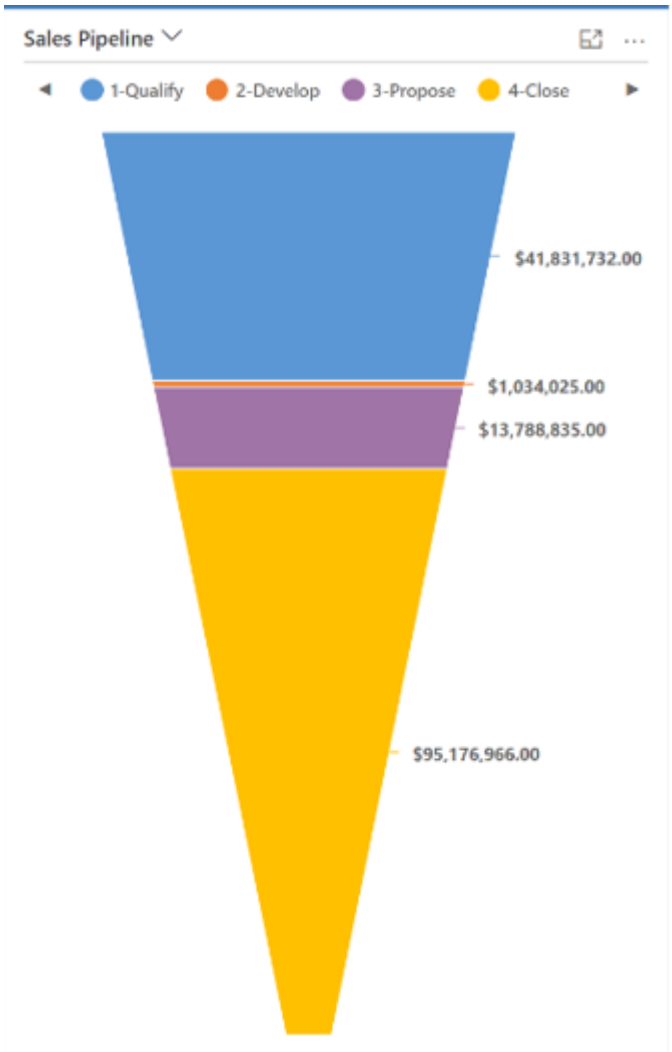
See also

Understand the sales pipeline chart and its phases

Understand the sales pipeline chart and its phases

Article • 05/10/2022

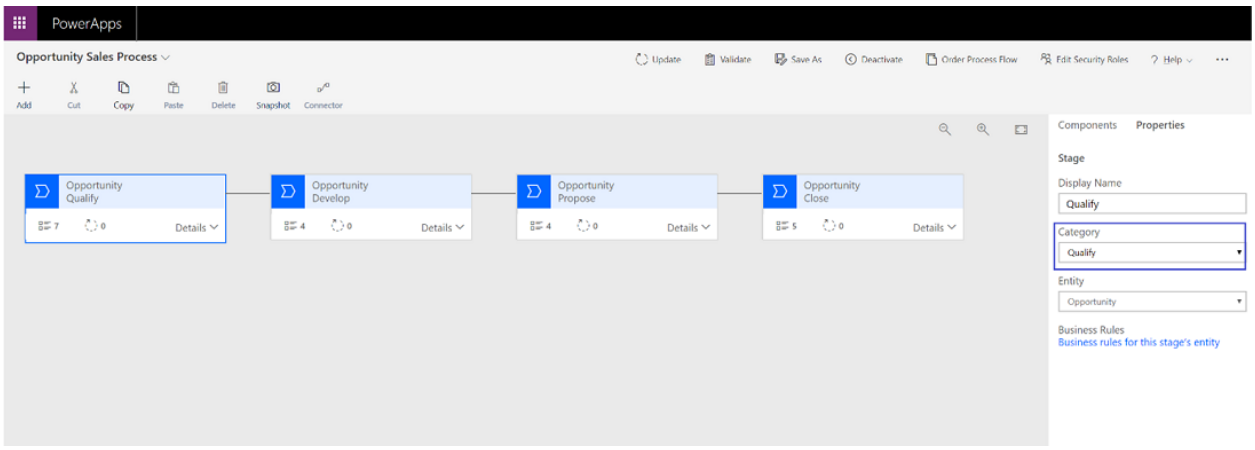
Sales reps or managers use the out-of-the-box Sales Pipeline chart to visualize the revenue for an opportunity based on each pipeline phase. The following image shows a sample Sales Pipeline chart with pipeline phases such as 1-Qualify, 2-Develop, and so on.



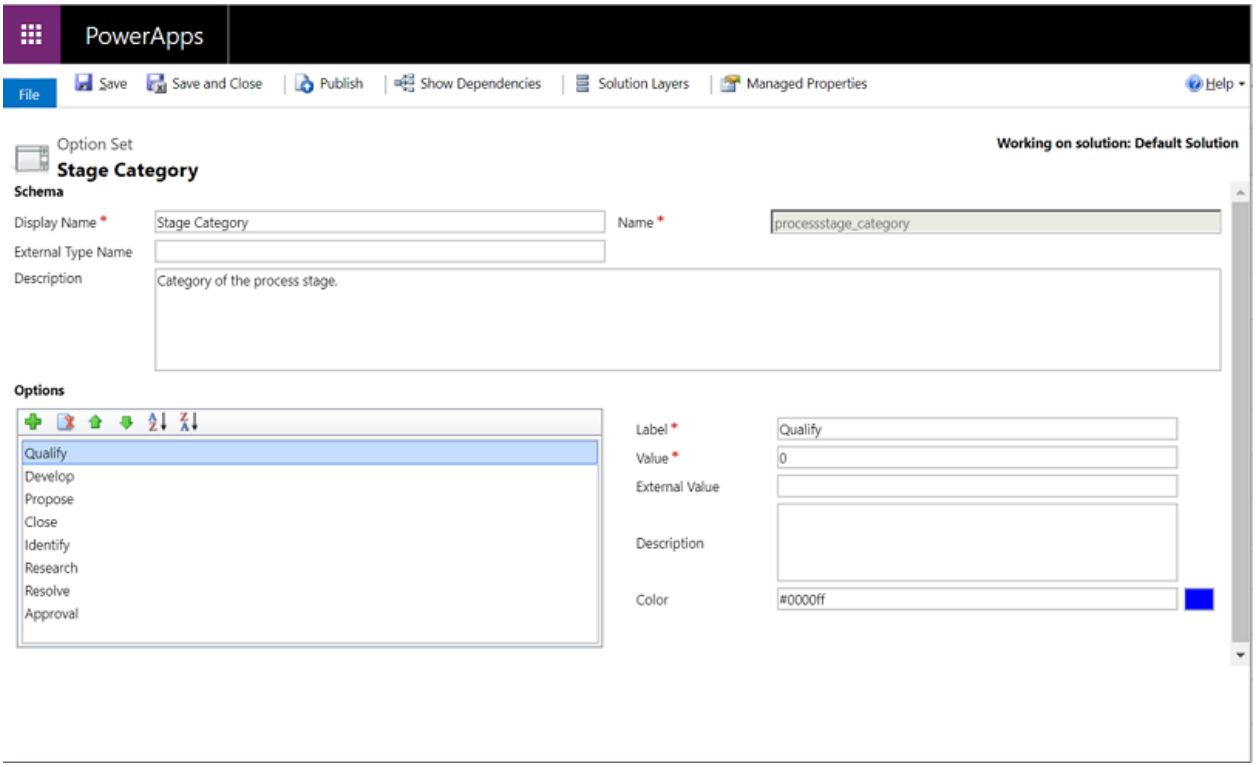
The pipeline phase of an opportunity is based on the stage of the business process flow that it's currently in. When an opportunity moves through the stages of its business process flow, the pipeline phase is set to a value in the form of *{StageCategoryIndex} - {CategoryName}*.

To understand how each of the pipeline phases are named, go to the **Settings** area for the opportunity and open the business process flow definition associated with the opportunity record.

There are four stages in the out-of-the-box Opportunity Sales Process flow. Each stage is mapped to a unique category, as highlighted in the **Properties** section of the image below. You can customize the business process flow definition by adding or removing stages, and you can also change the name that's displayed for each stage. The value of the pipeline phase attribute is based on the category of the stage and isn't affected by any change you make to the display name.



The category values used for each business process stage are defined in a global option set named **Stage Category**. When an opportunity moves from the **Qualify** to **Develop** stage of the Opportunity Sales Process flow, the metadata for the category of the new stage (**Develop**, in this example) is read. Because the order of the **Develop** stage in our example is **2**, the pipeline phase of the opportunity will be set to **2-Develop**.



The label for the pipeline phase of an opportunity consists of the category order (index) of the associated stage followed by the name of the category. In this way, pipeline phases are arranged in a sequence that matches the order of the associated category

options in the **Stage Category** option set metadata. If you have a business need to introduce a new stage in the flow—for example, you want the stage **Negotiation** to appear between the **Propose** and **Close** stages—you must add a new category option named **Negotiation** in the **Stage Category** option set, and ensure that it's positioned between **Propose** and **Close**, and select this new category option for the Negotiation stage of the business process flow.

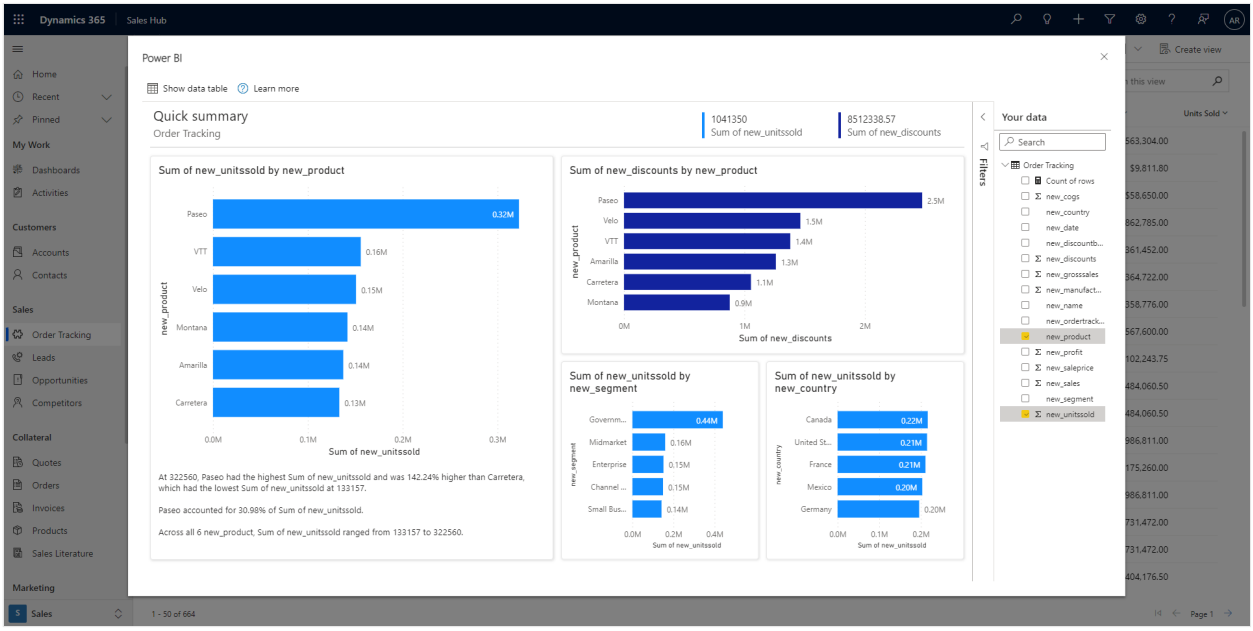
See also

Gain insights with dashboards in Dynamics 365 Sales
Troubleshooting sales pipeline chart and its phases

Visualize your data quickly from Power Apps and Dynamics 365 apps

Article • 04/12/2023

There's a new way to visualize your model-driven Power Apps and Dynamics 365 data stored within Dataverse. With a single click, Power BI will automatically generate a set of visuals for you to explore and find insights within your data.



Video

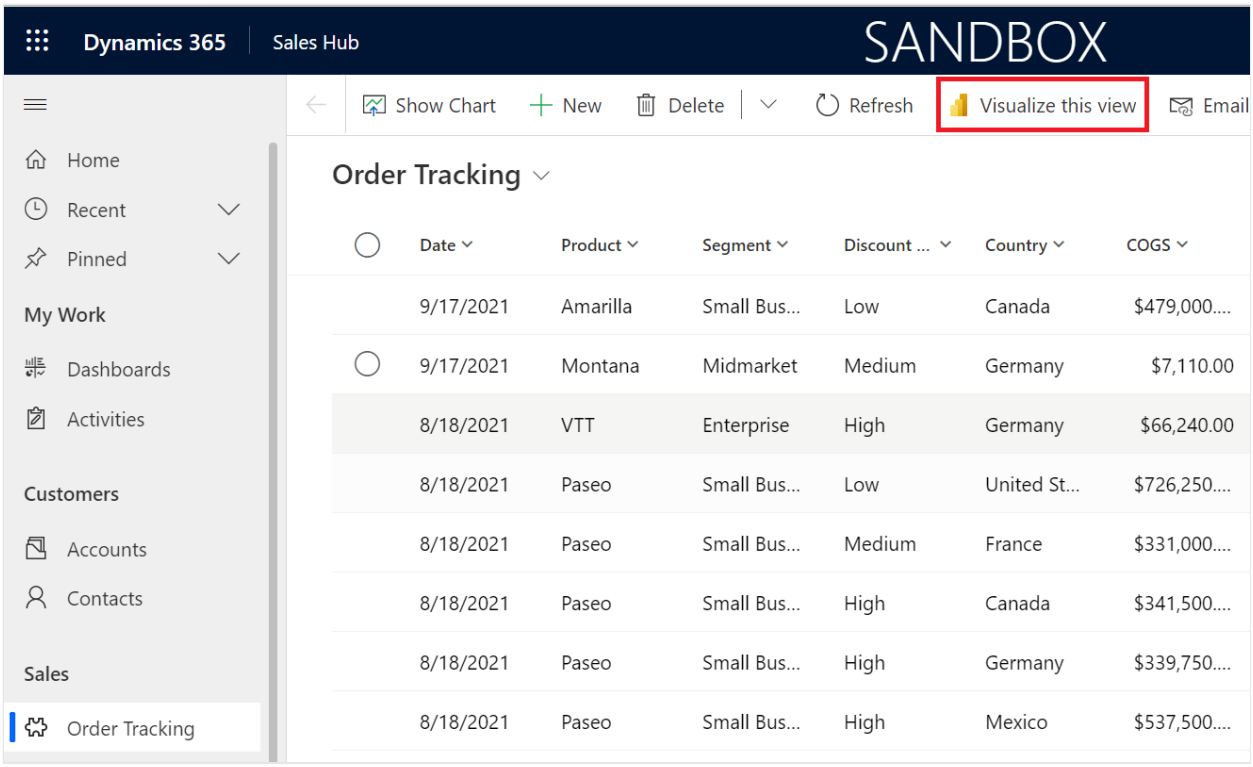
Watch this video showing how to create visuals from data stored within Dataverse, and then try it yourself.

> **Note**
>
> This video might use earlier versions of Power BI Desktop or the Power BI service.

https://www.microsoft.com/en-us/videoplayer/embed/RWRVzC?postJsllMsg=true

Visualize a view

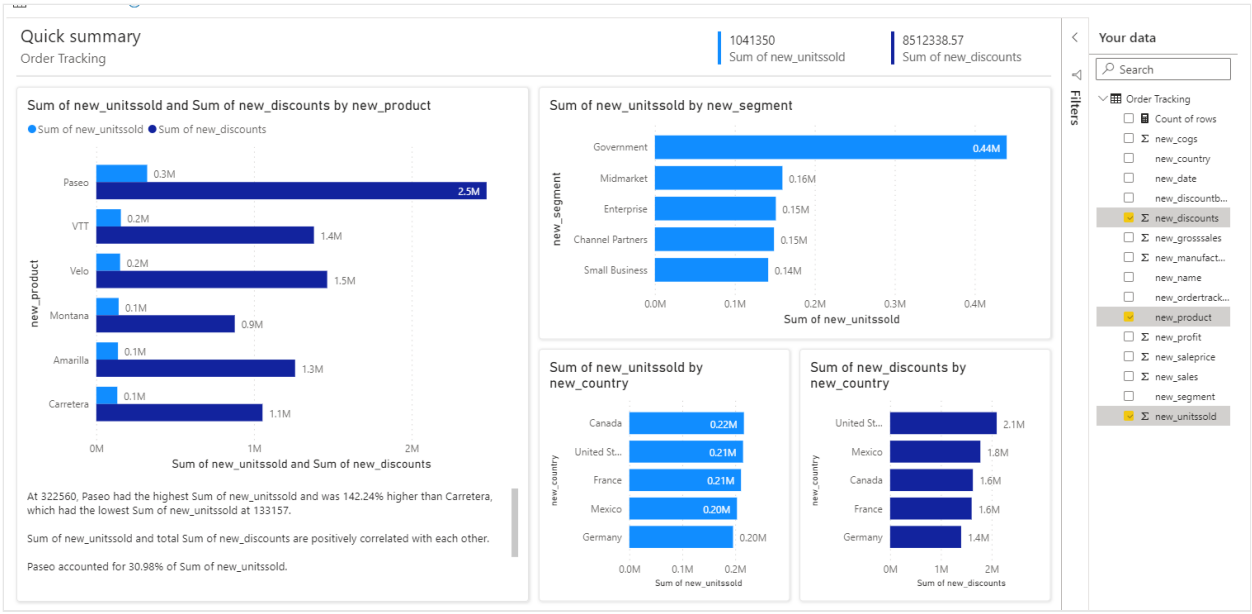
In your model-driven Power App or Dynamics 365 app, select the **Visualize this view** button in the app bar of any grid view.



A dialog opens with an automatically generated report with a few fields selected for you in the **Your data** pane on the right. The visuals within the report will use some or all of your selected fields and potentially other fields from the table that work well with chosen fields.

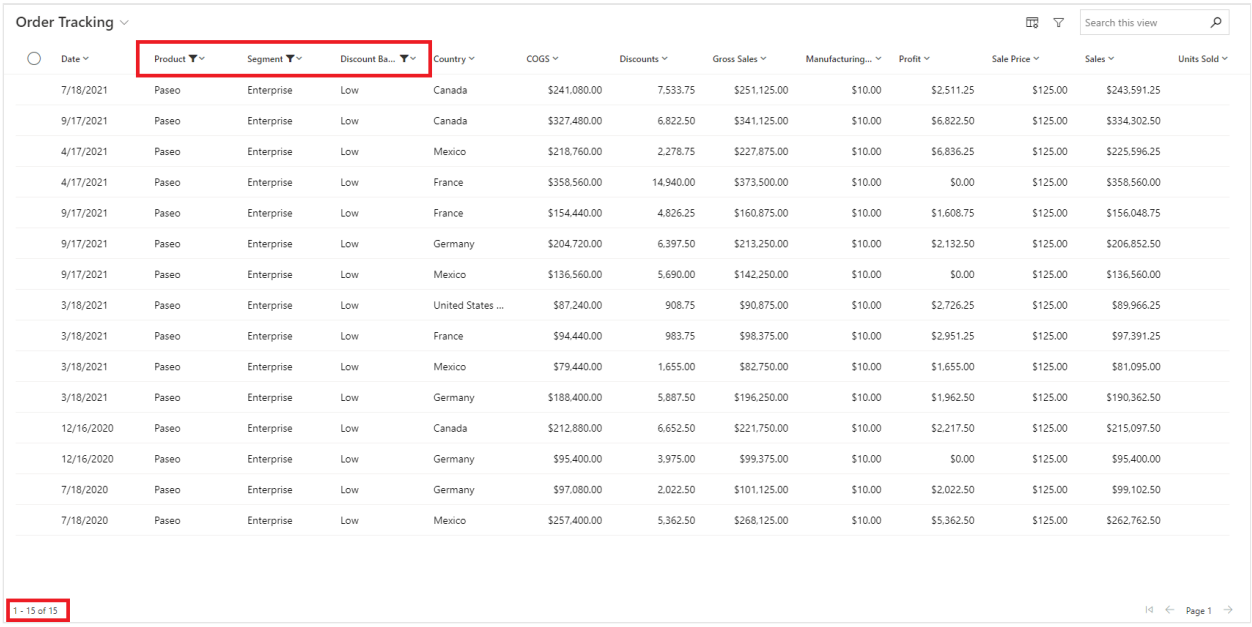
> **Note**
>
> Power BI is connecting to Dynamics on behalf of the user that clicked the **Visualize this view** button, so any security rules that have been set up with Dataverse will apply. Users should see the same data they see within the app itself.

Changing the data you see in the report is easy. In the **Your data** pane, add or remove fields that you're interested in visualizing. The selected fields are then used as 'hints' to the algorithm generating the visuals. Power BI automatically adds or removes charts to show new visuals. Read Interact with autogenerated "quick" reports to learn more about how to interact with and change these reports.



Filter the original view for in-depth exploration

The data being visualized within the report is always based on the data currently in the view's grid. This means if you've applied any filters to the grid, that filtered data will be used in the Power BI visuals. For example, if the view is filtered down to just 15 rows of data, only 15 rows will be visualized through Power BI.

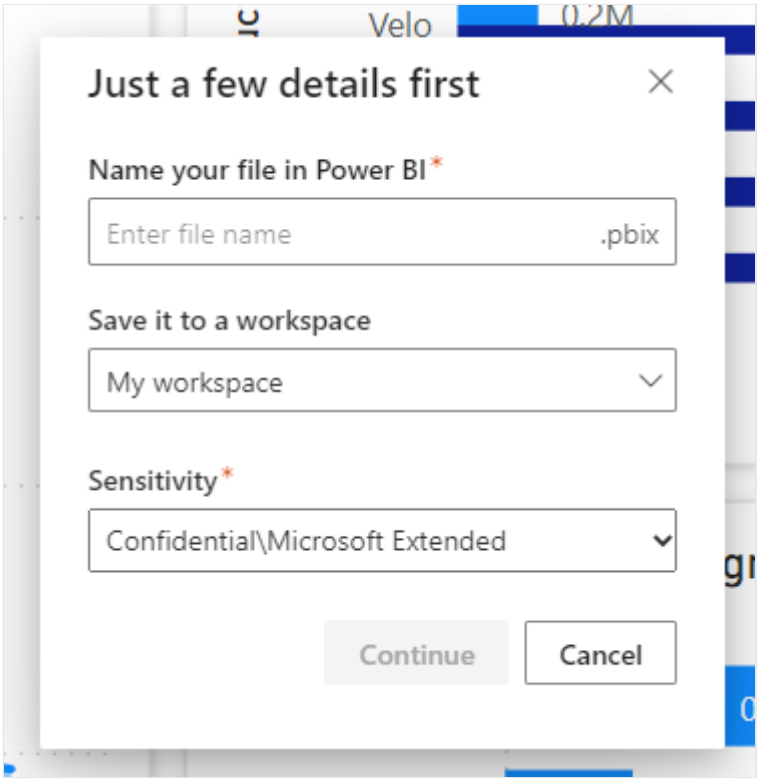


Date	Product	Segment	Discount Ba...	Country	COGS	Discounts	Gross Sales	Manufacturing...	Profit	Sale Price	Sales	Units Sold
7/18/2021	Paseo	Enterprise	Low	Canada	$241,080.00	7,533.75	$251,125.00	$10.00	$2,511.25	$125.00	$243,591.25	
9/17/2021	Paseo	Enterprise	Low	Canada	$327,480.00	6,822.50	$341,125.00	$10.00	$6,822.50	$125.00	$334,302.50	
4/17/2021	Paseo	Enterprise	Low	Mexico	$218,760.00	2,278.75	$227,875.00	$10.00	$6,836.25	$125.00	$225,596.25	
4/17/2021	Paseo	Enterprise	Low	France	$358,560.00	14,940.00	$373,500.00	$10.00	$0.00	$125.00	$358,560.00	
9/17/2021	Paseo	Enterprise	Low	France	$154,440.00	4,826.25	$160,875.00	$10.00	$1,608.75	$125.00	$156,048.75	
9/17/2021	Paseo	Enterprise	Low	Germany	$204,720.00	6,397.50	$213,250.00	$10.00	$2,132.50	$125.00	$206,852.50	
9/17/2021	Paseo	Enterprise	Low	Mexico	$136,560.00	5,690.00	$142,250.00	$10.00	$0.00	$125.00	$136,560.00	
3/18/2021	Paseo	Enterprise	Low	United States ...	$87,240.00	908.75	$90,875.00	$10.00	$2,726.25	$125.00	$89,966.25	
3/18/2021	Paseo	Enterprise	Low	France	$94,440.00	983.75	$98,375.00	$10.00	$2,951.25	$125.00	$97,391.25	
3/18/2021	Paseo	Enterprise	Low	Mexico	$79,440.00	1,655.00	$82,750.00	$10.00	$1,655.00	$125.00	$81,095.00	
3/18/2021	Paseo	Enterprise	Low	Germany	$188,400.00	5,887.50	$196,250.00	$10.00	$1,962.50	$125.00	$190,362.50	
12/16/2020	Paseo	Enterprise	Low	Canada	$212,880.00	6,652.50	$221,750.00	$10.00	$2,217.50	$125.00	$215,097.50	
12/16/2020	Paseo	Enterprise	Low	Germany	$95,400.00	3,975.00	$99,375.00	$10.00	$0.00	$125.00	$95,400.00	
7/18/2020	Paseo	Enterprise	Low	Germany	$97,080.00	2,022.50	$101,125.00	$10.00	$2,022.50	$125.00	$99,102.50	
7/18/2020	Paseo	Enterprise	Low	Mexico	$257,400.00	5,362.50	$268,125.00	$10.00	$5,362.50	$125.00	$262,762.50	

This makes it very easy to iteratively explore your data, jumping back and forth between filtering in the grid and visualizing with Power BI, until you find the insights you're looking for.

Save the report and dataset

Once you've finished your exploration and are ready to save, just select the **Save** button in the app bar, give it a name, and pick a workspace. If your organization has enabled sensitivity label, set a label. You can save to any workspace that you have a Contributor, Member, or Admin role assigned. As a free user, you can save to your personal My Workspace.



Once you've saved the report, we give you a link to access it in the Power BI service. Selecting the link opens the report in a new tab. Once you save this report, it becomes a normal Power BI report. You can share it, package it in an app, subscribe to email updates, or even download the .pbix to make further modifications.

The dataset that gets saved through this flow is automatically configured as DirectQuery with single sign-on (SSO) enabled. Thus, it will always be up to date and respect Dataverse security settings. Of course, once you've saved the report and dataset, you can go into the dataset's settings and change it later.

If you already have credentials in Power BI configured for the specific Dataverse environment you're connecting to, and it isn't set to SSO, we don't automatically override this. Instead, we ask you to decide how you want to handle your credentials. You can choose to either keep what's already stored in Power BI or override it to use SSO. If you decide to keep what's already in Power BI, your report may show different data when you view it in the Power BI service. If you decide to override, this also updates your existing datasets connected to the same source.

Once the report is in the Power BI service, that is where you'll access it going forward. However, if you'd like to make it a standardized report included in your app, you can

always choose to embed it back into the app.

Considerations and limitations

- You may notice more columns within the report than you see in the original view. These fields could include foreign keys for the columns or hierarchy, or URL fields that are being used within the original view for purposes other than columns.
- The report created through this feature is temporary. Unless you decide to save it, the experience times out after a set amount of time. At that point you need to close and reopen the report to continue exploring your data. For now, the timeout occurs at one hour.
- You can download the data from this report. However, Power BI uses single-sign on and Direct Query for the autogenerated report, so the data you can download is only the data you have permission to see in Dynamics. You can't access data that you normally wouldn't be able to see. Power BI admins can restrict download to Excel on the Power BI side by managing it in the Power BI admin portal. See the article Export and sharing tenant settings for details.

Next steps

- Interact with autogenerated "quick" reports
- Create quick reports in the Power BI service
- Create a report quickly from a SharePoint list in the Power BI service
- More questions? Try the Power BI Community

View operational metrics and KPIs in sales usage reports

Article • 03/31/2023

The sales usage reports provide a snapshot view of the historical operational metrics and key performance indicators (KPIs) of your contacts, accounts, leads, and opportunities.

The reports only include data that has been added or updated in the application from the day of enablement. After enabling, it may take up to three days for the sales usage reports to display data, there after, the data is refreshed every 24 hours.

Also, the actions that are performed in the application are reflected in the sales usage reports. Actions such as, bulk import, bulk update, and records updated through the API are not reflected in the sales usage reports.

> **Note**
>
> - Sales usage reports aren't available in Government Community Cloud (GCC) tenants.
> - The updated or added data may take up to three days to show in the reports.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security Role	Sales Manager See Predefined security roles for Sales

Open sales usage reports

Sign in to your sales app. In the lower-left corner of the page, select **Change area** > **Sales** > **Sales analytics** > **Sales usage reports**.

The following sales usage reports are available:

- Opportunity usage report

- Lead usage report
- Account usage report
- Contact usage report

Data filters

Use the filtering options at the top of each report to view only the information that's relevant to you. You can filter by date, user, manager, business unit, and role. By default, the reports show data for the previous 20 weeks.

Opportunity usage report

The following table describes the KPIs that are shown in the opportunity usage report tab. For each KPI, an arrow indicates the trend. For example, a green upward arrow indicates an improvement in the trend when compared to the previous time period.

KPI	Description
Created	The number of opportunities sellers created, and the number of sellers who created opportunities, during the specified time period
Viewed	The number of opportunities sellers viewed, and the number of sellers who viewed opportunities, during the specified time period
Updated	The number of opportunities sellers updated, and the number of sellers who updated opportunities, during the specified time period
Deleted	The number of opportunities sellers deleted, and the number of sellers who deleted opportunities, during the specified time period
Opportunities converted	The number of opportunities sellers converted into won deals, and the number of sellers who converted opportunities, during the specified time period

The following table describes the summary charts that are displayed in the report.

Chart name	Description
Actions performed on opportunities over time	The trend of actions taken on opportunities in the specified time period: created, viewed, updated, and deleted
Number of users contributing to actions performed on opportunities	The number of users who performed various actions on opportunities during the specified time period
Users with most opportunities created	The top four contributors who created opportunities during the specified time period

Chart name	Description
Users with most opportunities updated	The top four contributors who updated opportunities during the specified time period
Users with most opportunities converted	The top four contributors who converted opportunities into won deals during the specified time period
Status of opportunities over time	A breakdown of opportunities by status during the specified time period

Lead usage report

The following table describes the KPIs that are shown in the lead usage report tab. For each KPI, an arrow indicates the trend. For example, a green upward arrow indicates an improvement in the trend when compared to the previous time period.

KPI	Description
Created	The number of leads sellers created, and the number of sellers who created leads, during the specified time period
Viewed	The number of leads sellers viewed, and the number of sellers who viewed leads, during the specified time period
Updated	The number of leads sellers updated, and the number of sellers who updated leads, during the specified time period
Deleted	The number of leads sellers deleted, and the number of sellers who deleted leads, during the specified time period
Leads qualified	The number of leads sellers qualified into opportunities, and the number of sellers who qualified leads, during the specified time period

The following table describes the summary charts that are displayed in the report.

Chart name	Description
Actions performed on leads over time	The trend of actions taken on leads in the specified time period: created, viewed, updated, and deleted
Number of users contributing to actions performed on leads	The number of users who performed various actions on leads during the specified time period
Users with most leads created	The top four contributors who created leads during the specified time period

Chart name	Description
Users with most leads updated	The top four contributors who updated leads during the specified time period
Users with most leads qualified	The top four contributors who successfully qualified leads into opportunities during the specified time period
Status of leads over time	A breakdown of leads by status during the specified time period

Account usage report

The following table describes the KPIs that are shown in the account usage report tab. For each KPI, an arrow indicates the trend. For example, a green upward arrow indicates an improvement in the trend when compared to the previous time period.

KPI	Description
Created	The number of accounts sellers created, and the number of sellers who created accounts, during the specified time period
Viewed	The number of accounts sellers viewed, and the number of sellers who viewed accounts, during the specified time period
Updated	The number of accounts sellers updated, and the number of sellers who updated accounts, during the specified time period
Deleted	The number of accounts sellers deleted, and the number of sellers who deleted accounts, during the specified time period

The following table shows the summary charts that are displayed in the report.

Chart name	Description
Actions performed on accounts over time	The trend of actions taken on accounts in the specified time period: created, viewed, updated, and deleted
Number of users contributing to actions performed on accounts	The number of users who performed various actions on accounts during the specified time period
Users with most accounts created	The top four contributors who created accounts during the specified time period
Users with most accounts updated	The top four contributors who updated accounts during the specified time period

Contact usage report

The following table describes the KPIs that are shown in the contact usage report tab. For each KPI, an arrow indicates the trend. For example, a green upward arrow indicates an improvement in the trend when compared to the previous time period.

KPI	Description
Created	The number of contacts sellers created, and the number of sellers who created contacts, during the specified time period
Viewed	The number of contacts sellers viewed, and the number of sellers who viewed contacts, during the specified time period
Updated	The number of contacts sellers updated, and the number of sellers who updated contacts, during the specified time period
Deleted	The number of contacts sellers deleted, and the number of sellers who deleted contacts, during the specified time period

The following table describes the summary charts that are displayed in the report.

Chart name	Description
Actions performed on contacts over time	The trend of actions taken on contacts in the specified time period: created, viewed, updated, and deleted
Number of users contributing to actions performed on contacts	The number of users who performed various actions on contacts during the specified time period
Users with most contacts created	The top four contributors who created contacts during the specified time period
Users with most contacts updated	The top four contributors who updated contacts during the specified time period

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable sales usage reports

Manage your accounts and contacts

Article • 09/06/2023

In Dynamics 365 Sales, you use accounts to store information about the companies you do business with. Use contacts to store information about the people you work with at those companies. You can add multiple contacts to an account, but you can associate only one account with a contact. You can create accounts and contacts manually or import them from a spreadsheet or other supported files.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Work with accounts

- Create an account
- Add contacts to an account
- View opportunities associated with an account
- View invoices associated with an account
- View relationship analytics and KPIs for an account

Create an account

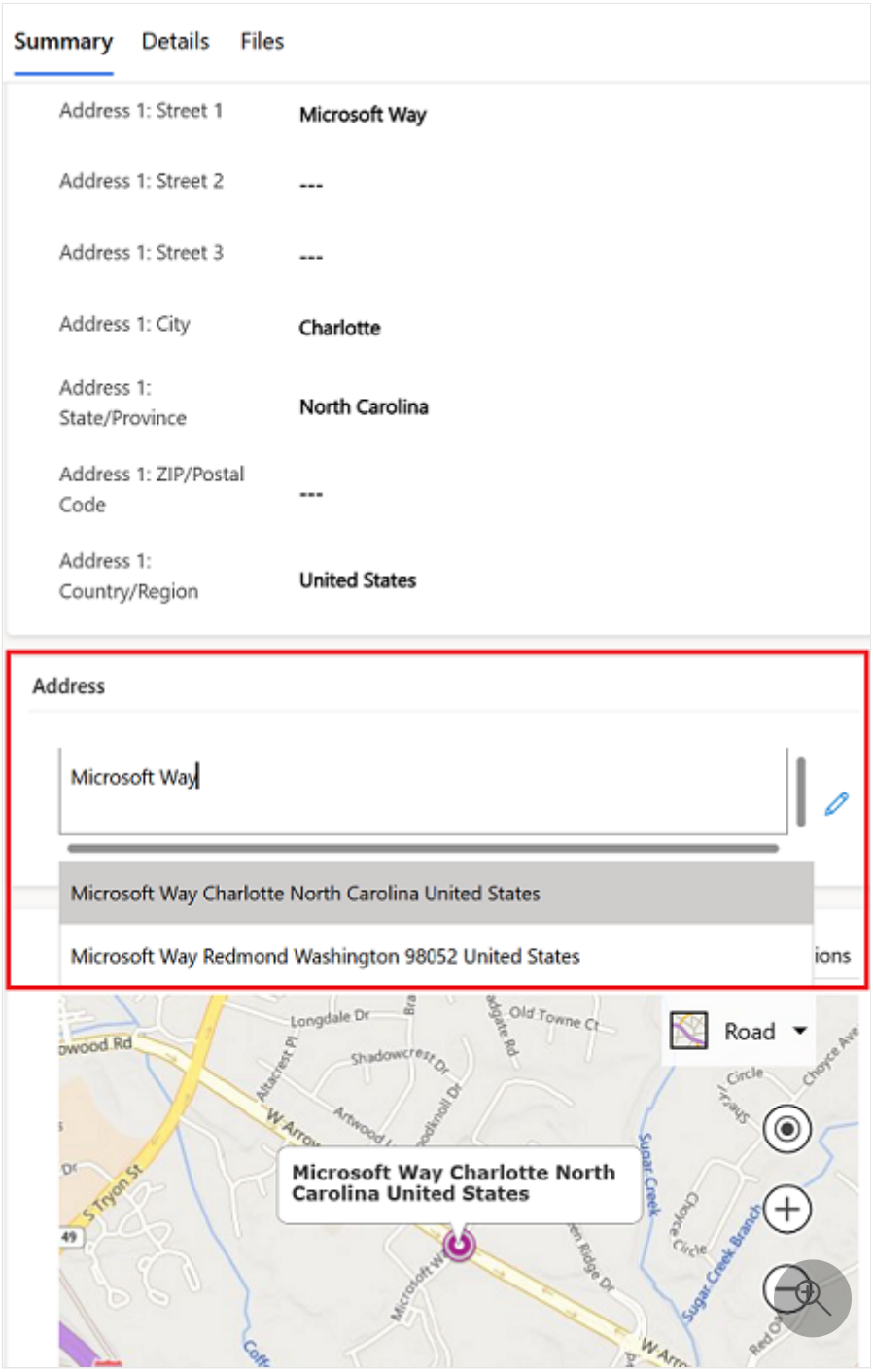
1. In the sitemap of your sales app, select **Accounts**.
2. In the command bar, select **New**.
3. On the **Summary** tab, enter the information you have about the company. Only the **Account Name** is required. All other details are optional.
4. Optionally, add contacts to the account.
5. Select **Save & Close**.

Fill in the address from suggestions

(Applicable for Sales Enterprise and Sales Premium only)

If your administrator has turned on address suggestions, Bing Maps can fill in the account's address details so that you don't have to. Address suggestion works with contacts, accounts, and leads.

1. Open an account, contact, or lead.
2. On the **Summary** tab, scroll down to the **Address** box and start typing the street address.



3. Select an address from the list of suggestions provided by Bing Maps.

View opportunities associated with an account

1. In the sitemap of your sales app, select **Accounts**.
2. Select an account in the list.
3. Select the **Related** tab. Scroll down to the **Related - Sales** group, and then select **Opportunities**.

View invoices associated with an account

1. In the sitemap of your sales app, select **Accounts**.
2. Select an account in the list.
3. Select the **Related** tab. Scroll down to the **Related - Sales** group, and then select **Invoices**.

Work with contacts

- Create a contact
- Add contacts to an account
- View opportunities associated with a contact
- Get introduced to a contact
- View relationship analytics and KPIs for a contact

Create a contact

1. In the sitemap of your sales app, select **Contacts**.
2. In the command bar, select **New**.
3. On the **Summary** tab, enter the information you have about the company. Only the **First Name** and **Last Name** are required. All other details are optional.

   Bing Maps can fill in the contact's address details for you if your administrator has turned on address suggestions.
4. Optionally, associate the contact with an account. Scroll down to **Company** and select an account from the list.

   A contact can be associated with only one account at a time.
5. Select **Save & Close**.

Add contacts to an account

1. In the sitemap of your sales app, select **Accounts**.
2. Select an account.
3. On the **Summary** tab, scroll down to the **Contacts** section.
4. Associate a contact:
   - To create a contact and associate it with the account at the same time, select **New Contact**.
   - To associate an existing contact, select **More commands** (⋮) > **Add Existing Contact**. Search for and select one or more contacts, and then select **Add**.

   You can associate a contact with only one account. If you select a contact who is already associated with a different account, you get an error message.
5. Select **Save & Close**.

View opportunities associated with a contact

1. In the sitemap of your sales app, select **Contacts**.
2. Select a contact in the list.
3. On the **Summary** tab, scroll down to the **Opportunities** section.

   Or, select the **Related** tab. Scroll down to the **Related - Sales** group, and then select **Opportunities**.

Import accounts or contacts from Excel, CSV, and XML Files

You can add accounts and contacts by importing them from a Microsoft Excel, CSV, or XML file or from Microsoft Exchange. Learn how to import data into Dynamics 365 Sales

Understand organization charts

Article • 09/28/2023

Organization charts help you visualize the hierarchy and relationships between departments and roles in your customers' organizations. You can better understand the decision-making process and identify the individuals who hold the most influence over purchasing decisions. With this information, you can tailor your sales approach to your customer's specific needs and preferences, resulting in better outcomes for both you and your customer.

With Dynamics 365 Sales, you can build an organization chart with ease and precision with simple drag-and-drop actions. The org chart also provides easy access to an embedded LinkedIn Sales Navigator widget that helps to keep contacts up to date.

Org charts are available for accounts and contacts.

Watch this brief video for a quick introduction to enhanced org charts in Dynamics 365 Sales:
https://www.microsoft.com/en-us/videoplayer/embed/RW166iv?postJsllMsg=true

How can I use org charts?

With any primary sales roles such as, Sales Manager or Salesperson, you can manage org charts and view org charts.

Permissions required

Salesperson and Sales Manager roles have permissions to view org charts by default. Other roles need the following permissions to use the enhanced org chart.

Tab name	Entity name	Access level	Privileges required
Custom Entities	Microsoft Orgchart node entity	Organization	Create, Write, Read, and Delete

Learn more about security role permissions.

Manage org charts

Article • 09/28/2023

An organization chart helps sellers and sales managers to visualize an account's hierarchy, understand the roles and responsibilities of each contact in the hierarchy, and view the strength of each contact. You can use an org chart to make sure you're reaching the right contact and develop strategies to improve sales.

As a seller or sales manager, you can perform the following tasks to manage org charts:

- Create or edit an org chart
- Add a contact
- Create a hierarchy
- Set a contact as primary
- Set a contact as an assistant
- Add a label to a contact
- Remove a contact

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as Salesperson or Sales Manager More information: Primary sales roles

Create or edit an org chart

An account can have only one org chart. You can create the org chart for an account if one doesn't exist. You can edit an org chart to add or remove positions, redefine roles and responsibilities, and adjust reporting lines. Org charts are available for all users in your organization.

1. Sign in to your sales app. On the site map, select **Customers** > **Accounts**.
2. Select the account, and then on the tool bar, select **Open org chart**.

> **Note**
>
> If you're using contacts to create an org chart, open a contact and then select **Open org chart**.

3. Add contacts to create an org chart or edit the org chart:

   - To start creating an org chart, drag a contact from the **Contacts in the account** list to **Add contact**.
   - To edit the org chart, select **Edit chart**.

4. Do the following tasks, as required:

   - Add a contact
   - Create a hierarchy
   - Set a contact as primary
   - Set a contact as an assistant
   - Add a label to a contact
   - Remove a contact

5. Select **Save chart**.

Add a contact

To add a contact to the org chart, drag it from the **Contacts in the account** list to the contact card. If you don't see the contact you want to add in the list, select **Refresh** in the tool bar.

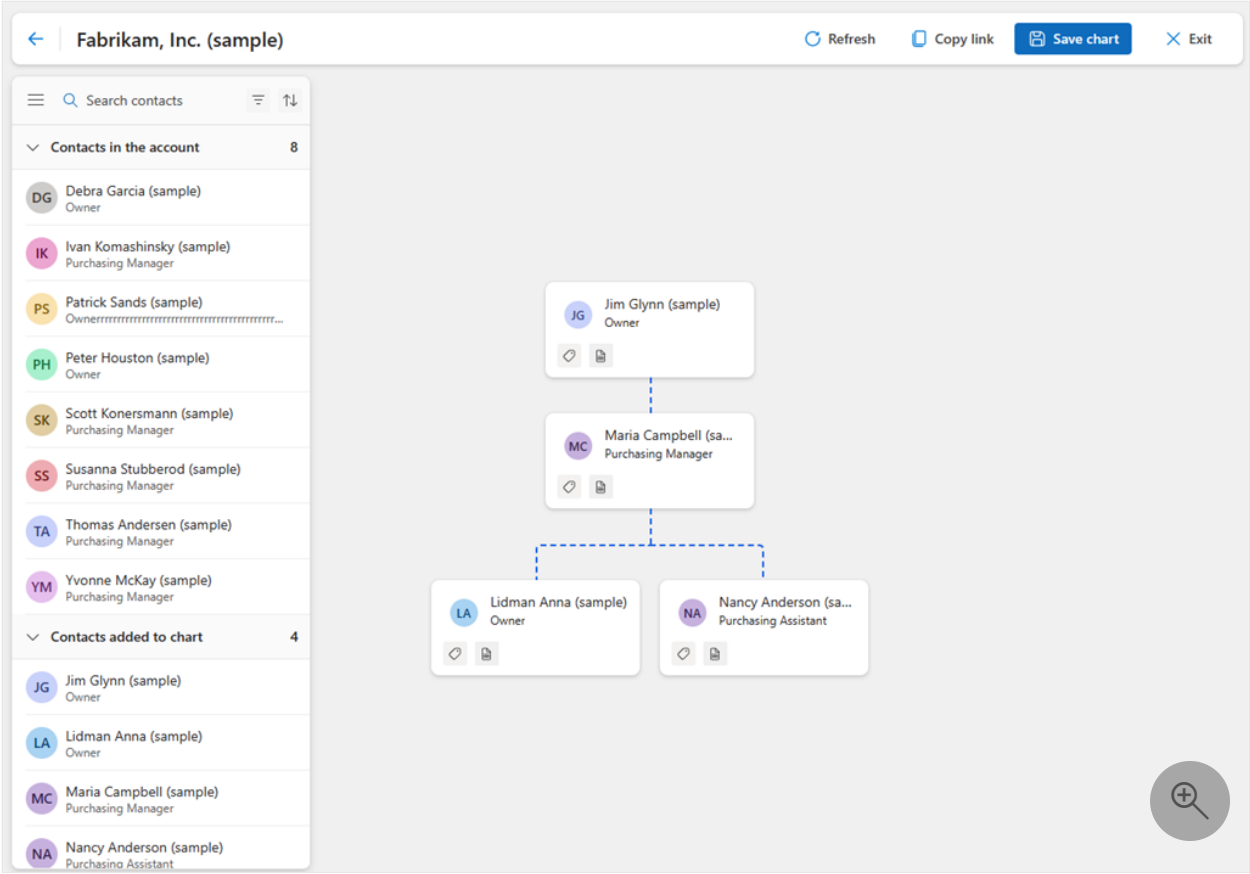
Contacts that appear in the **Contacts in the account** list are automatically added to the org chart if they match the account.

To update the org chart to show new roles, drag a contact to the new position.

Create a hierarchy

To create a hierarchy, drag a contact to the card of the contact with whom you're creating a relationship. The contact is automatically added as a direct report of the target contact.

For example, Anna Lidman and Nancy Anderson report to Maria Campbell. To create this hierarchy, drag **Lidman Anna** and **Nancy Anderson** to **Maria Campbell**'s card, as shown in the following screenshot.



After a contact is added to the chart, you can also use the **Contact Details** pane to add a manager and direct reports. To open the **Contact Details** pane, double-click the contact card.

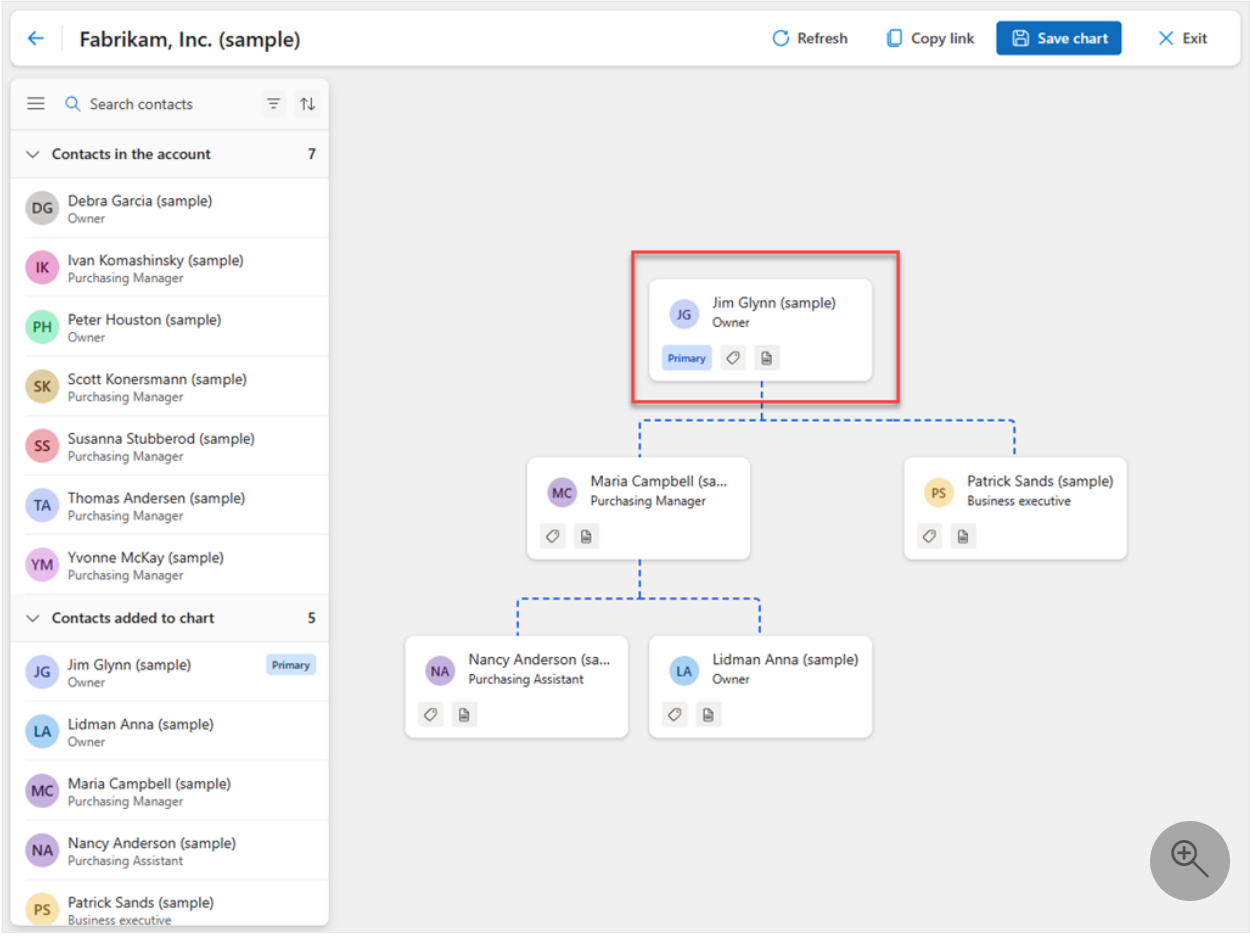
Set a contact as primary

A primary contact is the go-to contact for all communications in your customer's organization. An account can have only one primary contact.

To set a contact as primary in the org chart hover over the contact, select **More options**, and then select **Set as primary contact**.

A label on the contact card indicates its status as the primary contact.

The following image shows that Jim Glynn is the primary contact for the Fabrikam, Inc. account.



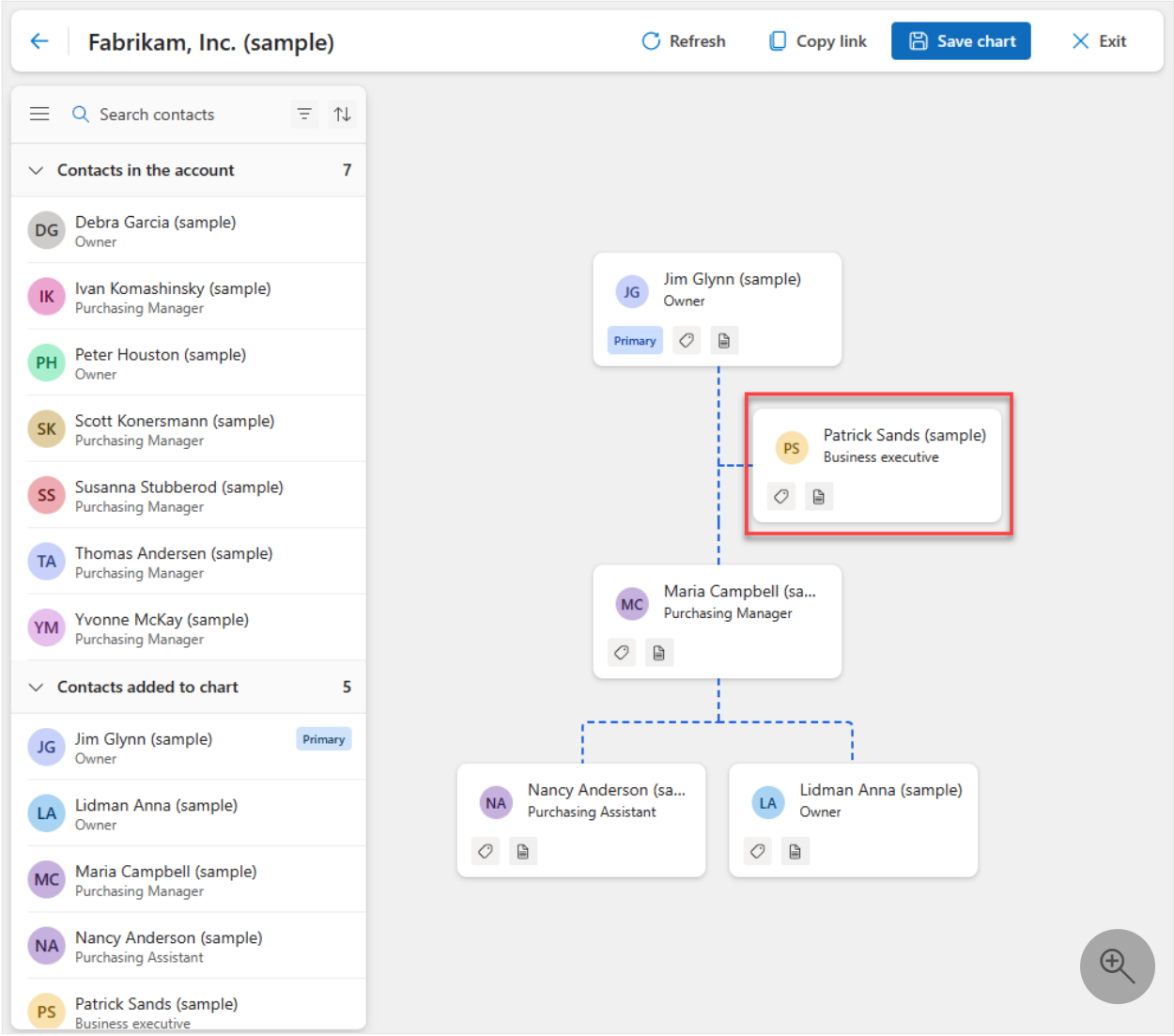
Set a contact as an assistant

In general, an assistant provides administrative support to a team in the organization. In an org chart, assistants are directly below the person to whom they report, but not at the same level as the manager's other direct reports.

1. Drag a contact to the manager card.

2. Hover over the contact, select **More options**, and then select **Set as assistant**.

The following image shows that Patrick Sands is the assistant for Jim Glynn.



To remove a contact as an assistant, hover over the contact, select **More options**, and then select **Set as direct report**.

Add a label to a contact

Labels identify contacts based on certain characteristics or criteria. They make it easier to visualize and understand the organizational structure and make informed decisions about which individuals to approach. A contact can have only one label.

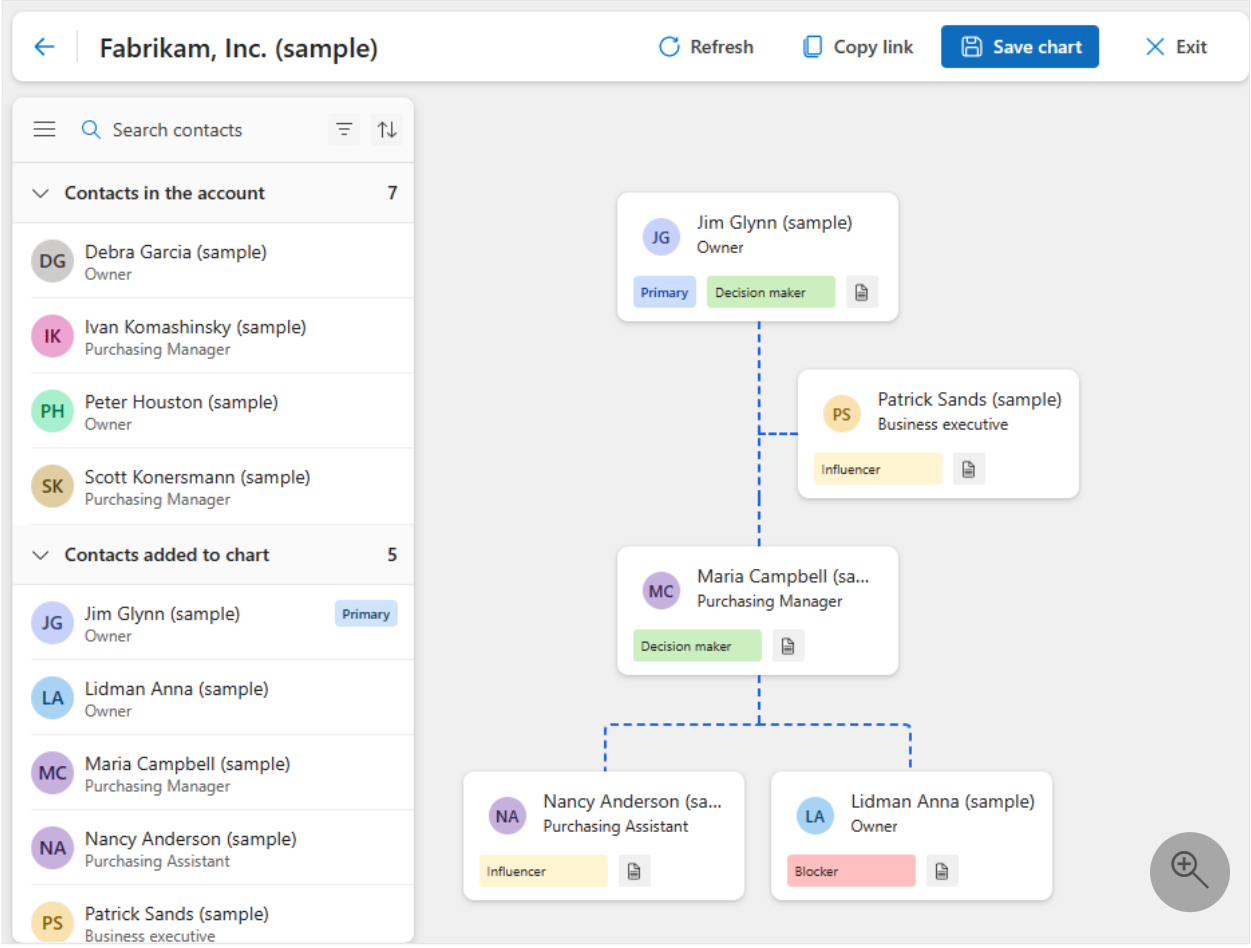
Four labels are available by default:

- **Decision maker**: Typically refers to an individual, or a group of individuals, who are responsible for making the final decisions that affect the overall direction and strategy of the organization.
- **Influencer**: Typically refers to an individual or group who can influence the decisions and actions of others in the organization.
- **Blocker**: Typically refers to an individual or group who are hindering or preventing progress on a particular deal or outcome.

- **Unknown**: Typically refers to an individual whose position isn't clearly defined or whose identity is unknown.

To add a label to a contact card, select the label icon and select a label from the list.

The following image is an example of contacts with labels.



Remove a contact

When a contact is no longer associated with the account, you can remove it from the org chart or from the account.

1. Hover over the contact, select **More options**, and then select one of the following options:

    - **Remove from chart**. The contact is still in the **Contacts in the account** list and can be added back to the org chart. Any direct reports move to the level of the removed contact.
    - **Remove from account**. The contact is removed from the org chart and disassociated from the account.

2. Confirm the removal when prompted.

When LinkedIn Sales Navigator is turned on in your organization and contacts change their organization, their contact card displays a notification to verify the contact's organization details. You can take appropriate action on the contact and update the org chart.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Organization charts
View and understand the org charts

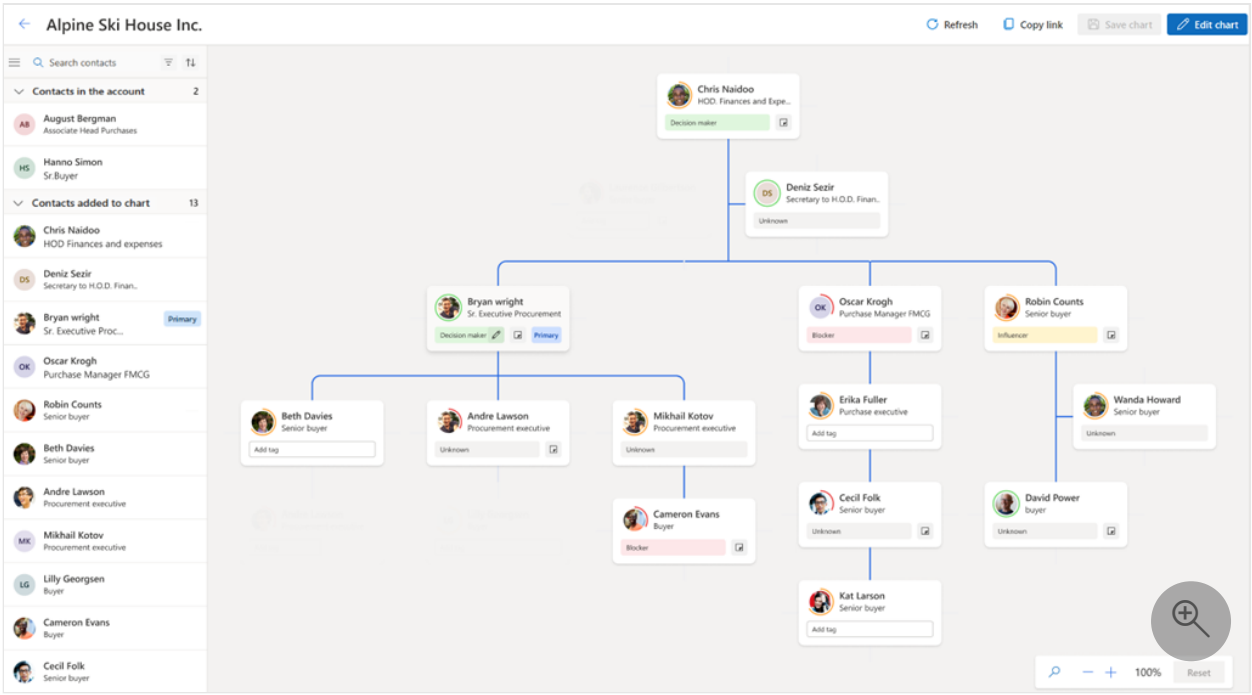
View and understand the org charts

Article • 09/28/2023

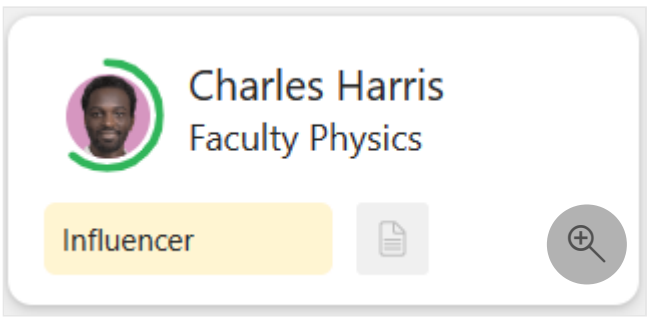
The org chart is accessible from accounts and contacts. To view the org chart for an account or a contact, select **Open org chart** in the command bar. If an organizational chart exists for the selected record, it's displayed. If not, you can create one.

> **Note**
>
> - Org charts that were previously created using the legacy org chart feature are automatically upgraded to the new org chart format.
> - Org charts are available only for accounts and contacts.

The following image is an example of an org chart:



The contact card in the org chart provides high-level information about individuals in the org, such as the relationship health, a label, and contact details. The following image is an example of a contact card in an org chart:



Contact cards include the following information:

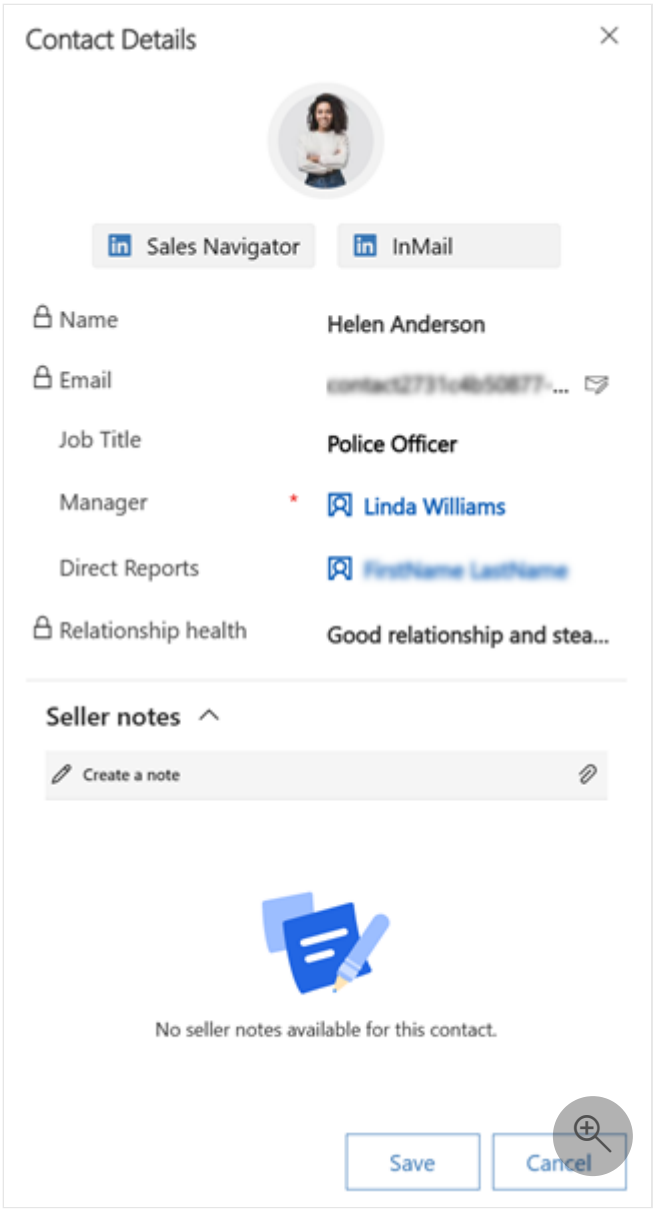
- A label such as "Decision maker" or "Influencer" helps you to visualize the individual's role in the organizational structure, so that you can make an informed decision about whom to approach. A contact can also be marked as the primary contact in the org chart.
- A colored circle around the contact photo or initials indicates the contact's relationship health. To view the relationship health state and trend, hover over the circle. You can also open the **Contact Details** pane to see the relationship health.

  > ⓘ **Note**
  >
  > To view relationship health, your administrator must **turn on relationship analytics**.

View contact details

The **Contact Details** pane provides more information about individuals in an organization, such as their email address, job title, the name of their manager, the names of any direct reports, and their relationship health. When your organization turns on LinkedIn Sales Navigator for you, you also see LinkedIn tools like Sales Navigator and InMail. You can also add notes about the contact for future reference.

To open the **Contact Details** pane, double-click a contact card.



LinkedIn tools

If you have a Sales Navigator license, contacts' LinkedIn profiles are always just a few clicks away.

To sign in to the service and open the LinkedIn Sales Navigator widget, select **Sales Navigator**. Here you can match the contact and view their LinkedIn profile.

To send an email to the contact, select **InMail**.

Contact changes organization in LinkedIn

When a contact leaves the organization and updates their LinkedIn profile, the org chart puts a red border around the contact card and displays a notification to verify the contact's details.

1. On the notification, select **Verify details**.

2. On the **Verify Contact Details** pane, review the details and update the contact information as required.

    - If the contact has moved to a new organization, update the account information in the **Update Company info in your contacts** section and select **Update Contact**.
    - If the contact is still with the current organization, select **Ignore Update**.

A red border around a contact card indicates the contact's organization has changed and needs your review.

Add notes

Add notes to keep and share important information or tasks related to the contact. Notes are available in the **Contact Details** pane and on the contact's timeline.

1. In the **Seller notes** section, select **Create a note**.
2. In the note editor, enter a title and the content of your note.
3. Select **Save**.

The note is added to the contact with information about the author and the time it was created.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Organization charts
Manage org charts

View and manage records in focused view

Article • 10/13/2023

The focused view allows you to view and manage account, contact, lead, and opportunity records and their associated activities on one page. This view makes it easier for you to stay focused on your tasks and reduces the need to navigate between multiple screens. It also allows you to better organize and prioritize your tasks.

> **Note**
>
> Focused view is now available for all entities, including custom entities. However, your administrator must enable it for you to access it. More information: **Enable focused view and set it as the default view**

The focused view is similar to the Sales accelerator workspace view. Learn how to prioritize your sales pipeline through the work list.

Open the focused view

The focused view is a centralized place to view all your open records that have activities that are due or pending, without having to navigate through multiple screens.

1. In the site map, select an entity and do one of the following actions depending on the entity:

    - For Account, Contact, Lead, and Opportunity entities, select **Focused view** on the command bar.
    - For all other entities, select **Show as** > **Focused view** on the command bar.

> **Note**
>
> - The **Focused view** option isn't displayed if a record is selected.
> - Focused view is not available for the Activities entity.
> - The records display all active activities that are created in the last 120 days.

Understand the focused view

The focused view consists of three sections.

- **Search, filter, sort, and switch view**: These options are displayed at the top of the work list item view.
  You can search, filter, and sort the records that you want to view in the list to quickly identify only the records that you want to work with. You can also switch between the focused view and the list view.

  Filters and sorting that are available here are similar to the list view. The attributes that are available in the view are displayed as filter. If you want to add more filters to the view, you can create an advanced filter.

  Create an advanced filter option using the expression builder to refine the content displayed in the work list. You can have only one advanced filter defined for an entity in focused view. Select **Edit filters** to open the expression builder. In the expression builder, create the conditions as required and then select **Apply**. When the advanced filter is applied, you will observe the filter icon is filled with a blue color, and the advanced filter tag is displayed under the filter options.

- **Records list**: All records, including records with no associated activities, for the selected entity are displayed in a card format. You can perform and complete the activities, whether manual or automated, on these cards from the current date and from previous dates. Each card displays information such as the name of the record, the primary contact name, and the next best action.

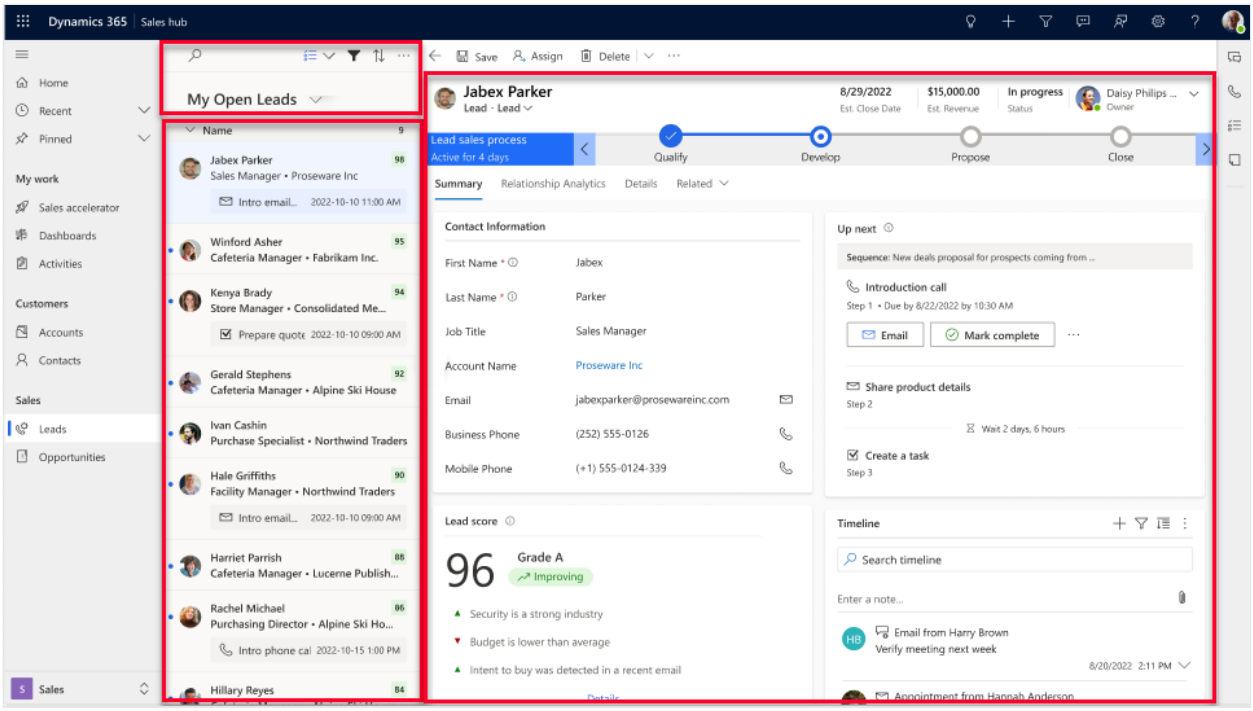
  Next best actions, include the top two activities with the latest due date. To complete the next best action, hover over the action and then select the action icon.

  When no action items are available for the record, the record displays information such as the name and contact details.

  When predictive scoring is enabled in your organization, the list also displays the score for that lead or opportunity at the top-right corner of the card. Learn more about prioritizing leads through scores and prioritizing opportunities through scores.

- **Record details**: Select a record in the work list to open a detailed view of the record on the same page.

The following image is an example of the focused view for the Lead entity:

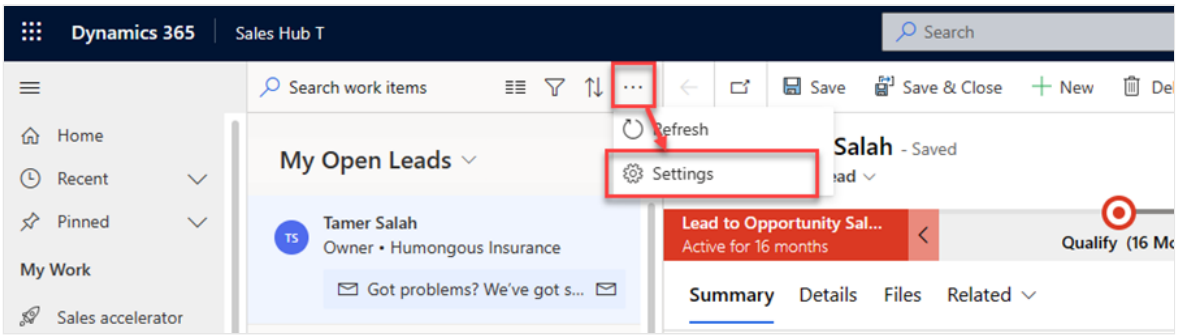


Customize the work list card

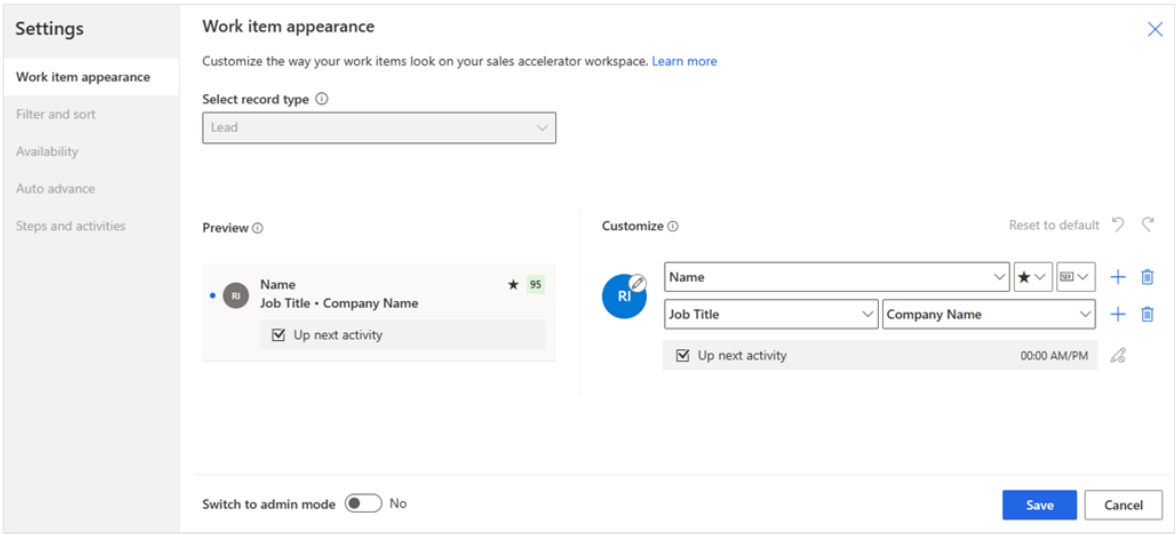
You can customize the work list card to display the information that you want to see. When sales accelerator is enabled, the customizations you make here are also reflected in the sales accelerator worklist items. More information: Customize the appearance of work items in sales accelerator

The customization that you make to the work list card is specific to the entity type. For example, if you customize the work list card for the Lead entity, the customization is applied only to the Lead entity. The customization isn't applied to the Account, Contact, Opportunity, or other entities. These customizations also effects the sales accelerator workspace view.

1. In the focused view page, on the work list pane, select **More options** and then select **Settings**.



2. In the **Settings** dialog box, select **Work item appearance**.



The following are the considerations to keep in mind when customizing the work list card in focused view:

- The **Switch to admin mode** and **Lock customization** options are available only for administrators.
- If the customization is disabled, contact your administrator to turn off the customization lock.
- When admin mode is turned on, you can customize work items for all users within your organization. When turned off, you can customize work items only for yourself. If admin mode is turned off, contact your administrator to turn it on. More information: Lock or unlock customization for other user roles
- You can't customize the action items in the work list card. Also, in preview mode, the **More options** icon isn't visible to select action items that are configured in the sales accelerator workspace view.

3. Under the **Customize** section use the following options to customize:

- To change the icon that appears on a work item, select the pencil icon, and then choose one of the following options:
  - **Record image**: A photo of the contact, if one is available
  - **Record initials**: The contact's first and last initials
  - **Record type**: The icon associated with the record type
  - **Activity type**: The icon associated with the current activity on the record
- To change the content of work items, select the fields or attributes to display:
  - To change an existing attribute, select a different one in its place from the list.
  - To add an attribute in the same row, hover over an existing attribute and select **More options** > **Add a field**. You can show up to three fields in a row.

    - To add an icon in the same row, hover over an existing attribute and select **More options** > **Add an icon**. You can show up to three icons in a row.
    - To add a row, select the add icon (+). You can show up to four rows of information in a work item.
    - To delete a field or an icon, hover over it and select **More options** > **Remove**.
  - To remove all customizations and restore work items to their original appearance, select **Reset to default**.

  The **Preview** section displays a preview of the work list card based on the customizations that you make.

4. Select **Save**.

See also

Set focused view as the default view
Prioritize your sales pipeline through the work list
Work with opportunities in the Kanban view
Customize work items
Focused view FAQs

Work with invalid email addresses (preview)

Article • 07/07/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Email validation in Dynamics 365 Sales identifies and removes non-working or invalid email addresses in your leads and contacts. This proactive validation helps you prioritize customers who have a valid email address, which in turn results in lower email bounce rates, improved engagement, and increased value for your time.

As you enter the email address in the primary email field, the validation process starts automatically. If the email address is invalid, the envelope icon turns red and hover over the cursor on the envelop icon to view the reason for the invalidation. For more information on reasons for the invalidation, see Understand email error message.

Email address validation looks for the following errors:

- **Incorrect syntax**: An address that doesn't contain both a username and an email domain
- **Disposable domain**: An address that contains a known disposable or temporary email domain
- **Test or spam email addresses**: An address that contains known indicators of a test or spam address in the email header or metadata, IP address, HTML code of the email, and email content and formatting
- **Expired email addresses**: An email account that has expired and can no longer receive or send email
- **Emails that bounce back**: An address that can't receive a message for any reason

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as Salesperson or Sales Manager More information: Primary sales roles

Prerequisite

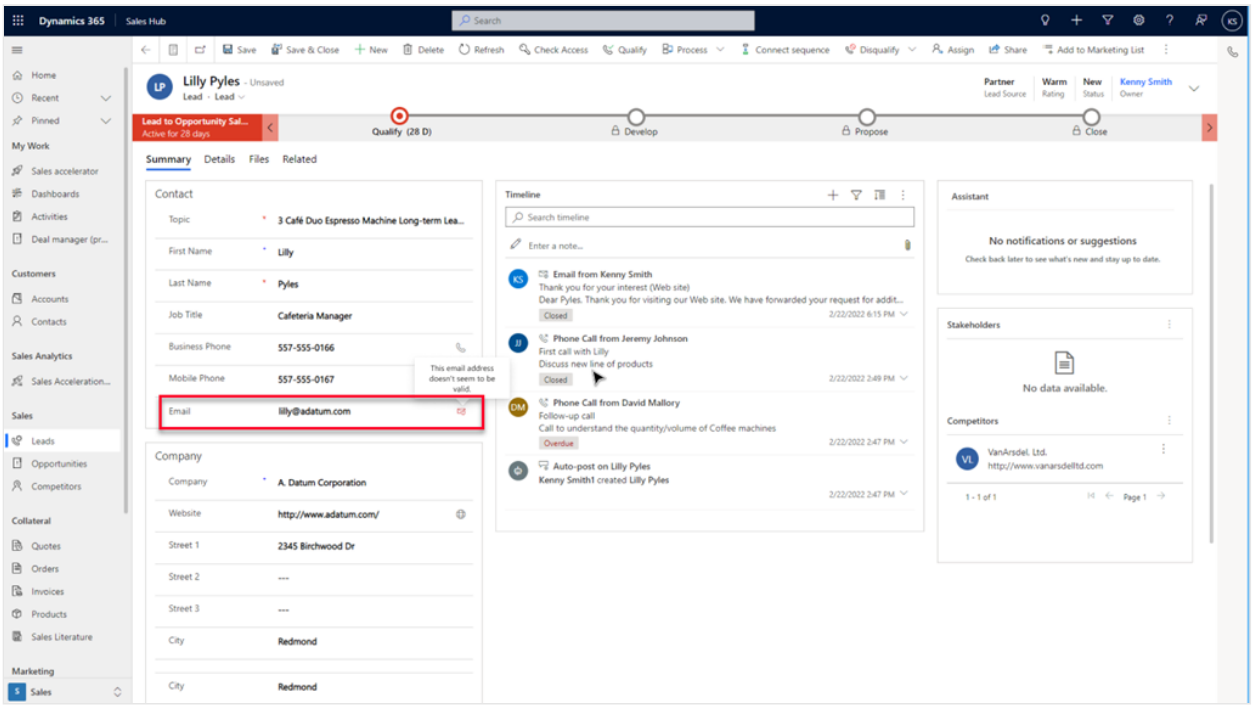
Ask your administrator to turn on email validation for your organization. More information: Enable email validation

View invalid email addresses

You can view invalid email addresses on primary record or sales insights forms, work list items, and the **Up next** widget in sales accelerator. A red envelope icon indicates an invalid email address.

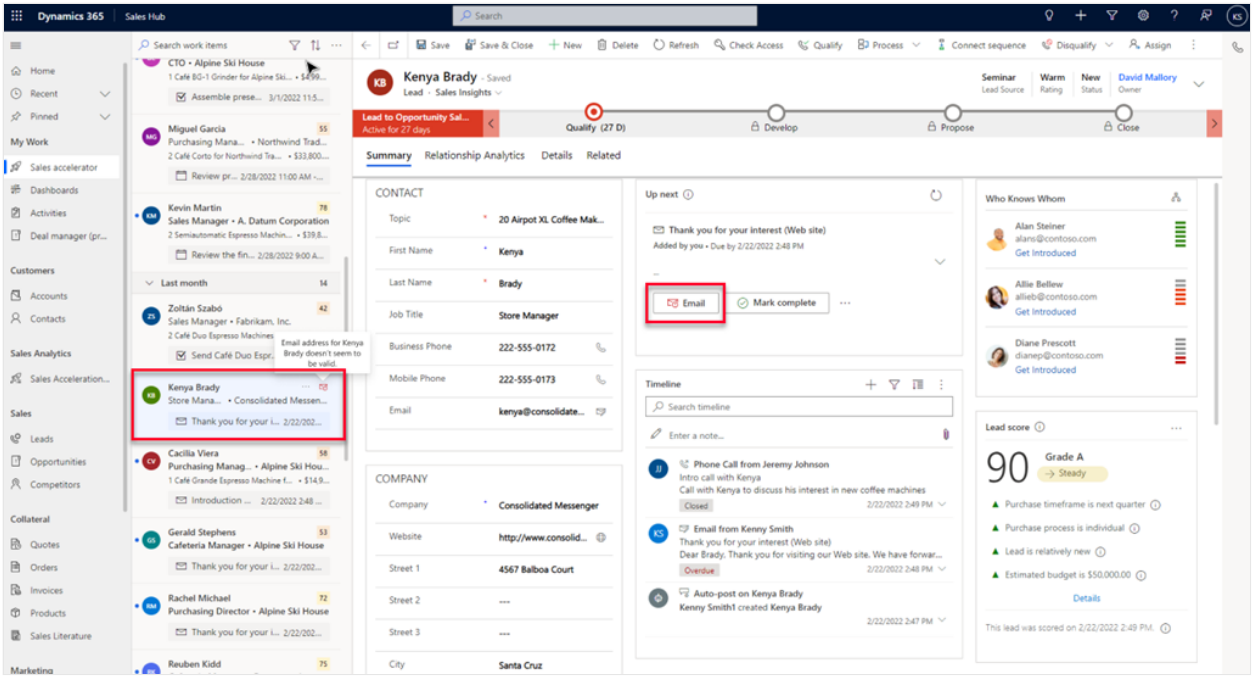
View invalid email addresses on primary entity and sales insights forms

Open a lead or contact record, and choose the primary record or sales insights form. In the following screenshot, a lead record has an invalid email address.



View invalid email addresses on the Up next widget and work list items

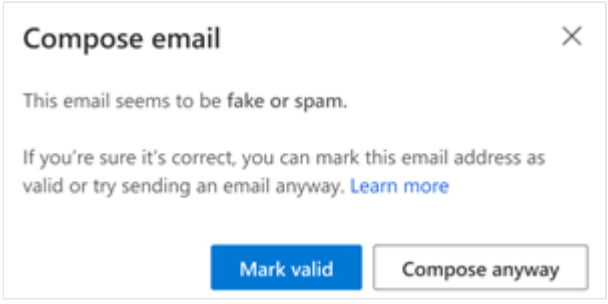
Go to a record in sales accelerator with email as the current activity.



Send an email to an invalid address

You can send a message to an email address that's marked as invalid. When you select the option to send email, a notification tells you the reason the email was marked as invalid. You can perform the following tasks in the notification:

- If you know the email address is valid, select **Mark valid**. The address is marked as valid and the alert is removed. Compose and send the email.
- If you don't know the email address is valid but you still want to send an email, select **Compose anyway**. Compose and send the email.



You can also send email to an invalid address by creating a manual email activity in the timeline.

Understand email error messages

Error message	Description
This email doesn't seem to be valid as the domain expired recently	The email domain recently expired. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain has expired	The email domain has expired. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain is invalid	The email domain is misspelled or can't be found for some other reason. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as it belongs to a temporary domain	The email domain is a known disposable or temporary domain. We recommend you exercise caution while engaging with this email address.
This email address may be invalid as it's a mailing list, and not an individual's email	The email address belongs to a mailing hub or hub email address, not to an individual. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the email address is malformed	The email address isn't in the expected format, *username@domain*. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the email address doesn't exist	The alias or username in this email address can't be found. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain is unknown	The email domain can't be found. We recommend you exercise caution while engaging with this email address.
This email seems to be spam	The email address or domain is a known source of spam. We recommend you avoid engaging with this email address.
This email seems to be fake	The email address has a fraught alias. We recommend you avoid engaging with this email address.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable email validation

Understand the LinkedIn Sales Insights tab

Article • 03/30/2022

The **LinkedIn Sales Insights** tab in **Account** records provides information about the company and personas that are defined for the company within LinkedIn Sales Insights.

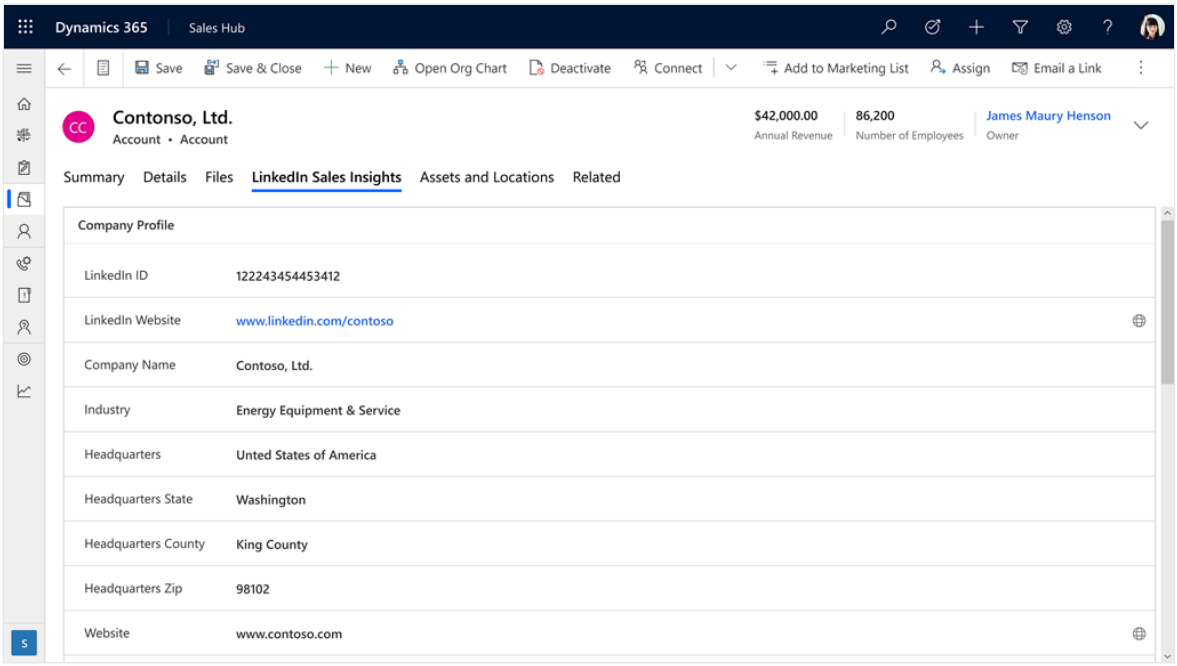
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

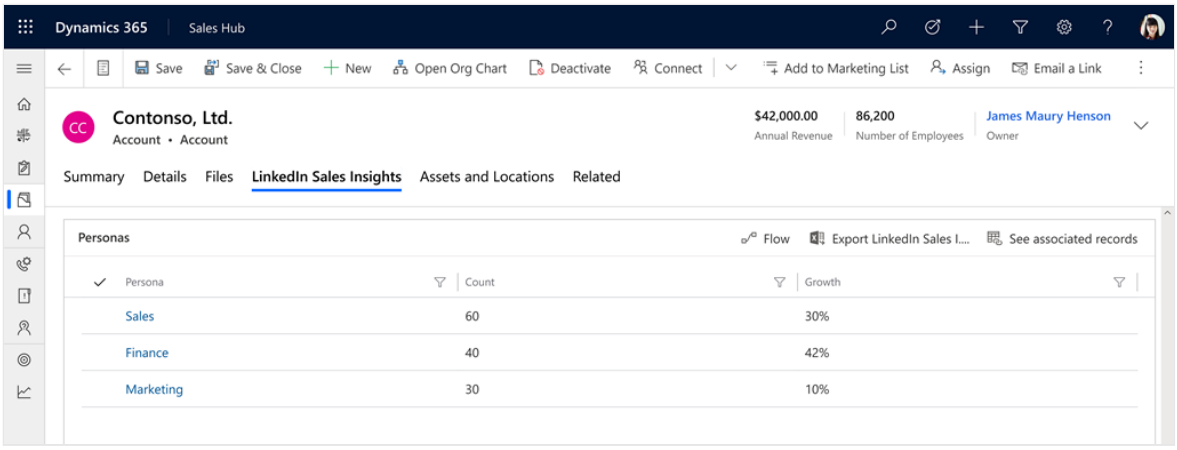
LinkedIn Sales Insights entities

When the solution is installed, two new entities are created in Dynamics 365 Sales:

- LinkedIn Sales Insights Company Profile (one company profile record related to each account)



- LinkedIn Sales Insights Personas (three persona records related to each account)



When CRM sync for LinkedIn Sales Insights is enabled, LinkedIn Sales Insights for Dynamics 365 brings data from all accounts that are matched in LinkedIn Sales Insights into account records in Dynamics 365. While configuring the data pipeline from LinkedIn, customers have the option to automatically update the data every 24 hours.

Entities	Parameter information
Company Profile	• LinkedIn ID • Company Page URL • Company Name • Industry • Global Employee Count • Global Employee Growth (%) • Headquarters City • Headquarters State • Headquarters Country • Company Website URL • Last Update
Personas	• Name • Employee Count • Employee Growth

See also

Install or delete the LinkedIn Sales Insights solution
LinkedIn Sales Insights for Dynamics 365 Sales - Installation Guide

Use ZoomInfo app data

Article • 06/27/2022

The ZoomInfo app for Dynamics 365 helps sales teams accelerate business growth with accurate contact and account information in their preferred Dynamics 365 Sales workflows.

As a seller or sales manager, you can do the following tasks using ZoomInfo data in Dynamics 365 Sales:

- Find and import B2B account, contact, and lead information
- Update data on existing leads, contacts, and accounts

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

Before you start, be sure you've met the following prerequisites:

- The ZoomInfo app is installed on your Dynamics 365 Sales organization. More information: Install ZoomInfo app
- You have a license to use the ZoomInfo app.

Access and understand the ZoomInfo data

You can access the ZoomInfo app in the following ways:

- **Through the Dynamics 365 app center**: The ZoomInfo app is available as part of Dynamics 365 published apps. The app for Dynamics includes custom forms with the ZoomInfo iframe built into account, contact, and lead forms. Also included in the left navigation are links to the ZoomInfo app and Knowledge Center.
- **Customized experience**: The customized experience is available when an administrator customizes the existing environment by adding the same elements

available in the ZoomInfo app experience to the Dynamics 365 Sales app and to standard or custom account, contact, and lead objects. More information: Customize the ZoomInfo app.

To access and understand the ZoomInfo data, follow these steps:

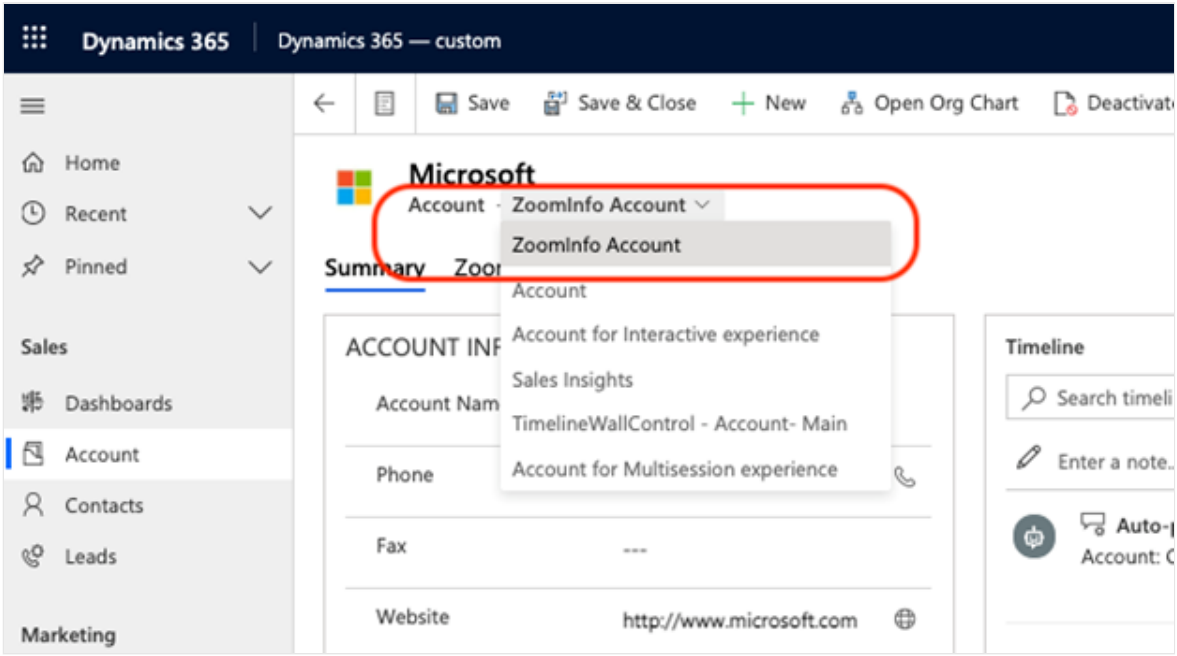
1. Open your Dynamics 365 Apps page and choose one of the following options to open the ZoomInfo data:

   - Select the **ZoomInfo** app and on the left navigation pane, select **Accounts**, **Contacts**, or **Leads**, depending on the record for which you want to view information.
   - Select the **Sales Hub** app and on the left navigation pane, select **Accounts**, **Contacts**, or **Leads**, depending on the record for which you want to view information.

   > **Note**
   >
   > In this example, we're using the **Accounts** record type to explain the steps.

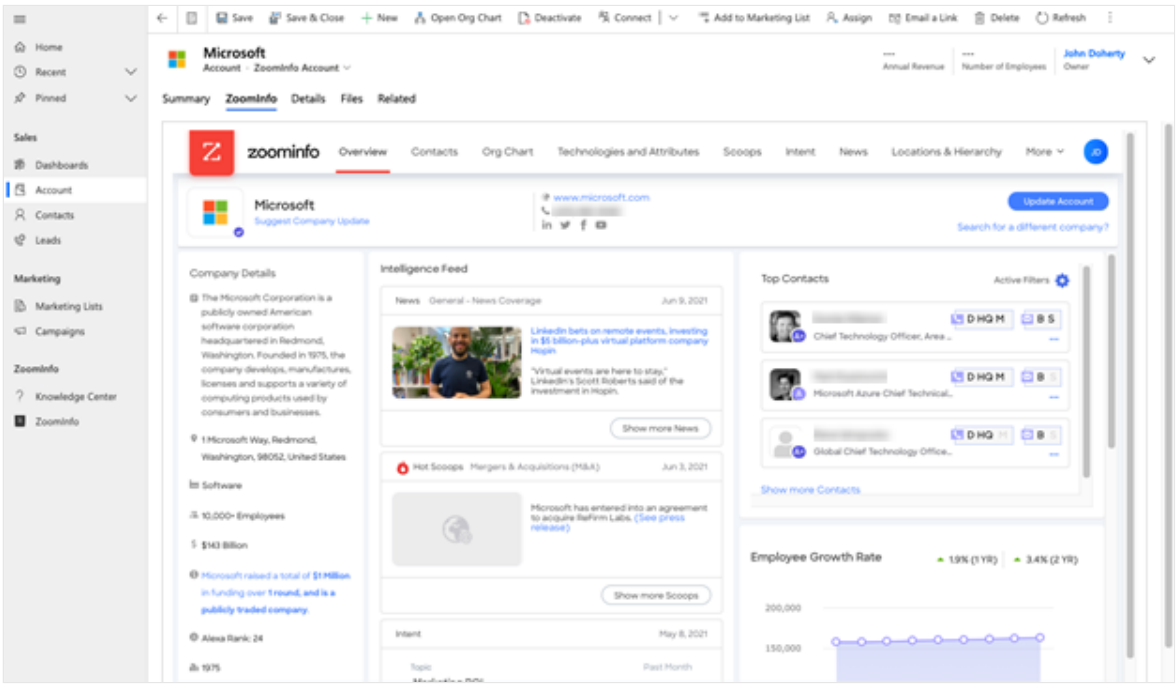
2. Open an account record and the record opens with a default form.

3. On the form selector dropdown, choose **ZoomInfo Account**.



The **Summary** tab of the **ZoomInfo Account** form includes a **ZoomInfo Overview** that displays metadata describing the ZoomInfo data for the selected account. The metadata includes the date and time when the account was first updated, last updated with ZoomInfo data, and the unique ZoomInfo ID.

4. Select the **ZoomInfo** tab to see the data of the account that's available in the ZoomInfo app.



To understand more about each component of the ZoomInfo home page, see Dynamics Native Application.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Install ZoomInfo app

Scan business cards in Dynamics 365 Sales

Article • 04/17/2023

The integrated business card scanner in Dynamics 365 Sales helps salespeople to quickly scan business cards of the prospective customers they've met in the fields. It reads basic information from the card and populates data in fields of **lead** or **contact** records in Dynamics 365 Sales, so salespeople don't spend time on entering the data manually and can focus on more important tasks.

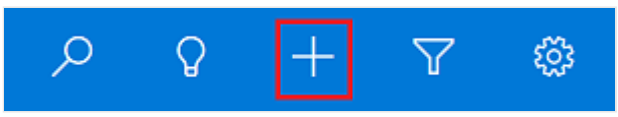
> **Important**
>
> - To learn about the availability of the business card feature in a region, see **Feature availability by region**.
> - To know about the business card scan limits with your user license, see the **Microsoft Dynamics 365 Licensing Guide**.
> - The card scanner is available in lead and contact forms. If you'd like to add the card scanner to other forms, see **Use the business card reader component in model-driven apps in Power Apps**

License and role requirements

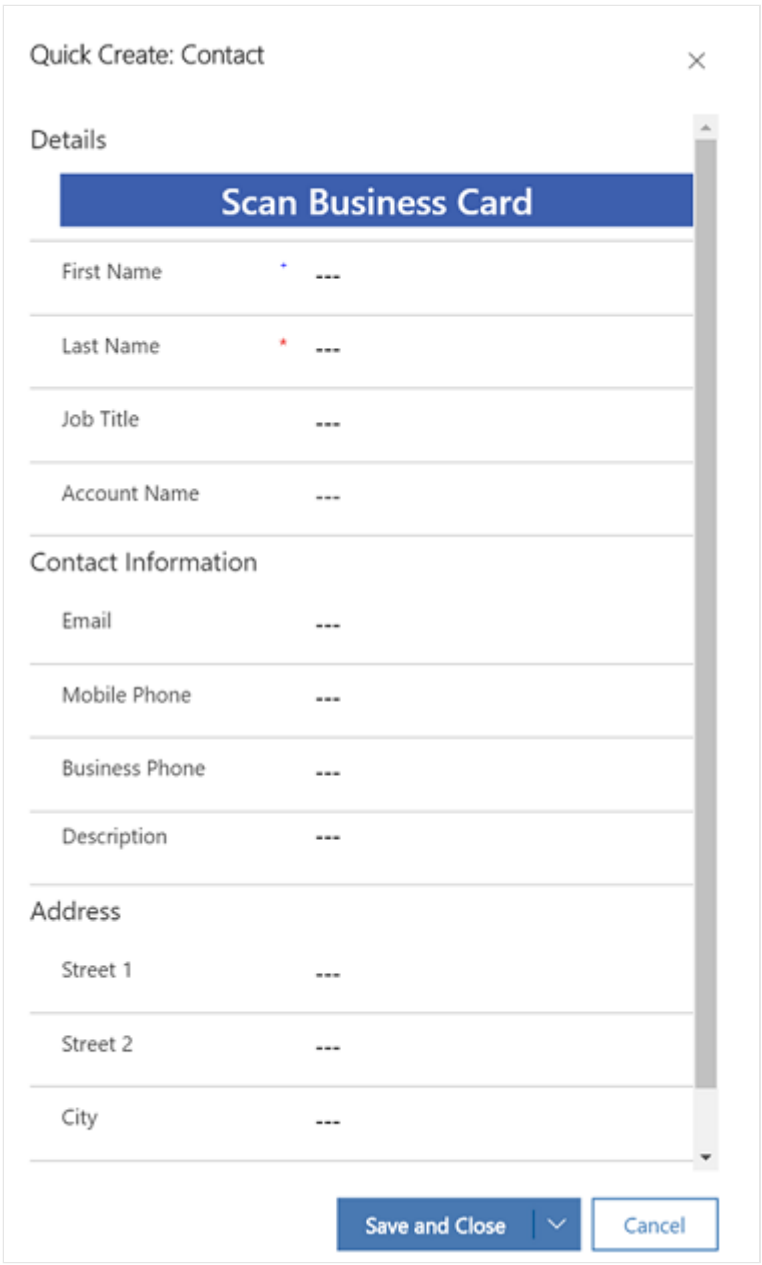
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise. More information: Dynamics 365 Sales pricing
Security roles	Basic User in Power Platform More information: Assign security roles to users in a Dataverse environment Assign security roles to users in non-Dataverse environment

Scan a business card

1. On the nav bar, select the **New** button and then select **Contact** or **Lead**.



2. On the Quick Create form, select **Scan Business Card**.

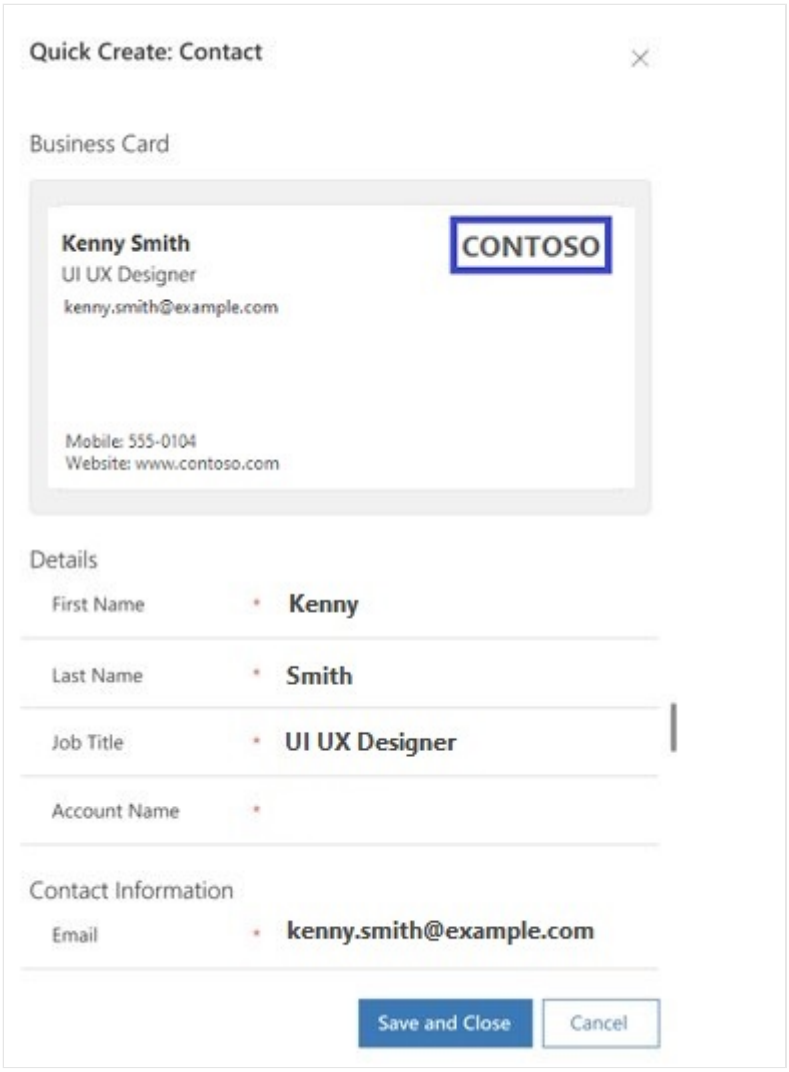


3. If you're using the Dynamics 365 Sales app on a desktop, browse to the folder where the business card picture is stored, select the business card picture, and then select **Insert**.

   -OR-

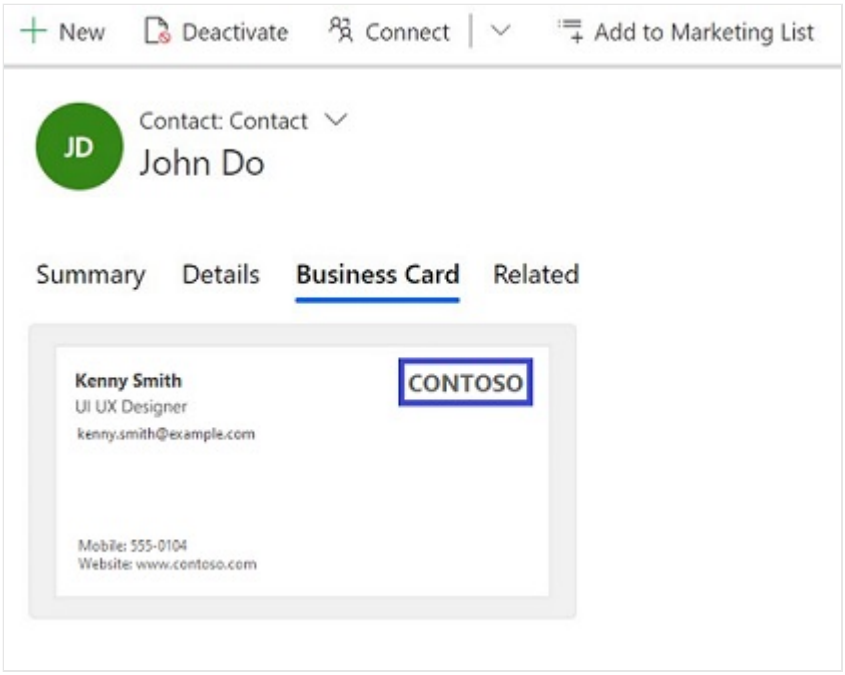
   If you are using a mobile phone, use the mobile phone camera to capture the business card picture.

   The details like first name, last name, job title, and email will be automatically populated from the business card. Account name is not populated automatically as it's a lookup field. You can select it manually in the **Account Name** field.



4. Select **Save**.

> ⓘ **Note**
>
> - When you save the **Contact** or **Lead** records, a **Duplicate Records detected** dialog box is shown if duplicate records are found based on the available duplicate detection rules. You can choose whether you want to create a duplicate record or not.
> - When you save the **Contact** or **Lead** record, the business card is also associated and stored in the records, so you can refer to it later. If your system administrator has set the **Always retain business card images after scanning option** option to **No**, the business card image won't be saved.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Customize the business card scanner control
Enable or disable saving of business card image

Copilot in Dynamics 365 Sales overview

Article • 10/05/2023

This article was partially created with the help of AI. An author reviewed and revised the content as needed. **Read more**.

Copilot is an AI assistant that helps sales teams be more productive and efficient in their daily work. It has a chat interface that sellers can use to get a quick summary of their opportunity and lead records, catch up on updates, prepare for meetings, and so on. Copilot is enabled by default for orgs in North America region. It's enabled for all the sales apps with lead and opportunity entities in this region. If your org is in a different region, you need to enable Copilot manually. Learn more about enabling and setting up Copilot.

> **Note**
>
> Copilot is also available as an add-in and an integrated app in Outlook and Teams respectively, allowing you to capture, access, and update your CRM data from the apps you use every day. It also has generative AI capabilities such as record summarization and email content generation. Learn more about **Microsoft Sales Copilot** and its **generative AI capabilities**.

Copilot capabilities

Copilot offers the following capabilities:

- Record summarization
- Record catch up
- Meeting preparation
- Email assistance
- News updates

Record summarization

Record summarization helps you get a quick summary of your opportunity and lead records. By default, the summary is generated from your default opportunity and lead views. However, a system administrator can configure the fields that are used to generate the summary. Ensure that your entire sales team agrees on the top seven fields that are most relevant for your business.

More information:

- Summarize an opportunity or a lead
- Configure fields for summarization

Record catch up

Stay on top of the changes to your opportunities and leads. Copilot summarizes the changes to your records since the last seven days or your last login. Copilot generates this information from the audit history of the record. A system administrator can configure the fields that you want to catch up on. Ensure that your entire sales team agrees on the top 10 fields that are most relevant for your business.

More information:

- Catch up with an opportunity or lead
- Configure fields for summarization

Meeting preparation

Meeting preparation helps you prepare for your upcoming meetings effortlessly using Copilot. Copilot identifies your upcoming meetings for the day and summarizes the relevant information from the opportunity or lead records that are associated with the meeting.

More information: Prepare for upcoming meetings

Email assistance

Use Copilot to compose professional-looking emails, respond to emails, and get email follow up reminders. Copilot uses natural language processing (NLP) algorithms to help creating emails messages. Trained on vast text data, Copilot generates personalized, high-quality emails tailored to specific needs. Dynamics 365 Sales uses Copilot capabilities to help sellers in creating emails that effectively engage customers, ensuring clarity, conciseness, and compelling content. Using the email assistance capabilities, you can do the following tasks:

- Compose and send email messages using Copilot (preview)
- View and copy email summary
- Show emails that are not replied

News updates

News updates help you stay current with the latest news about your account. These news updates can be great conversation starters and help you understand the current dynamics in your customers' organization. Ask Copilot to get you the latest news related to an account and get a list of articles featuring or mentioning the account, curated from Bing. Ensure to read through the news article thoroughly to confirm that it's from an authentic source and it's indeed about the customer.

More information: Show latest news for an account

Region availability and languages supported

Copilot is available in all regions and is supported only in English. However, if you're enabling the feature for orgs outside of North America, you'll need to opt in to share relevant data with the Azure OpenAI Service outside of your default geography. To learn more, see Copilot data movement across geographies.

Use Copilot in Dynamics 365 Sales

Article • 10/05/2023

> This article was partially created with the help of AI. An author reviewed and revised the content as needed. **Read more**.

Copilot is an AI assistant that helps you be more productive and efficient in your daily work. Copilot can summarize records, help you catch up on updates, prepare for meetings, and so on.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

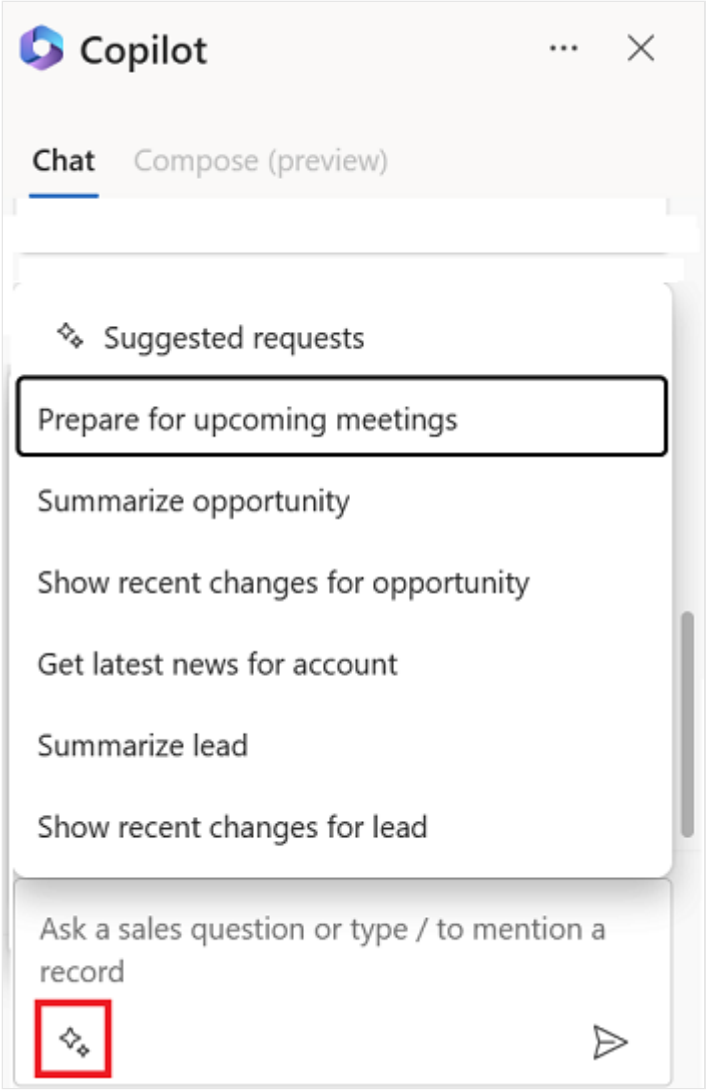
To use Copilot, your administrator must have enabled and set it up.

Launch Copilot

In your sales app, select the Copilot icon ( ) in the right most bar.

Use Copilot chat

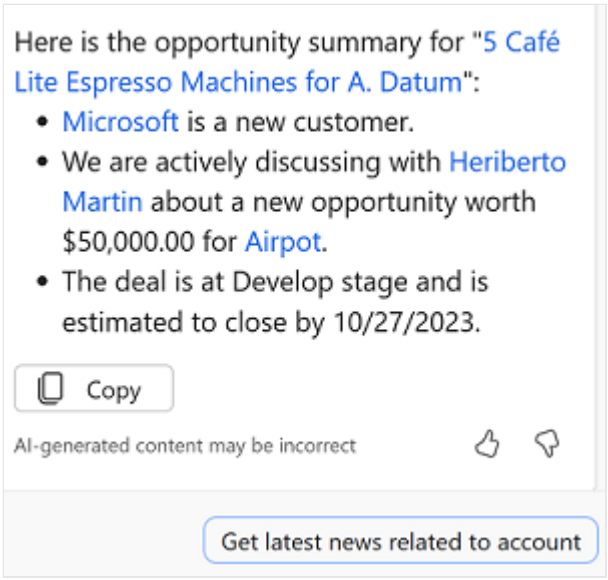
In the Copilot pane, select the sparkle icon ( ) or place the cursor in the chat area to get the list of suggested requests or prompts.



Summarize an opportunity or a lead

Use the `Summarize opportunity` or `Summarize lead` prompt to get a quick summary of an opportunity or lead. The summary is generated from the fields in the default opportunity or lead view. Start typing the opportunity or lead name after the @ symbol. Copilot will suggest the records that match your search. Select the record that you want to get a summary of.

The following screenshot is an example of an opportunity summary generated by Copilot:



Would you like to see a different set of fields summarized?

- You can get the summary generated from the fields that matter to you the most. For example, let's say that estimated revenue, close date, contact, BPF stage, and proposed solution are the first few things that you look for in an opportunity. Work with your administrator to configure these fields for summarization.
- Now, when you ask copilot to summarize an opportunity, you'll get a summary of the opportunity record that includes configured fields.
- These fields are configurable at the organization level. Ensure that your entire sales team agrees on the **top seven** fields that are most relevant for your business.

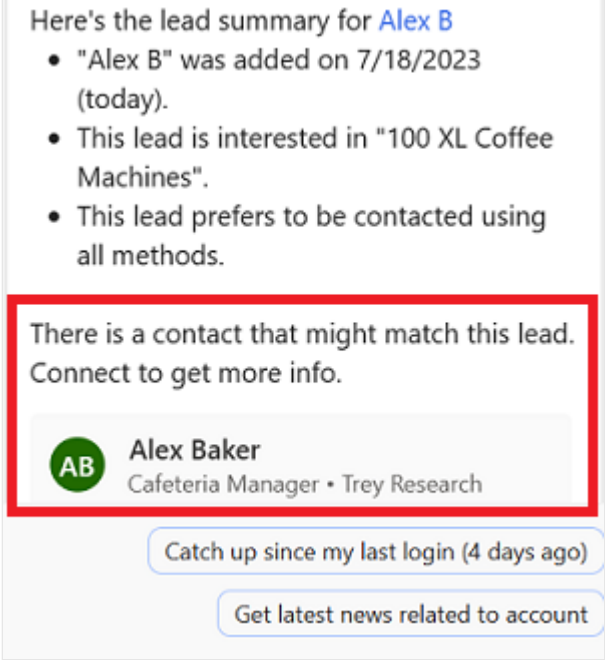
Lead enrichment with Copilot

Copilot enriches your leads with data from Dynamics 365 Sales, LinkedIn and Bing.

- Possible contacts for a lead, based on the lead name, phone number, email, company name.
- Latest news updates on the account, curated from Bing.
- Suggested profiles of the contact from LinkedIn, if you have the LinkedIn Sales Navigator license.

After you select a suggested contact, Copilot generates a summary of fields that can be updated in the lead based on information from the selected contact and the account associated with it. For example, let's say you selected Alex Baker from Trey Research as your contact, Copilot will suggest the fields in the lead form that can be updated with

details from Alex and Trey Research's records.



Catch up with an opportunity or lead

Use the `Catchup with opportunity` or `Catchup with lead` prompt to catch up on the updates to your opportunity or lead records since the last seven days or the last login. The catch up information is generated from the audit history. If you don't see any catch up information, ensure that your administrator has turned on audit and granted you access.

Would you like to define the fields that you want to catch up on?

- By default, Copilot summarizes the last 10 updates to the record from the audit history. However, you can work with your administrator to configure specific fields for catch up so that you stay updated on changes to fields that matter to you the most.
- These fields are configurable at the organization level. Ensure that your entire sales team agrees on the **top 10** fields that are most relevant for your business.

Prepare for upcoming meetings

Use the `Prepare for upcoming meetings` prompt to get a list of meetings in the next 24 hours on your calendar. After you select the meeting that you'd like to prepare for, Copilot generates a summary based on the latest notes (recorded in the last 3 months) and the most recent email thread associated with the timeline of the related record.

Show latest news for an account

Use the `Show latest news for account` prompt to get the latest news about an account, curated from Bing. Copilot lists articles featuring or mentioning the account. These news updates can be great conversation starters and help you understand the current dynamics in your customers' organization. Ensure to read through the news article thoroughly to confirm that it's from an authentic source and it's indeed about the customer.

Compose and send email messages

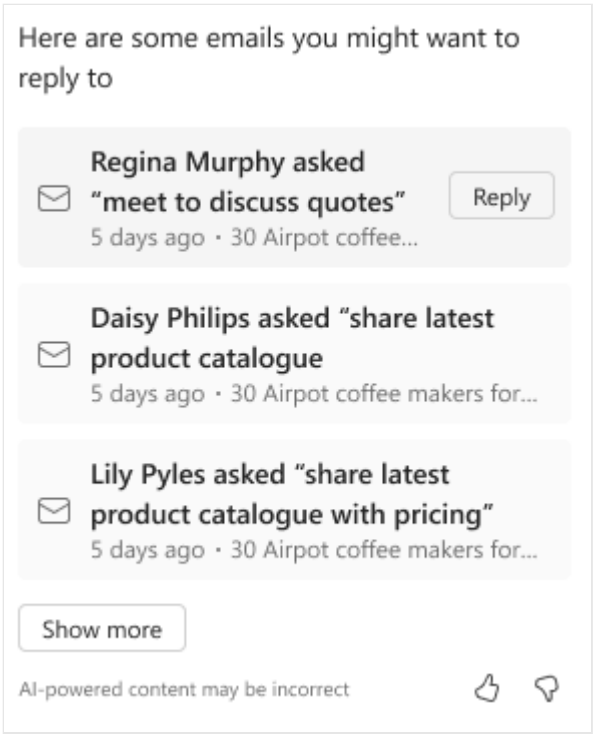
Use Copilot to get content suggestion while you're composing or replying to an email. Copilot generates the draft based on your input, recent emails, and related information. You can select from predefined response categories or input your own text, and the AI generates the suggested content. You can use it as-is or modify it as per your requirements. For more information, see Compose and send email messages using Copilot (preview).

Show emails that are not replied

Copilot serves a reminder to ensure that emails that you forget to reply are not missed. When you open the **Chat** tab, the **Show my unanswered email** option is displayed. Select this option to access the list of emails that remain unreplied. To be included in the list, the emails must meet the following criteria:

- Emails that have been pending for past three to seven days from the current day. However, any email that surpasses the seven-day mark will no longer be displayed in the list.
- Email should contain a buying intent, a question, a query, or an action item.
- Email should have the **Regarding** field as a lead or an opportunity.

The following card is an example of the list of emails that are not replied:



See also

Copilot overview

Configure Copilot in Dynamics 365 Sales

Compose and send email messages using Copilot (preview)

Article • 10/05/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Copilot for email suggests content while composing or replying to emails, saving you time and effort. It provides AI-generated drafts based on your input, recent emails, and related information. You can select from predefined response categories or input your own text, and the AI generates the suggested content. You can use it as-is or modify it as per your requirements.

> **Note**
>
> - The AI-generated content is just a suggestion. It is your responsibility to review and edit the suggested content to make sure it's accurate and appropriate before sending your email.
> - Copilot for email is supported only for lead and opportunity records through the Dynamics 365 email experience.

Prerequisites

Ensure that the Copilot feature is enabled for your Dynamics 365 Sales organization.
More information: Enable and set up copilot capabilities

View the Copilot composer

Copilot is available for lead and opportunity records with the Dynamics 365 email experience.
Sign in to your sales app and the Copilot ( ) icon appears on the upper-right corner of the page. The composer is inactive until you open the email.
Open an email from a record using the Up next widget, Timeline, or quick create email activity. The Copilot composer becomes active.

When opening an email from Timeline or quick create email activity, ensure that the Regarding field contains a lead or an opportunity.

Compose or reply to an email

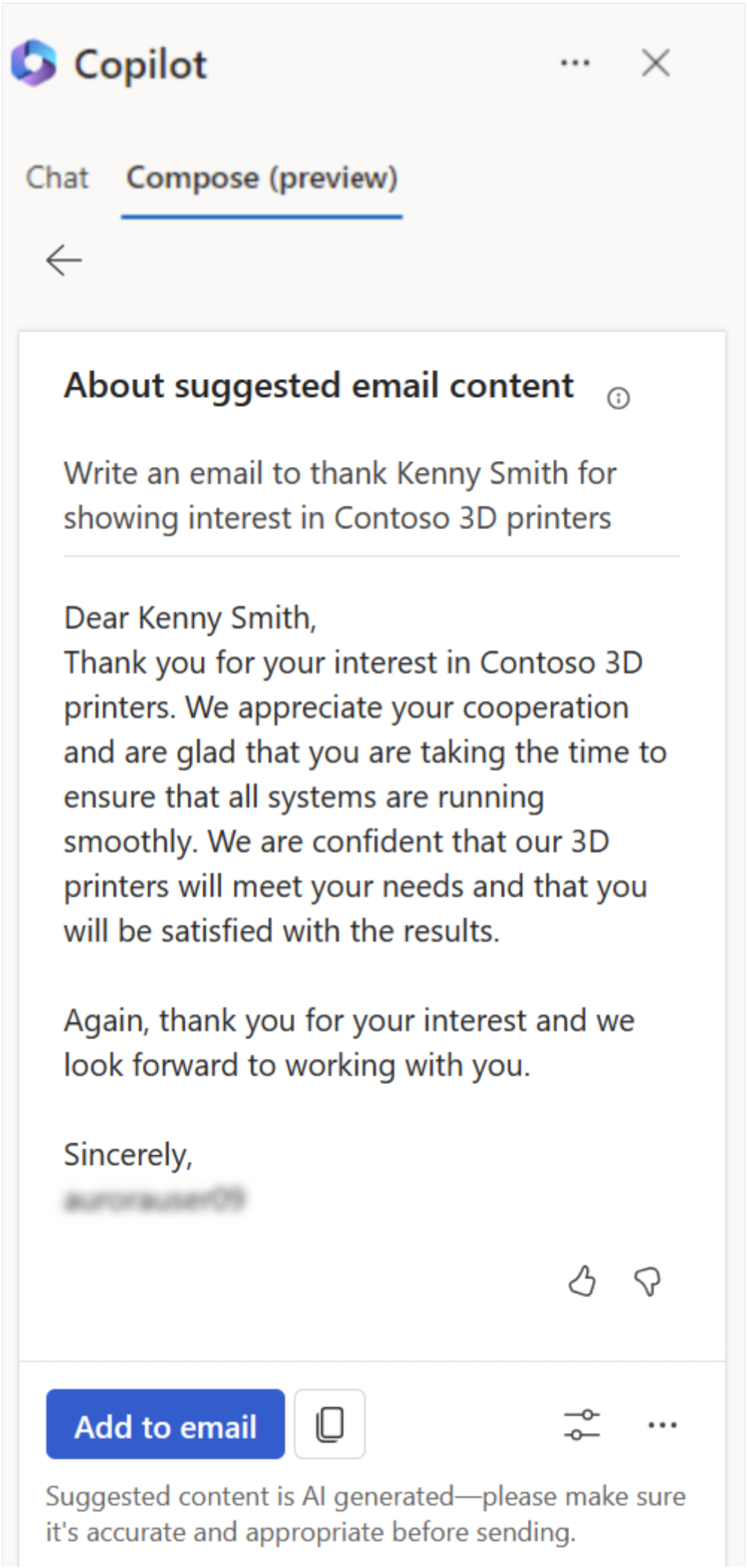
When you're sending an email, you can provide the context for the email in the Copilot composer, and a draft is generated. You can review the draft, copy the content to the email, and send it to recipients.

1. Open a new or an existing email from a lead or an opportunity record.
2. On the **Copilot** pane, go to the **Compose** tab.
3. Select **Describe the email you want**.

   > **Note**
   >
   > When replying to an email, default options are available to generate a draft, including **Reply to an inquiry**, **Make a proposal**, and **Address a concern**. You can choose an option that suits your needs or draft a new email.

4. In the **Draft with Copilot** section, enter the statement for which you want to generate the draft email. An example statement, Write an email to thank Kenny Smith for showing interest in Contoso 3D printers.

   A draft is generated for the statement. Review the suggested content.


Copilot
Chat
Compose (preview)
About suggested email content
Write an email to thank Kenny Smith for showing interest in Contoso 3D printers
Dear Kenny Smith,
Thank you for your interest in Contoso 3D printers. We appreciate your cooperation and are glad that you are taking the time to ensure that all systems are running smoothly. We are confident that our 3D printers will meet your needs and that you will be satisfied with the results.
Again, thank you for your interest and we look forward to working with you.
Sincerely,
Add to email
Suggested content is AI generated—please make sure it's accurate and appropriate before sending.

Do the following according to your needs:

- If you're fine with the content, select Copy to email to paste the content in the email body. Edit the content according to your requirements and send the email.
- If you want to fine-tune the suggested content, enter the suggested statement in the **Describe the changes you want** textbox. To refine the draft, see Refine suggested content.
- If you're not satisfied with the draft and generate new content based on the same statement, select **Try again**. More information, see Refine suggested content.

Refine suggested content

After you've generated the suggested content, you can refine the results further by providing a new prompt that builds upon the previous suggestion or generate new suggested content. This allows you to fine-tune your email replies according to the needs and preferences.

To refine the content:

1. Enter a statement to refine the suggested content in the **Describe the changes you want** textbox. For example: Make it formal, make it shorter, or suggest a meeting next week.
2. Press **Enter**.
3. Review the suggested content and select **Copy to email** to paste the content in the email body.

To generate different suggestion based on the statement:

1. Select **Try again**.
   New content is generated based on the statement.
2. Review the suggested content and select **Copy to email** to paste the content in the email body.

> ⓘ Note
>
> To restore the content to the previous version, select the undo ( ) icon beside **Try again**.

See also

Copilot overview

View and copy email summary

Article • 10/05/2023

When interacting with customers over email, you often need to update the records with the latest information. Manually updating the records each time you interact with customers via email can be time-consuming and error prone. Additionally, manual update could potentially add noise to the records, by overloading records with email exchanges.

Dynamics 365 Sales uses copilot to summarize email conversations and provides you with options to view and copy the summary as a note to a record.

Prerequisites

Ensure that the Copilot feature is enabled in your organization. More information: Enable and set up copilot capabilities

Considerations

Review the following considerations before you use the email summary feature:

- Email summary is generated only for emails or email threads with more than 1000 characters, which is about 180 words.
- The email summary contains up to 400 characters.
- You must verify the AI-generated content carefully, as it can have mistakes. It's your responsibility to review and edit the AI-generated summaries to make sure it’s accurate and appropriate.

View the email summary

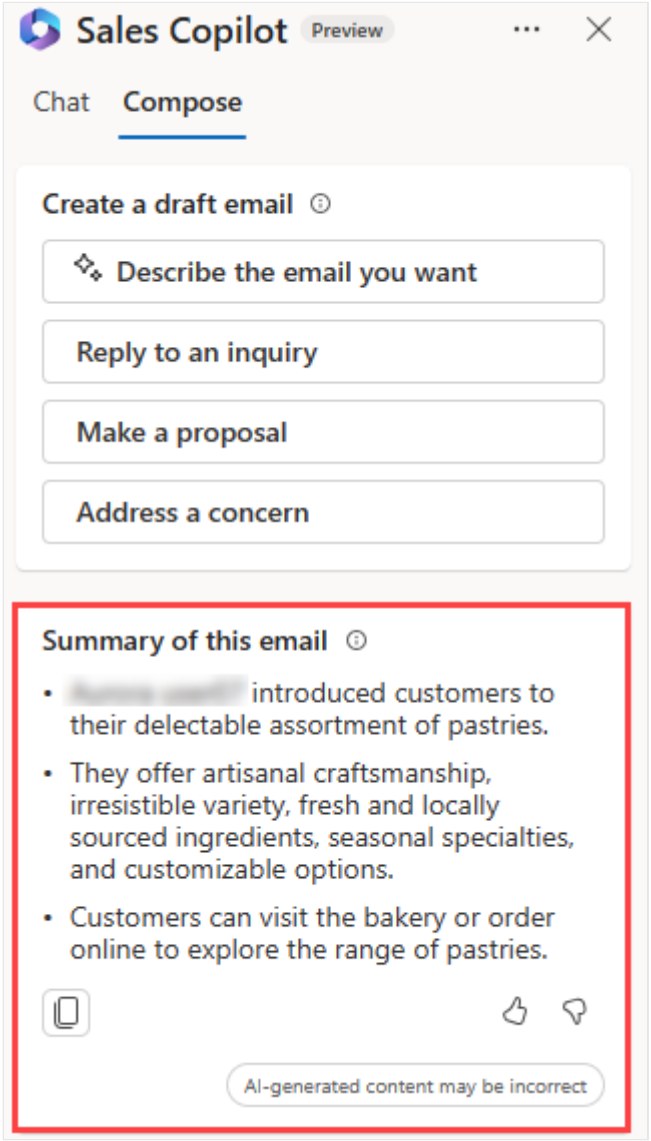
The summary provides the highlights of the email conversations. To view the email summary:

1. Open a record and select an email from the **Timeline** or the **Up next** widget.

> ⓘ **Note**

> The email summary feature is not supported when you open an email from **Activities** under the **My Work** site map.

2. In the **Copilot** pane, go to the **Compose** tab.
   The email summary is displayed in the **Summary of this email** section.



Now, you can copy the summary for the email and use it for future references.

Copy the email summary

Copy the email summary to clipboard and save it in a desired location for future references such as notes in records. To copy the email summary, in the **Summary of this email** section, select the **Copy** icon ( ).

See also

Compose and send email messages using Copilot

FAQs about Copilot in Dynamics 365 Sales

Article • 10/05/2023

This article includes frequently asked questions about Copilot in Dynamics 365 Sales.

How does the data flow between Dynamics 365 and Azure OpenAI endpoints?

When you type a question in the Copilot pane, we pass the relevant data to Azure OpenAI Service through our plug-ins and services. We'll release a high-level architecture document around the GA timeframe.

Does Copilot have abuse monitoring and human review?

No. Our Azure OpenAI resources have opted out of abuse monitoring and human review. This helps us ensure that we don't retain any of your data outside the Dynamics 365 data boundary. We use other techniques to monitor and filter out abusive content at runtime.

What data is included in the requests?

The data included in the requests varies based on the type of request made. For example, when you attempt to summarize an opportunity, the relevant fields of the opportunity and associated metadata are pushed to the Azure OpenAI endpoint to generate a summary.

Is any of my data stored outside of Dynamics 365?

No, we don't save any of your data in any new data store. You can read more about the Azure OpenAI data and privacy commitments.

How does Copilot encrypt data?

All data exchanges in Copilot are handled according to Microsoft data management guidelines.

What privacy controls apply to the data received by Azure OpenAI Service?

All data continues to be handled according to Microsoft privacy guidelines. You can read more about the Azure OpenAI data and privacy commitments at Data and Privacy.

Where are the Azure OpenAI endpoints hosted?

Currently, the Azure OpenAI resources are only available in the North America and Europe regions. If your Dynamics 365 environment is in any other geography, your data will be moved outside of your geography to handle copilot requests. You'll be prompted to consent to this data movement when you enable Copilot in Dynamics 365 Sales. More information: Sales Copilot data movement

Do you use my company data to train any of the models?

No. We don't use any customer data to train Azure OpenAI or any other language models.

What's the difference between Microsoft Sales Copilot and Copilot in Dynamics 365 Sales?

Microsoft Sales Copilot is a seller experience application that's available in Microsoft 365 and Microsoft Teams applications. It lets sellers capture, access, and update CRM data from within Microsoft 365 and Microsoft Teams applications. It also has generative AI capabilities such as record summarization and email content generation. Microsoft Sales Copilot works with Dynamics 365 Sales and Salesforce CRM. Learn more about Microsoft Sales Copilot.

Copilot in Dynamics 365 Sales refers to the AI assistant that uses generative AI to summarize opportunities and leads, and generate meeting preparation notes. It's integrated with Dynamics 365 Sales apps. Learn more about Copilot in Dynamics 365 Sales.

Use Microsoft Teams chat in Sales Hub

Article • 01/23/2023

Start Teams chat conversations from within Sales Hub and connect them to records.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

You can now engage in a Teams chat conversation from within Sales Hub. While you're working on a sales record, you can start a new Teams chat or connect an existing chat to the record, and thus collaborate efficiently without switching context. Connecting all the associated chats to the record helps you maintain all the conversations related to the record in one place.

> **Note**
>
> - When you associate a Teams channel to a record, the channel gets connected to the record. However, unlike chat conversations, channel conversations can't be accessed from within Dynamics 365.

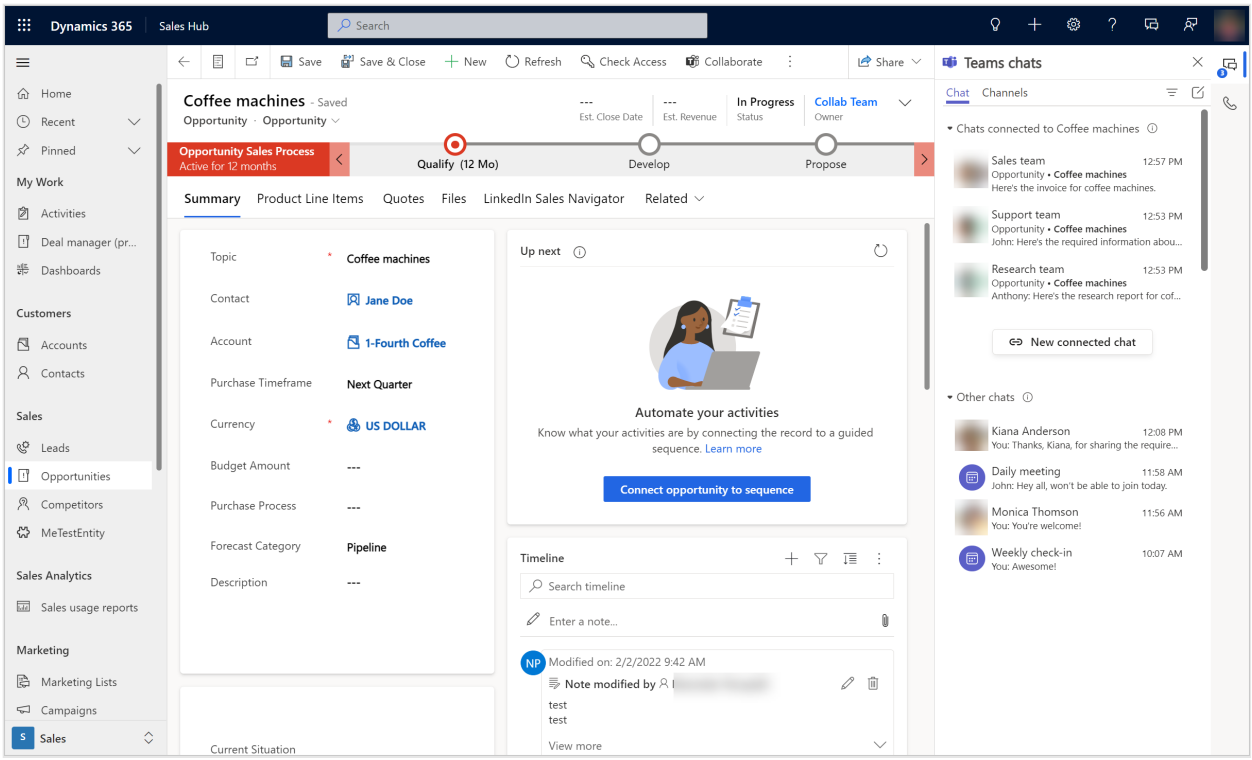
- Your administrator must have enabled this functionality. For more information, go to **Enable or disable the Teams chat in Dynamics 365**.
- For the embedded Teams chat functionality to work properly, ensure that web browser settings allow pop-ups for the Dynamics website.

You can do the following Teams collaboration activities from Dynamics 365:

- **Start a new connected chat conversation**: The chat gets automatically connected to the record.
- **Add users to an existing connected chat**: The chat appears as a connected chat for all the users involved in the conversation.
- **Connect an existing chat to a record**: The entire chat conversation will be visible to all the users who are part of the connected chat.
- **Access all your recent Dynamics 365 chats**: The list pages, such as the opportunities list page, display all of your recent chats that are connected to Dynamics 365 records.
- **Access all your recent chats**: Your top 200 Teams chat conversations are listed on the list and record pages.
- **Connect an existing channel to a record**: Although the channel is connected to the record, the channel conversations can only be accessed from within Teams.
- **Join an existing connected chat**: View and easily join chats that are connected to a record you have write access to, even if you weren't originally a participant in the chat.
- **Navigate to a record from a connected chat**: Navigate to a related record directly from the connected chat.

Open Teams chats and channels related to a record

Open any Dynamics 365 customer engagement record and select the **Teams chats and channels integration** icon at the upper-right of the page.



The **Teams chats** pane opens and displays the following sections on the **Chat** tab:

- **Chats connected to *record*** lists Teams chats that either you've connected to the selected record or someone else has connected with you as a participant.
- **Other chats** lists your top 200 chat conversations on Teams. You can select any existing conversation and connect it to a record.

The **Channel** tab lists the channels that you've connected to the selected record, and any channels someone else has connected to where you're a participant. If you've connected a record to a channel by using the basic or enhanced collaboration experience, that channel is also listed on this tab.

View all connected Dynamics 365 chats

Open the dashboard or list view of any Dynamics 365 customer engagement table, such as an opportunities list view, and select . All your connected Dynamics 365 chats will appear under **Chats connected to *record***. The chats display the record names to which they are connected and the latest chat message. You can navigate to a related record from the connected chat. For more information, see Navigate to a record from a connected chat.

Start a connected Teams chat in Dynamics 365

You can start a new connected chat or convert an existing Teams chat into a connected chat to associate the chat with a Dynamics 365 record.

1. Open any Dynamics 365 customer engagement record and select .

   The **Teams chats** pane opens.

2. To start a new connected chat with a participant, select **New connected chat** in the **Chats connected to *record*** section.

3. Use one of the following methods to add participants:

   - In the **Participants** field, browse and select the names of the participants you want to chat with.
   - A list of suggested contacts is automatically displayed for the **Participants** field. Select a participant's name from the **Suggested contacts** list. The **Suggested contacts** list displays the contacts of the users who are working on the record. More information: How contact suggestions work

   The chat name uses the record name or the participant's names, depending on the configuration that your administrator chose. To set the chat name as the record name, you can ask your administrator to turn on the **Use record title as the default chat name for connected chats** setting. You can modify the chat name. It's a good idea to provide a meaningful name so that you can identify the chat even when you're in Teams.

4. After adding the participants, select **Start chat**.

All the participants in the connected chat will see the chat when they open the record in Dynamics 365.

How contact suggestions work

The suggested contacts capability helps you to quickly find the right coworkers to collaborate with. This collaboration can help you more quickly work on sales queries.

If you don't see suggested contacts for a record type, your administrator might not have turned on the suggested contacts capability for the record type. Ask your administrator to turn on the capability for that record type.

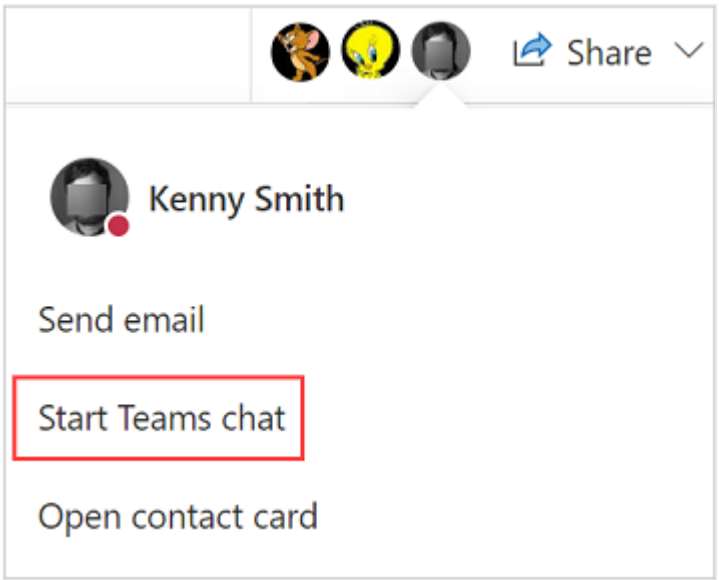
For the case record type, there are two types of contact suggestions: AI and rules-based. Other record types enabled for connected chats may only have rules-based suggestions.

The suggested contacts list displays users who are connected or have interacted with the record. Accordingly, a suggested contact can be one or more of the following users, in the given order:

- If the record is assigned to a user, the owner of the record.
- If the record is assigned to a team:
  - The team admin.
  - Team members who have logged an activity in the record timeline.
- *(Applicable only for an opportunity)* Sales team members who are connected with the opportunity and have logged an activity in the record timeline.
- Users who have connected chats with the record.
- Other users who have logged an activity in the record timeline.
- *(Applicable only for an opportunity)* All the connected sales team members.

Start a connected chat with other online members

You can start a connected chat with other members who are online and viewing the same record as you are. To start a connected chat with one or more online members, select a user icon on the command bar at the top, and then select **Start Teams chat**. The Teams popup chat is displayed and you can start chatting.



ⓘ Note

You can start a connected chat with other online members only when co-presence is enabled in Power Platform admin center and **Teams chat is enabled in Dynamics 365** Sales by your administrator.

In Power Platform admin center, your system administrator needs to turn on the **Collaboration** feature in your environment. For information, see **Manage feature settings**.

Connect or disconnect an existing chat from a record

You can connect a chat to a single record or multiple records. For example, if you had a chat about a lead that turned into an opportunity, you could also connect the chat to the opportunity. If you decided later that you didn't want the chat connected to the lead, you could disconnect it.

- To connect an existing chat to a record, select the chat from the **Other chats** section, and then select **More (...)** > **Connect to this *record***.
- To disconnect a chat from a record, select the chat, and then select **More (...)** > **Disconnect from this *record***.

Connect a Teams channel to a record

Connect relevant Teams channels to a record so that all the members can easily access the connected channels from the record and follow the conversations.

1. Open any Dynamics 365 customer engagement record, and select .

   The **Teams chats** pane opens.

   Alternatively, select **Collaborate** on the command bar to connect a channel to the record. For more information, go to Enhanced Collaboration Experience with Microsoft Teams.

2. Select the **Channel** tab. The tab lists the channels that are already connected to the record.

3. Select the **Connect a Teams channel to this record** icon in the upper-right corner of the **Teams chats** pane.

   The **Collaborate with Microsoft Teams** dialog opens.

4. To start a new connected channel, select **Create a new connection**.

5. To connect an existing channel, select the channel from the list, and then select **Start collaboration**.

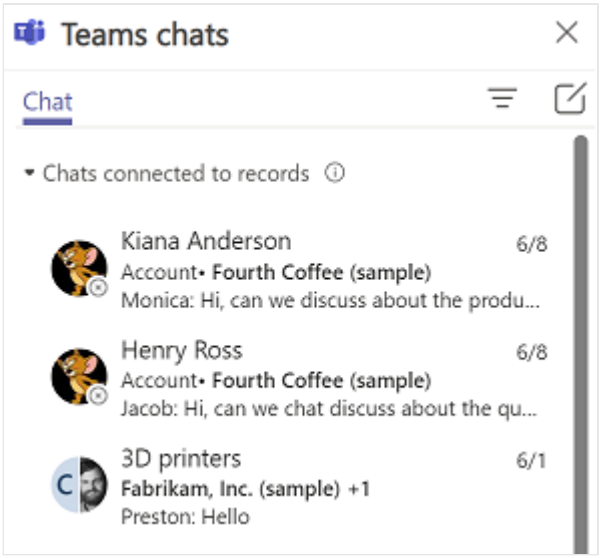
Start a regular Teams chat in Dynamics 365

You can start a regular conversation in Dynamics 365 if you don't want to switch to Teams.

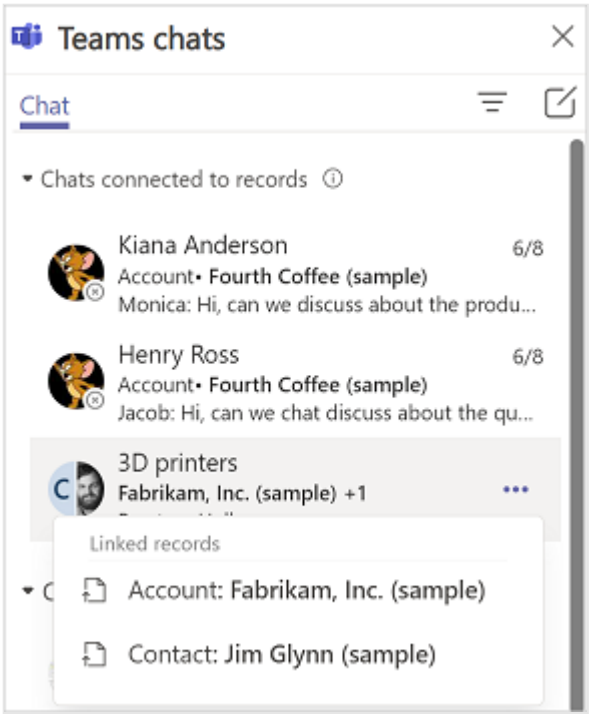
While you're in any of the records or in the list pane, select , and then select the **Compose chat** icon in the upper-right corner of the **Teams chats** pane. This option starts an individual or group chat but doesn't connect it to the record.

Navigate to a record from a connected chat

When you view all connected Dynamics 365 chats from the dashboard, list view of a table type (such as opportunities or accounts), or open chats related to a record, the connected chats display one or more record names they are connected to.



To navigate to a related record from the connected chat, hover over the chat, select ..., and then select the record.



The selected record opens and the **Teams chats** pane is refreshed with the chats connected to the opened record.

See also

Enable or disable Microsoft Teams chat in Sales Hub
Configure the ability to use suggested contacts
Collaborate with AI-suggested contacts in Dynamics 365 Customer Service

Join an existing connected chat

Article • 10/07/2022

View and easily join chats that are connected to a record you have write access to.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Join a connected chat

As a seller, you can view and easily join chats that are connected to a record you have write access to, even if you weren't originally a participant in the chat. For example, if you've onboarded to a lead that was previously handled by another seller, you can join the chat to better understand the context, and then continue to collaborate with your relevant colleagues.

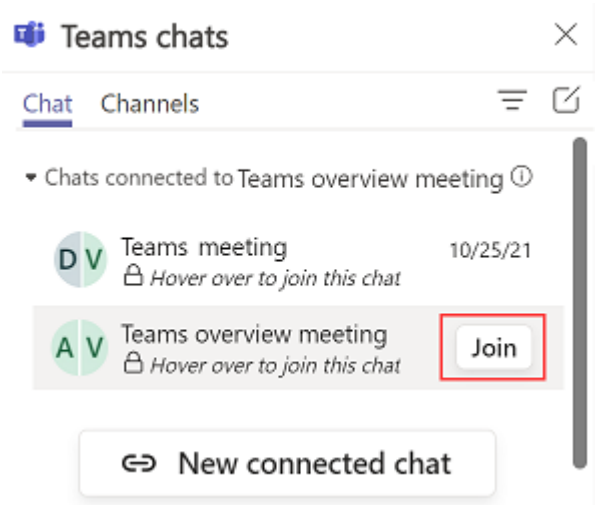
> **Note**
>
> You can only join connected chats. To do so, you must have write access to the record and your admin must turn on the Join Chat capability for the record type in which you want to join any existing connected chat.

1. Open the record for which you want to join the chat.

2. In the **Teams chats** pane, go to any of the connected chats you want to join. A lock icon is displayed with text that says, "Hover over to join this chat". When you hover over the lock icon, if you have write access to the associated record, a **Join** button will be displayed.

   > **Note**
   >
   > Let's assume you have only Read access to the set of Accounts which your team is working on. Your administrator has enabled the Join chat functionality for the Accounts record type.
   >
   > If you don't see the text that allows you to hover and join a chat, there are three possible causes:
   > - Your administrator hasn't enabled the Join chat capability for the record type.
   > - You have read-only access to the record.
   > - Both previous scenarios apply.
   >
   > In these cases, you will still see a list of conversations with the message "The chat is locked". In this case, you can ask a member of the chat to manually add you, or you can ask your administrator to turn on the Join chat capabilities for that record type.

3. Select **Join**.



   The Teams pop-up chat will show that you've been added to the chat, and you'll have access to the entire chat history. Other chat members will also receive the system message that you've been added to the chat.

See also

Configure the ability for users to join chats

Microsoft Teams chat integration FAQ

Article • 05/09/2023

Who needs to provide consent for this integration?

The tenant admin will be required to provide initial consent for the integration. After the tenant admin provides consent, an application administrator can enable the integration at the instance level.

Which tenant admin role is required for providing consent?

You must be a global administrator to provide consent.

What is the scope of the consent?

Consent is given at the tenant level. It applies to all Dynamics 365 instances under the same tenant.

What happens when consent is provided?

When the tenant admin provides consent, an enterprise application called **Dynamics 365 Microsoft Teams Collaboration Integration** is created in Microsoft Entra ID and permissions are given to the enterprise application. Also, a flag is set internally in Dynamics 365 to indicate that the feature is enabled. This flag controls the UI behavior, such as displaying the **Collaborate** menu in the command bar.

After consent is provided, is Teams integration enabled for all instances?

No. After the tenant admin provides consent, a Dynamics 365 system administrator can enable the integration for any instance under the same tenant.

What are the privileges and types of permissions required by the integration?

Permission	Type	What the app does with the permission
Chat.ReadWrite.All	Delegated	Reads a user's chats and recent messages to display in the chat list.
Directory.Read.All	Delegated	Reads the display names for user's teams and channels.
Presence.Read.All	Delegated	Reads presence information for all users to be displayed on the user avatars in the chat list.
User.Read.All	Application	Reads the display name and licenses of users to validate whether the suggested participants have a Teams license assigned. This permission is used by the **Suggested chats & contacts** section in the chat list. The permission is set at the application level, because it's used by a background service for better performance.
User.ReadBasic.All	Delegated	Reads users' photos.

Does the consent apply to other Microsoft services as well?

No. Other Office services, such as SharePoint and Exchange, don't require explicit consent because they're managed internally by Teams.

Will the integration in any way affect security constraints or configuration in Dynamics 365 and Teams?

No. The integration is developed with the core principle of not violating security in any direction. Connecting a chat or channel doesn't automatically grant participants of those chats or channels access to that Dynamics record. Dynamics security roles & permissions will supersede any membership of a connected chat or channel. Similarly, the user trying to create a team or channel from the **Collaborate** experience in Dynamics 365 must have Teams permissions to do so.

Is the Teams conversation data stored in Dynamics 365?

Only the conversation ID is stored in Dynamics 365, by using a link entity to make the connection between the record and the conversation. No conversation text is stored in Dynamics 365.

Is Teams chat integration supported on mobile devices?

No, Teams chat integration is not supported on mobile devices.

Integrate Dynamics 365 and Microsoft Teams meetings (preview)

Article • 07/25/2022

> **ⓘ Important**
>
> This topic is pre-release documentation and is subject to change.

> **ⓘ Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Microsoft Teams meeting integration allows you to stay in the flow of work, whether you're in Dynamics 365 or Teams:

- Create and join Teams meetings directly from Dynamics 365.
- View and update Dynamics 365 records seamlessly in a Teams meeting.
- Capture notes and tasks seamlessly during a Teams meeting. Your notes and tasks automatically sync to Dynamics 365.

Meeting lifecycle

The lifecycle of a meeting can be divided into three stages, each with specific tasks.

- **Pre-meeting**:
  - Create a Teams meeting

    - Join a Teams meeting
    - Add the Dynamics 365 app to a Teams meeting
    - Use the Dynamics 365 app to view and update record information

- **In-meeting**
    - Use the side-panel to view and update record information
    - Work with notes during a meeting
    - Work with tasks during a meeting
    - Work with activities during a meeting

- **Post-meeting**
    - Use the Dynamics 365 app to view and update record information

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Create a Teams meeting
Add the Dynamics 365 app to a Teams meeting
Work with the Dynamics 365 app
Join a Teams meeting
Work with notes during a meeting
Work with tasks during a meeting
Work with activities during a meeting

Create a Microsoft Teams meeting

Article • 06/22/2023

Create a Teams meeting from Dynamics 365 or Microsoft Outlook

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

You can create a Teams meeting from Dynamics 365 or Microsoft Outlook. Link a Dynamics 365 record to the meeting to view record details before the meeting, in a side panel during the meeting, and after the meeting.

To link a Dynamics 365 record to a meeting, select a **Regarding** record while creating the meeting. When a record is linked to the meeting, the **Dynamics 365** app is added automatically to the meeting, and you can see the details of the linked record.

If a record isn't linked to the meeting, you can still add the **Dynamics 365** app to the meeting. Although you can add the app during the meeting, we recommend that you add it before the meeting starts for a better experience.

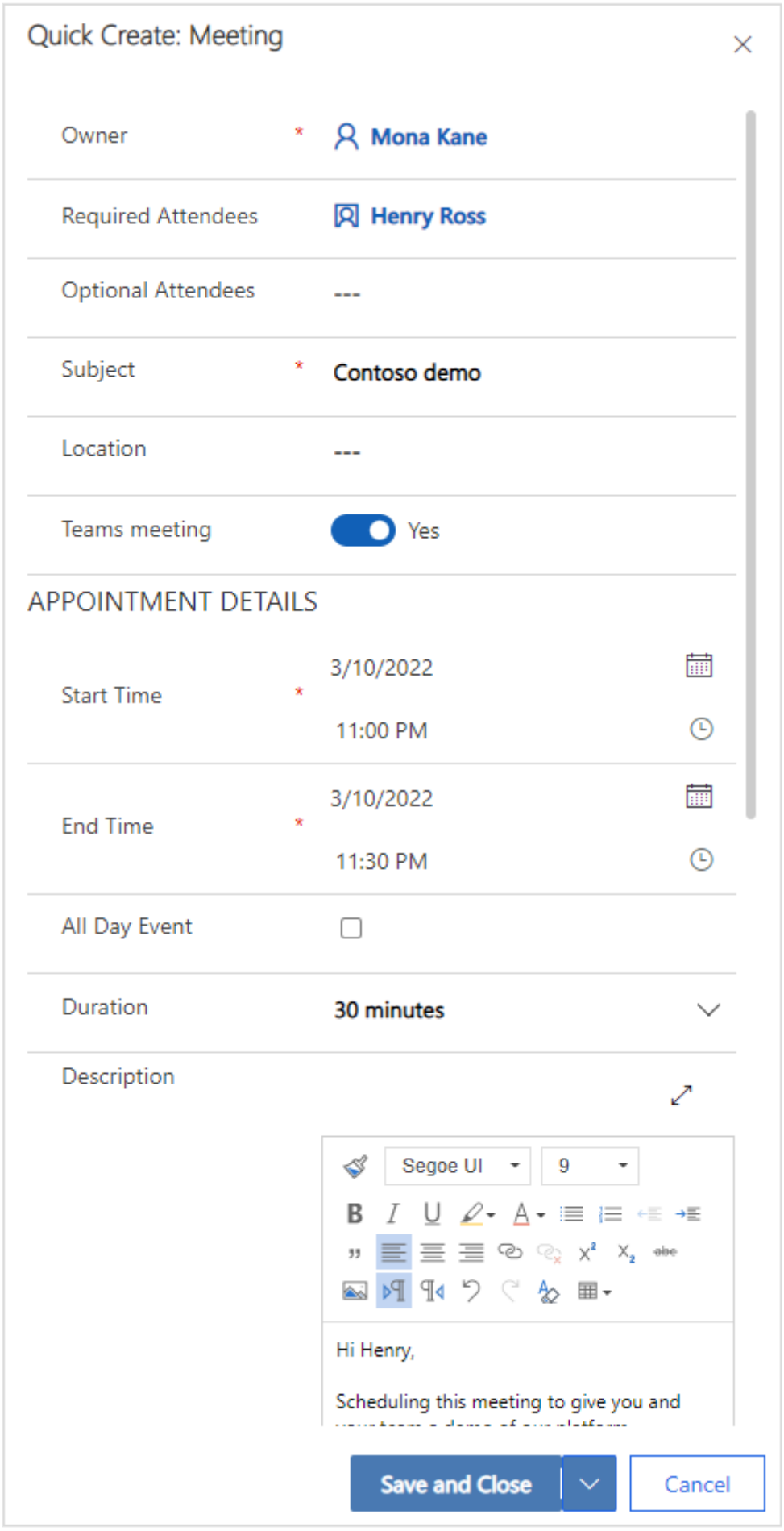
Create Teams meetings in Dynamics 365

In Dynamics 365, you can create a Teams meeting from the **Timeline** of a record or from the **Activities** page.

> **Important**
>
> - For the join link to be created successfully, the user enabling the meeting for Teams needs to be the meeting organizer. The organizer field is not exposed by default on the appointment form but the value defaults to the user who creates the meeting.
> - The personal standards and formats selected by a user in Dynamics 365 affect the formatting of the Teams meeting details saved within the description of the meeting. To view the selected format, select **Settings** ( ) > **Personalization Settings**, and then select the **Formats** tab.
> - When you create a Teams meeting from Dynamics 365, the appointment status is set to **Free** and no reminders are sent to the participants.

Create a Teams meeting from the Timeline

1. On the **Timeline**, select **Create a timeline record** > **Meeting**.
2. In the **Quick Create: Meeting** panel, enter the meeting information, such as attendees, location, time, and description.
3. Turn on **Teams meeting**.



4. Select **Save and Close**.

> **Note**
>
> When you create a meeting from a record's Timeline, the record name automatically fills the **Regarding** field, creating the link between the record and the meeting.

Create a Teams meeting from the Activities page

1. Sign in to your customer engagement app.
2. On the sitemap, select **Activities**.
3. On the command bar at the top, select **Meeting**.
4. On the **New Meeting** page, enter the meeting information, such as attendees, location, time, and description.
5. Turn on **Teams meeting**.
6. In the **Regarding** field, search for and select a record that the meeting is related to.
7. Select **Save & Close**.

Create Teams meetings in Microsoft Outlook

If you create a Teams meeting in Outlook, it isn't linked to a Dynamics 365 record automatically. You must install the Dynamics 365 App for Outlook to link the meeting to a Dynamics 365 record. After you install the app, open it and search for the record in the **Set Regarding** field.

For more information on creating a Teams meeting in Outlook, see Schedule a Teams meeting from Outlook.

For more information on using the Dynamics 365 App for Outlook, see Basic navigation in App for Outlook.

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings
Add the Dynamics 365 app to a Teams meeting
Work with the Dynamics 365 app
Join a Teams meeting
Work with notes during a meeting

Work with tasks during a meeting

Work with activities during a meeting

Add the Dynamics 365 app to a Microsoft Teams meeting (preview)

Article • 08/10/2022

Add the Dynamics 365 app to a Teams meeting created in Dynamics 365.

> **Important**
>
> This topic is pre-release documentation and is subject to change.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

When you add the Dynamics 365 app to a Teams meeting, you can view record details before, during, and after a meeting. The Dynamics 365 app can be added to a Teams meeting automatically or manually.

> **Note**

The Dynamics 365 app for Teams is available only in the Teams desktop app. If you are working in Teams web client or Teams mobile app, you'll not be able to add the Dynamics 365 app to a meeting.

Automatically add the app

If you link a Dynamics 365 record to a meeting while you're creating it in Dynamics 365 or Outlook, the Dynamics 365 app is added to the meeting automatically. This allows you to view record details before, during, and after a meeting.

Manually add the app

If you don't link a Dynamics 365 record to a meeting while you're creating it, you can add the app to the meeting manually. We recommend you add it before you join the meeting for a better experience.

To add an app before a meeting, first send the meeting invitation, and then edit the meeting in Teams. Select **Add a tab**, search for the Dynamics 365 app, and add it.

To add an app during a meeting, select **Add an app** in the meeting toolbar, search for the Dynamics 365 app, and add it.

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings
Create a Teams meeting
Work with the Dynamics 365 app
Join a Teams meeting
Work with notes during a meeting
Work with tasks during a meeting
Work with activities during a meeting

Work with the Dynamics 365 app (preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Work with the Dynamics 365 app in a Teams meeting.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

With the Dynamics 365 app, you can view information about a linked record before the meeting, in the side panel during the meeting, and after the meeting.

> **Note**

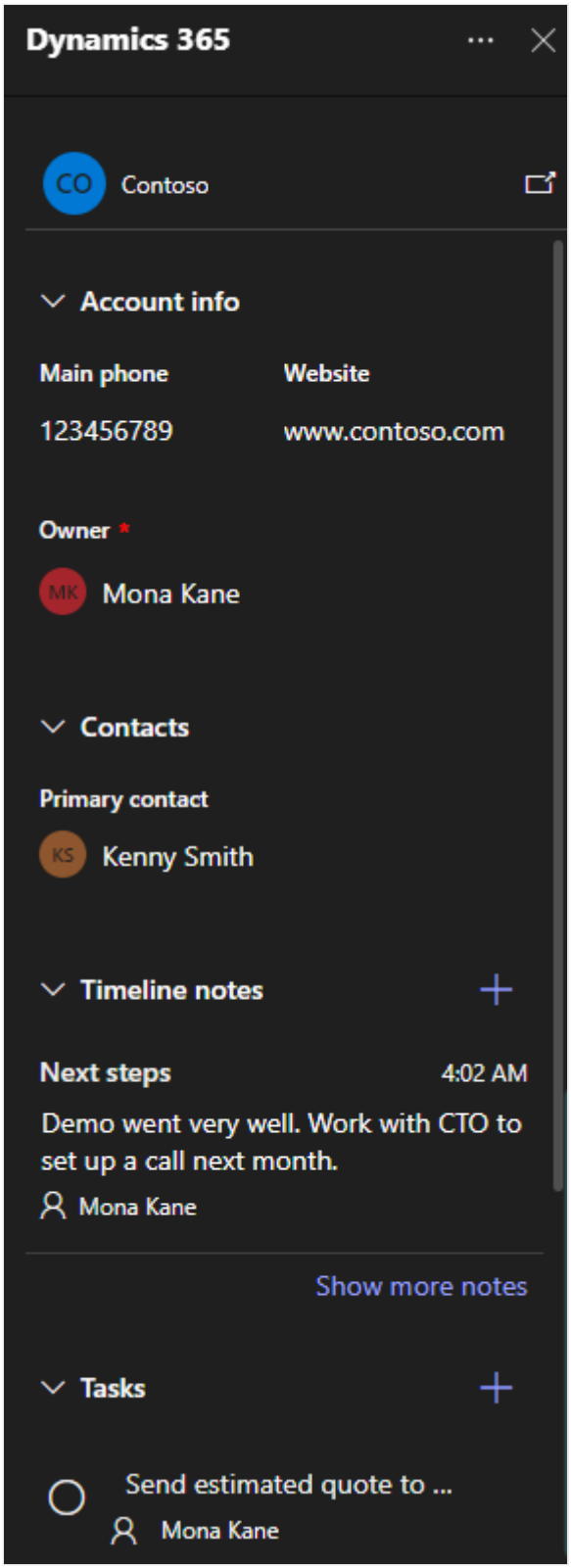
The Dynamics 365 app for Teams is available only in the Teams desktop app. If you are working in Teams web client or Teams mobile app, the Dynamics 365 app will not be visible.

View record details before or after a meeting

Open the meeting in Teams, and then select the **Dynamics 365** tab. You can work with the linked record as you would in your customer engagement apps, such as Dynamics 365 Sales or Dynamics 365 Customer Service.

View record details during a meeting

Select the Dynamics 365 app icon in the meeting toolbar. Details about the linked record are displayed in a side panel. You can view and update information such as notes and tasks in the Contact, Opportunity, Lead, Account, and Case tables.



See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings
Create a Teams meeting
Add the Dynamics 365 app to a Teams meeting
Join a Teams meeting

Work with notes during a meeting

Work with tasks during a meeting

Work with activities during a meeting

Join a Microsoft Teams meeting

Article • 08/10/2022

You can join a Teams meeting from Dynamics 365, Outlook, or Teams.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Join a Teams meeting from Dynamics 365

1. Open the meeting record from the **Timeline** or from the **Activities** page.
2. Perform one of the following actions:
   - On the command bar at the top, select **Join Teams Meeting**.
   - In the **Teams meeting** field, select **Join Teams Meeting**.
   - Go to the **Description** area, hold the **Ctrl** key, and select **Click here to join the meeting**.

Join a Teams meeting from Outlook

1. Open the calendar event.

2. Perform one of the following actions:

    - On the **Meeting** tab in the ribbon, select **Join Teams Meeting**.
    - In the message body, select **Click here to join the meeting**.

Join a Teams meeting from Teams

You have several options. For more information, see Join a meeting in Teams.

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings
Create a Teams meeting
Add the Dynamics 365 app to a Teams meeting
Work with the Dynamics 365 app
Work with notes during a meeting
Work with tasks during a meeting
Work with activities during a meeting

Work with notes during a meeting (preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

This article provides information on how to work with notes in a Teams meeting.

License and role requirements

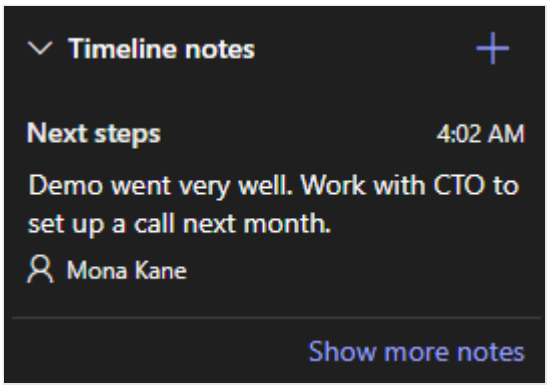
Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

The following prerequisites must be met before you can work with notes in a linked record:

- The record must be linked to the meeting.
- The Dynamics 365 app must be added to the meeting.

The latest note is displayed under the **Notes** section in the side panel. To view all notes, select **Show more notes**.



If you add, edit, or delete notes in the side panel, your changes are synced with the record in Dynamics 365.

Add a note

1. In the **Notes** section, select .
2. In the **Add note** form, enter a title and description of the note.
3. To attach a file, select **Attach file**.
4. Select **Save**.

Edit a note

1. In the **Notes** section, hover over the note, and then select .
2. In the **Edit note** form, update the title and description of the note as needed.
3. Select **Save**.

Delete a note

1. In the **Notes** section, hover over the note, and then select .
2. In the confirmation message, select **Delete**.

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
Integrate Dynamics 365 and Microsoft Teams meetings
Create a Teams meeting
Add the Dynamics 365 app to a Teams meeting

Work with the Dynamics 365 app

Join a Teams meeting

Work with tasks during a meeting

Work with activities during a meeting

Work with tasks during a meeting (preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

This article provides information on how to work with tasks in a Teams meeting.

License and role requirements

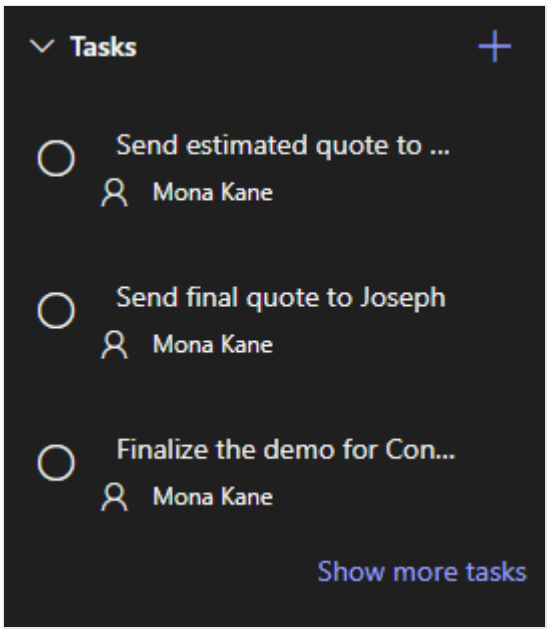
Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

The following prerequisites must be met before you can work with tasks in a linked record:

- The record must be linked to the meeting.
- The Dynamics 365 app must be added to the meeting.

Open tasks are displayed under the **Tasks** section in the side panel. To view all tasks , select **Show more tasks**.



If you add, edit, or delete tasks in the side panel, your changes are synced with the record in Dynamics 365. The tasks are sorted by their due date, prioritizing the tasks that are due soon or overdue.

Add a task

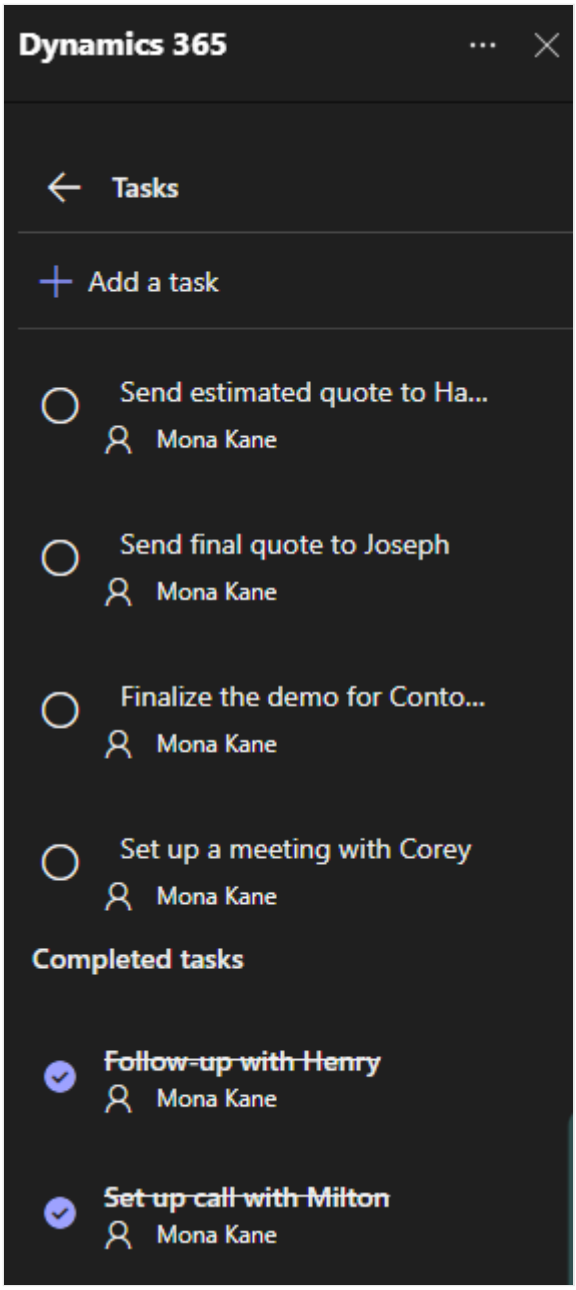
1. In the **Tasks** section, select .
2. Add the task details.

Complete a task

In the **Tasks** section, select the task to mark it as complete.

Reopen a task

1. In the **Tasks** section, select **Show more tasks**.
2. In the **Completed tasks** section, select the task to reopen it.



Edit a task

1. In the **Tasks** section, hover over the task, and then select .
2. Edit the task details as needed.

Delete a task

1. In the **Tasks** section, hover over the task, and then select .
2. In the confirmation message, select **Delete**.

See also

Enable Microsoft Teams meeting integration
Customize record details in the side panel
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Create a Teams meeting
Add the Dynamics 365 app to a Teams meeting
Work with the Dynamics 365 app
Join a Teams meeting
Work with notes during a meeting
Work with activities during a meeting

Work with activities during a meeting (preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

This article provides information on how to work with activities in a Teams meeting.

License and role requirements

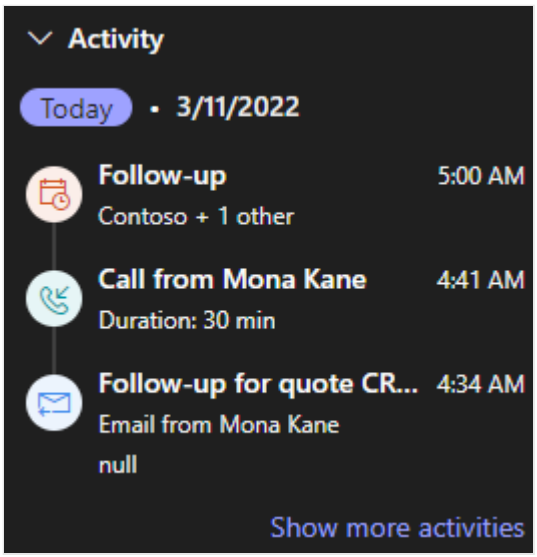
Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

The following prerequisites must be met before you can work with activities in a linked record:

- The record must be linked to the meeting.
- The Dynamics 365 app must be added to the meeting.

Recent activities are displayed under the **Activity** section in the side panel. To view all activities, select **Show more activities**.



You can view only appointment, email, and phone call activities that are associated with the record. View other activities in the customer engagement app.

View activity details

In the **Activities** section, select an activity. The activity record opens in your web browser.

See also

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Work with the Dynamics 365 app
Join a Teams meeting
Work with notes during a meeting
Work with tasks during a meeting

Share and update Dynamics 365 records within Microsoft Teams conversations (production-ready preview)

Article • 06/20/2022

Important

- This topic is prerelease documentation and is subject to change.
- Preview features designated as production-ready employ privacy and security measures typically present in generally available features, as further explained in our **preview terms**.

When having a conversation with other people over Teams, you might want to share Dynamics 365 records with them within a Teams chat or a channel. You can do this by using the Dynamics 365 app. The Dynamics 365 app allows you to search for information in Dynamics 365, share with other participants in their chats or channels, and even allow them to perform tasks from within the Teams chat conversation. Using the Dynamics 365 app, you can:

- Send a quick summary of a record in a Microsoft Teams chat or channel as an interactive card.
- Search for and filter Dynamics 365 records to share with your conversation participants.
- Paste the URL of a Dynamics 365 record and have it rendered as an interactive card.
- Edit records through interactive cards.
- Add chat conversations as notes and tasks with the click of a button.

Note

The functionality of sharing Dynamics 365 records in Teams is not supported on mobile devices.

The information in the interactive card is displayed using the view of type **Quick Find View** of a table. To change the information displayed in the cards, admins can edit the

columns in the **Quick Find View** view of a table as per the requirement.
https://www.microsoft.com/en-us/videoplayer/embed/RE4XVnt?postJsllMsg=true

See also

Enable sales teams to work with Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Edit settings of the Dynamics 365 app
Share feedback
Share Dynamics 365 records within Microsoft Teams conversations
View and update record details
Add chat messages to Dynamics 365 as notes or tasks

Access the Dynamics 365 app through messaging extensions (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

If you've already added the Dynamics 365 app to Microsoft Teams, proceed with the Access the Dynamics 365 app section. If you haven't added the app to Microsoft Teams, proceed with the Add the Dynamics 365 app section.

License and role requirements

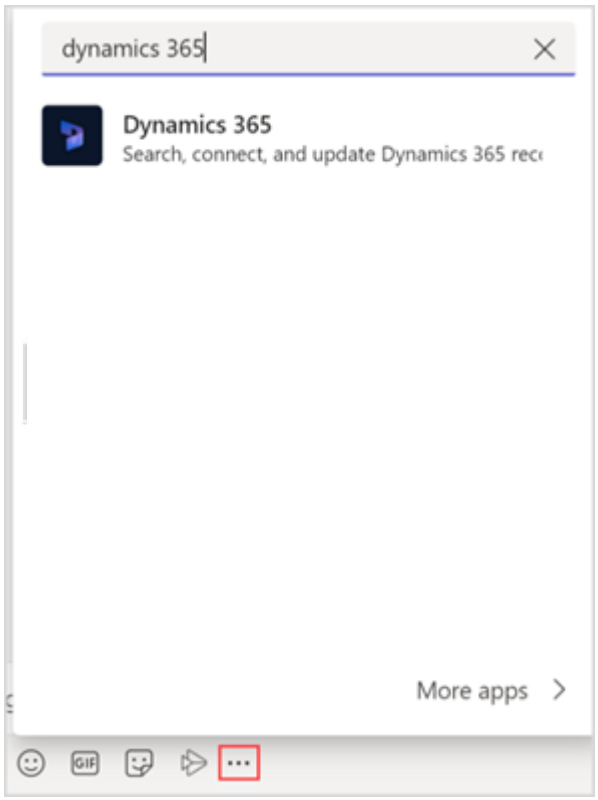
Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Add the Dynamics 365 app

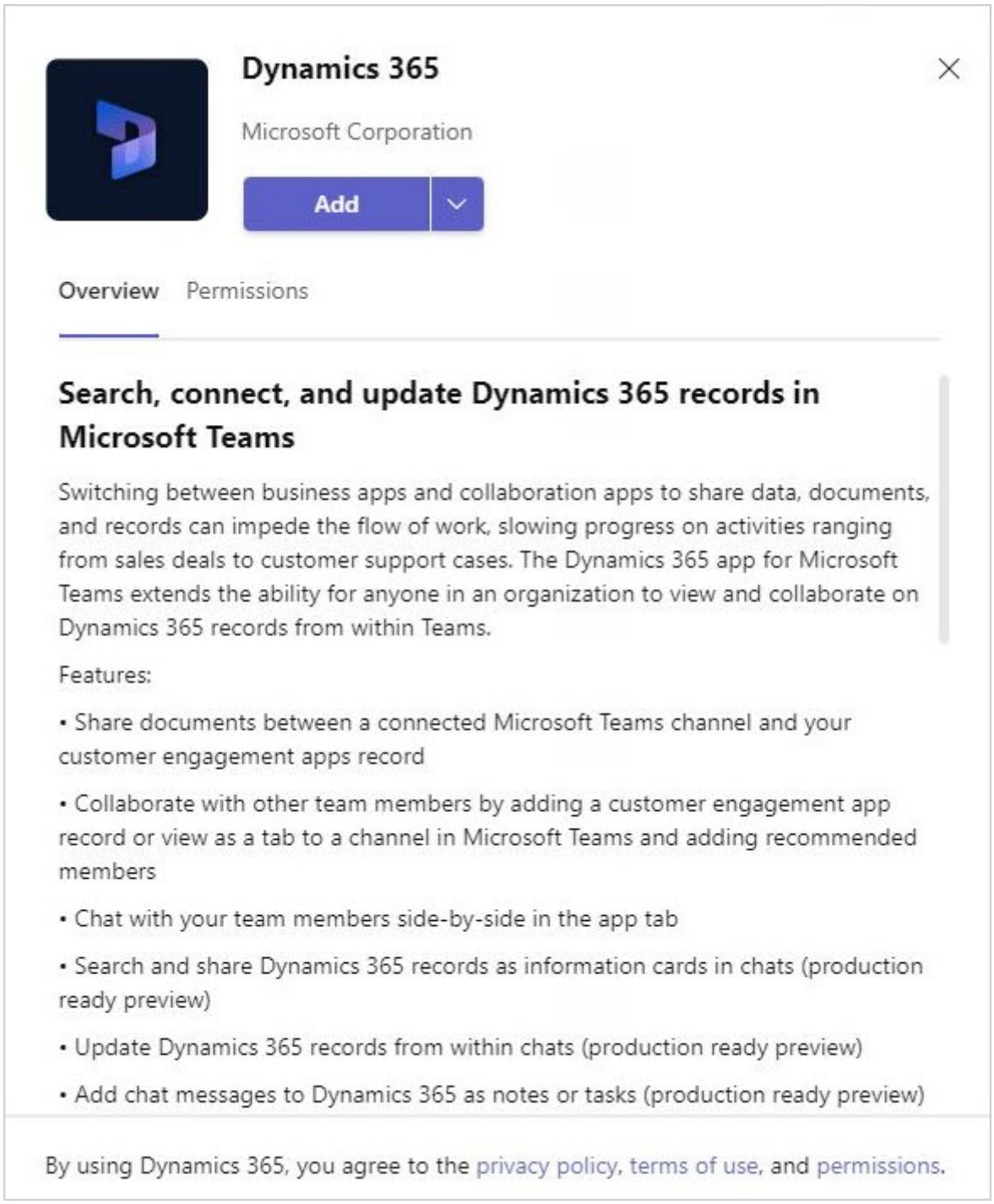
1. Open a channel in Teams and select **New conversation**.

Alternately, open any chat conversation with a person or group.

2. Select **Messaging extensions** (...) on the command bar, search for **Dynamics 365**, and select it.



3. Select **Add** in the Dynamics 365 window.



The app is added to the channel or a chat conversation in Teams.

> **Note**
>
> Once you install the app for one channel or chat, it's available for use in all other channels and chats.

Access the Dynamics 365 app

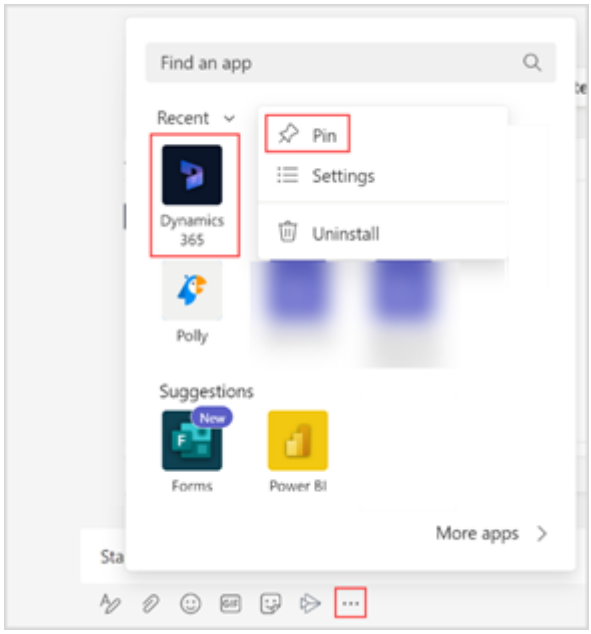
After the Dynamics 365 app is added to a channel, it's available through messaging extensions in Teams.

1. In Teams, open the channel to which you added the Dynamics 365 app and select **New conversation**.

   Alternately, open the chat conversation with a person or group to which you added the Dynamics 365 app.

2. Select the Dynamics 365 icon ( ) on the command bar.

   If you don't find the Dynamics 365 icon ( ) on the command bar, select the **Messaging extensions (...)** icon on the command bar, search for the **Dynamics 365** app, right-click and then select **Pin**.

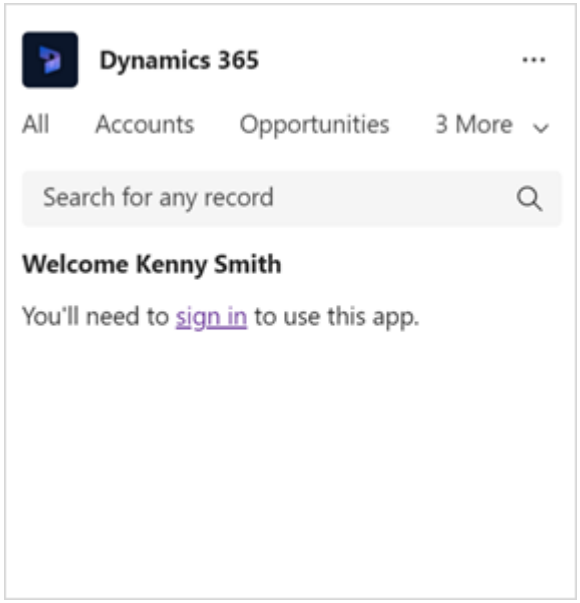


   The Dynamics 365 app icon is pinned to the command bar.

Set up the Dynamics 365 app

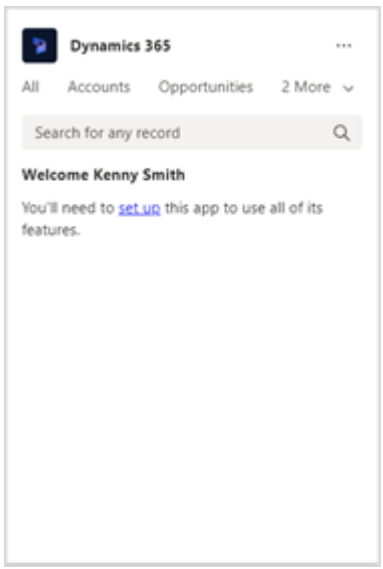
1. Access the Dynamics 365 app.

2. In the **Dynamics 365** window, select **sign in**.



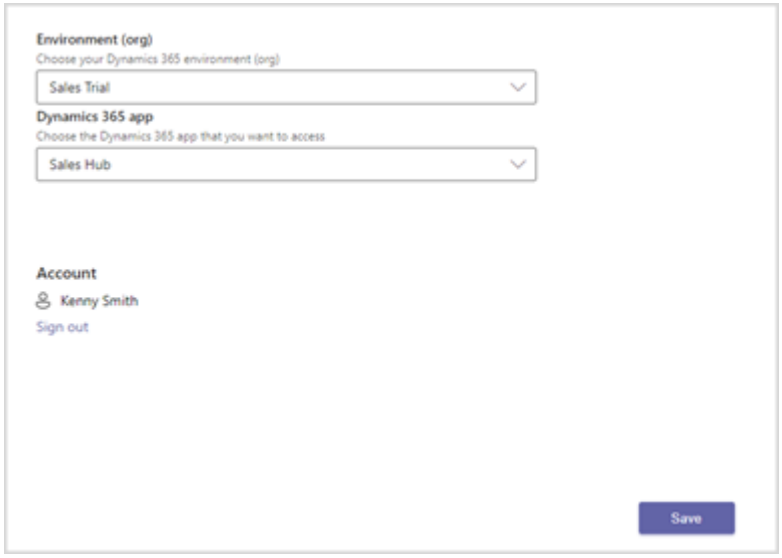
3. After you sign in to the app, select **set up**.

> **Note**
>
> You'll see this step only if you are using the Dynamics 365 app in Teams for the first time. Otherwise, you'll be taken to the next step to select an environment and an app.



4. In the browser window that opens, provide the following information:

   - **Environment (org)**: Select an environment that you want to connect to.
   - **Dynamics 365 app**: Select an app that you want to share records from.



5. Select **Save**.

After you've set up the app, you can change the settings later as required. More information: Edit settings of the Dynamics 365 app

See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Edit settings of the Dynamics 365 app
Share feedback
Share Dynamics 365 records within Microsoft Teams conversations
View and update record details
Add chat messages to Dynamics 365 as notes or tasks

Edit settings of the Dynamics 365 app (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

This article provides information on how to edit settings of the Dynamics 365 app.

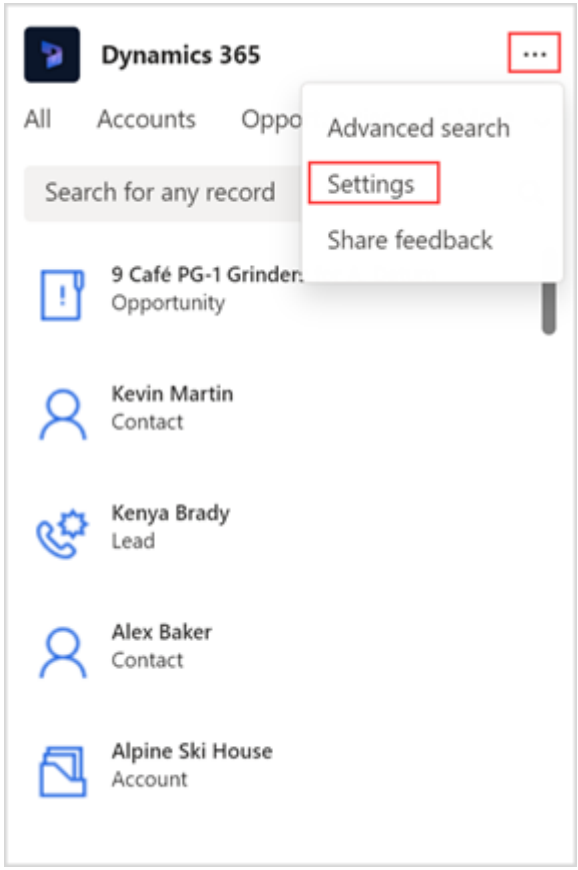
License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Edit settings

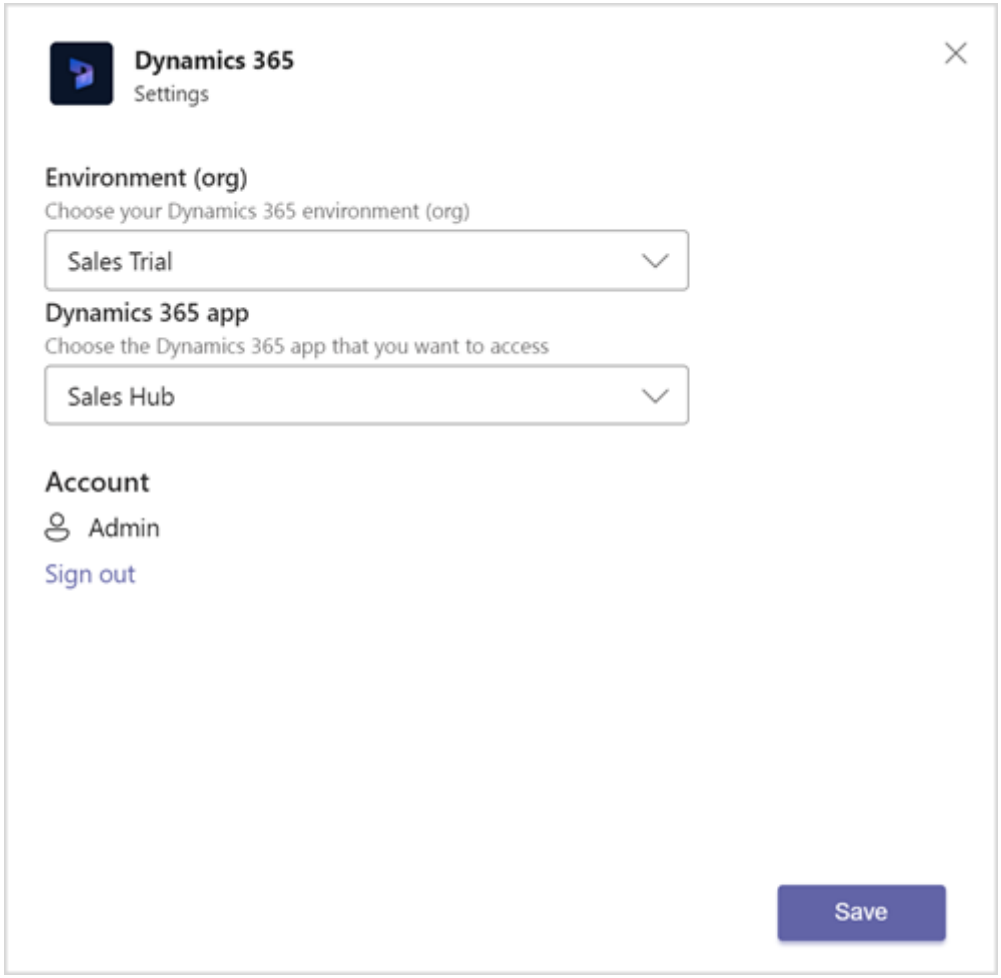
1. Access the Dynamics 365 app.

2. Select **Action Commands** (...) in the upper-right corner, and then select **Settings**.



3. In the **Settings** window, select the following information:

    - **Environment (org)**: Environment that you want to connect to.
    - **Dynamics 365 app**: App that you want to share records from.



4. Select **Save**.

See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Share feedback
Share Dynamics 365 records within Microsoft Teams conversations
View and update record details
Add chat messages to Dynamics 365 as notes or tasks

Share feedback (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

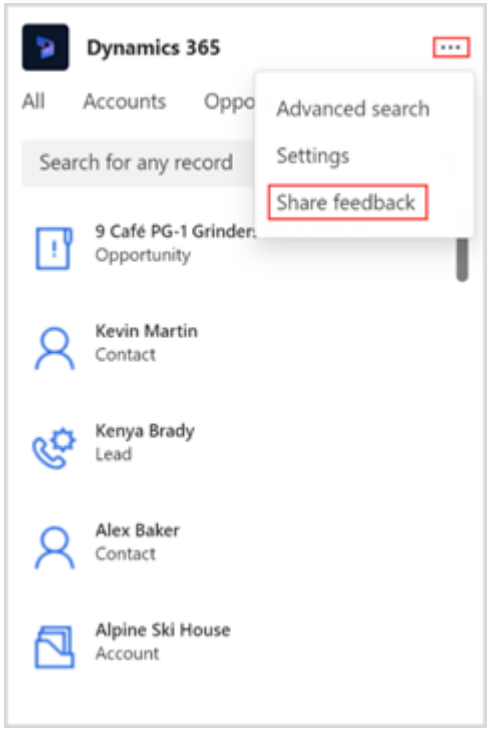
If you have any feedback about the Dynamics 365 app, you can share it from within the app.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

How to share feeback

1. Access the Dynamics 365 app.
2. Select **Action Commands** (...) in the upper-right corner, and then select **Share feedback**.



3. Enter your responses in the survey and then submit it.

See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Edit settings of the Dynamics 365 app
Share Dynamics 365 records within Microsoft Teams conversations
View and update record details
Add chat messages to Dynamics 365 as notes or tasks

Share Dynamics 365 records within Microsoft Teams conversations (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Discussing a particular opportunity on Teams? Share the record of the chat conversation and let participants view it without navigating away from Teams. You can share any Dynamics 365 record on Teams channels and chat conversations.

License and role requirements

Requirement type	You must have
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Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Share a Dynamics 365 record through search

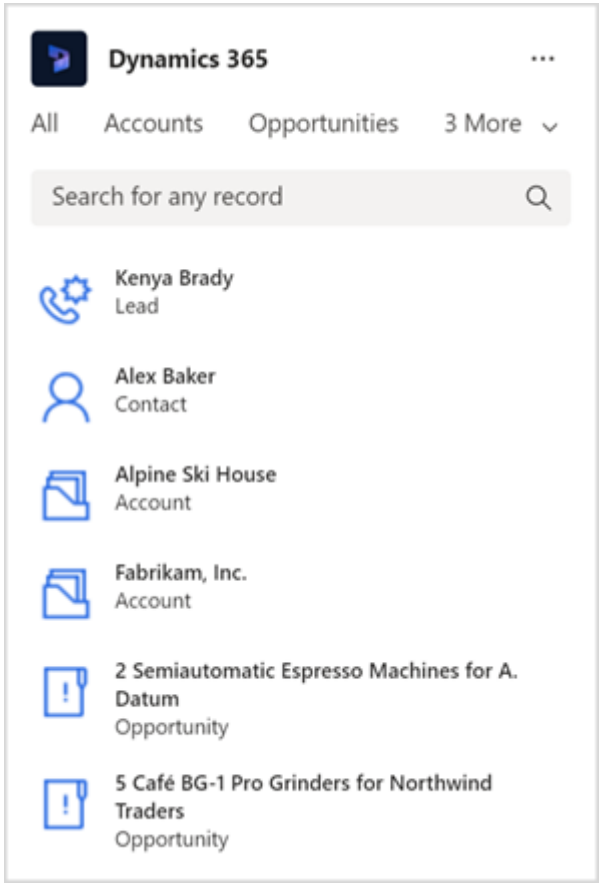
As a sender, you can share records using search in the app. The search displays the record name and the table type in the search results. However, if you want to search records as per a table type and preview a record in the search results, you must use the advanced search functionality.

> ⓘ **Note**
>
> You can also share a record by typing `@Dynamics 365` followed by a message to the Dynamics 365 app during a Teams conversation. The app allows you to search for the record and then it shares the record on your behalf in the Teams conversation. For example, if you type `@Dynamics 365, help me find the Alpine deal`, the app responds with a message to search for the record. You can then search for the record and share it.

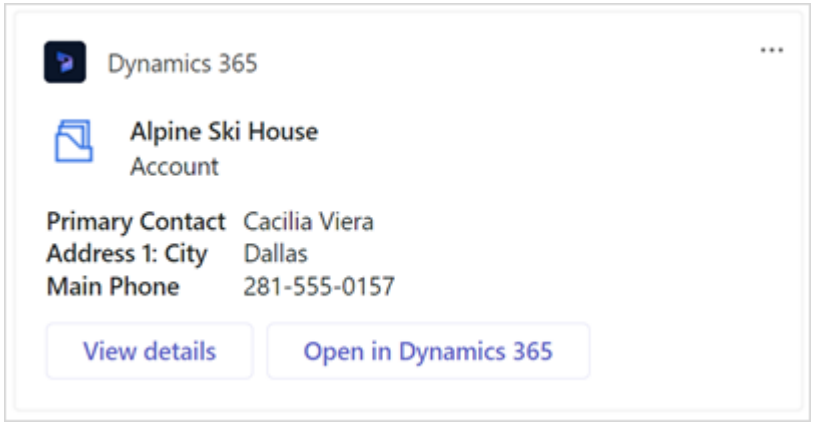
To share a record using search:

1. Go to the new or an existing conversation in which you want to share a record, and then open the Dynamics 365 app.
2. In the **Dynamics 365** window, search for the record to share, and then select it to share as a card on the chat.

   > ⓘ **Note**
   >
   > - By default, the recently accessed records are displayed, without performing any search. You can either search for the record or use the record type tabs available above the search field to search for a particular record type.
   > - The **All** tab allows you to search for all table type (out-of-the-box and custom) records. Other tabs are specific to a table type and allow you to search for that record type.

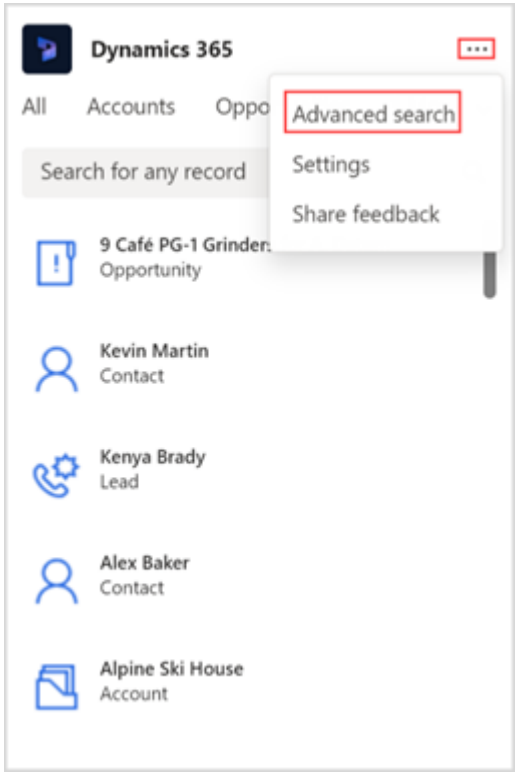


The selected record is shared on the Teams chat.



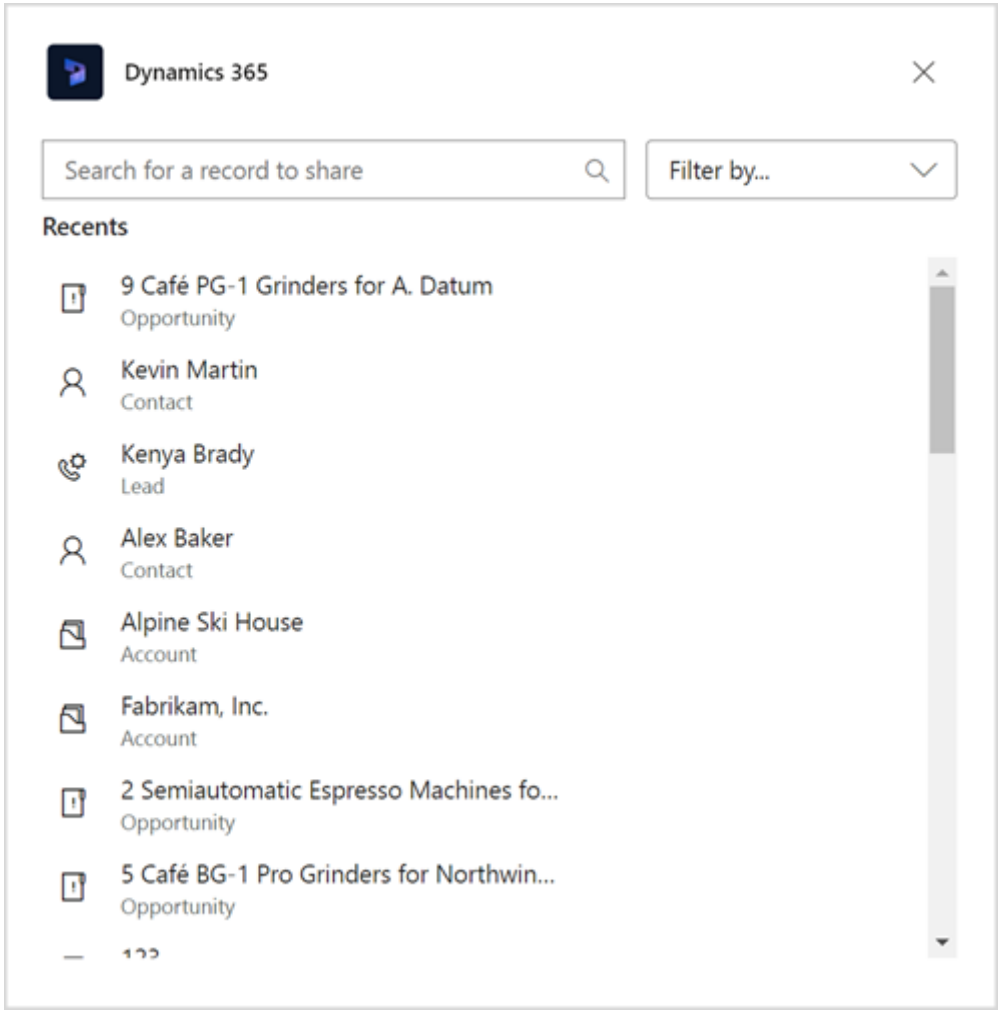
To share a record using advanced search:

1. Go to the new or existing conversation in which you want to share a record, and then open the Dynamics 365 app.
2. Select **Action Commands** (...) in the upper-right corner, and then select **Advanced search**.

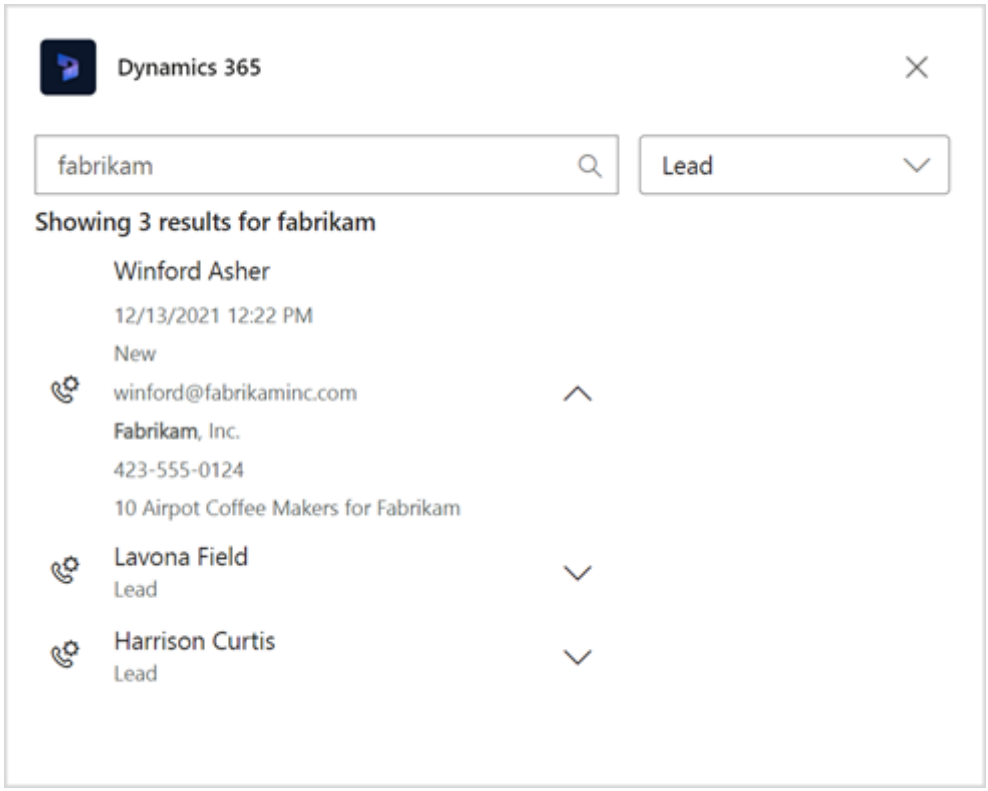


3. In the **Advanced search** window, enter or select the following values:

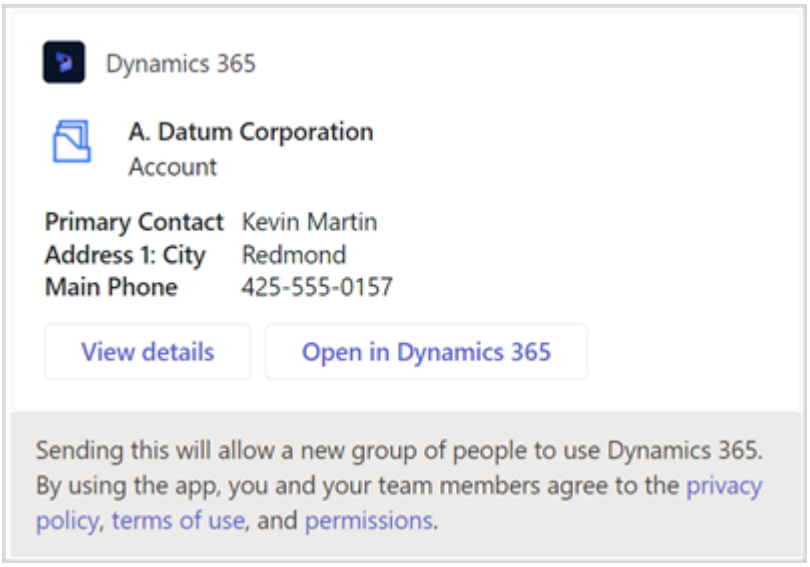
   - **Search for a record to share**: Name of the record to share.
   - **Filter by**: Record type to search for.



4. From the results, preview a record by selecting the down arrow next to the record name. Select a record to share it as a card on the chat.



If you see a disclaimer while sharing a record over Teams, it means that the app isn't yet added for that conversation or team.

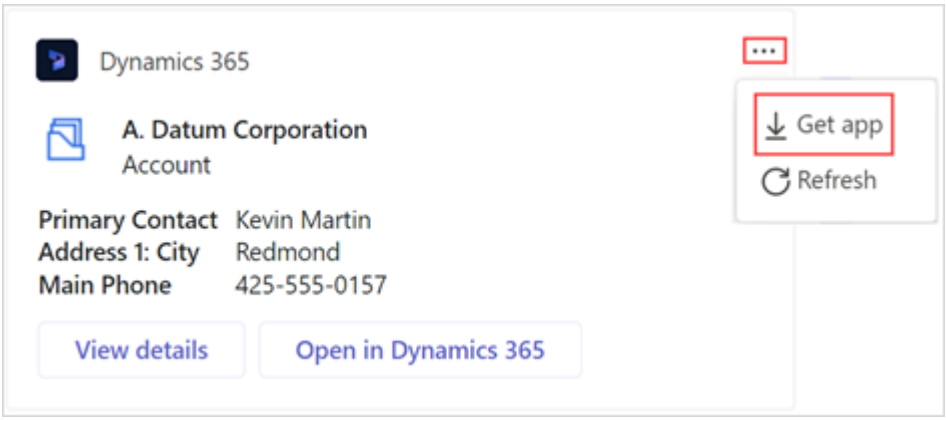


You can still share the record over Teams. The recipients must add the Dynamics 365 app to their Teams.

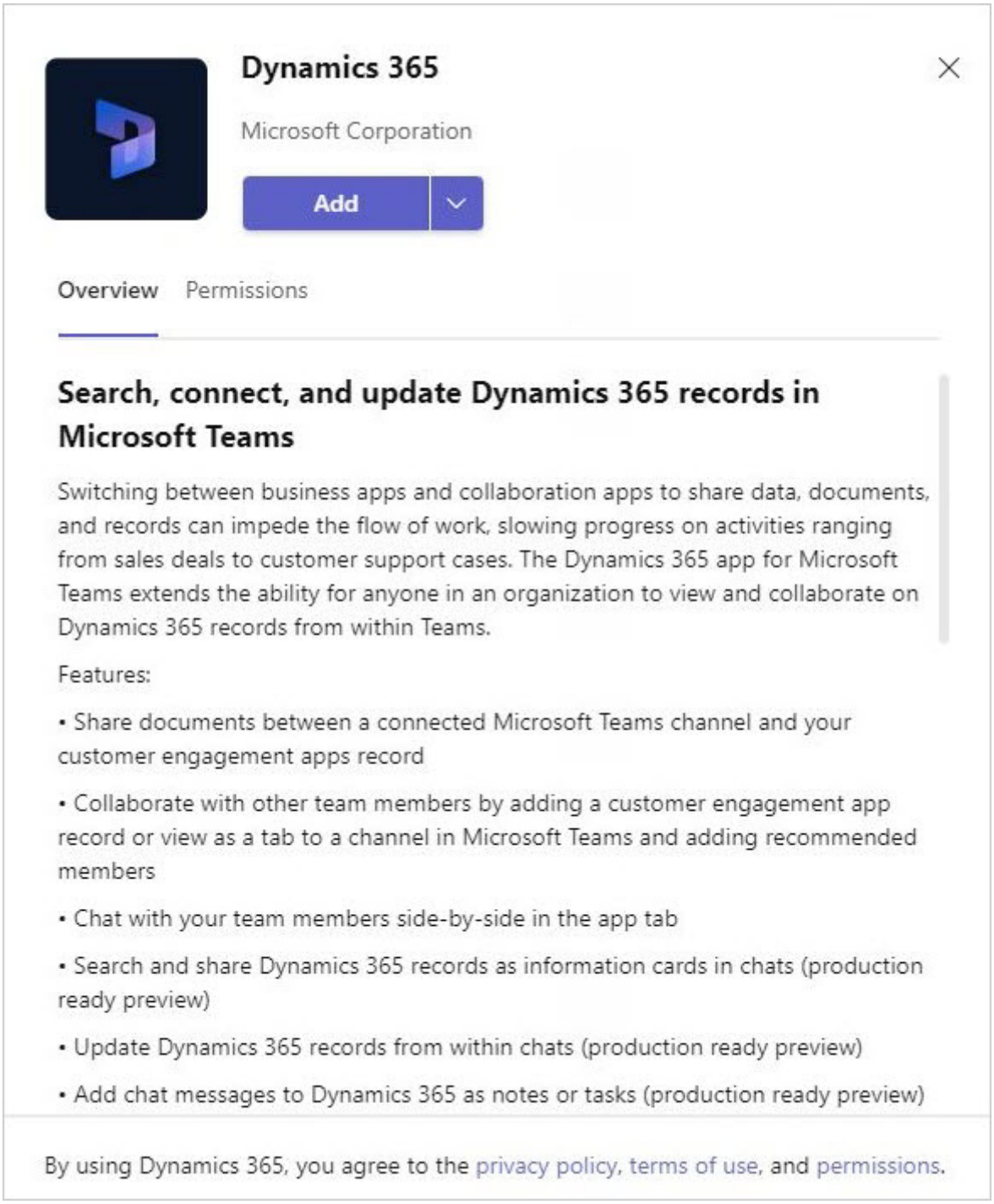
Each person in the team must add the Dynamics 365 app to their personal scope. To add the Dynamics 365 app:

1. Select **View details** on the card.

Alternately, hover over the card, select **More options** (...), and then select **Get app**.



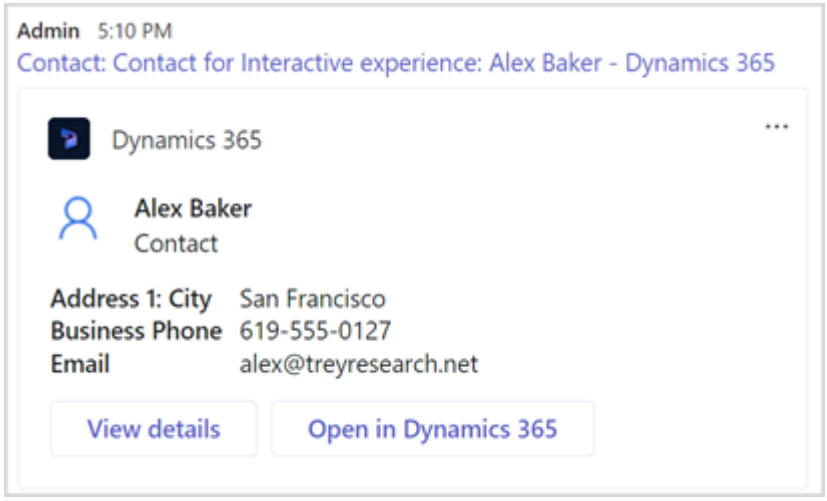
2. Select **Add** in the Dynamics 365 window.



Share a record through URL

You can also share a record by pasting the URL of a Dynamics 365 record. You can get the URL of a record from the web browser.

The record is displayed as an information card with actions.



See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Edit settings of the Dynamics 365 app
Share feedback
View and update record details
Add chat messages to Dynamics 365 as notes or tasks

View and update record details (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

After you receive a card in a Teams chat, you can view its details and update them as required.

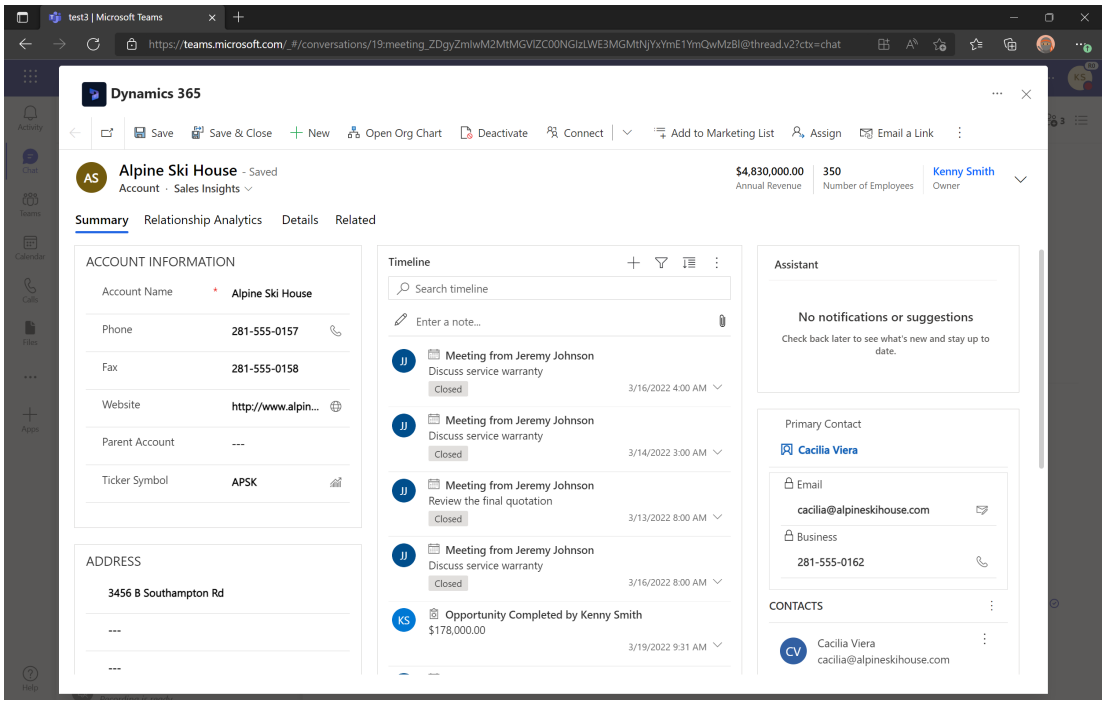
License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

How to view and update record details

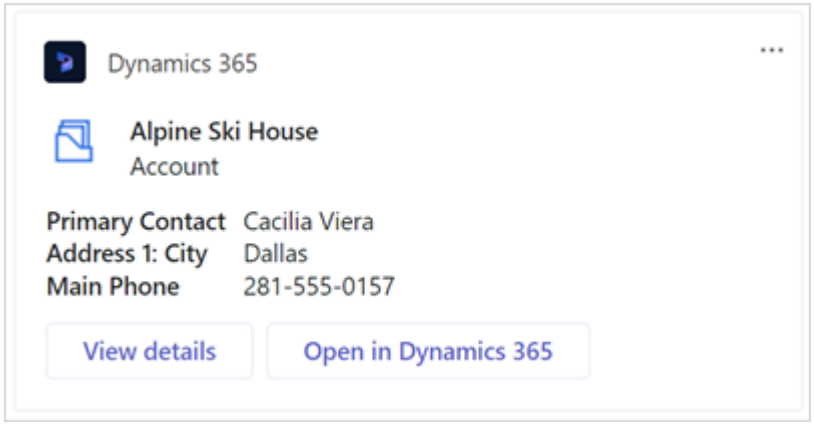
1. In a record card whose details you want to update, select one of the following:

   - **View details**: The record is opened in a new window inside Teams.



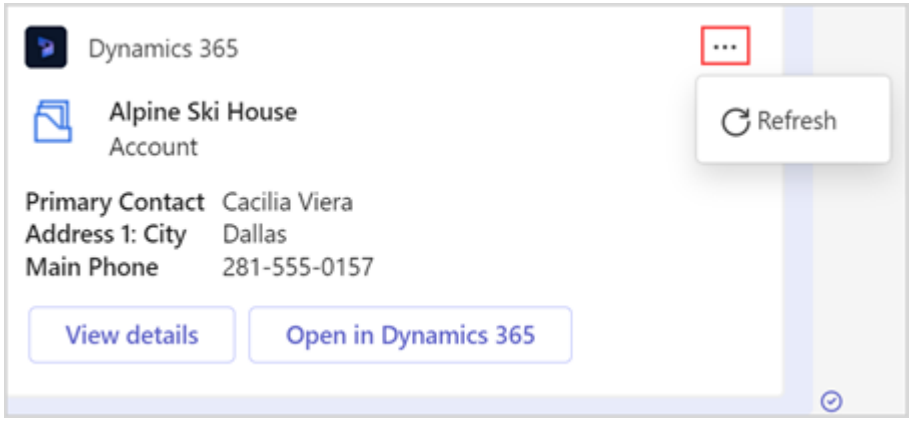
- **Open in Dynamics 365**: The record is opened in the customer engagement app.

> **Note**
>
> The recipients can view and update the record if they have the necessary permissions in Dynamics 365. Otherwise, they'll see a permission error.



2. Update the details as required and save the changes.

3. To see the updated changes in the card, hover over the card, select **More options** (...), and then select **Refresh**.



See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Edit settings of the Dynamics 365 app
Share feedback
Share Dynamics 365 records within Microsoft Teams conversations
Add chat messages to Dynamics 365 as notes or tasks

Add chat messages to Dynamics 365 as notes or tasks (production-ready preview)

Article • 08/10/2022

> **Important**
>
> This topic is pre-release documentation and is subject to change.

While you're in a conversation about a particular record, you might discuss certain action items, or important points that you want to capture in Dynamics 365. The app makes it easy for you to add such messages as notes or tasks to the corresponding record.

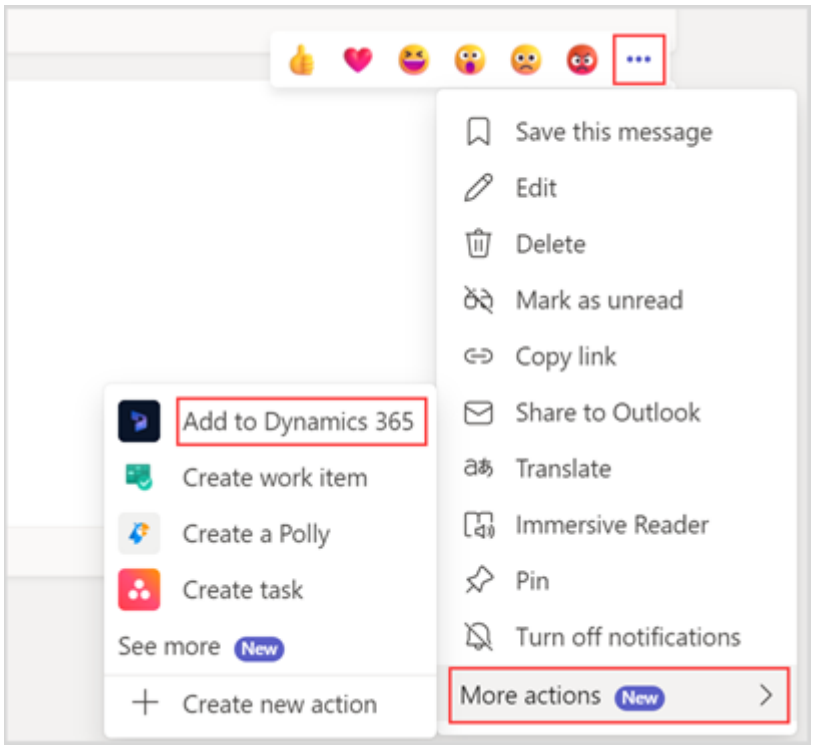
License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Add a chat message to a Dynamics 365 record

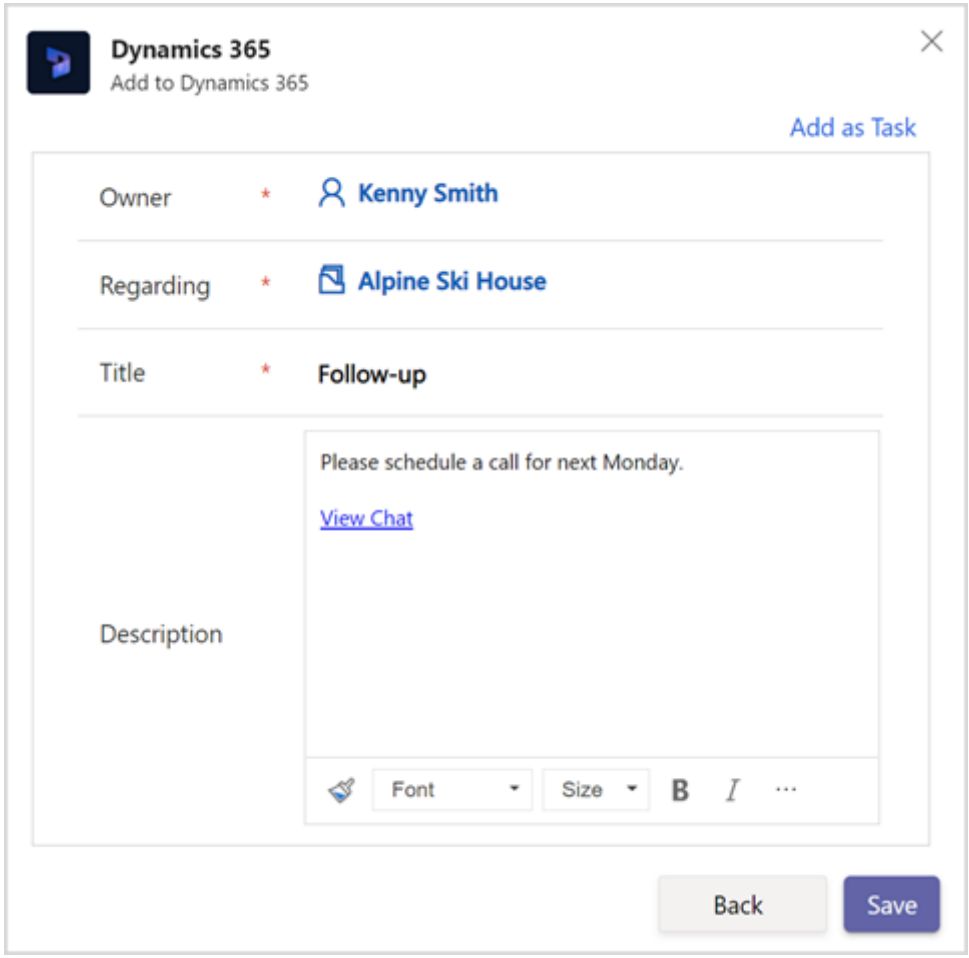
1. Hover over the message that you want to add as a note or task, and then select **More options** (...).

2. In the context menu, select **More actions** > **Add to Dynamics 365**.



3. In the **Regarding** field, select the record to which you want to add the message as a note or task.

4. In the **Title** field, enter a title for the note or task.



By default, the message is added as a note. If you want to add the message as a task, select **Add as Task** in the upper-right corner of the window. The values from the **Regarding** and **Title** fields are populated in the task accordingly.

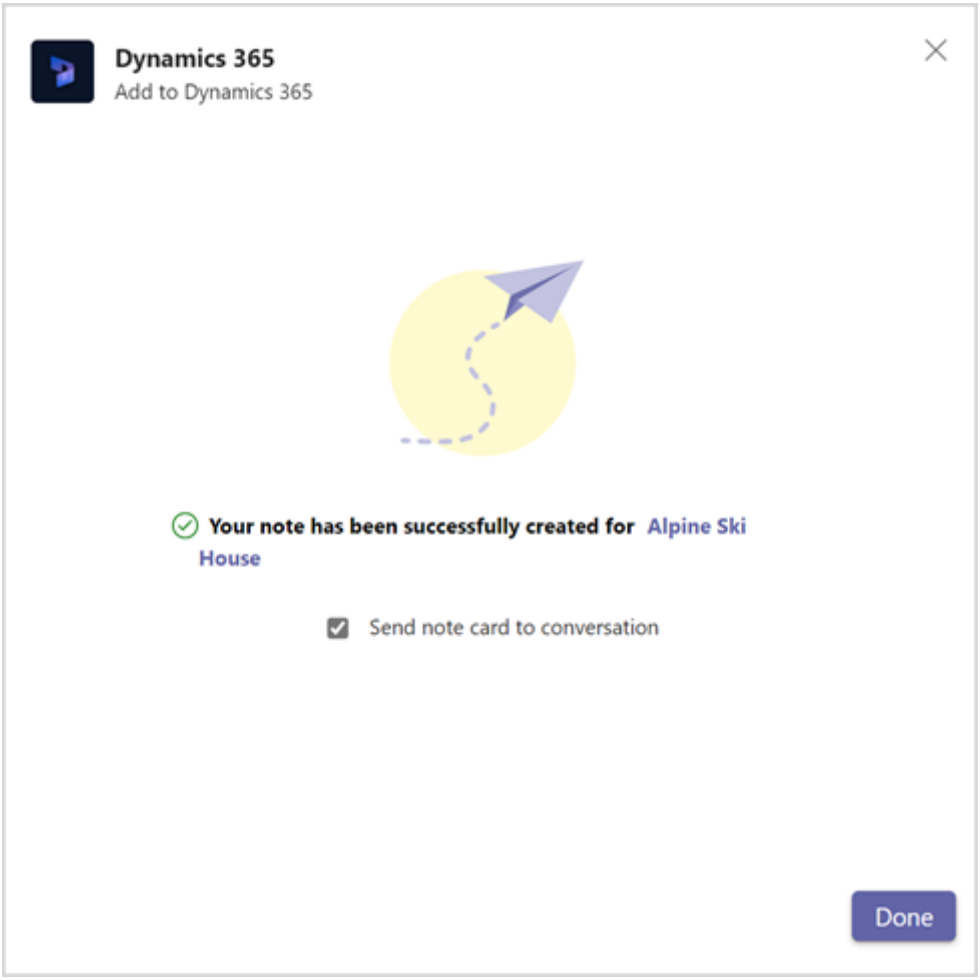
> **Note**
>
> The message is added to the description field of the note or task. Rich text format is not supported for tasks. So, if you try to add rich text messages, you'll only see the chat URL in the description for tasks. You can manually copy and paste the chat message in such cases.

5. Select **Save**.

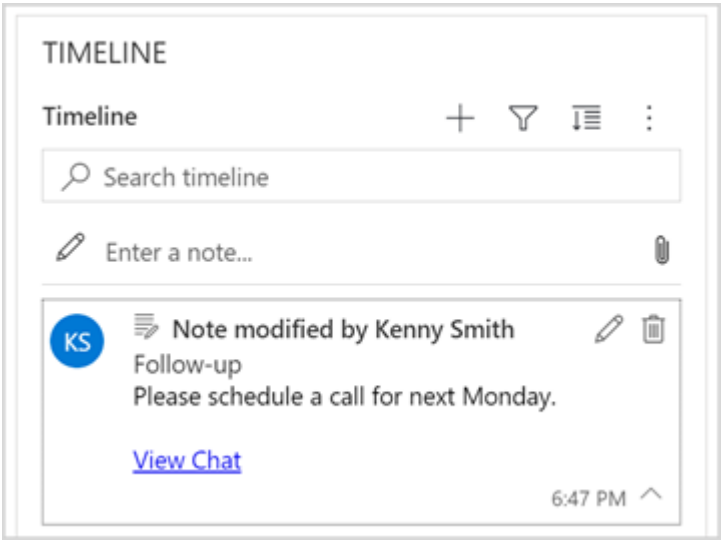
   The note or task is added to the timeline of the record.

   By default, the note or task card is sent to the conversation. If you don't want to send the note or task card to the conversation, clear **Send note card to conversation** or **Send task card to conversation**.

6. Select **Done**.



The note or task is added to the record's timeline. A **View Chat** link is added to the note or task. Selecting the **View Chat** link opens the conversation in Teams.



See also

Share and update Dynamics 365 records within Microsoft Teams conversations
Access the Dynamics 365 app through messaging extensions
Edit settings of the Dynamics 365 app
Share feedback

Share Dynamics 365 records within Microsoft Teams conversations

View and update record details

Frequently asked questions

Article • 06/20/2022

We've compiled a list of frequently asked questions and provided brief answers to help you get to your information quickly.

How are the Dynamics 365 messaging extension and the Dynamics 365 app for Teams related?

The Dynamics 365 messaging extension is a part of the Dynamics 365 app for Teams. You get access to the messaging extension when you install the Dynamics 365 app for Teams. Conversely, if you want to access the messaging extension, you need to install the Dynamics 365 app for Teams.

If I'm already using (and therefore have installed) the Dynamics 365 app for Teams, do I need to do any installation to access the messaging extension?

If you're already using (and therefore have installed) the Dynamics 365 app for Teams, you'll find the Dynamics 365 app in the messaging extensions (...) list in the compose toolbar. But, it may not be pinned.

If I install the Dynamics 365 app from the messaging extension (...) compose toolbar in a chat, will it also add a personal dashboard to Teams?

If you install the Dynamics 365 app from the messaging extension (...) compose toolbar in a chat, it will add a personal dashboard to Teams. You'll need to configure it before use when you first access the personal dashboard.

Can I search and share custom table records using the Dynamics 365 app?

You can search and share custom table records using the Dynamics 365 app. The **All** tab in the Dynamics 365 app will allow you to search on all tables, including custom tables. The search in **All** tab is powered by Dataverse Search if it is enabled on the organization; otherwise, it defaults to Categorized search. The tabs in the search fly-out show the most recently used records across tables by default (before you start a search).

How does the application pick the information to show in the card about a record I choose to share?

The application shows the fields that are included in the **Quick Find View** view of the table to which the record belongs.

How do I change the information that appears on a card after I choose a record to share?

You can change the information that appears on a card by changing the columns included in the **Quick Find View** view of the table to which the record belongs. For performance optimizations, it takes about 24 hours to refresh the view metadata cached in the Dynamics 365 app for Teams and the changes to the quick find views would automatically flow when the search is accessed the next time.

Can I change the action buttons on a card?

You can't change the action buttons on a card.

Does the card refresh? Or does it show static information as at the time of insertion of the card?

The card is reloaded or refreshed every time you open the chat in which the card is inserted.

What happens if I inadvertently share a record with someone who doesn't have permissions to view the record on Dynamics 365?

Only users who are authorized to access the record on Dynamics 365 are allowed to view the information on the card. Those who don't have permissions will see a message calling out their lack of permissions.

Can I see who in my channel has access to a record I have shared?

The app or the card doesn't call out who has (or doesn't have) permissions to the card you're sharing. However, the card details will be visible only to those who have access to the record in Dynamics 365.

Can I connect to multiple environments using the Dynamics 365 app?

You can connect only to one environment at a time.

Can I connect to multiple applications using the Dynamics 365 app?

You can connect only to one application at a time. Note that you can search and insert any record you have access to in the environment to which you are connected. The application you choose when setting up the app is used only to generate the deep link to record for directing users when they select **Open in Dynamics** on the card. Users will still be able to view a record that is in the environment but not in the app that is set up.

Can I connect to different environments or applications in different chats where I use the Dynamics 365 app?

When you change the settings of the app, you are changing it for all chats and environments.

What happens to the messages with cards in a chat when I uninstall the Dynamics 365 app?

The cards continue to display the record information to the user even after the user uninstalls the Dynamics 365 app in Teams. The cards would auto refresh as well. However, when the user selects **View details** on the card, they would see the app installation dialog box again.

Why do messages containing attachments or media not get copied to Dynamics 365 while using the Add to Dynamics 365 action?

We don't support copying over of messages with media such as files, images, videos, and adaptive cards to Dynamics 365. The messages with simple and rich text information with less than 3,000 characters gets automatically copied.

Is the Dynamics 365 app supported on mobiles devices?

We don't support adaptive cards or the Dynamics 365 app on mobile devices yet. Some of the experiences might be broken in mobiles but we aren't supporting these clients.

Make and receive Teams calls in Dynamics 365

Article • 10/17/2023

Microsoft Teams dialer helps you to be more productive and get work done effectively by calling customers directly from within the Dynamics 365 Sales Hub app. You can make and receive calls through the Teams dialer.

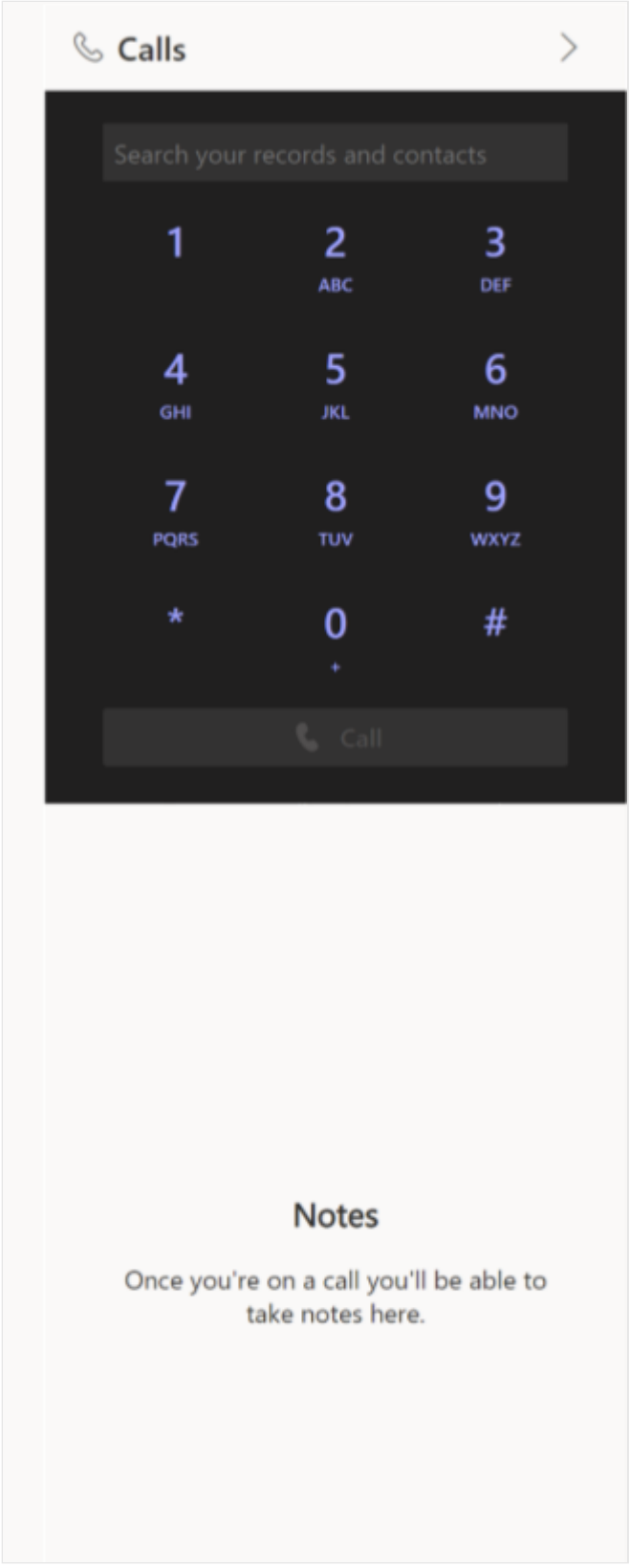
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Open Teams calls dialer

> **Note**
>
> An administrator must configure the Microsoft Teams dialer in your organization for you to use it. More information: **Configure Microsoft Teams dialer**

Sign in to your sales app and select the phone (📞) icon in the upper-right corner of the page to open the **Calls** pane and view the dial pad.



Important

- The dialer won't work if third-party cookies are blocked in the private or incognito window of your browser. To use the dialer, select the **Third-party cookie blocking** icon in your browser and select **Allow cookies**.

- The dialer isn't supported for custom entities. Though the phone icon appears on the custom entity forms, the dialer doesn't work.

Make calls with Teams

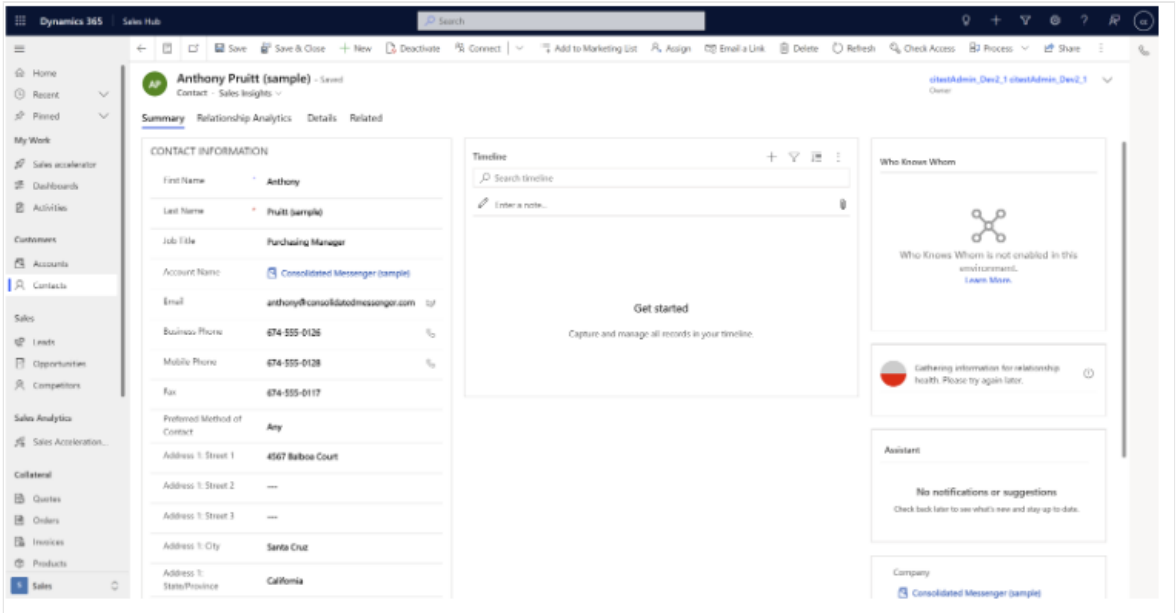
You can use Microsoft Teams to call a customer directly from the dialer, a record, or a work item in Dynamics 365.

> **Note**
>
> Verify that a valid phone number is associated with the Dynamics 365 records or work item.

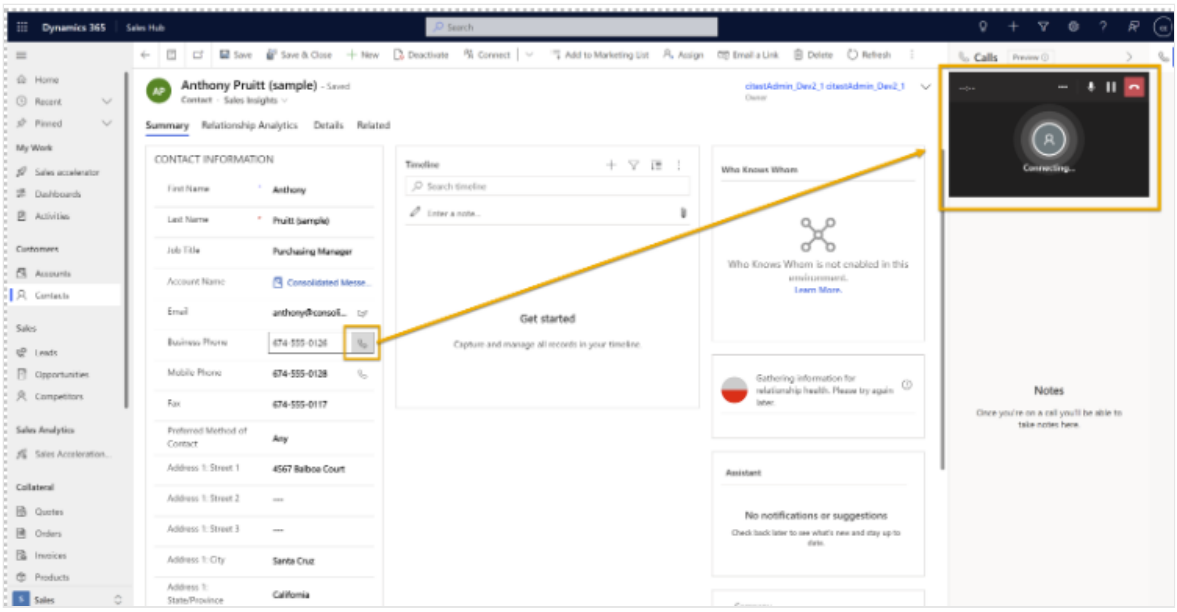
To call a customer through a Dynamics 365 record

1. Open a record. In this example, we're opening a contact record.

   In the **Business Phone** field, a phone number has been associated with the contact **Anthony Pruitt**.

2. Select corresponding to the phone number. The call is established.

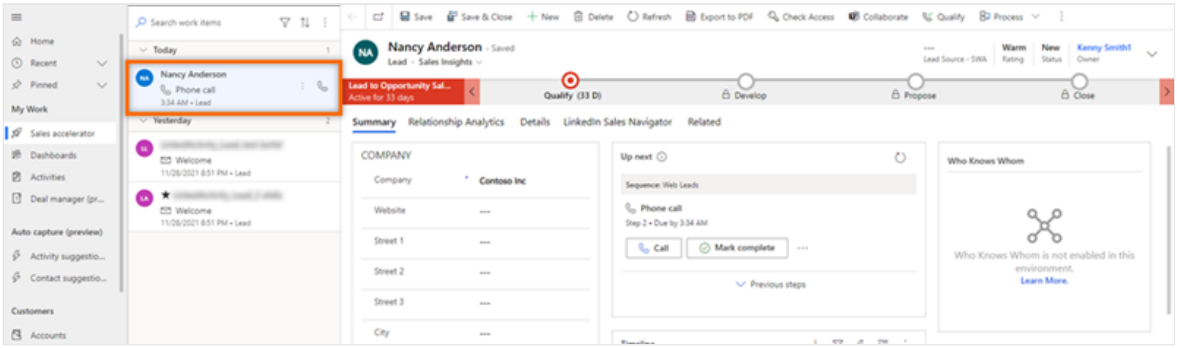


3. (Optional) Select the ellipses (three-dots menu) in the dialer screen to change your microphone and speaker settings.

To call a customer from a work list item

1. Go to **My Work** > **Sales accelerator**.

   Your work list opens. You can see the phone call activities that are pending for the day. In this example, the phone call activity for **Nancy Anderson** is pending for the day.



2. Select corresponding to the work item.

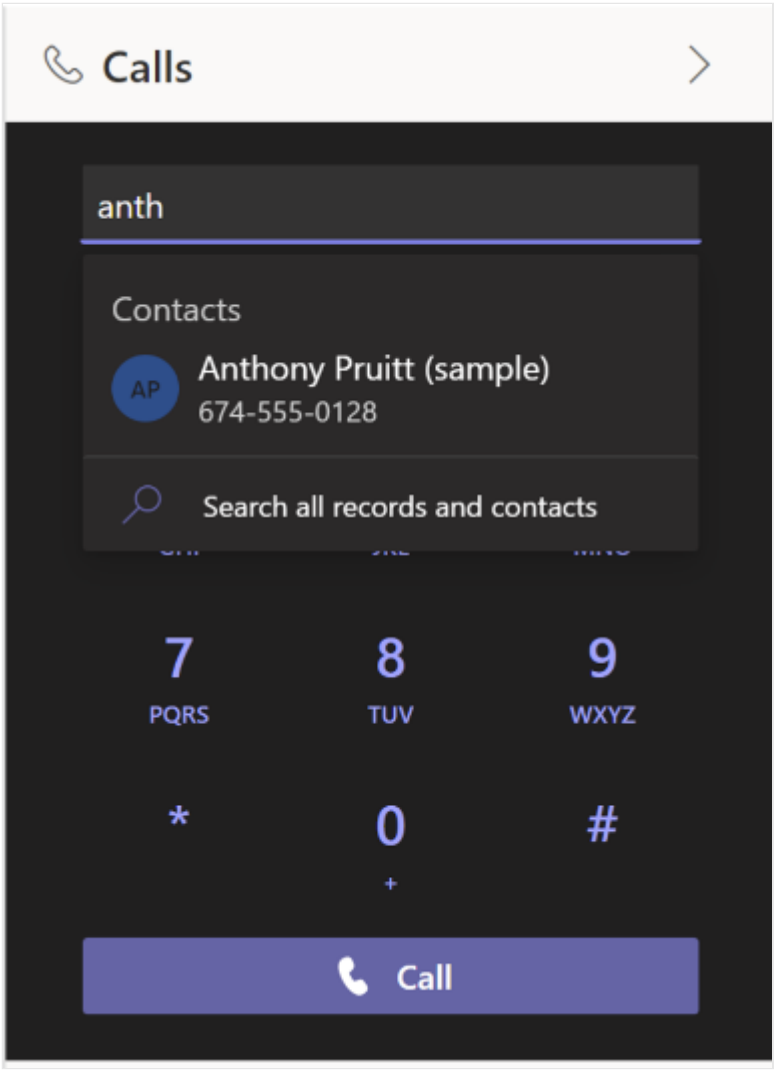
   The Teams dialer opens, and the call is established.

> ⓘ **Note**
>
> You can also use the **Call** option in the **Up next** widget to make the call.

To call a customer manually

1. Open the Teams dialer.

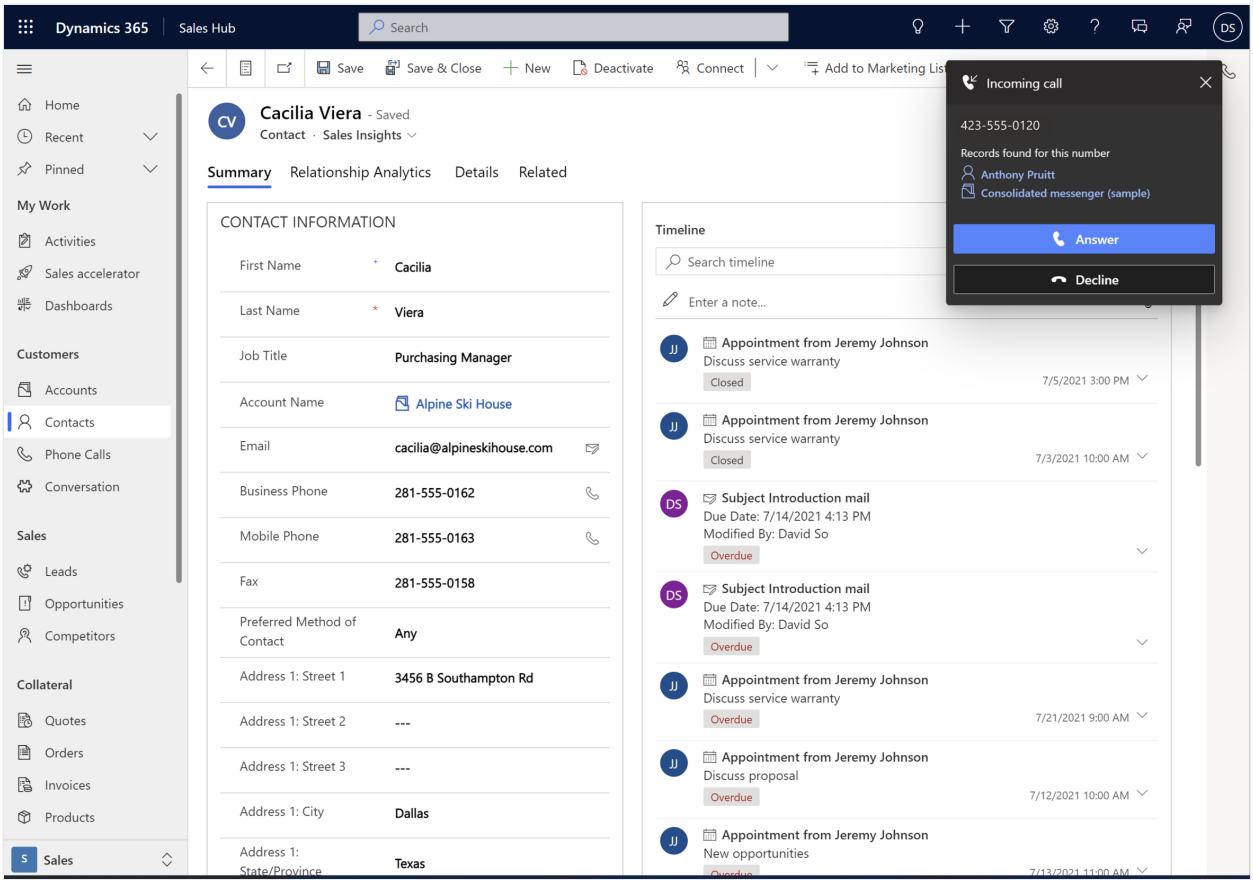
2. Enter the phone number of the customer, or search for the customer through dialer search box.



3. Select **Call**.

Receive Teams calls in Dynamics 365

You can receive calls in Dynamics 365 Sales. When a call is received, a notification is displayed in the upper-right corner of the page, as shown in the following image:



The caller name is automatically displayed when the phone number is associated with a record. For example, Kenny Smith is a lead and has the mobile number +1 123 456 7890 associated with their record. When you receive a call from +1 123 456 7890, the name Kenny Smith is automatically displayed; you can select the name in the notification to open the record.

Note

- If a phone number is associated with more than one record, the notification will display up to 3 records and will indicate more records exist with this phone number. Select the appropriate record.
- If you receive a call while you're on another call, the inbound call notification will provide an option to either end the current call and accept the incoming call, or to reject the incoming call and continue with the current call.

To receive the call, select **Answer**. The Teams telephony panel opens and the call is connected.

A phone call activity is created and displayed on the timeline of the record. If the phone number is automatically resolved to a record, the **Call From** and **Regarding** fields of the phone call activity are automatically populated. If the received call isn't associated with

any record, only a phone call activity is created. To associate the call with a record during the call, select the **Details** tab, and then select **Connect a record**.

View missed calls in Dynamics 365

If you've missed a call, a notification is displayed in the in-app notification center in Dynamics 365. To view the missed call notification, select the Notifications icon (bell icon) in the upper-right corner of the page. If you've answered the call from another app, such as Teams desktop, the call isn't considered as missed.

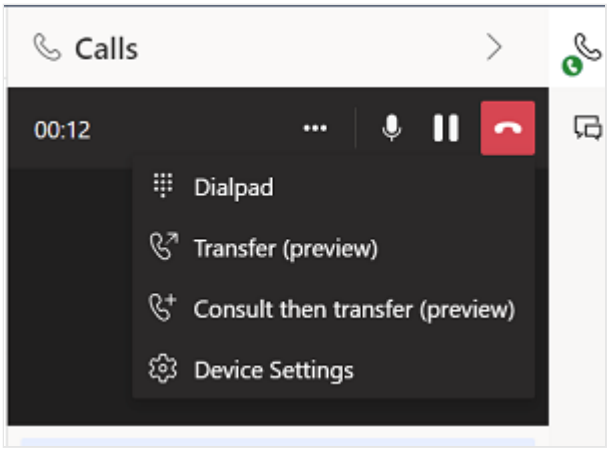
> ⓘ **Note**
>
> Your administrator must have enabled and **set up the in-app notifications** for you to view the missed calls.

Transfer a Teams call (preview)

> ⓘ **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

You can transfer a customer's call to a colleague's Teams line or their phone number.

1. While you're on the call, select **More options** (**...**), and then select **Transfer (preview)**.



The customer's call is put on hold.

2. On the dial pad, enter the name or phone number of your colleague.

3. (Optional) If you're calling the Teams line of your colleague, select **Ring back if there's no answer** to ensure a safe transfer. Otherwise, the call will be disconnected if it isn't answered. This option isn't available when you transfer to a phone number.

4. Follow one of these steps:

   - If the recipient is available, select **Transfer**.
   - If the recipient is unavailable, select **Cancel** and then **Resume** to go back to the customer.

   If you're transferring to a Teams line, the recipient receives a transfer notification that includes information about you and the customer. After you transfer the call, it's treated as a new call. In this case, no notes or recordings that you made during the original call are transferred to the recipient.

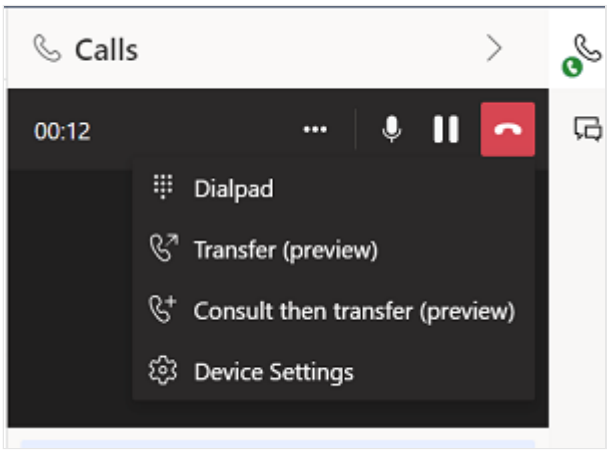
Consult and transfer a Teams call (preview)

> **ⓘ Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or

sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

You can consult a colleague before you transfer a customer's call to them. You can also consult a colleague and then answer the customer directly, without transferring the call.

1. While you're on the call, select **More options** (...), and then select **Consult then transfer (preview)**.



   The customer is put on hold.

2. Enter the name or phone number of your colleague.

3. Follow one of the steps:

   - If the recipient is available, follow these steps:
     a. Select **Call**. The duration of the hold is displayed, so that you know how long the customer has been waiting.
     b. Consult your colleague.
     c. If your colleague is ready to take the call, select **Transfer**.

     If you're transferring to a Teams line, the recipient receives a transfer notification that includes information about you and the customer. After you transfer the call, it's treated as a new call. In this case, no notes or recordings that you made during the original call are transferred to the recipient.

   - If the recipient is unavailable, or if you want to answer the customer directly, select **Cancel** and then **Resume** to go back to the customer.

Call analysis

Configure conversation intelligence for real-time analysis of your call data with overview, summary, transcription, insights, and action items. More information: Get real-time call data through Teams call

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure Microsoft Teams dialer
Get real-time call data through Teams call

Difference between the Basic and Enhanced Collaboration Experience with Microsoft Teams

Article • 08/10/2022

This article provides information about the differences between Basic and Enhanced Collaboration in Microsoft Teams, including the permissions, connection setups, and more.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Know the difference

Before you can start using the collaboration experience, it needs to be turned on in your customer engagement apps in Dynamics 365 (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, and Dynamics 365 Project Service Automation).

Enable Basic Collaboration Experience to share documents between a connected Microsoft Teams channel and your customer engagement apps record. To learn how to turn on Basic or Enhanced collaboration, see Enable linking of Dynamics 365 records to Teams channels.

Collaboration type	Description
Basic Collaboration Experience	• You need system admin permissions to enable this feature. • When you choose the **Collaborate** option in a customer engagement apps (such as Dynamics 365 Sales and Dynamics 365 Customer Service) record page, the connection set-up process between the app record and Microsoft Teams collaboration channel happens in Microsoft Teams. • You can manually pin an app record or view from Microsoft Teams. **Note:** The option to add recommended members during the manual set-up process from Microsoft Teams is not supported.
Enhanced Collaboration Experience	• You need Microsoft 365 tenant admin permissions to enable this feature. • When you choose the **Collaborate** option on in app record or view page, a set-up wizard will guide you through the connection set-up process between the app record or view page in customer engagement apps and Microsoft Teams collaboration. • You can manually pin an app record or view from the Microsoft Teams app and add recommended members if you are the team channel owner.

Basic Collaboration Experience with the Dynamics 365 app for Microsoft Teams

Article • 08/10/2022

Collaborate with team members using the Dynamics 365 app for Microsoft Teams.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

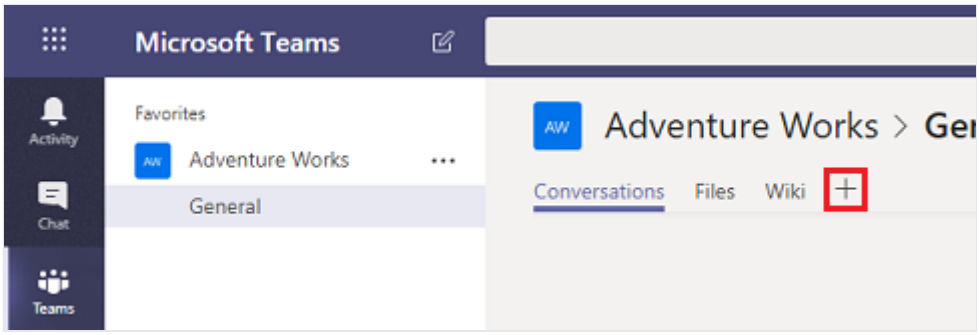
Collaboration experience in Microsoft Teams

Once installed, the Dynamics 365 app for Microsoft Teams enables collaborating with other team members by adding a customer engagement app in Dynamics 365 (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, or Dynamics 365 Project Service Automation) tab to a channel in Microsoft Teams.

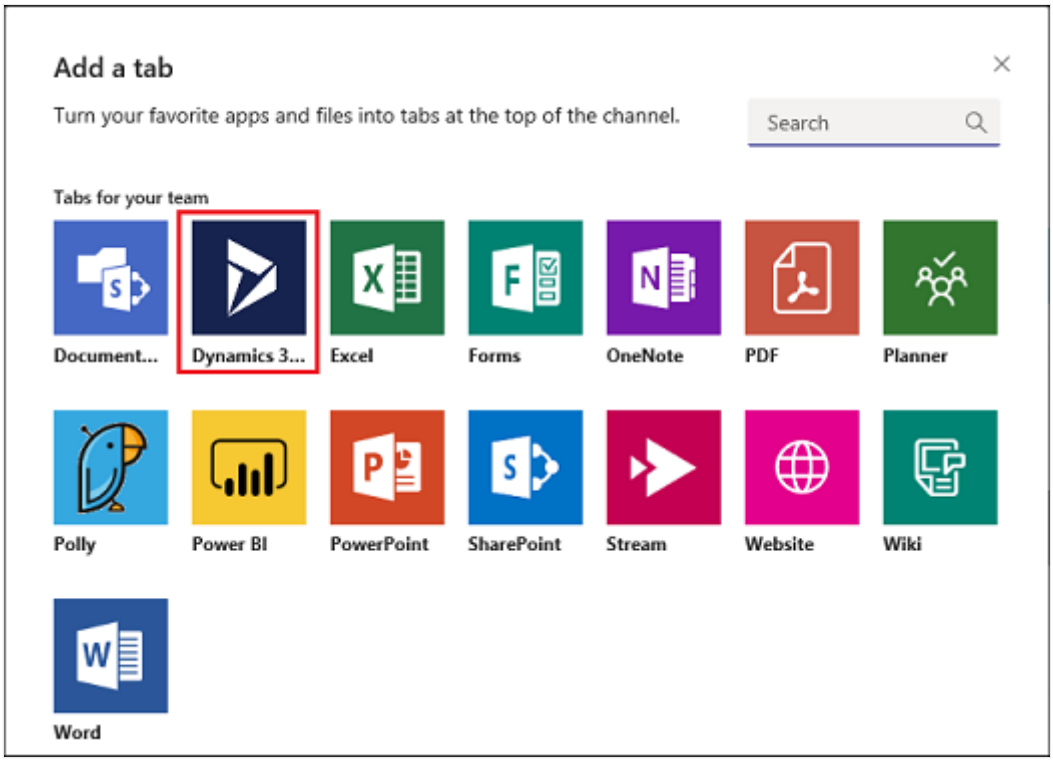
Connect an app record or view to a team channel

From a team channel, you can connect a customer engagement app (such as Dynamics 365 Sales or Dynamics 365 Customer Service) record or view to collaborate on any entity, such as customer accounts, opportunities, and more.

1. Open a team channel, and select the **Add** button (+).



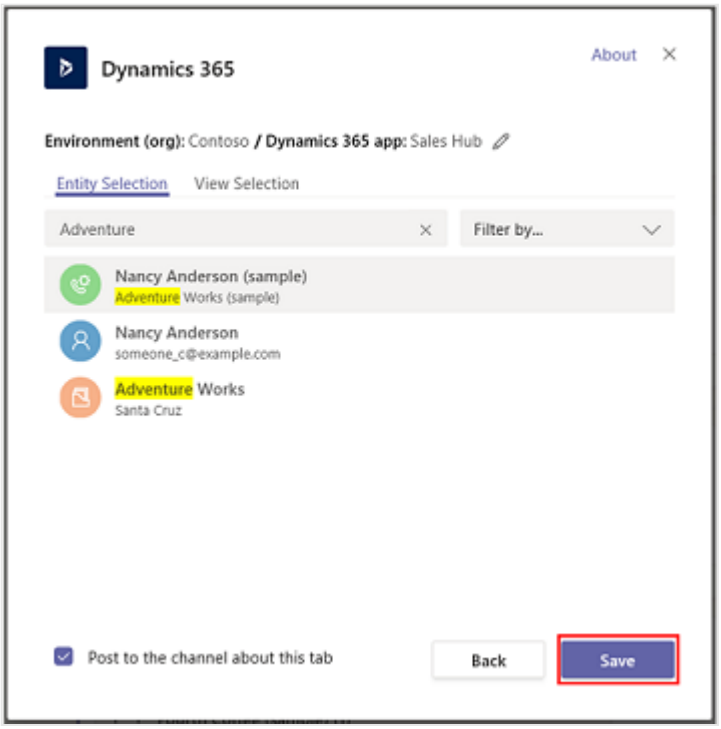
2. Select the **Dynamics 365** icon to pin an app record to a channel.



3. Select **Entity Selection**, or **View Selection**.

- **Entity Selection**

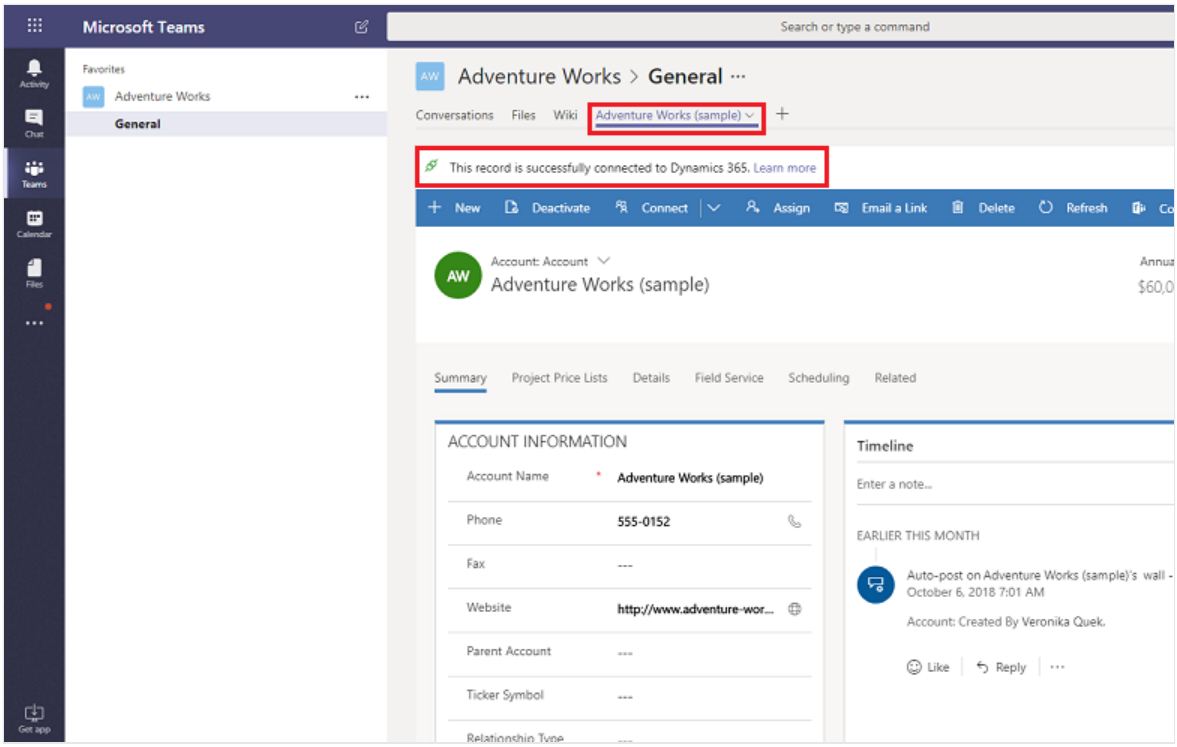
    1. Search for an entity to connect. You can pick a recently viewed record or use search to find records. You can use **Filter by** to narrow the search to an entity type.



2. If you are the owner of the team, you will see an option to add other members to the team who either owns the record, or it has been shared with them. When you are done, select **Save**.

> **Note**
>
> The Enhanced Collaboration Experience needs to be enabled to add members to the team. For more information, see **Enable linking of Dynamics 365 records to Teams channels**.

Once you complete the above steps, you'll see a notification of a successful connection and the app record will load in the new added tab. You can interact with the record as if you were using the app. Those with **Write** permissions can edit the record. Changes will be synchronized with the customer engagement app in Dynamics 365.



Two connection states

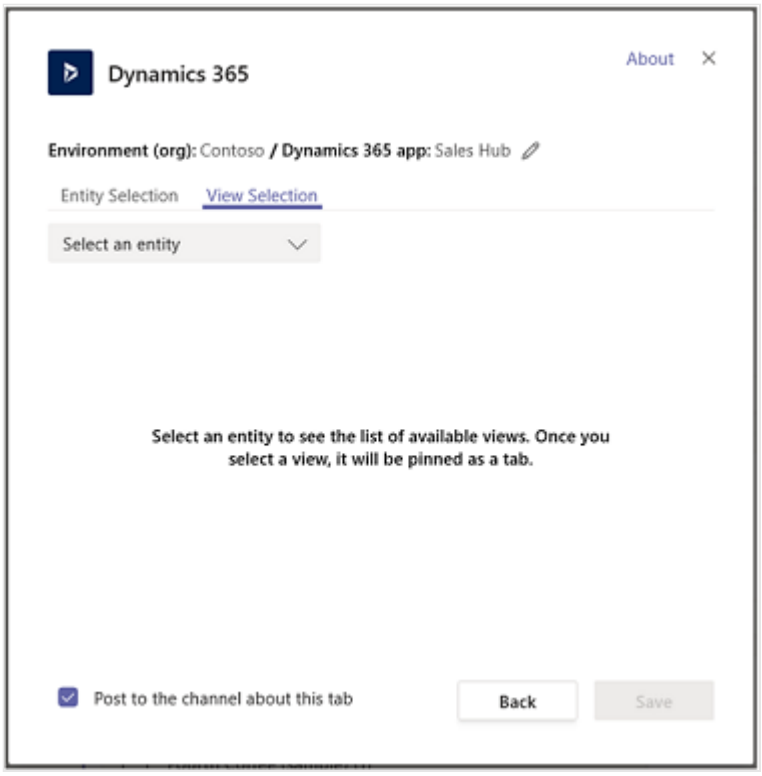
Successful or **Failed** are only two connection states possible when connecting customer engagement apps in Dynamics 365 and Microsoft Teams.

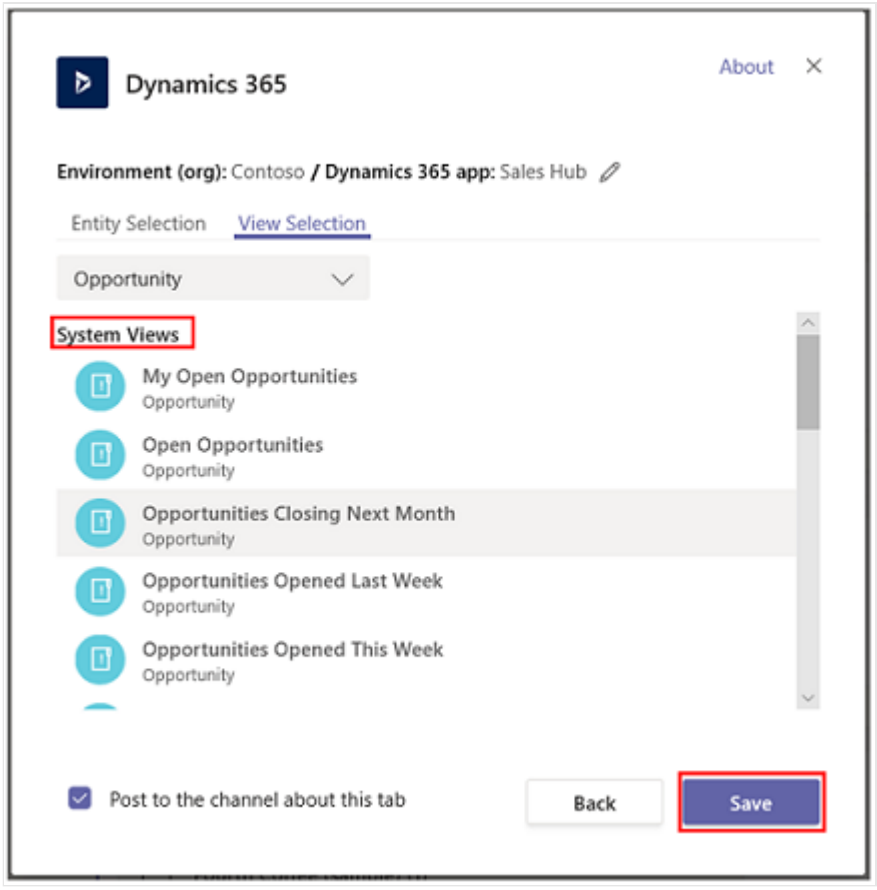
The successful connection state indicates that the connection was successfully saved in Dynamics 365 apps so that the link to the connected Microsoft Teams channel appears on the Dynamics 365 apps page and the files used on this channel also appear on the **Documents** tab in Dynamics 365 apps.

A failed connection state indicates that the connection was not successfully sent to the customer engagement app. Microsoft Teams users can still use the pinned tab in the channel, but the relationship between the pinned record or view with the team channel is not stored in your customer engagement app. For more information, see Troubleshooting.

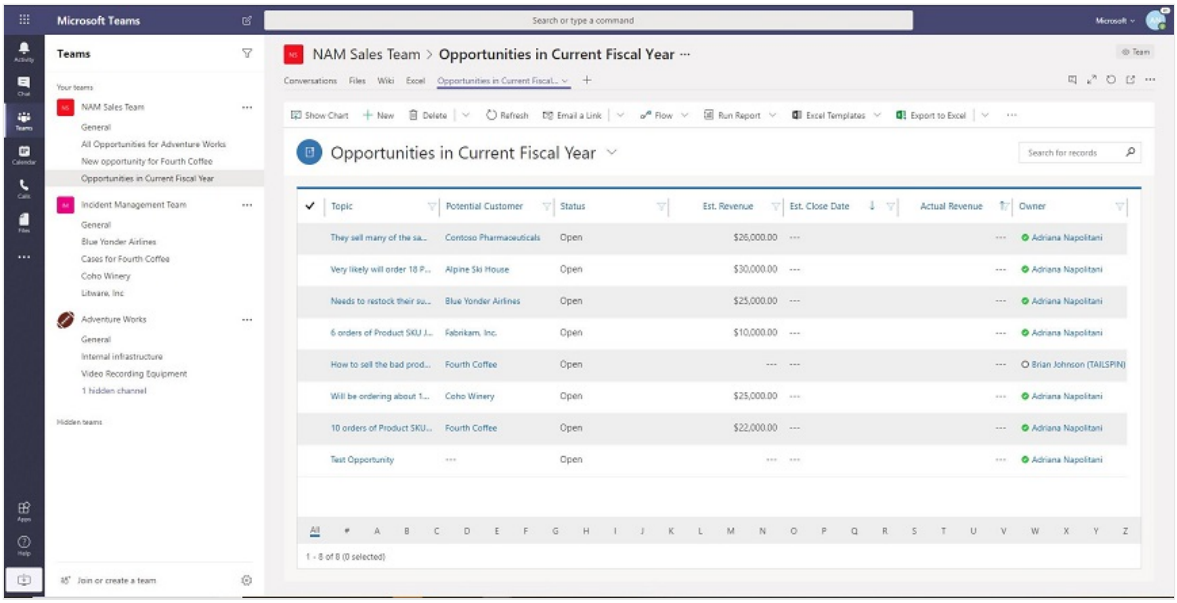
- **View Selection**

    1. Select an entity to see the list of active views that are available for the entity in the app and then select **Save**.

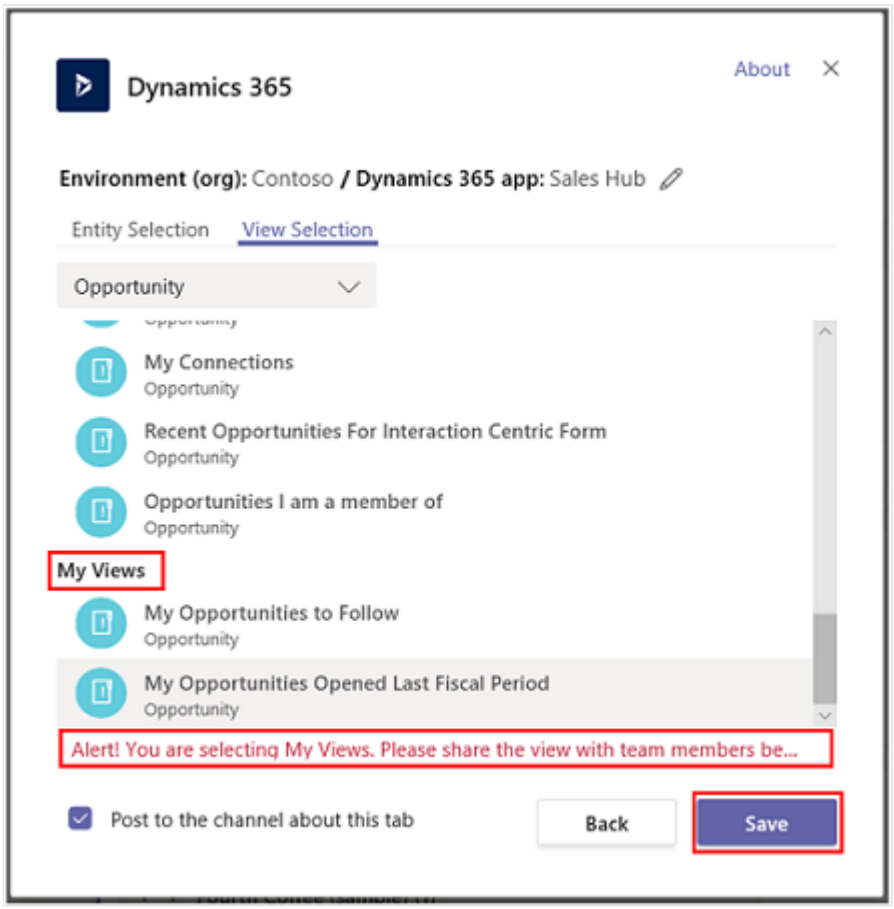




Once you complete the above steps, you'll see the app entity view in the new added tab.

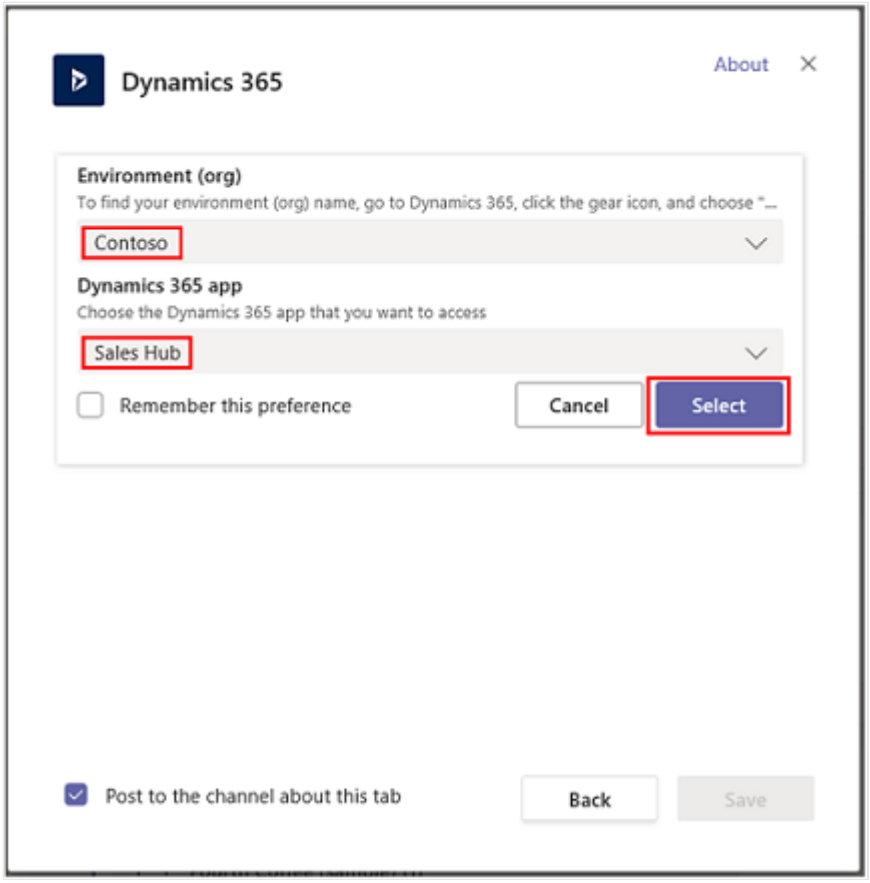


> **Note**
>
> - If you select a personal view (**My Views**) instead of **System Views**, it's recommended that you share the view with other users in Microsoft Teams before you add the view to the Microsoft Teams channel. Otherwise, other team members will not hae access to the view content.



4. If you have multiple environments or app modules, you can change the environment and app module by selecting **Edit** (✎) to specify which environment

or app module to use in Microsoft Teams.



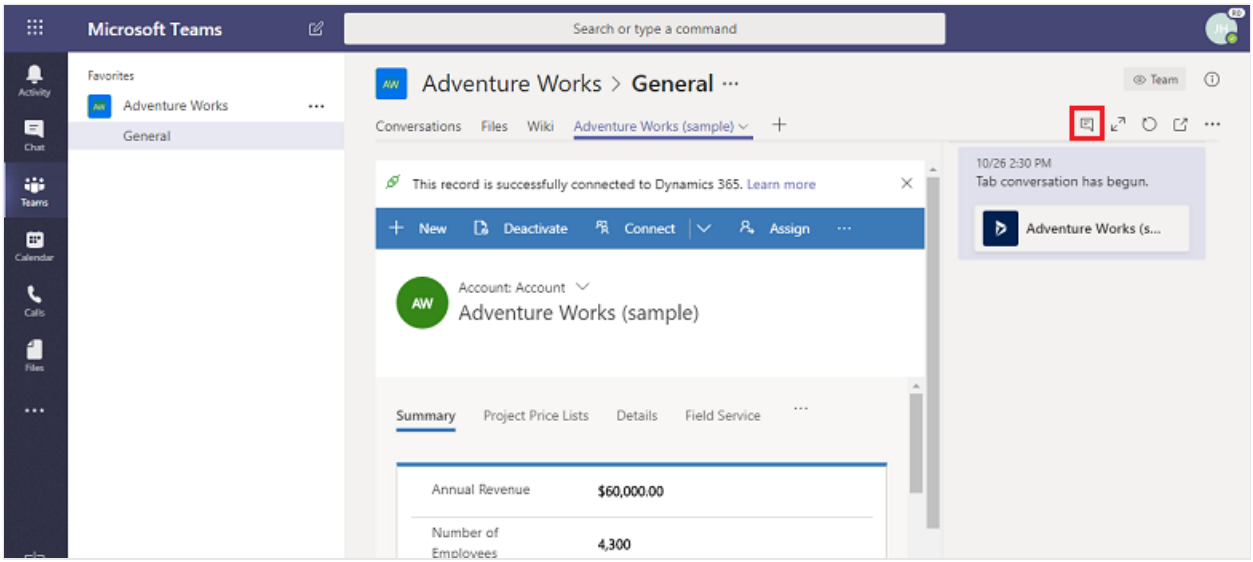
Select **Remember this preference** to set the environment and app selections to be the default personal dashboard that appears when you select **My Dashboard**.

To access these setting again, select the **Settings** tab.

Once the app tab is set up in Microsoft Teams collaboration channel, you can start working with your team members on the pinned app customer information and share files directly from Microsoft Teams.

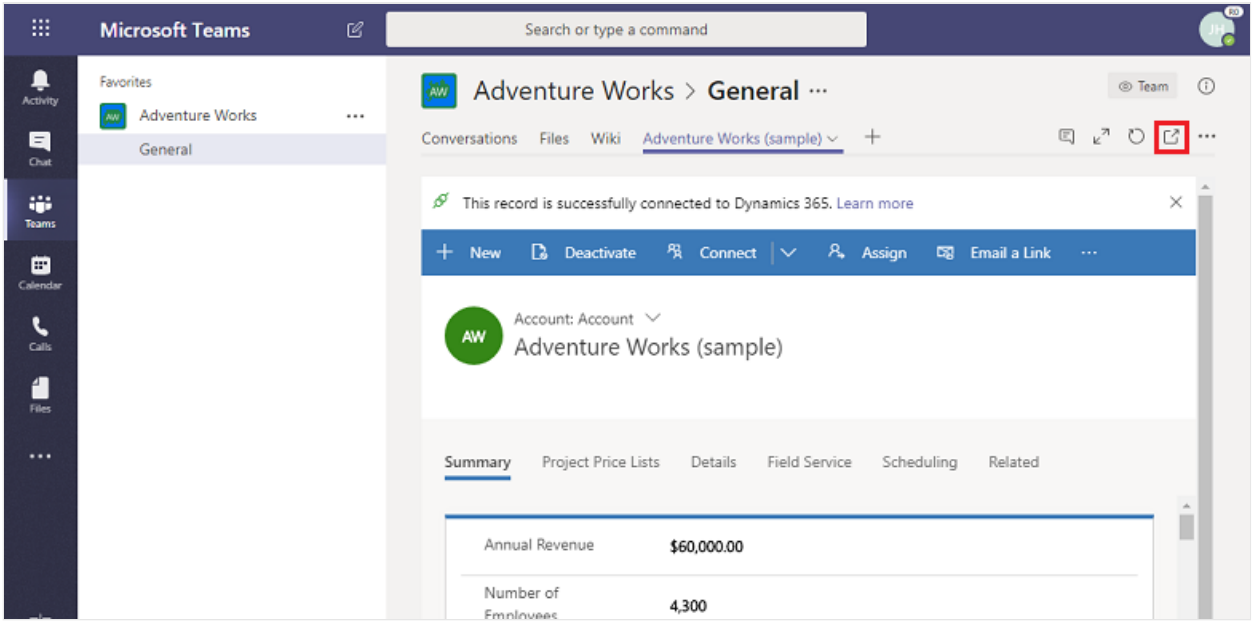
Have a conversation

You can chat with your team members side-by-side with the app tab. From the app tab pinned in a Microsoft Teams channel, select the **Show tab conversation** button to open the conversation tab.



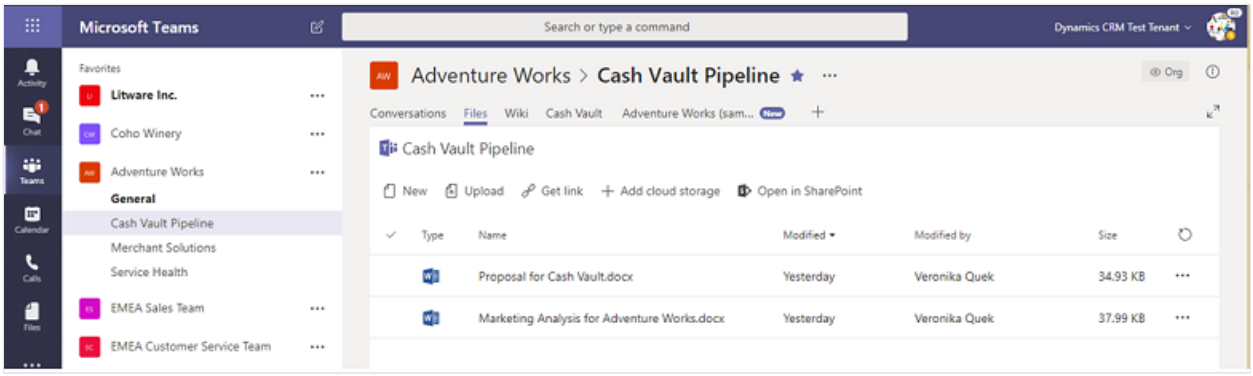
Open an app record or view

It's easy to navigate to the pinned app record or view page from Microsoft Teams. From the app record tab pinned in a Microsoft Teams channel, select the **Go to website** button to open the record or view page in Dynamics 365 apps.

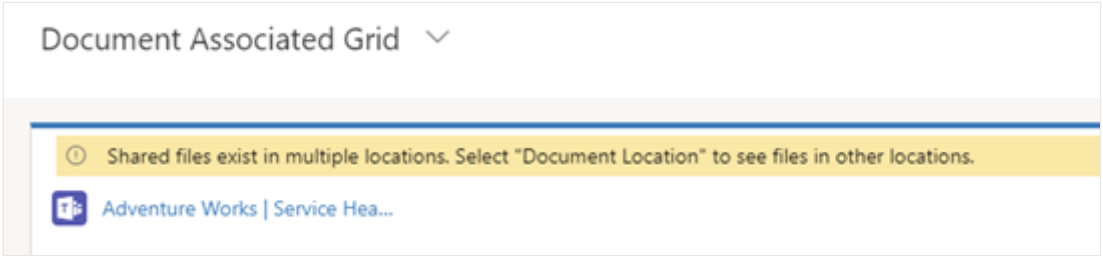


View and associate files

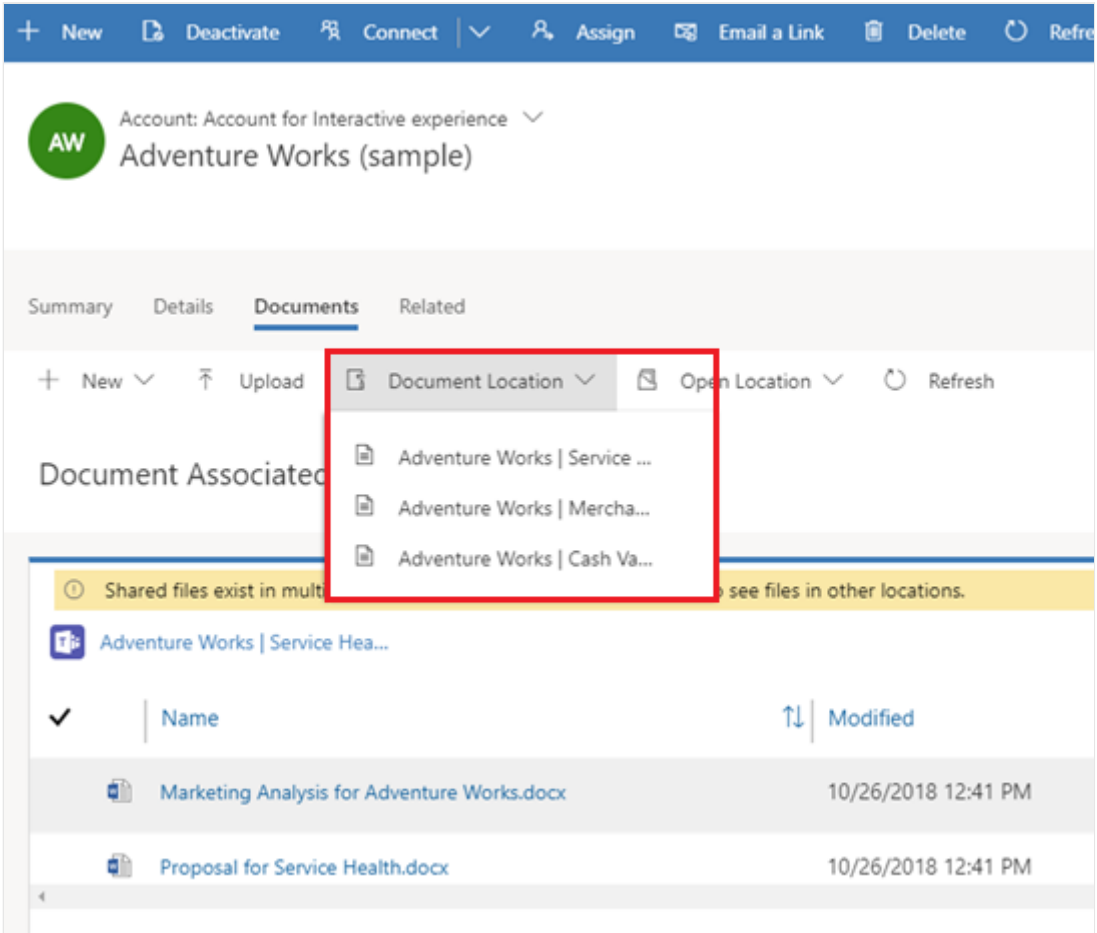
Select the **Files** tab in the connected team channel to associate files with an app record. Files added here will appear in apps in Dynamics 365 under **Documents** for the linked record. Likewise, when you add a document to an app record, that document will appear in Microsoft Teams under the **Files** tab.



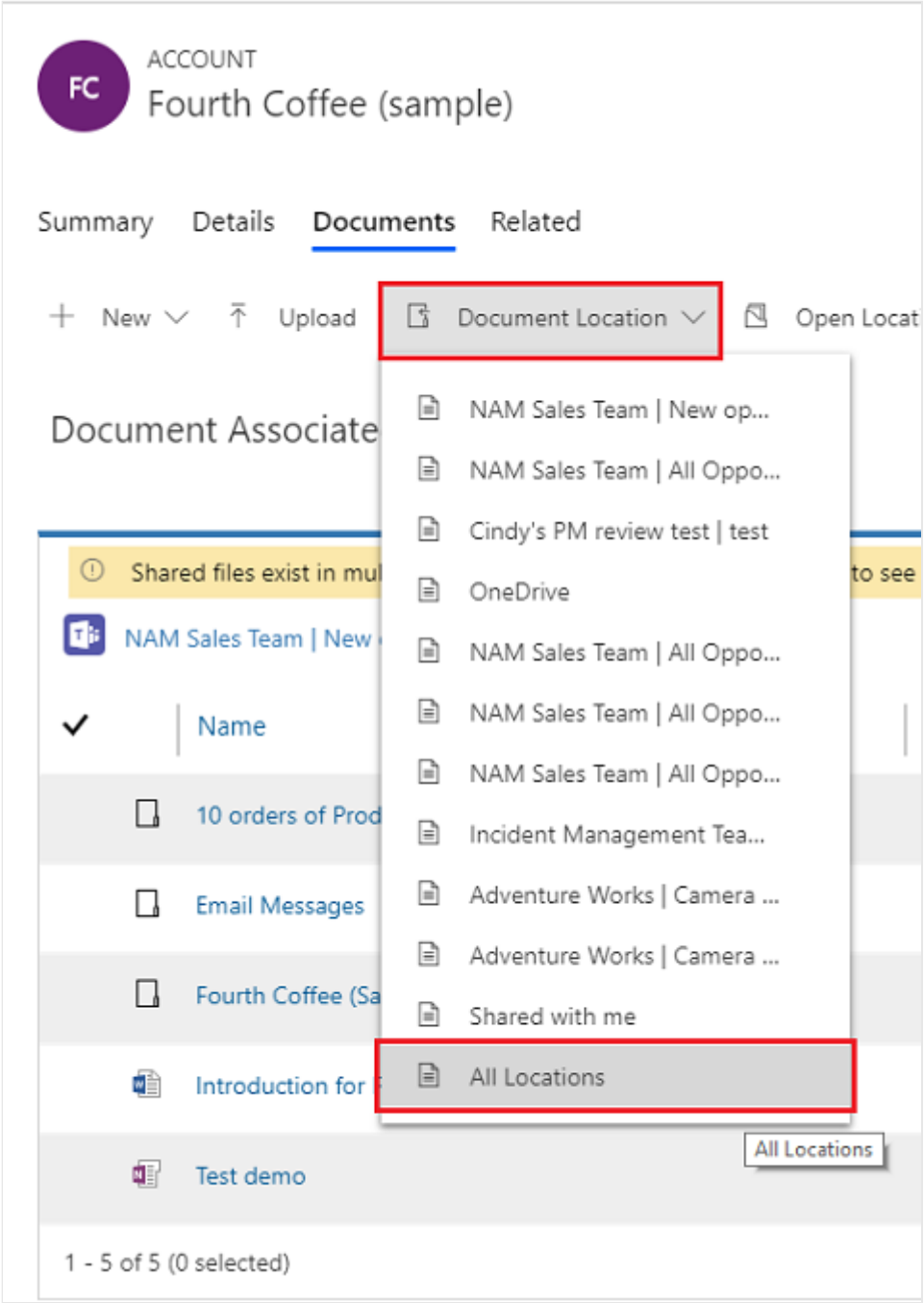
If you see this message: Shared files exist in multiple locations. Select "Document Location" to see files in other locations.

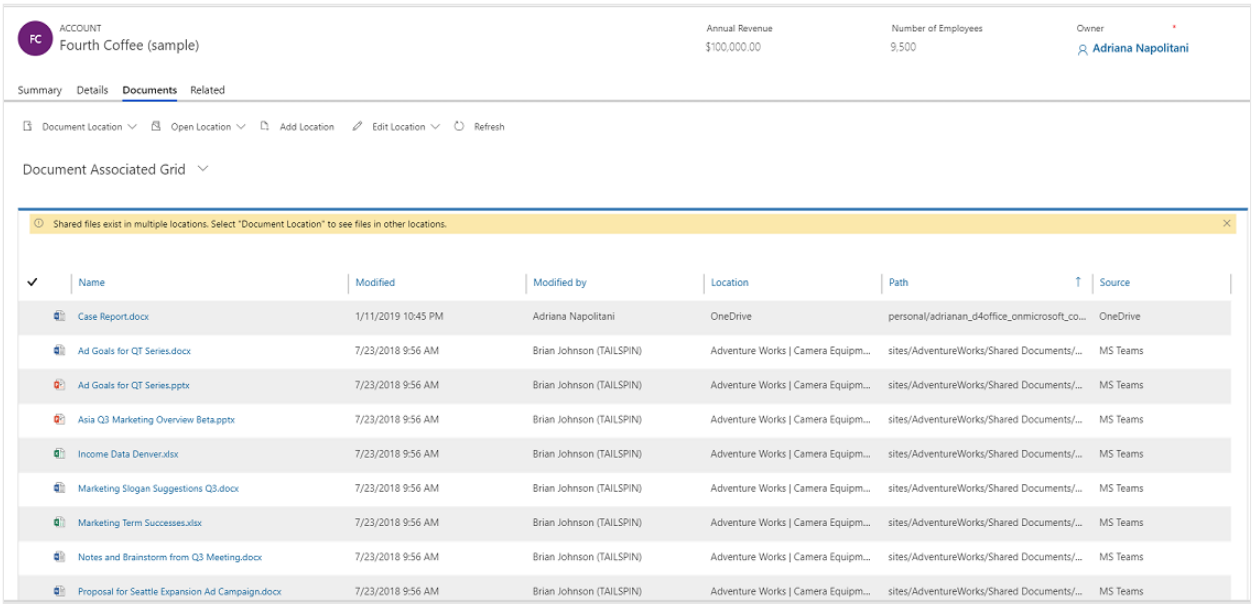


When there is more than one Microsoft Teams channel connected to an app record, each of the channels appears as a separate document location in the customer engagement app. You can switch to a different location by selecting **Document Location** to specify the location of the file.



To view a consolidated file list across all document locations including all connected team channel file libraries, from **Document Location** select **All Locations**.



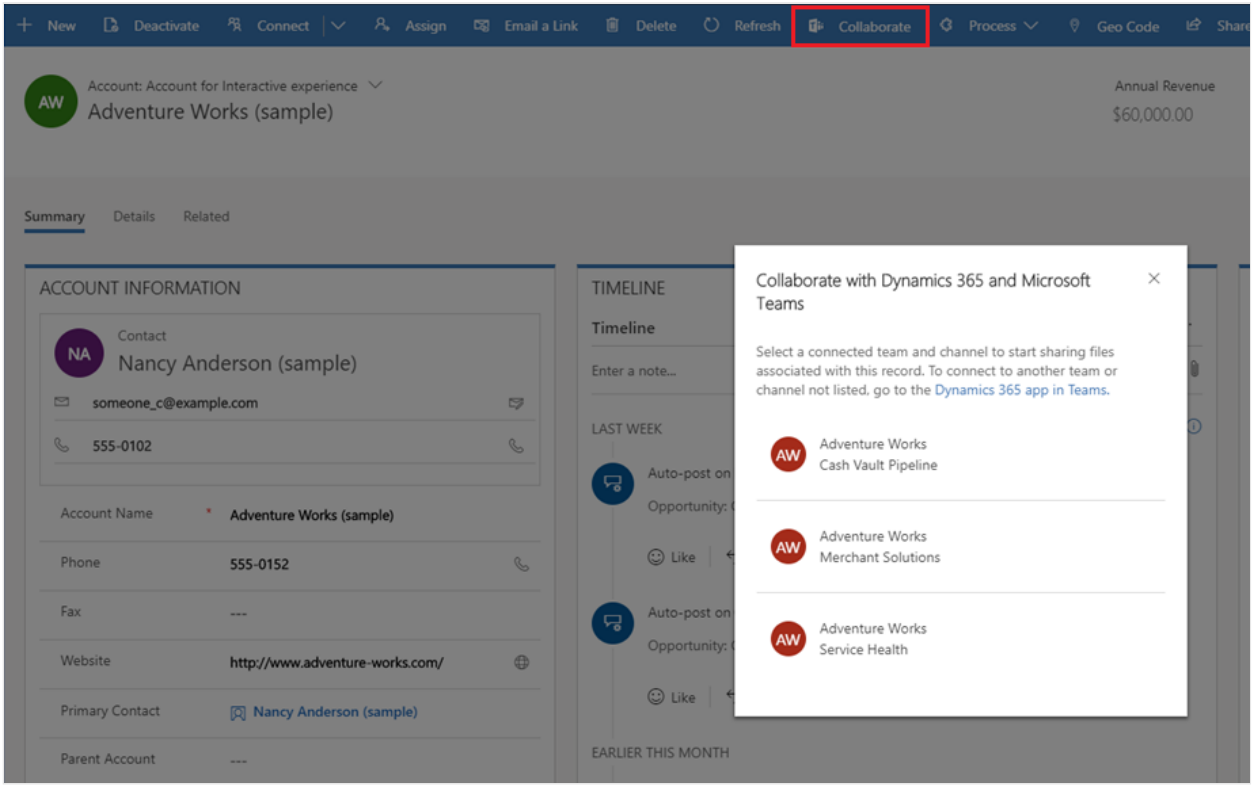


Collaboration experience in an app

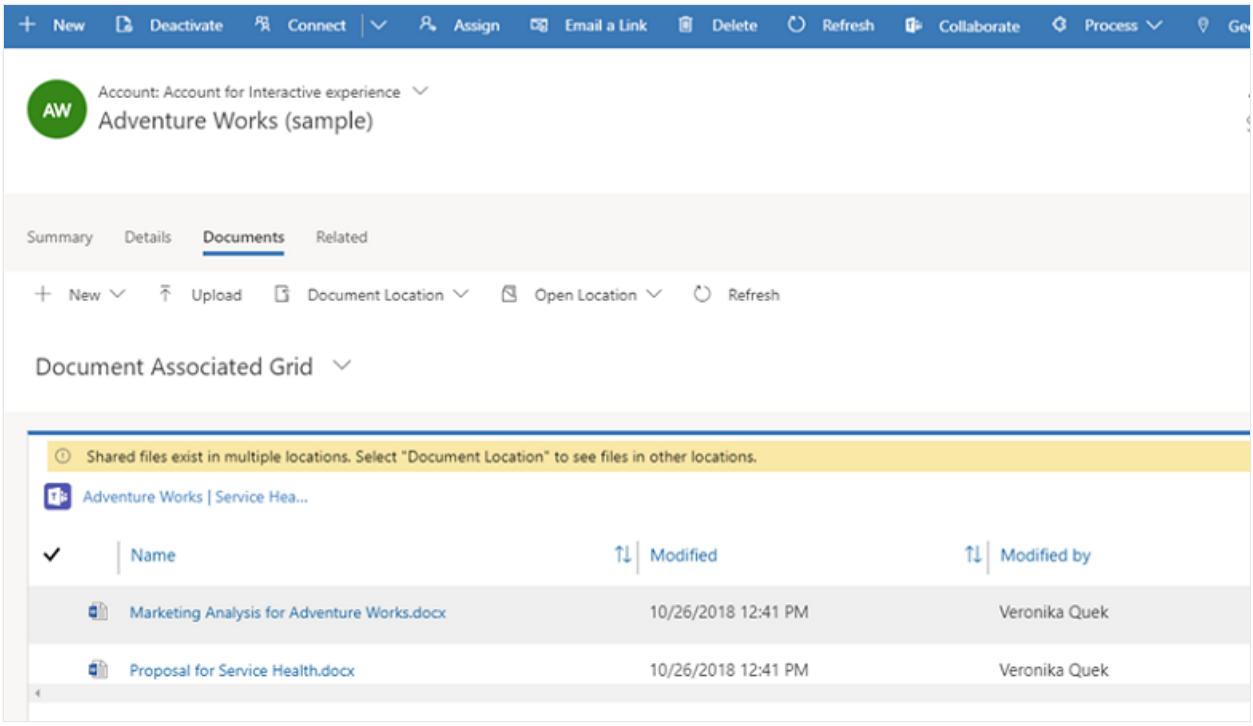
In a customer engagement app in Dynamics 365 (such as Dynamics 365 Sales and Dynamics 365 Customer Service), you can see the connected Microsoft Teams channel and files from the Microsoft Teams channel.

For more information on which entities support the collaborate option, see Record types that support Microsoft Teams integration.

On an app record page, select **Collaborate** to display a list of all the connected team channels. Then, select a team channel to go to the relevant channel conversation in Microsoft Teams.



In addition, document management in customer engagement apps in Dynamics 365 is integrated with Microsoft Teams. You can see the connected channel file library in the app and directly upload files; uploaded files will appear in the connected team channel file library under the **Files** tab in Microsoft Teams. Files uploaded in the Microsoft Teams connected channel will appear in the **Documents** tab in your app.



Record types that support Microsoft Teams integration

Currently, only the following record types support Microsoft Teams collaboration capabilities. The **Collaborate** button and file share feature will only work with the record types listed below.

> ⓘ **Note**
>
> The list below shows the logical name of an entity (not the display name).

- Account
- Agreement
- Annotation
- Appointment
- Businessunit
- Campaign
- Case
- Category

- Competitor
- Contact
- Email
- Expense
- Fulfillment Preference
- Inventory Adjustment
- Inventory Transfer
- Invoice
- Kbarticle
- Knowledge Article
- Lead
- Opportunity
- Opportunityproduct
- Order
- Product
- Project
- Purchase Order
- Purchase Order Receipt
- Quote
- Resource Request
- RMA
- RMA Receipt
- RTV
- Sales Literature
- Task
- Team
- Work Order

If not enabled, users can still connect customer engagement app records to Microsoft Teams, but the connected Microsoft Teams channel and the file library do not appear in customer engagement app.

When the feature is enabled, the collaboration feature is enabled only for a selected set of system entities. If you want to enable Microsoft Teams integration for additional entities or custom entities, you can only do it programmatically using the **msdyn_SetTeamsDocumentStatus** Web API action. More information: Enable or disable Microsoft Teams Integration using code

Enhanced collaboration experience with the Dynamics 365 app for Microsoft Teams

Article • 08/10/2022

This article provides information on how to use enhanced collaboration with Microsoft Teams, and connect a record or view to a team channel from Dynamics 365 customer engagement apps.

License and role requirements

Requirement type	You must have
License	• Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, Dynamics 365 Team Members, or any Dynamics 365 customer engagement app license • Microsoft Teams license More information: • Dynamics 365 Sales pricing • Microsoft Teams pricing • Dynamics 365 Team Members • Dynamics 365 Licensing Guide
Security roles	• Any primary sales role, such as salesperson, or sales manager • Any role that has access to a Dynamics 365 record More information: Primary sales roles

Overview

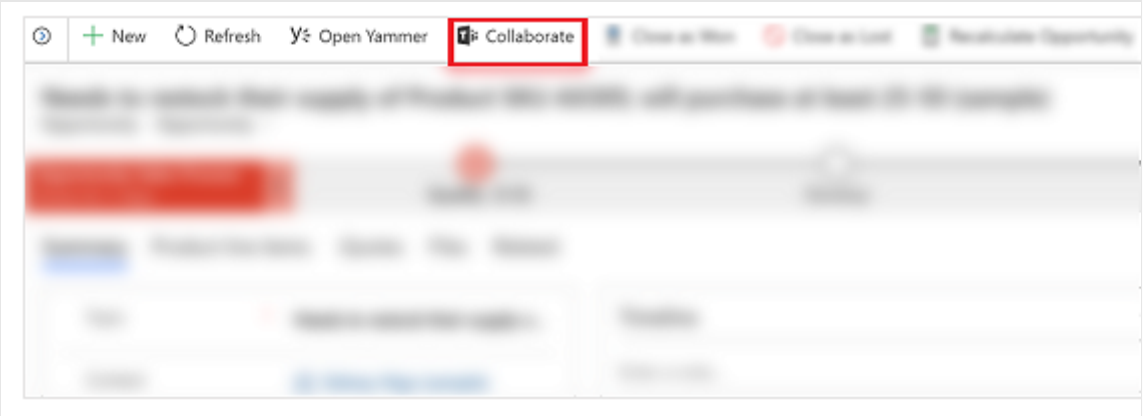
Easily connect customer engagement apps in Dynamics 365 (Dynamics 365 Sales, Dynamics 365 Customer Service, Dynamics 365 Field Service, Dynamics 365 Marketing, or Dynamics 365 Project Service Automation) records or views to a Microsoft Teams channel using the **Collaborate** button on the record or view page. The step-by-step process will help you connect the selected record or view to a Microsoft Teams channel.

The basic collaboration experience only lets you pin a record or a view to a team channel from within Microsoft Teams. The enhanced collaboration experience includes everything in the basic collaboration experience and also lets you pin connect a record or a view to a team channel while you are working in customer engagement apps in Dynamics 365 (such as Dynamics 365 Sales and Dynamics 365 Customer Service).

Connect a record or a view to a team channel from customer engagement apps in Dynamics 365

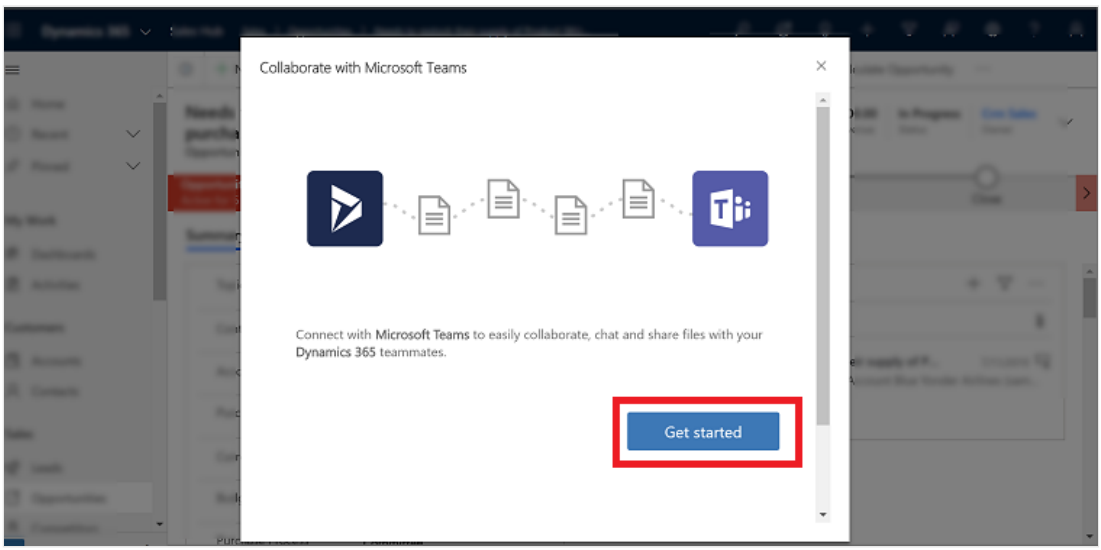
1. In customer engagement apps (such as Dynamics 365 Sales or Dynamics 365 Customer Service), open a record or a view.

2. On the command bar, select **Collaborate**.

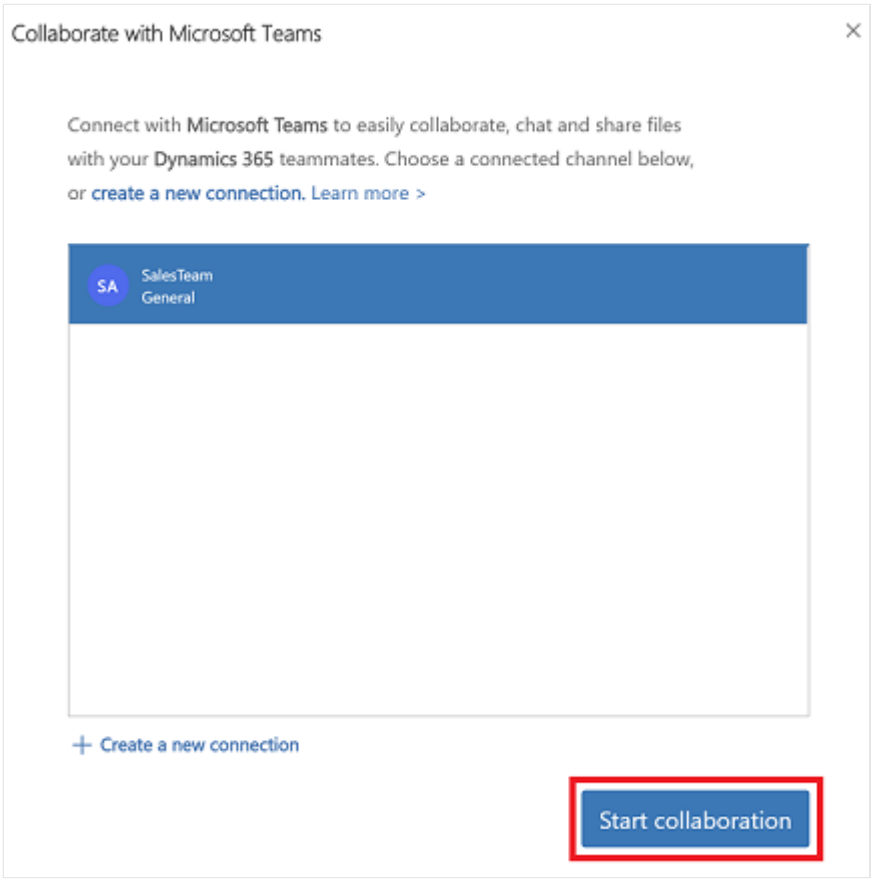


3. On the **Collaborate with Microsoft Teams** window, you will see one of the following:

    - **If there's no channel**: You can connect the current record or view to any team channel by selecting, **Get started**.



- **If there is channel that's already connected**: Select a channel from the list and then select, **Start collaboration**. This will open Microsoft Teams and navigate to the channel that you selected. Or, connect the current record or view to a new team channel by selecting, **Create a new connection**.

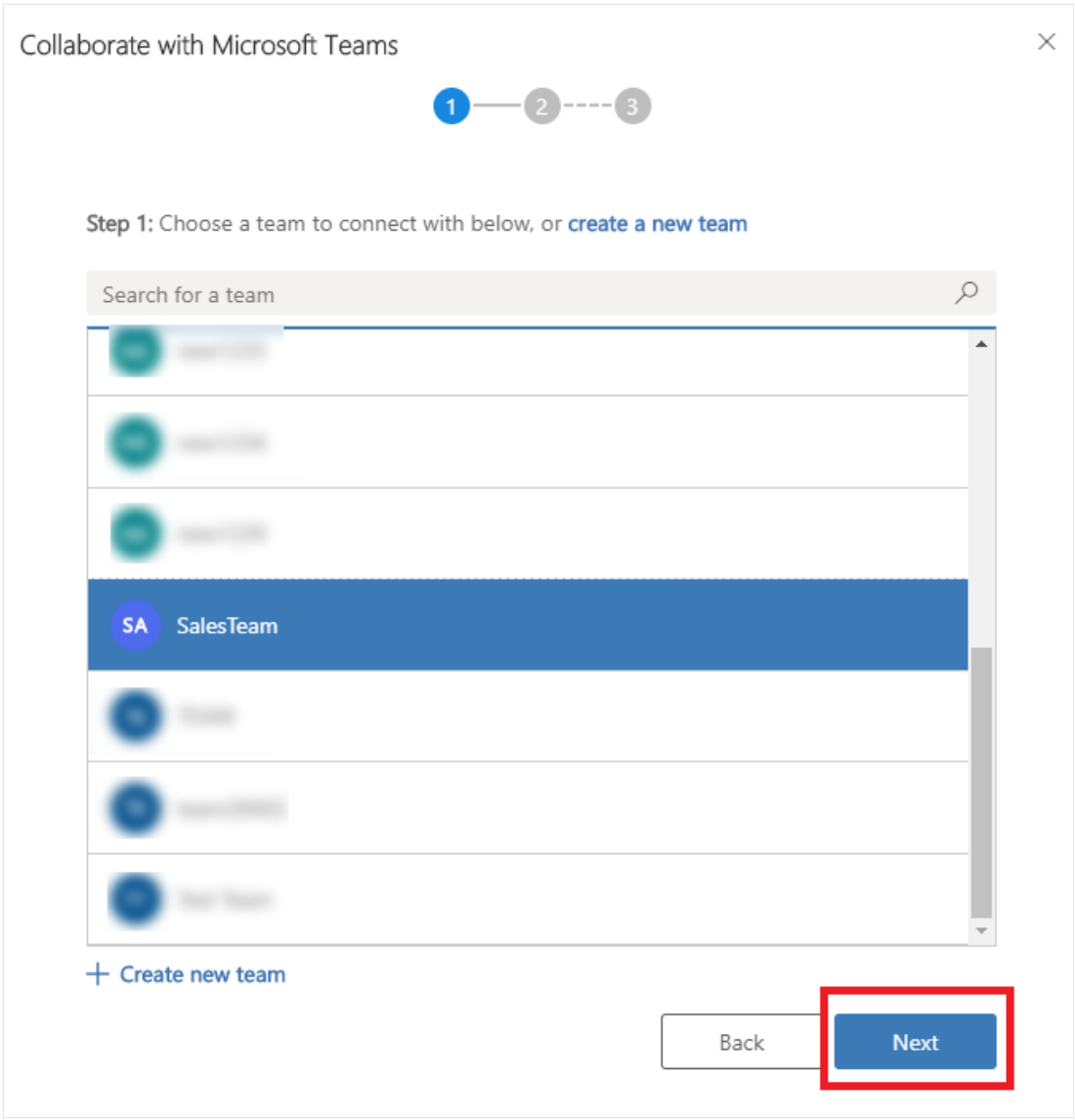


> ⓘ Note
>
> If you selected an existing connected team channel where you are not the owner or member in that team, then when Microsoft Teams opens, select **Join** to send request to be added to the channel.

4. After you select **Get started** or **Create a new connection**, you will enter into the connection process.

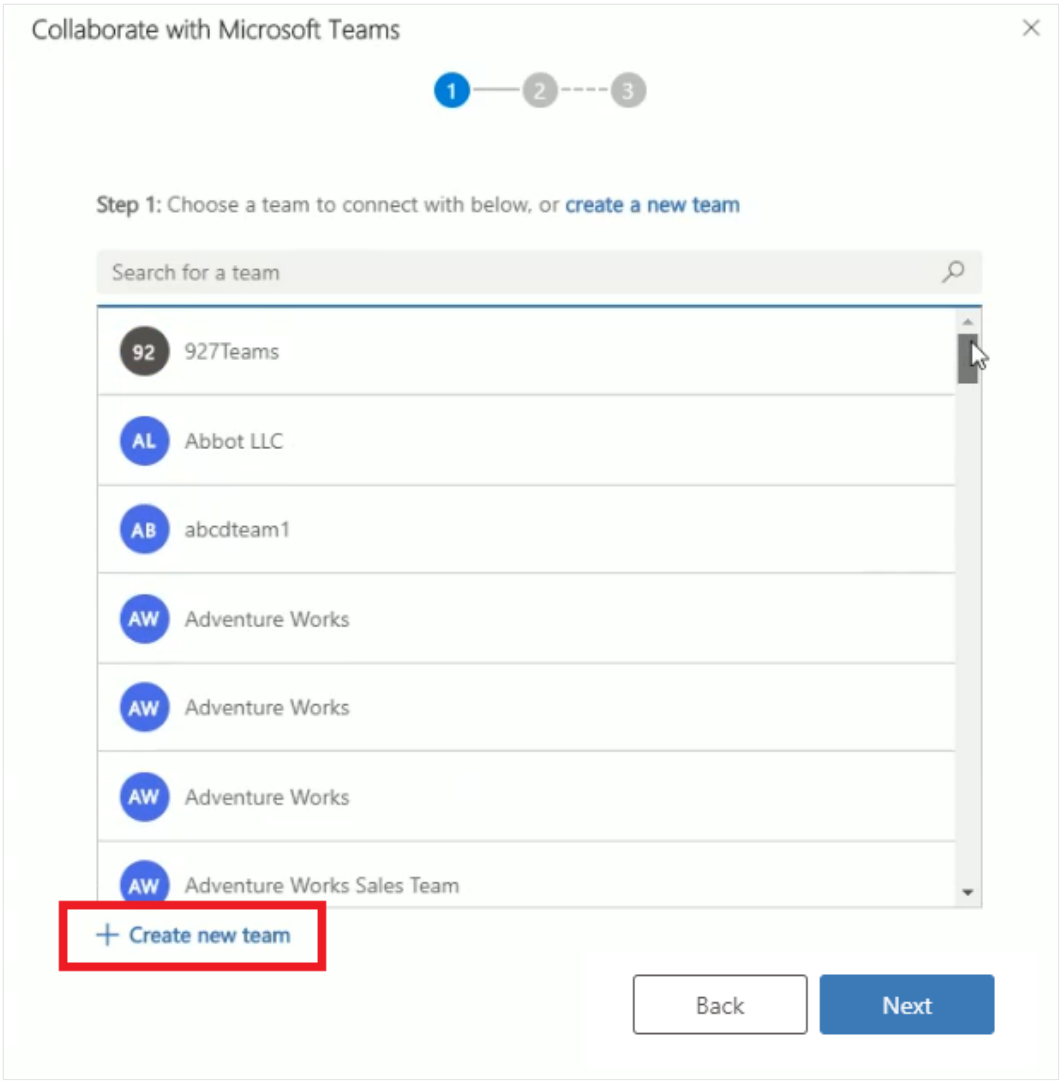
   Step 1: Choose an existing team or create a new team.

   - Choose an existing team that you belong to and then select **Next**.

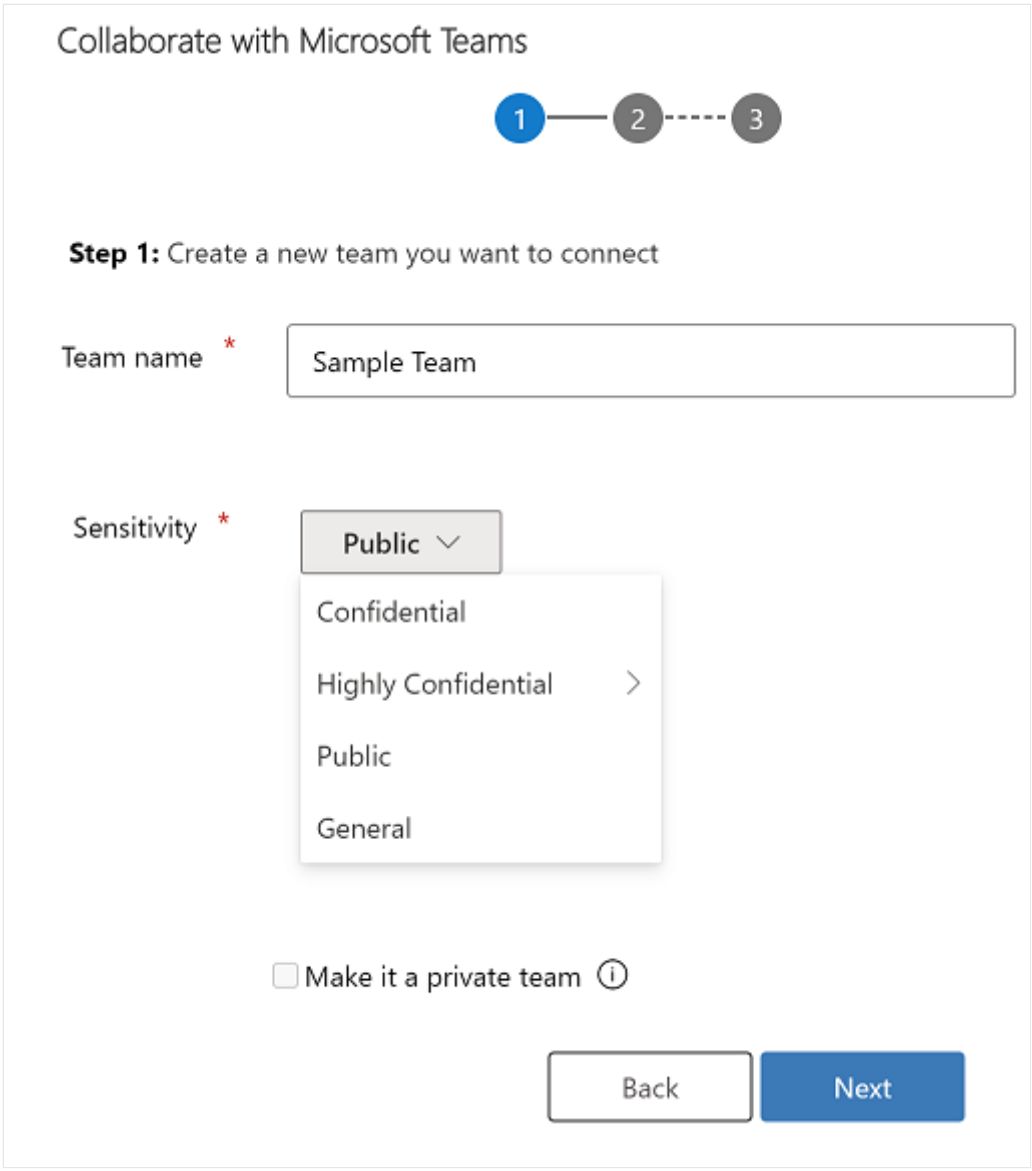


- Or, create a new team:

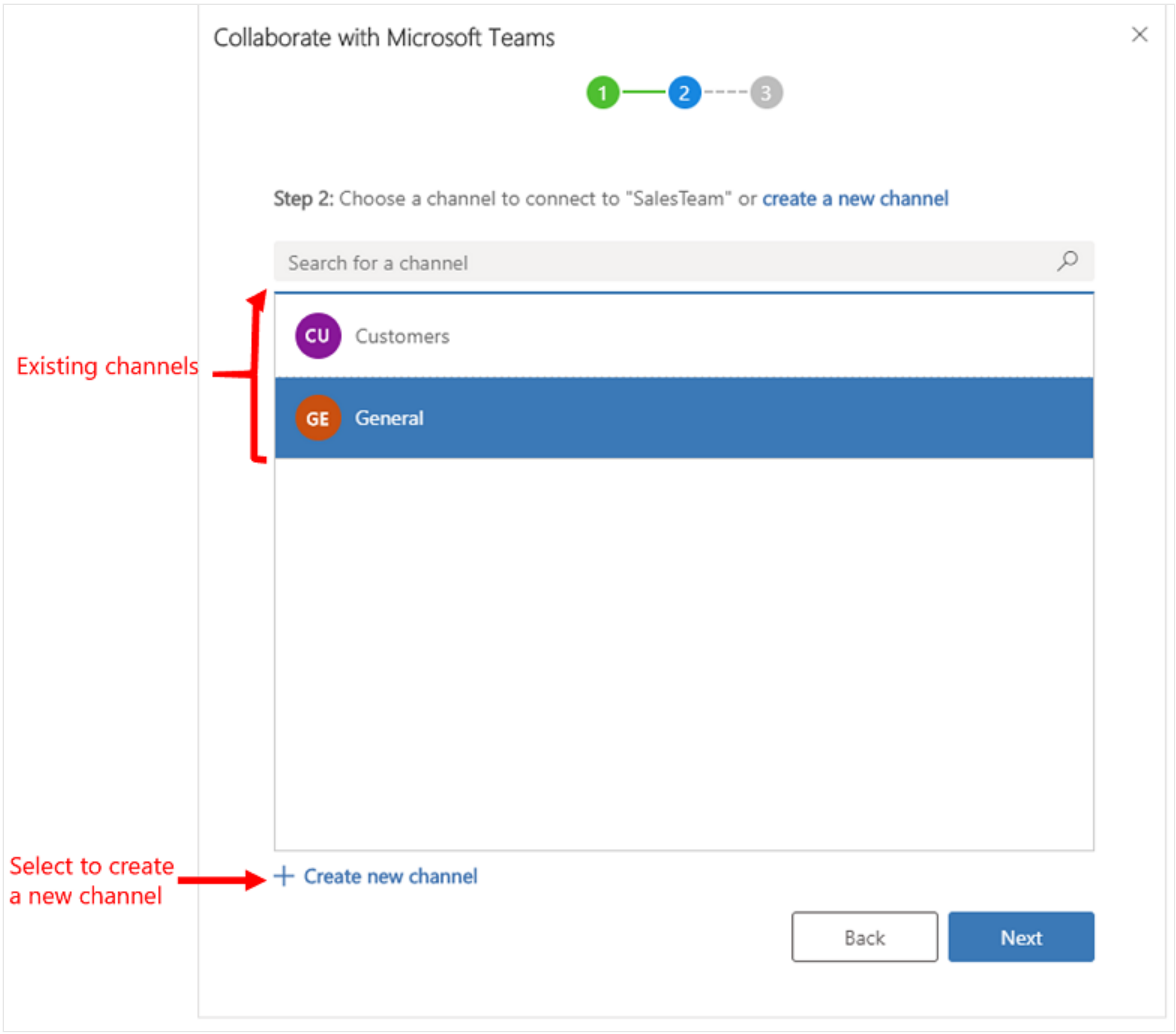
  a. Select **Create new team**.



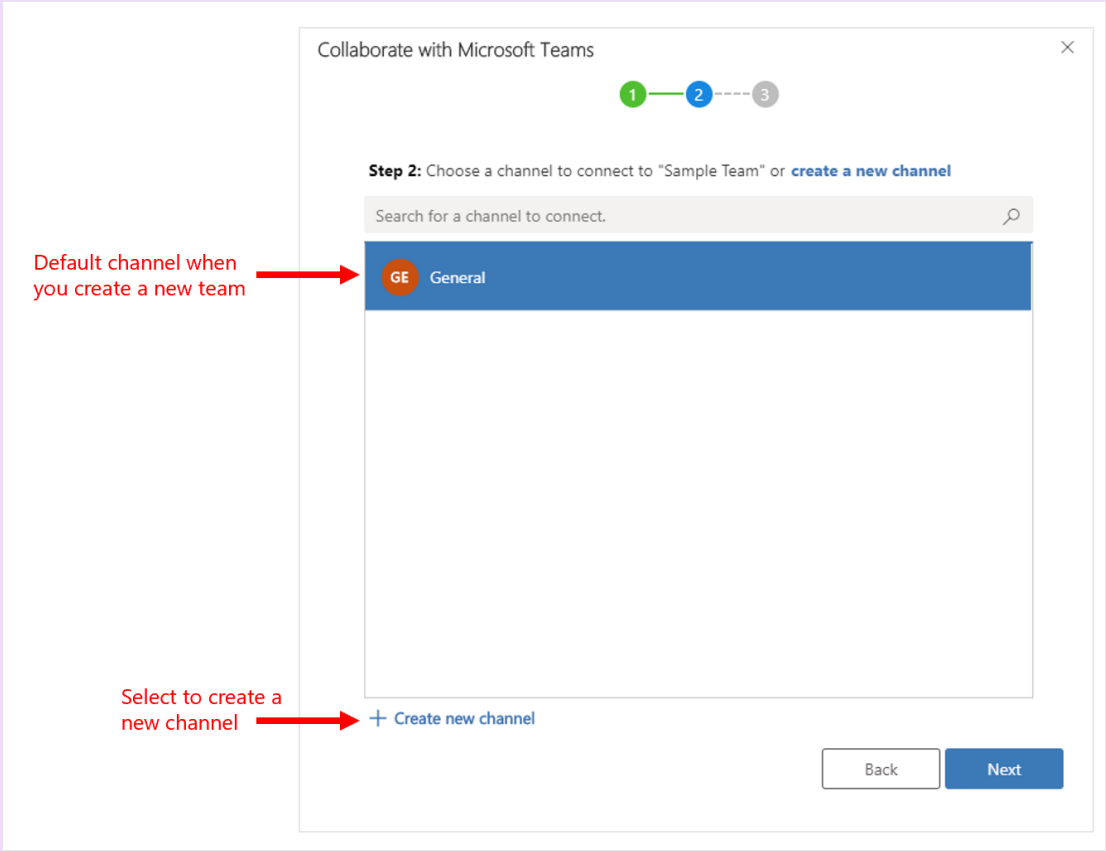
b. Enter a name for the team and then select **Next**.
   If your administrator has enabled sensitivity labels for Teams, you will see the **Sensitivity** field. Select a **Sensitivity** label from the list. Hover over the label to see tooltips to get more information about the label. Select **Make it a private team** to ensure that only the team owner can add additional members.



Step 2: Choose an existing channel and then select **Next**, or select **Create new channel** to create a new channel.

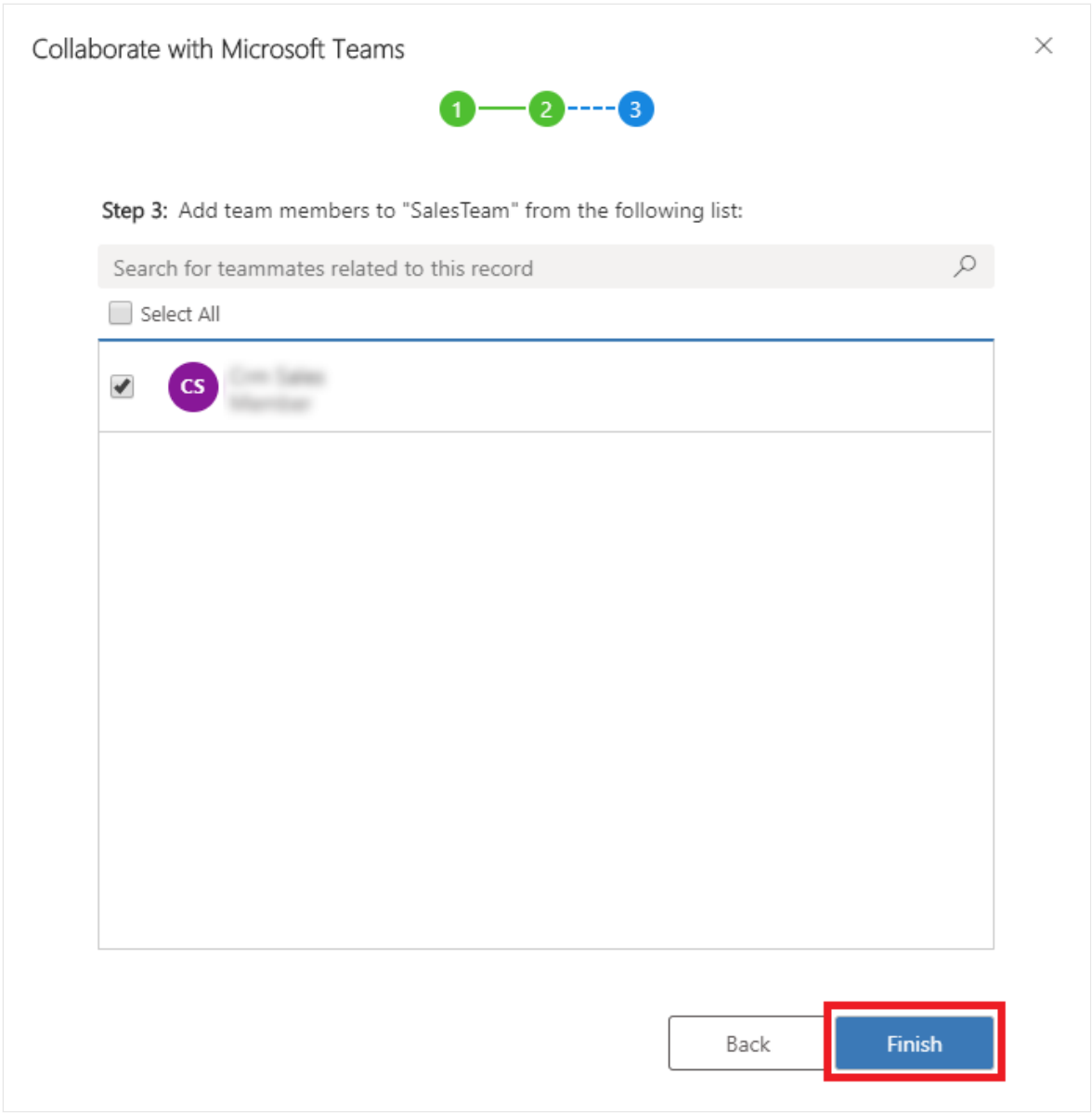


> **Note**
>
> When you create a new team, the system automatically creates a channel named **General**. You can connect the current record to the **General** channel and then select **Next** or select **create new channel** to create a new channel under the newly created team.



Step 3: If you are the owner of the selected team then you can add recommended teammates who either own the record or the record has been shared with them to the team member group. From the list, select any or all listed teammates. You can also use the search option to find the teammates in the list. When you are done, select **Finish**.

> ⓘ **Note**
>
> You will see this step only if you are the owner of the selected team while connecting to a customer engagement app record. If you are connecting a view of customer engagement app to a Microsoft Teams channel, you will skip this step. For more information on how to share a record, see **Assign or share records.**.



5. When the connection process is complete, the system will open Microsoft Teams and go to channel that you connected.

See also

- Enable sensitivity labels to protect content in Microsoft Team

Track activities in timeline

Article • 06/23/2023

The timeline control lets you create and view all the activities related to a record in one place. You can view activities such as emails, appointments, phone calls, notes, and tasks recorded in Dynamics 365 Sales.

For account and contact records, you can also view activities from Dynamics 365 Customer Insights and get the most recent and complete picture about activities related to your customers. Contact your administrator to understand whether the integration is configured for your organization. Learn more: Integrate Customer Insights activities with Dynamics 365 timelines.

Manage activities in the timeline

Open a record to view the timeline control and the activities related to the record. You can sort and filter the timeline based on your preferences. Learn more about timelines.

Track and manage activities

Article • 03/03/2023

In Dynamics 365 Sales, you use activities to plan, track, and organize all your customer communications. For example, you can take notes, send email, make phone calls, set up appointments, and assign yourself tasks as you work a sale or resolve a service case. These actions are all considered types of activities.

The system automatically timestamps every activity and shows who created it. You and other people on your team can scroll through the activities to see the history as you work with a customer.

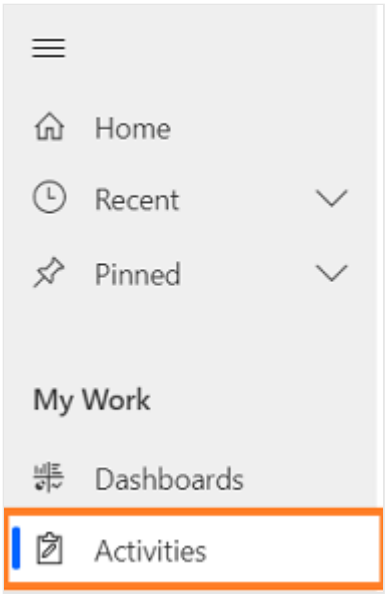
To get the most out of Dynamics 365 Sales, it's important for everyone in the organization to track all their customer interactions by adding an activity for every email, phone call, task, or appointment. That way, a customer's history is complete.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

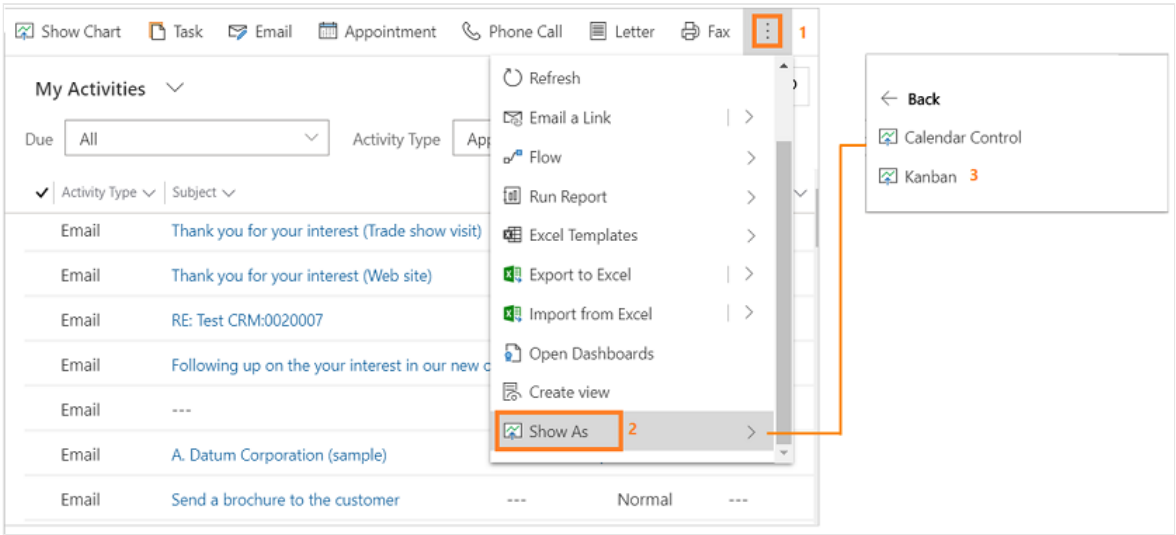
Find your activities

You can find your activities under **My Work** in the site map.



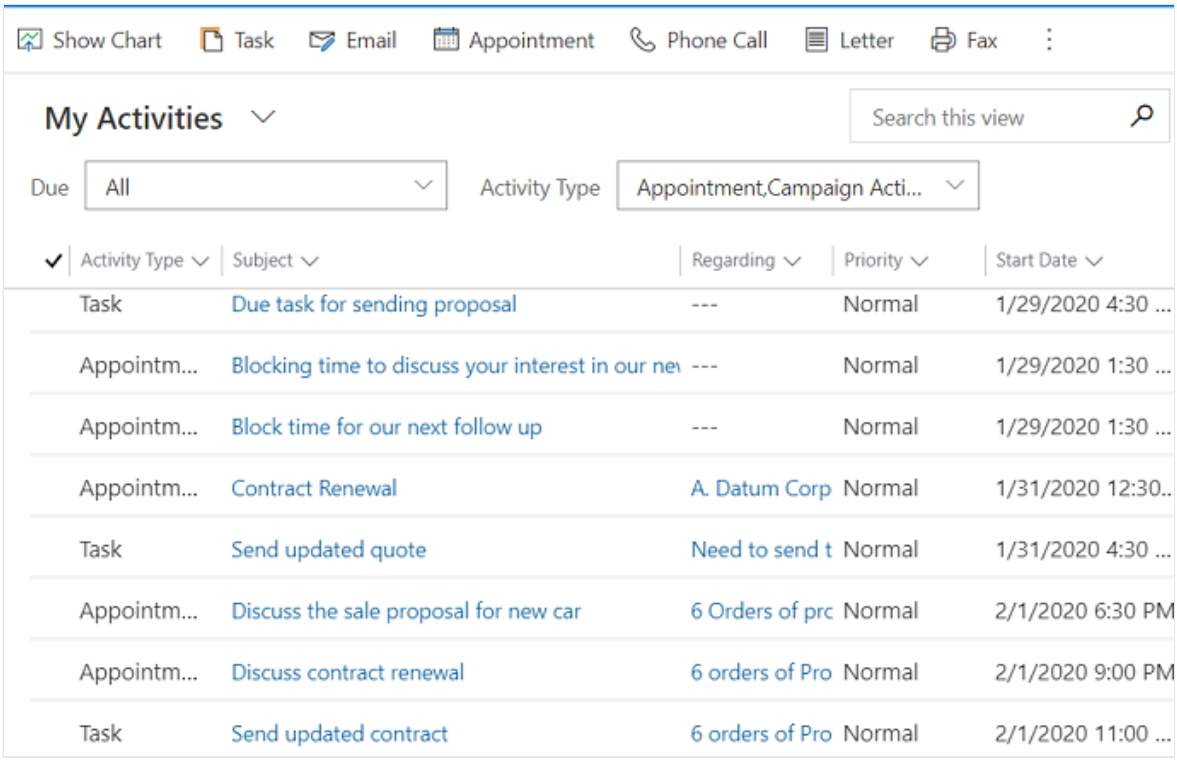
See activities in List, Calendar, or Kanban view

1. In the site map, select **Activities**.
2. On the command bar, select the **More commands** icon, and then select **Show As**, and then the view type such as, **Kanban**, **Calendar Control**, or **Read Only Grid**.

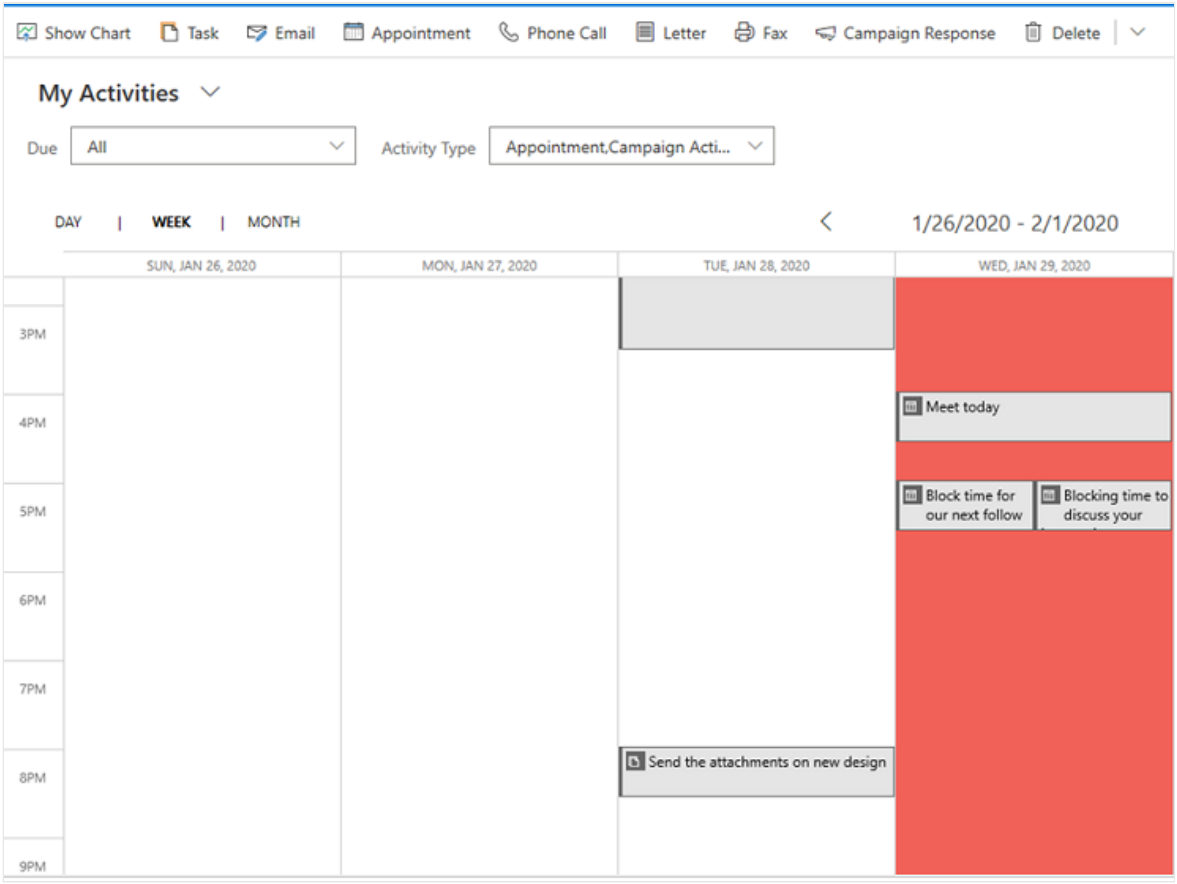


You can see the activities in three different views:

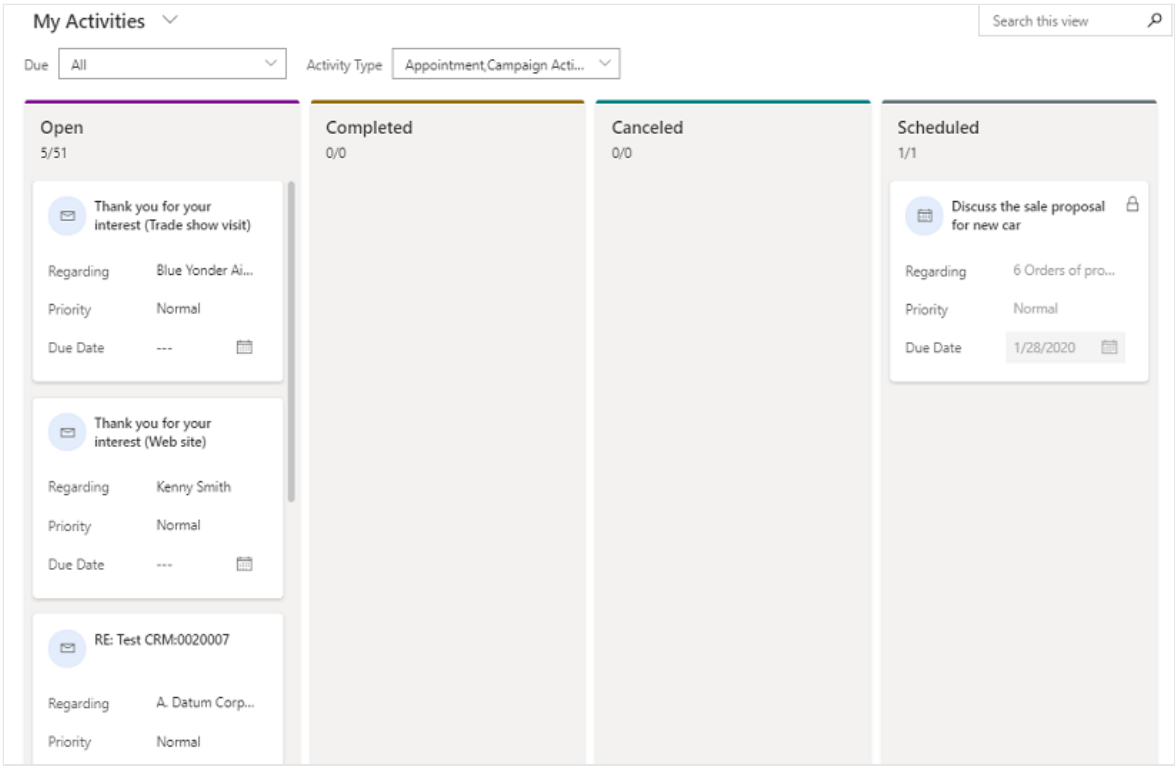
- **List.** Shows a list of all activities.



- **Calendar.** Shows a calendar with a list of the day's scheduled activities and the associated deals.

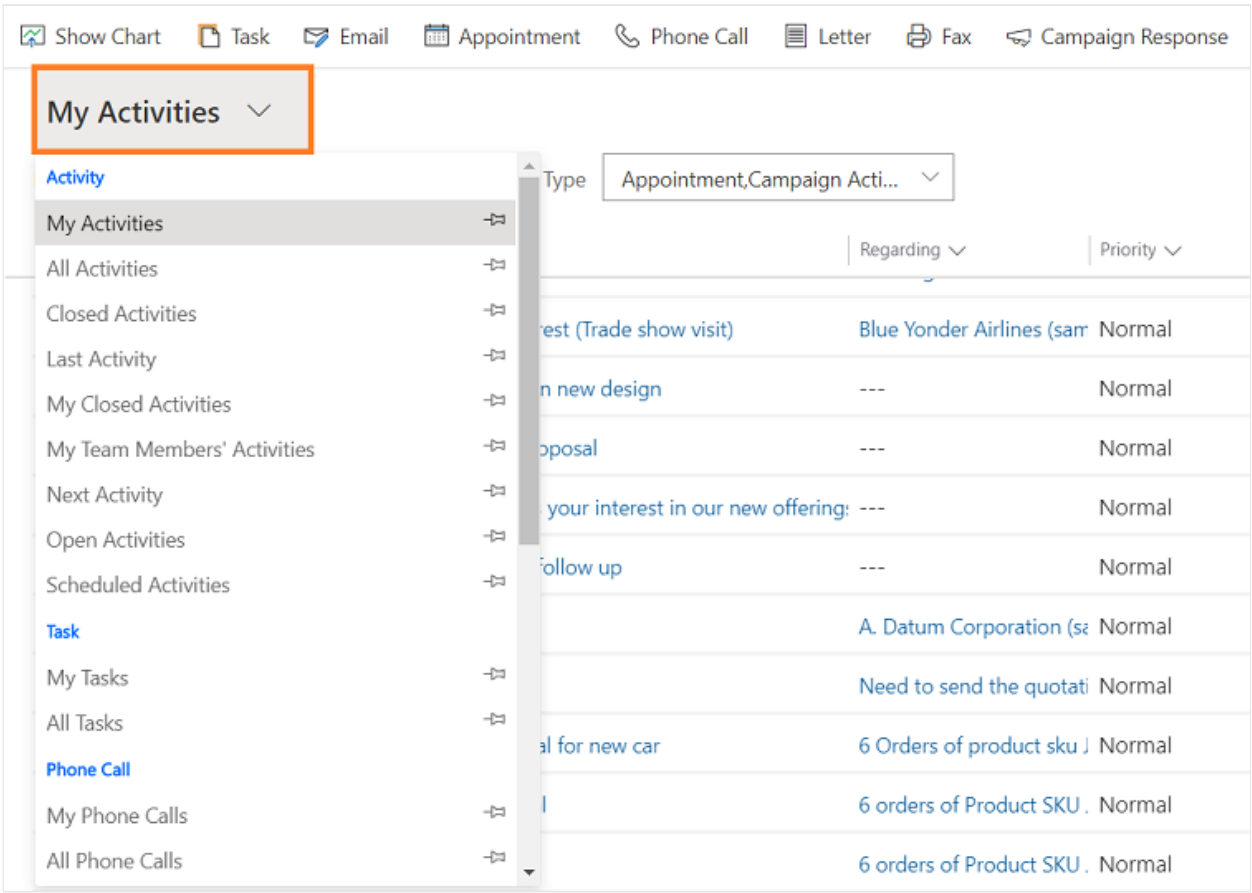


- **Kanban.** Shows a visual representation of your sales activities in their different states. This lets you see the status of every activity in your pipeline and drag them to move from one status to another (for example, Open, Completed, Canceled, Scheduled). More information: Work with activities in the Kanban view



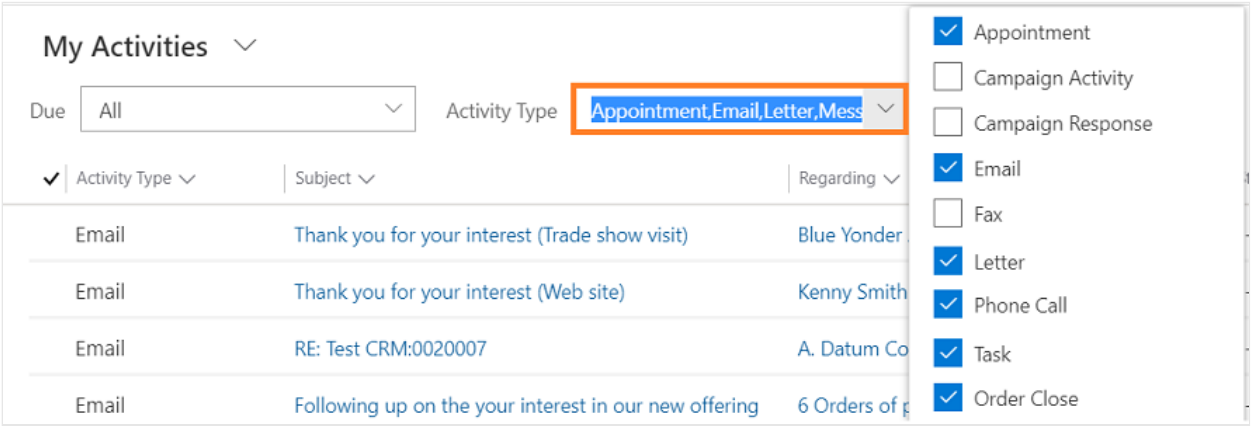
Change your activities view

You can use views to see the activities you want. For example, you can use the **My Activities** view to see activities assigned to you and **My Team Members' Activities** view to see your team's activities.

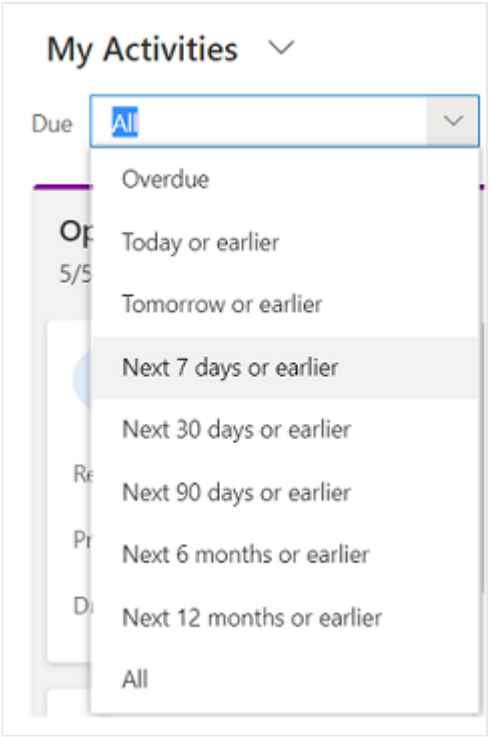


Filter the list of activities

You can filter the list of activities to see only the ones you're interested in. For example, you can further limit the activities you are seeing in a view by using the activity type filter. The activity type filter allows you to filter activities based on the type, such as email, task, phone call, and so on.



You can also use the **Due** filter to see the activities that are due in a specified time, such as activities that are due today or earlier or activities that are due in the next seven days or earlier.



Create or edit a new activity

You can create independent activities that aren't associated with any customer or sales record. To do so, in the site map, select **Activities** and then on the command bar, select **Email** or **Phone Call** or **Task**, depending on which activity you want to create.

Or, to edit an existing activity record, open the activity by selecting its title.

> **Note**
>
> With the April 2020 release of Dynamics 365 Sales, when you create or edit a new activity, the record opens in a Main form dialog. A Main form dialog is a Main form opening in a dialog (a pop-up window). Main form dialogs allow you to stay in context while working on one record with the ability to open a second or third record in dialog experience. This makes it easier to edit the records.

Add a new activity for a customer

Most often, you'll want to add an activity associated with a contact, opportunity, account, or other type of record to help you keep track of all the communication history you have with a customer. (You can also add an activity for yourself.)

As your organization's relationship with a customer builds over time, you and other people on your team can look through the activity feed as you work with the customer, and see the history of your interactions. Activities can also be included in reports to track your ongoing progress.

To add an activity for a customer:

1. Open the record. You can use Quick Search on the navigation bar to find a record quickly.
2. Select **Activities** to add a task or phone call to the record. Select **More** (...) to add an email or appointment. Or, select **Notes** and then start typing.

Add an activity for yourself

Add a task or note for yourself when you want a reminder to do something personal, like schedule a doctor's appointment or attend a sporting event.

Otherwise, to keep a history of your interactions with a customer, you should add new activities that are associated with a customer's record, so those activities become part of the history that other people on your team can view.

To add an activity for yourself:

1. On the navigation bar, select **Create** and then select the icon or tile for the activity.

2. Fill in the fields and then select **Save**.

Attach a document

Documents, spreadsheets, pictures, and just about any type of file can be attached to emails and notes.

To attach a document to an email:

1. Open the email form.
2. On the command bar, select **Attach File**.
3. Browse to and then select the file that you want to attach. The selected file appears in the **Attachment** pane.

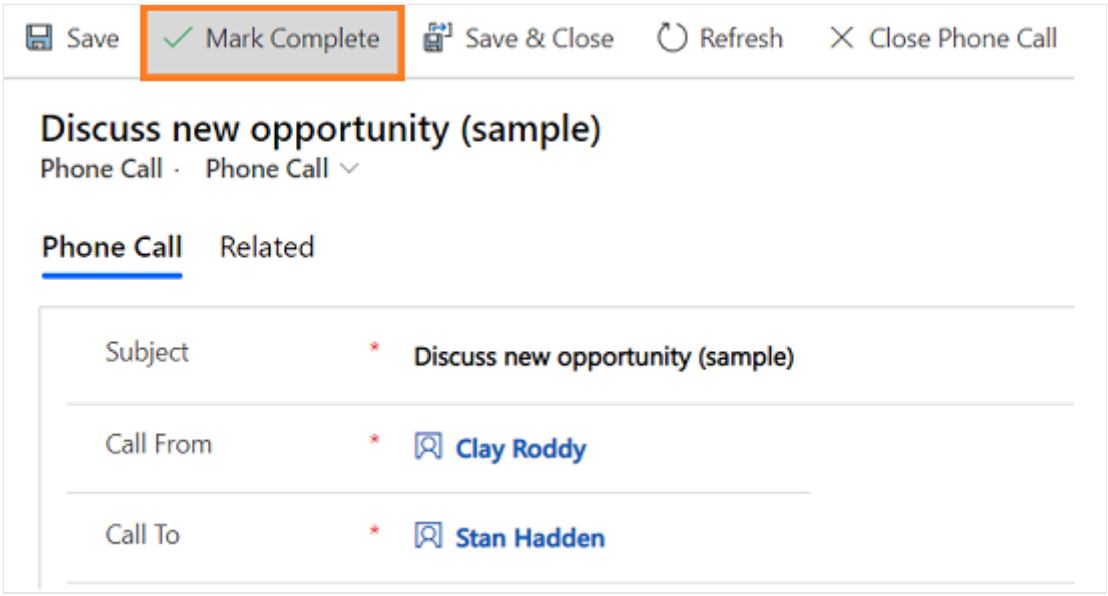
To attach a document to a note:

1. In the **Timeline** pane, select **+** and then select **Note**.
2. Add the note and select the attachment icon before the **Add note** button.
3. Browse to and then select the file that you want to attach. The selected file appears above the **Add note** button.

Mark an activity complete

After you call someone, complete a task, send an email, or go to an appointment, you can mark the activity for that action as completed.

1. Open the activity.
2. On the command bar, select **Mark Complete**.



Mark several activities complete at the same time

1. On the list of activities, select all the activities that you want to mark complete.
2. On the command bar, select **Mark Complete**.

Best practices for activities

Here are some suggestions about how to use activities to your organization's best advantage:

- **Add an activity for every customer interaction**. Make sure a customer's history includes a record of every communication you have with them.
- **Use the right activity type for the action**. It might be tempting to enter a new note that says, "Sent an email to confirm pricing," or "Called the customer to discuss their service case." However, you should add an email or phone call activity to track those types of actions, and use notes for more general text.
- **Add activities for yourself, too**. You can keep track of your own assignments, events, and notes without associating these activities with a customer.

  Use the **Create** command on the navigation bar. Find these activities in the list by sorting on the **Regarding** column, which is blank to let you know that the activity isn't associated with a customer record.
- **Keep in mind that activities "roll up" under their associated records.** Let's say you want to remind yourself to follow up with Cecil Langer, a contact who's associated

with the account, Wingtip Toys. You'll need to add the task activity to the contact record for Cecil (not for the account, Wingtip Toys).

That way, your task will "roll up" under the account automatically, and you and other people on your team will see the task when they're looking at the contact and when they're looking at the account for Wingtip Toys. (And they'll know you've got it handled.)

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Work with activities in the Kanban view

Basic navigation in App for Outlook

Article • 10/13/2023

Use Dynamics 365 App for Outlook while you're using Outlook on the desktop, web, or phone. When App for Outlook is installed you can use the Dynamics 365 pane to link and track Outlook emails and appointments to records in your app.

> **ⓘ Important**
>
> - The latest release of Dynamics 365 App for Outlook works with customer engagement apps (such as **Dynamics 365 Sales**, **Dynamics 365 Customer Service**, **Dynamics 365 Marketing**. **Dynamics 365 Field Service**, and **Dynamics 365 Project Service Automation**), **Dynamics 365 Customer Engagement (on-premises), version 9**, and **Microsoft Dataverse**.
> - For a prior release that works with earlier versions of Dynamics 365 apps, see **Deploy Dynamics 365 App for Outlook**.

Install

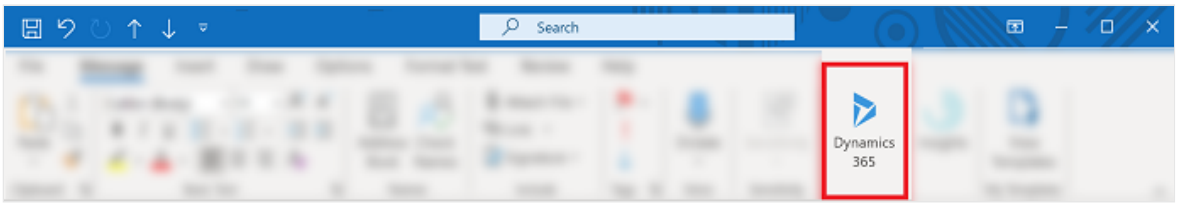
Before installing App for Outlook, contact your administrator and make sure all the prerequisites are met. For more information, see Deploy Dynamics 365 App for Outlook.

In most cases, your administrator will automatically push the app to you and it should be available in the Outlook ribbon. If you don't see it, then you can install it yourself. For more information, see Have users install App for Outlook themselves.

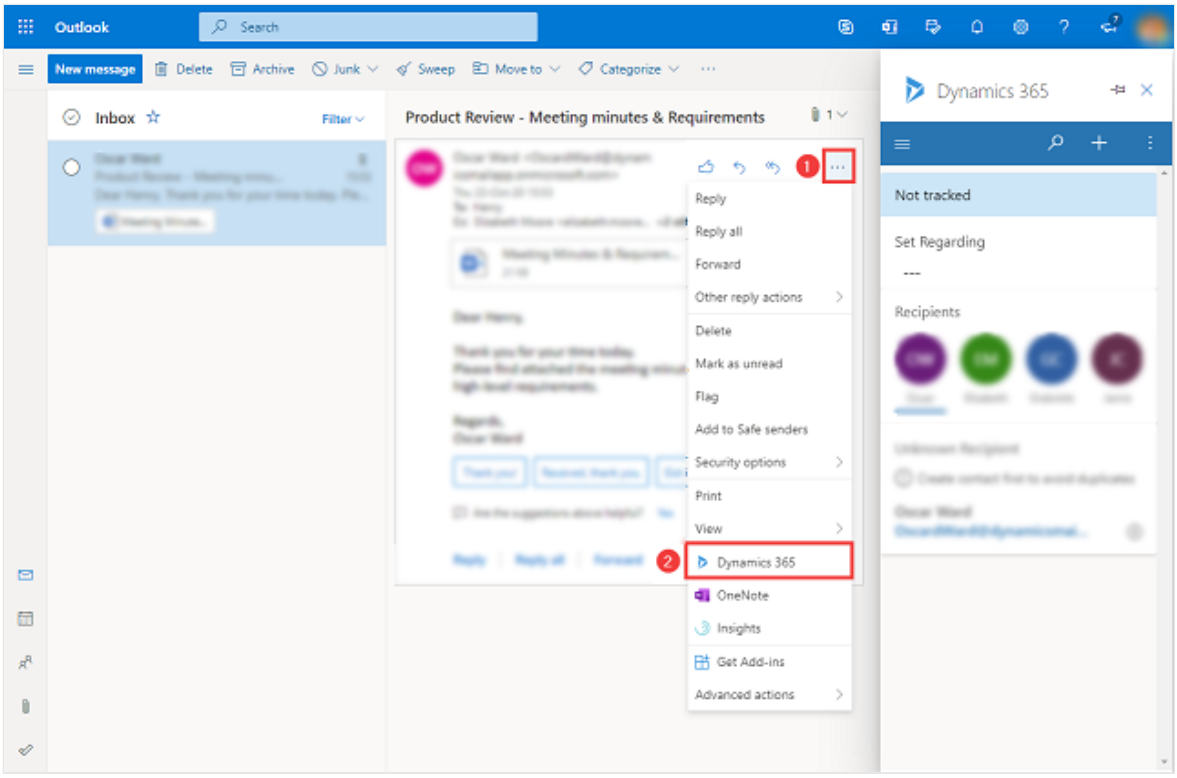
Access the app and sign in

Once installed it's easy to access the Dynamics 365 App for Outlook pane whether you're using Outlook on your desktop or the web app.

- In the Outlook desktop client, select **Dynamics 365**.



- In Outlook Web Access, open an email and then select More (...) > **Dynamics 365**.

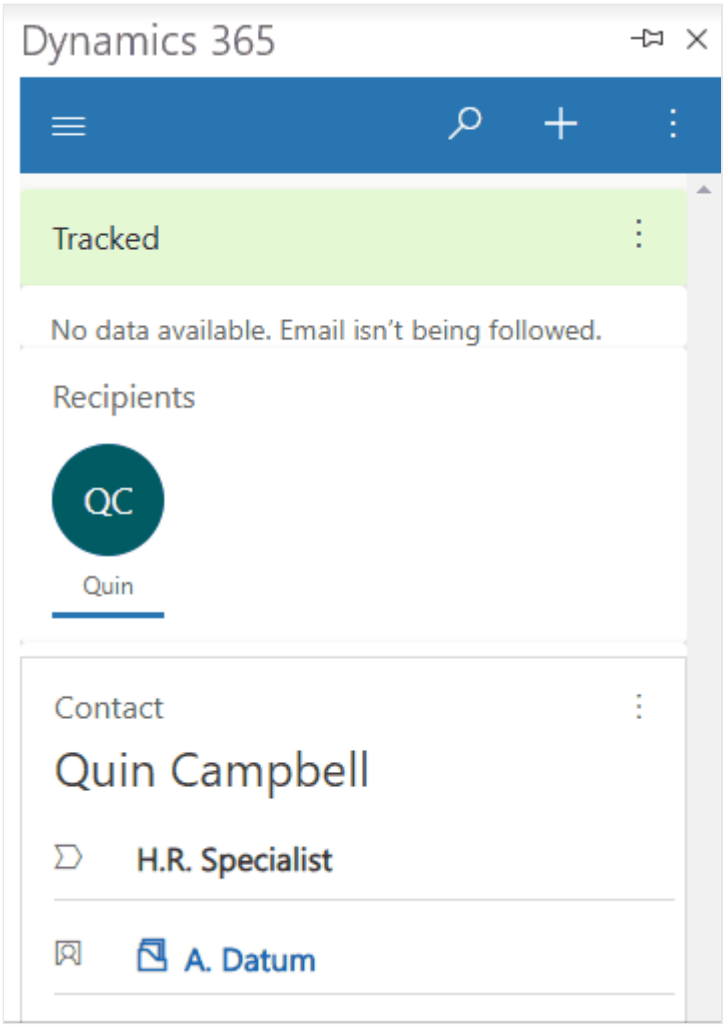


When you first access the Dynamics 365 App for Outlook pane, you are prompted to sign in to your Dynamics 365 account. In the confirmation message, select **Allow** and then follow the steps on screen to sign in to Dynamics 365. After you have signed in, as long as you use the app frequently, you'll remain signed in. If you haven't used the app for 90 days, you will be asked to sign in again.

Pin

If you're using the Outlook desktop client or Outlook Web Access, you can pin App for Outlook so that it remains open when you navigate from one email to another. If you don't see the pin option, then verify that it's supported for your setup. For more information, see What's supported.

- To pin the app, select the pin. To unpin, select the pin again.

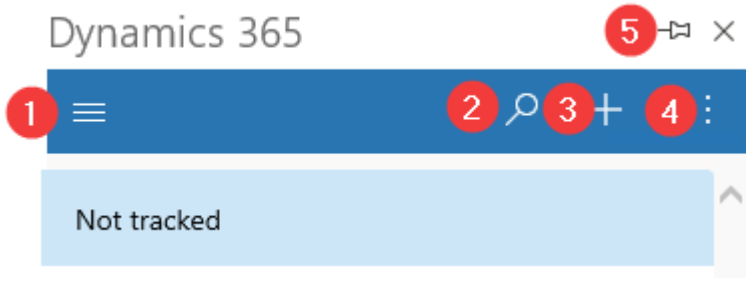


Terminology

Term	Definition
Set regarding	Track and link the email or appointment to an existing row your Dynamics 365 app.
Track	Create a copy of the email or appointment in your Dynamics 365 app.
Untrack	Remove the copy of the email or appointment from your Dynamics 365 app.
Track Successful	Your email or appointment is successfully copied to your Dynamics 365 app.
Track failure	Your email or appointment is failed to copy to your Dynamics 365 app.
Track pending	Your email or appointment is in pending state to be copied to your Dynamics 365 app.

Navigation bar

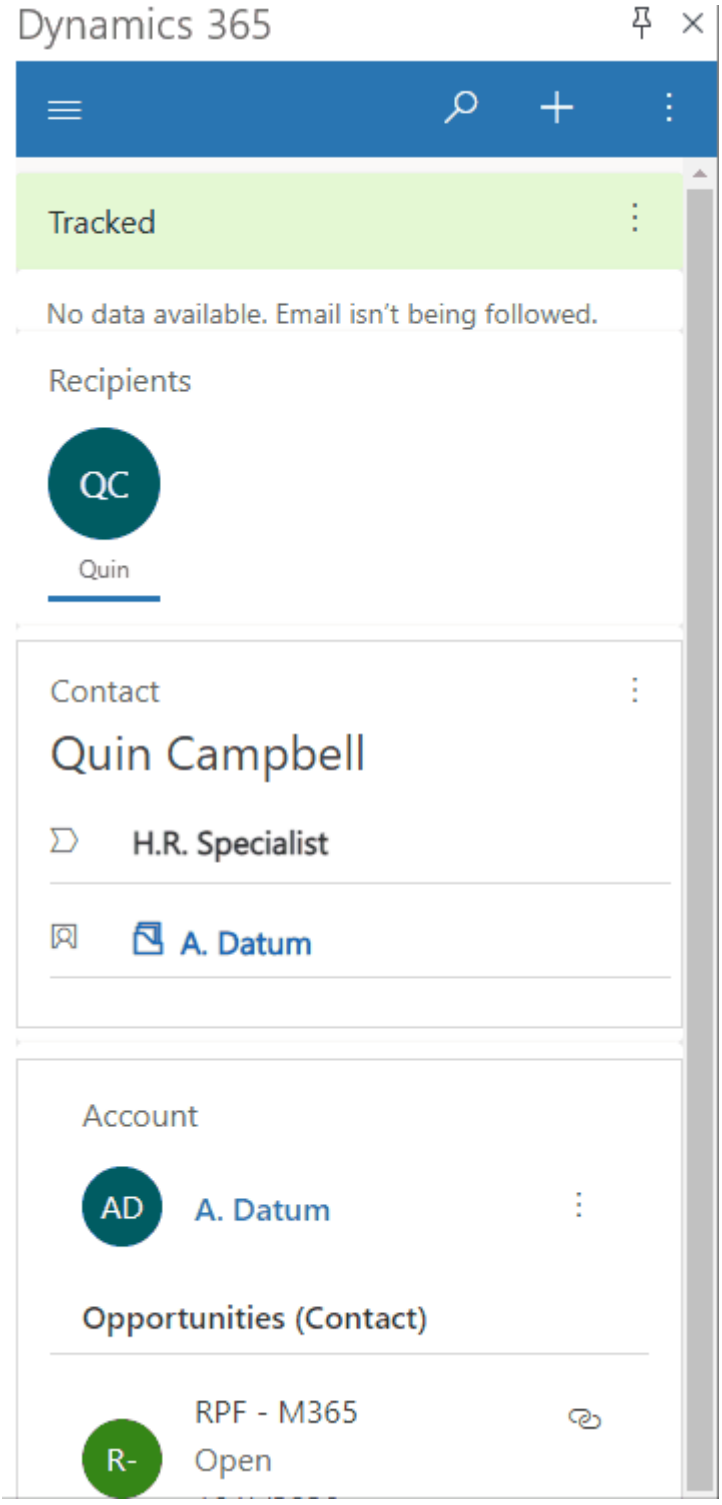
Use the navigation bar at the top to access the site map, search, quick create, and more commands.



1. **Site map**: Use the site map to navigate to the **Home**, **Recent** items, **Pinned** items, and **Dashboards**.
2. **Search**: Search for rows across multiple tables sorted by relevance.
3. **Create a new row**: Create a new row for the tables that have been included in the App for Outlook and are enabled for quick create.
4. **More commands**: Access more such as user information, information your Dynamics 365 environment, the Assistant, and Outlook checker.
5. **Pin**: Select the pin icon to pin Dynamics 365 App pane so that it remains open when you navigate from one email to another.

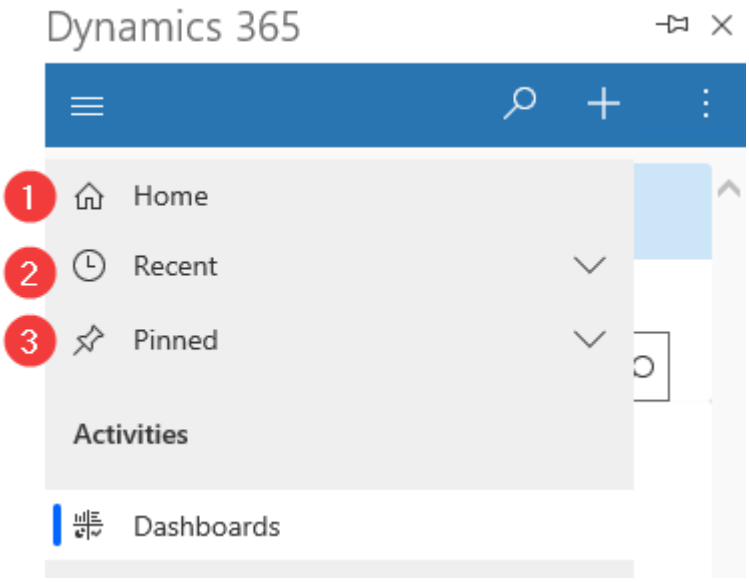
Site map

Use the site map to navigate to **Home**, **Recent** items, **Pinned** items, and **Dashboards**.



Site map menu items

It's easy to get around and get back to your favorite or most-used rows. The following illustration shows the primary navigation elements

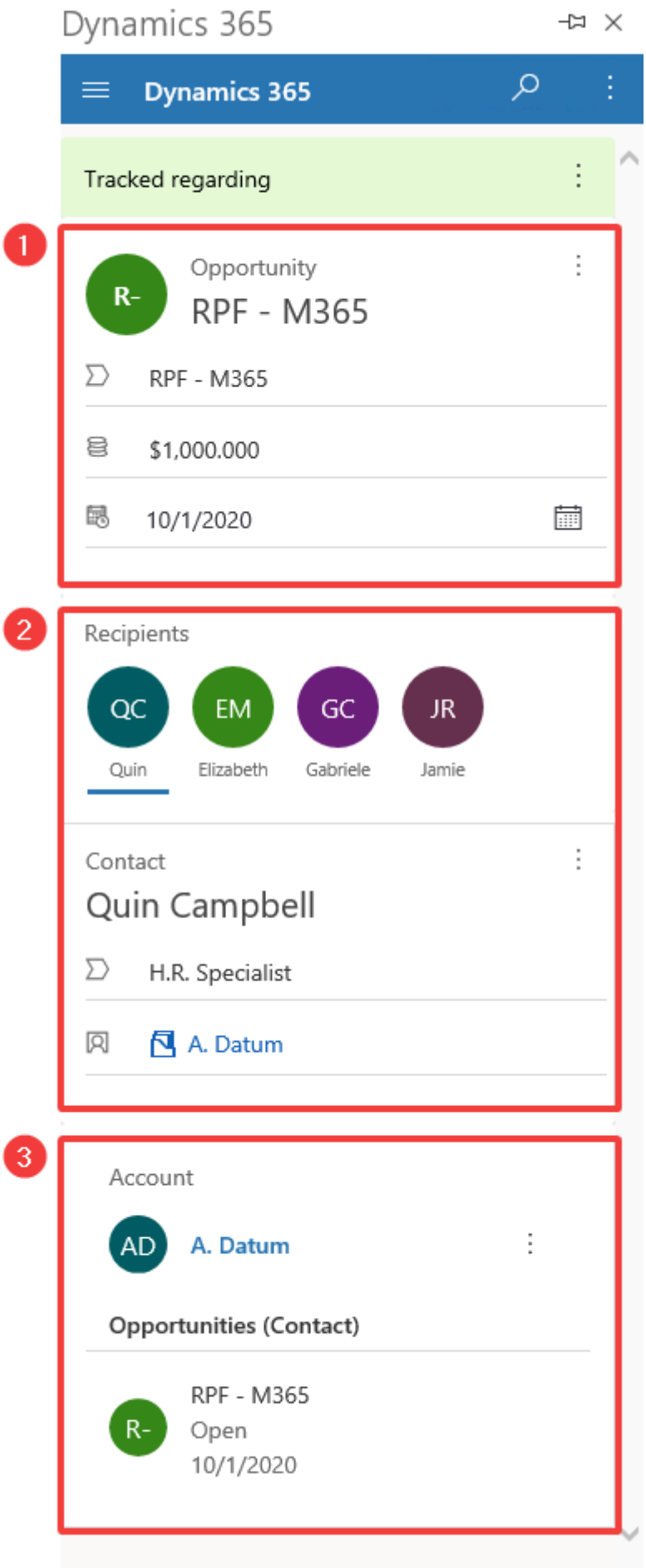


Legend

1. **Home**: Take you to the Dynamics 365 App for Outlook main screen that displays tracking status, the regarding row with contextual information.
2. **Recent**: Expand this entry to view a list of rows you were recently using. Select a row here to open it. Select the push-pin icon next to a row listed here to add it to your pinned rows.
3. **Pinned**: Expand this entry to view and open your favorite pinned rows. Use the **Recent** list to add rows here. Select the remove-pin icon next to a row listed here to remove it from this list.

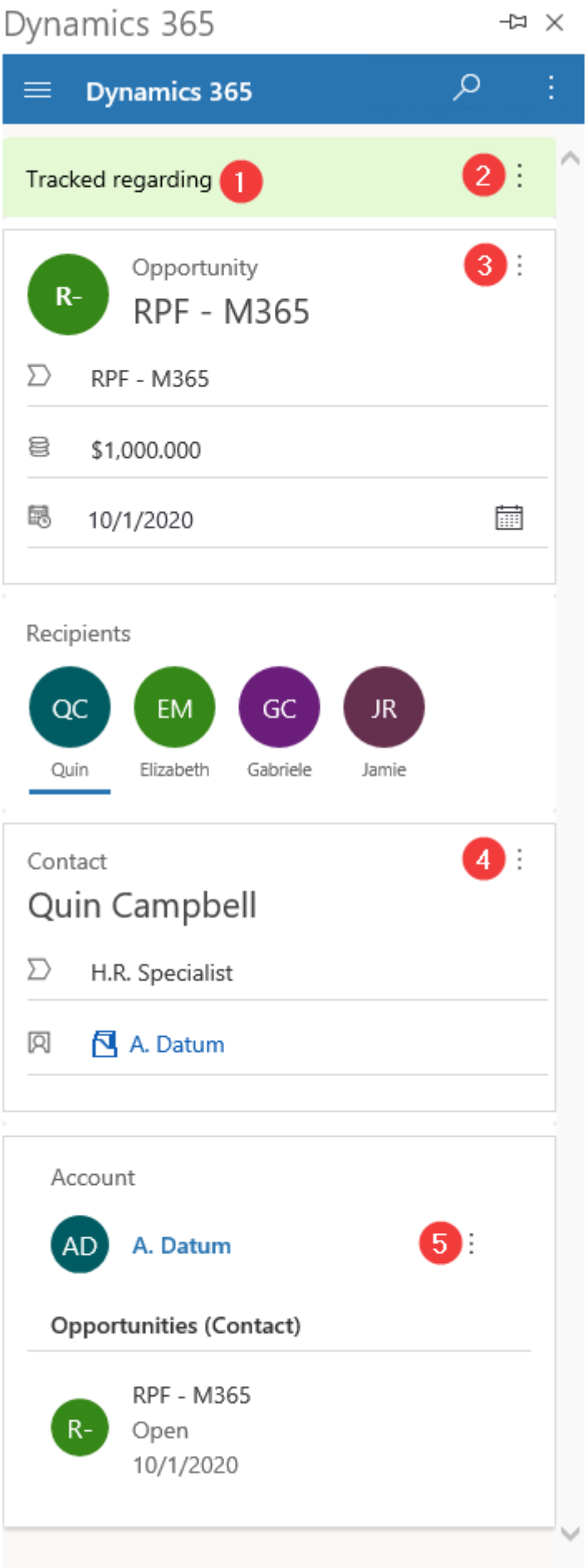
Tracked row

Select an email to view additional information about the tracked item in the Dynamics 365 pane.


Dynamics 365
Dynamics 365
Tracked regarding
1
R-
Opportunity
RPF - M365
RPF - M365
$1,000.000
10/1/2020
2
Recipients
QC
EM
GC
JR
Quin
Elizabeth
Gabriele
Jamie
Contact
Quin Campbell
H.R. Specialist
A. Datum
3
Account
AD
A. Datum
Opportunities (Contact)
R-
RPF - M365
Open
10/1/2020

Legend

1. **Linked row information**: The Dynamics 365 row this Outlook item is linked to. The quick view form displays some of the row's key information.
2. **Recipients**: List of recipients from the email or the attendees of a meeting. You can navigate between the different recipients, which can be a contact, lead, or an account and display a quick view of their information in Dynamics 365.
3. **Related information**: When a contact is selected, its parent account is also available so you can drill into the account details and surface more Dynamics 365 data. You can also see related data, such as related the contact's opportunities.



1. **Tracked information**: Shows if the email message or meeting is linked to a row and if it's being tracked in your Dynamics 365 app.

2. **More commands**: Select to set or change set regarding or tracking information or view information about the row in Dynamics 365

3. **Add activity**: Select to create activities for that row or view it in Dynamics 365.

4 & 5. **Set regarding**: Select to choose the **Set regarding** for the row or view information about the row in Dynamics 365.

Work with activities in the Kanban view

Article • 03/30/2022

The Kanban view for activities helps salespeople to manage multiple activities quickly. Looking at the Kanban view, salespeople can quickly see the activities and the status they're in. In the Activity Kanban view, activities are represented visually with cards. The lanes represent the default statuses of activities. You can drag the activities to different lanes to move them from one status to another.

> **Note**
>
> The Kanban view is not supported in the **Dynamics 365 for Phones** mobile app.

License and role requirements

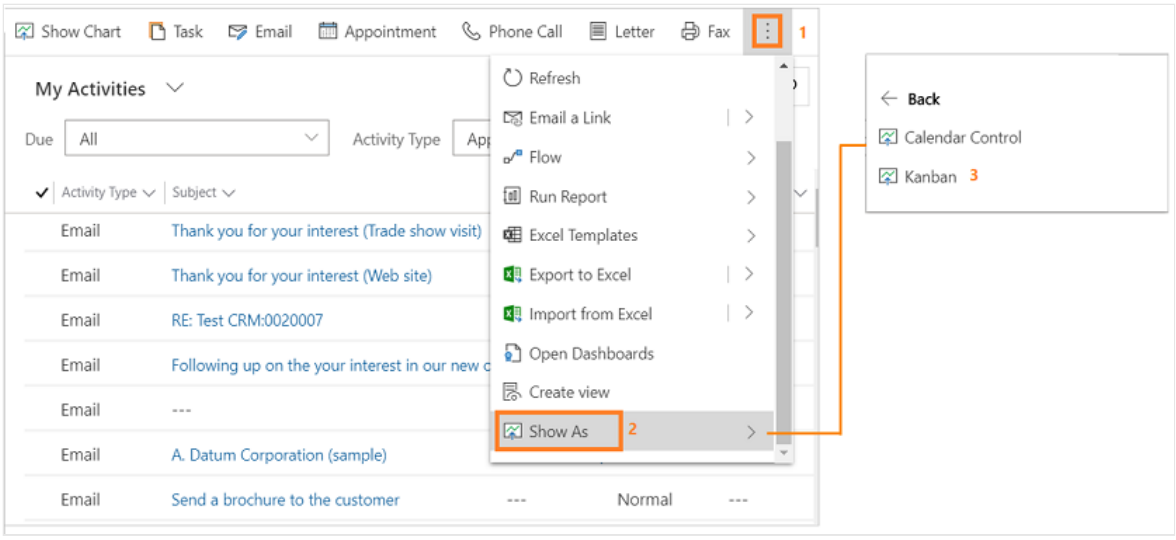
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Open a Kanban view

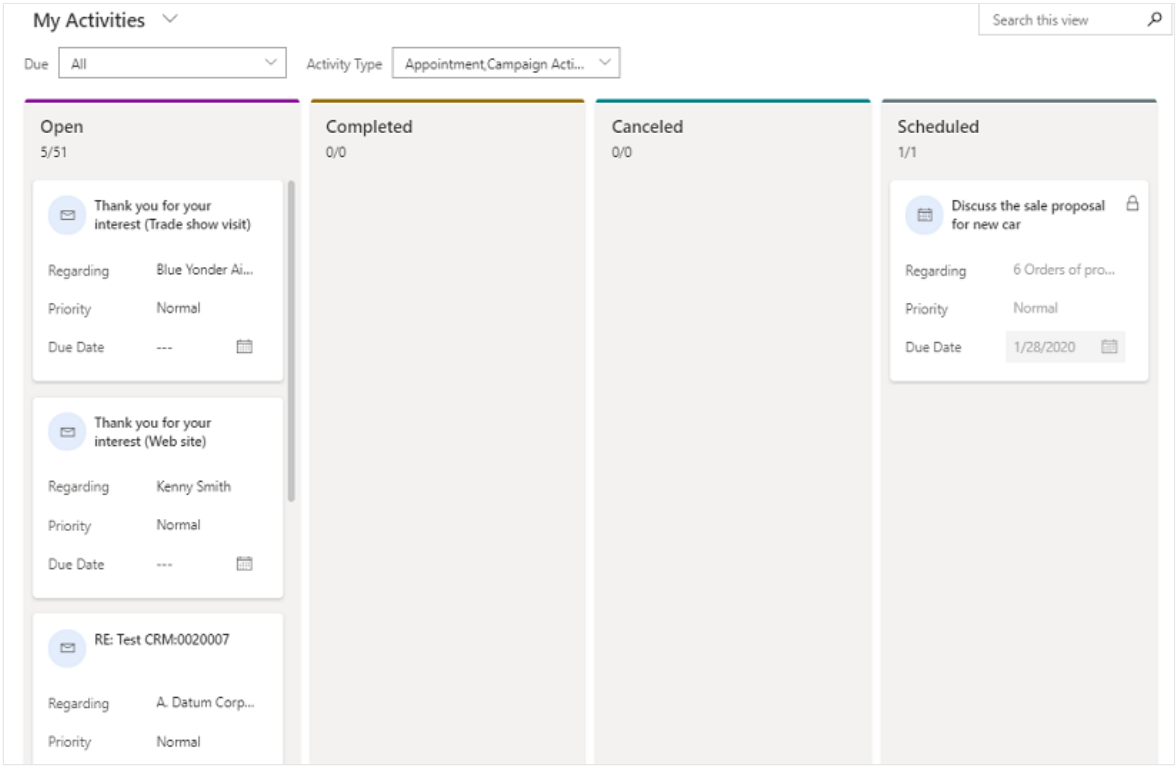
A Kanban view is available when the Kanban control is added to the Activity entity. If you don't see the Kanban view, check with your system customizer.

To open the Kanban view:

1. In the site map, select **Activities**.
2. On the command bar, select the **More commands** icon, and select **Show As** > **Kanban**.



The activities are shown in the Kanban view.



Know your Kanban views

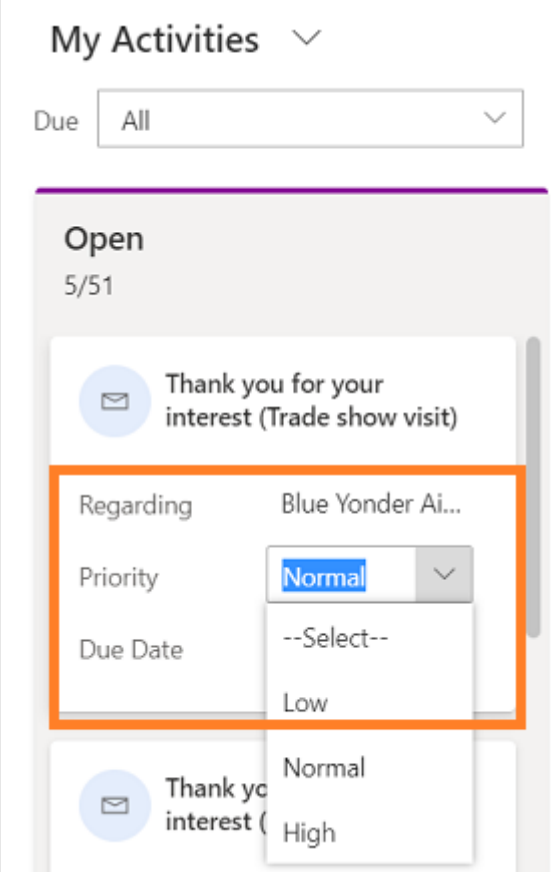
Here are some important things to know about your Kanban view:

- At the top of each lane, the count of activities in that lane is shown. At any given point, only the first 10 records/cards are shown in any lane. For example, if there are a total of 30 open activities, the count shows 10/30. To see more cards, scroll down in the lane. When you scroll down, the count changes to show 20/30, and so on.

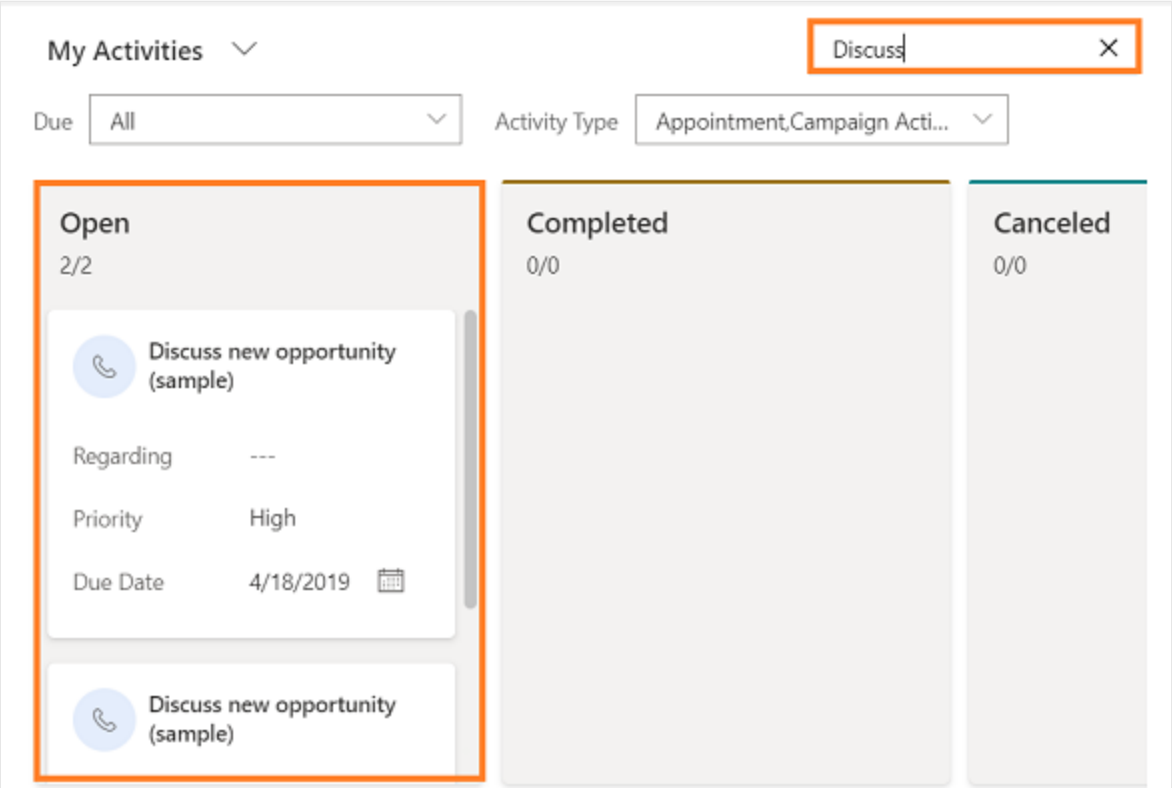
> **Note**

> If there are more than 50,000 records in a swim lane, the count of records is shown as 50000+.

- Selecting the card title opens the activity main form. When you close the Main form, the whole Kanban view is refreshed.
- The card fields are editable inline. You can quickly change details for the three fields of an activity record right from the card.



- When you select a different view or filter, cards in the lanes are refreshed to show the filtered activity records. For example, if you are currently using the All Activities view, and select the **Activity Type** filter to show only phone calls, the swim lanes are refreshed to show only the phone call activities.
- You can use the **Search** box to filter the records/cards in the swim lane based on the search criteria. For example, if you enter the keyword "Discuss," it will refresh the Kanban view to only show the activity records where the title begins with "Discuss".



- You can drag a card and move it to other lanes. When you drag a card from one lane to another, the activity status changes:
    - The cards for the out-of-the-box activity types can be moved from Open to Completed and Canceled lanes. Once the card is moved to the Completed or Canceled lane, the activity status changes to closed, the activity card becomes inactive, and a lock icon is shown on the card. You can't change the fields on an inactive or locked card.
    - You can't reopen an inactive activity other than the Campaign Response activity. An inactive/locked card of Campaign Response activity can be moved back from Completed or Canceled lanes to the Open lane.
    - There's no restrictions on the movement of custom activity cards—they can be moved from any lane to any lane.
    - When you're dragging a card to move to another lane, the lanes where the card can't be dropped appear dimmed.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Add the Kanban control to Opportunity or Activity entities

Send email using the enhanced email experience

Article • 10/13/2022

The enhanced email experience in customer engagement apps allows users to compose an email without leaving the record they're working on.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What can I do with email experience?

Using the enhanced email experience, you can:

- Navigate to different pages without losing the email content.
- Minimize the email window to get back to the records you were working on.
- Expand the email editor pop-up window to see more email options.
- Simultaneously open three email compose pop-up windows.
- Search for and apply a predefined template to an email you're composing.
- Insert attachments to email.

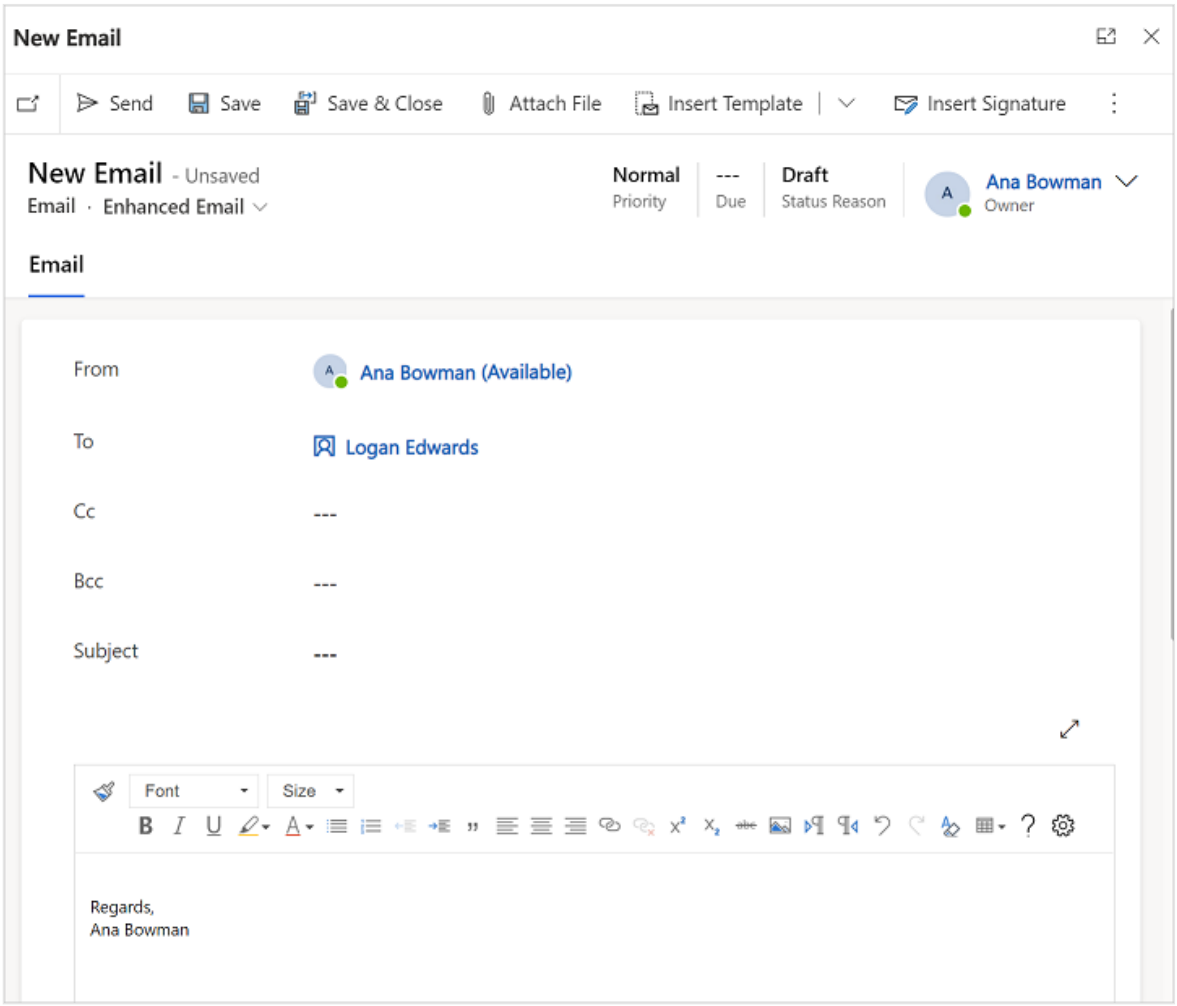
> **Note**
>
> - System administrators must **enable the enhanced email experience** before you can use it.
> - The enhanced email experience is available only for email activities created from the **Timeline** section of any customer engagement app.
> - The enhanced email pop-up window opens only when the height and width of your screen size is at least 400 x 650 pixels or greater. If lower, you will be taken to the standard form instead of the enhanced email experience.

- If you try to navigate to a record (by selecting a record in the lookup field) while working in the Enhanced Email form, an error message is displayed. You cannot navigate to another record from within the Enhanced Email form.

Compose an email using the enhanced experience

1. In the **Timeline** section of the account, contact, lead, or opportunity records, select + and then under **Activities**, select **Email**.

   A new email pop-up window opens.



   The **From** and **To** fields are automatically populated based on the user and the account and contact of the original record.

2. Write your email from scratch or select **Insert Template** to search for and apply a template.

3. Select **Attach file** if you want to add attachments.

4. Select **Insert signature** to search for and add your signature.

5. When you're done, select **Send**.

For more information about the email functionality, see Understand the email experience.

Set default font and size

Set the default font and size so that every email you create uses that font setting. For more information about setting the default font and size, see Set the default font and font size.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up enhanced email
Troubleshooting issues with email

Capture customer-related activities with auto capture

Article • 07/08/2022

Auto capture helps salespeople by simplifying the logging of customer-related activities into Dynamics 365 Sales. Auto capture provides activity suggestions for emails and meetings related to your work based on data captured from your Outlook account. This helps you see relevant emails and meetings on your timeline, together with all the other activities related to a given record.

The activity suggestions generated by auto capture remain private and visible only to you until you choose to track the email or meeting. You can save or delete the suggestions, and you can make the email or meeting visible to everyone who has access to the specific record that the suggestion was added to.

Auto capture logs every customer-related activity so sales personnel can focus their time on selling. These customer interactions are displayed on the timeline for records pertaining to Contact, Opportunity, Lead, Account, Case, and custom entities.

Your administrator must enable auto capture before you can try it out. For complete details about prerequisites, how to enable the feature, and how to set it up, see Enable and configure auto capture.

Auto capture

Article • 12/07/2022

Use the auto capture to capture activities related to your emails and contacts, and display on timeline.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

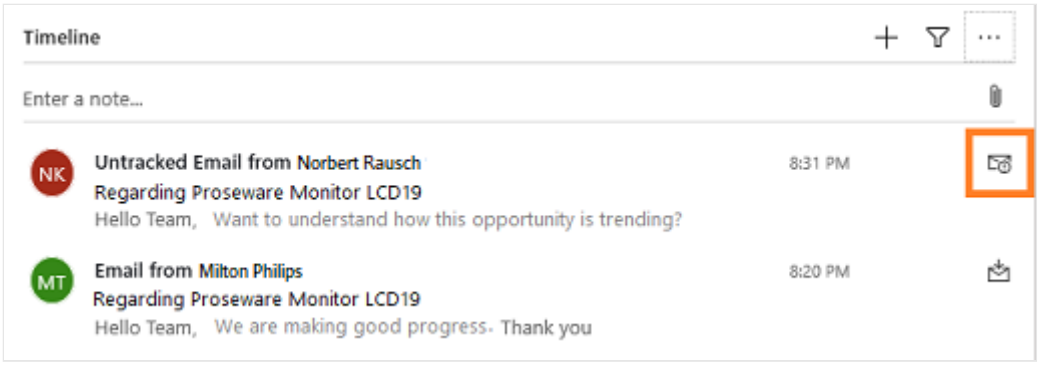
What is auto capture?

The activities captured by the auto capture feature are shown on the timeline in Dynamics 365 Sales. The feature finds activities by applying a set of rules that are specific to the record type. For example, when you look at an opportunity in Microsoft Dynamics 365 Sales, the timeline shows all the activities you've logged, and in addition it shows suggestions for up to 50 recent emails and meetings from your Outlook account that were sent to or from the primary contact for the opportunity or its stakeholders.

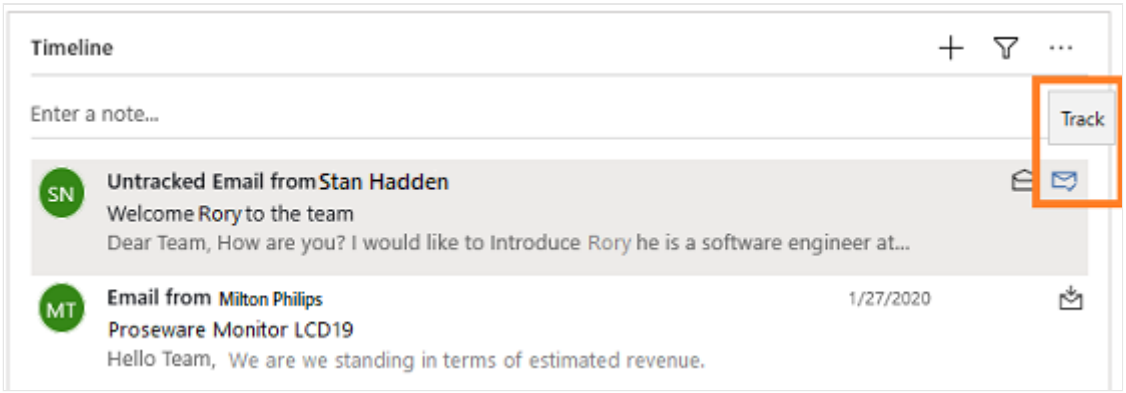
> **Note**
>
> The appointment suggestion starts appearing on the timeline three days prior to the actual appointment time.

The following images show how tracked and auto-captured (not yet tracked) emails and meetings are displayed on the timeline:

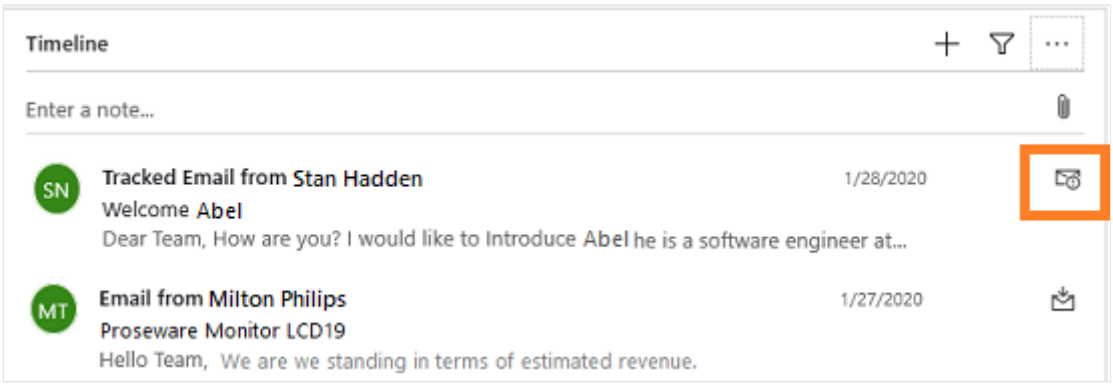
- **Auto capture emails and meetings**: These emails and meetings were detected by auto capture as being relevant to the current record, but they're still private, so only you can see them. Compared to tracked messages, these messages are shown as untracked emails or meetings. The following image shows an untracked email.



- **Track link**: Select the **Track** icon on an untracked activity captured by auto capture, making it visible to everyone who has access to the timeline of this specific record. The activities that auto capture finds are only visible to you, so other members of your sales team won't be able to see them in Dynamics 365 Sales. When you select the **Track** link on any auto-captured message, you turn it into a tracked email message, which saves the activity into the Dynamics 365 Sales database and makes it visible to other members of your team. It might take a few minutes for an activity to go from not being tracked to tracked, during which time it shows a **Tracking pending** message.



- **Tracked emails and meetings**: The envelope symbol indicates that this email or meeting is already being tracked, so it's already imported into Sales and is being shared with your team.



As with other types of activity tiles shown on the timeline, you can select the tile to expand or collapse the content on the tile.

Which activities are captured?

Auto capture queries your Outlook account and looks for activities related to the record you're looking at. The following table summarizes how auto capture identifies related activities.

Entity type	Matches these field values to the To, CC, or From address of each email and meeting
Account	**Email** address of the listed **Primary Contact**. **Email** addresses of the top 50 contacts that have the account as their parent account. All **Email** addresses defined for the account record itself.
Opportunity	**Email** address listed for the **Opportunity Contact**. **Email** address of any contact in the **Stakeholders** list. All **Email** addresses defined for the opportunity record itself. **Email** addresses of contacts of the account that is linked to the opportunity. If the opportunity is associated with a lead, **Email** address of the contact in the lead.
Lead	**Email** address listed in the **Contact** section. All **Email** addresses defined for the lead record itself.
Contact	All **Email** addresses defined for the contact record.
Custom entities	For *account* fields: the email address for the **Primary Contact** of the account, plus all **Email** addresses defined for the account record itself. For *contact* fields: all **Email** addresses defined for the contact record. For *customer* fields that refer to a contact: all **Email** addresses defined for the contact record. For *customer* fields that refer to an account: the **Email** address of the listed **Primary Contact**, plus all **Email** addresses defined for the account record itself.

See also

Enable and configure auto capture
Auto capture FAQs

Use email engagement to view message interactions

Article • 05/25/2023

Email engagement in Dynamics 365 Sales tracks your customers' interactions with your messages. You can learn whether they selected a link, opened an attachment, or sent a reply. You can also get alerts to help you remember to follow up with your customers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise
Security roles	Any primary sales role

Prerequisites

- Your administrator has turned on email engagement.
- Your administrator has turned on the assistant. Email engagement uses the assistant to deliver alerts and other messages.

How email engagement helps you to be a more effective seller

With email engagement, you can:

- Find out when a customer opened your message, selected a link, opened an attachment, or sent a reply. (When the customer's email client scans your email for security reasons, it can artificially inflate the count for email open and link selections.)
- Get an immediate alert when a customer opens your message for the first time.
- Schedule the most effective delivery time based on the recipient's time zone.
- Choose the most effective message template based on your organization's email interaction history.
- Set an alert to remind you when it's time to follow up on an email.
- Review the full interaction history of a single message or view key performance indicators (KPIs) for all your messages.

Some features of email engagement might be visible even when the feature is turned off. These features still appear but are empty:

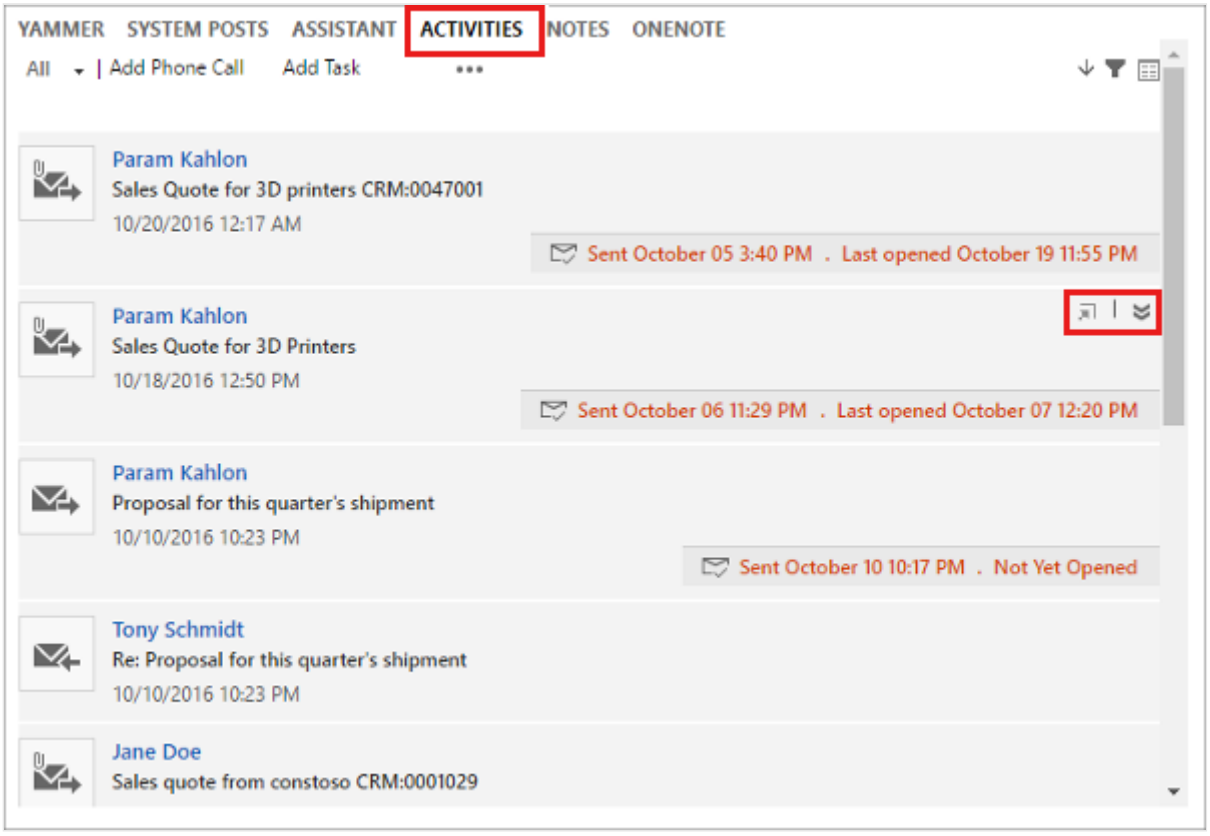
- The **Attachments** table, which is shown when you compose an email message or email template, always includes the **Followed** column.
- The **Followed Email** table always shows the **Opens**, **Last Opened Time**, **Attachment Views**, **Link Clicks**, and **Replies** columns.
- The **Email Template** table always shows the **Reply Rate**, **Open Rate**, **Recommended**, and **Email Count** columns.
- The out-of-the-box versions of the account, contact, and lead forms all include the **Follow Email** field.

View email engagement history

The status, interaction statistics, and key performance indicators (KPIs) for your followed email messages are available in many parts of Dynamics 365 Sales for each record where they're relevant.

Email history in the Activities column

After you save or send a message, it appears in the **Activities** list for its **Regarding** record, which is usually the record you were viewing when you composed it. In some cases, it may be a related record.

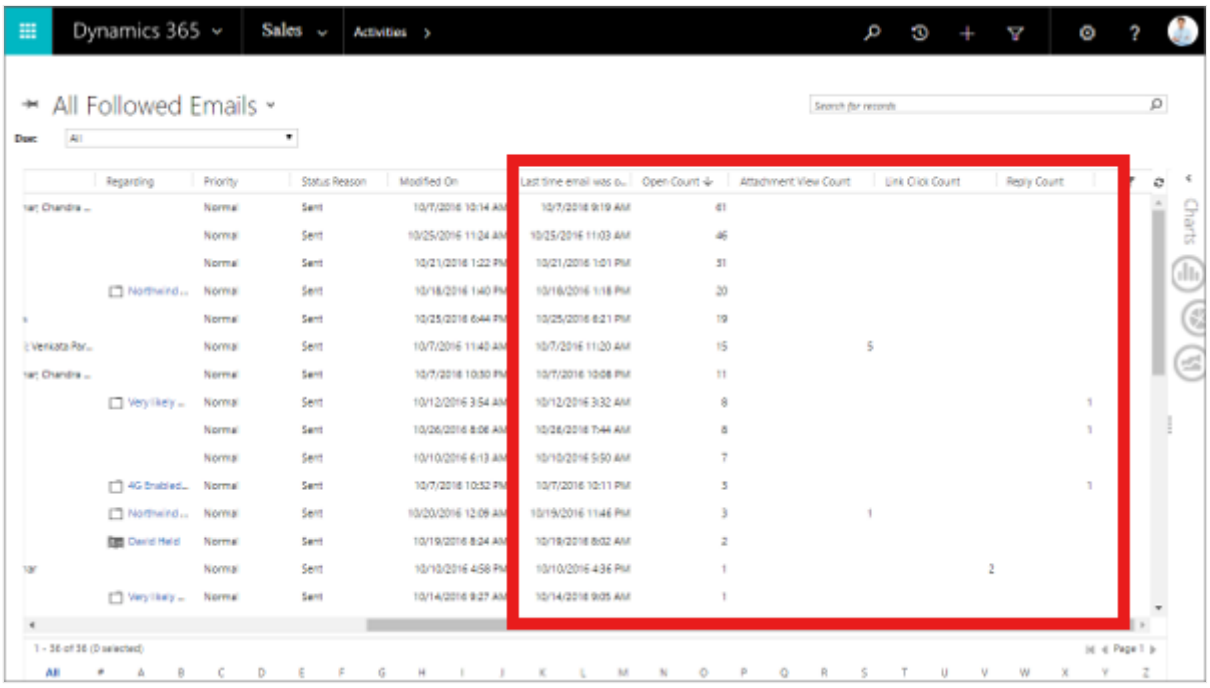


Followed messages show their current interaction status on their tile in the **Activities** list. Use the buttons in the upper-right corner of an email tile to expand its content and interaction history right in the list or to open the full message page.

Email KPIs in the emails list

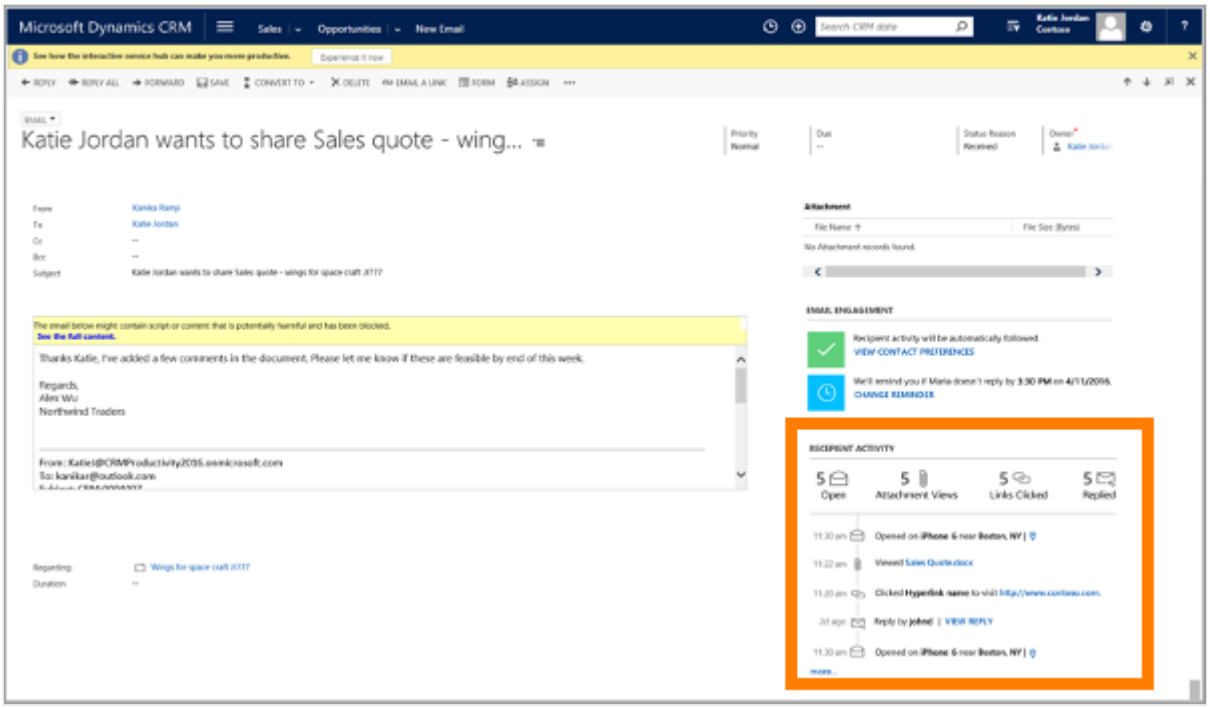
You can view the number of opens, attachment views, link clicks, and replies for followed messages in the list of emails your sales organization has sent.

1. Go to **Sales** > **Activities**.
2. In the list at the top of the page, select **Email** > **All Followed Emails**.



Message details

To open a read-only view of the details of a delivered message, select its subject in an **Activities** or **Emails** list. The details you can view include the message interaction history and KPIs.

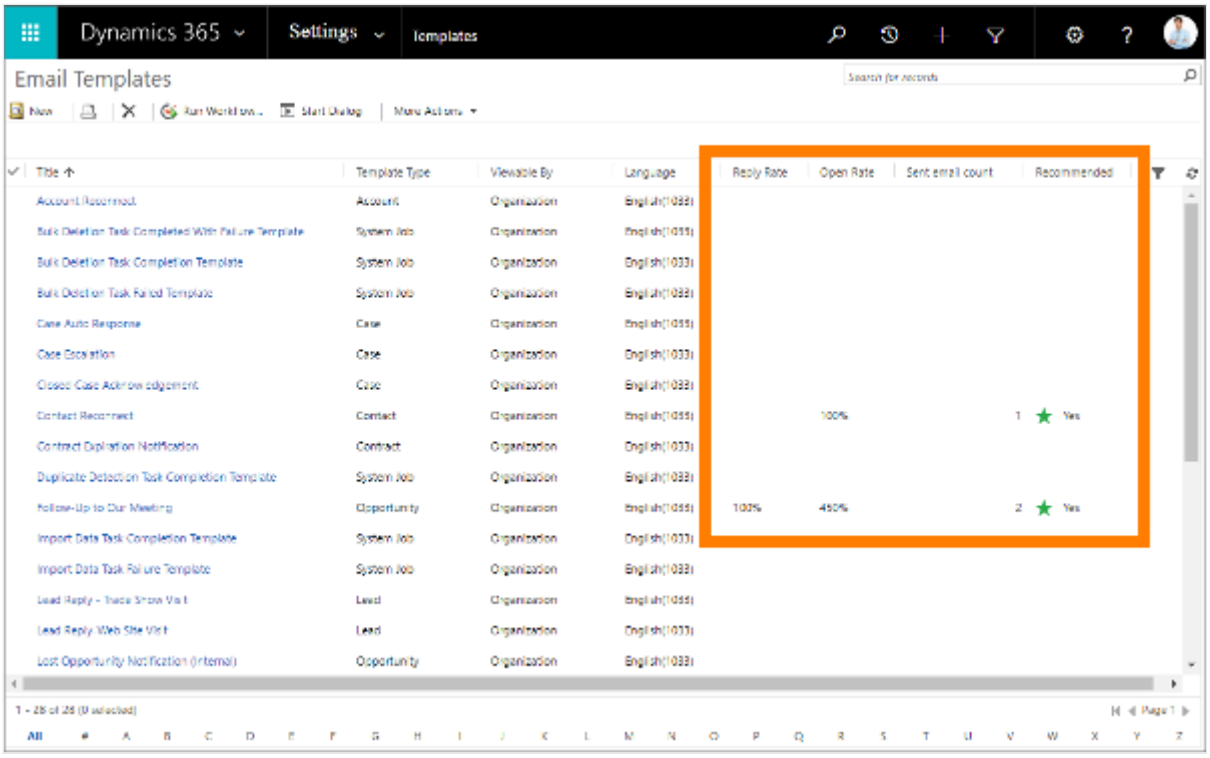


The KPIs at the top of the timeline show the total opens, attachment views, clicks, and replies that have been recorded for the message. The timeline shows a symbol for each interaction event, with the newest at the top, and a few details about each event.

Template results and recommendations in the template list

You can view the performance of your email templates, including the reply rate, open rate, the number of times they've been used, and whether they're recommended or not.

Go to **Settings** > **Business** > **Templates**, and then select **Email Templates**.



Understand email interaction history

Usually when you send an email, you don't know if it was opened or read unless the recipient chooses to write back to you. That's because email was created to simulate traditional mail and wasn't designed with response tracking in mind. Dynamics 365 Sales uses special techniques to work around this limitation and provide the message-following features in email engagement.

- **Find out when your message was opened**: When you send a followed email message from Dynamics 365 Sales, the system generates a uniquely named, transparent, one-pixel GIF and adds it to the message as a linked image. This invisible GIF, along with any other images you add to the message, are stored in Dynamics 365. They're fetched when the recipient opens the message and chooses to download its images. When a unique GIF is requested, Dynamics 365 Sales registers that the associated message was opened.

  We recommend that you always include images in your messages, like a company logo or an arresting illustration, because it motivates recipients to download them. You won't know they've opened the message if images aren't loaded.

- **Find out when each link was clicked**: When you send a followed email message from Dynamics 365 Sales, the system replaces each of its hyperlinks with a unique redirect link that points to Dynamics 365. Each redirect link includes an ID that uniquely identifies both the message that contains it and the URL of the original link target. When Dynamics 365 receives the link request, it logs the click and then

redirects the click to its original address so that the recipient gets the correct information with little or no delay.

- **Find out when each attachment was opened**: When you add a followed attachment to a message, the file isn't attached directly as with a standard email. Instead, it's stored on the OneDrive for Business share that's used by Dynamics 365 and added to the message as a link. As with followed links, when a recipient clicks to download the attachment, Dynamics 365 notes the click and the time. Your recipients may even prefer to receive attachments as links rather than files because your messages take up much less room in their inbox.

  You can mix followed and unfollowed attachments in a single email. That can be important if you're sending sensitive files that you don't want to save in OneDrive for Business.

Actions that are performed on email are stored in Microsoft Azure Storage. Azure Storage is unique for each organization. If an organization is restored to another organization, the history of the email actions in the previous organization isn't carried over to the restored organization.

> **ⓘ Important**
>
> You should treat all email interaction data as approximations. The system can only register an email-open event if the recipient also downloads the message's images, including the invisible GIF. The actual number of opens could be larger than the number recorded in Dynamics 365 Sales. Similarly, if images are cached, which is typical for web-based email clients, then subsequent opens may not be reported to Sales.

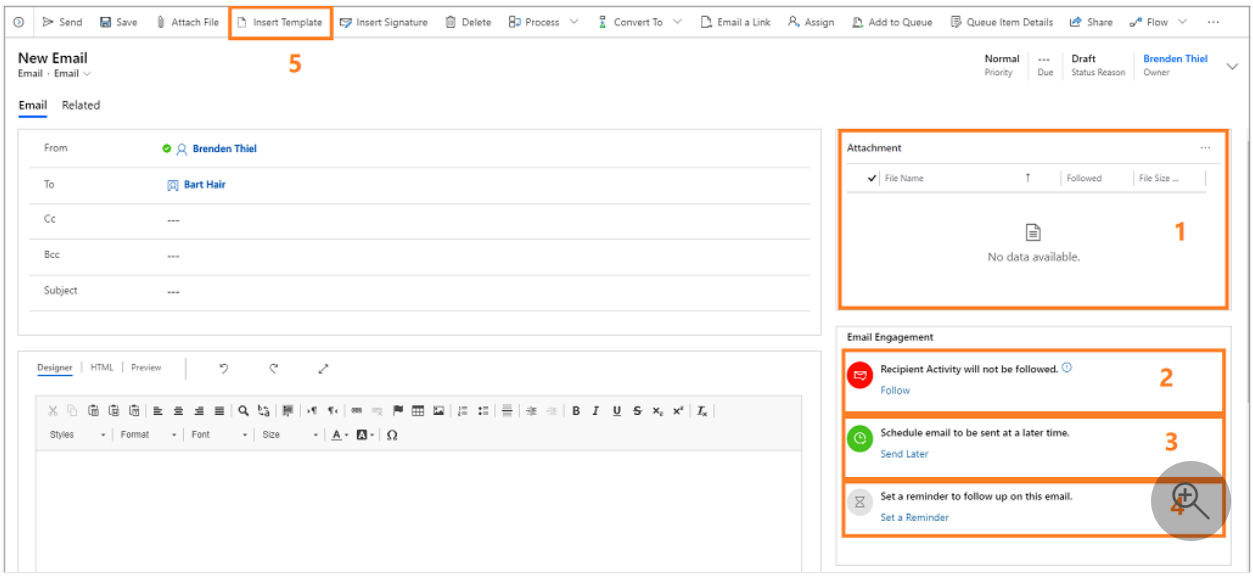
See also

Turn on email engagement
Create and send an email message
Configure privacy preferences

Create and send an email message

Article • 05/25/2023

When your organization turns on email engagement, you get a few more choices when you compose an email in Dynamics 365 Sales.



Legend:

1. **Attachment**: A list of files attached to your email and whether they're followed or unfollowed, along with controls for adding, removing, and modifying the attachments.

2. **Follow/Don't Follow**: Turn on following to track your customer's engagement with the message or turn it off to stop tracking. Other controls and links appear as needed, such as when a recipient doesn't allow following.

3. **Send Later**: Set the delivery time for your message if you don't want to send it right away. Recommended delivery times may appear here, depending on the recipient's time zone.

4. **Set a Reminder**: Set a reminder to follow up at a specific time. For example, you might want to get an alert if the message remains unopened for three days.

5. **Insert Template**: Insert standard text that you can revise as needed. Your organization may have a template for different purposes, such as a meeting follow-up or an introduction. Email engagement may suggest a template based on previous performance.

When your organization turns on email engagement, it applies by default to all messages you create in Dynamics 365 Sales, as long as none of the recipients are set up

to block followed messages.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise
Security roles	Any primary sales role, such as salesperson or sales manager

Create a message

Email engagement features apply to any email you send from Dynamics 365 Sales. When you send an email, it adds an email activity to the record you're looking at, and that record is set as the message's **Regarding** value. The To, From, and Copy-to addresses affect where in Sales you can view the message and where its key performance indicators (KPIs) may apply.

1. Open the record you want to add the activity to (typically a contact, opportunity, lead, or account).
2. In the **Timeline** section, select + (**Create a timeline record**) > **Email**.
3. Select one or more recipients and enter the message subject.
4. Enter the body of your message, or insert an email template.
5. Select **Send**, or select **Save** to save the message as a draft and finish it later.

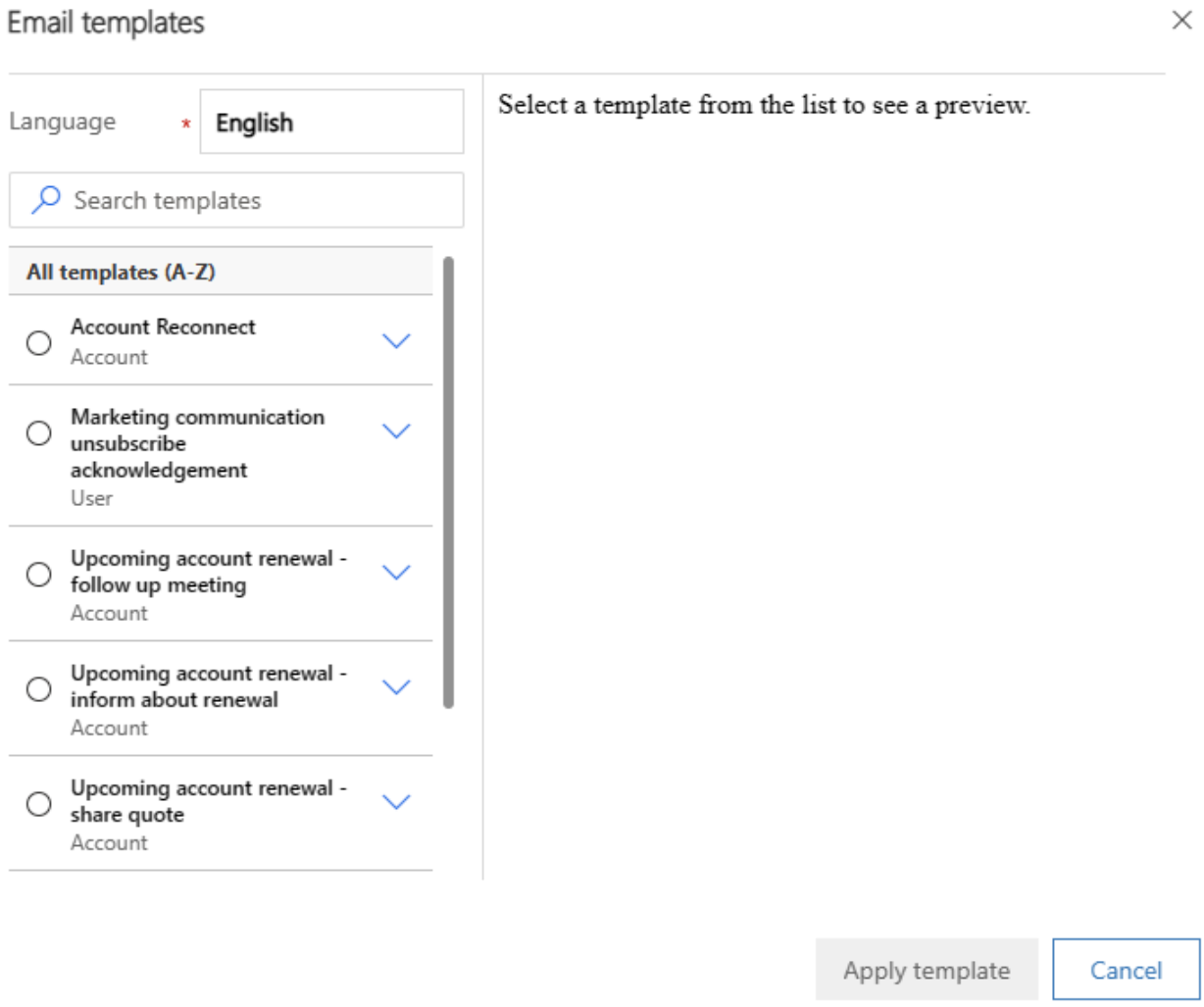
> **Tip**
>
> To add a link to your message, select the text you want to add the link to, press Ctrl+K, and type or paste the link address.

Use an email template

Email templates are standard messages that you send often, such as introductions, confirmations, thank-you messages, and reminders. They can include dynamic values that are filled in automatically, like the recipient's name or an order number. They give you a quick start when you're writing common messages.

Email engagement analyzes the performance of all the messages your sales team has sent from Dynamics 365 Sales and identifies the most successful templates. It shows all available templates, but highlights the ones that it found to generate the most opens, replies, or sales.

1. Create a message.
2. On the command bar, select **Insert Template**.
3. In the **Email templates** window, select the language if needed, and then search for and select a template.



1. Select **Apply template**.
2. Customize the template content as needed.
3. Select **Send**, or select **Save** to save the message as a draft and finish it later.

Follow or unfollow a message

When you follow an email, email engagement can tell you when the recipient opened it, replied to it, opened an attachment, or selected a link in it.

The **Email Engagement** section includes the following indicators and controls:

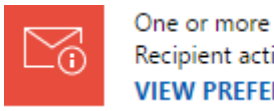
-

: Indicates you're following the current email, including any links you include, and you have the option to follow any files you attach. Select **Don't Follow** to stop tracking the message.

  This state is the default for new messages when your organization has turned on email engagement and all the recipients allow following.

-

: Indicates you're not following the current email, including any links you include. You can't follow any attachments either. Select **Follow** to turn on following if the recipients allow it.

- 

: Indicates that one or more recipients have following set to **Do Not Allow**. You can't follow this message unless you either remove the recipients that don't allow following or change their setting.
  - Select **View Preferences** to view the recipient names and following preferences in a new window. Select a name to open the recipient's record.
  - If you removed recipients who don't want to be followed or changed their setting to allow following, select **Retry Follow** to try again.
  - Select **Don't Follow** to stop trying to follow this message.

Within about 15 minutes after a followed message is opened, the system creates an action card in the assistant. The card includes links to the message and related records and action buttons to generate a call activity, snooze the alert, or dismiss it. Learn more about guided customer communications with assistant.

Add followed attachments

When you follow an attachment, email engagement can tell you when the recipient opens it. To follow attachments, OneDrive for Business must be available in Dynamics 365 and your organization must turn on document management for email. Ask your administrator if the followed attachments option isn't available for you.

You can't add followed attachments if the message recipients don't allow following. You can still add unfollowed attachments. You can also mix followed and unfollowed attachments in any message you're following.

1. Create a message.
2. Turn on following for the message.
3. Select **Save** on the toolbar to save your message and turn on the attachment feature.
4. In the **Attachment** section, select **New Attachment**.
5. Select **Choose File**, and then locate and select the file.
6. Select **Attach** to upload the file.

   It may take several seconds to upload the file, depending on its size.
7. Select **Follow** to track the attachment, or select **Do Not Follow** to stop following it.
8. Select **Close** to close the attachment window.
9. Select **Send**, or select **Save** to save the message as a draft and finish it later.

Choose the most effective delivery time

Your email messages may receive more or less attention depending on when they arrive in recipients' inboxes. For example, many people start their day with a full inbox, so messages that arrive overnight must compete for attention and may get put off or even forgotten. Emails that arrive later in the day may get noticed and handled right away. With email engagement, you can compose your email messages when it's convenient for you, but let Dynamics 365 Sales deliver them when it's best for your recipients.

The system sometimes recommends a delivery time based on the recipient's time zone. It assumes a standard workday of 8:00 AM to 5:00 PM, Monday through Friday, and suggests the next closest business hour if you're working outside the recipient's business day. If the message has more than one recipient or no address is provided, the system doesn't make a recommendation.

Your organization must turn on Bing Maps and the recipient must have a physical address in Sales for email engagement to determine the time zone.

If no recommendation is given, or if you prefer to use your own logic, you can specify any delivery time you choose.

The delivery time feature is available for both followed and unfollowed messages.

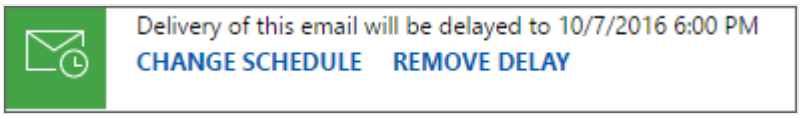
1. Create a message.
2. When you're ready to send the message, look under **Send Later** in the **Email Engagement** section.

   If the system can recommend a delivery time, one appears here. Whether or not it does, you can delay delivery anyway.
3. Select **Send Later**.

If the system recommended a time or date, then that information is filled in for you. If not, the date is blank. In either case, it uses *your local time*, not the recipient's.

1. Use the **Set at** controls to set your preferred delivery date and time.
2. Select **OK** to save your setting and close the window.

   The **Delay Send** indicator turns green. Select **Change Schedule** or **Remove Delay** if you need to change the delay or send the message right away. You can change the scheduled delivery at any time before the message is sent.

3. Select **Send**, or select **Save** to save the message as a draft and finish it later.

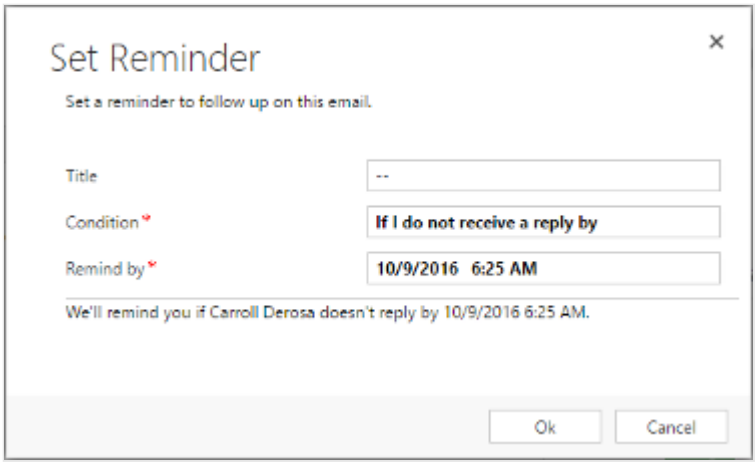
Scheduled messages appear as such in the **Activities** list for the **Regarding** record. Until the scheduled time arrives, you can delete or reschedule the message from there. You can also edit the follow-up reminder date or time. You can't change any other settings after you select **Send**.

Set a message follow-up reminder

If you want to make sure you don't forget to follow up on an important email, set a reminder.

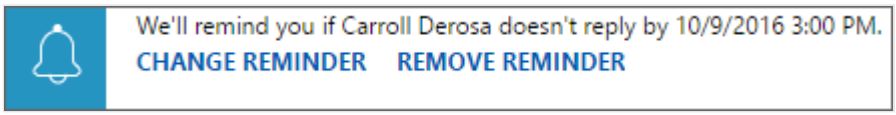
1. Create a message.
2. When you're ready to set the reminder, select **Set Reminder** in the **Email Engagement** section.

   The **Set Reminder** window opens.



3. In the **Title** box, enter the text you want to see when the reminder is triggered.
4. In the **Condition** list, select the condition that triggers the reminder:
    - **If I do not receive a reply by**: Triggers the reminder if no reply has been received by the **Remind by** date. Only available for followed messages.
    - **If the email is not opened by**: Triggers the reminder if the message hasn't been opened by the **Remind by** date. Only available for followed messages.
    - **Remind me anyway at**: Triggers the reminder at the specified time and date, no matter what.
5. In **Remind by**, specify the date and time to show the reminder if the **Condition** is met.
6. Select **OK** to save your settings and close the window.

    The **Set Reminder** indicator turns blue and a short summary of your reminder settings appears. After the reminder time passes, the summary updates to indicate this. Select **Change Reminder** or **Remove Reminder** if you need to change the reminder or remove it.

7. Select **Send**, or select **Save** to save the message as a draft and finish it later.

When the reminder is triggered, the system creates an action card in the assistant. The card is given high priority, so you should see it right away. The card includes links to the message and related records and action buttons to snooze or dismiss the alert. Learn more about guided customer communications with assistant.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Turn on email engagement
View message interactions with email engagement
Configure privacy preferences
Create templates for email

Use email engagement to view message interactions

Article • 05/25/2023

Email engagement in Dynamics 365 Sales tracks your customers' interactions with your messages. You can learn whether they selected a link, opened an attachment, or sent a reply. You can also get alerts to help you remember to follow up with your customers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise
Security roles	Any primary sales role

Prerequisites

- Your administrator has turned on email engagement.
- Your administrator has turned on the assistant. Email engagement uses the assistant to deliver alerts and other messages.

How email engagement helps you to be a more effective seller

With email engagement, you can:

- Find out when a customer opened your message, selected a link, opened an attachment, or sent a reply. (When the customer's email client scans your email for security reasons, it can artificially inflate the count for email open and link selections.)
- Get an immediate alert when a customer opens your message for the first time.
- Schedule the most effective delivery time based on the recipient's time zone.
- Choose the most effective message template based on your organization's email interaction history.
- Set an alert to remind you when it's time to follow up on an email.
- Review the full interaction history of a single message or view key performance indicators (KPIs) for all your messages.

Some features of email engagement might be visible even when the feature is turned off. These features still appear but are empty:

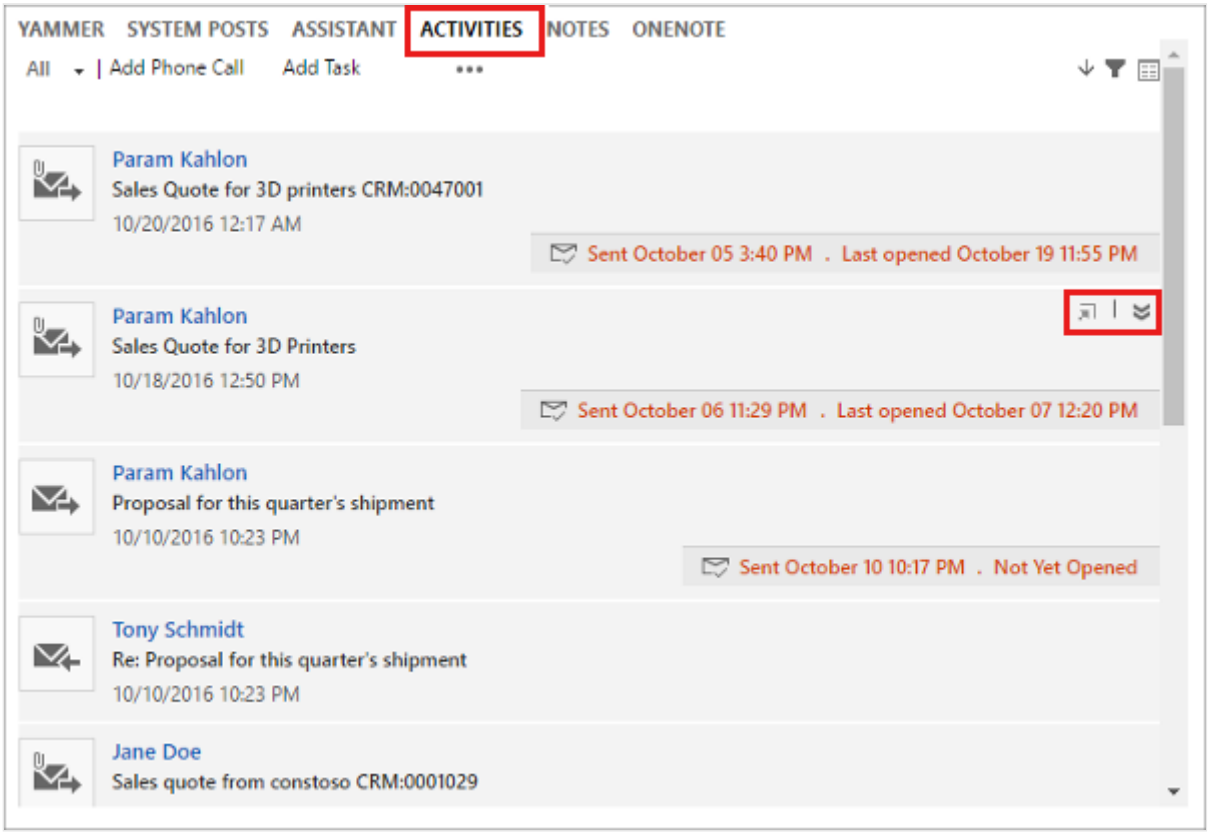
- The **Attachments** table, which is shown when you compose an email message or email template, always includes the **Followed** column.
- The **Followed Email** table always shows the **Opens**, **Last Opened Time**, **Attachment Views**, **Link Clicks**, and **Replies** columns.
- The **Email Template** table always shows the **Reply Rate**, **Open Rate**, **Recommended**, and **Email Count** columns.
- The out-of-the-box versions of the account, contact, and lead forms all include the **Follow Email** field.

View email engagement history

The status, interaction statistics, and key performance indicators (KPIs) for your followed email messages are available in many parts of Dynamics 365 Sales for each record where they're relevant.

Email history in the Activities column

After you save or send a message, it appears in the **Activities** list for its **Regarding** record, which is usually the record you were viewing when you composed it. In some cases, it may be a related record.

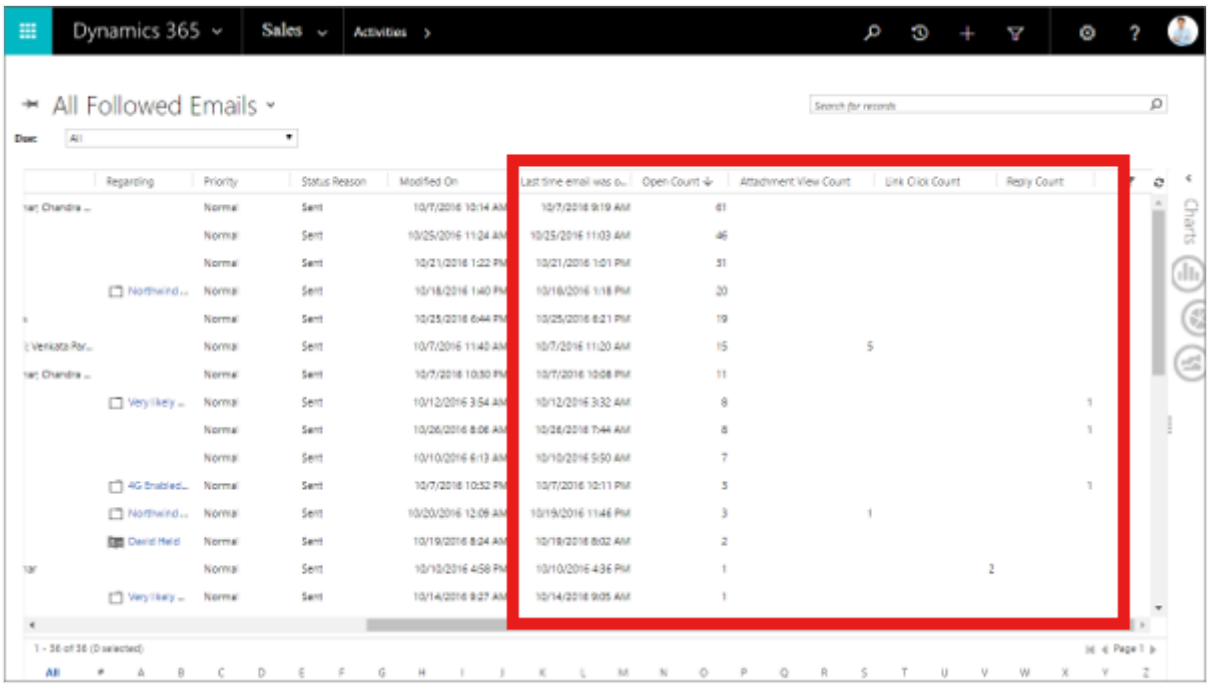


Followed messages show their current interaction status on their tile in the **Activities** list. Use the buttons in the upper-right corner of an email tile to expand its content and interaction history right in the list or to open the full message page.

Email KPIs in the emails list

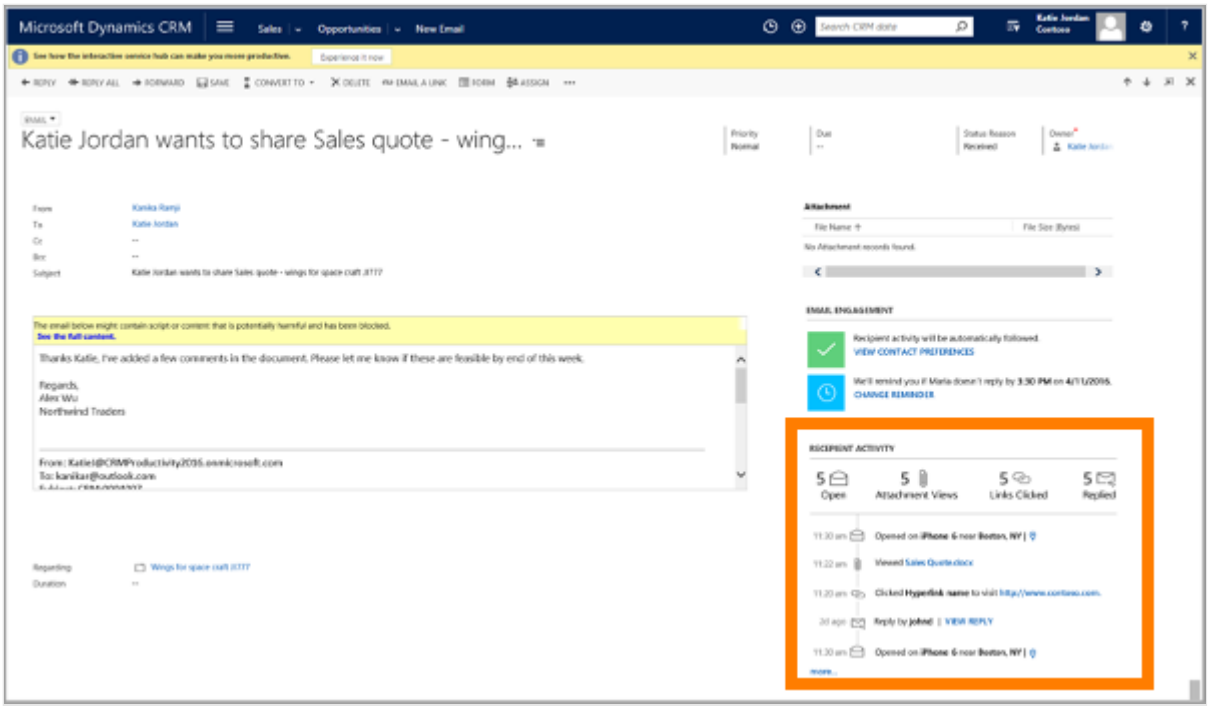
You can view the number of opens, attachment views, link clicks, and replies for followed messages in the list of emails your sales organization has sent.

1. Go to **Sales** > **Activities**.
2. In the list at the top of the page, select **Email** > **All Followed Emails**.



Message details

To open a read-only view of the details of a delivered message, select its subject in an **Activities** or **Emails** list. The details you can view include the message interaction history and KPIs.

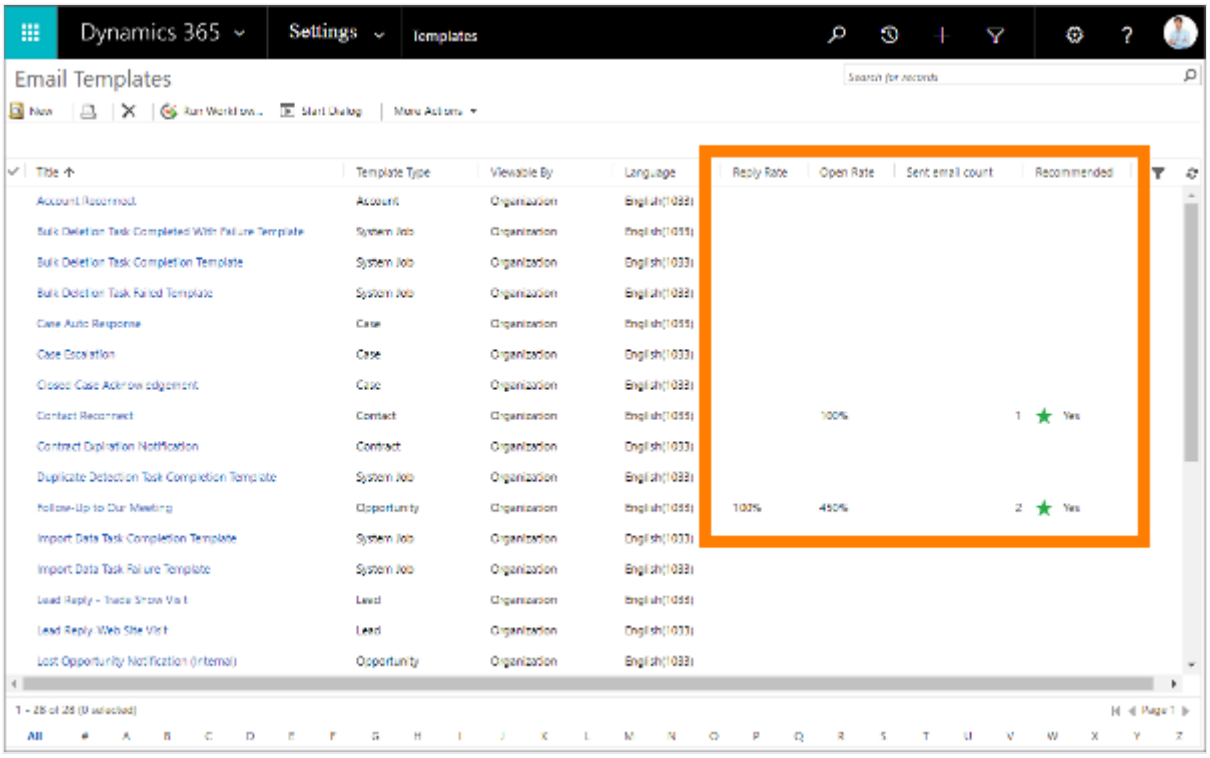


The KPIs at the top of the timeline show the total opens, attachment views, clicks, and replies that have been recorded for the message. The timeline shows a symbol for each interaction event, with the newest at the top, and a few details about each event.

Template results and recommendations in the template list

You can view the performance of your email templates, including the reply rate, open rate, the number of times they've been used, and whether they're recommended or not.

Go to **Settings** > **Business** > **Templates**, and then select **Email Templates**.



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- **Find out when each attachment was opened**: When you add a followed attachment to a message, the file isn't attached directly as with a standard email. Instead, it's stored on the OneDrive for Business share that's used by Dynamics 365 and added to the message as a link. As with followed links, when a recipient clicks to download the attachment, Dynamics 365 notes the click and the time. Your recipients may even prefer to receive attachments as links rather than files because your messages take up much less room in their inbox.

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See also

Turn on email engagement
Create and send an email message
Configure privacy preferences

Honor individuals' privacy preferences

Article • 05/25/2023

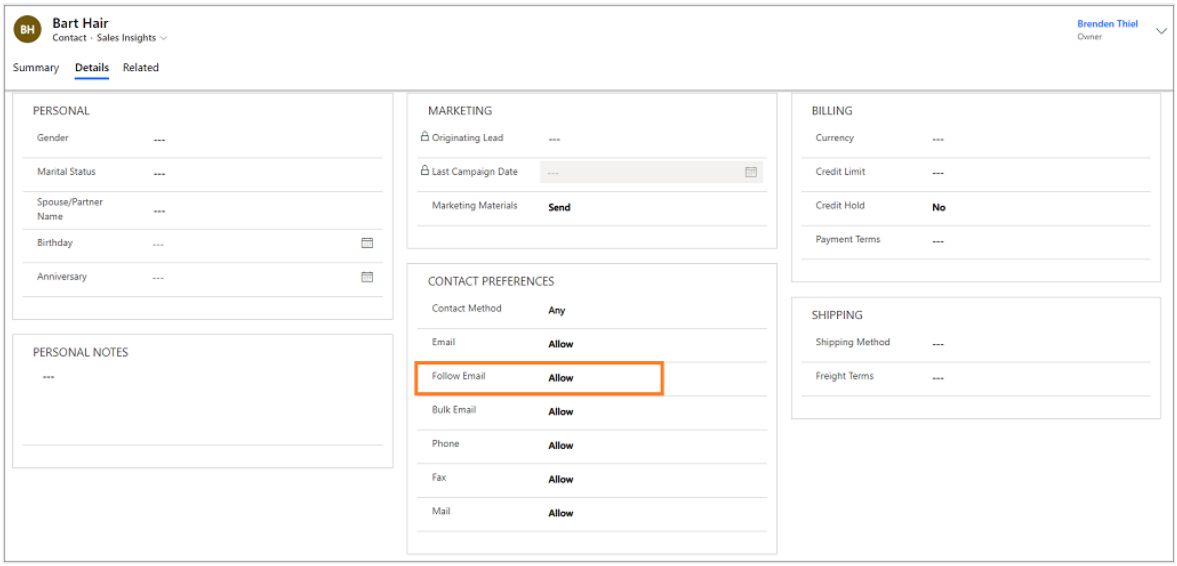
Your customers who have privacy or security concerns may ask you not to use email following features when you communicate with them. You can easily turn off these features for specific customers by setting email following options on their contact, lead, or account record. Email following is turned on by default for all records, so you must explicitly turn it off.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise
Security roles	Any primary sales role, such as salesperson or sales manager

Set privacy options for a contact, account, or lead

1. In Dynamics 365 Sales, open the contact, account, or lead record.
2. Open the **Details** tab.
3. In the **Contact Preferences** section, set **Follow Email** to **Do Not Allow** or **Allow** as needed.



4. Select **Save**.

When you compose an email that includes one or more recipients that don't allow following, email following features are turned off.

- The message doesn't include a web beacon or invisible, one-pixel GIF.
- Files are attached directly rather than linked, and no links are redirected through Dynamics 365 Sales.
- You can still schedule delivery and may still get template and delivery-time recommendations.

To view the tracking preferences for all the recipients of a message, select **View Recipients' Preferences** above the body of your message. The name and follow preference of each recipient is shown in a separate window. To open a recipient's record, select a name in the list.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Turn on email engagement
View message interactions with email engagement
Create and send an email message

How notes analysis assists you with suggestion

Article • 03/30/2022

Get intelligent suggestions on action that you take on notes you enter during a recent meeting or discussion with your customer.

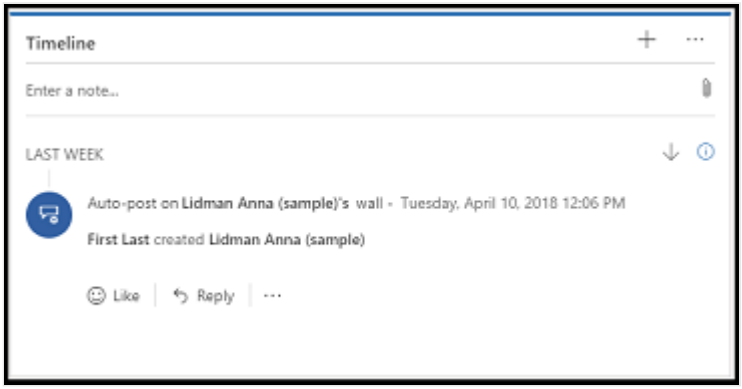
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create actions based on suggestions

Notes analysis provides you with suggestions for actions based on customer-related activities. When you create an activity, such as appointment, email, phone call, task, note, post, or custom activities, the notes analysis feature analyzes the descriptions provided in these activities and gives you intelligent suggestions. With these suggestions, you can take actions, such as creating a meeting request and adding a contact.

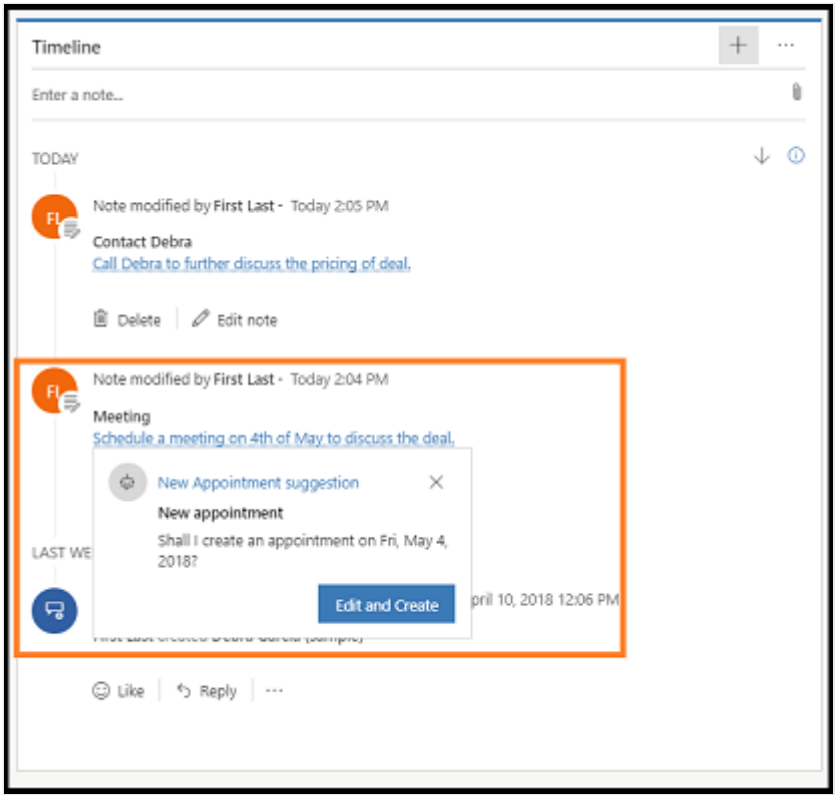
Timeline control is available on contacts, opportunities, leads, accounts, and case forms.



With notes analysis, the text in the activity is highlighted and when selected, suggestions are displayed. These suggestions include: Creating activities, tasks, contacts, meeting, content requests, and issue detection.

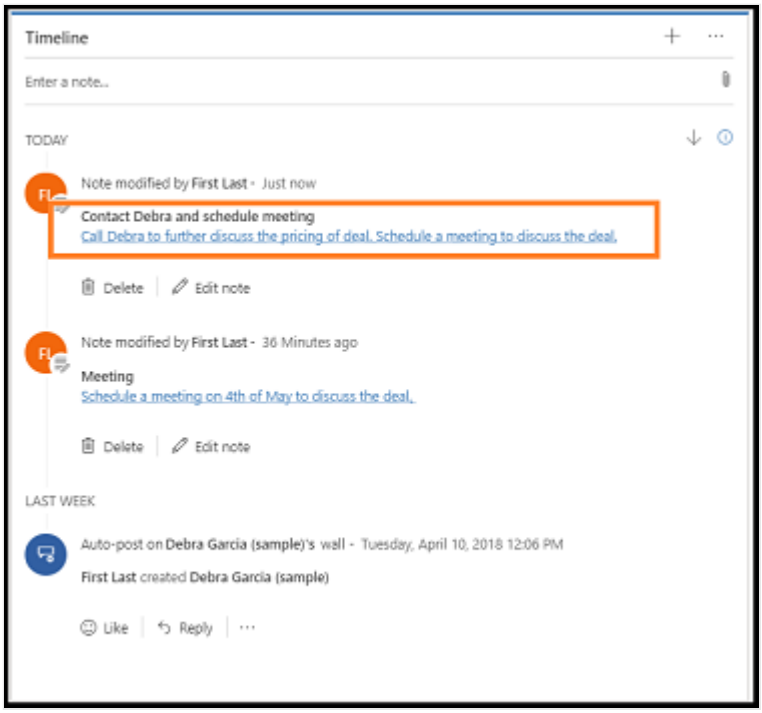
For example, you created a note "*Meet the customer on May 4 at 4:00 PM*". When you

select this text, Dynamics 365 Sales Insights provides an automatic suggestion to create an appointment.

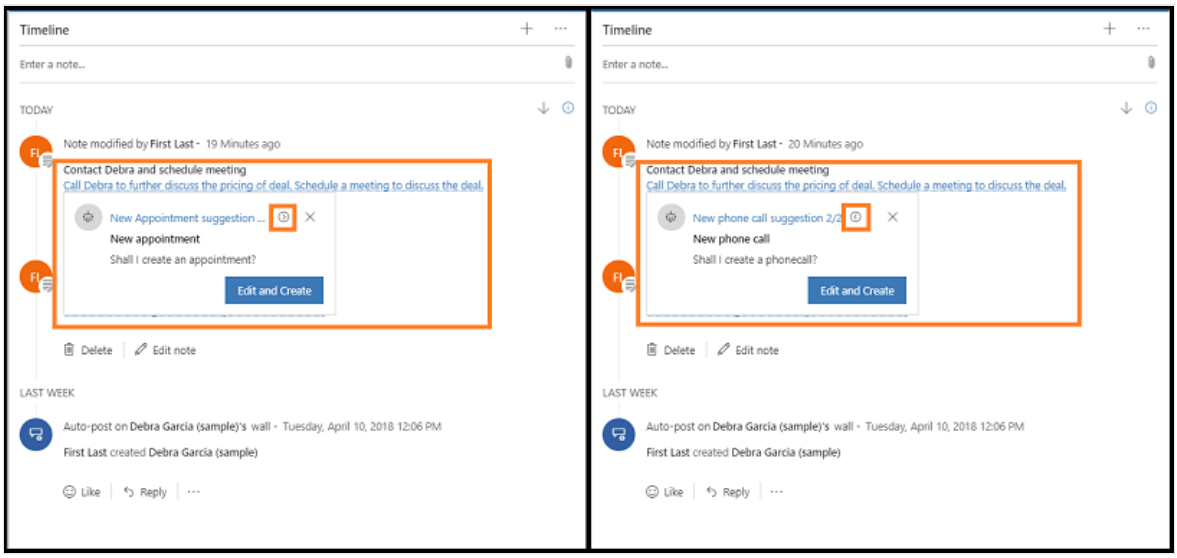


When you have multiple suggestions associated with an activity, Dynamics 365 Sales Insights displays those multiple suggestions—you can take timely actions depending on your requirements. For example, you have created a note to contact your customer regarding pricing and schedule a meeting to further discuss the deal. The note shows suggestions to create an appointment and schedule a phone call. Let's look this example to see how suggestion-based activities work with multiple suggestions:

1. Open a record with the note and select the note text.
   In this example, the note specifies to call Debra to discuss the pricing of the deal and schedule a meeting to discuss the deal.



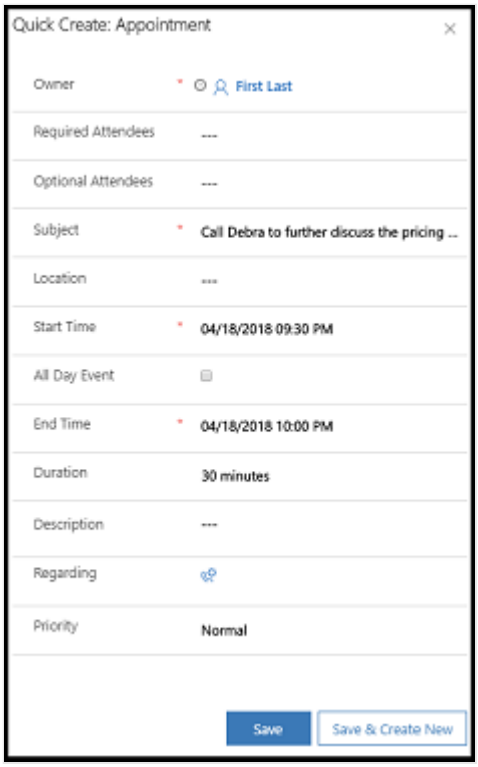
Suggestions to create an appointment and a phone call are displayed.



Use the arrow icon to switch between the suggestions.

2. On the **New Appointment suggestion** card, select **Edit and Create**.

   The **Quick Create: Appointment** form opens with prefilled information from the note.



3. Edit the necessary information and select **Save**.
4. Similarly, repeat step 2 and 3 for New phone call suggestion.
   A new appointment and a call are scheduled for the record.

More information: Work with activities

Examples

The following three scenarios are the examples of how to use notes analysis in your organization.

- Scenario 1: Suggest New Contact
- Scenario 2: Suggest Task Creation
- Scenario 3: New Meeting

Scenario 1: Suggest New Contact

- Let me introduce you to John

Scenario 2: Suggest Task Creation

- I will prepare the contract by Friday.
- John to confirm the date with Contoso.
- John, can you please send the code to them?

Scenario 3: New Meeting

- Could we talk over coffee while I am in town?
- We had a meeting with Contoso last Friday.

Privacy notice

For specific privacy information about Dynamics 365 Sales Insights capabilities for sellers, see Privacy notice.

See also

Configure Notes analysis
Notes analysis FAQs

Manage sales literature

Article • 03/30/2022

Sales literature in Dynamics 365 Sales stores sales-related information such as brochures or detailed specifications of products. Think of sales literature as a central repository for your organization's sales information (in the form of sales attachments) that lets you share information with other users.

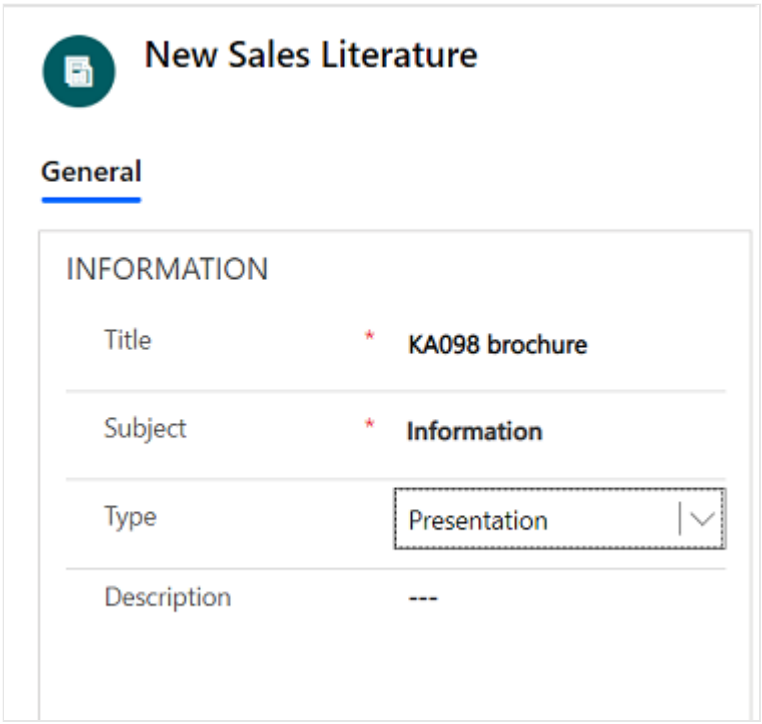
You can associate a sales literature to a competitor or a product.

License and role requirements

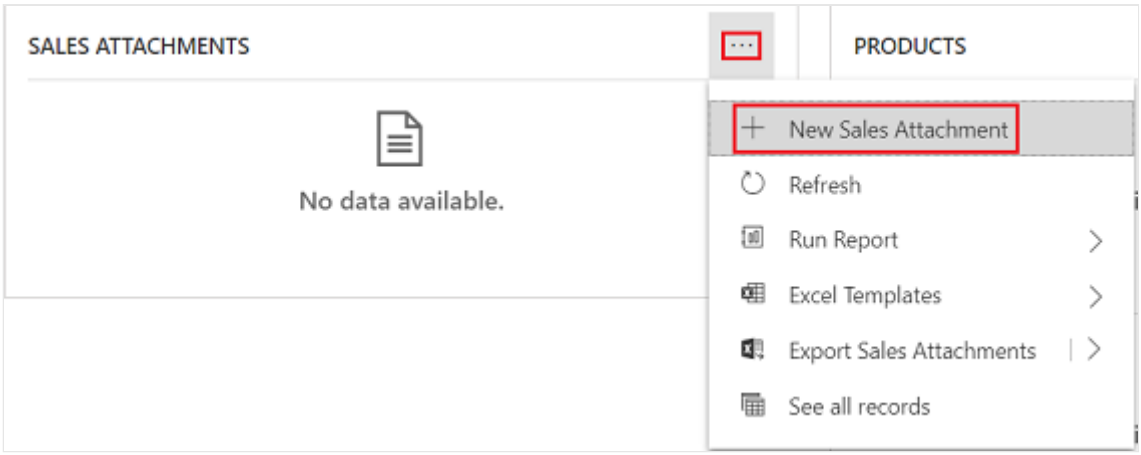
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create a sales literature record

1. Make sure that you have one of the following security roles or equivalent permissions: System Administrator, System Customizer, Sales Manager, Vice President of Sales, Vice President of Marketing, or CEO-Business Manager.
2. Select the site map , and then under **Collaterals**, select **Sales Literature**.
3. Select **New**.
4. Fill in the information such as **Title**, **Subject**, and **Type**. Use the handy tooltips as a guide.



5. Select **Save**.
6. In the **Sales Attachments** section, select the **More Commands** button , and then select **New Sales Attachment**.



7. In the **New Sales Attachment** form, enter a **Title** and **Abstract** for the attachment, and then select **Choose File** to select a file to be attached.
8. Select **Save** or **Save & Close**.

There are two ways to send the sales literature to other users:

- Select the **Send as Email** option in the **Sales Literature** form.
- Select the **Add Sales Literature** option in Dynamics 365 App for Outlook. More information: Add sales literature or a knowledge base article to a email

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit a competitor record
Set up a product

Use OneDrive for Business

Article • 02/15/2022

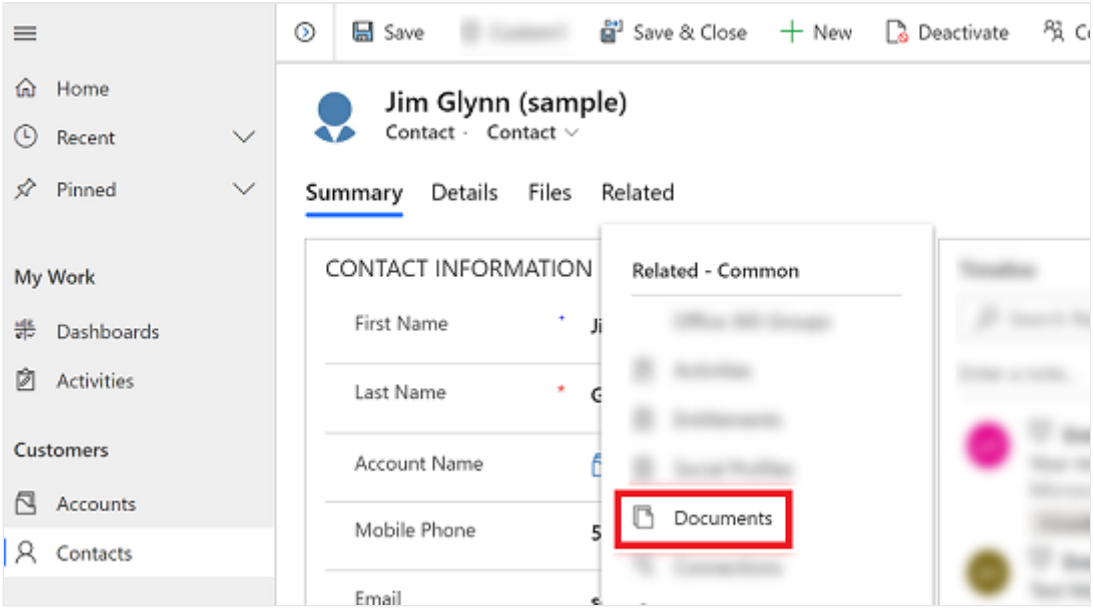
Create and manage private documents from within Microsoft Dataverse apps by using OneDrive for Business. More information: What is OneDrive for Business?

Before you can use OneDrive for Business, it must be enabled by your system administrator. More information:

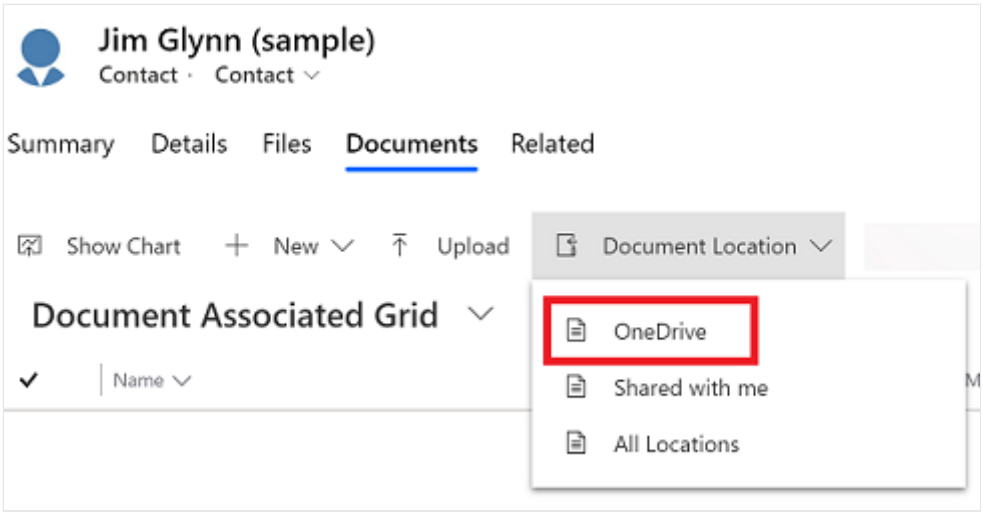
- Find your administrator or support person
- Enable OneDrive for Business

The first time you view your documents

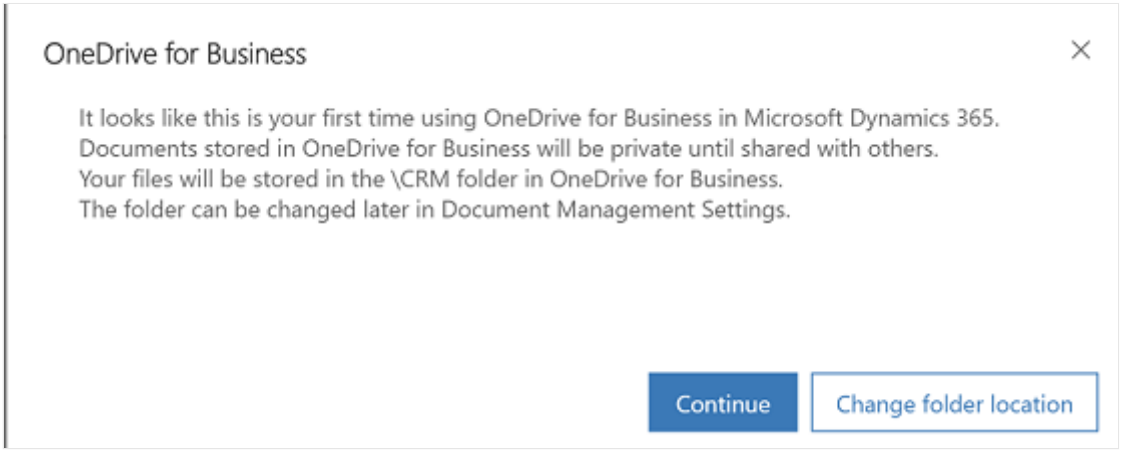
1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.
2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location** > **OneDrive**.



4. After OneDrive for Business is enabled, you'll see the following dialog box when you go to the **Documents** tab to view documents in Dataverse and upload a file to OneDrive, or when you attempt to create a new document or folder.

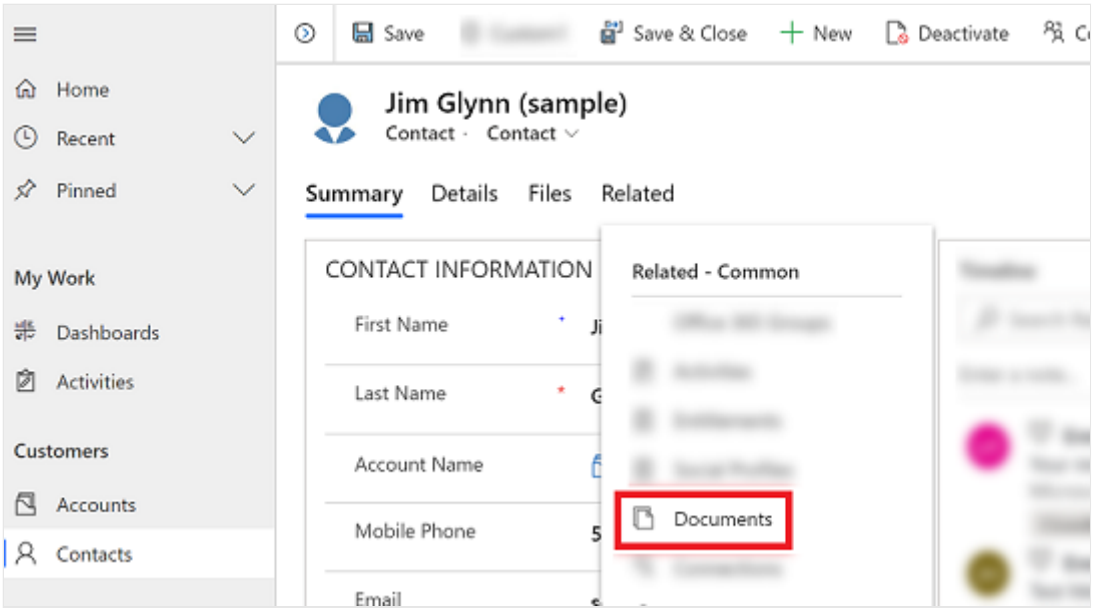


5. Select **Change folder location** to pick a new location to store OneDrive documents, or select **Continue** to accept the default folder location.

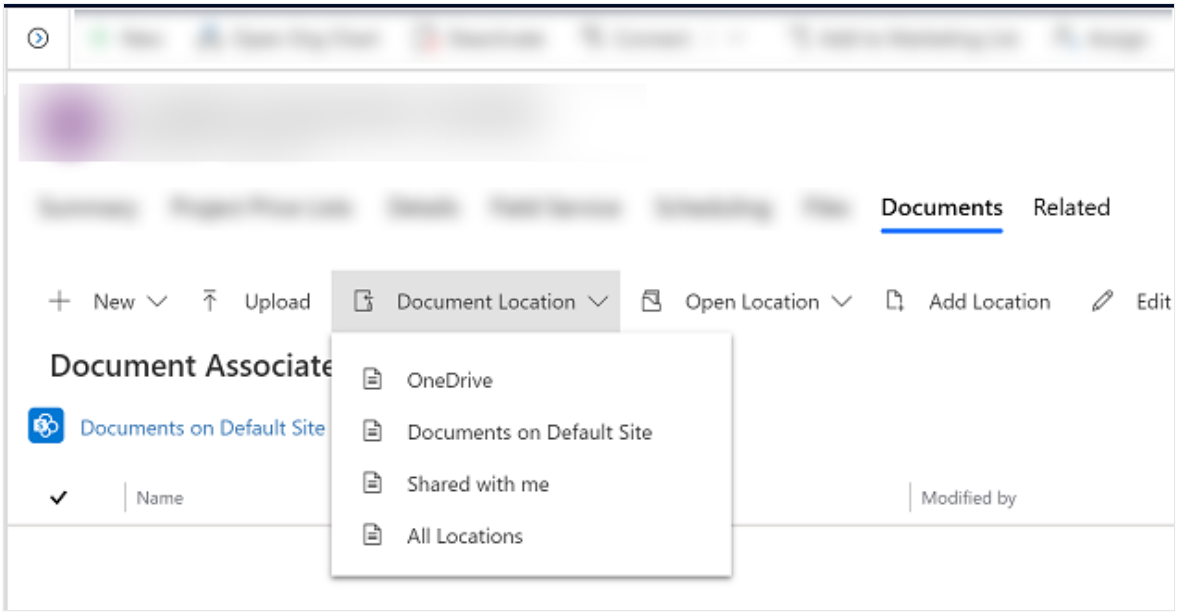
View existing OneDrive documents

1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.

2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location** to filter the document list.



4. Select a location as described in the following table.

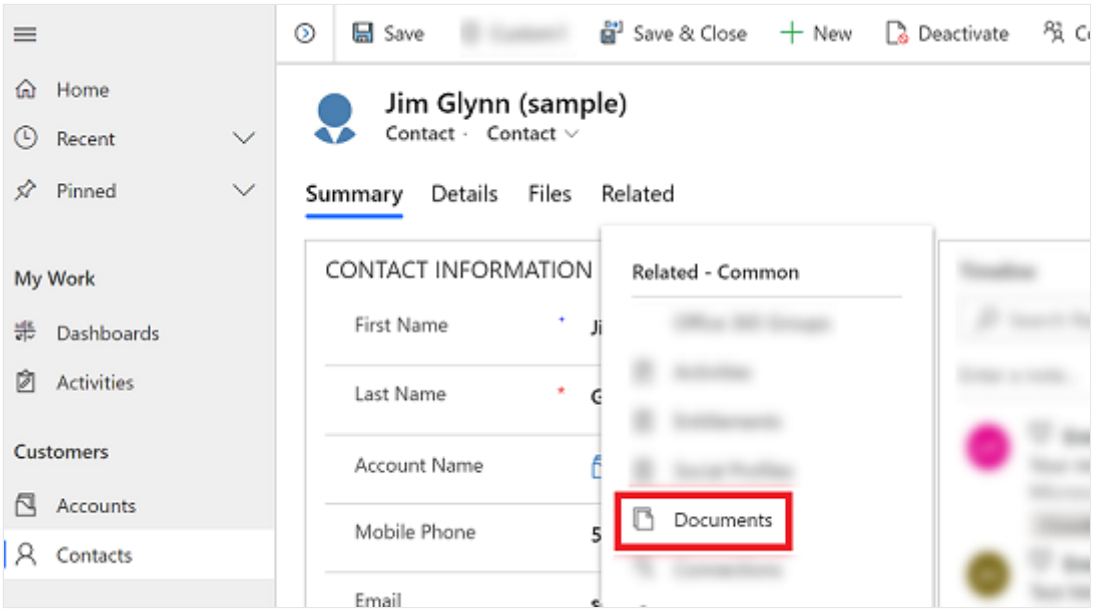
Document Location	Description
OneDrive	Documents stored in OneDrive for Business
Documents on Default Site	Documents stored in your default SharePoint site
Shared with me	Documents that others shared with you that are associated with this row
All Locations	All document locations associated with this row

5. After you select a location, you'll see the documents saved in that location.

Create a new document and save it to OneDrive

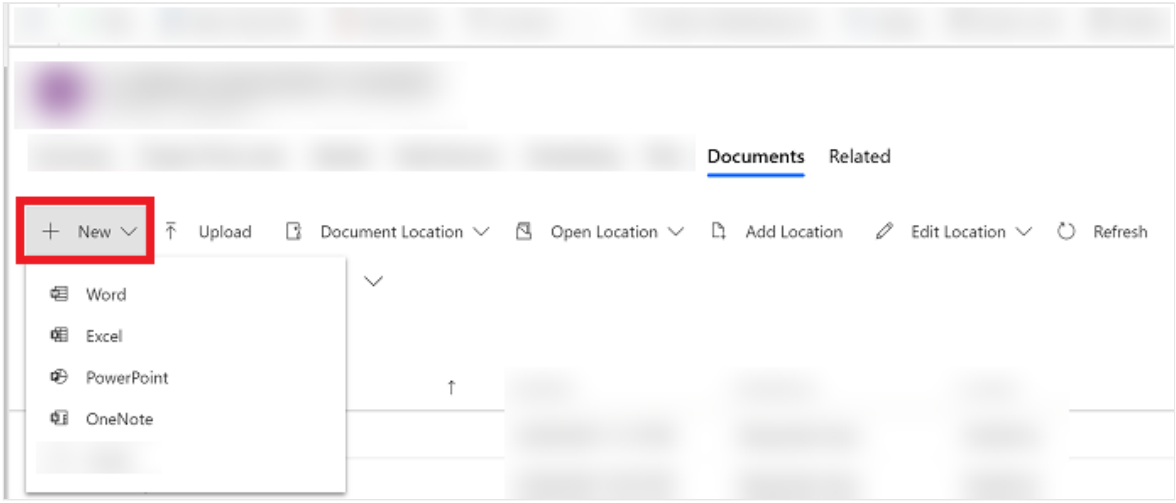
1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.

2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location**, and change the location to **OneDrive**.

4. Select **New**, and then choose a document type such as PowerPoint or Word.



5. Enter a document name, and then select **Save**.

Things to consider

Be aware of the following regarding OneDrive for Business in Dataverse:

- OneDrive storage folders are created in the user's current Dataverse language. If the language changes, new folders will be created in the new language. Old folders will remain in the previous language.
- There might be a delay between when the documents are shared in OneDrive and when they're available to other users.

Take notes by using OneNote

Article • 02/15/2022

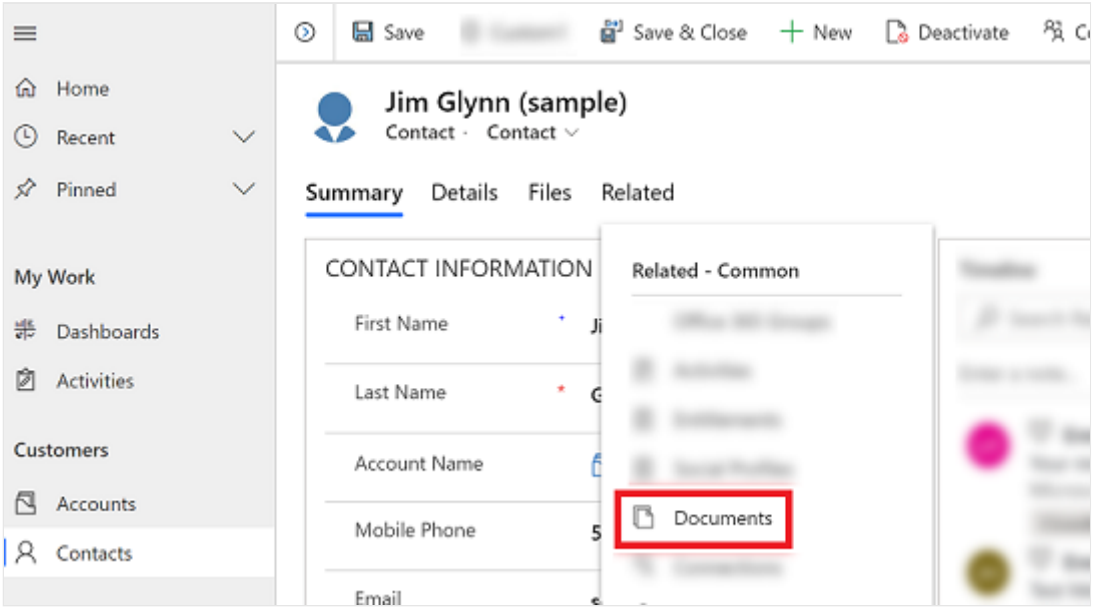
Use OneNote to take or review notes, ideas, plans, and research from the **Document Associated Grid** view of a row in Microsoft Dataverse.

Before you can use OneNote, it must be enabled by your system administrator. More information:

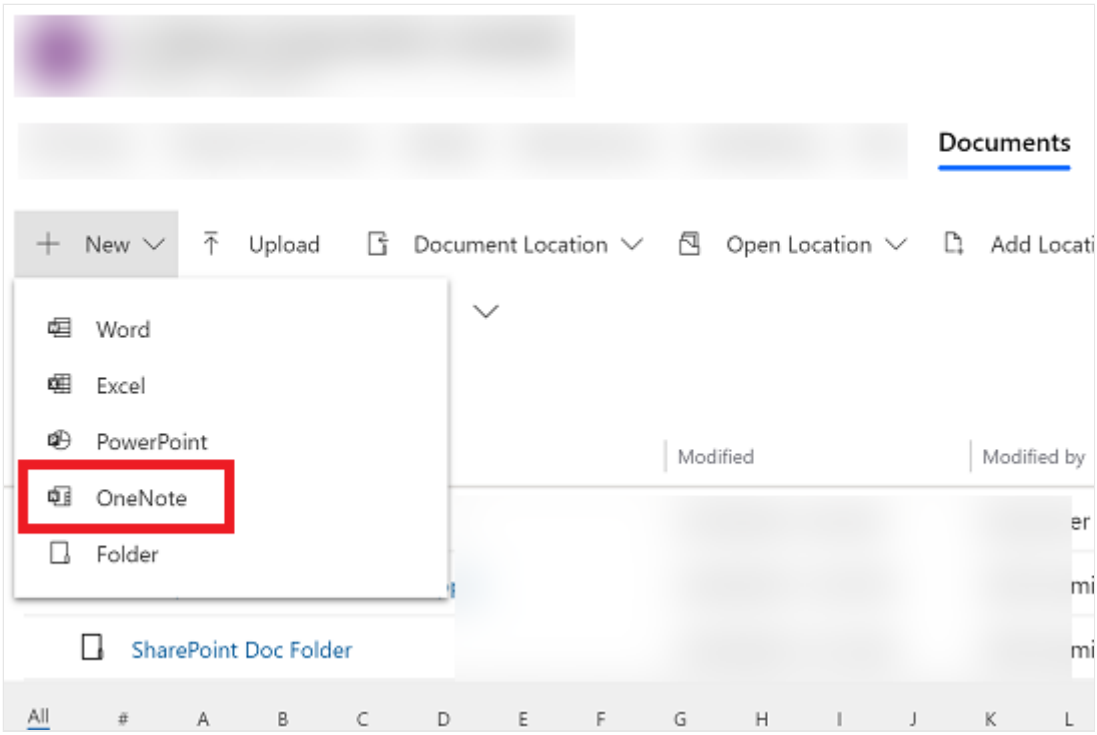
- Find your administrator or support person
- Set up OneNote integration

Start a new OneNote notebook

1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.
2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location**, and select the location where you want to save the notebook. For more information, see View existing OneDrive documents.
4. Select **New**, and then select **OneNote**.

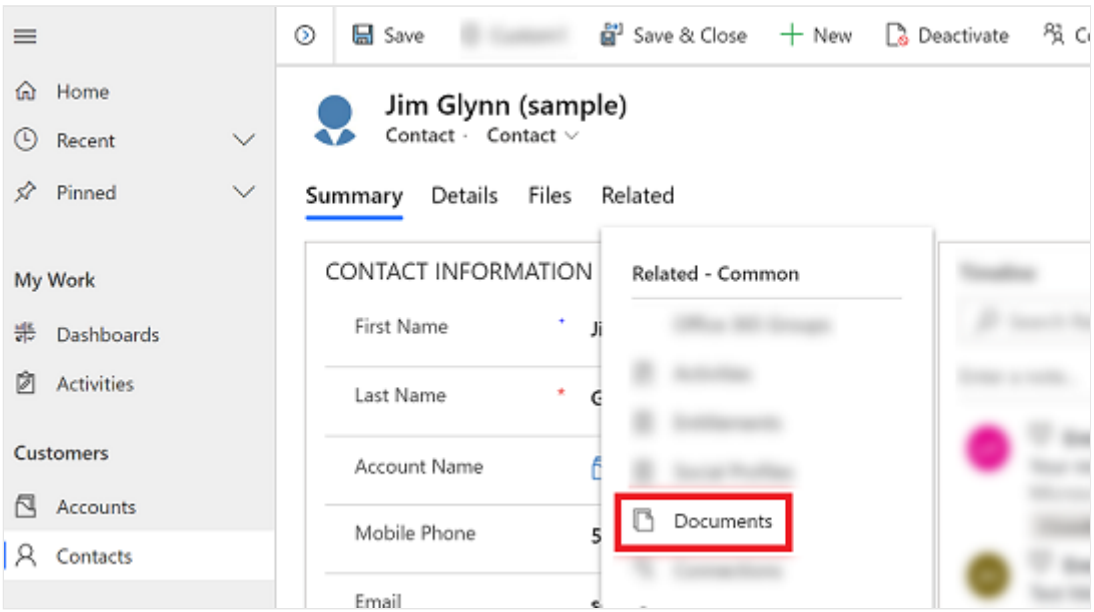


5. Enter a name for the notebook, and then select **Save**. A new notebook is created and opened.

Open an existing OneNote notebook

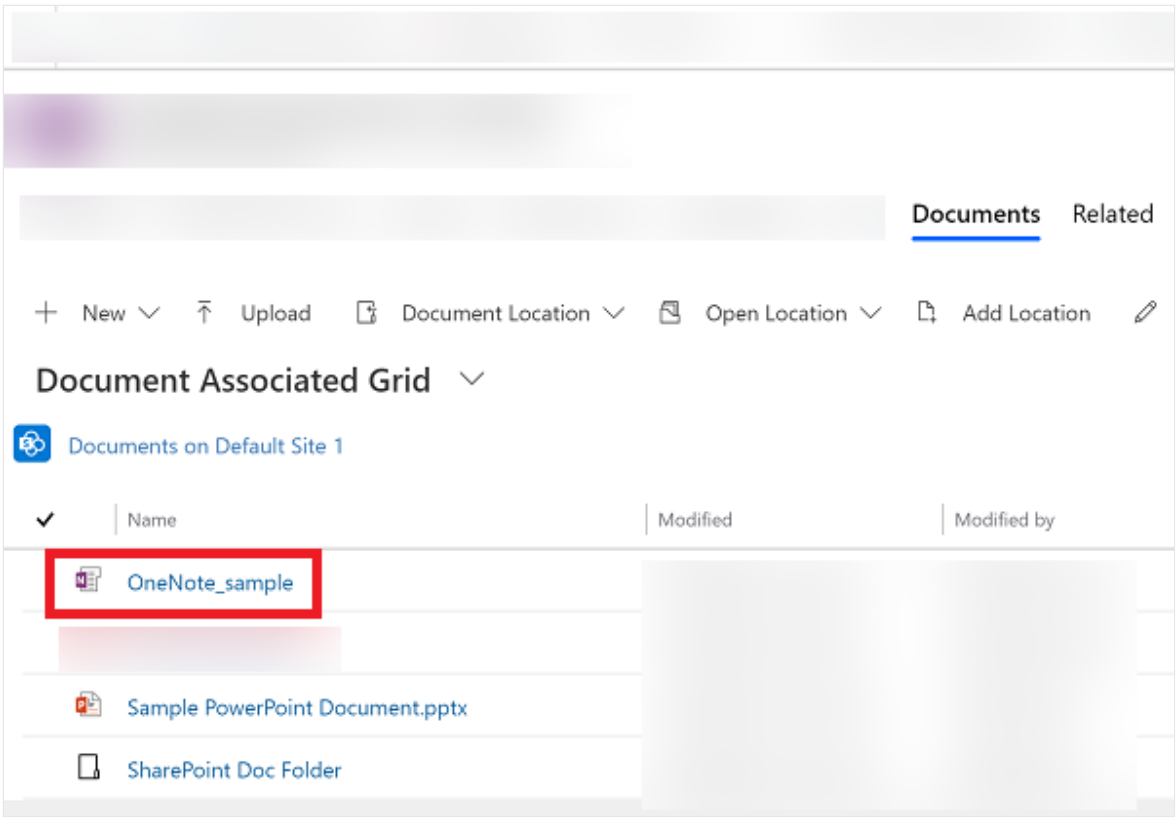
1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.

2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location**, and select the location of your notebook. For example, choose **OneDrive** if your notebook is stored on OneDrive. More information: View existing OneDrive documents

4. Select your notebook to start adding notes.



Collaborate using SharePoint

Article • 02/15/2022

With Microsoft Dataverse, you can store your documents on SharePoint and manage them from within your app. The documents that you create in your app are stored on SharePoint, and are automatically synced to your desktop and mobile devices.

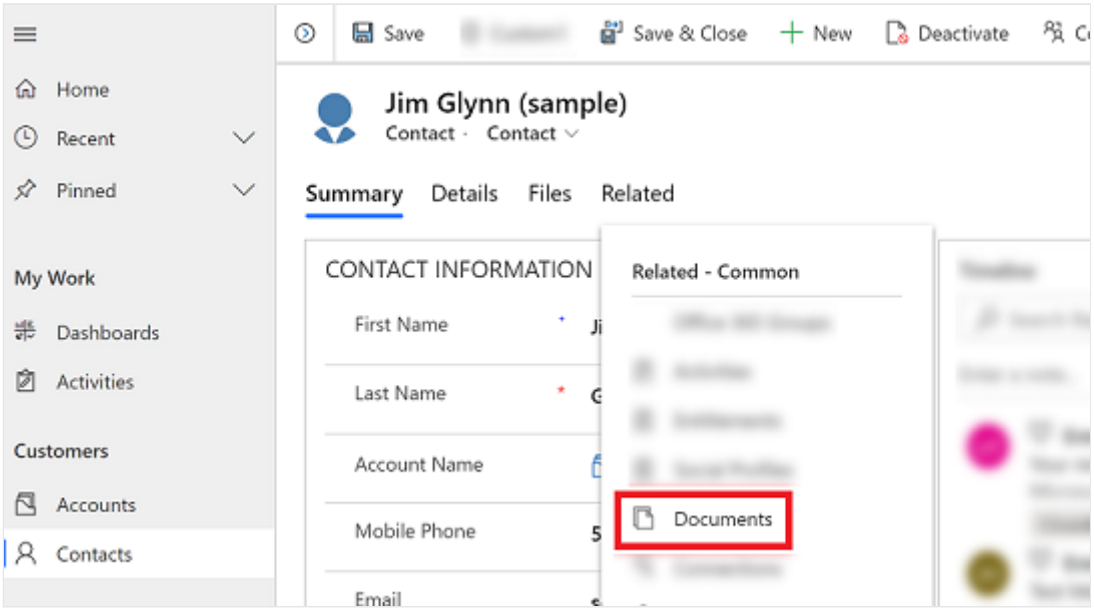
Before you can use SharePoint to store documents, it must be enabled by your system administrator. More information:

- Find your administrator or support person
- Manage your documents using SharePoint

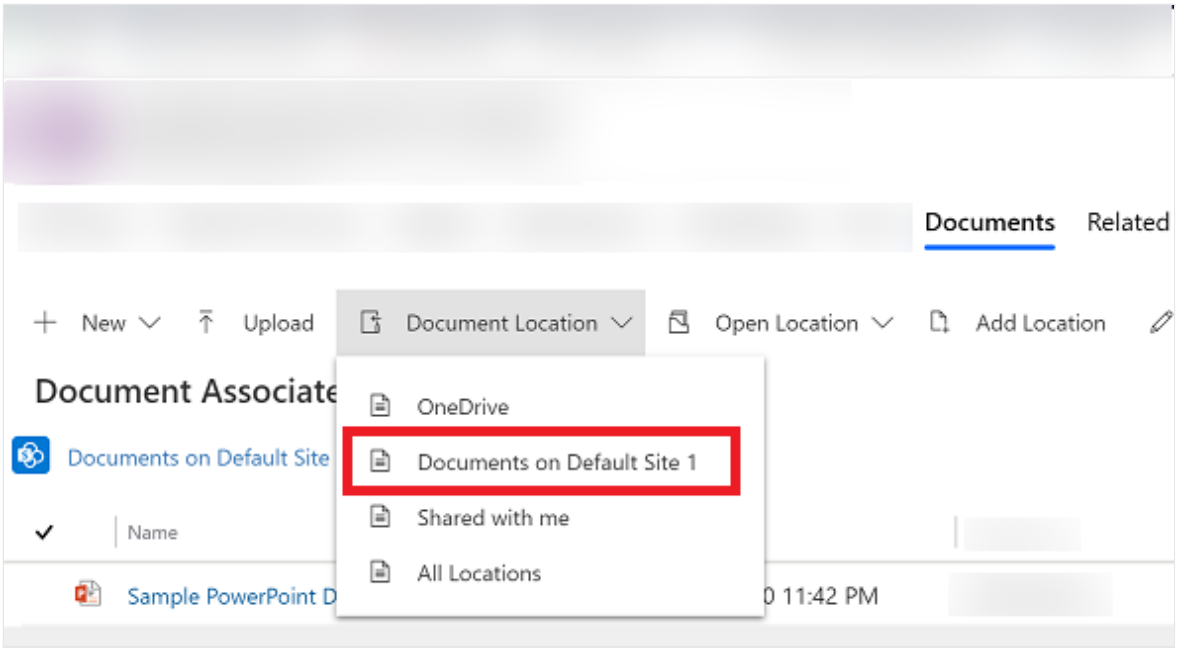
> **Important**
>
> SharePoint managed documents that are deleted using a Power Apps or Dynamics 365 customer engagement app are permanently deleted from both the app and the SharePoint site.

Where do you access the documents from?

1. For row types that support document management, open the row, select the **Related** tab, and then select **Documents**.



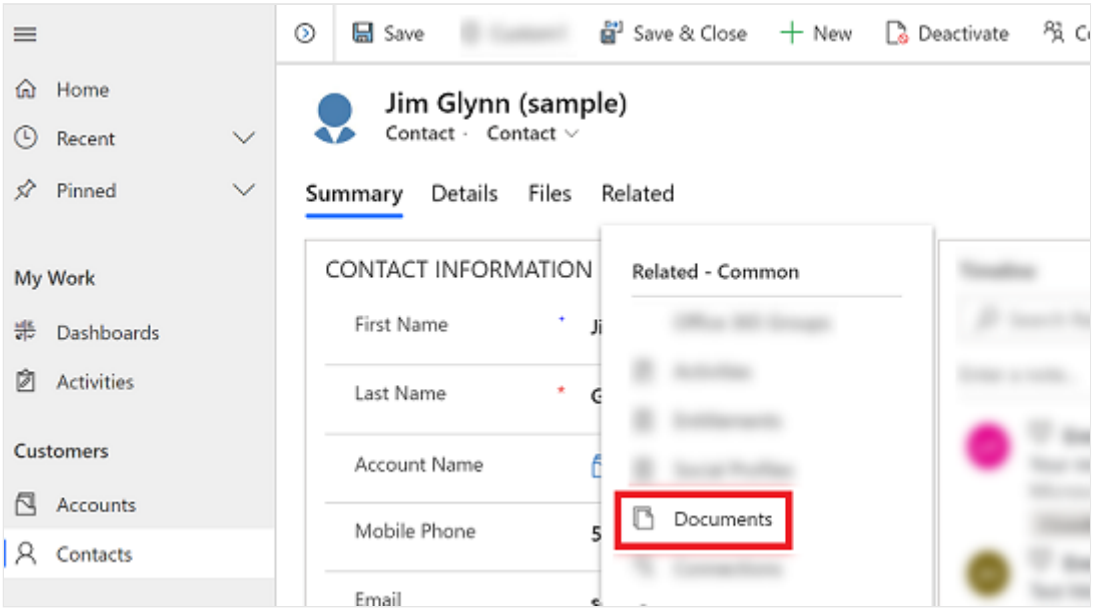
2. Select **Document Location** > **Documents on Default Site 1**. When SharePoint is enabled, the location is set to **Documents on Default Site 1** by default.



Create a new document and save it to SharePoint

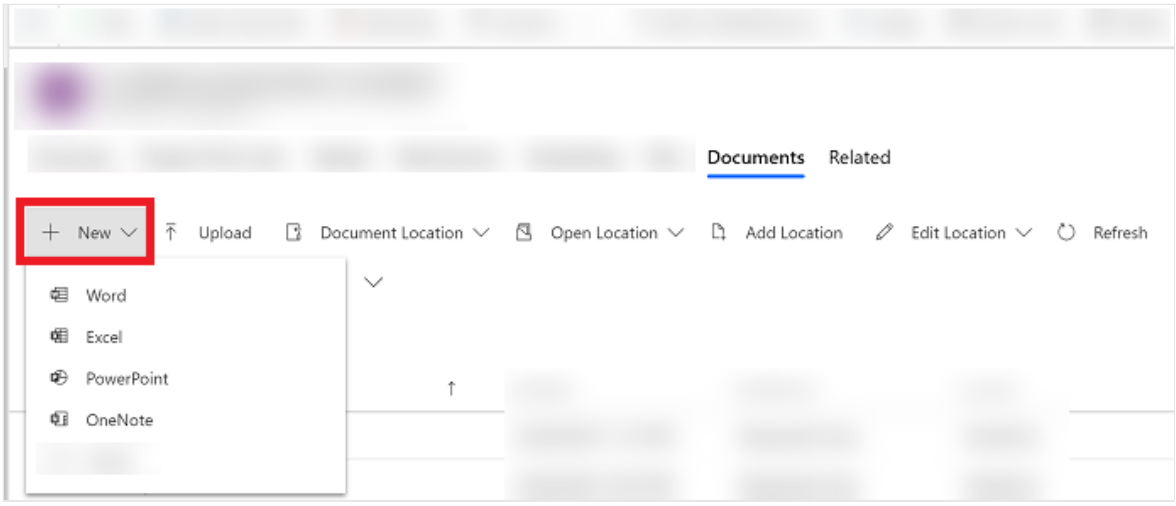
1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.

2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location**, and change the location to **Documents on Default Site 1**.

4. Select **New**, and then choose a document type such as Word, Excel, or PowerPoint.

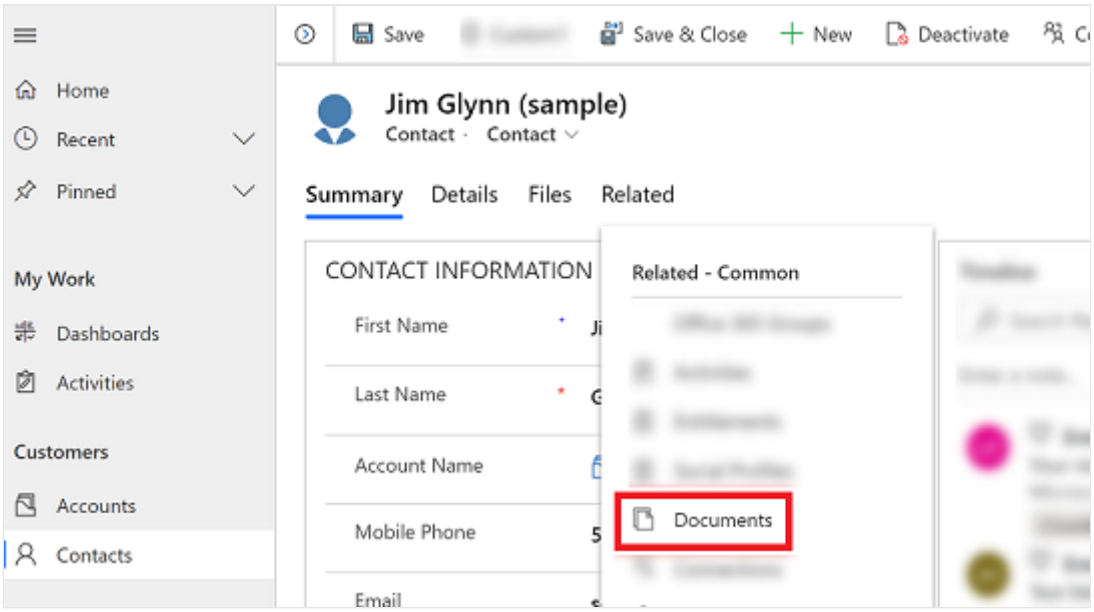


5. Enter a document name, and then select **Save**.

Create a new folder in the default SharePoint site location

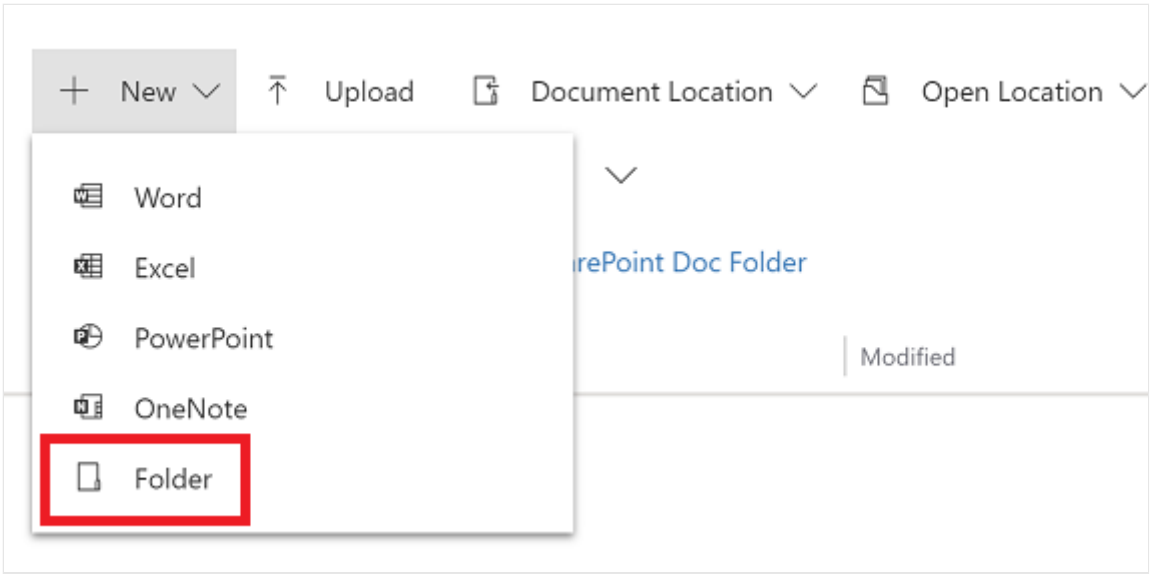
1. Open a row and go to the **Document Associated Grid** view. For example, open a contact row.

2. On the open row, select the **Related** tab, and then select **Documents**.



3. Select **Document Location**, and change the location to **Documents on Default Site 1**.

4. Select **New**, and then choose **Folder**.

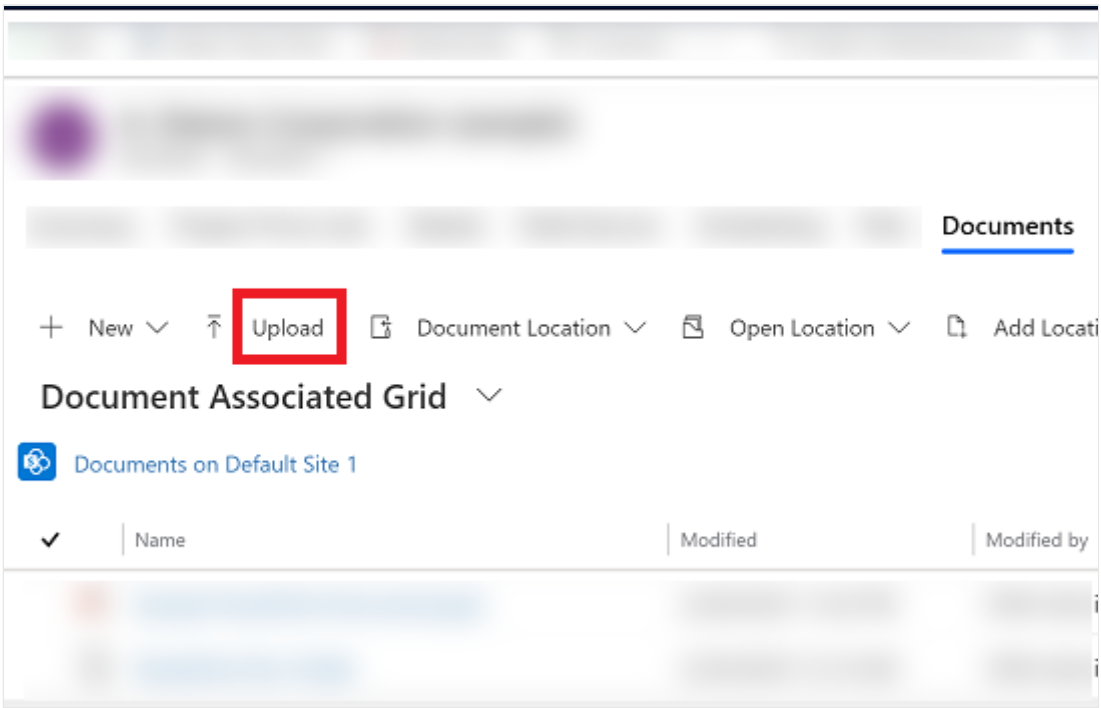


5. Enter a folder name, and then select **Save**.

Upload an existing document to SharePoint from your app

1. Go to the row you want to create the document for, select the **Related** tab, and then select **Documents**.

2. Select **Upload.**



3. Choose the file you want to upload. You can choose only one file at a time.

   The document is created in the current document location you're in.

> **Note**
>
> You can upload a file of up to 50 MB. If your internet connection is slow, you might get an error while uploading large files.

4. If files with the same name exist in SharePoint, select whether you want to overwrite the files.

5. Select **OK**.

Manage SharePoint locations

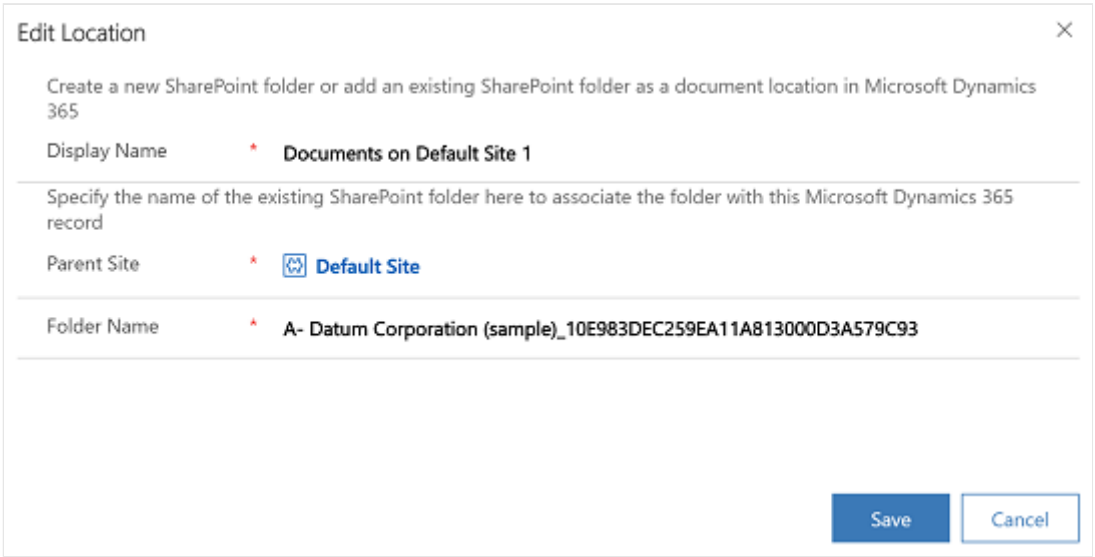
You can create new or edit existing SharePoint locations from your app in Dataverse.

Edit a location

1. Open a row, select the **Related** tab, and then select **Documents**.

2. Select **Edit Location**, and then select a SharePoint site location.

   The **Edit Location** dialog box appears.



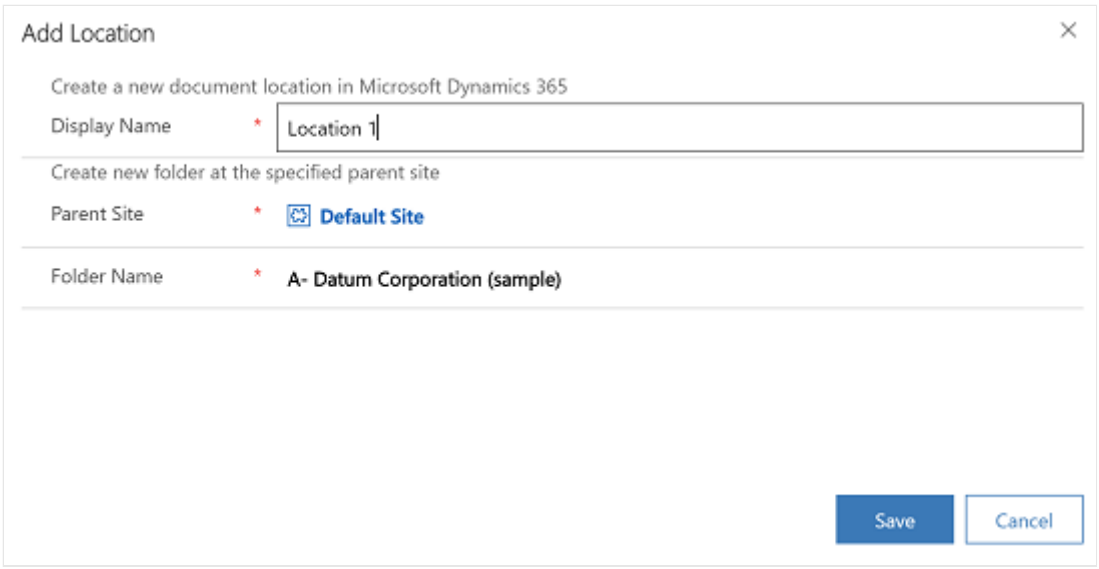
3. The display name, parent site, and folder name are automatically populated. Enter details about the new location, and then select **Save**.

Add a new location

1. Open a row, select the **Related** tab, and then select **Documents**.

2. Select **Add Location**.

The **Add Location** dialog box appears.



3. The display name, parent site, and folder name are automatically populated. Change the details if required, and then select **Save**.

Files tab FAQ

Why was the location to access documents moved?

- We moved the command to make documents easier to find with fewer clicks.

Has the Documents tab gone away?

- No, it hasn't gone away. Users can still access the documents associated with the row in question the old way, simply by selecting the **Related** menu and then the **Documents** link.

With the change, will subfolders in SharePoint still be created automatically?

- Yes. The behavior is similar to that of the **Documents** link under the **Related** menu. When a user selects the **Files** tab for the first time, the corresponding SharePoint subfolder is created by the system.

Is there a way to add the Files tab to other tables, or remove it?

- Yes. To add or remove the **Files** tab, follow the steps in this article: Add the SharePoint documents tab to the main form for a table

Manage leads

Article • 08/10/2023

Leads are potential customers who have shown interest in your products or services. Leads are the first step in the sales process. You can use Dynamics 365 Sales to manage leads and convert them into opportunities.

Configure lead management

As an administrator, you can define the lead assignment rules, qualification experience, duplicate detection rules, lead scoring rules, and so on. These settings help your sales team to follow a streamlined process for managing leads.

- Lead assignment rules: Auto-assign leads to sellers based on certain rules.
- Lead qualification experience: Give your sellers the flexibility to choose which records to create—account, contact, or opportunity—when a lead is qualified.
- Duplicate lead detection: Enable duplicate lead detection to help your sellers identify and address potential duplicate leads.
- Predictive scoring rules: Help sellers increase the probability of winning a deal based on predictions from past data.
- LinkedIn Sales Insights integration: Integrate with LinkedIn Sales Navigator so that your sellers can get the most recent and relevant data of their leads from LinkedIn.

Work with leads

As a seller, you create leads, use predictive scores to improve the lead conversion, and qualify and convert leads to opportunities.

- Create a lead: Use leads to keep track of business prospects.
- Use predictive scores: Use the predictive lead scoring feature to prioritize your leads based on scores.
- Qualify and convert: Qualify a lead to convert it into an opportunity.

Create or edit leads

Article • 09/06/2023

Create leads in Dynamics 365 to track potential new customers. A lead can be an existing client or someone you've never done business with before. You might get leads from many sources, such as advertising, networking, or email campaigns. You can add notes, activities, and related contacts to your leads.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create or edit a lead

1. In the sitemap of your sales app, select **Leads**.
2. Select **New**.
3. Enter the information you have about the lead. Only the **Topic** and **Last name** are required. All other details are optional.
4. Select **Qualify** in the process bar and select or create an account and contact.
    - If you select an account or a contact, the company name and contact address details are filled in for you if they were empty. If that information was already entered, your selection doesn't change the existing values.
    - If you create an account or a contact, Bing Maps can fill in the address details for you if your administrator has turned on address suggestions. Scroll down

to the **Address** box and start typing the street address. Select an address from the list of suggestions provided by Bing Maps.
    - When you create a lead, you can select any values for **Existing Contact** and **Existing Account** until you save the lead. After you save the new lead, you can only select values that have been filtered to avoid duplicates.

5. Select or enter the remaining details in the **Qualify** step.

6. In the **Timeline** section, add any notes or activities, like phone calls or tasks, that are related to the lead.

7. To add a contact as a stakeholder, scroll down to the **Stakeholders** section and select **New Connection**. Search for and select a contact to connect and assign the Stakeholder role. Or, select **New Contact** to create a contact, connect it, and assign it the Stakeholder role.

    - A *stakeholder* is a key contact at the account who's involved in making purchase decisions. If you associated a contact in the **Qualify** step and selected **mark complete** to identify the contact as the account's decision maker, then that contact is automatically connected as a stakeholder and assigned the Stakeholder role.
    - By default, the contact you connect is assigned the Stakeholder role. To select a different role, select the space to the left of the contact in the list, select **Edit**, and assign the correct role.

    > **Important**
    >
    > If you don't see "New Connection", it means your organization is using a customized view of leads. In that case, select the **Connections** tab, and then select **Connect** to connect a stakeholder to the lead.

8. Select the **Details** tab and enter any other information you have about your lead, such as industry and preferred contact method.

9. Select **Save & Close**.

Import leads from Excel, CSV, and XML Files

You can add leads by importing them from a Microsoft Excel, CSV, or XML file or from Microsoft Exchange. Learn how to import data into Dynamics 365 Sales.

Do more with leads

- Nurture your leads through a marketing campaign
- Research leads through social media channels like LinkedIn
- Increase your marketing and sales effectiveness (applies to the Sales app only)

Typical next steps

- Qualify a lead and convert it to an opportunity
- Get introduced to the lead through who knows whom
- Learn about the sales process, nurturing sales from lead to order
- View relationship analytics and KPIs for the lead

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Print quote, invoice, or other records

View and manage records in focused view

Article • 10/13/2023

The focused view allows you to view and manage account, contact, lead, and opportunity records and their associated activities on one page. This view makes it easier for you to stay focused on your tasks and reduces the need to navigate between multiple screens. It also allows you to better organize and prioritize your tasks.

> **Note**
>
> Focused view is now available for all entities, including custom entities. However, your administrator must enable it for you to access it. More information: **Enable focused view and set it as the default view**

The focused view is similar to the Sales accelerator workspace view. Learn how to prioritize your sales pipeline through the work list.

Open the focused view

The focused view is a centralized place to view all your open records that have activities that are due or pending, without having to navigate through multiple screens.

1. In the site map, select an entity and do one of the following actions depending on the entity:

    - For Account, Contact, Lead, and Opportunity entities, select **Focused view** on the command bar.
    - For all other entities, select **Show as** > **Focused view** on the command bar.

> **Note**
>
> - The **Focused view** option isn't displayed if a record is selected.
> - Focused view is not available for the Activities entity.
> - The records display all active activities that are created in the last 120 days.

Understand the focused view

The focused view consists of three sections.

- **Search, filter, sort, and switch view**: These options are displayed at the top of the work list item view.
  You can search, filter, and sort the records that you want to view in the list to quickly identify only the records that you want to work with. You can also switch between the focused view and the list view.

  Filters and sorting that are available here are similar to the list view. The attributes that are available in the view are displayed as filter. If you want to add more filters to the view, you can create an advanced filter.

  Create an advanced filter option using the expression builder to refine the content displayed in the work list. You can have only one advanced filter defined for an entity in focused view. Select **Edit filters** to open the expression builder. In the expression builder, create the conditions as required and then select **Apply**. When the advanced filter is applied, you will observe the filter icon is filled with a blue color, and the advanced filter tag is displayed under the filter options.

- **Records list**: All records, including records with no associated activities, for the selected entity are displayed in a card format. You can perform and complete the activities, whether manual or automated, on these cards from the current date and from previous dates. Each card displays information such as the name of the record, the primary contact name, and the next best action.

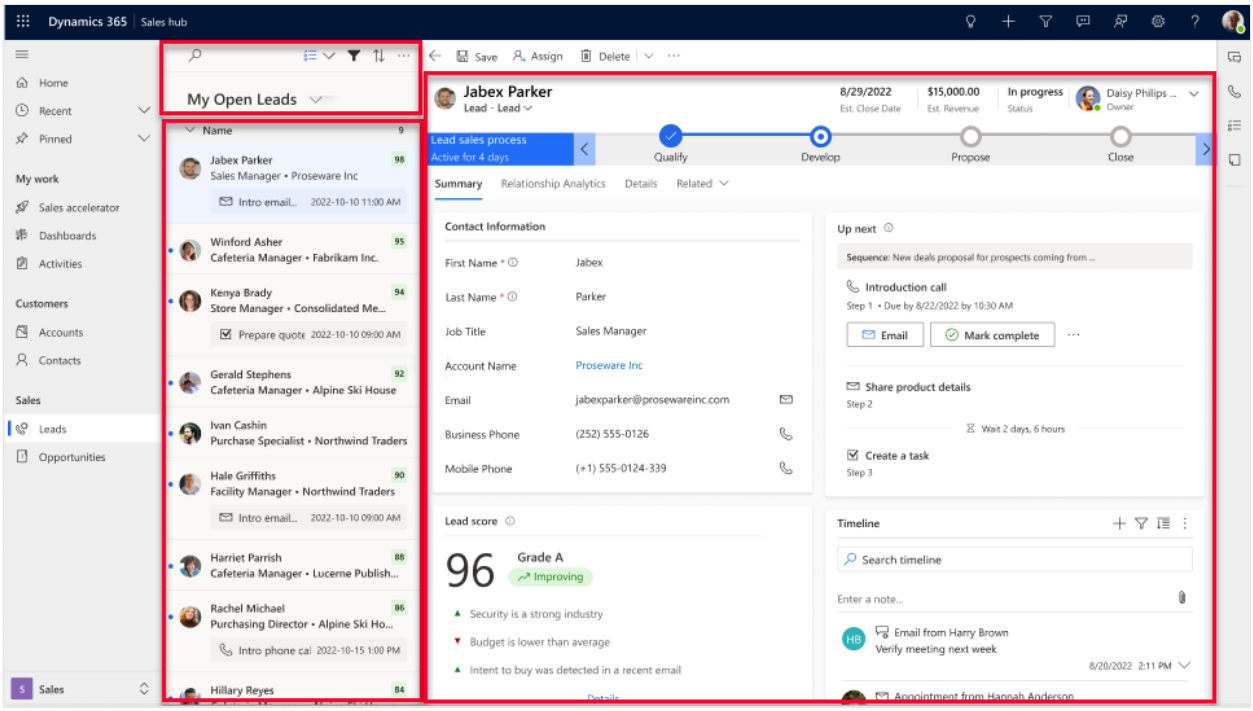
  Next best actions, include the top two activities with the latest due date. To complete the next best action, hover over the action and then select the action icon.

  When no action items are available for the record, the record displays information such as the name and contact details.

  When predictive scoring is enabled in your organization, the list also displays the score for that lead or opportunity at the top-right corner of the card. Learn more about prioritizing leads through scores and prioritizing opportunities through scores.

- **Record details**: Select a record in the work list to open a detailed view of the record on the same page.

The following image is an example of the focused view for the Lead entity:

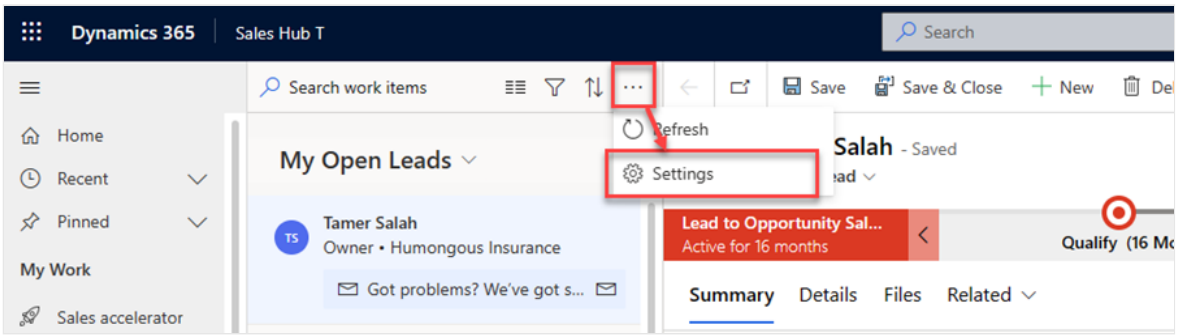


Customize the work list card

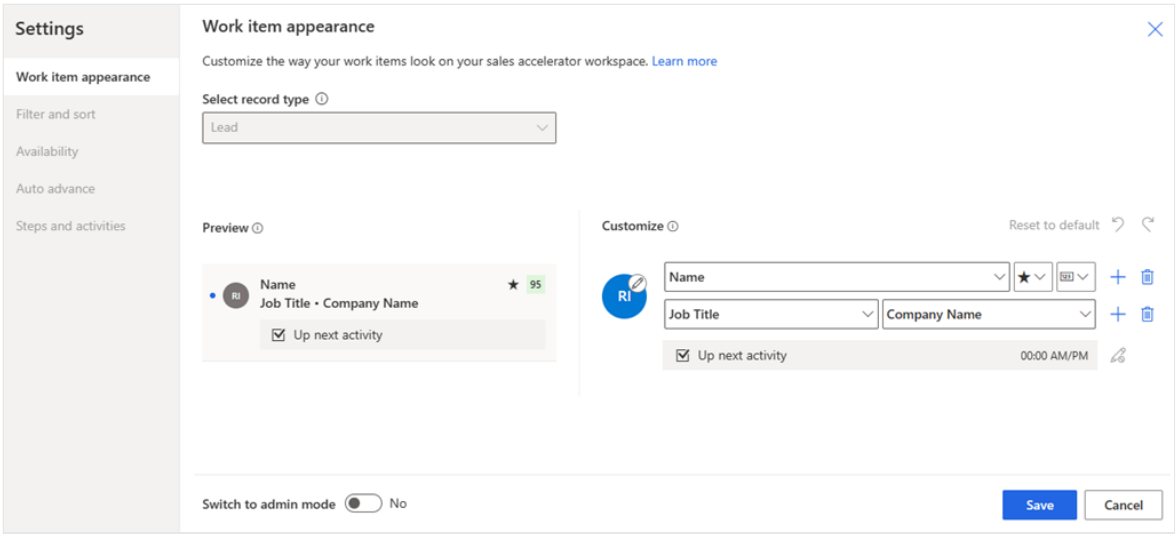
You can customize the work list card to display the information that you want to see. When sales accelerator is enabled, the customizations you make here are also reflected in the sales accelerator worklist items. More information: Customize the appearance of work items in sales accelerator

The customization that you make to the work list card is specific to the entity type. For example, if you customize the work list card for the Lead entity, the customization is applied only to the Lead entity. The customization isn't applied to the Account, Contact, Opportunity, or other entities. These customizations also effects the sales accelerator workspace view.

1. In the focused view page, on the work list pane, select **More options** and then select **Settings**.



2. In the **Settings** dialog box, select **Work item appearance**.



The following are the considerations to keep in mind when customizing the work list card in focused view:

- The **Switch to admin mode** and **Lock customization** options are available only for administrators.
- If the customization is disabled, contact your administrator to turn off the customization lock.
- When admin mode is turned on, you can customize work items for all users within your organization. When turned off, you can customize work items only for yourself. If admin mode is turned off, contact your administrator to turn it on. More information: Lock or unlock customization for other user roles
- You can't customize the action items in the work list card. Also, in preview mode, the **More options** icon isn't visible to select action items that are configured in the sales accelerator workspace view.

3. Under the **Customize** section use the following options to customize:

- To change the icon that appears on a work item, select the pencil icon, and then choose one of the following options:
  - **Record image**: A photo of the contact, if one is available
  - **Record initials**: The contact's first and last initials
  - **Record type**: The icon associated with the record type
  - **Activity type**: The icon associated with the current activity on the record
- To change the content of work items, select the fields or attributes to display:
  - To change an existing attribute, select a different one in its place from the list.
  - To add an attribute in the same row, hover over an existing attribute and select **More options** > **Add a field**. You can show up to three fields in a row.

    - To add an icon in the same row, hover over an existing attribute and select **More options** > **Add an icon**. You can show up to three icons in a row.
    - To add a row, select the add icon (+). You can show up to four rows of information in a work item.
    - To delete a field or an icon, hover over it and select **More options** > **Remove**.
  - To remove all customizations and restore work items to their original appearance, select **Reset to default**.

  The **Preview** section displays a preview of the work list card based on the customizations that you make.

4. Select **Save**.

See also

Set focused view as the default view
Prioritize your sales pipeline through the work list
Work with opportunities in the Kanban view
Customize work items
Focused view FAQs

Manage duplicate leads

Article • 08/26/2022

Identifying duplicate leads helps you to maintain a clean and accurate database of leads by removing the duplicates.

https://www.microsoft.com/en-us/videoplayer/embed/RE4UpF6?postJsllMsg=true

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

Contact your administrator to enable duplicate lead detection for your organization.
More information: Enable duplicate lead detection

Rules to identify duplicates

Duplicate leads are identified based on the following rules.

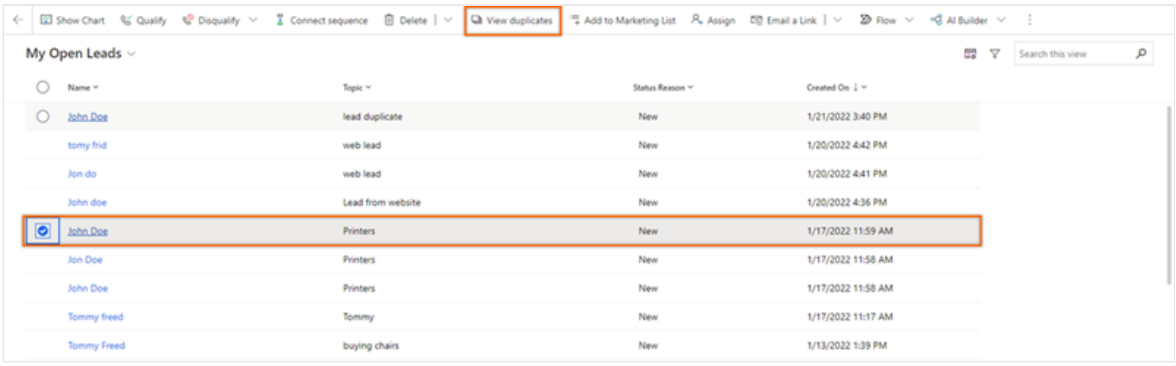
Rule	Description	Example
Same email address	The leads are displayed as duplicates when they contain the same email address, even though other values such as name and mobile number are different.	The leads Kenny Smith and John Doe have the email address employee@contoso.com. The duplicate detection feature displays the leads Kenny Smith and John Doe as duplicates, based on this rule.
Same phone number	The leads are displayed as duplicates when they contain the same phone number, even though other values such as name and email address are different.	The leads Kenny Smith and John Doe have the same phone member, +1234567890. The duplicate detection feature displays the leads Kenny Smith and John Doe as duplicates, based on this rule.

Rule	Description	Example
Similar name and company name	If the leads have a similar name and company, they're displayed as duplicates. The AI model can identify the duplicate leads even when the name and company sound similar.	For example, Regina Murphy from Contoso and Regina Merphy from Contoso.inc. In this example, the spelling of the names is different but the names sound similar.
Similar name and the same email domain	If the leads have a similar name and the same email domain, they're displayed as duplicates. The AI model can identify the duplicate leads even when the names sound similar.	For example, Regina Murphy, Regina@contoso.com, and Regina Merphy, Manager@contoso.com. In this example, the spelling of the names is different, but the names sound similar and the email domain is the same (contoso.com).

View and identify duplicate leads

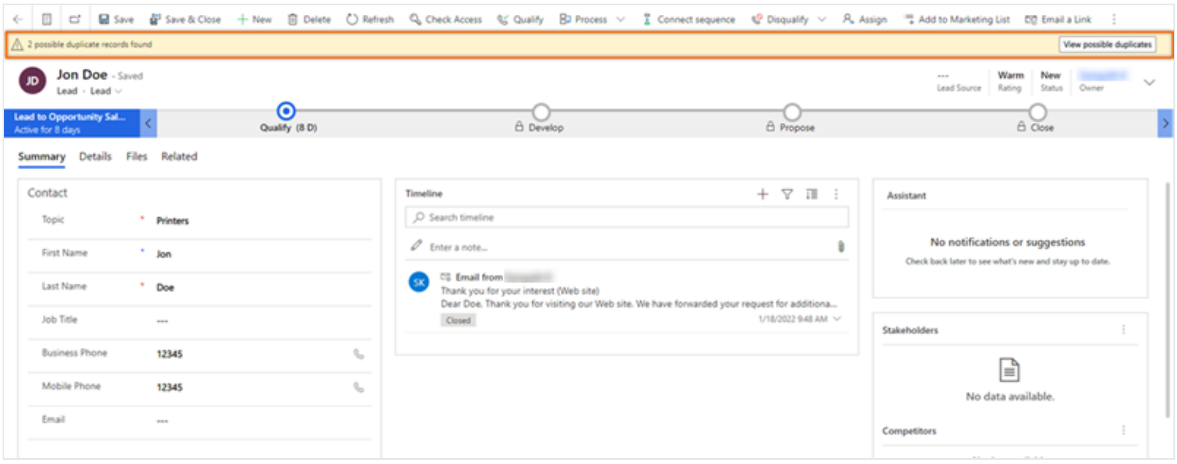
1. Sign in to Sales Hub app, and in the site map, select **Sales** > **Leads**.
2. Select a lead from the list. If the lead has duplicates, the **View duplicates** option is displayed on the toolbar.

   > **Note**
   >
   > Select only one lead to view the duplicates.

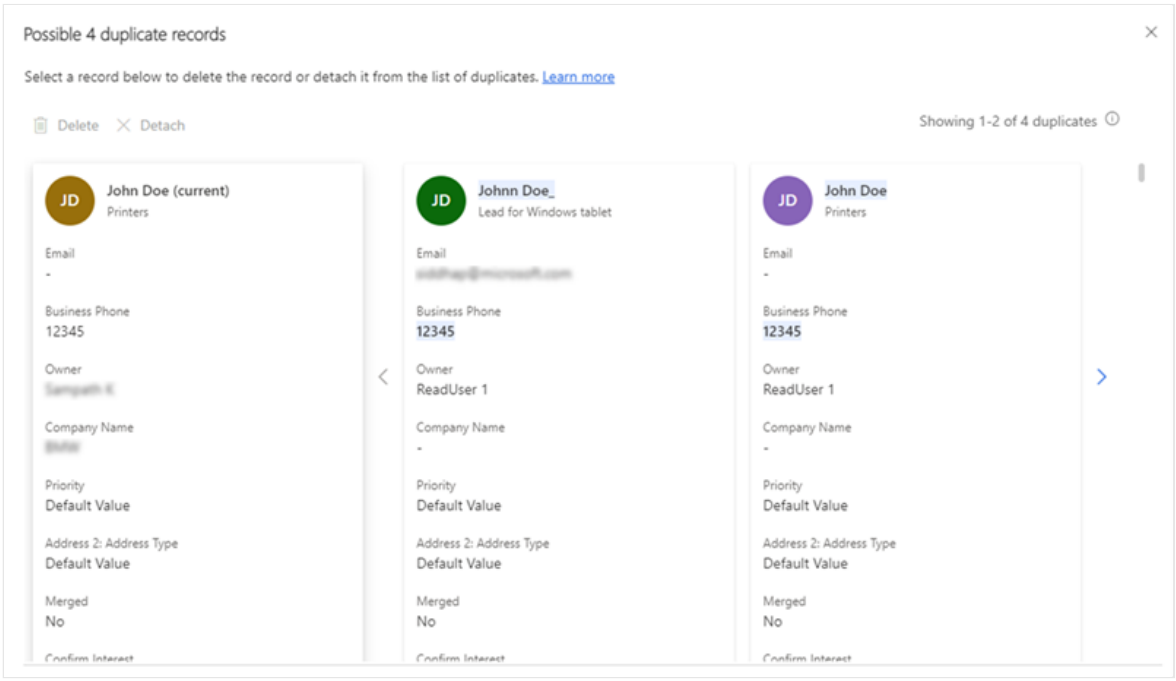
   

   or

   Open a lead. If the lead has duplicates, a message is displayed below the toolbar with the number of duplicate leads that match the open lead. Select **View possible duplicates**.



The duplicate page opens with a list of duplicate leads.



After detecting the duplicates, you can merge and maintain a single record. More information: Merge duplicate leads

Understand the duplicate list page

- The lead displayed on the left side of the page is the lead that you've selected to view duplicates. The name is suffixed with **(current)**.
- The attributes that contain similar data are highlighted across the identified duplicate leads. For example, in the preceding image, you can see that the name and the **Business Phone** are highlighted, indicating that the data is similar when compared with the selected lead.
- Only two duplicate leads are visible on the page. To view the other leads, select the right arrow. The message in the upper-right corner shows the count of the leads

you're viewing. For example, in the preceding image, the message **Showing 1-2 of 4 duplicates** indicates that you're viewing the first two leads of a total of four duplicate leads.

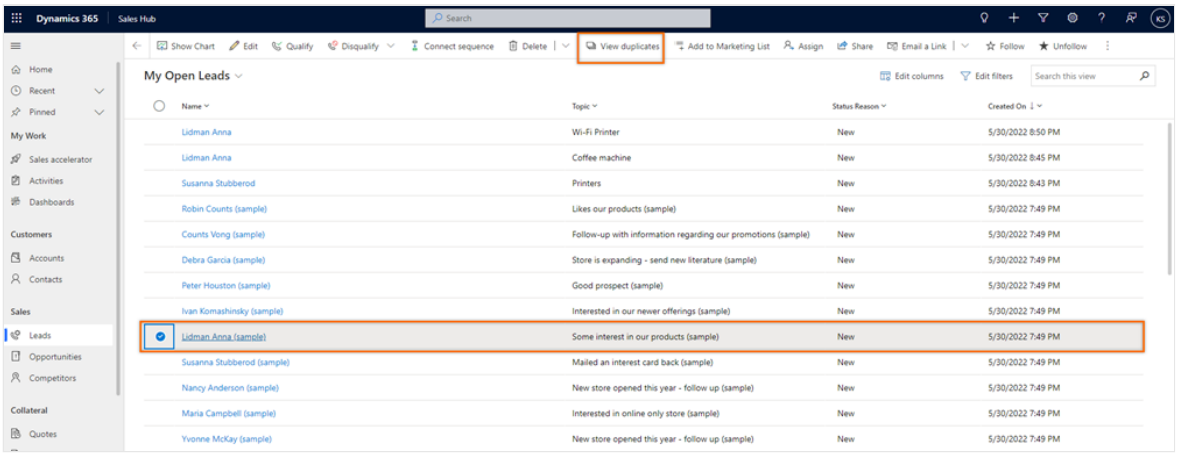
Merge duplicate leads

To work on a prospect, you first need to merge any duplicate records into a single record. With the duplicate detection feature of Microsoft Power Platform, you can only merge one duplicate with the primary record. The Sales duplicate detection feature has been enhanced so you can merge a record that has as many as four duplicates. This helps you maintain a single record with the latest information.

Let's look at the merge process by using an example of a lead named **Lidman Anna**.

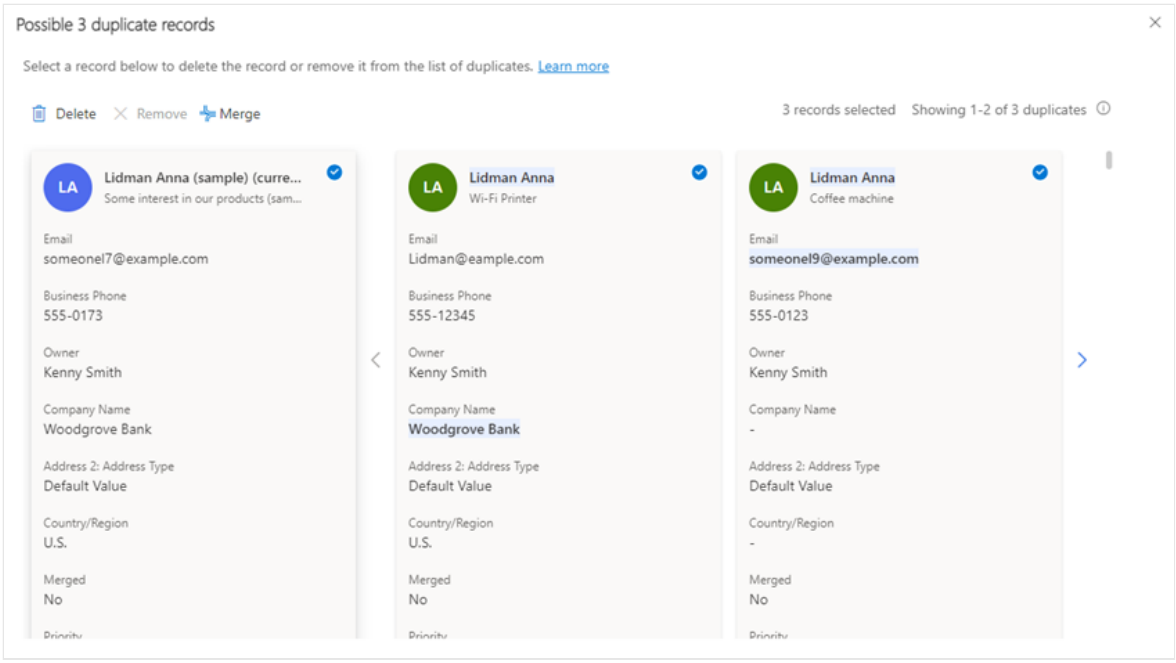
1. Open the lead as described in View and identify duplicate leads, earlier in this article.

   In this example, we're opening the **Lidman Anna (sample)** record.



2. In the duplicate records dialog, select the records that you want to merge. You can select up to four duplicate records.

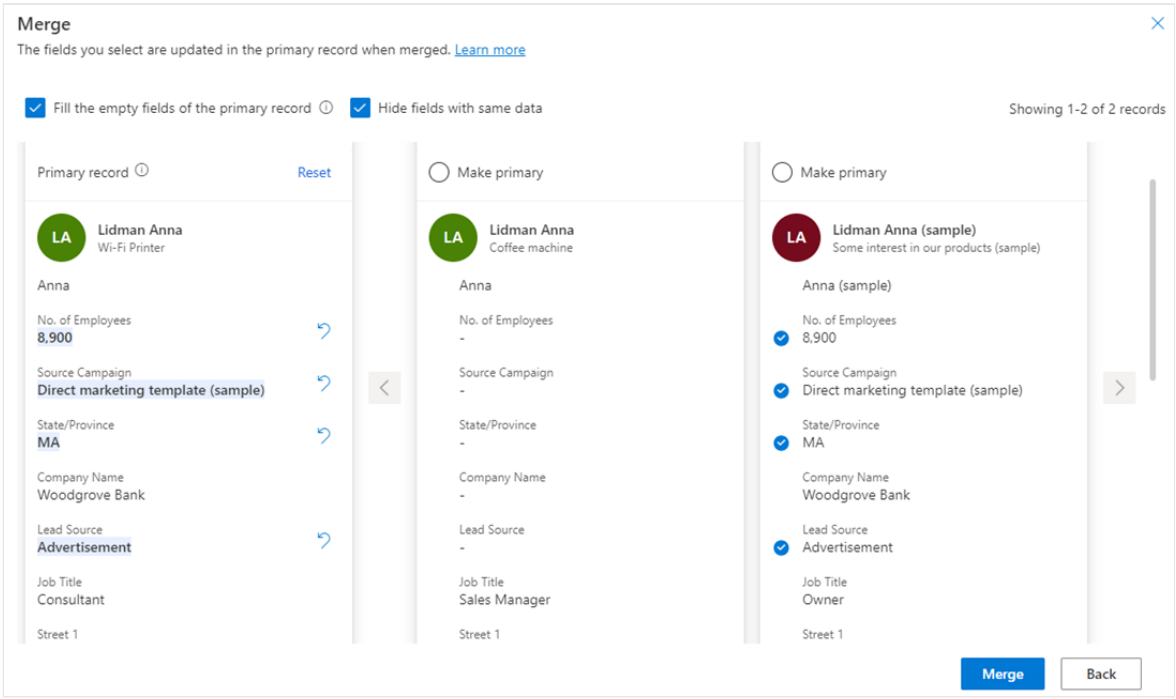
   The **Lidman Anna (sample)** lead contains three possible duplicates. Select the records that you want to merge.



> **Note**
>
> The **Merge** option will be active only when you select the current record and at least one duplicate record.

3. Select **Merge**.

   The Merge dialog opens. Let's look at it in detail.



- **Primary record**: A primary record is always the lead that has the most activities related to it or was most recently updated. For example, though we've selected **Lidman Anna (sample)** to view the duplicates, the primary

record is **Lidman Anna** with the topic **Wi-Fi Printer** because this is the record that was most recently updated.

To make another record the primary, select the **Make primary** option from the top of the record. In the confirmation message that appears, stating that the changes made to the current primary record will be lost, select **Continue**.

- **Fill the empty fields of the primary record**: If the primary record contains empty fields and the other records contain values for those fields, select **Fill the empty fields of the primary record**. By default, this option is selected.

  The empty fields in the primary record will be automatically updated with the information from the next available record (in the order of display). The **Undo** icon appears next to the fields that have been updated.

  Similarly, field values that have been added to the primary record are preceded with a check mark on the record from which they've been added. In our example, you can see that field values **No. of Employees**, **Source Campaign**, **State/Province**, and **Lead Source** have been added from **Lidman Anna (sample)** to the primary record **Lidman Anna**.

  To add a value from a duplicate record to the primary record, hover over the field and select the check mark icon. In our example, if you want the lead's job title to be **Sales Manager**, select the **Job Title** field from the first duplicate record.

  To remove the value of a field, do one of the following action:

  - Select on the primary record.

    or

  - Clear the check mark next to the field on the duplicate record.

- **Hide fields with same data**: To hide fields that have similar values across all the records, select **Hide fields with same data**. By default, this option is selected.

4. Select **Merge**.

5. In the confirmation message, select **Continue**.

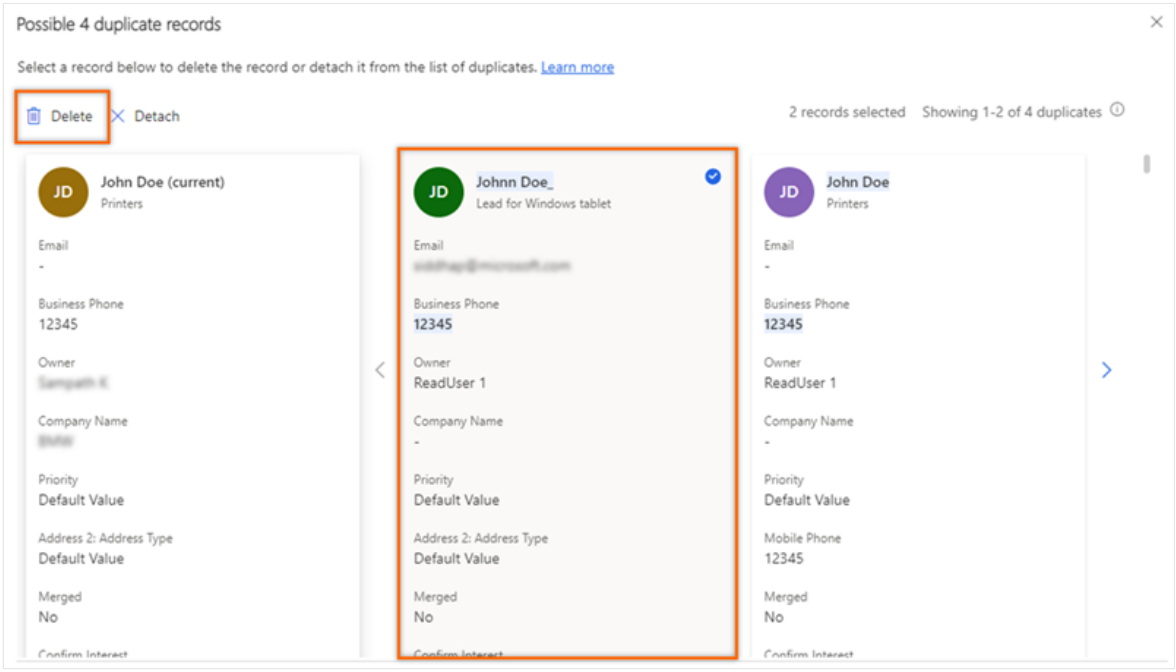
The primary record is updated, and other records are deactivated. If the deactivated duplicates contain related records, they're automatically moved under the primary record.

Delete duplicate leads

After you identify the duplicate leads, delete them to help ensure a clutter-free and actionable leads list.

1. Select the duplicate lead, and then select **Delete**.

   > **Note**
   >
   > You can delete a lead only if you're the owner of the lead or have the delete permission for the lead.



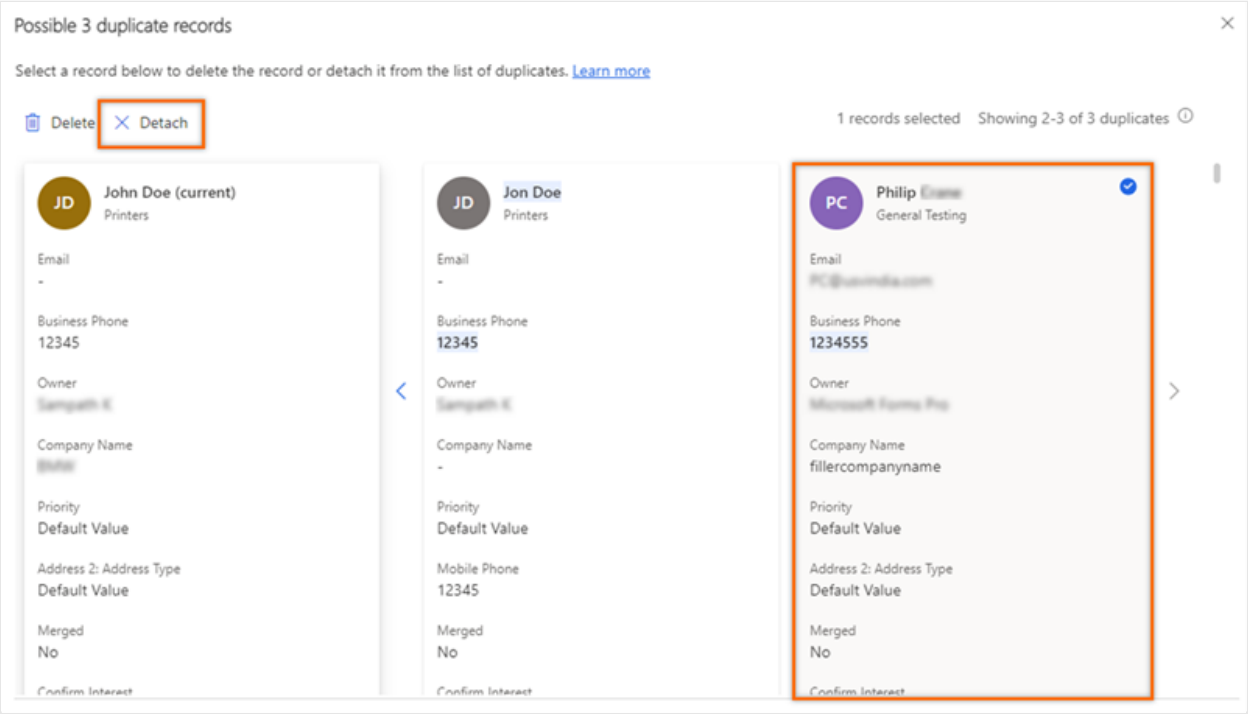
2. In the confirmation message, select **Delete permanently**.

The duplicate lead is removed from your organization.

Remove leads from the duplicates list

After you identify the leads that aren't duplicates, you can remove them from the duplicates list.

Select the lead, and then select **Detach**.



The lead is detached from the actual lead's duplicate list. However, if the detached lead occurs in the duplicates list of other leads, you must remove it from each list individually.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable duplicate lead detection

Work with invalid email addresses (preview)

Article • 07/07/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

Email validation in Dynamics 365 Sales identifies and removes non-working or invalid email addresses in your leads and contacts. This proactive validation helps you prioritize customers who have a valid email address, which in turn results in lower email bounce rates, improved engagement, and increased value for your time.

As you enter the email address in the primary email field, the validation process starts automatically. If the email address is invalid, the envelope icon turns red and hover over the cursor on the envelop icon to view the reason for the invalidation. For more information on reasons for the invalidation, see Understand email error message.

Email address validation looks for the following errors:

- **Incorrect syntax**: An address that doesn't contain both a username and an email domain
- **Disposable domain**: An address that contains a known disposable or temporary email domain
- **Test or spam email addresses**: An address that contains known indicators of a test or spam address in the email header or metadata, IP address, HTML code of the email, and email content and formatting
- **Expired email addresses**: An email account that has expired and can no longer receive or send email
- **Emails that bounce back**: An address that can't receive a message for any reason

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as Salesperson or Sales Manager More information: Primary sales roles

Prerequisite

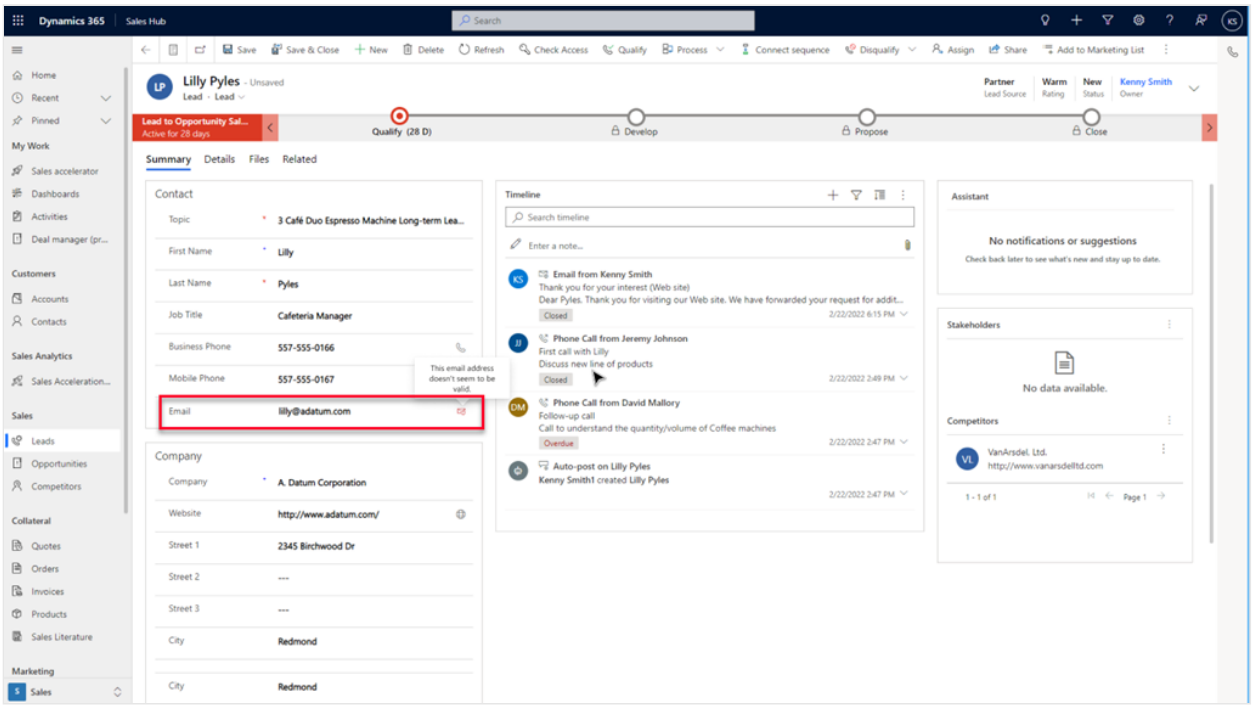
Ask your administrator to turn on email validation for your organization. More information: Enable email validation

View invalid email addresses

You can view invalid email addresses on primary record or sales insights forms, work list items, and the **Up next** widget in sales accelerator. A red envelope icon indicates an invalid email address.

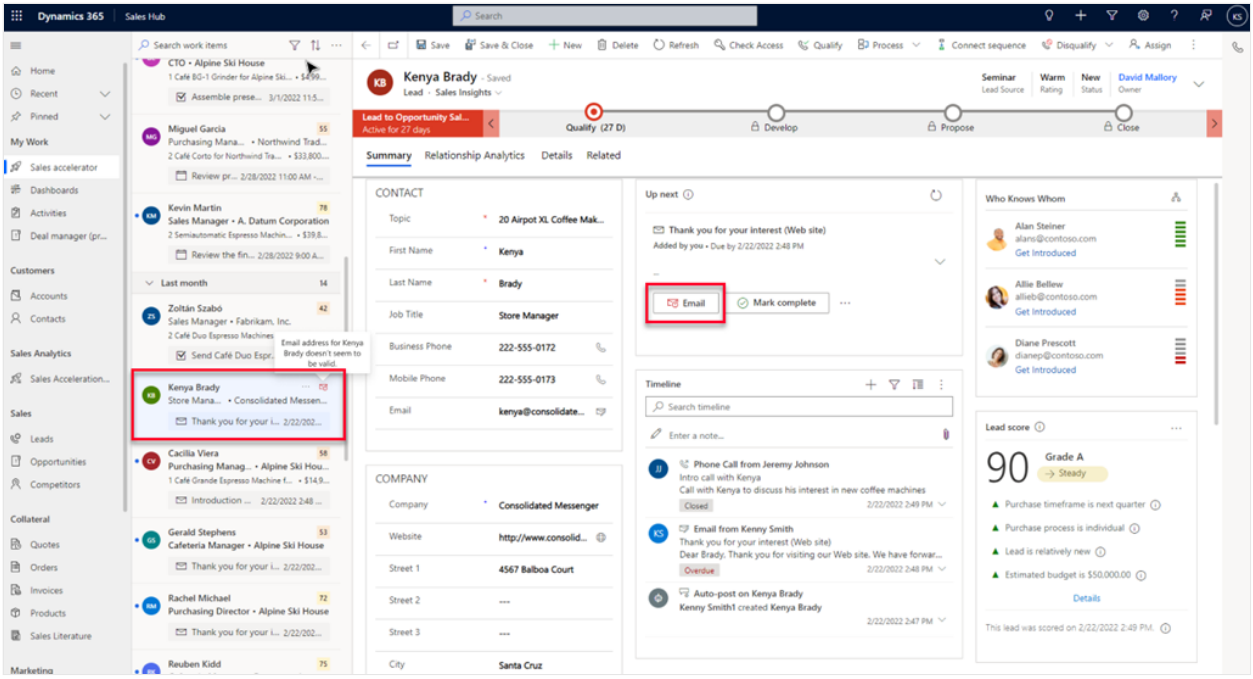
View invalid email addresses on primary entity and sales insights forms

Open a lead or contact record, and choose the primary record or sales insights form. In the following screenshot, a lead record has an invalid email address.



View invalid email addresses on the Up next widget and work list items

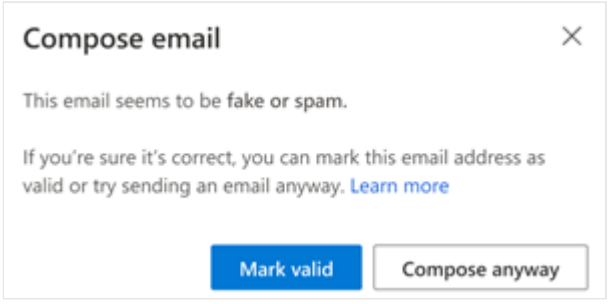
Go to a record in sales accelerator with email as the current activity.



Send an email to an invalid address

You can send a message to an email address that's marked as invalid. When you select the option to send email, a notification tells you the reason the email was marked as invalid. You can perform the following tasks in the notification:

- If you know the email address is valid, select **Mark valid**. The address is marked as valid and the alert is removed. Compose and send the email.
- If you don't know the email address is valid but you still want to send an email, select **Compose anyway**. Compose and send the email.



You can also send email to an invalid address by creating a manual email activity in the timeline.

Understand email error messages

Error message	Description
This email doesn't seem to be valid as the domain expired recently	The email domain recently expired. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain has expired	The email domain has expired. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain is invalid	The email domain is misspelled or can't be found for some other reason. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as it belongs to a temporary domain	The email domain is a known disposable or temporary domain. We recommend you exercise caution while engaging with this email address.
This email address may be invalid as it's a mailing list, and not an individual's email	The email address belongs to a mailing hub or hub email address, not to an individual. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the email address is malformed	The email address isn't in the expected format, *username@domain*. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the email address doesn't exist	The alias or username in this email address can't be found. We recommend you exercise caution while engaging with this email address.
This email doesn't seem to be valid as the domain is unknown	The email domain can't be found. We recommend you exercise caution while engaging with this email address.
This email seems to be spam	The email address or domain is a known source of spam. We recommend you avoid engaging with this email address.
This email seems to be fake	The email address has a fraught alias. We recommend you avoid engaging with this email address.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable email validation

Prioritize leads through scores

Article • 05/11/2023

Use the predictive lead scoring feature to prioritize your leads based on scores and achieve higher lead qualification rates.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What is predictive lead scoring

In a highly competitive market, you need to be sure you're spending your time on high-quality leads to reach your sales targets. The predictive lead scoring feature in Dynamics 365 Sales uses a model to generate scores for the leads in your pipeline. The out-of-the-box model chooses the top factors that influence the score. An administrator can view and modify the top influencing factors by customizing the model. Learn how to configure predictive lead scoring.

The model assigns a score between 0 and 100 to leads based on the signals from leads and related entities, such as contact and account. Using these scores, you can identify and prioritize leads that have a higher chances of converting to opportunities.

For example, say you have two leads - Lead A and Lead B - in your pipeline. The lead scoring model applies a score of 80 for Lead A and 50 for Lead B. Comparing the scores, you can predict that Lead A has a higher chance of converting to an opportunity. Also, you can analyze why Lead B scored low by looking at the top reasons influencing its score and decide whether to try to improve it.

To use predictive lead scoring in your organization, ask your system administrator to configure predictive lead scoring.

Real-time scoring

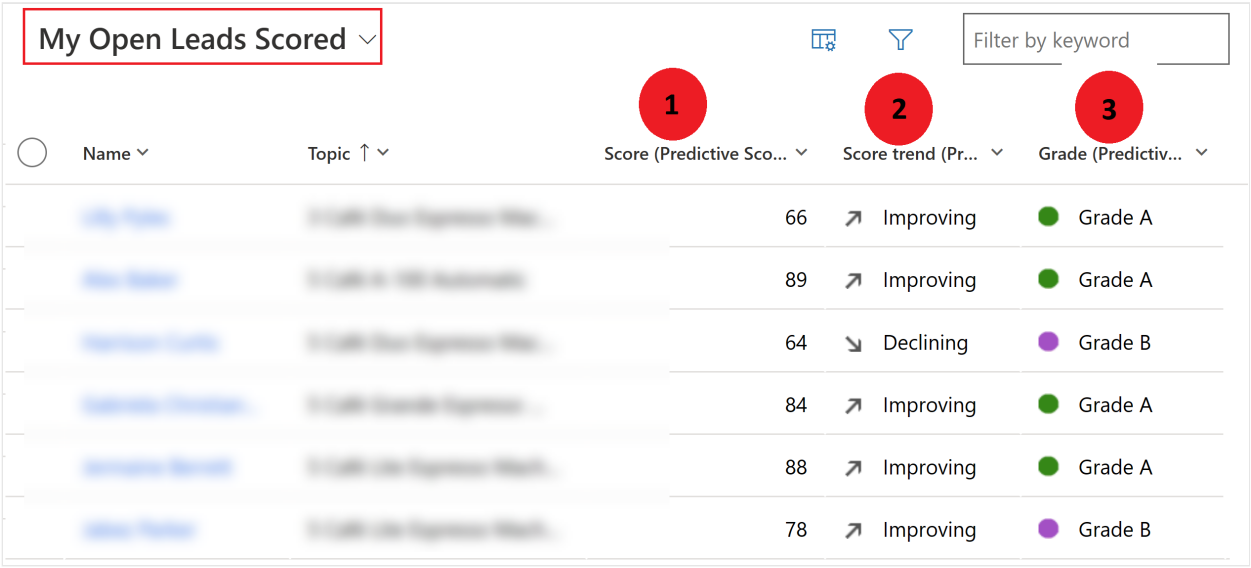
With real-time scoring, new leads are scored in near real-time. The score will be calculated within a few minutes of saving or importing a new lead; refresh the lead page to view the score.

The following considerations apply for real-time scoring:

- Real-time scoring is available only for leads that are scored by models created or edited, and published after the real-time scoring was feature rolled out. So, if a new lead is not scored within 15 minutes of saving or importing, edit and retrain the model that's scoring the lead.
- Business process flows are not taken into consideration for real-time scoring. Lets say you have different models for each business process flow, with the same filter condition. When a new lead that matches the filter condition is created, real-time scoring will use one of models to score the lead, ignoring the business process flow.
- Real-time scoring works only for new leads. The scores for updated leads are refreshed only after every 24 hours.

Understand predictive lead scoring in views

The **My Open Leads Scored** system view is available when predictive lead scoring is enabled in your organization. This view provides a list of leads with different parameters including lead score, lead grade, and lead score trend.



Legend:

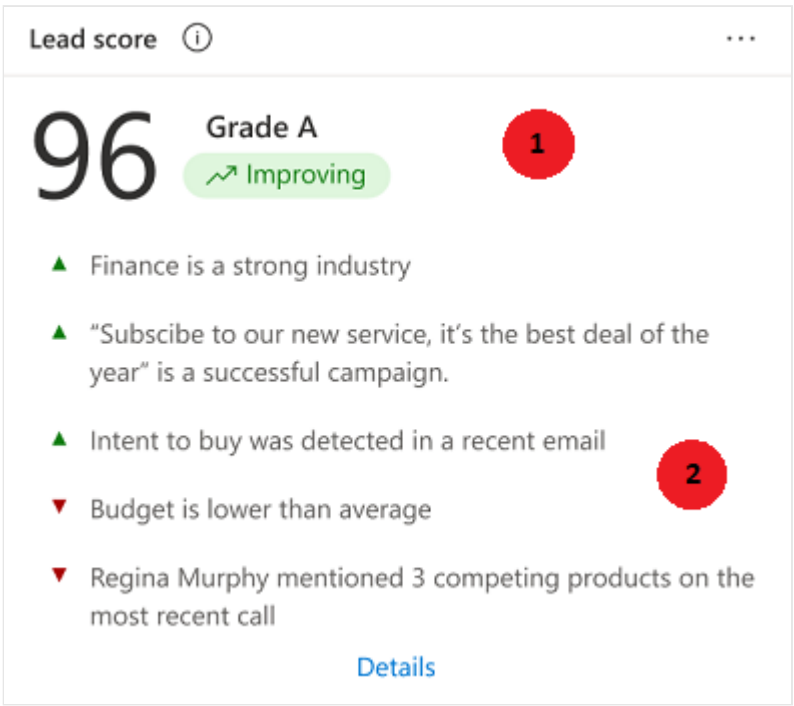
1. **Score** shows the likelihood, on a scale of 1 to 100, that the lead will convert to an opportunity. A lead with a score of 100 has the highest likelihood of converting to an opportunity. The scores are refreshed after every 24 hours.

2. **Score Trend** shows the direction in which a lead is trending, such as **Improving** (up arrow), **Declining** (down arrow), **Steady** (right arrow), or **Not enough info**. Trends are calculated by comparing the current lead score with the previous score. For example, if a lead was scored 65 and is now scored 45, the **Lead Score Trend** column displays a down arrow to indicate that the lead is losing traction and needs some action from you to improve the score.

3. **Grade** ranks leads based on the generated score. Leads with higher grades have more chances of converting to opportunities. Grades are categorized as A, B, C, and D, with colors green, purple, yellow, and red, respectively. Grade A (green) is the lead with the highest likelihood for conversion to an opportunity. Grade D (red) is least likely to convert. System administrators can define lead score ranges for a grade, depending on your organizational requirements.

Understand lead scoring widget

In forms, the Lead score widget displays the top positive and negative reasons that influence the score. These reasons come from the lead attributes and attributes from related entities. The reasons help you analyze and work on the lead to improve its score and convert it to a possible opportunity. The following image shows a typical **Lead score** widget.



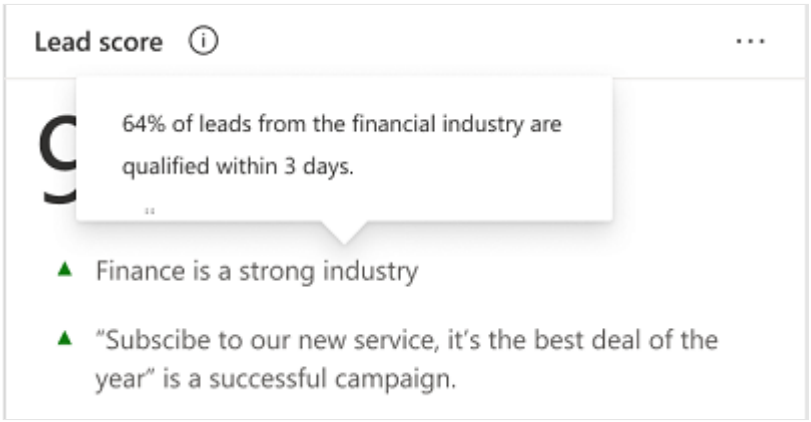
Legend:

1. This section displays basic information such as lead score, lead grade, and score trend.

2. This section displays the most important reasons, both positive and negative, that affect the lead score. You can use these reasons to determine how you might convert the lead to an opportunity.

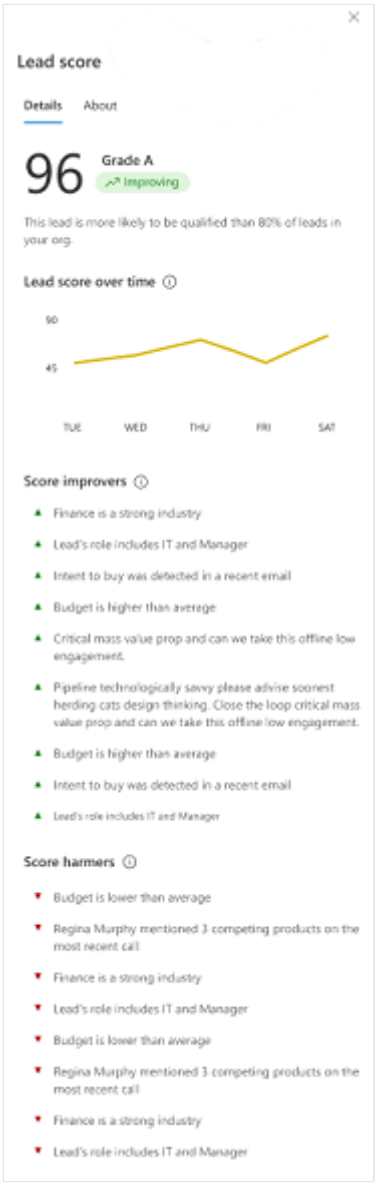
When you move your cursor over a reason, a tooltip displays an insight about what's causing the reason to be listed. You can work on this insight and take any necessary action to improve the lead.

In the following example, for the reason "Finance is a strong industry," the tooltip displays the insight "64% of leads from the financial industry are qualified within 3 days."

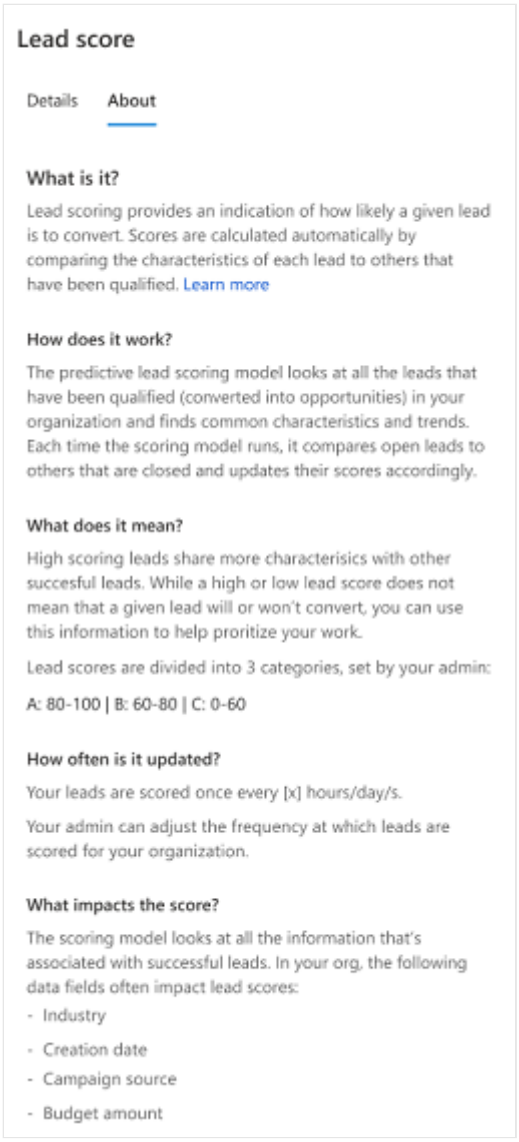


The Lead score widget displays only the top five positive and negative reasons. To view all the positive and negative reasons that are affecting the lead score, select **Details**.

The Lead score pane shows a list of all factors that improved the score and those that harmed it, along with a graph that shows how the lead score is trending over time.



For more information about the lead score, select the **About** tab. The **About** tab helps you understand what the lead score is and how it works. Under **What does it mean?**, you'll find information about how lead scores are categorized by admins in your organization. Under **What impacts the score?**, you'll find the attributes that affect lead scores in your organization.



See also

Configure predictive lead scoring

Predictive lead and opportunity scoring

Qualify and convert leads to opportunity

Article • 03/29/2023

After you've identified the time frame, budget, and purchase process for a lead, qualify the lead to create the corresponding account, contact, and opportunity.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

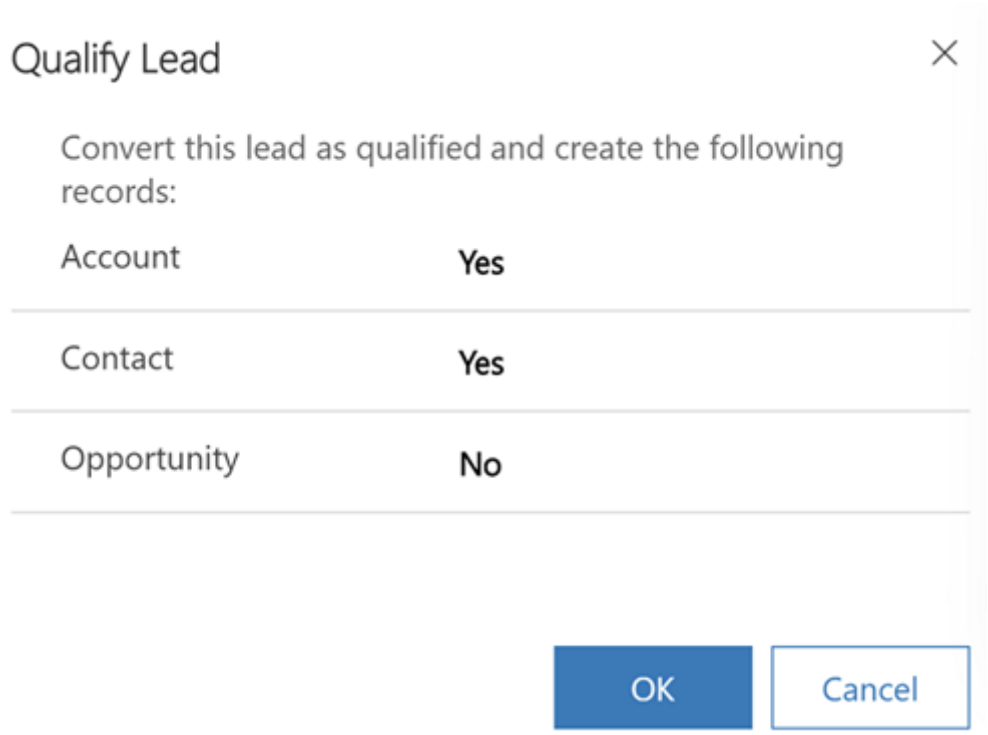
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Qualify a lead

1. In the Sales Hub site map , select **Leads**.
2. In the list of leads, open the lead you want to qualify.
3. In the **Qualify** section of the process bar, specify the following information:
   - If the lead is from an existing account or contact, select them in the **Existing Contact** and **Existing Account** fields.
   - Specify the other details such as purchase timeframe and estimated budget.

   > **Tip**
   >
   > To qualify multiple leads, go back to the leads list page and select the leads that you want to qualify.

4. On the command bar, select **Qualify**. Depending on the lead qualification experience chosen by your administrator, you'll either see a prompt for creating the contact, lead, and opportunity records or you'll see a **Processing** message and the records will be automatically created.



More information:

- What happens when a lead is qualified
- What happens when duplicates are found while qualifying leads?
- How do I handle lead qualification errors?

The lead moves to the next stage in the business process. The lead is also removed from the **My Open Leads** view and gets added to the **Closed Leads** view.

> **Note**
>
> If an opportunity isn't created when qualifying a lead, the business process flow doesn't progress to the next stage, although the lead status becomes qualified.

Disqualify a lead

When you decide that a lead won't turn into an opportunity, you can disqualify it, and still have an audit trail for your sales process. You can reactivate the record, including any attachments and notes, without having to re-enter all the data if the lead contacts you in the future. Deleting the record also removes any attachments and notes.

> **Note**
>
> You can disqualify a lead only if there's no opportunity associated with that lead.

To disqualify, select the lead, and on the command bar, select **Disqualify**.

For information on how to resolve the common errors that you may get while you qualify a lead, see the troubleshooting guide.

FAQs about lead qualification

What happens when a lead is qualified?

Your system administrator defines what happens to a lead when it's qualified:

- If your system administrator has set **Create Account, Contact, and Opportunity records by default upon qualifying a lead** to **No**, you'll be prompted to choose what records to create when the lead is qualified (account, contact, or opportunity).
- If they've set **Create Account, Contact, and Opportunity records by default upon qualifying a lead** to **Yes**, an account, contact, and opportunity records are automatically created when the lead is qualified.

Where can I find the qualified and disqualified leads?

Select **Leads** in the sitemap, and then select the **Closed Leads** view to find your qualified and disqualified leads. You can reactivate the leads if you want to qualify them again.

What happens when duplicates are found while qualifying leads?

When qualifying a lead, if a duplicate account or contact is detected while creating new records, a duplicate warning is shown to you. Depending on whether your system administrator has enabled the improved duplicate detection and merge experience, you'll see the options to resolve duplicates.

For information on enabling the improved duplicate detection and merge experience, see Enable the improved duplicate detection and merge experience.

How do I handle lead qualification errors?

While qualifying a lead, one of the following errors occur due to duplicate leads:

- Lead record was not created or updated because a duplicate of the current record already exists.
- Opportunity record was not created or updated because a duplicate of the current record already exists.

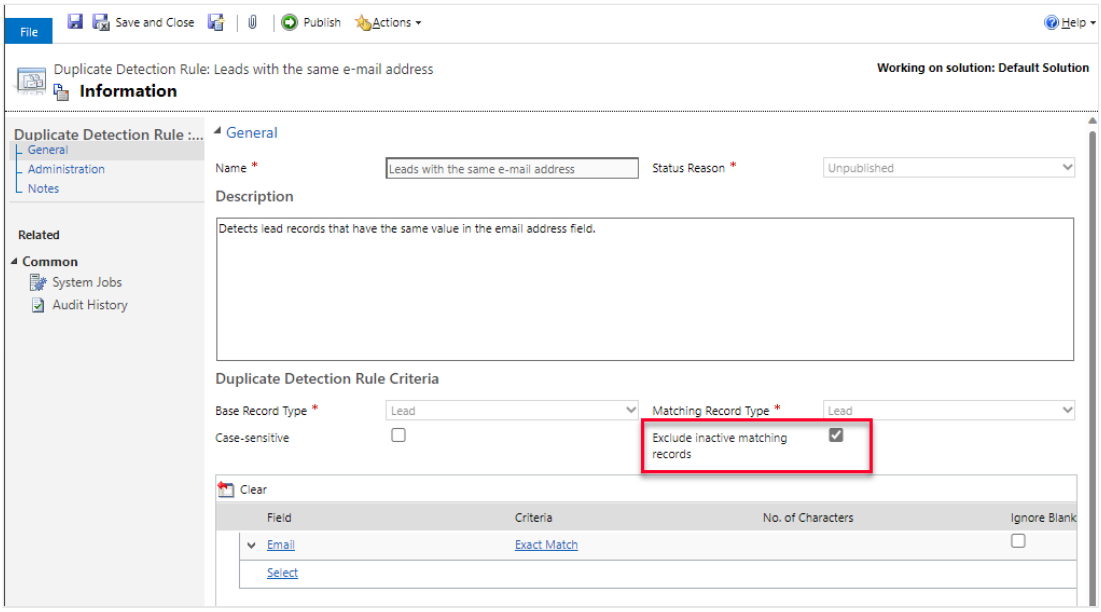
If the duplicate detection rules feature is enabled in your organization, the application won't allow qualification of leads if duplicates of that lead exist. To mitigate the issue, try the following resolutions:

- Remove the duplicates for the lead and qualify again. More information: Merge duplicate rows
- Go to the leads grid view, select the lead and qualify.
- Unpublish the rule that is causing the error and qualify the lead again. Contact your administrator to unpublish the rules using the following steps.

    1. Go to **Advanced settings** > **Settings** > **System** > **Data Management** > **Duplicate Detection Rules**.
    2. Select the rule and then select **Unpublish**.

- If a rule is required only to create or update the lead, but not required for qualification, ensure that duplicate detection rules don’t run on qualified leads. Enable the **Exclude inactive matching records** option and qualify the lead. Contact your administrator to enable the option using the following steps.

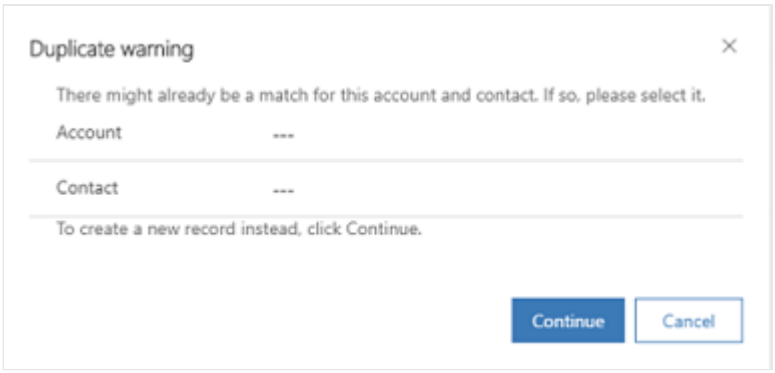
    1. Go to **Advanced settings** > **Settings** > **System** > **Data Management** > **Duplicate Detection Rules**.
    2. Open and unpublish the rule.
    3. Select the **Exclude inactive matching records** option.



4. Publish the rule.

Duplicate detection when improved duplicate detection and merge experience is disabled

When the improved duplicate detection experience is disabled, you'll see the **Duplicate warning** dialog box.

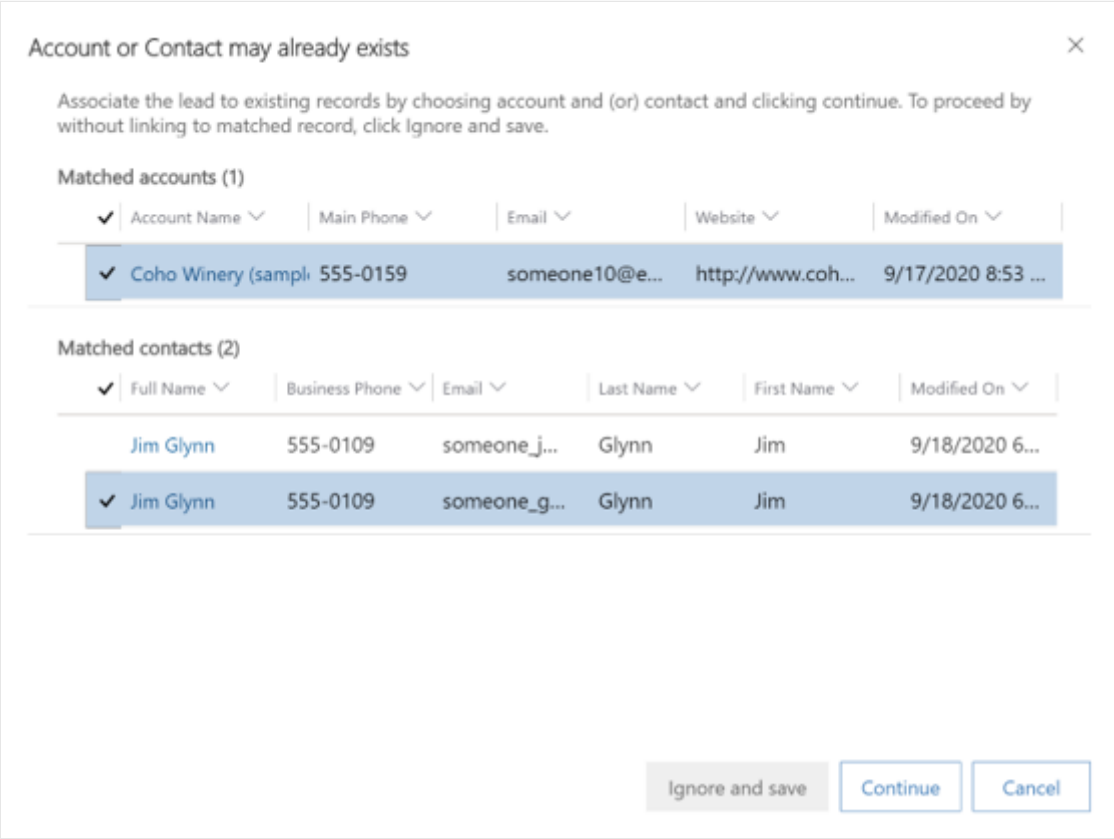


In the **Account** and **Contact** fields, select the matching account and contact record and select **Continue**. To ignore the duplicate warning and create new records, leave the Account and Contact fields blank, and select **Continue**.

The **Account** and **Contact** lookup fields are filtered with matched results and shown along with additional information to precisely identify the record to which the lead should be linked. For example, when you select the **Contact** lookup search icon, you'll see only matched contact records.

Duplicate detection when improved duplicate detection and merge experience is enabled

When the improved duplicate detection and merge experience is enabled, you'll see the **Account or Contact may already exist** dialog box.



The **Matched accounts** and **Matched contacts** sections will show all the matching records (based on the duplicate detection rules) along with additional information to precisely identify the record to which the lead should be linked.

To associate the lead record to an existing matching record, select the record, and select **Continue**. To create a new account or contact record, select **Ignore and save** without selecting a matching record.

The lead is qualified.

What happens to notes and attachments when leads are qualified?

When salespeople work on a lead, they use notes to store key information on the things they've researched about the lead. This could be information like new contacts at the site, current value of the contract, vendor information and so on. When a lead is qualified, these notes are displayed in the Opportunity record so that the information isn't lost.

Typical next steps

Create or edit an opportunity

Learn about the sales process, nurturing sales from lead to order

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Define lead qualification experience
Print quote, invoice, or other records
Dynamics 365 Sales troubleshooting guide
Boost sales with Versium Predict
Get sales Insights, powered by InsideView
Troubleshoot issues with lead qualification issues

Reopen leads in Dynamics 365 Sales

Article • 03/30/2022

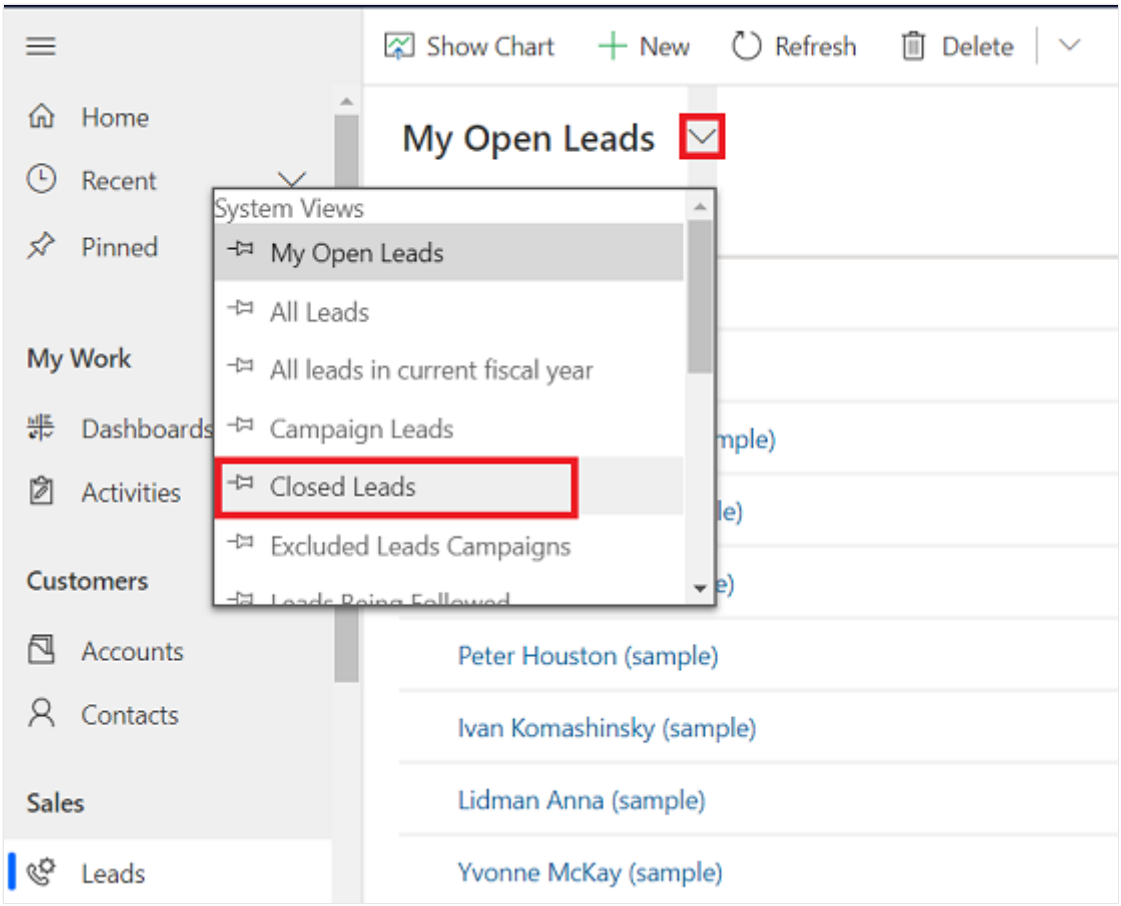
Great news! A lead that you thought wasn't interested has contacted you, and it looks like the person will buy after all. Assuming that you disqualified the lead (instead of deleting it), you'll be able to reopen it without reentering all the information you already gathered.

License and role requirements

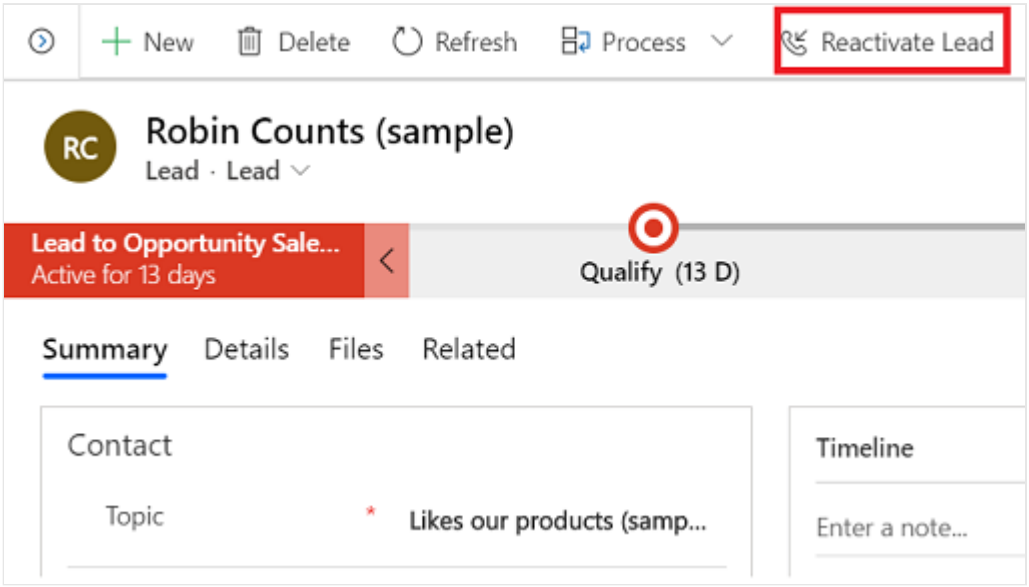
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Reopen a lead

1. On the list of leads, select the down arrow, and then select the **Closed Leads** view.



2. Select the lead you want to reopen, and then select **Reactivate Lead**.



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See also

Create or edit a lead
What if you're no longer working a lead?

Understand the sales process

Article • 03/31/2023

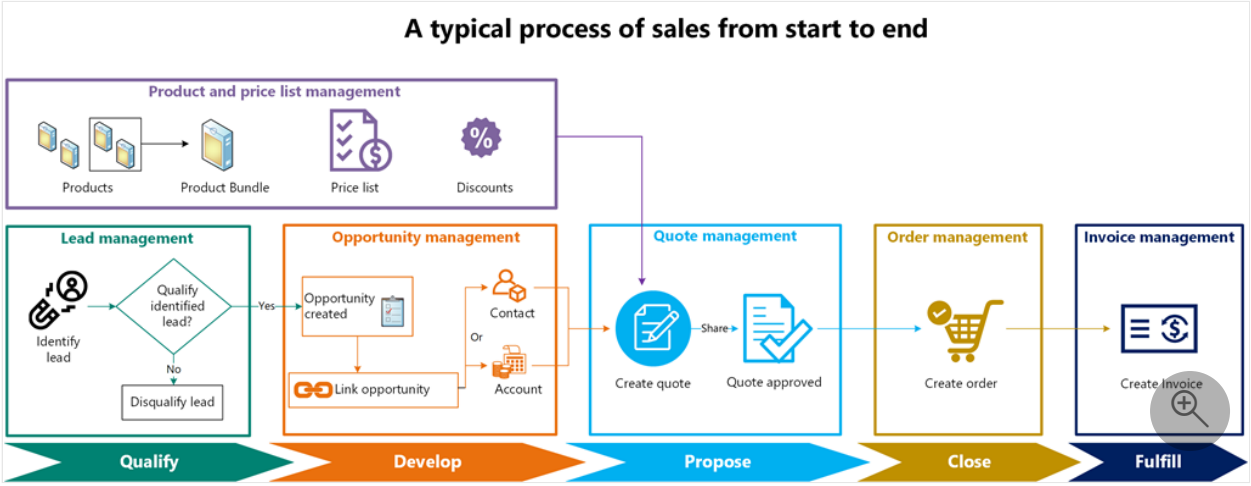
A sales process includes a set of repeatable steps that sellers follow to engage with a prospective customer from the early stage of awareness to closing a sale. You can achieve more consistent sales interactions by following the sales process as it takes you through each stage, from creating a lead to closing the opportunity and recording the sale. You also end up with a more complete history that you can refer to later, if you plan to work with your customer again in the future or if your customer needs support.

Your sales process begins with a lead—someone who is interested in the products or services you provide. Your leads might be automatically generated or they might come from other sources, such as website opt-in pages, email queries, or business cards that you gather at trade shows.

Also, the specific process stages and terminology used by organizations vary based on factors such as, industry, sales strategies, product offerings, or the types of customers they target. Though the actual processes are different, a typical sales process resembles a flow shown in the following diagram:

Each stage typically maps to a specific sales record type. For example, during the qualifying stage, sellers are generally working with a lead. A lead represents someone with an interest in what you are selling. The goal of a lead is to qualify and advance it to the next stage in the sales process, such as the develop stage.

Let's look at an example on how this sales processes is used to implement a sales lifecycle solution in an organization. The following image shows what a sales lifecycle might look like from start to end:



Your sales process begins with a lead—someone who is interested in the products or services you provide. Your leads might be automatically generated, or they might come from other sources, such as website opt-in pages, email queries, or business cards you gather at trade shows.

1. **Qualify**: Great job! You've got your lead...now what? If your lead isn't already in Dynamics 365 Sales, start by creating your lead in the system.
   After you've determined that your lead is interested in your solution and has the appropriate purchasing power, qualify your lead. Qualifying a lead in Dynamics 365 Sales converts it to an opportunity.
   More information:

   - Create or edit a lead
   - Qualify a lead and convert it to an opportunity

2. **Develop**: The opportunity record is used to develop the details of the deal. Details such as the products and services they are interested in, estimated revenue, and timelines are added to the opportunity.
   More information: Create or edit an opportunity
3. **Propose**: Now it's time to present your proposal to your potential customer.
   More information: Create or edit a quote
4. **Close**: When the customer agrees to the quote, an order is generated. The quote and opportunity associated with the order are closed.

More information:

- Create or edit an order
- Close an opportunity as won or lost

5. **Fulfill**: After the order is fulfilled, an invoice is generated to bill the customer.
   More information: Create or edit an invoice

> **Note**
>
> Your Dynamics 365 Sales system might look different because it was customized. This walkthrough guides you through the basic sales process, but your organization might offer further training for your system.

See Also

Overview of Sales

Create or edit opportunities

Article • 04/05/2023

Create an opportunity when your lead is almost ready to buy. With an opportunity, you can forecast sales revenue, set a potential close date, and factor in a probability for the sale to occur.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How to create an opportunity

Use one of the following methods to create an opportunity:

- Convert a lead to an opportunity, if the opportunity originated from a lead. In this case,
  - Information from the lead record is copied to the opportunity.
  - The lead and opportunity records are linked. All the activities and notes in the lead record also becomes available in the corresponding opportunity record.
- Create a new opportunity from scratch if it didn't originate from a lead.

Create a new opportunity

Create an opportunity with the details you have. You can update the opportunity as you progress through the different stages of the opportunity - Qualify, Develop, Propose, and Close.

To create an opportunity:

1. In the Sales Hub site map, select **Opportunities**.
2. On the command bar, select **New**.

3. In the **Summary** tab, capture important details about the opportunity. The following list describes fields that require explanation:

   - **Topic**: Specify a brief summary of the opportunity. Include details such as the product, quantity, and customer name. A well-written topic helps your stakeholders spot the opportunity by just glancing through the opportunity list. **Example:** 125 CRM licenses for Contoso inc.

   - **Currency**: Select the currency to use for calculating money values in the opportunity.

     > ⓘ Note
     > - Your base record and all its line items must use the same currency. For example, if your opportunity has the currency set to US Dollars, you must use the same currency for the price list items that you add to the opportunity. You can't change the currency of the base record (in this case, an opportunity), unless you remove all the list items associated with the record.
     > - Similarly, all the records created from an opportunity, such as a quote, order or invoice must use the same currency as the opportunity.

4. If you're not yet ready to add products to the opportunity, you can specify the estimated revenue. Select the pull-down menu at the top-right corner of the opportunity and update the estimated revenue and estimated close date as shown in the following video:
   https://www.microsoft.com/en-us/videoplayer/embed/RE4TYCI?postJsllMsg=true

   > ⓘ Note
   >
   > When you're ready to add products, you can choose to auto-calculate the revenue based on the products added, price list, discounts and so on.

5. Select **Save**.

Typical next steps

- Find and add multiple products to an opportunity
- Add stakeholders, sales team, and competitors for the opportunity
- Move the opportunity through different stages

Learn about the sales process, nurturing sales from lead to order
View relationship insights for the opportunity

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

- Import opportunity records
- Add products to an opportunity
- Add products to an opportunity using the enhanced experience
- Recalculate an opportunity
- Close an opportunity
- Work with opportunities in the Kanban view
- Troubleshooting the Opportunity entity
- Boost sales with Versium Predict
- Insights, powered by InsideView
- Print quote, invoice, or other records
- Troubleshoot issues with opportunities

Add products to an opportunity

Article • 04/05/2023

Develop your opportunity by adding products, bundles or families that you want to sell,upsell, and cross-sell.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Find and add products to an opportunity

You can add a product that already exists in the Dynamics 365 Sales product catalog or add a write-in product. Any products added to an opportunity are automatically associated with quotes generated from the opportunity.

To find and add products:

1. From the list of opportunities, open the opportunity to which you want to add products.
2. Go to the **Product line items** tab.
3. Select a **Price list**. The price list determines the cost of the product.

   > **Note**
   >
   > By default, you must select a price list to be able to add products to an opportunity; however, your administrator can change your organization settings to make the **Price list** field optional.

4. If you want the estimated revenue of the opportunity to be calculated based on the total number of products, set **Revenue** to **System Calculated**. If you want to

use a custom estimated revenue, set it to **User Provided**.

5. Select **Add product**.

6. In the **Quick Create: Opportunity Product** form, do the following:

   a. **Select Product**: Set the switch to choose whether you want to add an existing product or create a new one:

      - To use an existing product, select **Lookup** to search for and add a product.

        > ⓘ Note
        > - When a price list is selected for the opportunity, the products listed in the **Existing Product** field are filtered by the price list. This means that only the products associated with the selected price list are shown in this field. In this case, the default view is set to **Products in Parent Price List** view. You can't set a custom view as the default view. Even if you do, the Products lookup will automatically set it back to **Products in Parent Price List** view.
        > - When a price list isn't selected, the **Existing product** field shows all active products (not filtered by the price list). You can change the view to look for other products by selecting the **Change View** icon.
        > - By default, the product lookup will show the most recently used products. The most recently used products aren't filtered based on the selected price list.
        > - If a price list is selected and you select a product that isn't associated with the price list, you'll see an error. Select a product that's associated with the selected price list.

      - To add an adhoc product, select **Write-In**, and then enter the name of the product.

   b. **Pricing**: Select the pricing option. By default, this is the per unit price that's listed in the product catalog. To override the catalog price, select **Override Price**: When you override the price, you can specify a price that you want to charge for each unit of the product.

   c. **Quantity**: Enter the quantity of the product or service that will be included.

   d. **Manual Discount**: If you want to offer a discount to the product price, enter it here.

e. **Tax**: If required, enter the appropriate tax amount.

7. To save this product, and add more products, select **Save and New**.

The **Product Line Items** grid shows all the products that are associated with the opportunity. If you added an existing product from the product catalog, you can change the quantity and discount of the product inline in the **Product Line Items** grid. If you added a write-in product, you can also change the price of the product in addition to the quantity and discount.

You can take the following actions on the products added to the **Product Line Items** grid.

To	Do This
Edit the properties of a product.	Double-click the product to update details such as the price, quantity, or discount of the added products.
Delete a product associated with the opportunity.	Select the product, and on the command bar, select **Delete Opportunity Product**.
View products within a bundle.	Select the **Chevron** icon ❯ for the product bundle. You'll see all the products that are included in the bundle.
See and add related products for cross-selling or upselling, or select an accessory or substitute product.	Select a product, and select **Suggestions** in the products grid. The **Suggestions** pane shows all the products that are defined as related products for the current product. Select the related products that you want to add, and then select **OK**.
Group specific records together by moving a record up or down in the grid.	Select the record, select the more commands icon, and then select **Move Up** or **Move Down**.

> **ⓘ Important**
>
> If your system administrator has enabled the enhanced "add product" experience for adding products to an opportunity, you'll see a different experience. To learn more, see **Add products to an opportunity by using the enhanced experience**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit an opportunity
Nurture sales from lead to order
Dynamics 365 Sales troubleshooting guide
Price calculation for opportunity, quote, order, and invoice records

Find and add multiple products to an opportunity

Article • 04/05/2023

Use the enhanced experience to quickly identify and add multiple products from the catalog to opportunities.

> **Note**
>
> Product families are only supported for Sales Enterprise and Sales Premium.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What's in the enhanced experience?

As a salesperson, you want to be able to easily identify and add products from the catalog that best fit the opportunity at hand. With the enhanced experience of adding products, you can:

- Quickly find products from the catalog, based on free-text search.
- See matching products as you enter text in the search field.
- (Applicable for Sales Premium and Sales Enterprise) Pick products from the categorized list of product families.
- See the most recently used list of products while you add multiple products.
- View product details inline and compare products before selecting any, which helps you find the right product.

- Select and add multiple products at one go.
- Add write-in products by using as few clicks as possible.
- Specify price, quantity, and any other required information as configured by your system administrator.

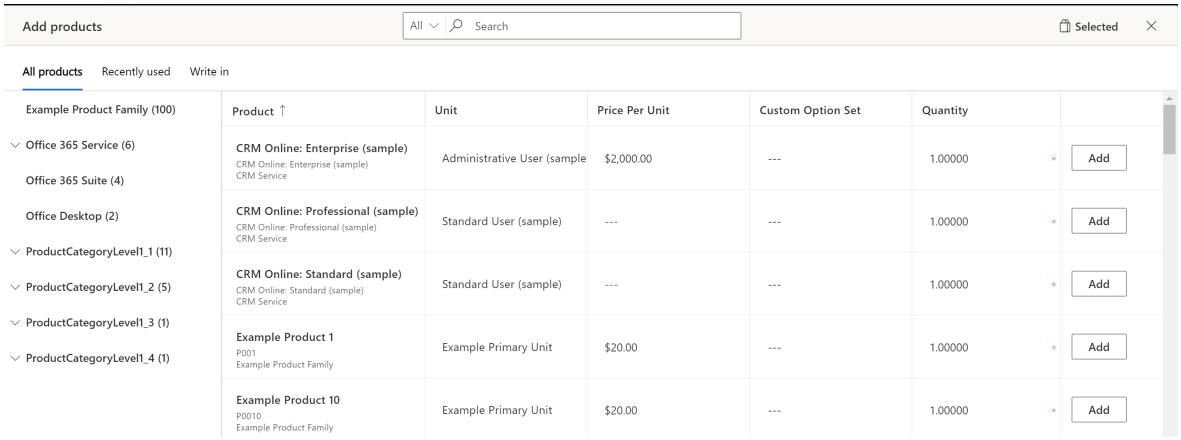
> ⓘ Note
>
> The enhanced experience for adding products is not supported for mobile devices. Mobile users will continue to see the Quick Create form for adding products.

Add products to an opportunity

1. Open the opportunity to which you want to add products.
2. Go to the **Product line items** tab.
3. Select a **Price list**. The price list determines the cost of the product and the products you can select.

   > ⓘ Note
   >
   > By default, you must select a price list to be able to add products to an opportunity; however, your administrator can change the product catalog settings to make the **Price list** field optional.

4. Under **Revenue**, do one of the following:
   - To calculate the estimated revenue of the opportunity based on the products that are added to the opportunity, select **System calculated**.
   - To use a custom estimated revenue, select **User provided**.
5. In the **Products** grid, select **Add products**.



> **Note**
>
> The enhanced experience for adding products is only available if your system administrator has enabled it. If you see the form interface instead of the Add products dialog, contact your system administrator to enable the experience.

The preceding image shows the default columns in the dialog box. The information displayed in the **Product** column is customizable, as are the columns that appear in the grid. If you need additional columns to populate data or you need more information so you can better identify the product, contact your system administrator.

6. Use one of the following options to identify and add products:

   - If you know the product names, simply search for them and add. Learn more about how the search works.

   - (Applicable for Sales Premium and Sales Enterprise) To choose products from a specific product family, use the left pane or the drop-down menu before the search box to filter products by family.

     > **Note**
     >
     > - The products and product families displayed depend on the price list that you've chosen, so if you don't see a product, ensure that the product is associated with the selected price list.
     > - The left pane disappears once you start typing in the search box. If you want to filter the search results by product family, use the drop-down menu. Also, the count of products in the left pane is available only when the number of products and families are less than 50,000 and 5,000 respectively.

- To add products that you have recently chosen for another entity such as opportunity, quote, order, or invoice, open the **Recently used** tab.
- To add a product or service that is not in the standard product catalog but is specific to the opportunity, open the **write in** tab and create a product on-the-fly.

> **Important**
>
> Do not use the write in option for standard products and services that your organization offers.

7. In the **Price per unit** column, do one of the following:
   - If the product doesn't have an associated price list, enter the price manually.
   - If the product has a default price list associated with it, **Price per unit** is populated in accordance with the associated price list.

     > **Tip**
     >
     > If you want to override the default price of a product, request your administrator to add the **Price overridden** column to the grid. After the **Price overridden** column has been added, turn it on.

8. Enter the quantity you want, and then select **Add**.
9. Repeat steps 6 through 8 for each product you want to add.
10. When you're done, select **Save to opportunity**.

Remove products from an opportunity

Remove products if you've selected them inadvertently or they're no longer relevant for the opportunity. You can remove products in two circumstances:

- While adding products to the opportunity, by using the **Add products** dialog box
- After you've added products to the opportunity, on the **Products** tab

To remove a product from the Add products dialog box

1. In the **Add products** dialog box, select the **Selected** tab.

2. Next to the product you want to remove, select **Remove**.

To remove a product from the Products tab

1. Open the opportunity, go to the **Products** tab.
2. Select the products that you want to remove, and then select **Delete opportunity product**. The selected products will be removed from the opportunity after you confirm the deletion.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable the enhanced experience of adding products
Customize the Add products dialog box

How the search works on Add Products dialog

Article • 08/09/2023

When you search for a product in the enhanced Add Products dialog while adding products to an opportunity, quote, order, or invoice, the search results are displayed in the following order:

- Products that contain the whole searched phrase in one of the fields (Product Name, Description, or Product ID) are displayed at the top of the list.
- Products that contain at least one of the words from the searched phrase in one of the fields (Product Name, Description, or Product ID) are displayed at the bottom of the list.
- Both parts are displayed separately and are ordered alphabetically by the **Product Name** field.

See also

- Find and add multiple products to quotes, orders, or invoices
- Find and add multiple products to an opportunity

Add stakeholders, sales team, and competitors for the opportunity

Article • 05/10/2022

When you're working on an opportunity, you'll be interacting with several people, both internally and externally. These people are broadly categorized as stakeholders, sales team, and competitors. Capturing information about the people that you're working with on the opportunity helps your leadership team understand how the opportunity is shaping up and where you need help.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Add stakeholders and decision makers for the opportunity

A stakeholder can be a decision maker or any person who's working with you on the opportunity from the customer's end, such as a champion, end user, economic buyer, influencer, or technical buyer.
https://www.microsoft.com/en-us/videoplayer/embed/RE4U5N2?postJsllMsg=true

To add stakeholders:

1. In the Sales Hub site map, select **Opportunities**.
2. Open the opportunity.
3. In the **Summary** tab, go to the **Stakeholders** section.

> **Note**

If you'd selected a person in the **Contact** field of the opportunity, that contact is automatically added to the **Stakeholders** section.

4. Select **New Connection** and then select the stakeholder's record from the contacts list.

   > **Note**
   >
   > The **New Connection** button is supported only for the out-of-box Stakeholders and Sales Team views on the Opportunity entity. If you're using custom views, the **New Connection** button doesn't appear on the sub-grid. In such cases, navigate to the Connection Associated view for the record and use the **Connect** button to create a new connection. More information: **How are stakeholders and sales team members tracked for opportunities?**

   The selected contact is added as a stakeholder.

5. To convert a stakeholder to any other stakeholder category (for example, decision maker), select the stakeholder record and then select **Edit**.

6. In the **As this role** field, remove Stakeholder and select a role that best fits the contact. For example, select Decision Maker if the contact is a decision maker for the opportunity.

7. Go back to the opportunity and verify that the stakeholder's role is updated.

Add sales team for the opportunity

If multiple users and teams from your organization are working on an opportunity, add them as the Sales team for the opportunity. After you add them, the sales team members will be able to see the opportunity in their **Opportunities I am a member of** view.

To add the sales team:

1. In the Sales Hub site map, select **Opportunities**.

2. Open the opportunity.

3. In the Summary tab, scroll down to the **Sales team** section.

4. Select **New Connection** and then add users or teams in your organization who are involved in the opportunity.

> **Note**
>
> If you don't see the **New connection** button, navigate to the Connection Associated view for the record and use the **Connect** button to create a new connection. More information: **How are stakeholders and sales team members tracked for opportunities?**

Add competitors for the opportunity

Add the organizations that are competing with you for the opportunity as competitors for the opportunity.

> **Note**
>
> The competitors entity is not supported for Sales Professional license.

To add competitors:

1. In the Sales Hub site map, select **Opportunities**.
2. Open the opportunity.
3. In the Summary tab, scroll down to the **Competitors** section.
4. Select **Add Existing Competitor** to add a competitor.

See also

Create or edit opportunities
Move the opportunity through different stages
Troubleshoot issues with opportunities

Move the opportunity through different stages

Article • 04/13/2022

An opportunity goes through different stages (also known as pipeline phase) as you make progress and get more details about the opportunity. Each stage defines the information that you should've collected about the opportunity to methodically progress and increase your chances of winning the deal.

> **Note**
>
> - It's important to keep the stage current as it's used in sales charts and dashboards. For example, the funnel chart displays the opportunities in different stages.
> - If your organization has multiple business process flows for the opportunity entity, the **Pipeline Phase** field stores the last stage change information done on the opportunity record through any business process flow. If you're using multiple business process flows on opportunity, exercise your discretion while using this field.

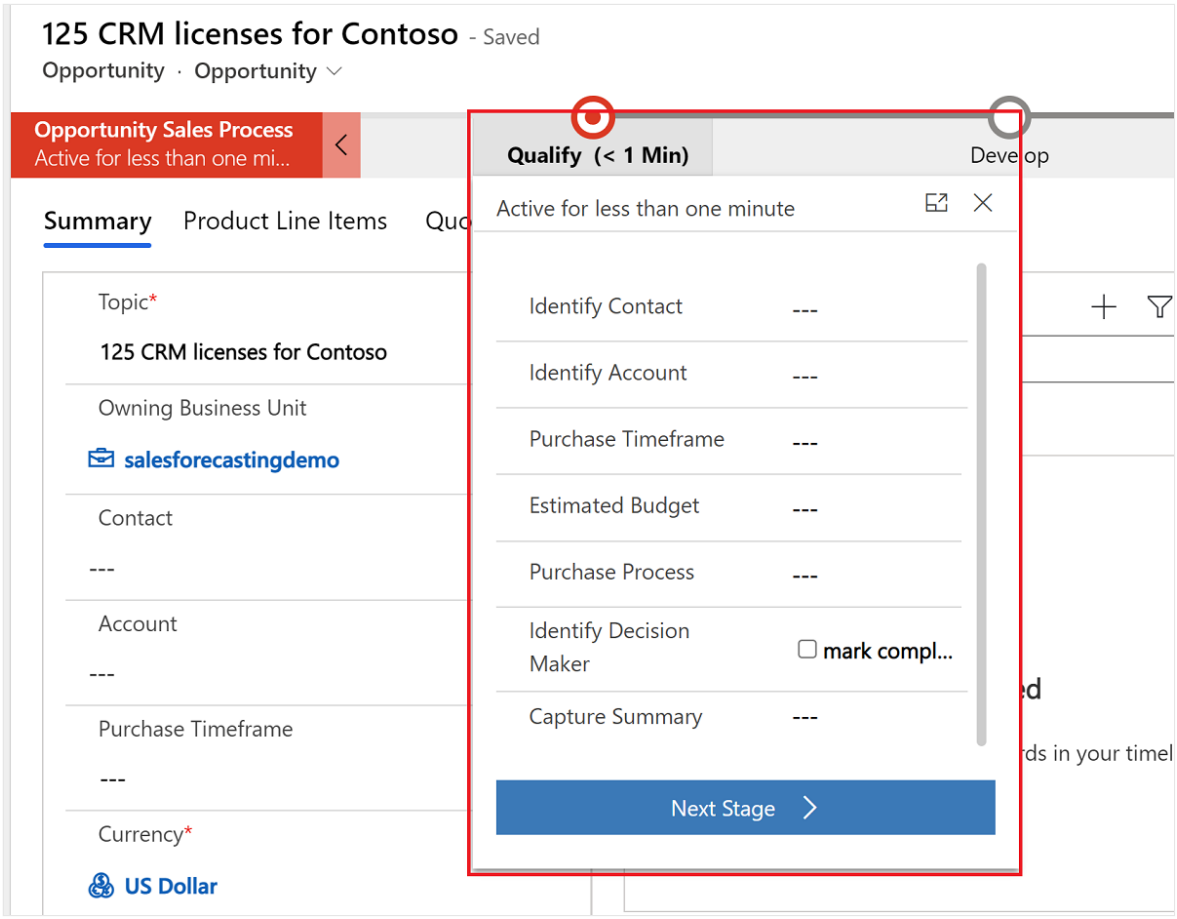
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Move the opportunity to Qualify stage

When you've gathered the basic details about the customer, move the opportunity to the Qualify stage.

1. Select **Qualify** in the process bar and specify the following details about the customer:



Field	Description
Identify Contact	Select the contact who will be working on the opportunity from the customer's end.
Identify Account	Select the customer for the opportunity.
Purchase Timeframe	Select the purchase timeframe of the customer.
Estimated Budget	Enter the estimated budget of the customer. This is different from the estimated revenue. Depending on the budget the customer has, you can decide the products that best fits the budget.
Purchase Process	Select whether the purchase decision is made by an individual or committee.
Identify Decision Maker	Mark as complete if you've identified the decision maker. More information: Add stakeholders and decision makers for the opportunity

2. Select **Next Stage**.
   The opportunity moves to the Develop stage of the process.

Move the opportunity to Develop stage

When you've gathered specific details about the customer need, move the opportunity to the Develop stage.

1. Select **Develop** in the process bar and specify the following details:

Field	Description
Customer Need	Enter what interests the customer, such as specific product requirements.
Proposed Solution	Enter the plan for what your organization can offer the account, such as product details.
Identify Stakeholders	Select **mark complete** if you've added contacts in the Stakeholders. These are contacts from the customer's end who will be involved in pursuing the opportunity. More information: Add stakeholders and decision makers for the opportunity
Identify Competitors	Select **mark complete** if you've added the competitor information. More information: Add competitors for the opportunity

2. Select **Next stage**.
   The opportunity moves to the Propose stage of the process.

Move the opportunity to Propose stage

When you've ready to propose the solution to the customer, move the opportunity to the Propose stage.

1. In the **Propose** stage, select **mark complete** next to each of the following steps that you've completed:

Field	Description
Identify Sales Team	Select **mark complete** if you've added the sales team members. More information: Add sales team for the opportunity

Field	Description
Develop Proposal	Select **mark complete** if you've created a proposal for the opportunity. This optional step indicates that you've included notes about how the account will be approached. You can add the proposal as attachment to the opportunity in the **Files** tab.
Complete Internal Review	Select **mark complete** if you've completed an internal review of the proposal.
Present Proposal	Select **mark complete** if you've presented the proposal to the stakeholders.

2. Select **Next stage**.
   The opportunity moves to the Close stage of the process.

The next step is to create a quote and send it to your customer. More information: Create a quote and send it to your customer

Move the opportunity to Close stage

When the opportunity materializes, you can move the opportunity to the Close stage.

1. In the **Close** stage, select **mark complete** next to each of the following steps that you've completed:

Field	Description
Complete Final Proposal:	Select **mark complete** if you've created a final proposal for the opportunity. You can add the proposal as attachment to the opportunity in the **Files** tab.
Present Final Proposal	Select **mark complete** if you've presented the final proposal to the customer.
Confirm Decision Date	Select the date by when you're expecting a decision from customer.
Send Thank You	Select **mark complete** if you've sent a thank you note to the customer.
File De-brief	Select **mark complete** if you've created a de-brief for the opportunity.

2. Select **Finished** when you're done with all the activities.

   You can now close the opportunity as Won or Lost. More information: Close opportunities as won or lost

View and manage records in focused view

Article • 10/13/2023

The focused view allows you to view and manage account, contact, lead, and opportunity records and their associated activities on one page. This view makes it easier for you to stay focused on your tasks and reduces the need to navigate between multiple screens. It also allows you to better organize and prioritize your tasks.

> **Note**
>
> Focused view is now available for all entities, including custom entities. However, your administrator must enable it for you to access it. More information: **Enable focused view and set it as the default view**

The focused view is similar to the Sales accelerator workspace view. Learn how to prioritize your sales pipeline through the work list.

Open the focused view

The focused view is a centralized place to view all your open records that have activities that are due or pending, without having to navigate through multiple screens.

1. In the site map, select an entity and do one of the following actions depending on the entity:

    - For Account, Contact, Lead, and Opportunity entities, select **Focused view** on the command bar.
    - For all other entities, select **Show as** > **Focused view** on the command bar.

> **Note**
>
> - The **Focused view** option isn't displayed if a record is selected.
> - Focused view is not available for the Activities entity.
> - The records display all active activities that are created in the last 120 days.

Understand the focused view

The focused view consists of three sections.

- **Search, filter, sort, and switch view**: These options are displayed at the top of the work list item view.
  You can search, filter, and sort the records that you want to view in the list to quickly identify only the records that you want to work with. You can also switch between the focused view and the list view.

  Filters and sorting that are available here are similar to the list view. The attributes that are available in the view are displayed as filter. If you want to add more filters to the view, you can create an advanced filter.

  Create an advanced filter option using the expression builder to refine the content displayed in the work list. You can have only one advanced filter defined for an entity in focused view. Select **Edit filters** to open the expression builder. In the expression builder, create the conditions as required and then select **Apply**. When the advanced filter is applied, you will observe the filter icon is filled with a blue color, and the advanced filter tag is displayed under the filter options.

- **Records list**: All records, including records with no associated activities, for the selected entity are displayed in a card format. You can perform and complete the activities, whether manual or automated, on these cards from the current date and from previous dates. Each card displays information such as the name of the record, the primary contact name, and the next best action.

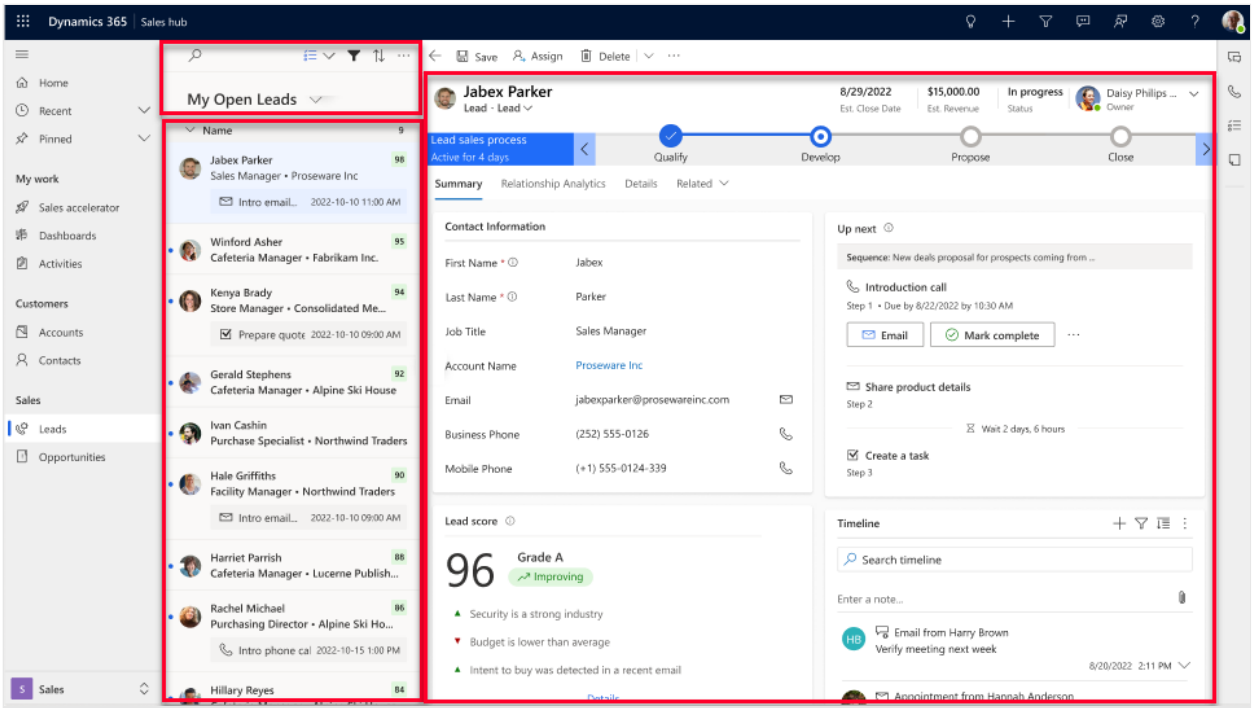
  Next best actions, include the top two activities with the latest due date. To complete the next best action, hover over the action and then select the action icon.

  When no action items are available for the record, the record displays information such as the name and contact details.

  When predictive scoring is enabled in your organization, the list also displays the score for that lead or opportunity at the top-right corner of the card. Learn more about prioritizing leads through scores and prioritizing opportunities through scores.

- **Record details**: Select a record in the work list to open a detailed view of the record on the same page.

The following image is an example of the focused view for the Lead entity:

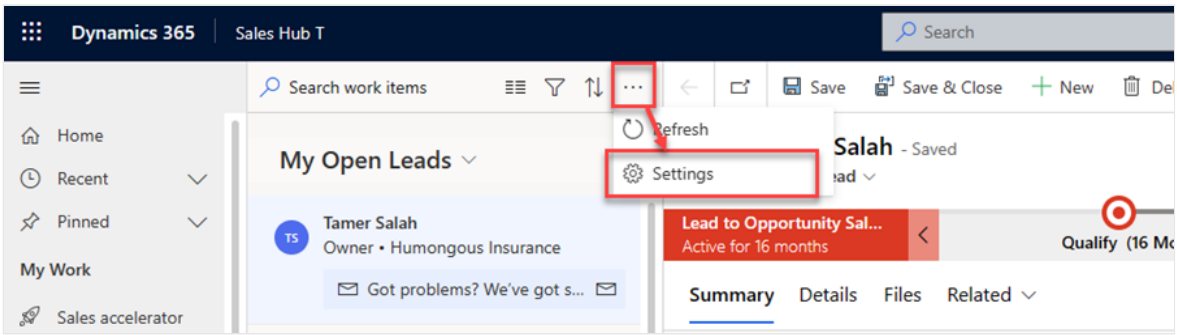


Customize the work list card

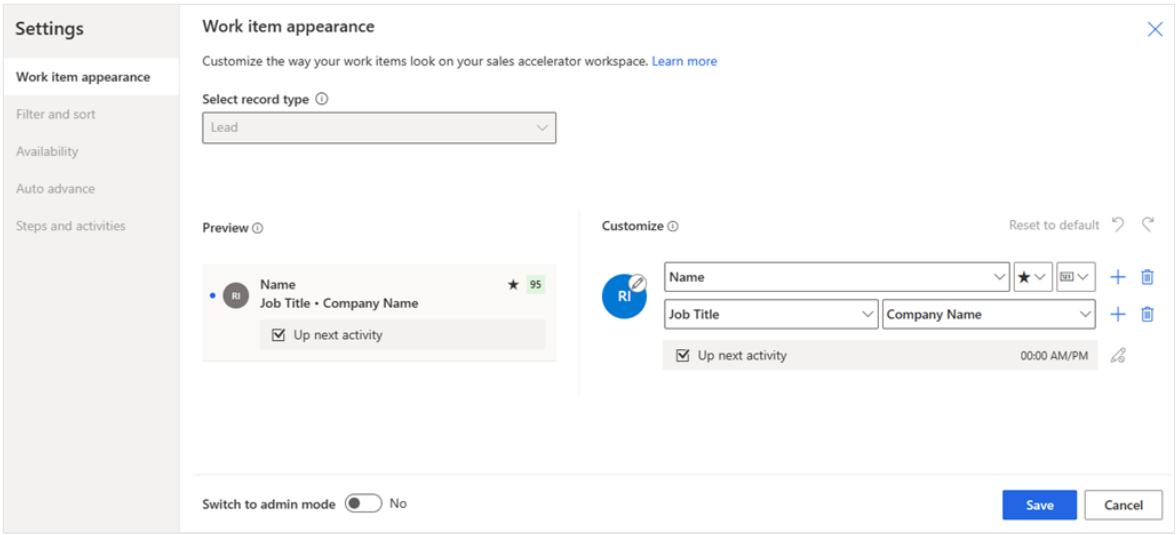
You can customize the work list card to display the information that you want to see. When sales accelerator is enabled, the customizations you make here are also reflected in the sales accelerator worklist items. More information: Customize the appearance of work items in sales accelerator

The customization that you make to the work list card is specific to the entity type. For example, if you customize the work list card for the Lead entity, the customization is applied only to the Lead entity. The customization isn't applied to the Account, Contact, Opportunity, or other entities. These customizations also effects the sales accelerator workspace view.

1. In the focused view page, on the work list pane, select **More options** and then select **Settings**.



2. In the **Settings** dialog box, select **Work item appearance**.



The following are the considerations to keep in mind when customizing the work list card in focused view:

- The **Switch to admin mode** and **Lock customization** options are available only for administrators.
- If the customization is disabled, contact your administrator to turn off the customization lock.
- When admin mode is turned on, you can customize work items for all users within your organization. When turned off, you can customize work items only for yourself. If admin mode is turned off, contact your administrator to turn it on. More information: Lock or unlock customization for other user roles
- You can't customize the action items in the work list card. Also, in preview mode, the **More options** icon isn't visible to select action items that are configured in the sales accelerator workspace view.

3. Under the **Customize** section use the following options to customize:

- To change the icon that appears on a work item, select the pencil icon, and then choose one of the following options:
  - **Record image**: A photo of the contact, if one is available
  - **Record initials**: The contact's first and last initials
  - **Record type**: The icon associated with the record type
  - **Activity type**: The icon associated with the current activity on the record
- To change the content of work items, select the fields or attributes to display:
  - To change an existing attribute, select a different one in its place from the list.
  - To add an attribute in the same row, hover over an existing attribute and select **More options** > **Add a field**. You can show up to three fields in a row.

    - To add an icon in the same row, hover over an existing attribute and select **More options** > **Add an icon**. You can show up to three icons in a row.
    - To add a row, select the add icon (+). You can show up to four rows of information in a work item.
    - To delete a field or an icon, hover over it and select **More options** > **Remove**.
  - To remove all customizations and restore work items to their original appearance, select **Reset to default**.

  The **Preview** section displays a preview of the work list card based on the customizations that you make.

4. Select **Save**.

See also

Set focused view as the default view
Prioritize your sales pipeline through the work list
Work with opportunities in the Kanban view
Customize work items
Focused view FAQs

Prioritize opportunities through predictive scores

Article • 03/06/2023

Use the predictive opportunity scoring feature to prioritize your opportunities based on scores and achieve higher opportunity qualification rates.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What is predictive opportunity scoring

In a highly competitive market, it is important for you to spend time on quality opportunities to reach your sales targets. You must identify and prioritize opportunities to convert them into wins. The predictive opportunity scoring of Dynamics 365 Sales Insights provides a scoring model to generate scores for opportunities in your pipeline. The out-of-the-box model chooses top factors that influence the score. An administrator can view and modify the top factors that influence the scores by customizing the model. To learn more, see Configure predictive opportunity scoring.

This model assigns a score between 0 and 100 for opportunities based on the signals from opportunities and related entities such as contact and account. Using these scores, you can identify and prioritize opportunities that have more chances of converting into wins.

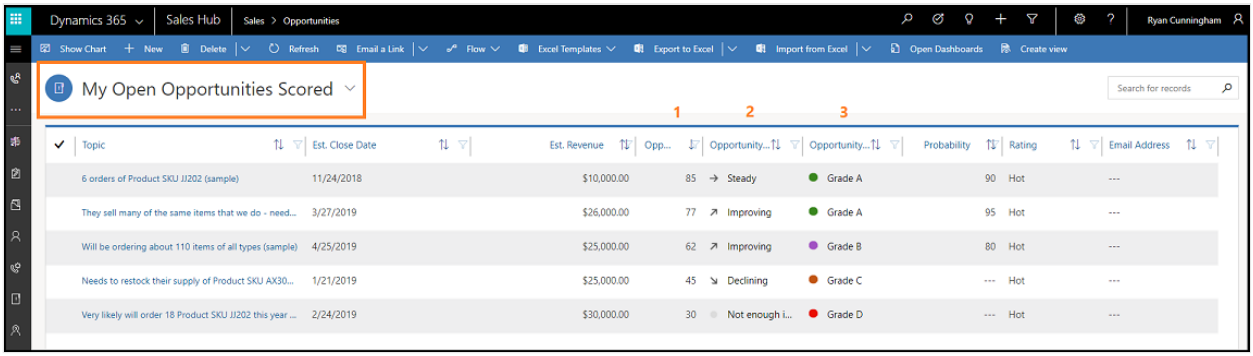
For example, say you have two opportunities - Opportunity A and Opportunity B - in your pipeline. The opportunity scoring model applies a score of 75 for Opportunity A and 55 for Opportunity B. By looking at the score, you can predict that Opportunity A has more chances of converting into a win deal and you can engage it. Also, you can further analyze why the score of Opportunity B is low by looking at the top reasons that are influencing the score and deciding how to improve this score.

> **Important**
>
> To enable predictive opportunity scoring in your organization, contact your system administrator. More information: **Configure predictive opportunity scoring**

Understand opportunity scoring in views

The **My Open Opportunities Scored** system view is available for you when predictive opportunity scoring is enabled in your organization. This view provides a list of opportunities with different parameters, including opportunity score, opportunity grade, and opportunity score trend. By analyzing these parameters, you can identify and prioritize opportunities to convert into win deals.

The following screen displays a typical view that consists of columns that can be used to analyze and prioritize the opportunities.



The numbered columns are:

1. **Opportunity Score.** Specifies the value that represents the likelihood of the opportunity to convert into a deal on a scale of 1 to 100. An opportunity with score of 100 has the highest likelihood of converting into a win deal.

   > **Note**
   >
   > The model calculates the score every 24 hours, therefore, the application may take up to 24 hours to display the score for new opportunities.

2. **Opportunity Score Trend.** Specifies the direction in which an opportunity is trending such as **Improving** (up arrow), **Declining** (down arrow), **Steady** (right arrow), or **Not enough info**. These trends are displayed by comparing the present opportunity score with the previous score. For example, the score of an opportunity was 65 and the present score has decreased to 45. A down arrow is

displayed in the **Opportunity Score Trend** column specifying that the opportunity is losing traction and needs some action from you to improve the score.

3. **Opportunity Grade.** Specifies a ranks or level of quality that is given to an opportunity based on the generated score. Opportunities with higher grade have more chances of converting into win deals. The grades of an opportunity are categorized into A, B, C, and D with colors green, purple, yellow, and red, respectively, where Grade A (green) is the opportunity with the highest likelihood for conversion into a win deal followed by Grade B (purple), Grade C (yellow), and Grade D (red). The system administrator can define opportunity score ranges for a grade, depending on the organizational requirements.

Understand opportunity scoring widget

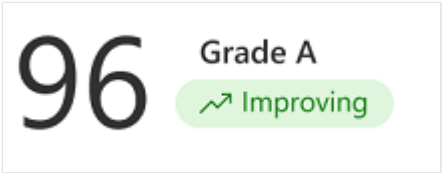
In forms, the opportunity score widget displays the top positive and negative reasons that influence the score. These reasons come from the opportunity attributes and attributes from related entities. The reasons help you analyze and work on the opportunity to improve the score and convert the opportunity into a possible deal. The following image shows a typical **Opportunity score** widget.

Typically, the screen is organized into the following sections:

- Basic information
- Top reasons

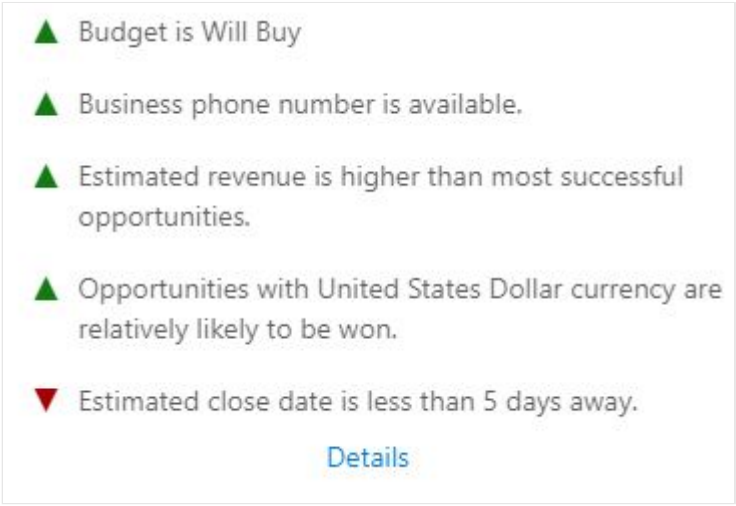
Basic information

The information included in this section covers the opportunity score, opportunity grade, and opportunity trend.



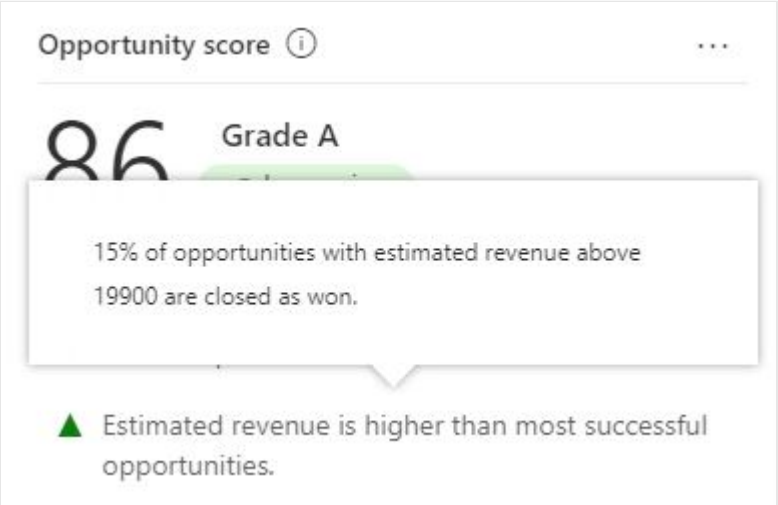
Top reasons

The most important reasons—both positive and negative—that affect the opportunity score are listed here. You can use these reasons to analyze how you might convert the opportunity into a deal.



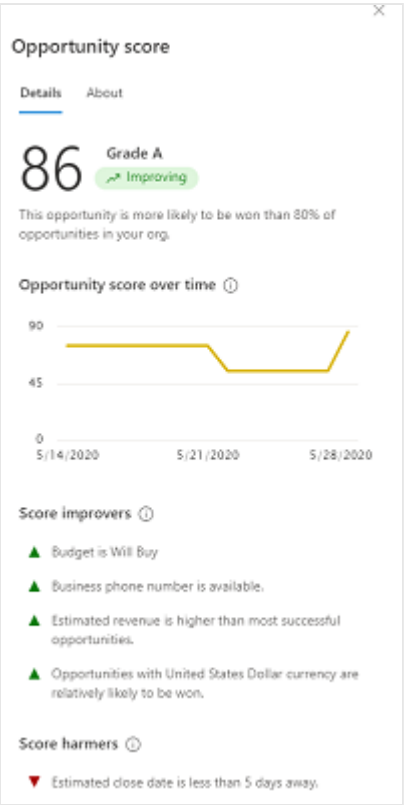
When you move your cursor over a reason, a tooltip displays an insight about what's causing the reason to be listed on top. You can work on this insight and take any necessary action to improve the opportunity.

In the following example, for the reason "Estimated revenue is higher than most successful opportunities," the tooltip displays the insight **15% of opportunities with estimated revenue above 19900 are closed as won."

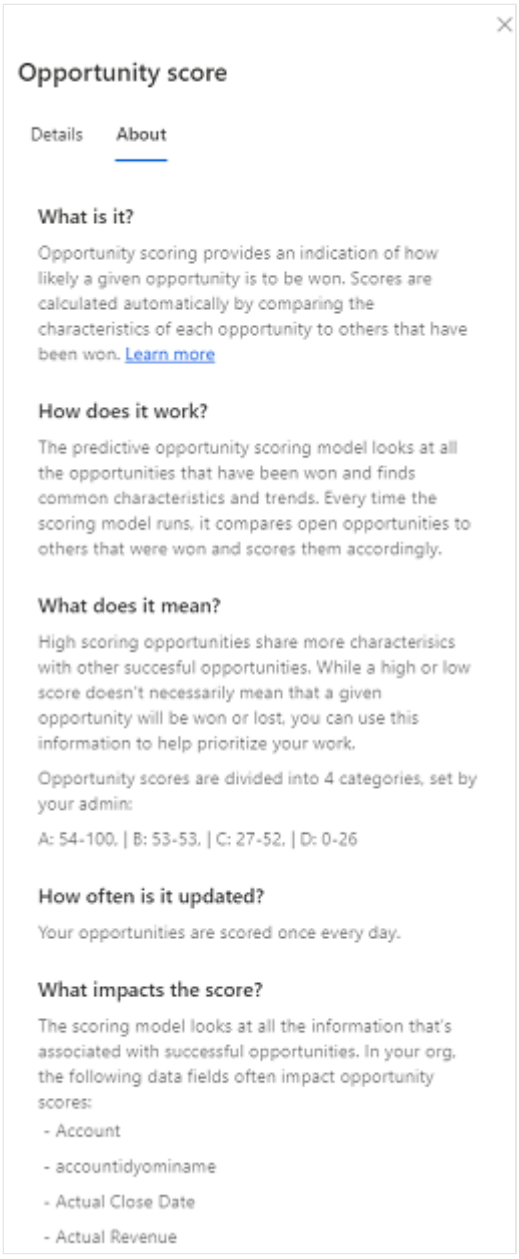


The **Opportunity score** widget displays only the top five positive and negative reasons. To view all the positive and negative reasons that are affecting the opportunity score, select **Details**.

The **Opportunity score** pane opens with a list of all score improvers (positives) and harmers (negatives), along with a graph that shows how the opportunity score is trending over time.



For more information about the opportunity score, select the **About** tab. The **About** tab helps you understand what the opportunity score is and how it works. Under **What does it mean?**, you'll find information about how opportunity scores are categorized by admins in your organization. Under **What impacts the score?**, you'll find the attributes that affect opportunity scores in your organization.



Time spent by opportunities in Business Process Flow Stage

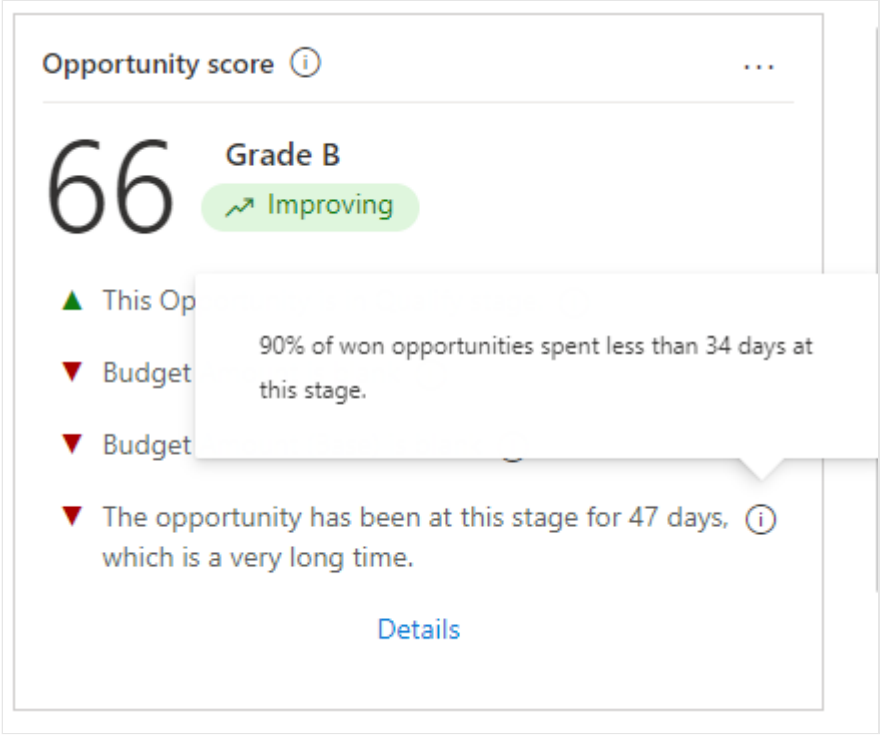
It's important that you move opportunities from one business process flow stage to another in a timely fashion to successfully close a deal. If an opportunity gets stuck at a specific stage for a longer period compared to the time the other won opportunities have spent in the same stage, it could be a cause for concern.

By analyzing the time that the closed opportunities have spent in each stage, the predictive model provides insights about the open opportunities. This insight helps sellers take action on stalled opportunities and move them forward.

> **Note**

This insight is available by default if you've enabled predictive scoring; no additional configuration is required.

The following screenshot illustrates the reason and tooltip for the time spent in stage insight:



See also

Configure predictive opportunity scoring
Predictive lead and opportunity scoring

Manage opportunities using pipeline view

Article • 06/23/2023

The opportunity pipeline view, formerly known as deal manager, helps you visualize, prioritize, and manage the opportunities in your pipeline. The charts in the view help you figure out which deals to follow up with next. The metrics help you determine the current status of deals in the pipeline, deals successfully closed, and deals lost, and their respective revenue.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

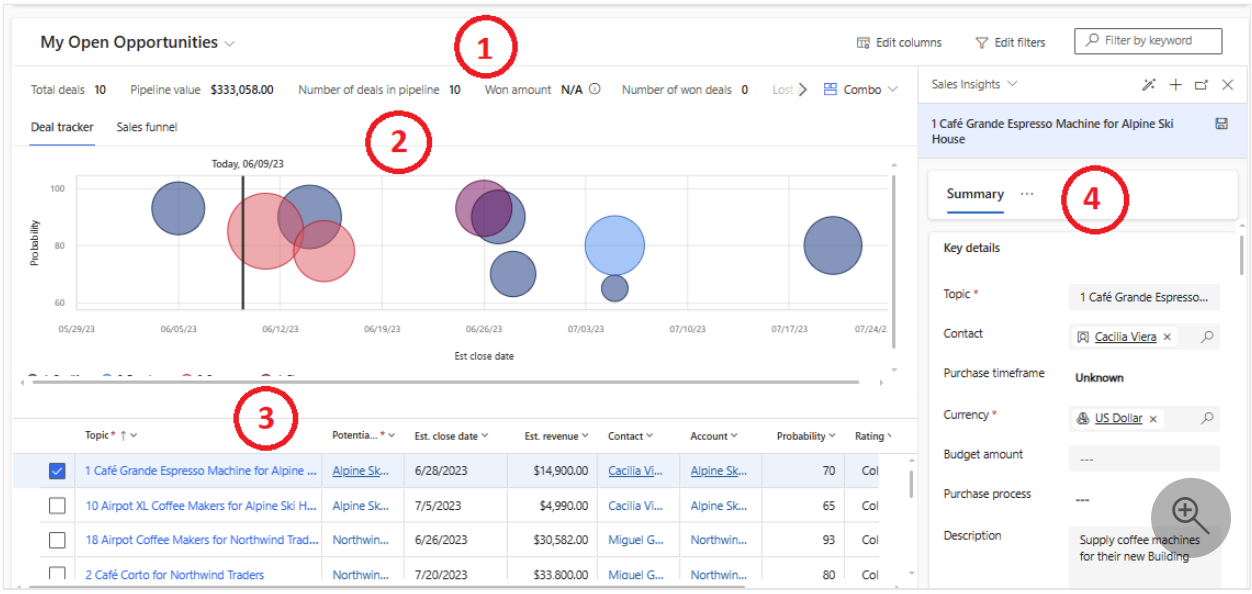
Video: Opportunity pipeline view

Watch this short video to learn how the opportunity pipeline view helps sellers be more productive and efficient.
https://www.microsoft.com/en-us/videoplayer/embed/RWONpe?postJsllMsg=true

> **Tip**
>
> Images that include an icon that looks like this: may be expanded to show more detail. Select the image to expand it. To close it, press the Esc key.

Open the opportunity pipeline view

In the Sales Hub navigation panel, select **Opportunities**. If you don't see the opportunity pipeline view, select **Show As**, and then select **Pipeline view**.



Legend:

1. **Metrics**: View the key metrics or KPIs that you want to track. Select a metric to view the underlying data.
2. **Charts**: Get a visual representation of the pipeline.
3. **Editable grid**: View a list of opportunities and edit them inline. Select any linked column to view and edit details in the side panel. Select the three-dot menu against an opportunity to perform common actions, such as closing the opportunity as won or lost, or reopening the opportunity.
4. **Side panel**: View and quickly edit details of the linked record. You can also navigate from one object to another in the side panel. For example, while you're looking at the opportunity, you can select a contact to view their details, quickly make updates, and then return to the opportunity.

You can personalize the opportunity pipeline view to add, remove, resize, hide, rearrange, and sort the columns in the editable grid, customize the side panel, and select the metrics you want to track.

Understand the opportunity pipeline charts

- **Bubble chart:** Ask your administrator to customize the bubble chart if you want to change the data you see. By default, the bubble chart shows the following information:
  - **x-axis:** Displays the opportunity score if you have Sales Insights; otherwise, it displays the deal probability.
  - **y-axis:** Displays the close date. This is a smart column that displays the actual close date or estimated close date, depending on whether the opportunity is closed.

    - **Size of the bubble:** Displays revenue. This is a smart column that displays the actual revenue or estimated revenue, depending on whether the opportunity is closed.
    - **Color of the bubble:** Indicates the opportunity grade if you have Sales Insights; otherwise, it displays the pipeline phase.

- **Sales funnel chart:** Displays a funnel based on the sum of estimated revenues across different pipeline phases. Ask your administrator to customize the funnel chart if you want to change the data you see.

  The funnel chart can display up to 50,000 records. You can apply filters to reduce the number of records in the chart.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Where is the deal manager workspace?
Personalize the opportunity pipeline view

Personalize the opportunity pipeline view

Article • 06/23/2023

Personalize the pipeline view to organize opportunities in a way that makes sense to you and to make it easy to update information on the fly, add notes and tasks, and more:

- Add, remove, rearrange, and sort columns in the editable grid.
- Apply filters to view records that are important to you.
- Change the layout of the view to list (grid only) or combo (grid and chart).
- Change the metrics displayed at the top of the view.

You can also ask your administrator to customize the experience further to improve your productivity.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Salesperson or higher More information: Predefined security roles for Sales

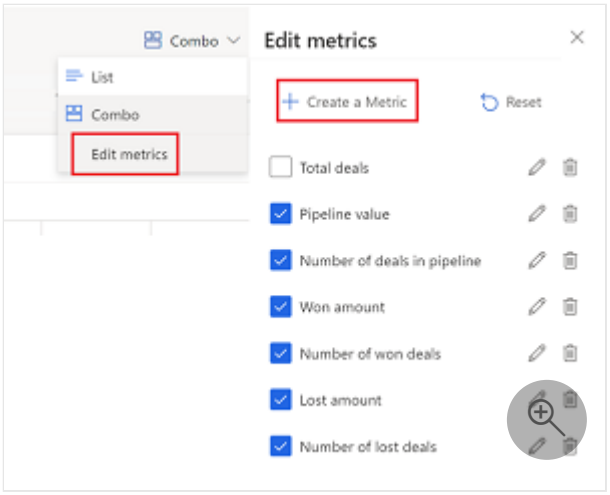
Personalize metrics

The opportunity pipeline view lists important metrics related to the sales pipeline at the top of the view. You can personalize this space to view metrics that you want to track.

> **Note**
>
> Personalized metrics are only available until you log out. The current release doesn't support saving changes you make to metrics.

1. Open the opportunities pipeline view.
2. Select **Combo** > **Edit Metrics**.

   In the **Edit metrics** side panel, you can create, update, remove, or delete a metric.



- To create a metric:

    1. Select **Create a Metric**.

    2. Select the field and the aggregate function that you want to use for calculating the metric. The **Field** list displays all the numerical fields in the opportunity entity.

    3. (Optional) Add filters to calculate metrics from specific records. For example, if you want to view the estimated revenue of all opportunities created this year and are in the **Develop** stage, create a metric with the following values:
        - **Field:** Est. Revenue
        - **Aggregate function:** Sum
        - **Filters**
            - **Created On**: This year
            - **Sales Stage**: Develop

- To edit a metric, hover over the metric in the **Edit metrics** side panel and select the **Edit** icon.

- To remove a metric temporarily, clear the checkbox against the metric in the **Edit metrics** side panel.

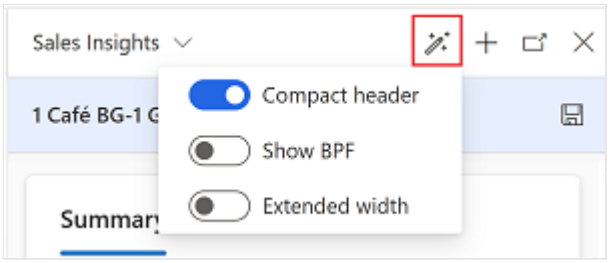
Personalize the side panel

Personalize the side panel to view it in different modes, depending on the details you'd like to see and your screen size.

1. Open the opportunities pipeline view.

2. Select an opportunity from the grid to open the side panel.

3. Select the wand icon to switch to one of the following modes:



   - **Compact header:** This is the default mode. It displays the most important fields in the opportunity table but doesn't include the business process flow.
   - **Show BPF:** While you're in the compact mode, select this option to view the business process flow.
   - **Extended width:** This model is ideal for large screens. It displays the business process flow and all the fields in the opportunity table.

   The selected mode is saved until you change it again.

Personalize the grid

Personalize the grid to include columns that you want to see and update quickly.

1. In the opportunity pipeline view, select **Edit columns** to add, remove, hide, show, or rearrange columns.
2. In the **Edit columns: Opportunities** side panel:

   - To add a column, select **Add column**.
   - To show or hide columns, select or clear the checkboxes. You can't delete the default columns from the grid; however, you can hide them.
   - To rearrange columns, drag the columns in the **Edit columns: Opportunities** panel.

3. To sort columns, select the column list and select the sort option.

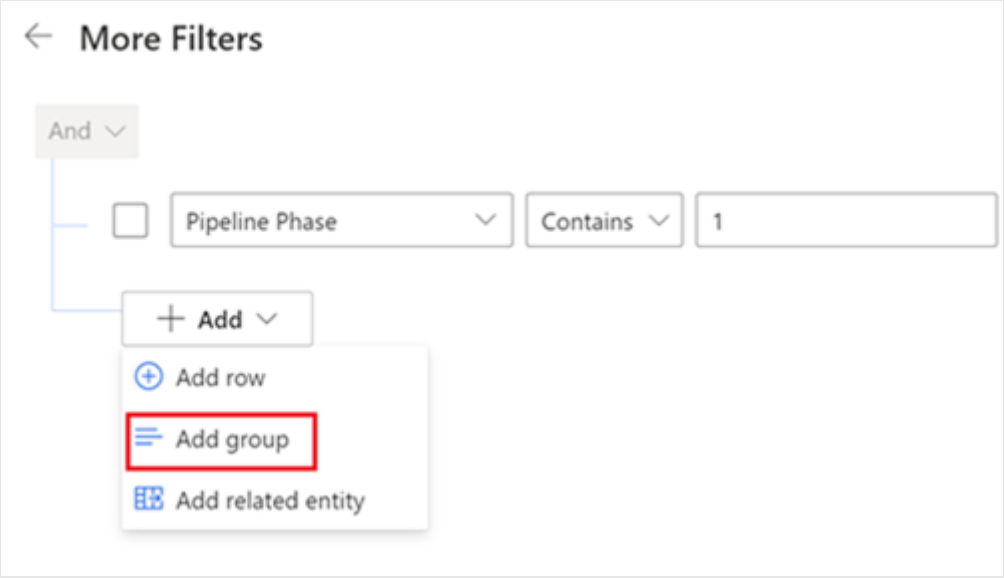
Apply filters

1. In the opportunity pipeline view, select **Edit filters**.
2. In the **Edit filters: Opportunities** panel, select **Add** > **Add row** to add a condition based on fields in the opportunity table.

You can add multiple conditions by adding more rows. The conditions are validated with the AND operator.

To specify a condition with the OR operator:

1. Select **Add group** in the **Add** list.



> **Note**
>
> Although the **Add** list displays **Add related entity**, this option isn't supported in this release.

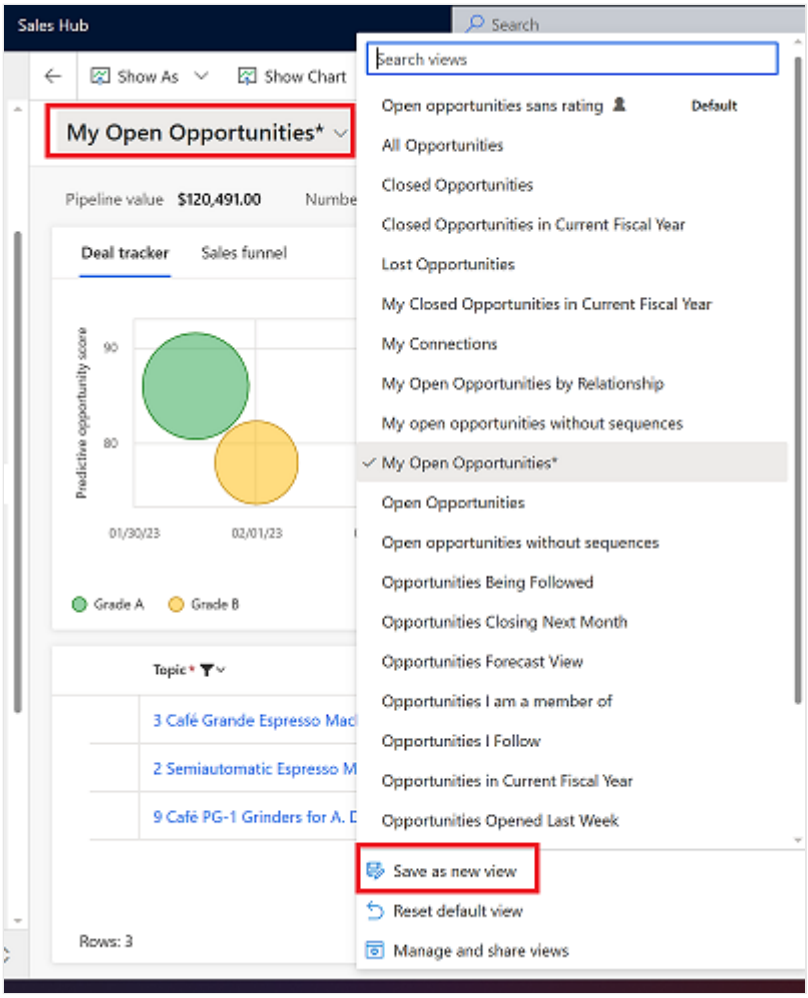
2. Select the **Or** operator in the list next to the group filter checkbox, and specify the condition.

Learn how to create filters with grouped and nested conditions in model-driven app views.

Save personalizations to a new view

After you personalize the pipeline view, you can save your changes to a new view. An asterisk next to the view name indicates that the view has unsaved changes.

Select the **My Open Opportunities** view list, and then select **Save as new view**.

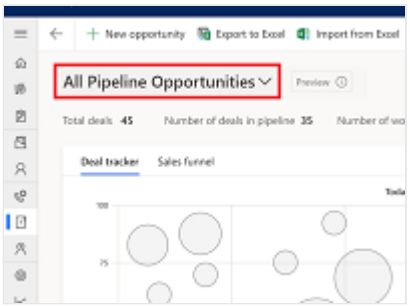


To set the new view as your default, select **Set as default view**.

Switch to a view

You can create multiple views with different personalizations and switch between them.

From the view list, select the view that you want to switch to.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

Work with opportunities in the Kanban view

Article • 08/18/2023

Use the opportunity Kanban view to effectively monitor the pipeline and see the opportunities in their different statuses or stages of business process flow.

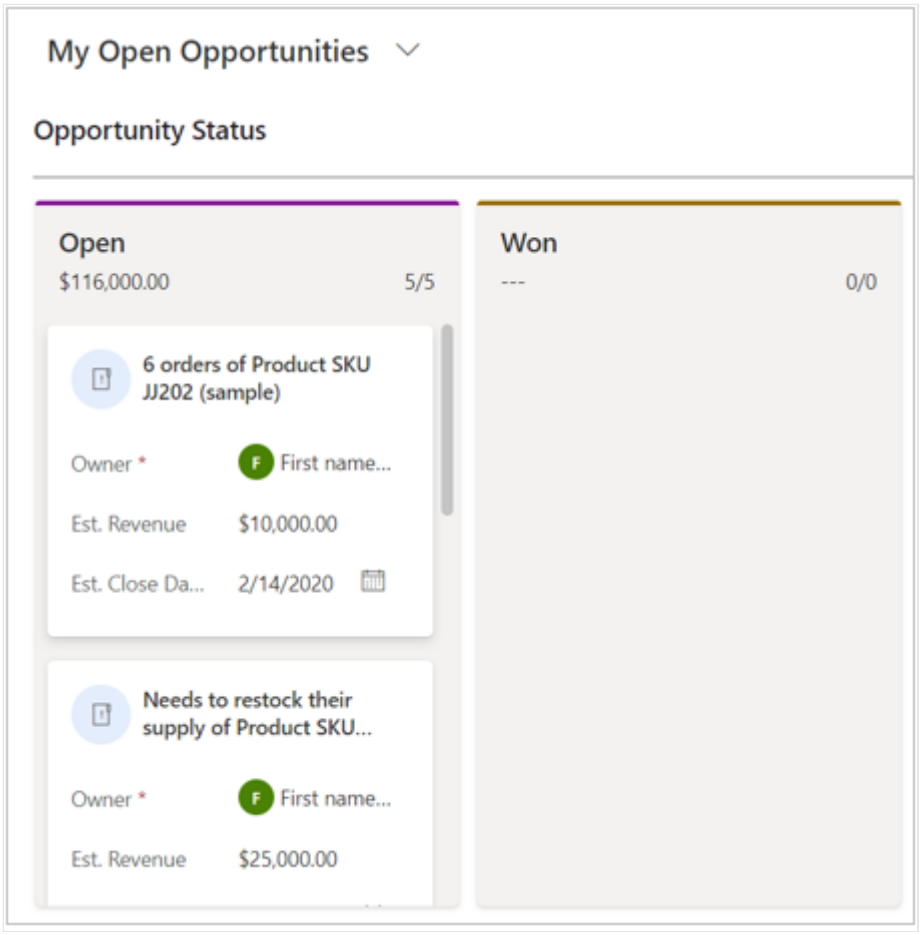
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What is a Kanban view?

The Kanban view shows opportunities as cards. The lanes in the Kanban view represent the default statuses or business process flow stages of opportunities. The opportunity cards within the swim lanes show where in the process the opportunities are.

You can drag the opportunities to different lanes to move them from one status or stage to another.



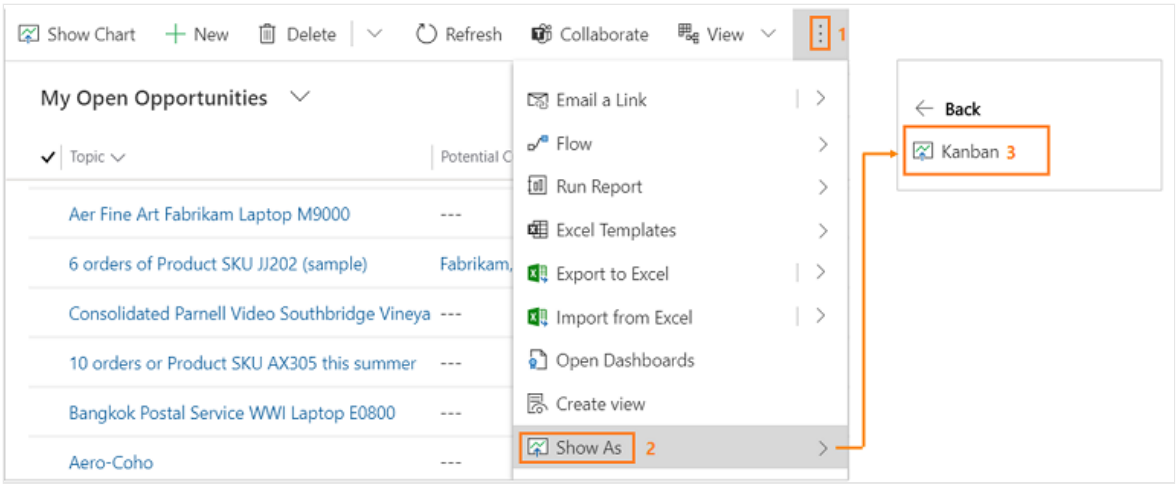
> ⓘ **Note**
>
> The Kanban view is not supported in the mobile app.

Open a Kanban view

A Kanban view is available when the Kanban control is added to the Opportunity entity. If you don't see the Kanban view, talk to your system customizer.

To open the Kanban view:

1. In the site map, select **Opportunities**.
2. On the command bar, select the **More commands** icon ⋮ and then select **Show As** > **Kanban**.

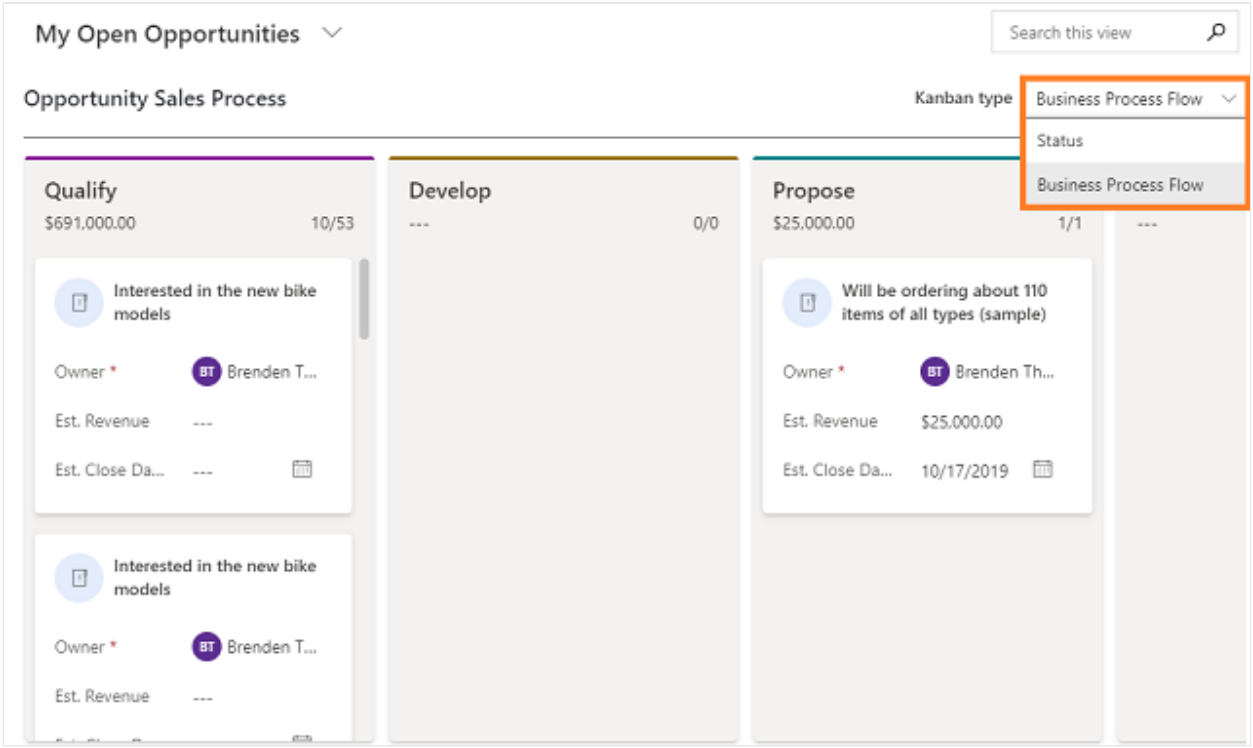


Available Kanban views for opportunity records

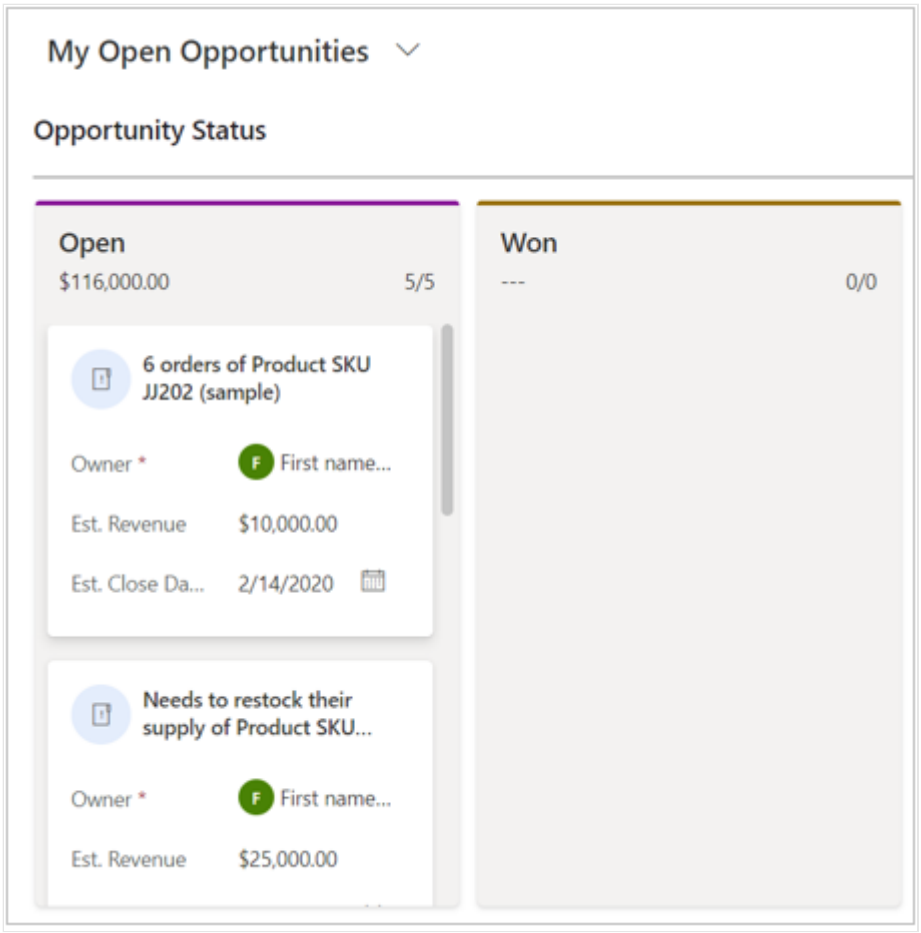
The following two types of Kanban views are available for opportunities:

- Based on the business process flow stage (default view).
- Based on the Opportunity status.

You can switch between the views by selecting the Kanban type from the Kanban type drop-down list.

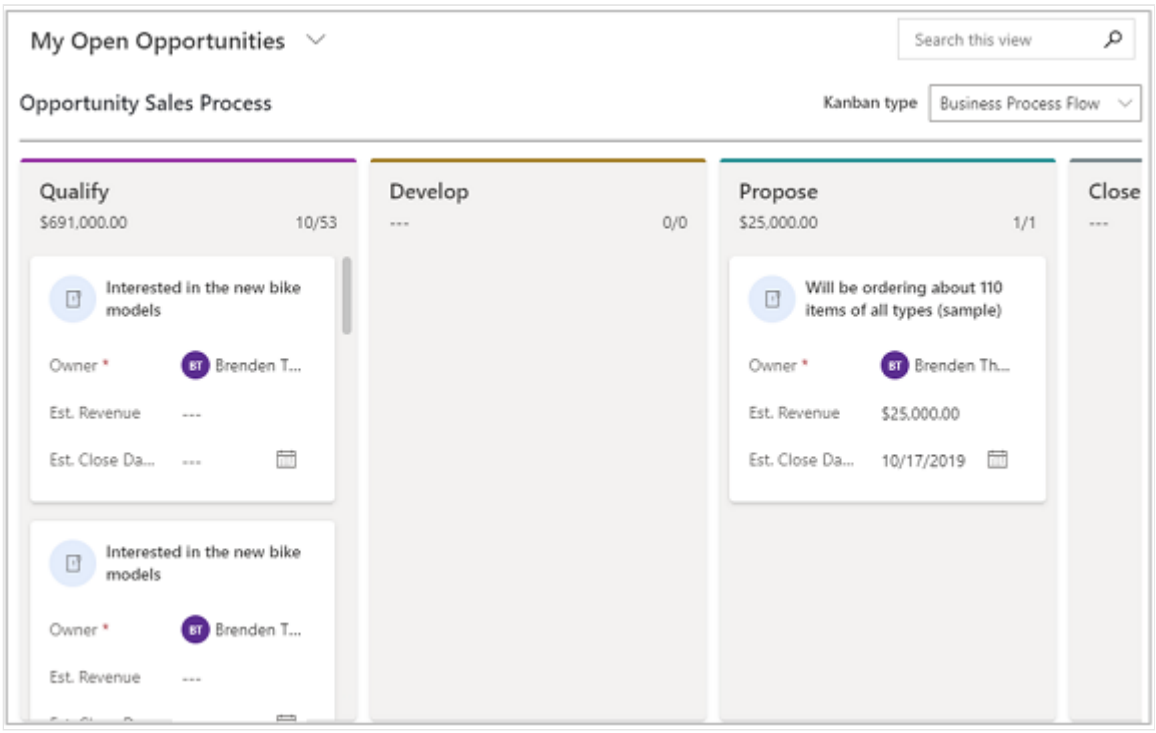


In the status-based Kanban view, each swim lane represents a default opportunity status such as, Open, Won, or Lost.



In the Business process flow-based view, swim lanes represent the stages of opportunities in the **Opportunity sales process** business process flow.

Currently, the Kanban view is only available for the **Opportunity sales process** business process flow.

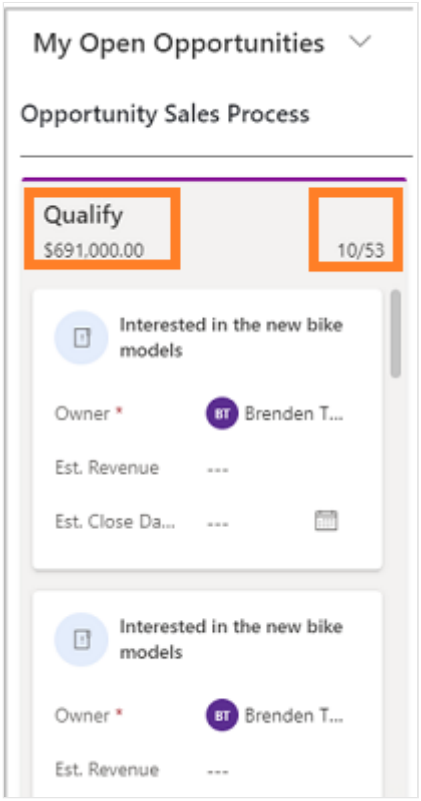


> **Note**
>
> If your system administrator or customizer has customized the **Opportunity sales process** business process, such as changing the stages in the business process flow, the changes are reflected in the business process flow-based opportunity Kanban view.

Know your Kanban views

Here are some important things to know about your Kanban view:

- At the top of each lane, the total estimated revenue for the opportunities in that lane is shown.

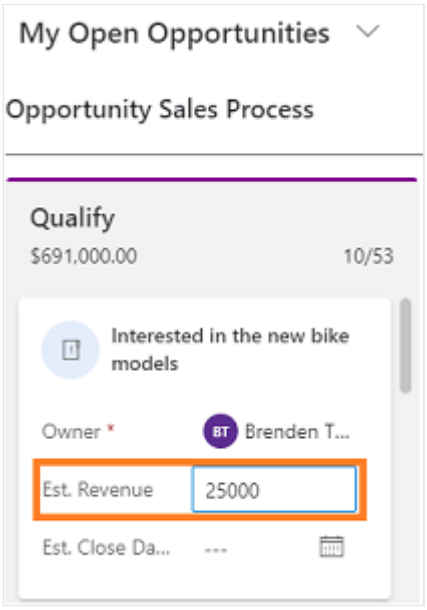


  It also shows a count of opportunity cards in that lane. At any given point, only the first 10 records or cards will be shown in any lane. If there are more than 10 opportunity cards in a lane—for example, 50—the count shows 10/50. To see more cards, scroll down in the lane. When you scroll down, the count changes to show 20/50, and so on.

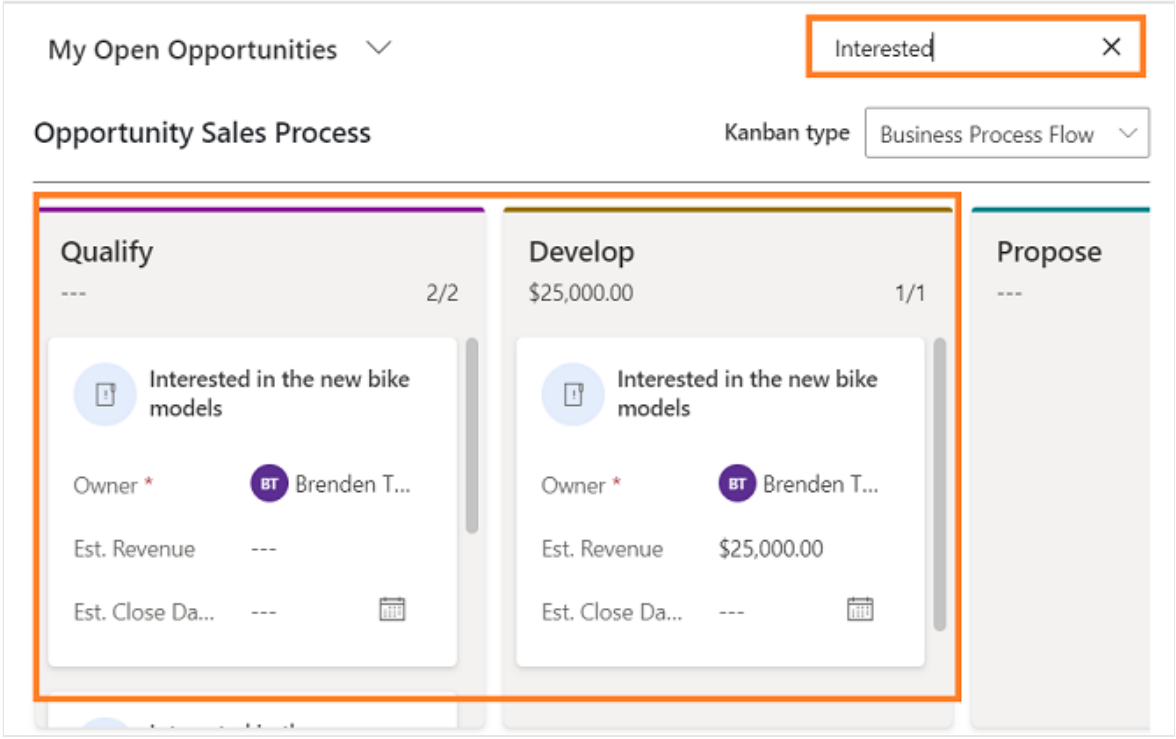
  > **Note**
  >
  > Aggregation of more than 50,000 records is not supported in a single swim lane. If there are more than 50,000 records, the aggregated estimated revenue

is shown as blank and the total number of records are shown as 50000+.

- Selecting the card title opens the opportunity Main form. The Main form also opens when you move cards across business process flow stages. When you close the Main form, the whole Kanban view is refreshed.
- The card fields are editable inline. You can quickly change details for the three fields of an opportunity record right from the card.



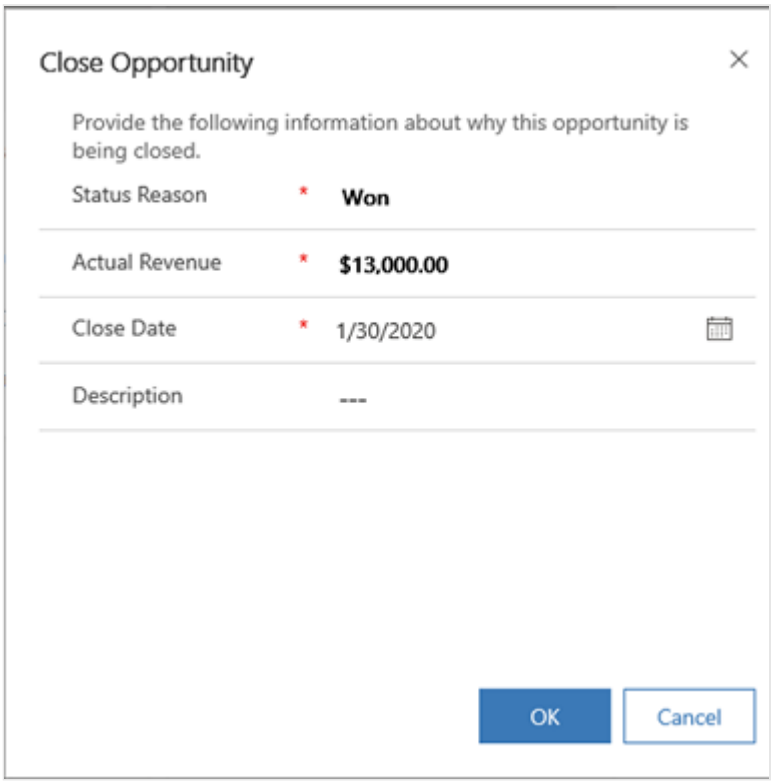
- When you select a different view, cards in the lanes are filtered based on the selected view.
- You can use the **Search** box to filter the records or cards in the swim lane based on the search criteria. For example, if you enter the keyword "Interested," it will refresh the Kanban view to only show the opportunity records where the title begins with "Interested".



- You can drag a card and move it to other lanes.

  In the Status-based Kanban view:

  - Moving a card to other lanes in the Status-based Kanban view opens the Opportunity status change dialog box, even if you've configured a customized opportunity close form.

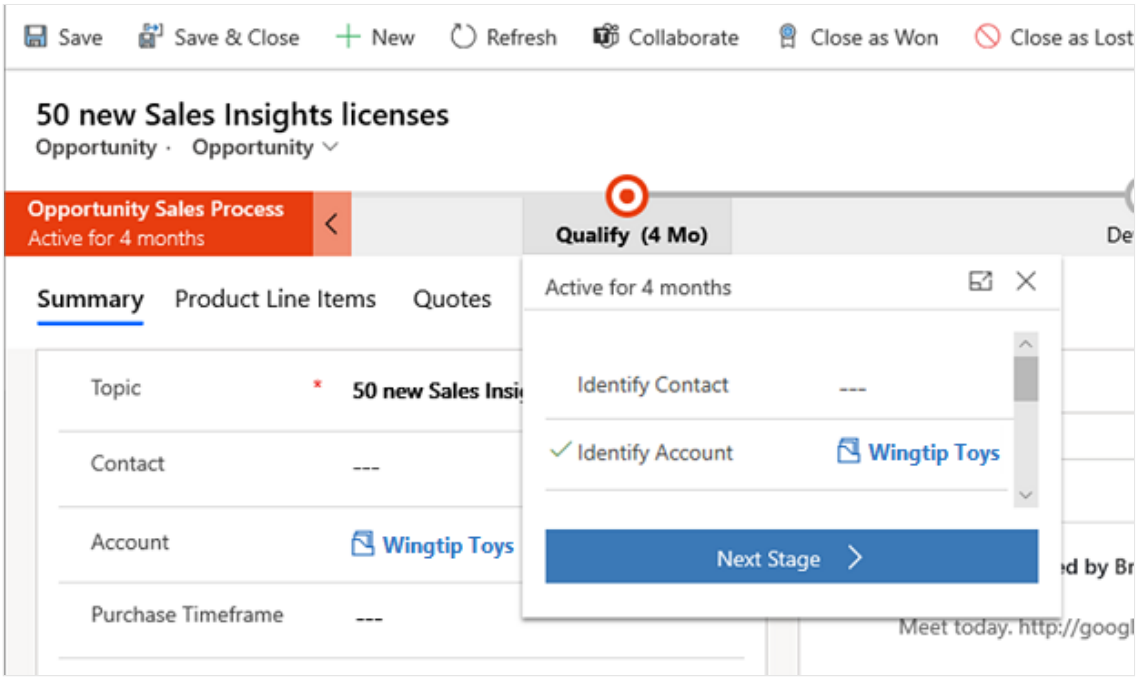


  - You can drag an opportunity card from the Open pane to the Won or Close lanes.

- When you move the card to the Won or Lost lanes, the opportunity record is closed. A lock icon is shown on the card, which means that the card (opportunity record) is inactive—you can't edit the fields on the card.
- You can still reopen a closed opportunity (a locked card) by moving the card from the Won or Lost lanes to the Open lane.
- When you're dragging a card to move to another lane, the lanes where the card can't be dropped appear dimmed.

In the Business process flow-based view:

- Moving a card to other lanes in the Business process flow-based Kanban view opens the main Opportunity form with the business process flow pop-up window.



- You can move the card from the current lane to the consecutive next or previous lane. Swim lanes where the card can't be dropped appear dimmed.
- When you're dragging a card to move to another lane, the lanes where the card can't be dropped appear dimmed.
- For all closed opportunities a lock icon is shown. The lock icon means that you can't change the information on the card inline, but you can still move the cards from one lane to another.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Add the Kanban control to Opportunity or Activity entities
Create or edit opportunities

Price calculation for opportunity, quote, order, and invoice records

Article • 02/17/2022

System price calculation is used to calculate values for the price-related fields of the opportunity, quote, order, and invoice records such as price per unit, volume discount, manual discount, or extended amount. An administrator or system customizer can set the preference for using system pricing calculations in **System Settings**. More information: System Settings Sales tab

> **Tip**
>
> Developers can also set system pricing calculation using the OOBPriceCalculationEnabled field of the Organization entity. More information: **OOBPriceCalculationEnabled**

If the **Use system pricing calculation** option is set to **Yes**, price calculation happens when an opportunity, order, quote, or invoice record is opened, created, or updated or when products are added, updated, or deleted from the entity record.

How price per unit is calculated for existing products in the product catalog

When you add an existing product to an opportunity, quote, order, or invoice record, and select a unit, you're adding a price list item. This price list item could be associated with a price list set on the opportunity, quote, order, or invoice record or to the default price list that's set on the product.

The Price Per Unit field on the price list item is calculated only when an existing product that's associated with a price list is added to an opportunity, quote, order, or invoice record. Otherwise, it is set to 0.

The price per unit is calculated based on the pricing method that you select while adding the product/price list item.

The following table lists the formula used for calculating the Price Per Unit field for each pricing method.

Pricing method	PricePerUnit formula

Pricing method	PricePerUnit formula
Amount	The price is specified for each unit of measure for each product. Price = amount
Percent list price	The price is calculated based on the manufacturer's or distributor's list price. Calculated price = list price x percentage
Margin current cost	The price is based on the profit percentage you want to achieve and your current cost for the item. Calculated price = current cost + [(current cost x percentage)/(100% - percentage)]
Markup current cost	The price is calculated as a percentage of your current cost for the item. Calculated price = current cost x 100% + percentage
Margin standard cost	The price is based on the profit percentage you want to achieve and the standard cost of the item. Calculated price = standard cost + [(standard cost x percentage)/(100% - percentage)] Because the standard cost is updated periodically, the standard cost amount in this equation is an average and will not always be the same as the amount you paid most recently for the item.
Markup standard cost	The price is calculated as a percentage of the standard cost of the item. Calculated price = standard cost x 100% + percentage. Because the standard cost is updated periodically, the standard cost amount in this equation is an average and will not always be the same as the amount you paid most recently for the item.

The final price per unit is derived by applying the rounding options (as defined in the price list item record) on the calculated value.

> **Note**
>
> List Price, Standard Cost, and Current Cost fields are not present on the product form by default. To see them on the form, a system customizer must add these fields to the product form.

Price calculation when price list is mandatory versus optional

Price calculations depend on whether a price list is mandatory while adding products or whether your organization has made price lists optional.

When price list is mandatory, price calculation won't happen if:

- You haven't selected a price list on the opportunity, quote, order, or invoice records.
- You've selected a price list on the opportunity, quote, order, or invoice record, but you're adding a product that doesn't belong to the selected price list.
- You've selected a price list on the opportunity, quote, order, or invoice record, but:
  - The price list item for the product's default price list isn't present.
  - The currency of the product's default price list doesn't match the currency on the quote product, order product, or invoice product.

When price list is optional, price calculation happens. If the product you're adding is associated with a price list, the price per unit is calculated and populated from the price list item. Otherwise, the price per unit is set to 0. To learn how to make the price list optional, see Make price list optional.

Price calculations for volume discount

Volume discount is calculated only when the quantity of the opportunity product, quote product, order product, or invoice product is changed (even when the parent entities are locked).

When a price list item is added as a product in opportunity, quote, order or invoice, the discount list defined in the price list item is used to calculate the volume discount.

> **Note**
>
> Discount is calculated even when a discount list is inactive.

See also

Define product pricing with price lists and price list items
Add products to an opportunity
Add products to quotes, orders, or invoices

How are stakeholders and sales team members tracked for opportunities?

Article • 04/13/2022

When you're working on an opportunity, you need to track who the stakeholders are and also the team members who are working with you on the opportunity. The Stakeholders and Sales Team subgrid on the out-of-the-box Opportunity form lets you do that.

Stakeholder subgrid

The **Stakeholders** subgrid uses connections to associate contact records as stakeholders with the opportunity. More information: Add a connection role to link rows to each other.

You can add a contact as a stakeholder to the opportunity by selecting **New Connection** on the subgrid. This creates a connection record between the opportunity and the contact by using the **Stakeholder** connection role. For more information, see Configure connection roles. You can change the connection role to any other applicable stakeholder connection role by opening the record and changing the **As this role** field on the connection record. Other out-of-the-box connection roles configured under the **Stakeholder** connection role category are Champion, Decision Maker, End User, Economic Buyer, Influencer, and Technical Buyer.

> ⓘ Note
>
> The **Stakeholders** subgrid on the Opportunity form only shows connections that have a connection role category of **Stakeholder**.

Sales team subgrid

You can add existing users as sales team members by using the **Sales team** subgrid. The **Sales team** subgrid also uses connections to associate users with the opportunity in different sales member roles. Similar to adding a stakeholder, you can add an existing user as a sales team member by using **New Connection**. You can change the connection role to any other applicable sales team connection role by opening the record and changing the **As this role** field on the connection record. Other out-of-the-box connection roles configured under the **Sales team** connection role category are Delivery

Professional, Account Manager, Territory Manager, Service Professional, Industry Expert, and Technical Sales Professional.

> **Note**
>
> The **Sales team** subgrid only shows connections that have a connection role category of **Sales team**.

Dynamics 365 Sales uses the Opportunity Sales Access Team template to provide access to the opportunity record to all the users connected under the **Sales team** connection role category. A salesperson who might not have access to a given opportunity record by their assigned security role privileges can still get access when added as a sales team member from this subgrid. This allows the sales team member users to access and work with the opportunity record in Dynamics 365 on a per-record basis. Similarly, when an existing sales team member is deleted from the subgrid, the access to the opportunity record granted via the access team template is also removed. More information: Share records using Access Team

See also

Create or edit opportunities

Recalculate an opportunity in Dynamics 365 Sales

Article • 03/21/2023

When you add a product to an opportunity, the opportunity's estimated revenue value is calculated based on the price, discounts, taxes, and other pricing modifications for the product.

To change the estimated revenue value of an opportunity based on any changes to the associated products or product quantities, recalculate the opportunity.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Recalculate an opportunity

1. In the list of opportunities, open the opportunity for which you want to recalculate the estimated revenue.
2. Go to the **Product line items** tab, and verify that **Revenue** is set to **System Calculated**.
3. In the grid, modify the list of products associated with the opportunity.
4. Select **Save**.
5. On the command bar, select **Recalculate**.

> **Important**
>
> If there are any changes to existing opportunity products associated with closed opportunities, the prices aren't recalculated.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit an opportunity
Nurture sales from lead to order
Print quote, invoice, or other records
Dynamics 365 Sales troubleshooting guide

Close opportunities as won or lost

Article • 05/10/2022

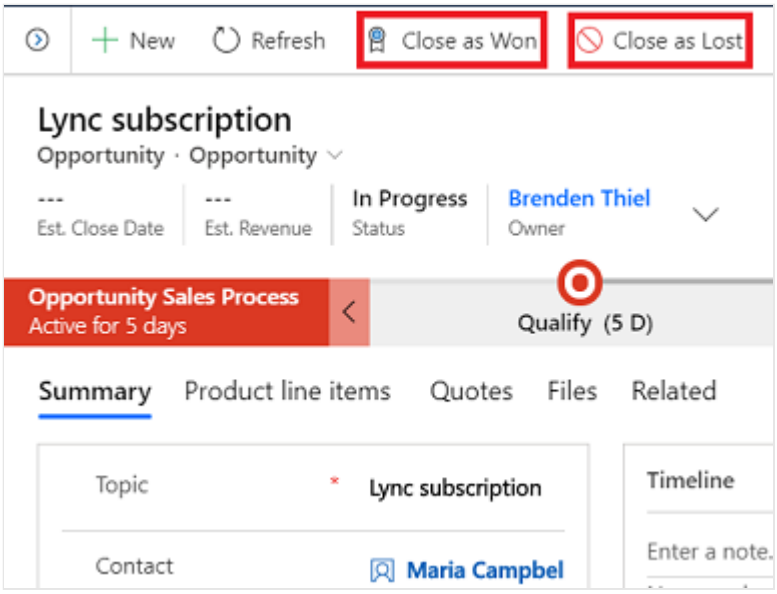
If your customer has accepted your proposal, congratulations! Whether your customer had accepted or declined your proposal, it's now time to close that opportunity.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

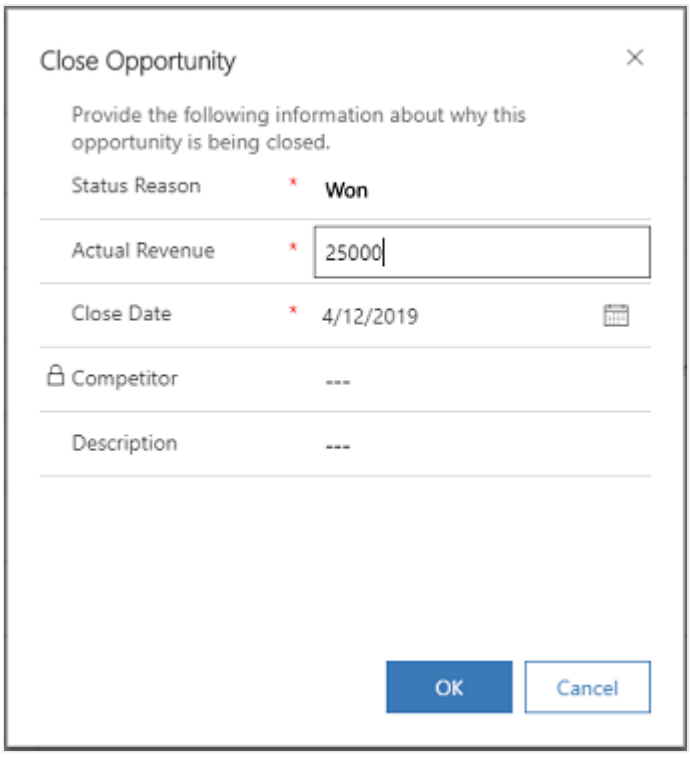
Close an opportunity

1. Select **Opportunities** in the Sales Hub sitemap.
2. Open the opportunity you want to close.
3. Select the **Quotes** tab and ensure that all the quotes are in **Closed** state. For instructions on how to close a quote, see Close a quote.
4. At the top of the **Opportunity** form, do one of the following:
    - To close your opportunity as won, select **Close as Won**.
    - To close your opportunity as lost, select **Close as Lost**.



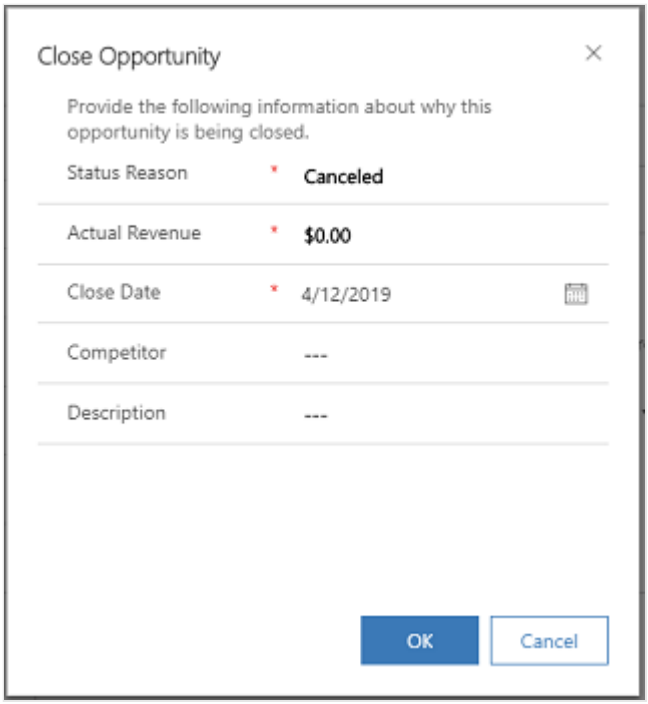
5. When you close the opportunity as **Won**, in the **Close Opportunity** dialog box, do the following, and select **OK**:

   - In **Actual Revenue**, Verify the amount, and make changes, if necessary.
   - In **Description**, enter details about what contributed to winning this opportunity.



When you close the opportunity as **Lost**, in the **Close Opportunity** dialog box, do the following, and select **OK**:

- In **Competitor**, select a competitor you lost this opportunity to.
- In **Description**, add more details around why the opportunity was lost.



> **Important**
>
> If your system administrator has enabled custom fields on the Opportunity Close form, you may be required to fill in data in other fields as defined by your organization.

When you close an opportunity record, all the information that you enter is available in the associated Opportunity Close record. To see the associated Opportunity Close records, on the **Related** tab, select **Activities**. Then, on the **Activities** tab, open the **Closed Activity Associated View**.

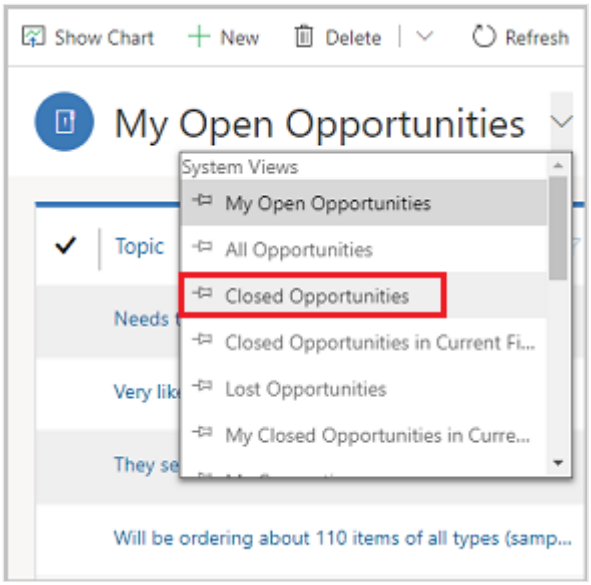
> **Note**
>
> After you close an opportunity record, the forecast category of the opportunity is automatically updated to **Won** or **Lost** depending on your selection for the opportunity closure.

For information on how to resolve the common errors that you may see while closing an opportunity, see the troubleshooting guide.

Reopen a closed opportunity

If you've closed an opportunity as lost, but would like to start discussions about a potential sale, you may want to reopen a closed opportunity.

1. Select **Opportunities** in the Sales Hub sitemap.
2. To see all the closed opportunities, in the view selector, select the **Closed Opportunities** view.



3. Select the opportunity that you want to reopen, and on the command bar, select **Reopen Opportunity**. The reopened opportunities start appearing in the open opportunities list.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Nurture sales from lead to order
Dynamics 365 Sales troubleshooting guide
Troubleshoot issues with opportunities

Create or edit competitor records (Sales Hub)

Article • 03/30/2022

Tracking your competitors and their strengths and weaknesses can help you win sales. Use Dynamics 365 Sales to store details about competitors that you and your colleagues can share, and stay current with the latest details.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create a competitor

1. In the site map, under **Sales**, select **Competitors**.
2. On the command bar, select **New**.
3. Fill in your information. Use the handy tooltips as a guide.
4. On the command bar, select **Save**.
5. To associate a competitor with an opportunity, select the **Opportunities** tab, and select **Add Existing Opportunity**. In the **Search** box, select the Lookup icon, and then select an opportunity from the results.
6. To associate a competitor with a product, select the **Related** tab, and then select **Products**. Select **Add Existing Product** and use the Lookup icon to select a product.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Help resources for Dynamics 365 Sales

Manage quote, order, and invoice

Article • 05/29/2023

In Dynamics 365 Sales, a sale typically starts with a draft quote. A quote undergoes several revisions between the salesperson and customer before it is accepted. After the quote is accepted, an order is generated from the quote. The order is used to fulfill the agreement of goods or services that were offered in the quote. Finally, after the order for the goods or services is shipped, an invoice is generated.

In Dynamics 365 Sales, quotes, orders, and invoices are considered to be the same item, but in different states of transition.

You can start a sales transaction, such as a quote or invoice, from within the opportunity record. The advantage of starting sales transactions in this manner is that much of the information is automatically entered based on the opportunity data. You can also view any sales transaction records from within the opportunity record to track the overall sales process and expected revenue.

More information:

- Create or edit quotes
- Create or edit sales orders
- Create or manage invoices

Understanding quote stages

When you create a new quote, it is automatically set to Draft, and the revision ID is set to 0.

Before a quote is sent to a customer, it must be set to Active. Activating a quote makes it read-only so your versions matches the customer's version. If you revise it, the revision ID will increase by one.

When you close a quote, you have three choices: Lost, Canceled, or Revised. If you revise it, a new quote is created, set to Draft status, and you can start over. If you do not revise it, the quote is closed.

Differences between Current Pricing and Prices Locked in invoices

Dynamics 365 Sales has two kinds of pricing behavior on orders and invoices: **Use Current Pricing** and **Prices Locked**.

The **Use Current Pricing** price comes directly from the product catalog. If you change the price of a product there, then it changes in all open invoices that include the product.

Prices Locked locks the price for a product in an open order or invoice. Even if the price changes in the product catalog, that order or invoice remains at the agreed price.

See also

Create or edit quotes
Create or edit orders
Create or edit invoices
Lock or unlock the price for an order or invoice

Lock or unlock the price for an order or invoice (Sales Hub)

Article • 08/01/2023

After you've finalized an order or invoice for a specific price, you can lock the price to prevent it from being updated when the price list is updated. Conversely, you can enable current pricing to update the price on the order or invoice when the price list is updated.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Lock prices or use current pricing

1. In the site map, select **Orders** or **Invoices**.
2. Open the order or invoice you want to edit.
3. To lock prices, on the command bar, select the More Commands icon, and then select **Lock Pricing**.

   When you lock the price, the following happens:

   - The **Prices Locked** field in the order or invoice is set to **Yes**.
   - The **Price Per Unit** field is locked for all the products in the order or invoice and is disabled for editing.
   - You won't be able to add write-in products to the order or invoice as you need to specify the price for write-in products.
   - Though you can change the price list of the order or invoice, the prices of the products are not updated based on that price list.

- You can continue to add products to the quote at the default price, but you won't be able to edit the price.

4. To unlock prices and use current pricing, on the command bar, select the More Commands icon, and then select **Use Current Pricing**.

   When you use current pricing, the following happens:

   - The **Prices Locked** field in the order or invoice is set to **No**.
   - The **Price Per Unit** field is unlocked for all the products in the order or invoice and becomes editable. You can choose to use the default price or override the price.
   - When you open or edit the quote or invoice, the price of the line items is automatically updated to reflect any changes in the price list.
   - If the price of a line item has been overridden in the order or invoice, it's unaffected by any changes to the price list.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit orders
Create or edit invoices

Create or edit quotes

Article • 08/01/2023

Quotes include the pricing details of products that your potential customer is interested in.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How to create or edit quotes

One way that can help you increase your sales is to add all products that your customer might need to your quote. Dynamics 365 Sales may also offer product bundles or product families to make it easier for you to choose products for upsell and cross-sell.

Most sales begin with a price quote, which eventually becomes an order.
You'll probably edit a quote multiple times as a sale progresses. Initially, you create a draft, and then you need to activate it when it's ready to go to a customer.
When the customer accepts the quote, you create an order. Otherwise, you close the quote as revised, canceled, or lost.

Create a quote from an opportunity

1. Select the site map , and then select **Opportunities**.

2. Select the opportunity you want to create a quote for.

3. Go to the **Quotes** tab and then select **New Quote**.

   The quote form opens. The quote form is prefilled with important details from the opportunity record.

4. Enter shipping and payment information in the **Shipping Information** area of the **Quote** form.

5. Enter the billing and shipping addresses in the **Addresses** area of the **Quote** form.

6. To add products from your opportunity to your quote, on the command bar of the **Quote** form, select **Get Products**. Add more products or remove existing ones from the **Products** area. Learn more about how prices are calculated for a quote.

7. Select **Save** in the lower-right corner of the screen.

8. When your quote is ready to send to your customer, on the command bar, select **Activate Quote**.

> ⓘ **Note**
>
> Your base record and all its line items must use the same currency. For example, if your quote has the currency set to U.S Dollars, you must use the same currency for the price list items that you add to the quote. You can't change the currency of the base record (in this case, an quote), unless you remove all the line items associated with the record. Similarly, if the quote is created from an opportunity, it must use the same currency as the opportunity.

Create a quote

1. Select the site map , and then select **Quotes**.

2. Select **New**.

3. On the **Quote** form, enter data in the following required fields:

   - **Name**
   - **Price List** and **Currency**: The price list that will be used to calculate the product prices and currency. Learn more about how prices are calculated for a quote.

     > ⓘ **Note**

> By default, selecting a price list is required to be able to add products a quote. However, your administrator can change your organization settings to make the Price list field optional. More information: **Allow adding products without associated price list**

4. In the **Sales Information** section, in **Potential Customer**, enter information about the customer you're creating this quote for.
5. On the command bar, select **Save** to enable other sections on the form.
6. To add products from an opportunity to your quote, select **Get Products** at the top of the **Quote** form, select an opportunity, and then select **OK**.

   -OR-

   To manually add other products, in the **Products** section, select the **More commands** icon , and then select **Add Product**. More information: Add products to Quote, invoice, or order records
7. In the **Shipping Information** area, enter shipping details.
8. In the **Addresses** area, enter shipping and billing addresses.
9. Select **Save**.
10. When your quote is ready to send to your customer, on the command bar, select **Activate Quote**.

How prices are calculated for a quote

The price calculation for a quote depends on the product catalog, line items, pricing rules, discounts, and taxes. It also varies based on the quote phase such as draft, active, or closed.

- **Draft state**: During the draft phase, pricing calculations are based on the following elements:
  - **Product catalog**: Includes a product catalog with products/services available for quoting.
  - **Price list**: Defines the price of the products included in the quote.
  - **Line items**: Includes the products/services that you've added as line items to the quote, along with the quantity.

    - **Pricing rules**: Determines the price of a product or service based on various factors such as volume discounts, customer-specific pricing, contract terms, or any other configured criteria.
    - **Discounts**: Specifies the discounts to be applied to individual line items, or the overall quote based on specific conditions or negotiations with the customer. Discounts can be percentage-based or fixed amounts.
    - **Taxes**: Specifies the tax rules that are configured to calculate applicable taxes based on the product, customer location, and other relevant factors.

    In the draft state, the prices are adjusted to the actual prices on the price list when you open or edit the quote. The overall price is calculated by adding the price of all the products in the quote and deducting any applied discounts.

- **Active state**: The active quote state has the same price as the draft state. However, the overall amount is locked and can't be modified after it's published.
- **Closed phase**: In the closed state, the price is typically based on the agreed-upon terms between the seller and the customer. Once the quote is closed, prices are considered fixed and no longer subject to changes unless a new quote or agreement is created.

  In the active and closed states, the prices are not adjusted to the actual prices on the price list when you open or edit the quote.

Email a quote

When you've added all the details to the quote, you can send it to the customer. To directly send an email to a customer with a quote attached, open the quote, and on the command bar, select **Email as PDF**. More information: Email a PDF file

Typical next steps

Create or edit an order

Learn about the sales process, nurturing sales from lead to order

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Sales transactions in Dynamics 365 Sales
Export your quote to a PDF file
Track and manage activities
Print quote, invoice, or other records

Close a quote in Dynamics 365 Sales

Article • 10/03/2023

When you create an order from a quote, the quote is automatically closed as won. However, if the quote was not accepted, you can close it manually as Lost, Canceled, or Revised.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Close a quote

1. In the sitemap, select **Quotes** to view all the quotes. Alternatively, you can open an opportunity and select the **Quotes** tab to view the quotes associated with the opportunity.

   > **Note**
   >
   > - You can close a quote only when it's in the **Active** state. If you have quotes in **Draft** state, you can either delete them or activate and then close them.
   > - If you'd like to customize the quote closure experience, contact your Dynamics 365 Sales administrator. **Learn more about supported customizations.**

2. Open the quote that you want to close and select **Close Quote** on the command bar.

3. In the **Close Quote** dialog box, enter the following information:

- **Status Reason:** Select the status of the item. The choices available by default are Lost, Canceled, and Revised.
- **Close Date:** Enter the date that the quote was closed. The current date is selected by default.
- **Description:** Enter details about why the quote is being closed.
- **Create a revised quote:** You may be closing the quote because you need to create a new, revised quote. If this is the case, select **Yes**. If you don't want to revise the quote, set this field to **No**.
- **Close the associated opportunity:** This field appears only when you try to close the last quote associated with an opportunity.

4. Select **OK**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Create or edit quotes

Create or edit sales orders

Article • 07/06/2022

Use orders to track details of the products or services that your customers want to place an order for.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

When to create an order

Create an order when the customer is ready to buy your products or services. In Dynamics 365 Sales, an order can originate from a customer's acceptance of a quote, or you can place an order without an accepted quote, depending on the situation.

One way that can help you increase your sales is to add all products that your customer might need to your order. Dynamics 365 Sales may also offer product bundles or product families to make it easier for you to choose products for upsell and cross-sell. If you've already prepared a quote for your customer, you can create an order from that quote.

Create an order from a quote

Typically, you convert a quote that you have won into an order. Start with an active quote. Note that after a quote is accepted, you won't be able to revise it.

1. Select the Site map icon , and then select **Quotes**.
2. Select the quote you want to create an order from.
3. On the command bar, select **Activate Quote**.
4. At the top of the **Quote** form, select **Create Order**.

> **Note**
>
> In the Sales Professional app, the **Create Order** option is available only if your administrator has **enabled creation of orders from quotes**

5. In the **Create Order** dialog box, the **Date Won** field is set to the current date. Select a different date if required.
6. Add a description, and select **OK**.
7. To add products from your opportunity to your quote, select **Get Products** at the top of the screen, select your opportunity, and select **OK**.
8. Select **Save** in the lower-right corner of the screen.

> **Note**
>
> Your base record and all its line items must use the same currency. For example, if your order has the currency set to U.S Dollars, you must use the same currency for the price list items that you add to the order. You can't change the currency of the base record (in this case, an order), unless you remove all the line items associated with the record. Similarly, if the order is created from a quote that is generated from an opportunity, it must use the same currency as the opportunity.

> **Important**
>
> Once your order is final, you can create an invoice from the order by selecting the **Create Invoice** button on the command bar. More information:**Create or edit an invoice**
> If Dynamics 365 Sales is integrated with an external order processing application, you may see the **Submit Order** button instead of the **Create Invoice** button on the Order form command bar. This is because the integration allows an order created in Dynamics 365 Sales to be submitted, upon which the order is synced to the order processing app where the lifecycle of the order continues. A submitted order is locked for editing in Dynamics 365 Sales except by an integration user. More information: **Enable sales order processing integration**

Create an order

You can create an order that is based on your communication with a customer instead of an accepted quote.

1. Select the Site map icon, and then select **Orders**.
2. Select **New**.
3. On the **Order** form, enter data in the following required fields:
    - **Name**. You must enter a name with a length of 100 characters or fewer. The information should be meaningful and unique. By default, these records are sorted by Name in the records list.
    - **Price List** and **Currency**: Select the price list and the currency that will be used to calculate the product prices.

      > ⓘ **Note**
      >
      > By default, selecting a price list is required to be able to add products to an order. However, your administrator can change your organization settings to make the Price list field optional.

    - **Prices Locked**. This field is read-only. You set **Prices Locked** by selecting **Lock Pricing** on the command bar. More information: Lock or unlock the price for an order or invoice, Sales transactions in Dynamics 365 Sales
4. In the **Sales Information** section, in **Potential Customer**, select the customer you're creating this order for.
5. On the command bar, select **Save**.
6. To add products from a previously created opportunity to your order, select **Get Products** at the top of the screen, select your opportunity, and then select **OK**.

   -OR-

   To manually add other products, in the **Products** section, select the **More commands** icon, and then select **Add New Order Product**. More information: Add products to Quote, invoice, or order records

   > ⓘ **Note**
   >
   > You need to enter the tax amount when you add a product to a quote, order, or invoice. Dynamics 365 Sales does not automatically calculate tax for

individual products. However, the total tax is calculated automatically based on the sum of the tax amounts for all of the individual products in a quote, order, or invoice.

7. In the **Shipping Information** area, enter shipping details.
8. In the **Addresses** area, enter shipping and billing addresses.
9. Select **Save** in the lower-right corner of the screen.

> **Note**
>
> - You close an order by either fulfilling the order or canceling the order. Products or services that are shipped are fulfilled. You should cancel orders for any products or services that are not shipped.
> - You can't set the status of multiple orders to fulfilled at one go.
> - You can't update or change an order after it has been closed, or if it has been partially or completely fulfilled.

Typical next steps

Create or edit an invoice

Learn about the sales process, nurturing sales from lead to order

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Print quote, invoice, or other records

Sales transactions in Dynamics 365 Sales

Create or manage invoices

Article • 05/10/2022

When a customer places an order, you can create an invoice to bill them for the upcoming sale. Typically, you convert an order into an invoice; however, you can also create an invoice that does not originate from an order.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create an invoice from an order

1. Select the site map , and then select **Orders**.
2. Select the order you want to create an invoice from.
3. Select **Create Invoice** at the top of the screen.

   > **Important**
   >
   > If Dynamics 365 Sales is integrated with an external order processing application, you may see the **Submit Order** button instead of the **Create Invoice** button on the Order form command bar. This is because the integration allows an order created in Dynamics 365 Sales to be submitted, after which it is synchronized with the order processing app where the lifecycle of the order continues. A submitted order is locked for editing in Dynamics 365 Sales, except by an integration user. More information: **Enable sales order processing integration**

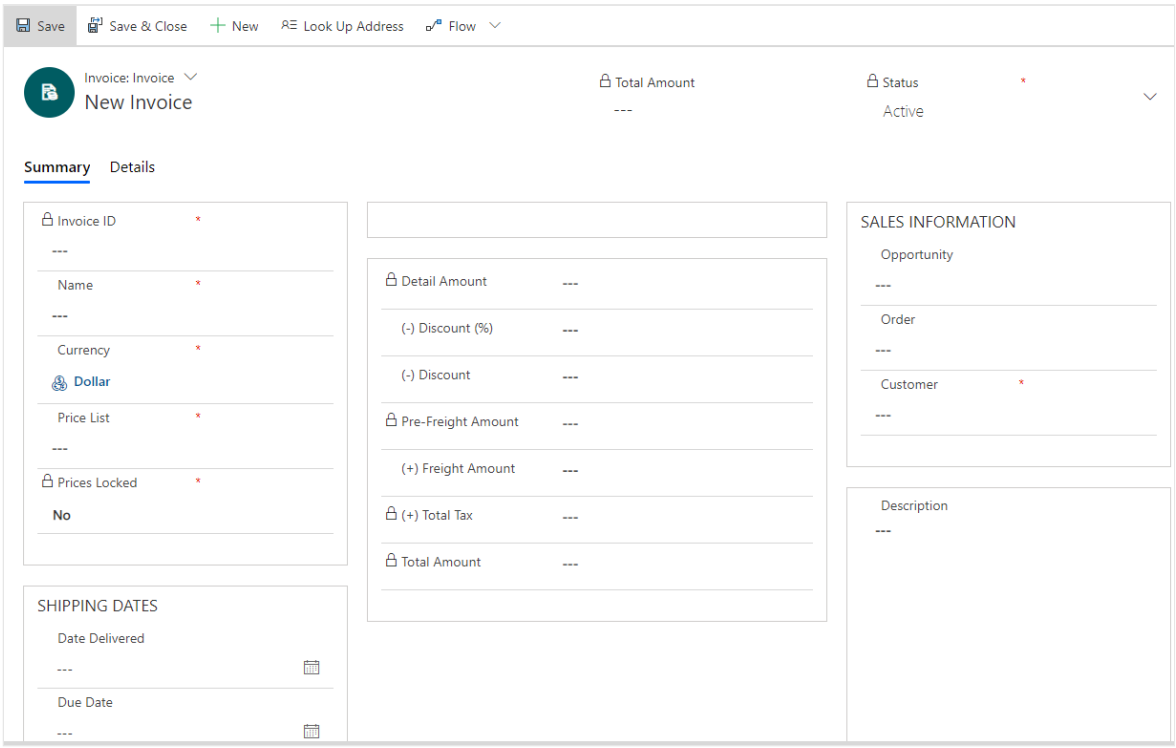
4. Review the contents of the invoice and make any additions or corrections before sending to your customer.

> **Note**
>
> Your base record and all its line items must use the same currency. For example, if your invoice has the currency set to U.S. Dollars, you must use the same currency for the price list items that you add to the invoice. You can't change the currency of the base record (in this case, an invoice), unless you remove all the line items associated with the record. Similarly, if the invoice is created from an order that's created from a quote created from an opportunity, it must use the same currency as the opportunity.

Create an invoice

1. Select the site map , and then select **Invoices**.
2. Select **New**.

   The Invoice form opens.



3. On the **Invoice** form, enter data in the following required fields:

   - **Name**
   - **Price List** and **Currency**: Select the price list and the currency that will be used to calculate the product prices.

     > **Note**

> By default, selecting a price list is required to be able to add products to an invoice; however, your administrator can change your organization settings to make the Price List field optional.

- **Prices Locked**. This field is read-only. You set **Prices Locked** by selecting **Lock Pricing** on the command bar. More information: Lock or unlock the price for an order or invoice, Sales transactions in Dynamics 365 Sales

4. In the **Sales Information** section, in **Potential Customer**, select the customer you're creating this invoice for.

5. On the command bar, select **Save** to create the invoice record.

6. To add products from your opportunity to your order, select the **More options** icon and then choose **Get Products**, select your opportunity, and select **OK**.

   -OR- To manually add other products, In the **Products** section, select the **Add Product**. More information: Add products to Quote, invoice, or order records

   You need to enter the tax amount when you add a product to a quote, order, or invoice. Dynamics 365 Sales doesn't automatically calculate tax for individual products. However, the total tax is calculated automatically based on the sum of the tax amounts for all of the individual products in a quote, order, or invoice.

7. In the **Quick Create: Invoice Product** form, enter the details:

   a. In the **Select Product** button, select whether you want to add an existing product or create a new one:

      i. To use an existing product, select **Lookup** to search for and add a product. Also, select a unit of measurement for the product.

      ii. To create a product, select **Write-In**, and then enter the name of the product.

   b. Fill in details in the **Pricing** section:

      i. Toggle the **Pricing** button to indicate whether you want to use the default pricing that is listed in the product catalog or override the price. For a write-in product, this field is set to **Override** Price.

      ii. If you're adding a write-in product, in **Price Per Unit**, enter the price to be charged per unit for the product.

      iii. Enter the quantity of the product or service that will be included.

iv. If you want to offer a discount to the product price, enter it in **Manual Discount**.

v. If required, enter the appropriate tax amount. You need to enter the tax amount when you add a product to a quote, order, or invoice. Dynamics 365 Sales Professional doesn't automatically calculate tax for individual products. However, the total tax is calculated automatically based on the sum of the tax amounts for all of the individual products in a quote, order, or invoice.

8. Select **Save and Close**.

> ⓘ **Note**
>
> You close an invoice either by canceling the invoice or setting the invoice status as paid.

Edit an invoice

1. In the list of invoices, select the invoice you want to edit.
2. Add or change any details about your invoice.
3. Select **Save** in the lower-right corner of the screen.

> ⓘ **Note**
>
> It isn't possible to edit multiple invoice records at once.

Lock or unlock prices of an invoice

Lock Pricing locks the price for a product in an open invoice. Even if the price changes in the product catalog, that invoice remains at the agreed price.

To lock a price:

1. Go to the list of invoices and open the invoice that you want.
2. To lock the price, on the command bar, select **Lock Pricing**.

   -OR-

To use the price of a product from the product catalog, select **Use Current Pricing**.

Close an invoice

You close an invoice either by canceling the invoice or setting the invoice status as paid. To do this, open the invoice you want to close, and on the command bar, select **Cancel Invoice** or **Invoice Paid**.

Email an invoice

When you've added all the details to the invoice, send it to the customer.

To directly send an email to a customer with an invoice attached, open the invoice, and on the command bar, select **Send by Email**.

Typical next steps

Close an opportunity as won or lost (Sales)

Learn about the sales process, nurturing sales from lead to order

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Nurture sales from lead to order
Print quote, invoice, or other records
Troubleshoot issues with orders

Add products to quotes, orders, or invoices

Article • 05/10/2022

You can add products or product bundles to a quote, order, or invoice record. The product can be an existing product in the Dynamics 365 Sales product catalog or an ad hoc product that you add as a write-in product.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Add a product

If you've created a quote from an opportunity, the products added to the opportunity are automatically added to the quote. You can add more products or remove the existing ones. You can also add products from a different opportunity by selecting **Get products** from the command bar.

The process for adding a product to a quote record is the same as adding a product to an order or an invoice. This topic explains how to add products to a quote record.

1. From the list of quotes, open the quote record you want to add the product to.
2. In the **Products** section of the **Summary** tab, add products to the quote using one of the following methods:
    - To add products from an opportunity, select the **More commands** button > **Get products** and select the opportunity.
      Products from the selected opportunity are added to the quote.
    - To find and add products manually, select **Add product**.
        a. In the **Quick Create: Quote Product form**, do the following:

b. In the **Select Product** drop-down list, select whether you want to add an existing product or create a new one:

- In the **Existing Product** field, select **Lookup** to search for and add a product. Also, select a unit of measurement for the product.

  > ⓘ **Note**
  >
  > - When a price list is selected for the opportunity, the products listed in the **Existing Product** field are filtered by the price list. This means that only the product associated with the selected price list are shown in this field. In this case, the default view is set to **Products in Parent Price List** view. You can't set a custom view as the default view. Even if you do, the Products lookup will automatically set it back to **Products in Parent Price List** view.
  > - When a price list isn't selected, the **Existing product** field shows all active products (not filtered by the price list). You can change the view to look for other products by selecting the **Change View** icon.
  > - By default, the product lookup will show the most recently used products. The most recently used products are not filtered based on the selected price list.
  > - If a price list is selected, and you select a product that isn’t associated with the price list, you'll see an error. Select a product that's associated with the selected price list.

- To create a product, select **Write-In**, and then enter the name of the product.

  > ⓘ **Important**
  >
  > To add a write-in product to orders and invoices, ensure that the **Prices Locked** field is set to **No**. If it's set to **Yes**, you won't be able to add write-in products because prices of write-in products are considered as overridden. **More information**: **Lock or unlock the price for an order or invoice**, **Sales transactions in Dynamics 365 Sales**

c. Fill in details in the **Pricing** section:

- **Price Overridden**: If you're adding an existing product from the product catalog, select whether you want to use the default pricing that is listed in the product catalog or override the price. For a write-in product, this field is set to **Override** Price.
- **Price Per Unit**: If you're adding a write-in product, enter the price to be charged per unit for the product.
- **Quantity**: Enter the quantity of the product or service that will be included.
- **Manual Discount**: If you want to offer a discount to the product price, enter it here.
- **Tax**. If required, enter the appropriate tax amount.

d. To save this product, and add more products, select **Save and New**.

The **Products** grid shows all the products that are associated with the quote. After you add a product, you can change the unit, price, quantity, and discount of the product inline in the **Products** grid. For a write-in product, you can also change the price of the product in addition to the quantity and discount.

Here are the actions you can take on the products in the Products grid:

To	Do This
Edit properties of a product	Select a product, and on the command bar, select **Edit**. You can change details such as the price, quantity, or discount of the added products. You can also open the quote product, order product, or invoice product record, and view or change the properties of the product inline on the **Product Properties** tab.
Delete a product associated with the quote	Select the product, and on the command bar, select the **More commands** button ⋮ > **Delete Quote Product**.
View products within a bundle	Select the **Chevron** icon › for the product bundle. You'll see all the products that are included in the bundle.
See and add related products for cross-selling or upselling or to select an accessory or substitute product	Select a product, and on the command bar, select **Suggestions**. The **Suggestions** pane shows all the products that are defined as related products for the current product. Select the related products that you want to add, and then select **OK**.

To	Do This
See specific records together by moving a record up or down in the grid	Select a record, and on the command bar, use the **Move Up** or **Move Down** button.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create or edit a quote
Create or edit an order
Create or edit an invoice
Price calculation for opportunity, quote, order, and invoice records
Troubleshoot issues with products

Find and add multiple products to quotes, orders, or invoices

Article • 05/17/2022

Use the enhanced experience to quickly identify and add multiple products from the catalog to opportunities.

> **Note**
>
> Product families are only supported for Sales Enterprise and Sales Premium licenses.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What's in the enhanced experience?

As a salesperson, you want to be able to easily identify and add products from the catalog to quotes, orders, or invoices. With the enhanced experience of adding products, you can:

- Quickly find products from the catalog, based on free-text search.
- See matching products as you enter text in the search field.
- (Applicable for Sales Premium and Sales Enterprise) Pick products from the categorized list of product families.
- See the most recently used list of products while you add multiple products.
- View product details inline and compare products before selecting any, which helps you find the right product.

- Select and add multiple products at one go.
- Add write-in products by using as few clicks as possible.
- Specify price, quantity, and any other required information as configured by your system administrator.

> ⓘ Note
>
> The enhanced experience for adding products is not supported for mobile devices. Mobile users will continue to see the Quick Create form for adding products.

If you've created a quote from an opportunity, the products added to the opportunity are automatically added to the quote. You can add more products or remove the existing ones.

Add products to a quote, order, or invoice

> ⓘ Note
>
> The process of adding a product to a quote is the same as adding a product to an order or an invoice. This procedure explains how to add products to a quote.

1. Open the quote to which you want to add products.
2. On the **Summary** tab, select a **Price list**.
   The price list determines the cost of the product and the products you can select.

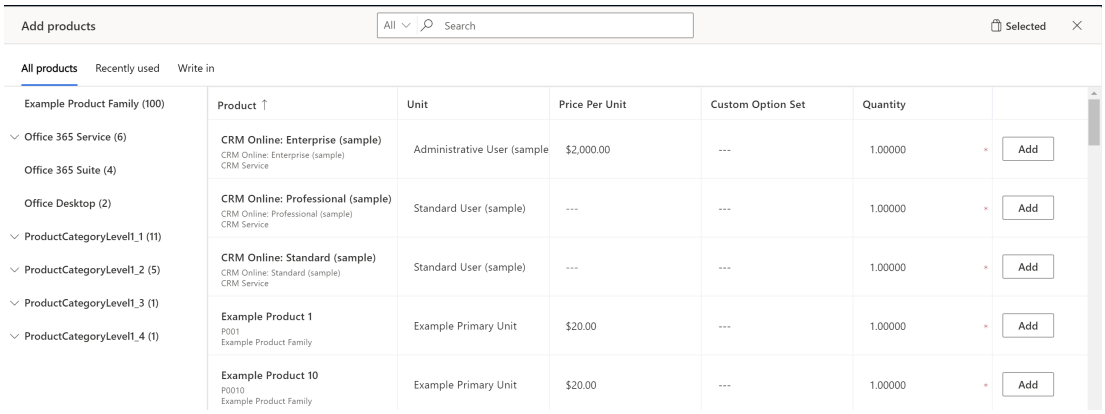
   > ⓘ Note
   >
   > By default, you must select a price list to be able to add products to the quote; however, your administrator can change the product catalog settings to make the **Price list** field optional.

3. In the **Products** grid, add products to the quote using one of the following methods:

   - To add products from an opportunity, select the **More commands** button ⋮ > **Get products** and select the opportunity.
     Products from the selected opportunity are added to the quote. To update the product details, double-click the value and edit.

- To find and add products manually, select **Add products**.

  The **Add products** dialog box opens.



> **Note**
>
> The enhanced experience for adding products is only available if your system administrator has enabled it. If you see a **Quick create** form instead of the Add products dialog, contact your system administrator to enable the experience. More information: **Enable or disable the enhanced experience for adding products**
>
> The preceding image shows the default columns in the dialog box. The information displayed in the **Product** column is customizable, as are the columns that appear in the grid. If you need additional columns to populate data or you need more information so you can better identify the product, contact your system administrator.

4. Use one of the following options to identify and add products:

   - If you know the product names, simply search for them and add. Learn more about how the search works.

   - (Applicable for Sales Premium and Sales Enterprise) If you want to choose products from a specific product family, use the left pane or the drop-down menu before the search box to filter products by family.

     > **Note**
     >
     > The products and product families displayed depend on the price list that you've chosen, so if you don't see a product, ensure that the product is associated with the selected price list.

The left pane disappears once you start typing in the search box. If you want to filter the search results by product family, use the drop-down menu. Also, the count of products in the left pane is available only when the number of products and families are less than 50,000 and 5,000 respectively.

- To add products that you have recently chosen for another entity such as opportunity, quote, order, or invoice, open the **Recently used** tab.
- If you want to add a product or service that is not in the standard product catalog but is specific to the quote, open the **write in** tab and create a product on-the-fly.

> **Note**
>
> Do not use the write in option for standard products and services that your organization offers.

> **Important**
>
> To add a write-in product to *orders* and *invoices*, ensure that the **Prices Locked** field is set to **No**. If it's set to **Yes**, you won't be able to add write-in products because prices of write-in products are considered as overridden. **More information**: Lock or unlock the price for an order or invoice, Sales transactions in Dynamics 365 Sales

5. In the **Price per unit** column, do one of the following:

   - If the product doesn't have an associated price list, enter the price manually.
   - If the product has a default price list associated with it, **Price per unit** is populated in accordance with the associated price list.

   > **Tip**
   >
   > If you want to override the default price of a product, request your administrator to add the **Price overridden** column to the grid. After the **Price overridden** column has been added, turn it on.

6. Enter the quantity you want, and then select **Add**.

7. Repeat steps 3 through 6 for each product you want to add.
8. When you're done, select **Save to quote**.

Remove products from a quote, order, or invoice

> **Note**
>
> The process for removing a product from a quote is the same as removing a product from an order or an invoice. This procedure explains how to remove products from a quote.

Remove products if you've selected them inadvertently or they're no longer relevant for the quote. You can remove products in two circumstances:

- While adding products to the quote, by using the **Add products** dialog box.
- After you've added products to the quote, in the **Products** section of the quote.

To remove a product from the Add products dialog box

1. In the **Add products** dialog box, select the **Selected** tab.
2. Next to the product you want to remove, select **Remove**.

To remove a product from the Products section

1. Open the quote, go to the **Products** section.
2. Select the products that you want to remove, and then select **Delete quote product**. The selected products will be removed from the quote after you confirm the deletion.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Enable the enhanced experience of adding products
Customize the Add Products dialog box

Project accurate revenue with sales forecasting

Article • 03/30/2022

A forecast helps your organization predict how much revenue your sales team will generate in a given timeframe. When done correctly, it can play a significant role in your company's success.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How does a forecast help sales team

By using a forecast:

- Sellers can track their performance against targets and identify pipeline risks that might jeopardize their ability to hit the targets.
- Managers can track individual sales performance against quotas, to proactively provide coaching.
- Directors can use forecast trends to anticipate departmental sales and reallocate resources if necessary.
- Organization leaders can use projected estimates to change product strategy or convey updated projections to investors.

Review prerequisites

Review the following prerequisites before using forecasts:

- The forecast was created with at least one of the following options:
    - A hierarchy that you're part of.

- A security role that you're part of has been granted access.

  To learn more, see Configure a forecast.

- You must have read privileges for User and Territory entities. To learn more, see Security roles and privileges.

> **Important**
>
> This feature is intended to help sales managers or supervisors enhance their team's performance. This feature is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with end users. This also includes adequately notifying end users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from end users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with end users may be monitored, recorded, or stored.

See also

Configure a forecast
View a forecast

View a forecast

Article • 09/01/2023

Forecasts help you to see the health of your pipeline or to see how your sales team is doing against their quota or target.

> **Note**
>
> The forecasting feature is not supported on mobile devices.

License and role requirements

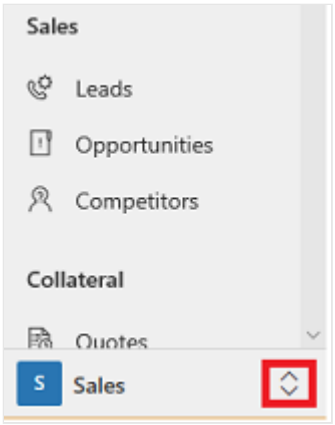
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Open and view a forecast

Bottoms-up forecasting is the projection of what a salesperson, team, or organization will sell in a given predefined period (week, month, quarter, or annual). Sellers can also use forecasts to track their performance by using assigned sales targets or quotas.

To view a forecast

1. Review the prerequisites.
2. Sign in to the Sales Hub app.
3. At the bottom of the site map, select **Change area** , and then select **Sales**.

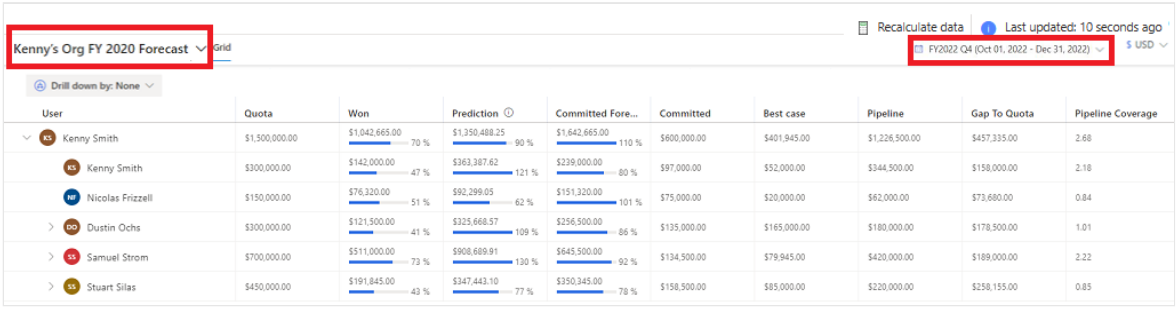


4. Under **Performance**, select **Forecasts**.

5. On the grid page, do the following:

   - Select a forecast from the drop-down list on the left. Any forecasts for which you have permissions will appear here.

   - Choose the forecast period you want to see from the drop-down list on the right.
     - Options in the drop-down list reflect the number of forecast periods defined in the forecast configuration. The default is the current period.
     - To rearrange the forecast periods in the drop-down list, contact your administrator. For more information, see Rearrange forecast periods.



6. Verify the **Last updated** time stamp to see when the forecast was last recalculated successfully. When you make any adjustments to the forecast or changes to the underlying records on the **Forecasts** page, the forecast is immediately recalculated. However, if you've updated the underlying records on the opportunities page or updated the forecast hierarchy, select **Recalculate data** to manually recalculate the forecast and refresh the page. For more information, see Maintain up-to-date forecast data.

   The forecast grid displays all relevant columns as defined in the forecast configuration. The totals are aggregated by user or by territory, at each level of the hierarchy and for each period according to the forecast column attributes.

> **Note**
>
> The values displayed in the grid are based on the fields configured in your forecast. If these values don't match the values you expected, verify the **fields used for aggregation**.

For example, if you're using the out-of-the-box **Forecast category** on an org chart forecast, the grid will display the following information:

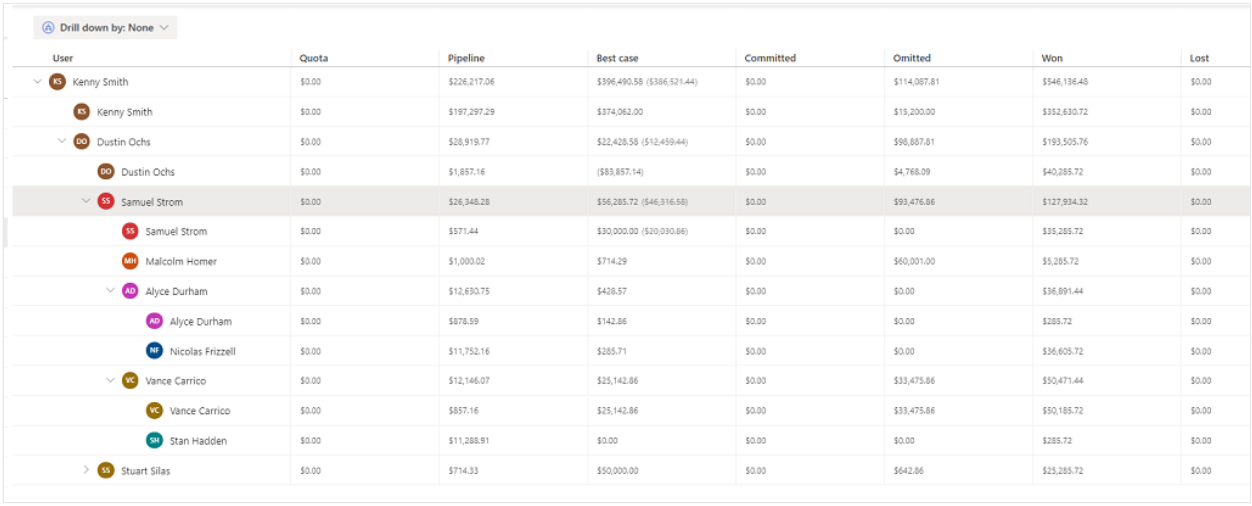
- **Users**: Shows the hierarchy of users as defined by the **Manager** field. To learn more, see Forecasts and sales hierarchy.
- **Quota**: A target amount set for a specific owner over a given time frame. The progress bar is calculated against this value.
- **Committed**: Shows the aggregated (rolled-up) value of estimated revenue for all open opportunities that have the forecast category set as **Committed** (high confidence). This value can be adjusted during forecast.
- **Best case**: Shows the aggregated (rolled-up) value of estimated revenue of all open opportunities that have the forecast category set as **Best Case** (medium confidence). This value can be adjusted during forecast.
- **Pipeline**: Shows the aggregated (rolled-up) value of estimated revenue for all open opportunities that have the forecast category set as **Pipeline** (low confidence). This value can be adjusted during forecast.
- **Omitted**: Shows the aggregated (rolled-up) value of excluded revenue for all open opportunities that have the forecast category set as **Omitted**.
- **Won**: Shows the aggregated (rolled-up) value of revenue that's generated for all won opportunities that have the forecast category set as **Won**.
- **Lost**: Shows the aggregated (rolled-up) value of revenue that's lost for all lost opportunities that have the forecast category set as **Lost**.

> **Note**
>
> The permissions granted during the forecast configuration affects who can view the forecast values. To learn more, see **Provide viewing permissions**.

Forecasts and sales hierarchy

Every forecast is attached to an organization-defined hierarchy that rolls up the values level by level. If the **Org chart forecast** template is used, the forecast is created based on the sales team hierarchy as defined by the manager role on the **User** record. Similarly, if the **Territory forecast** template is used, the hierarchy is based on the **Territory manager** lookup field.

For example, you created a forecast by using the **Org chart forecast** template. The hierarchy is defined based on the **User** record. If Alyce Durham is a sales manager with one direct report, and is designated as manager in the direct report's **User** record, Alyce will see a forecast for both users. Because Alyce Durham reports to Samuel Strom, Samuel will see their own forecasts along with the rolled-up forecasts of their direct reports, including Alyce's.



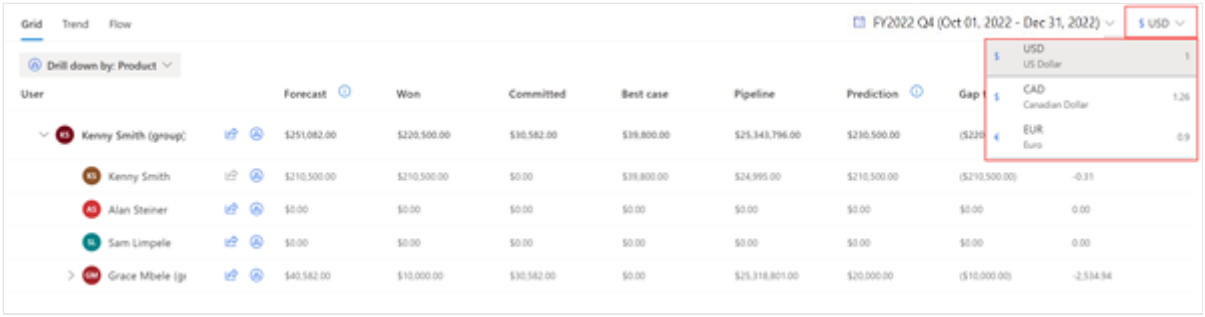
To see the rolled-up forecast for everyone in the hierarchy, expand a specific forecast.

Select a currency

When your sales teams are distributed across different geographies and viewing the forecast with organization's base currency might cause confusion for users in other geographies to analyze and understand forecast. The multi-currency selection option helps the sales teams to choose and convert the forecast data in real time based on the latest exchange rate to their convenient currencies defined in your organization, which help in better planning, organizing, and understanding the current forecast state.

> **Note**
>
> The real time conversion of forecast data always takes place based on the latest exchange rate defined in your organization.

For example, you have sales teams in the US and Europe. The base currency for your organization is defined as US Dollar and also, Euro is defined as one of the currencies. When you create forecast with multi currency enabled, sales teams open the forecast the data is displayed in Dollar. Sales teams in Europe can select currency as Euro and the forecast data is displayed in Euro. The conversion of currency happens in real time based on the current exchange rate. Also, manual adjustments can be made on the chosen currency.



> **Note**
>
> Administrator or forecast manager must enable the option to select currency. More information: **Turn on multi-currency selection**.

Tasks you can do on the forecast grid

Using the forecast grid, you can do the following tasks:

- View and manage underlying opportunities
- Adjust values in a forecast
- Maintain up-to-date forecast data

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Project accurate revenue with sales forecasting
Configure a forecast
Analyze revenue outcome by using predictive forecasting
Forecasting FAQs
Troubleshoot issues with forecasting

Share a forecast

Article • 04/20/2023

Share the forecasts that you own, with anyone in your hierarchy or outside of your hierarchy. You can specify the access level (such as read, or read and adjust rollup) that you want to give the user. For example, Henry, the Sales Manager, wants to go on a vacation and wants one of the direct reports, Serena Davis, to manage the forecasts. Henry can share the forecast hierarchy with Serena and assign the appropriate permissions. Depending on the permissions granted, Serena can view or adjust the forecast. However, Serena cannot share the forecast with any other user as Henry is the owner of the forecast.

> ⓘ Note
>
> Only a forecast owner can share their forecast. To know more, see **Who owns the forecast?**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Share a forecast or forecast hierarchy

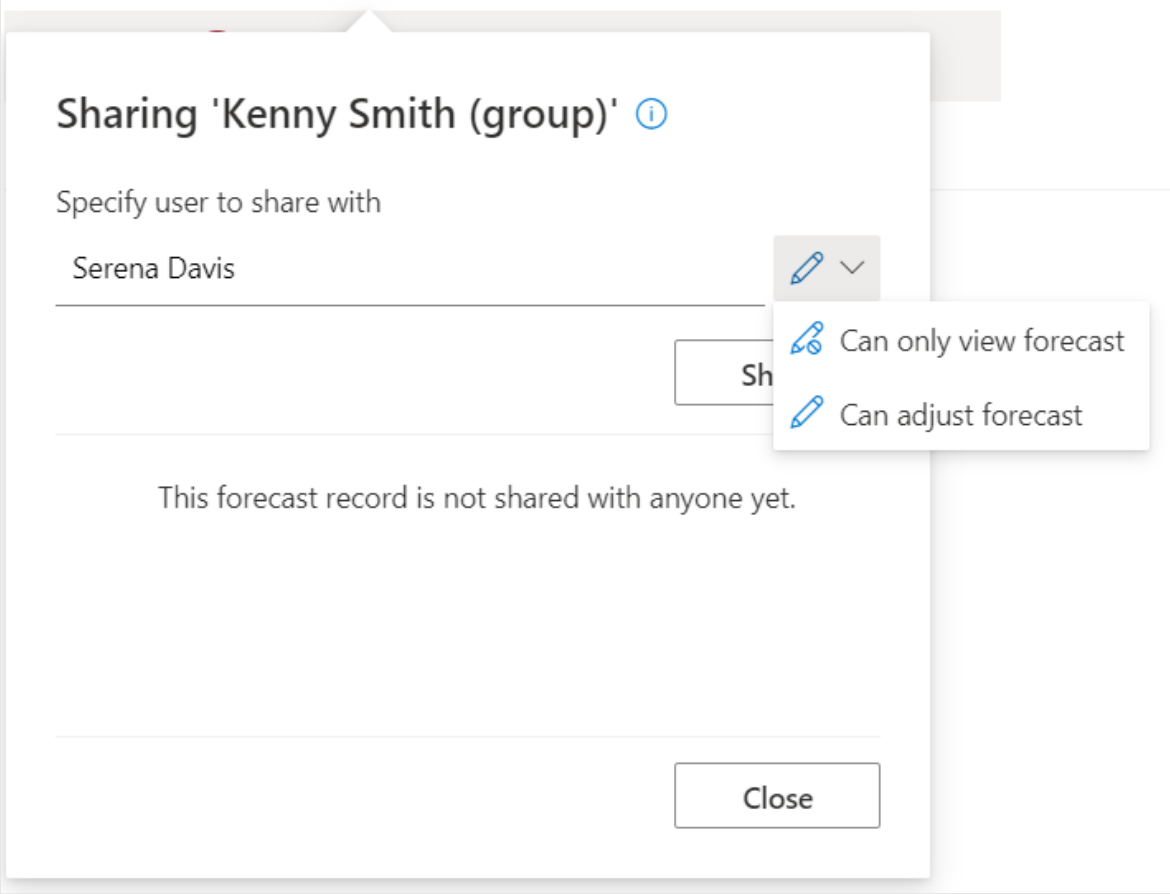
1. Go to **Performance** > **Forecasts** in the Sales Hub sitemap.

   You'll see the **Share** icon next to the forecasts that are enabled for sharing.

   > ⓘ Note
   >
   > If you don't see the Share icon, it means that either you're not the owner of the forecast or forecast sharing is not enabled. To know who owns the forecast, see **this FAQ**. Contact your administrator to identify the root cause and take appropriate action.

2. Select the **Share** icon next to the forecast record or hierarchy that you want to share.
3. In the **Sharing** dialog, specify the users with whom you want to share the forecast and select the pencil icon to specify the access level.

> **Note**
>
> You can specify different level of access for each user if your administrator has set the **Read and adjust** option.



The selected forecast record or hierarchy is shared with the specified users.

Stop sharing a forecast

To stop sharing a forecast with a user, select the **Share** icon next to the forecast record. In the **Sharing** dialog, find the user you want to stop sharing with, and then select the **Delete** icon next to the username.

To stop sharing the entire forecast hierarchy from all the users, your administrator needs to disable the sharing option at the forecast configuration level. For more information, see Enable or disable forecast sharing.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Enable or disable forecast sharing
Provide permissions to access and share a forecast

View and understand data through drill-down entities

Article • 05/10/2022

The drill-down feature lets you break down the seller's forecast projections as a function of the contributing factors that you care about, such as Account and Product.

License and role requirements

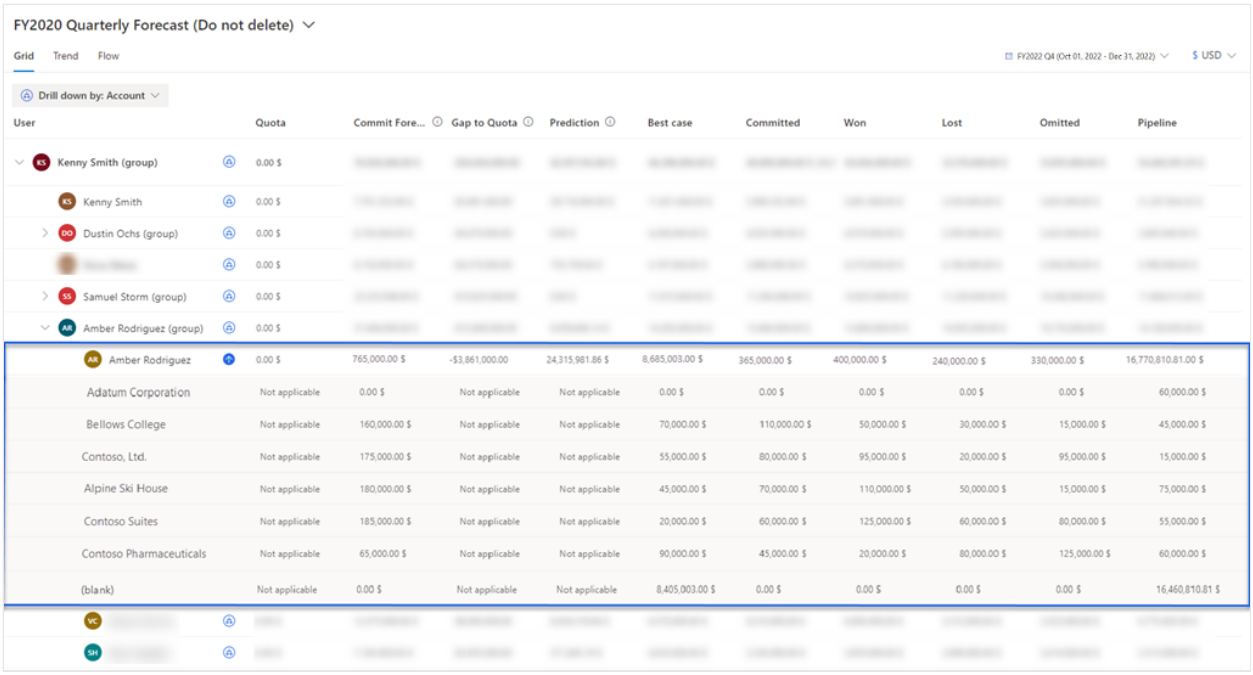
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How does forecast drill-down helps?

Through a forecast, you'll have visibility into the pipeline amounts that your sellers are projecting for the period. Now you might want to know which accounts contribute to a specific seller's Committed value or maybe you want to know which products are contributing to a different seller's Won value. You can use the drill-down feature to break down your seller's forecast projections as a function of the contributing factors that you care about, such as Account and Product. The drill-down feature looks at the underlying records that are contributing to the value of the rollup column and groups them according to the selected drill-down option.

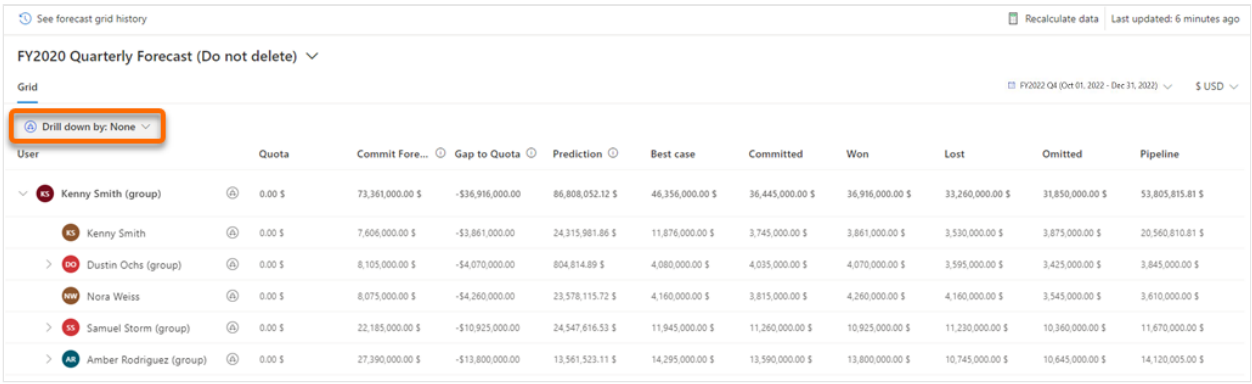
By viewing drill-down data, you can understand how the records in each group are performing and set the next course of action. This helps you to plan better and achieve the targets as set in the forecast.

Let's look at an example. **Amber Rodriguez** is a seller who's associated with four accounts. Amber's projected revenue for the current period is $400,000. **Kevin Smith**, Amber's sales manager, wants to understand how the revenue of $400,000 is broken down by each account. On the forecast page, Kevin chooses the Account drill-down option from the drop-down menu. Kevin, then selects the drill-down icon beside Amber's record to view a list of accounts that make each of Amber's forecast pipeline values.



Before you start using the feature, an administrator or forecast manager must add the drill-down options to the forecast. To learn more, go to Configure and manage drill-down entities.

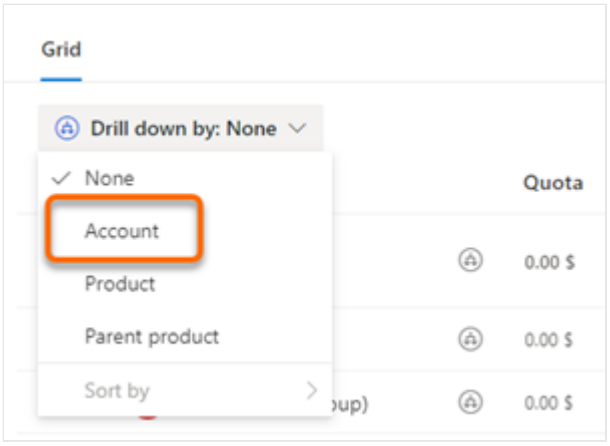
When a drill-down option is added to your forecast, a drop-down list is displayed below the **Grid** tab. The following screenshot is an example:



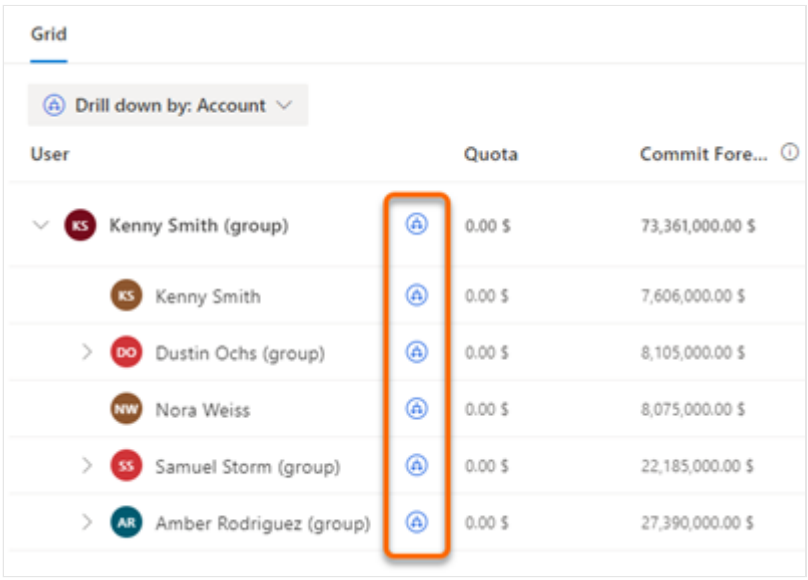
Select a drill-down option

By default, when you open a forecast, no drill-down choice is selected and the icon corresponding to each row is disabled. To enable and view the details, you must select a drill-down option. That enables the icons corresponding to each row. Select the icon to view the forecast data in a drill-down mode. To select a drill-down option, follow these steps:

1. Open a forecast with the drill-down feature added.
2. Select the **Drill down by** list and choose the drill-down option on which you want to break down the data. For example, **Account**.



The icon corresponding to each row turns blue and is now active. The data in the forecast is broken down into multiple groups according to the drill-down selection (**Account**).



View and understand the drill-down data

After you've selected a drill-down category, the icon for each row is active and the data is grouped according to the drill-down selection.

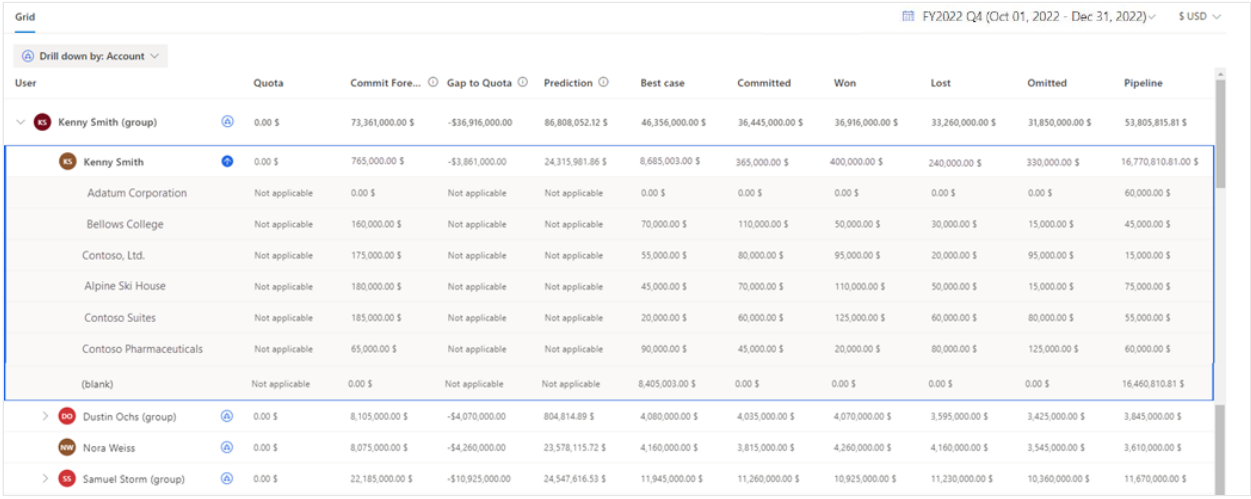
For example, select the drill-down option as Account and the data in the forecast is grouped according to the accounts that are associated with the opportunities. Here we want to view the contribution of each account to the value of each category of **Kenny Smith**.

Select the drill-down icon corresponding to **Kenny Smith**. All the accounts with values that are contributing to Kenny's forecast are displayed.

For simple column types such as **Quota**, the values are displayed as **Not applicable** because these values are uploaded manually to forecast. Also, for the **Prediction** column, the values are displayed as **Not applicable** because the prediction values aren't based on a drill-down entity.

> **Note**
>
> If you are unable to view the drill-down data, see **Unable to view drill down data in a forecast grid**.

At the bottom of the table, a **blank** row is created with values for the opportunities that aren't related to any account.



> **Note**
>
> - In the example, you can observe that the sum of all accounts' drill-down data matches the forecast data. If the data doesn't match, it might be that the forecast data is old. Drill-down is always calculated on live data. Select **Recalculate** to get the latest forecasting data to match with the drill-down data. More information: **Maintain up-to-date forecast data**
> - The forecast and drill-down data are independently calculated based on the configurations. Hence, the forecast and drill-down data might not always match. For example, in a product-based forecast, the sum of product revenue might not match the sum of opportunity values because there might be some opportunities that aren't associated with products. If you drill down the data based on products, only the associated Opportunity products will be aggregated for drill down, whereas the forecast displays the sum of all opportunities' data.

To view the opportunities that are affecting the forecast values of an account, do one of the following:

- Select an account row to show all opportunities, regardless of forecast category.

- Select a cell in an account row to show only the opportunities that affect the roll-up column value.

> **Note**
>
> If you edit the underlying opportunities in drill-down view, the updated values won't show in the drill-down selection. To view the updated values, close the drill-down selection and open it again.

More information: View and manage underlying opportunities

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Project accurate revenue with sales forecasting
Configure and manage drill-down entities
Troubleshoot issues with forecasting

View and manage underlying opportunities

Article • 04/01/2022

Getting visibility into the underlying opportunities that are contributing to the forecast values helps the sales team to focus on specific opportunities and take action.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View underlying opportunities

To understand which opportunities are affecting forecast values, select one of the following options:

- Select a row to show all opportunities, regardless of forecast category.
- Select a cell to show only the opportunities that match the roll-up column value.

> **Note**
>
> Underlying opportunities won't be displayed for **Quota** and simple column types, because no opportunities contribute to calculating their values; you manually upload these values through an Excel workbook.

The opportunities you see in the table depend on the role assigned to you in the hierarchy that was used to configure the forecast.

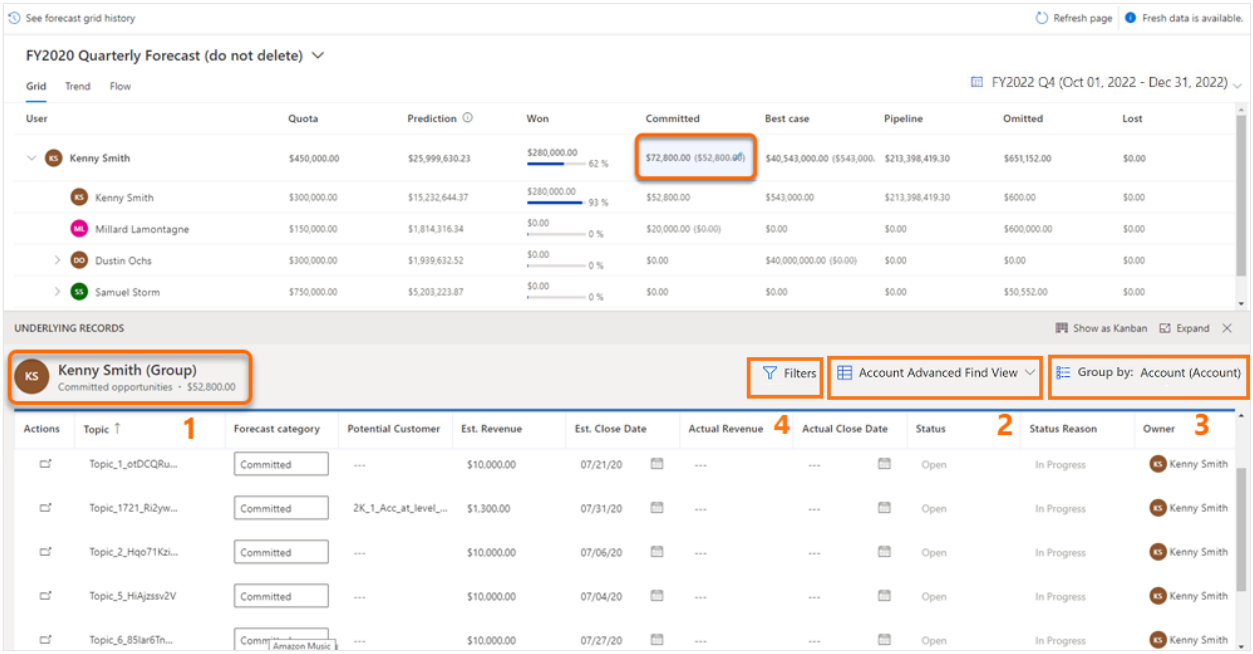
For example, Alyce Durham is a manager and Nicolas Frizzell reports to Alyce. Nicolas can see only their own underlying opportunities, while Alyce can their own and Nicolas's underlying opportunities.

You can view and edit underlying opportunities in two ways:

- View and edit in a table view
- View and edit in a kanban view

View and edit in a table view

With the enhanced grid, you can view and edit related entity records also. The following screen is an example of the enhanced grid view of underlying records:



1. **General information**: You can identify the owning user or team of the underlying records. Also, you can see the category of the underlying records—such as won, committed, or pipeline along with the total value of the category.

   > **Note**
   >
   > Though you can update the forecast category of an opportunity in the grid, the options **Won** and **Lost** are disabled and can't be selected. These options are automatically updated when an opportunity is closed as won or lost; hence they shouldn't be updated manually. More information: **Close opportunities as won or lost**.

2. **View selector**: You can change the view of these records. By default, the view that was selected when the forecast was configured is displayed.

3. **Group by**: You can group the underlying opportunity records by using a related entity such as, account. For more information on how to use the **Group by** option with or without a filter, go to Filter the underlying opportunities of a forecast.

4. **Filter**: You can filter the underlying opportunities to view specific set of opportunities that you want to analyze or work on. For more information on how to use filters, go to Filter the underlying opportunities of a forecast.

Filter the underlying opportunities of a forecast

When you select a row in the forecast grid, you see the underlying opportunities that contribute to that row in the forecast. You can group and filter these opportunities to efficiently manage them and take necessary actions to finalize deals that matter the most.

To filter the underlying opportunities

1. Open a forecast, and select a row.

   The underlying opportunities that contribute to the selected row are displayed.

2. (Optional) In the **Group by** field, select the entity (such as, account) that you want to use for grouping opportunities.

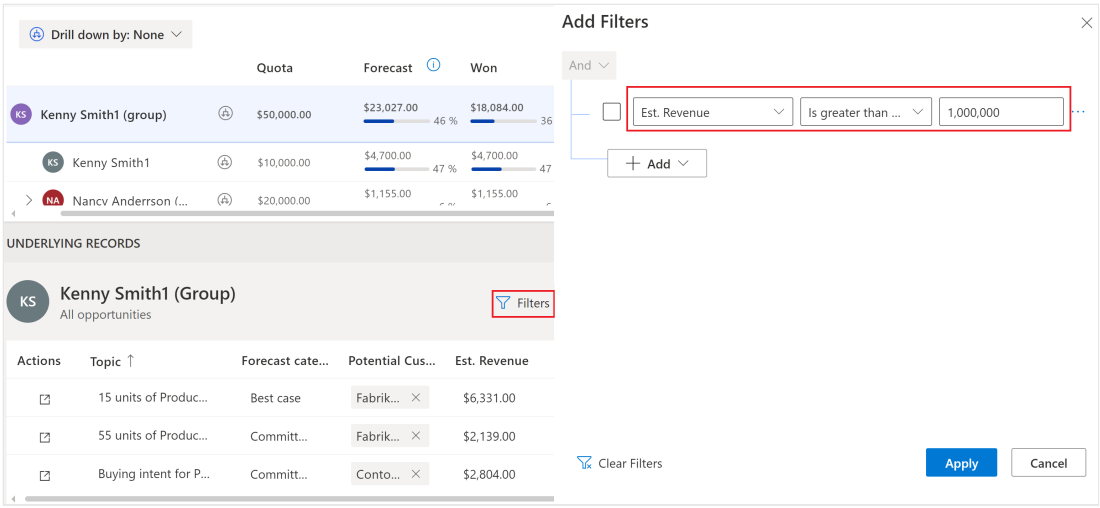
   The opportunities are grouped by the selected entity.

   a. Select the **View underlying rollup records** (the plus sign (+)) next to a group.

      The opportunities associated with that account are displayed. For more information on how filters work when the underlying records are grouped, go to Example: Grouping and filtering the underlying opportunities.

3. Select **Filters**, and add the filter conditions.

   - If **Group by** is set to **None**, you can directly apply the filters on the underlying opportunities as shown in the following screenshot. The opportunities filter will persist across the recurrences in the same forecast until you clear the filter manually.



- If **Group by** is set to an entity (such as, account),
    - You can filter the group by using the attributes in the selected table. For example, if you've chosen to group the opportunities by account, you can filter the accounts from a specific region. You can also add a filter on a related entity, such as estimated revenue of the opportunities associated with the account.
    - You can apply a different filter for the opportunities associated with the group. The filters applied on the underlying opportunities persist irrespective of the grouped entity, group filter, and recurrence of the forecast.
    - Each forecast can have different filter conditions and grouping.

For more information about filters, go to Add conditions to a filter.

Example: Grouping and filtering the underlying opportunities

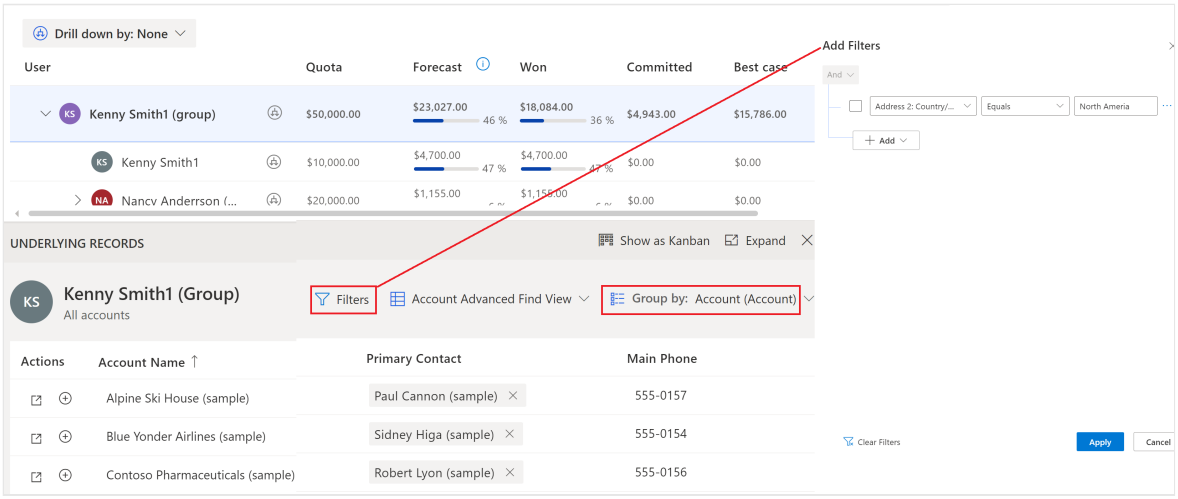
Let's understand grouping and filtering of underlying records with an example.

Kenny Smith is a Vice President of the sales organization at Contoso Inc and heads the Sales teams in North America (NA) and Europe regions. Kenny wants to personally follow up with the customers of the high-value opportunities in the NA region so that the deals can be closed in time for Q2. Following are the steps that Kenny should perform:

1. Open the Q2 forecast for the org.
2. Select **Account** in the **Group by** field. All underlying opportunities of the forecast are grouped by their corresponding accounts.

3. Select **Filters** > **Add** > **Add row** and specify the following condition:

   `Address2: Country Equals North America`

   All the accounts in North America are displayed.

4. Select the **View underlying rollup records** (the plus sign (+)) next to an account. The underlying opportunities associated with that account are displayed.

5. Select **Filters** > **Add** > **Add row**, and specify the following condition for the opportunities:

   `Est.Revenue Is greater than or equal to 1,000,000`

   The high-value opportunities of the selected account are displayed.

> **Note**
>
> The opportunities filter is persisted unless cleared manually. For example, when Kenny opens the rollup records of another account in the NA region, the records are already filtered for high-value opportunities. Even if Kenny changes the grouping to a User entity, the underlying opportunities filter persists and is automatically applied to the opportunities in the new group.

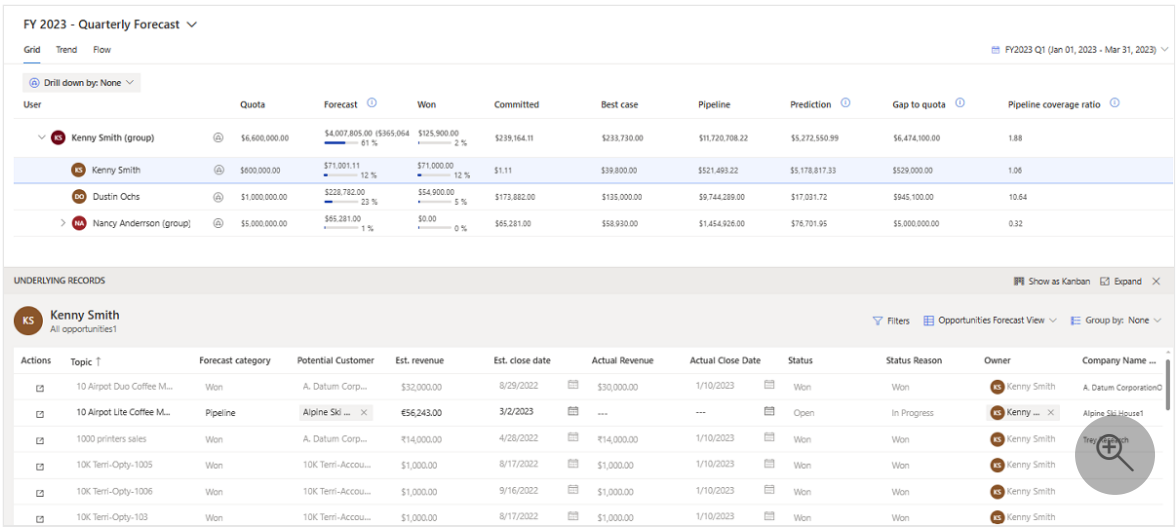
View and edit in a kanban view

1. Open a forecast.

2. Select a row or a cell for any level of the hierarchy for which you want to see underlying opportunities.

   In this example, we're selecting **Alyce Durham**. Because Alyce is a manager, all the underlying opportunities that are contributing to the team's forecast are listed.

This view is opened in a table, by default.



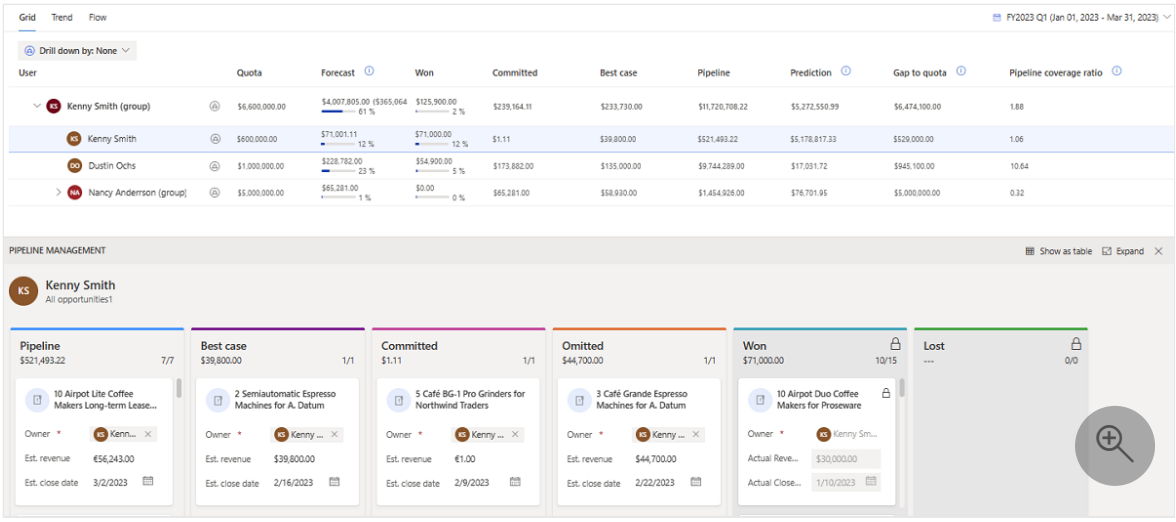
You can identify whether the selected opportunities belong to a team, an individual, a single cell value, or a full row by looking at the table heading. The format of the heading is described in the following table:

Heading format	Description
Username (Group) – All opportunities	All the opportunities across different forecast categories that the selected user and that user's team own.
Username - All opportunities	All the opportunities across different forecast categories that the selected user owns.
Username (Group) – Column name	The opportunities that the selected user and that user's team own for the selected forecast category.
Username – Column name	All the opportunities that the selected user owns for the selected forecast category.

You can change the view of these opportunities by using the view selector. By default, the view that was selected when the forecast was configured is displayed.

3. Select **Show as Kanban**.

   The table view changes into a kanban view and the order of columns is displayed based on the order that's defined in the option set in the application. All the underlying opportunities are displayed as cards in their respective forecast categories. Each card displays attributes that you can edit. In this example, the opportunity name, **Owner**, **Est. Revenue**, and **Est. Close Date** are displayed.



> **Note**
>
> The opportunities in columns **Won** and **Lost** are locked. You can't edit these values directly, because multiple attribute values must be set to enter an opportunity as **Won** or **Lost**. However, you can select the name of the opportunity, and the opportunity will open in a new page where you can edit the opportunity, and then save and close it.

4. To edit the opportunity, you can directly change the values for the attributes displayed on the card and drag the cards from one forecast category to another.

   The changes are saved, and the opportunity is updated in Dynamics 365 Sales. The changes are also automatically applied in the forecast grid.

> **Note**
>
> To edit more attributes for the opportunity, select the name of the opportunity. The opportunity will open in a new page, where you can edit it as required, and then save and close it.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps

such as, the Sales Hub or Sales Professional app.

See also

Project accurate revenue with sales forecasting
View a forecast

Adjust values in a forecast

Article • 03/29/2023

Adjust values in a forecast to estimate the final amount that you expect the forecast's opportunities to bring in at the close of the forecast period.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Why should you adjust values?

An adjustment provides sales managers or sellers the ability to estimate the final amount that they expect for a forecast's opportunities to bring in at the close of the forecast period. Sales managers have the ability to adjust their own or a direct report's forecast. For example, if the sales manager thinks that one of their direct report's best-case opportunities might have more value than the proposed value, they can increase the value in the forecast. On saving the adjustment, the changes will be rolled up to the parent record and up the hierarchy.

Adjust a value in a forecast

To make adjustments, a forecast column must be set as editable. While configuring a forecast, the forecast owner must identify and set the editable columns through the **Allow adjustments** option. To learn more, see configure columns.

You can also view the history of the adjustments that are made on a forecast, and you can get more information about the following types of adjustments:

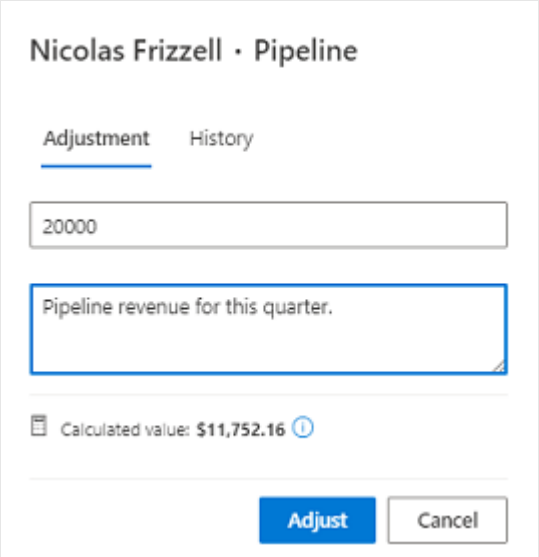
- **Direct Adjustment**: Specifies that a user directly modified the value in the current cell. A direct adjustment can be reverted.
- **Indirect Adjustment**: Specifies that a user made an adjustment to another value somewhere in the grid, and that adjustment was propagated through the forecast.

- **Calculated value**: Shows the system-calculated value if no direct or indirect adjustments are made.

> **Note**
>
> You can't adjust values for users or territories above your level in the hierarchy, even if you've been given access through your security role.

To adjust a value in a forecast

1. Hover over the field, and select the pencil icon that appears.
2. On the **Adjustment** tab, enter the value and add a note for the adjustment. For example, the **Pipeline** column is configured as editable and you know that Nicolas Frizzell has a pipeline revenue of $20,000 instead of the existing value, $11,752.16. Enter the value as **20000**. You can see that the actual system-calculated value for the forecast, based on existing data, is $10,000.



3. Select **Adjust**.
   The new value is displayed in the **Pipeline** column for Nicolas Frizzell. The adjusted value is also rolled up to the top of the hierarchy from Nicolas's manager.
4. You can roll back the value if you think it was inappropriately adjusted from the system-calculated value. Open the adjustment dialog box, and then select **Reset**.
5. In the dialog that appears, specify the reason for resetting the value and select **Reset**.

   The note is added to the history of adjustments for reference for other users and the value is rolled back to the system-calculated value. The indirect adjustment values that are added to the top of the hierarchy are also rolled back.

6. To view the history of the adjustable forecast, open the adjustment dialog box and select the **History** tab.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Project accurate revenue with sales forecasting
View a forecast

Maintain up-to-date forecast data

Article • 09/01/2023

Forecast data is automatically recalculated after every 24 hours to keep the data current. You can also trigger a manual calculation if you want a change to be immediately reflected in the forecast.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Recalculate and refresh forecast data manually

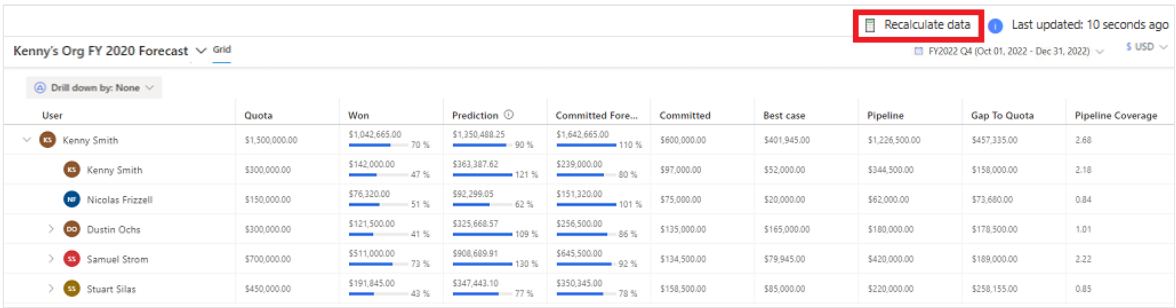
Forecast data is automatically recalculated in the following scenarios:

- After every 24 hours.
- After you adjust the forecast values or update the underlying records on the **Forecasts** page.

if you've updated the underlying records on the opportunities page or updated the forecast hierarchy, you can trigger a manual recalculation.

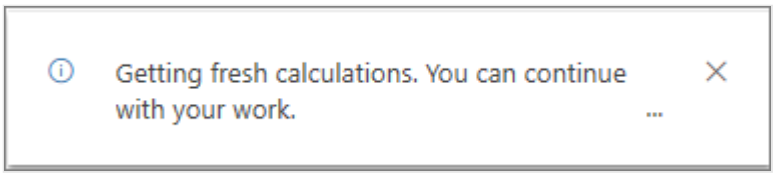
1. Open the forecast. Verify the **Last updated** timestamp on the command bar to know when the forecast was last recalculated successfully.

2. Select **Recalculate data**.



   A notification appears at the top of the screen, confirming the recalculation. Recalculation happens in the background, and you can continue to work while

recalculation is in progress.



3. After the application recalculates the forecast data, a notification appears to refresh the data. On the notification, select **Refresh page**. You'll notice the following updates to the forecast:

   - The aggregation and roll-ups for the underlying data are recalculated.
   - Any target or quota changes are checked and updated.
   - Any other changes affecting the forecast values (excluding hierarchy changes) are refreshed.
   - Only the current forecast period is recalculated.
   - No changes are made to the forecast values that were manually adjusted.
   - No changes are made to the **Prediction** column. Predictions are only recalculated after every seven days. Hover over the information icon on the column header to view the last recalculation date.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Project accurate revenue with sales forecasting

View a forecast

Analyze revenue outcome by using predictive forecasting

Troubleshooting forecasts

Analyze revenue outcome by using predictive forecasting

Article • 03/07/2023

Use predictive forecasting to analyze the revenue outcome by providing forecast projections based on your data.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Understand the prediction column and details in a forecast

Predictive forecasting helps sellers and managers improve their forecast accuracy by providing forecast projections based on data. To achieve this, predictive forecasting uses AI-driven models that look at historical data and the open sales pipeline to predict future revenue outcome.

The **Prediction** column shows the predicted revenue for each seller and manager. Predictions are based on the **Status** field of an opportunity. To optimize the accuracy of the predictions, ensure the **Forecast Category** values are kept in sync with the **Status** field. For the out-of-the-box forecast category, a workflow ensures that when an opportunity is closed as **Won** or **Lost**, the forecast category is updated with the proper value.

> ⓘ Note
>
> If sufficient data isn't available for predictive forecasting, an error message is displayed and the **Prediction** column is left empty.

Prerequisites

Review the following prerequisite before you start using predictive forecasting:

- Ensure that predictive opportunity scoring is enabled and at least one model is configured. To learn more, see Configure predictive opportunity scoring.
- Ensure that the predictive forecasting feature is enabled and a forecast is configured accordingly. To learn more, see About premium forecasting.

Prediction column

Open a forecast that includes a **Prediction** column. To learn more, see View a forecast.

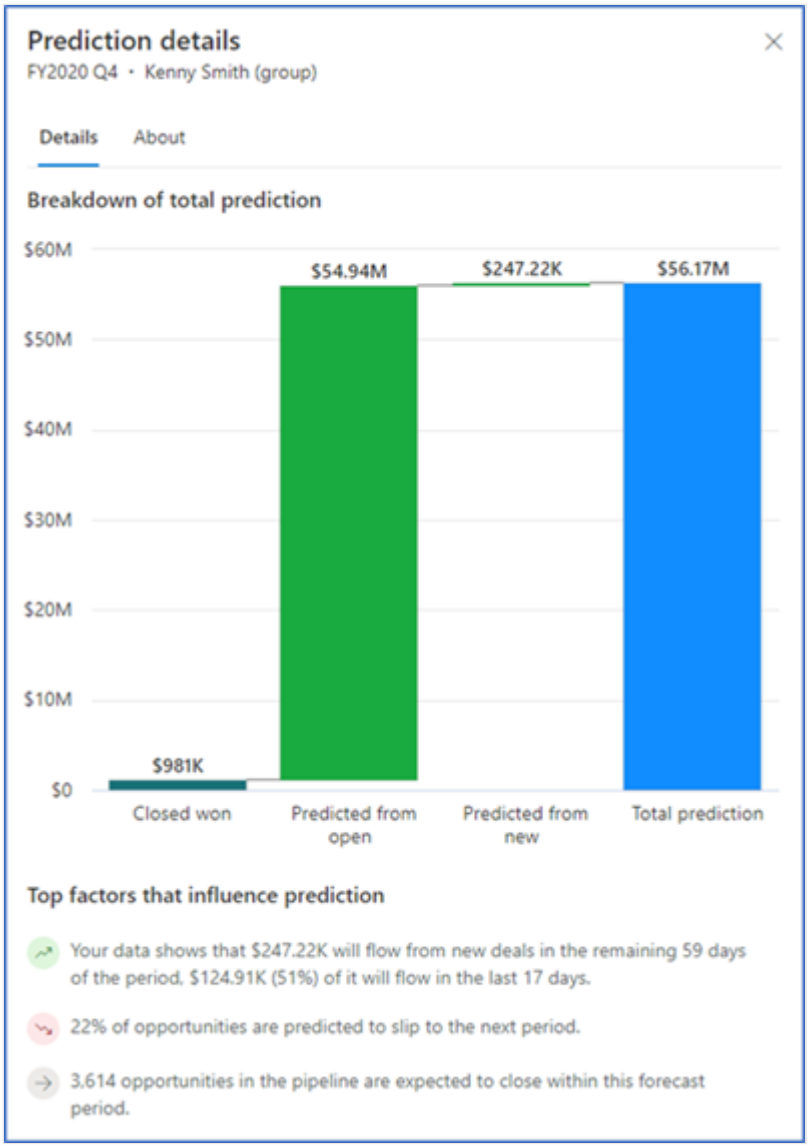
The following screen shows an example of a **Prediction** column.

User	Quota	Prediction	Commit Forecast	Won	Committed	Best case	Pipeline	Lost	Gap to Quota	Pipeline Coverage
Dustin Ochs	$250,000.00	$174,984.32	$1,492,934.32 597 %	$192,934.32 77 %	$1,300,000.00 ($501,893.7	$17,000,000.00 ($66,714.2	$90,041.10 ($25,326.65)	$0.00	$57,065.68	1.58
Dustin Ochs	$50,000.00	$46,411.47	$110,250.86 221 %	$40,142.86 80 %	$70,108.00	$16,142.86	$1,142.87	$0.00	$9,857.14	0.12
Samuel Strom	$150,000.00	$117,787.13	$1,427,791.46 952 %	$127,791.46 85 %	$1,300,000.00 ($400,285.5	$100,000.00 ($571.43)	$23,898.23	$0.00	$22,208.54	1.08
Samuel Strom	$20,000.00	$40,565.40	$35,571.43 178 %	$35,285.72 176 %	$285.71	$142.86	$285.72	$0.00	($15,285.72)	(0.02)
Malcolm Homer	$0.00	$14,572.43	$305,285.72	$5,285.72	$300,000.00	$0.00	$285.72	$0.00	($5,285.72)	(0.05)
Alyce Durham	$50,000.00	$36,985.00	$46,891.44 94 %	$36,891.44 74 %	$10,000.00 ($0.00)	$285.71	$12,037.88	$0.00	$13,108.56	0.92
Vance Carrico	$50,000.00	$25,664.30	$150,328.58 301 %	$50,328.58 101 %	$100,000.00	$142.86	$11,288.91	$0.00	($328.58)	(34.36)
Stuart Silas	$0.00	$10,785.72	$36,500.01	$25,000.00	$31,500.01	$50,000.00	$65,000.00 ($285.75)	$0.00	($25,000.00)	(2.60)

When you hover over the information icon on the column header, the last recalculation date of the prediction is shown. Predictions are recalculated after every seven days; you can't trigger a manual recalculation.

Prediction details

Select a value in the prediction column to display the **Prediction details** pane.



The graph in the **Prediction details** pane consists of the following values:

- **Closed won**: Total actual revenue of opportunities that have been closed as won during the current forecast period.
- **Predicted from open**: Total estimated revenue from open opportunities that are predicted to close during the current forecasting period and are contributing to the prediction.
- **Predicted from new**: Total estimated revenue from new opportunities that are predicted to close during the current forecasting period and are contributing to the prediction.
- **Total prediction**: Total predicted amount for the current forecasting period.

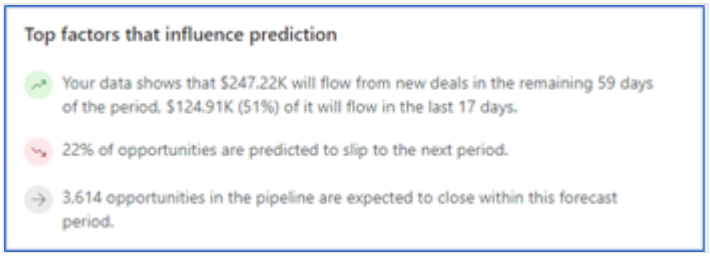
The top factors that influence the prediction are displayed below the graph. These factors help you to understand the key points of the graph. As many as five of these factors will appear.

> **Note**
>
> In order for **Prediction details** to be displayed, an administrator or forecast manager must **enable prediction factors**.

The top prediction factors are categorized into three types:

- A green icon with an upward-trending arrow ( ) represents a positive influencing factor.
- A red icon with a downward-trending arrow ( ) represents a negative influencing factor.
- A gray icon with a horizontal arrow ( ) represents a neutral influencing factor.

The following image shows an example of a **Top factors that influence prediction** section.



Icon	Influencing factor
	The top positive influencing factor is that $247.22K will flow from new deals in the remaining 59 days of the period, and $124.91K (51%) of it will flow in the last 17 days.
	The negative influencing factor is that 22% of opportunities are predicted to slip to the next period.
	The neutral influencing factor is that 3,614 opportunities in the pipeline are expected to close within this forecast period.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

About premium forecasting
Enable prediction factors

Understand forecast projections by using trend charts

Article • 09/13/2023

The **Trend** chart shows how each forecast amount is trending over time, comparing it against the period end prediction and quota. A separate predicted realization line is automatically created to project future revenue over time.

> **Note**
>
> The **Trend** chart is available as part of the predictive forecasting feature. Verify that predictive forecasting is enabled for your organization. To learn more, see **About premium forecasting**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View trend charts

1. Sign in to the Sales Hub app.
2. At the bottom of the site map, select the **Change area** icon, and then select **Sales**.
3. Under **Performance**, select **Forecasts**.
4. Select a forecast, and choose a forecast period for the forecast.
5. Select the **Trend** tab.

   A line chart is displayed with the comparison between the forecast categories until the present day.

Understand trend charts

> **Note**
>
> Columns available for trending can be configured in the forecast configuration. To learn more, see **configure columns**.

The following screenshot shows an example of a trend chart.

The categories displayed on the trend chart depend on the forecast grid columns that your administrator has configured and the prediction columns. For more information on configuring forecast grid columns, see Configure columns.

> **Note**
>
> The Predicted Realization line indicates the combined value of **Predicted from open** and **Predicted from new**. For more information on prediction columns, see **Analyze revenue outcome by using predictive forecasting**.

When you hover over a forecast category in the legend, the trend line of the forecast category gets highlighted.

You can also view the summary of a forecast category at a given time by hovering over the trend line. The summary displays the date, forecast category, and aggregated opportunity amount.

If you don't want to view any forecast category on the chart, select the forecast category on the legend and the forecast category will be grayed out. To view it again on the chart, select the forecast category.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Analyze revenue outcome by using predictive forecasting
About premium forecasting

Analyze deals flow between forecast snapshots

Article • 02/24/2023

As a sales manager, analyzing the deals flow between snapshots helps you identify deals that are moving in the right direction and those deals that need attention to meet your sales forecast. You can drill in to specific deals that have contributed to the increase or decrease in your forecast commitment. This analysis enables you to follow up with your teams and coach them on how to improve your forecast accuracy.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View deals flow between snapshots

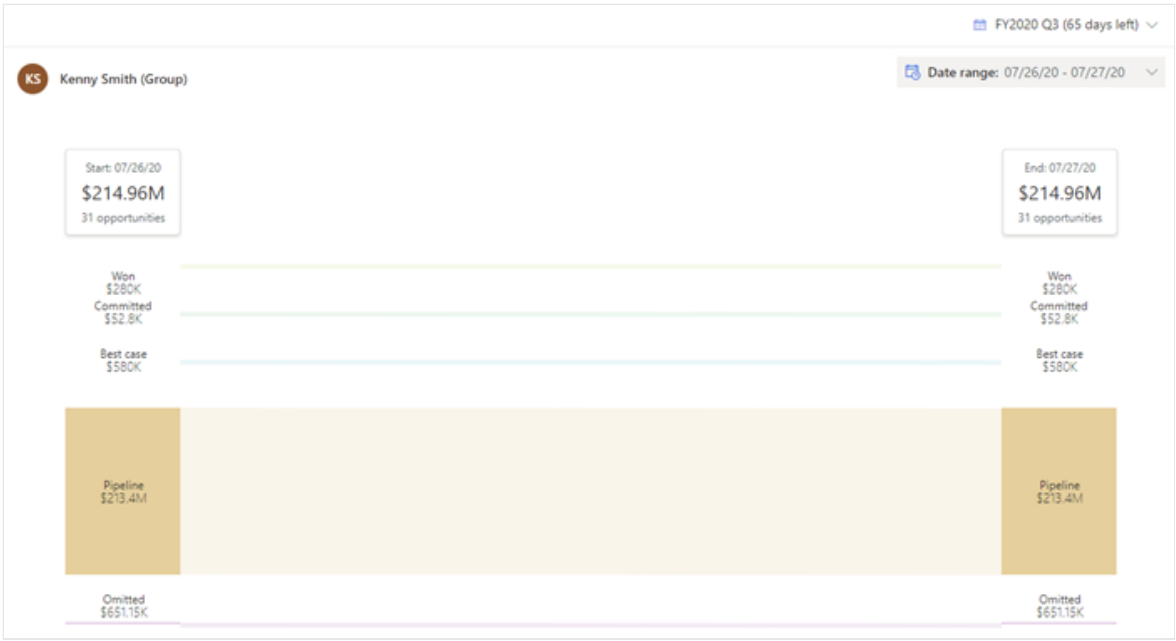
Prerequisite

Verify that at least two snapshots are available for the forecast. More information: View snapshots

View and understand a deals flow

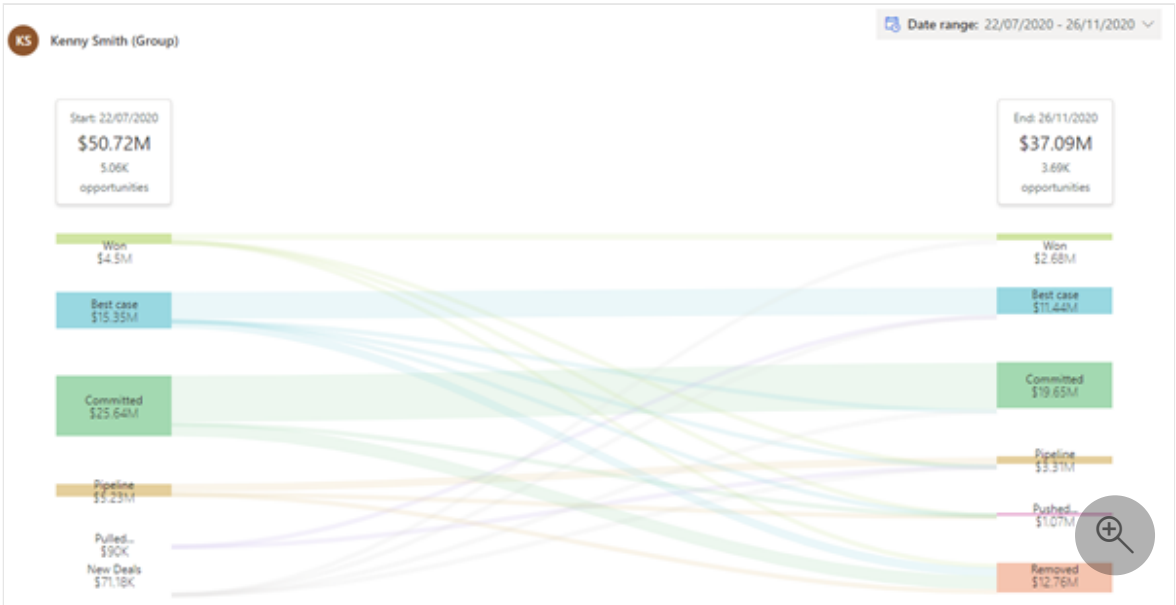
1. In the **Sales Hub** app, go to **Performance** > **Forecasts**.
2. Select a forecast, and then choose a forecast period for the forecast.
3. Select the **Flow** tab. The tab is available only if you have enabled snapshots.

   A sankey chart is displayed with a comparison between the two latest snapshots for the forecast. The order of forecast categories depends on how the forecast columns are arranged in the grid view.



4. To compare snapshots, choose **Start** and **End** dates from the calendar. Select **Apply**.

   The chart is updated to display the deal flow. The flow is determined based on the opportunity's forecast category between the start date and end date snapshots. For example, if an opportunity was in the **Committed** state on the start date and moved to **Won** on the end date, you'll see the opportunity flow from **Committed** to **Won** in the flow chart.



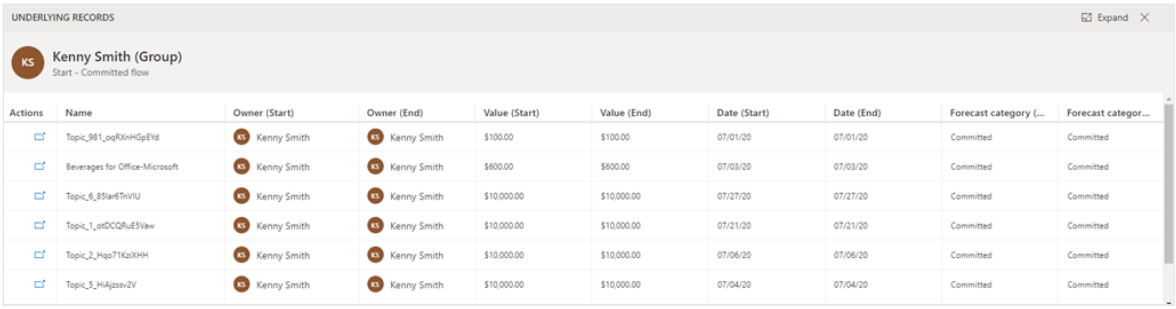
   The following categories in the deal flow are calculated based on the movement of deals. Let's understand them with an example scenario. Let's say your forecast is for a fiscal year with four quarters – starting from January-March(Q1), April-June(Q2), July-September(Q3), October-December(Q4). Let's compare the snapshots of July 1 and August 31.

Forecast Category	Description	Example
Pushed out or Pulled in	These categories include opportunities that were moved during the snapshot period for the following reasons: • Opportunities that moved from one seller to another within the forecast hierarchy. • Opportunities that moved from one forecast period to another within the forecast date range.	**Ownership change:** Dustin Ochs and Amber Rodriguez are Sales Managers reporting into Kenny Smith. A few opportunities of Dustin were transferred to Amber in between the start date and end date snapshots. The transferred opportunities appear under the **Pushed out** category for Dustin and **Pulled in** category for Amber. However, there will be no change for Kenny as the movement is within the same hierarchy. **Date change:** A few opportunities of Kenny Smith that were estimated to close within Q3 as on July 1st have moved to Q4 as on August 31st. These opportunities are shown under the **Pushed out** category in the end date snapshot.
New Deals	New opportunities that were added in between the snapshot start and end dates appear as New Deals in the Start date snapshot column.	Opportunities that were created between 1st July and 31st August.

Forecast Category	Description	Example
Removed	Opportunities that have moved out of the forecast due to one of the following reasons: • Estimated close date of the opportunity has moved out of the forecast date range. • Opportunity is deleted. • Opportunity has moved out of the forecast hierarchy	• Opportunities that were moved to the next fiscal year. • Opportunities that have moved from Kenny Smith's org to Olivia Wilson's org.

5. Hover over a forecast category in the stack to see a summary of the category, including the forecast category with snapshot date, the aggregated budget amount, and the number of opportunities that are influencing the aggregated amount. Also, the flow is highlighted to show how the opportunities are trending between the snapshots.

6. To view underlying opportunities, select a forecast category in the stack. The opportunities are displayed in a grid with side-by-side comparison of how the granular data for each opportunity—such as owner, value, date, and forecast category—is changing in columns from start date to end date.



You can't edit the opportunities inline. However, in the **Action** column, select the navigate icon corresponding to the opportunity that you want to edit. The saved changes won't affect the status of the opportunity in the snapshot, because the snapshots are taken at a moment in time by using frozen data.

Whose deals flow am I viewing?

You can identify whether the selected flow is for a team or an individual by looking at the deals flow heading:

- If the heading name contains **Username (Group)**, you're looking at the deals flow of a user's team.
- If the heading name contains only **Username**, you're looking at the deals flow of an individual user.

Seeing the deals flow of other users depends on the sales hierarchy defined for you. To learn more, see Forecasts and sales hierarchy.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

View snapshots
Take snapshots automatically

About premium forecasting

View snapshots

Article • 09/01/2023

View a snapshot to see and understand the forecast data at the moment in time when the snapshot was taken, including underlying opportunities. Also, you can compare the data between your current forecast and the snapshot to understand how the forecast is doing.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

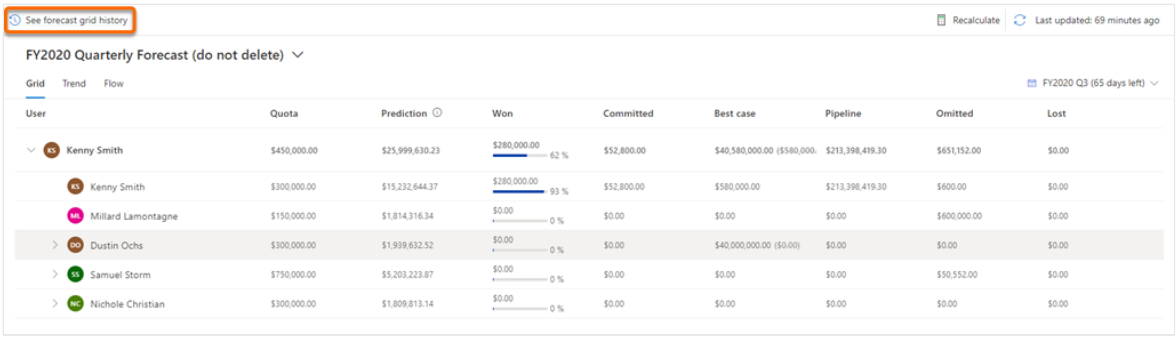
Prerequisites

Your administrator must have enabled snapshots

Open and view snapshots

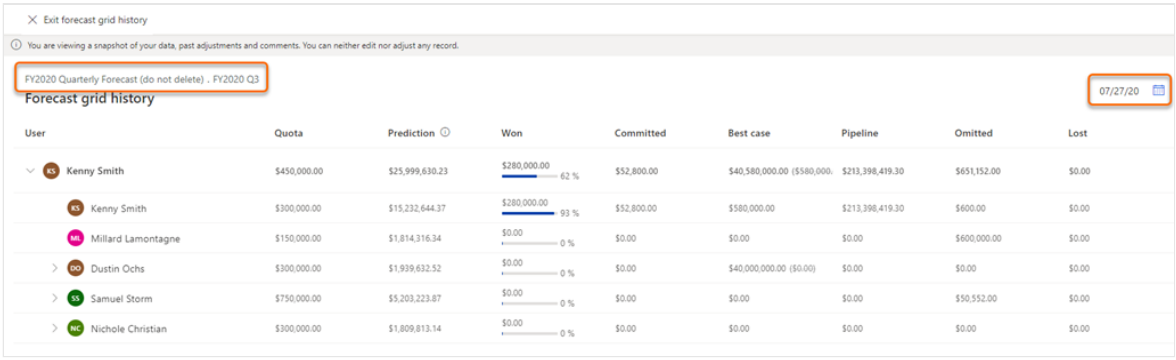
1. Sign in to the **Sales Hub** app, and go to **Performance** > **Forecasts**.
2. Select the forecast for which you want to view snapshots.
3. Select **See forecast grid history**.

> **Note**
>
> The **See forecast grid history** option is inactive if there no snapshots available for the forecast. Daily snapshots are available for weekly, monthly, and quarterly forecast periods, and weekly snapshots are available for annual periods.



The latest snapshot for the forecast is displayed with information about forecast data at that point in time, along with name and date.

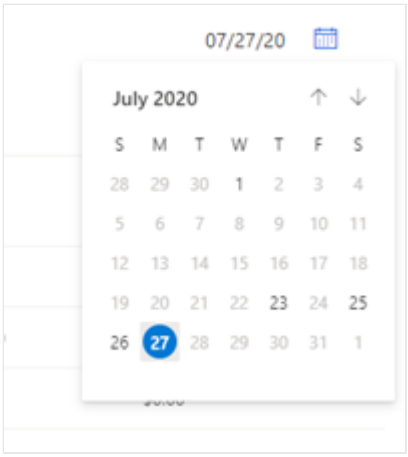
> **Note**
>
> The values displayed in the snapshot are based on the fields configured in your forecast. If these values don't match the values you expected, verify the **fields used for aggregation**.



The format of the snapshot date is based on your personal settings. In this example, the date format is **MM/DD/YY** (**07/27/20**).

4. Select the calendar icon to know the dates for which snapshots are available. To view the snapshot from a specific date, select the date from the calendar.

> **Note**
>
> If a date is inactive, there's no snapshot available for that date.



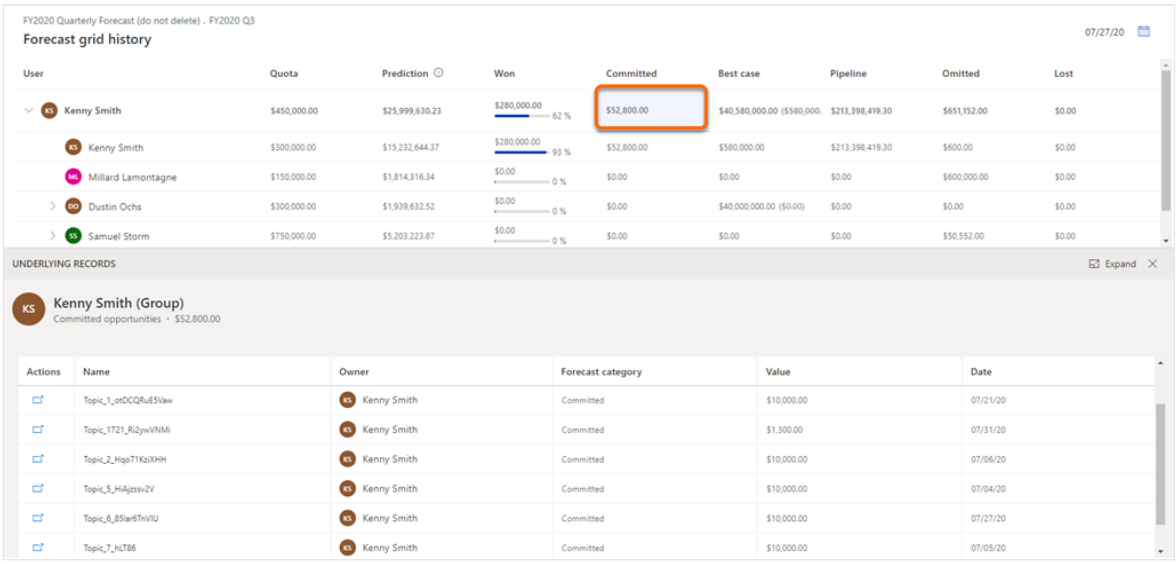
The data displayed in the snapshot is view-only and can't be modified.

View underlying opportunities

For a snapshot, you can view the underlying opportunities of a column or the users who are influencing the displayed budget amount at that point in time. By viewing the opportunities, you can analyze and understand how they're trending.

1. Open a snapshot.

2. To see the underlying opportunities that are defining the value of a column at that point in time, select the column or user. In this example, Kenny Smith's **Committed** column is selected and the underlying opportunities that are contributing the value are displayed.



3. To view the details of an underlying opportunity, under **Actions** column, select the navigate icon corresponding to the opportunity.

   The opportunity opens in a pop-up window. The latest information will be displayed in the opportunity, not the information as of the date of the snapshot.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

About premium forecasting
Take snapshots automatically
Analyze deals flow between snapshots

What is the Sales accelerator?

Article • 08/17/2022

https://go.microsoft.com/fwlink/?linkid=2190823

Sales teams in organizations must focus on high-velocity selling. The sellers who are part of these sales teams spend valuable time identifying the best customer in their customer list, navigating across multiple sources to identify who they need to engage with, when, and how.

To overcome this challenge, the Sales accelerator in Dynamics 365 provides a tailored experience for sellers by minimizing the time they spend on their search for the best next customer to reach out to. The Sales accelerator gathers information from multiple sources and lets sellers focus on how to best approach their customers. It helps sellers to sell smartly, by building a strong and prioritized pipeline, offering context, and surfacing automated recommendations throughout a sales sequence that helps to speed the sales process.

By default, sales accelerator is available in the Sales Hub app with limited functionalities. Sales teams can view their work list items created through timeline for contact, opportunity, lead, and account records, and can perform search, filter, and sort on the list. To experience the full capabilities of sales accelerator, contact your administrator to configure the sales accelerator workspace. More information: Enable and configure Sales accelerator.

By using the Sales accelerator:

- Sellers can prioritize their customer list in a fast and easy way by using an intelligent work list. The work list helps sellers reach out to the next best lead or opportunity by displaying relevant sales information and customer context that's available immediately, which helps make every communication more successful. More information: Prioritize sales pipeline through work list.
  Also, you can use the sequence designer to create and manage your own sequences. More information: Create and connect sequence for yourself
- Sales managers can use the sequence designer to configure sequences of activities that define steps to help sellers prioritize their activities for the day, be productive in their jobs, and focus on selling. More information: Create and manage sequences

Note

Sales accelerator is not supported on mobile devices, such as tablets and smartphones.

See also

Enable and configure Sales accelerator
Sales accelerator FAQs

Prioritize sales pipeline with work lists

Article • 10/16/2023

Use work lists in the sales accelerator to prioritize your sales pipeline and ensure that important records aren't left behind.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How to prioritize your pipeline

During your workday as a seller, you need to juggle multiple tasks as you work on multiple records. As a result, it can be hard to plan and prioritize your customer-facing activities. The work list in the sales accelerator for Dynamics 365 Sales Insights helps you prioritize your time and effort to ensure that important records aren't left behind.

The sales accelerator work list gives you the following capabilities:

- Manage and view records that include activities that are due in the last 30 days to be performed, sorted by priority, and removed after an activity has been completed.
- Manage the work list by sorting, filtering, and grouping records.
- View relevant information about customers, such as personal details, past and future activities, and the related entities for each record.
- Communicate with customers through phone and email. More information: Connect with customers by using a record or the Up next widget
- Add manual activities to records—in addition to those that have been defined in a sequence—if an ad-hoc activity is required.

> **Note**

The work list is configured by a sales manager who defines the sequence of activities for records by using the sequence designer. More information: **Create and manage sequences**

Prerequisites

Review the following prerequisites before you start using work lists:

- The sales accelerator feature is installed in your organization, and your role is assigned to access work lists. More information: Configure the sales accelerator
- A softphone and an email server are configured for your security role.
- Dynamics 365 Channel Integration Framework version 1 is installed, and a channel provider is configured for your Dynamics 365 organization. More information: Integrate a sample softphone dialer with Dynamics 365 Sales

> ⓘ **Note**
>
> Although **predictive lead scoring** and **predictive opportunity scoring** aren't required for work lists, the work list functionality described in this topic assumes that these features have been enabled and models generated for your organization. Contact your administrator to enable these features.

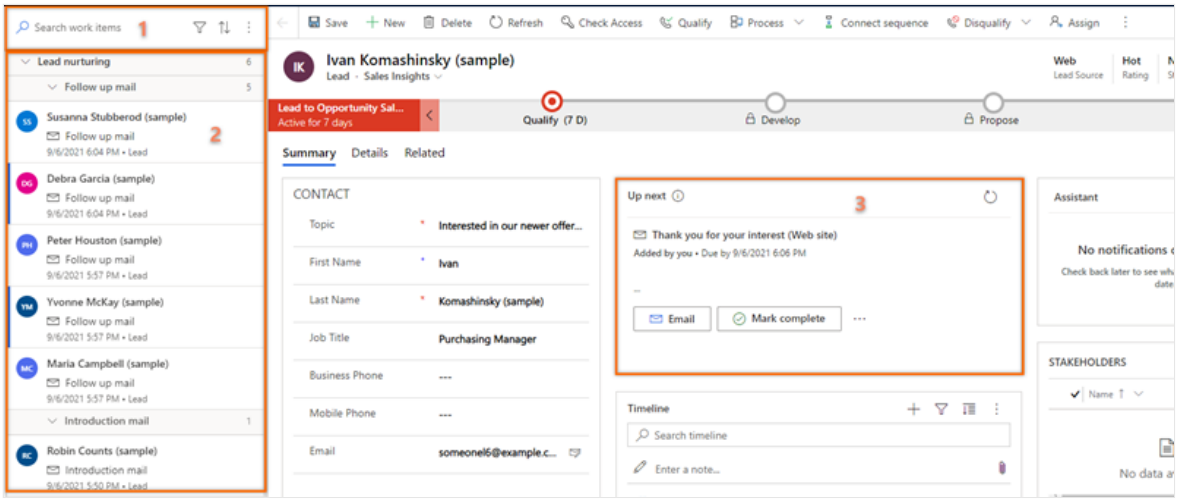
View my records by using the work list

The work list displays a list of records that are assigned to you or the security role you're associated with. The records display activities that are due for the current date—or pending from previous dates—that were created manually or through a sequence. This helps you to access all records that include activities in one place, instead of navigating across multiple forms in the application. A sales manager can configure and determine the entities to display to you in the work list. The top of the record in the work list will always be the next-best customer with the highest prediction score.

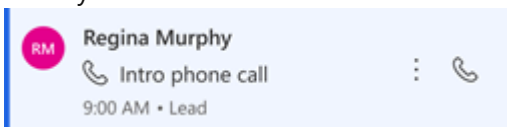
> ⓘ **Note**
>
> From version 9.1.23093.10010, to optimize the performance of loading forms from the work list, the **Back**, **Save & Close**, and **Open in new window** options on the form command bar are removed. If you want these options on your forms in work list, contact Microsoft Support.

To view the work list

1. Sign in to the Dynamics 365 Sales Hub app, and go to **Change area** > **Sales**.
2. From the site map, under **My Work**, select **Sales accelerator**.
   The work list page opens, as shown in the following image.



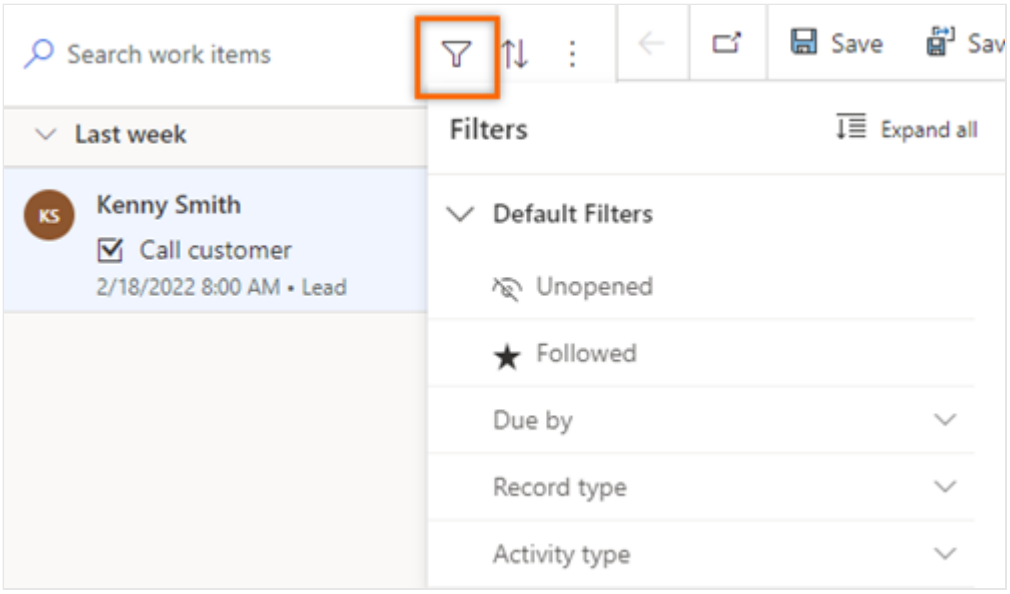
Number	Feature	Description
1	**Search, filter, sort, and group records**	You can search, filter, sort, and group the records that you want to view in the list to quickly identify the customers to contact, as described later in this topic. By using the lookup icon, you can search for a specific record by using the record name. Select **More options** (⋮) to send bulk emails, configure work list settings, and refresh the list, as described later in this topic.
2	**Records list**	Displays a list of records that are assigned to you or to a security role that you're part of. The unread records appear in bold with a blue vertical bar on the left. You must perform and complete the activities on these records from the current date and from previous dates. Each record displays the name of the record, primary contact name, next best action, priority scoring, and entity name. Hover over the record to view more options. Select **More options** (⋮) to perform the following actions on the record: • Mark as complete. • Skip the current activity. • Snooze the activity. • Change the state of the record to unread or read. • Follow or unfollow the record.

Number	Feature	Description
		• Skip wait time (this option is available for items that are in the wait state). Also, you can select the activity icon to perform the specified activity for the record.  More information: Connect with customers by using a record or the Up next widget When you complete an activity on the record, select the refresh icon. The list will be refreshed, and the record will be removed from the list. **Note** The list displays records for a month from the current date. The records that are older than 30 days are automatically removed and won't be displayed.
3	**Up next widget**	Displays the next best action that you can perform on a record for the given date, as described later in this topic.

Filter, sort, and more options

Filter

Use filters to prioritize the records in the work list so you can reach customers at the right time. The following image shows the list of options that are available to filter the work list.



Filters are categorized into two types:

- Default filters
- Custom filters

Default filters

The following filters are available by default in the sales accelerator:

- **Unopened**: View records that haven't been opened or read.
- **Followed**: View records that you're following.
- **Due by**: Filter records according to the time that a task must be completed for a record. The following options are available:
  - **Today**: View records with pending tasks that haven't been completed today.
  - **From tomorrow**: View records with pending tasks that are to be completed tomorrow.
  - **Overdue**: View records with pending tasks that haven't been completed on time.
- **Record type**: These filter options are the record types that the sales accelerator is configured for. You can select all options to view all records, or you can select an individual type to view only the records of that type.

  Select at least one option to display relevant records in the work list. If no records match your selected type, an empty list is displayed. By default, all filter options are selected.
- **Activity type**: These filter options are **Phone calls**, **Email messages**, **Tasks**, and **Meetings**. You can select all or any specific option to filter the records to display in

the work list.

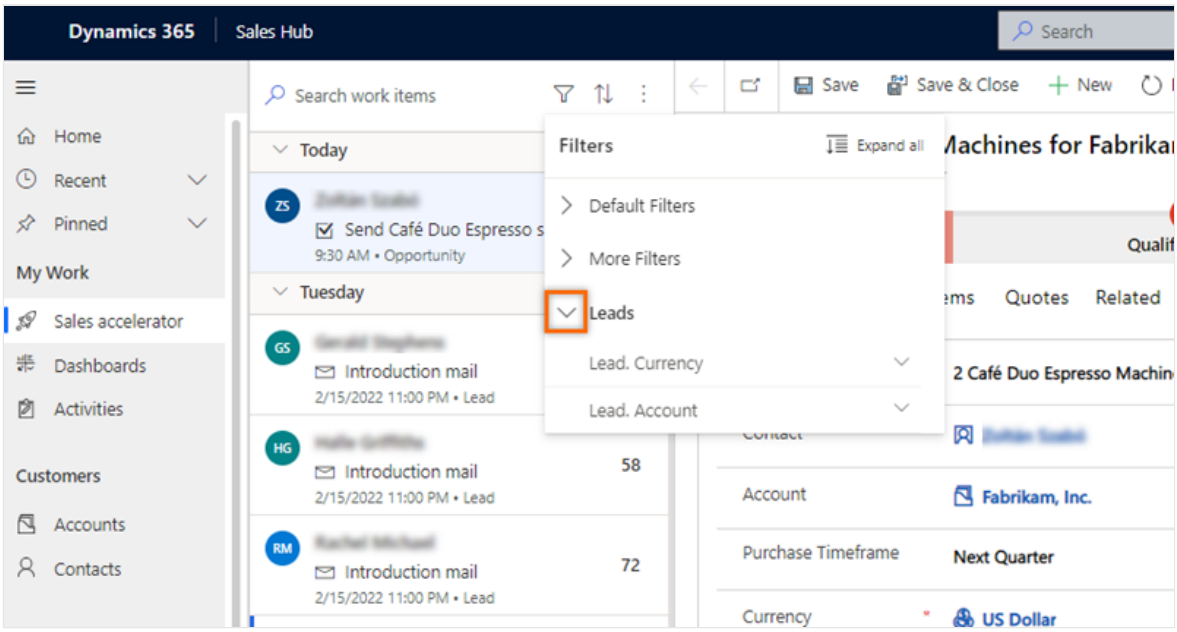
Select at least one option to display relevant records in the work list. If no records match your selected activity type, an empty list is displayed. By default, all filter options are selected. For example, when you select the entity type as **Lead** and the activity type as **Call**, the work list displays only the lead records that include call activities.

Custom filters

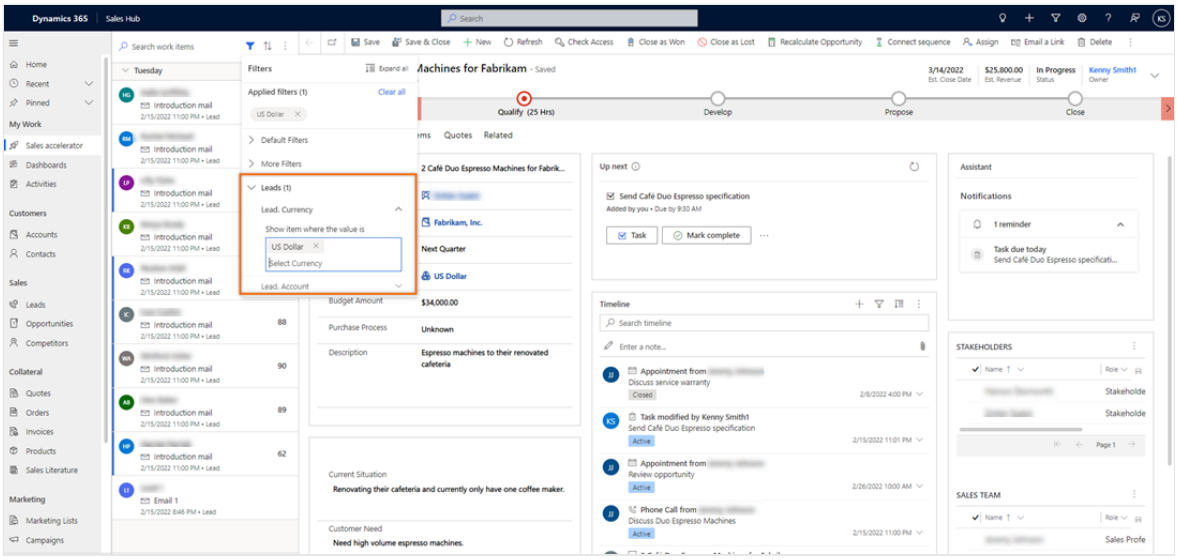
Custom filters are created specifically for you to view records that are important and relevant to you. You can contact your administrator to create a custom filter for you to use to filter records.

In the following example, your administrator has created a filter based on lead and currency. You want to view leads that have currency set to **US Dollar**, so you choose the filter and select **US Dollar** as the currency.

1. From the filter options, expand **Leads**.



2. Expand **Leads.Currency**, and then select **US Dollar**.



The work items list is filtered to show only leads with the currency type of **US Dollar**.

Sort

Select **Sort** to organize records into groups and display them in the sort order you choose (ascending or descending).

More options

Select **More options** (⋮) to perform the following actions:

- Refresh the list.
- Send an email to multiple recipients at once, as described later in this topic.
- Personalize your workspace. You can configure the following options:
  - **Availability**: Configure your work availability. More information: Configure your work availability
  - **Auto advance**: Choose what happens next after you complete an activity. More information: Configure the auto advance steps
  - **Steps and activities**: Create an activity automatically on the timeline that's linked to a step. More information: Configure steps and activities
  - **Filters**: Hide or show filters from the available filter list. More information: Show or hide filters

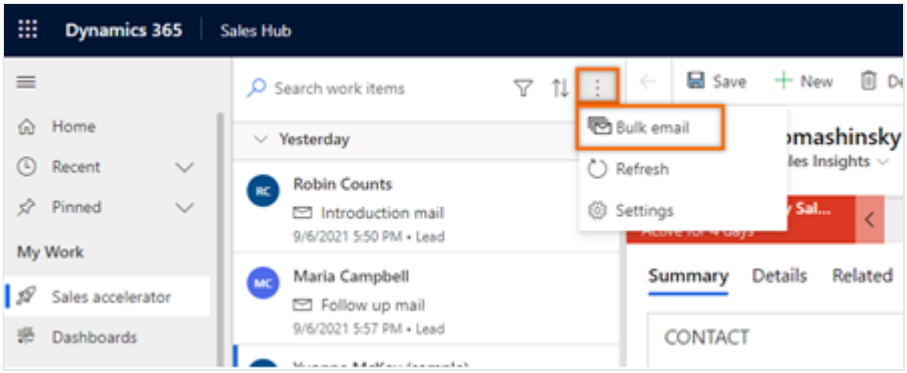
Send bulk email

The bulk email feature helps you to optimize your work by sending the same email to a list of leads simultaneously. The leads need to have the same email step from the same sequence attached to all their records.

For example, let's say 10 leads have a sequence step to send an introduction email, and this step is pending for today. By using the bulk email feature, you can select all or some of the 10 leads and send them the introduction email all at once.

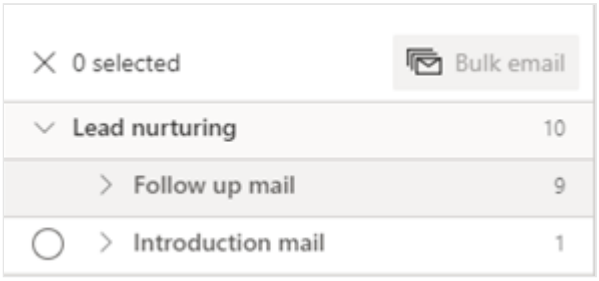
To send bulk email

1. On the work list page, select **More options** > **Bulk email**.

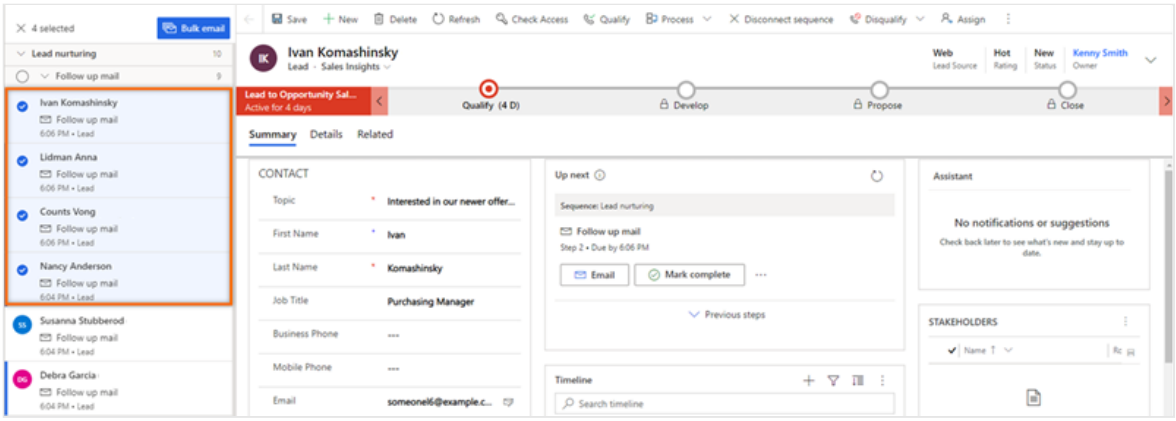


   The work list records in the queue are automatically grouped according to the sequence and then the action. For example, the **Lead nurturing** sequence has 10 leads, with nine on the **Follow up mail** step and one on the **Introduction mail** step. When you select the **Bulk email** option, the records are first grouped by the lead nurturing sequence and then by the **Follow up mail** and **Introduction mail** steps.

   As shown in the following image, the **Bulk email** option in the upper-right corner is unavailable until you select the leads, as described in the following step.

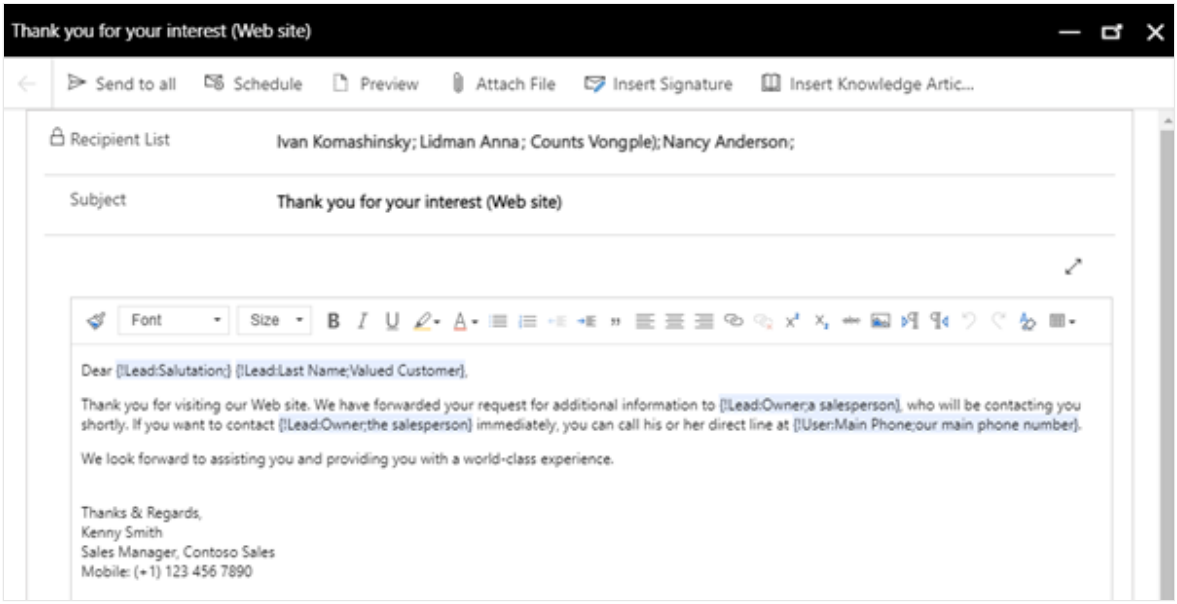


2. Choose the leads to whom you want to send the bulk email. You can select all the leads at once by selecting the step name, or you can expand the step and then select the leads individually. In this example, we're sending a bulk email to the leads Ivan Komashinsky, Lidman Anna, Counts Vongple, and Nancy Anderson.



3. On the command bar, select **Bulk email**.

   The email composer opens. If you've selected an email template for the step, the template opens in the composer.

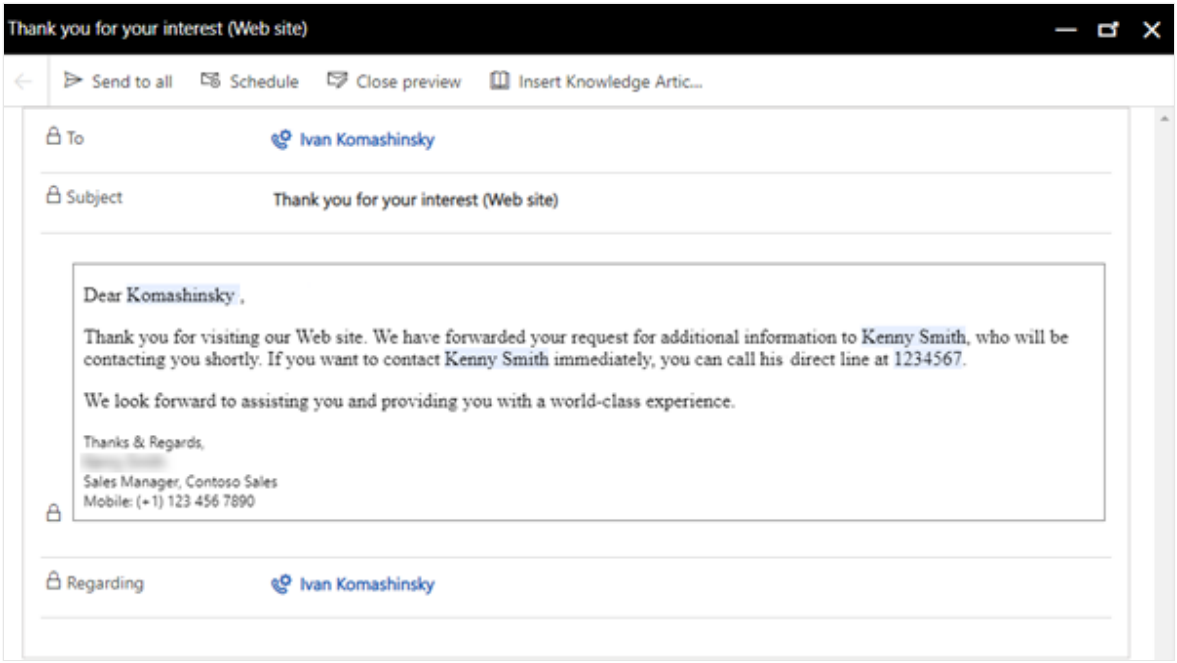


> **Note**
>
> Each user in the recipient list must satisfy the following conditions on the entity form:
>
> - On the **Details** tab under **CONTACT METHOD**, **Email** is set to **Allow**.
> - On the **Summary** tab under **CONTACT**, the user has a valid email address.

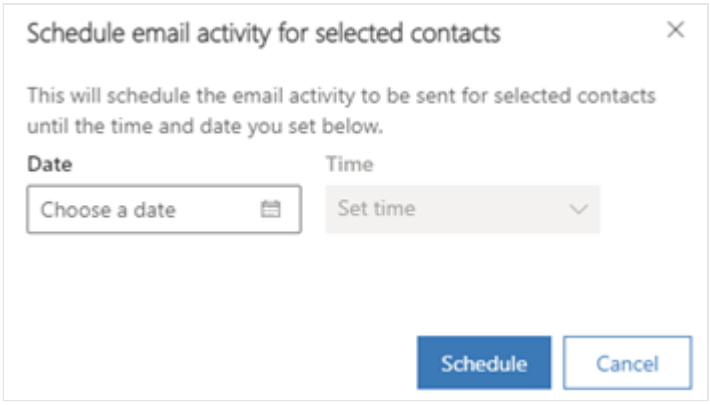
4. (Optional) To preview the email, select **Preview**.

   The preview opens and shows tags that contain information about the first recipient (in this example, Ivan Komashinsky). However, when the actual email is

sent, each email will include relevant information from each lead in your recipient list.



5. (Optional) To schedule the email, select **Schedule** and then choose a date and time at which you want to send the email.



6. Select **Send to all**.

The email will be sent to all the recipients you specify. You can verify that the timelines for those entities are updated with the email. After you refresh the work list, all the records you just sent email to will move to the next step.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Create and manage sequences
Understand the Up next widget

Customize the appearance of work items

Article • 09/15/2023

The work list in sales accelerator helps sellers prioritize their time and effort. Customize work items to display the most relevant and important information in the work list. You can customize work items for each entity type that you or your sellers work with. Want to know how the work items appear by default? See the Default work item appearance section.

> **Note**
>
> The card customizations made through the focused view will also affect the card display in the work list. More information: **Customize the work list card in focused view**

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Microsoft Relationship Sales, or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Administrator or any primary sales role, such as salesperson or sales manager

If you have an **administrator** role, you can do the following tasks.

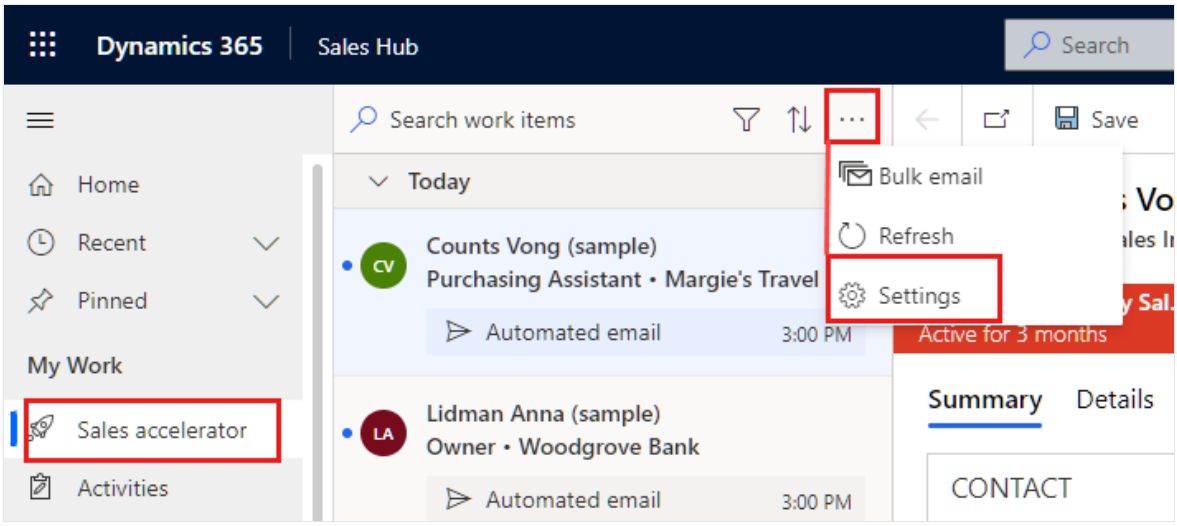
- Enable customizations. More information: Turn on customizations
- Allow sellers to override your customizations. More information: Lock or unlock customization for other user roles
- Customize work items for your organization. More information: Customize work items

If you have a **primary sales role** and if your admin has turned on the ability to customize work items, you can customize them for yourself only. Your customizations don't affect what other sellers see in their work list. More information: Customize work items

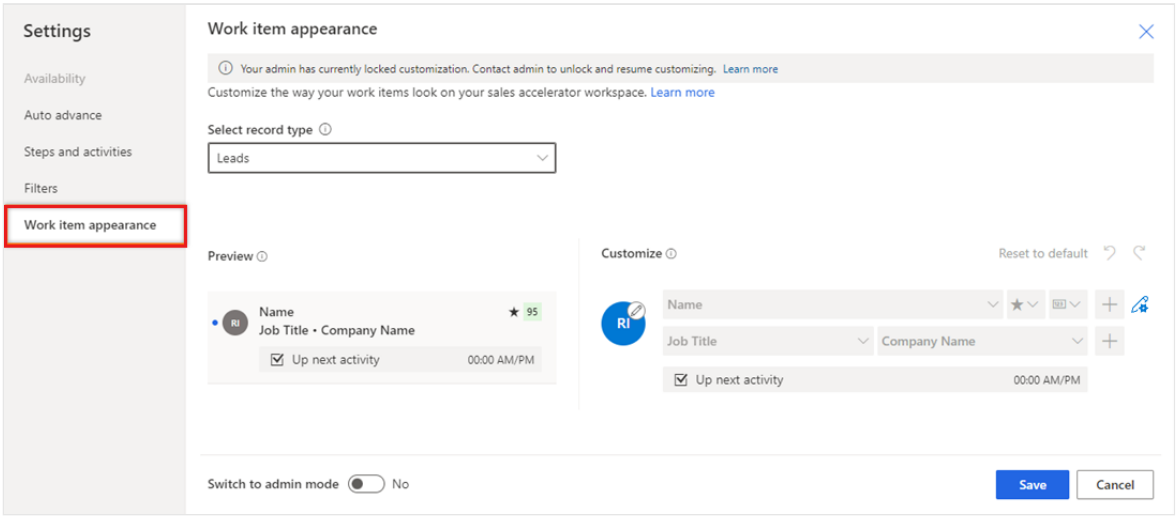
Turn on customizations

As an administrator, you must turn on the ability to customize work items. Unless you turn on, nobody (including you) can customize the work item in your organization.

1. Sign in to the Dynamics 365 Sales Hub app, and go to **Change area** > **Sales**.
2. In the left pane, under **My Work**, select **Sales accelerator**.
3. On the work list page, select **More options** > **Settings**.



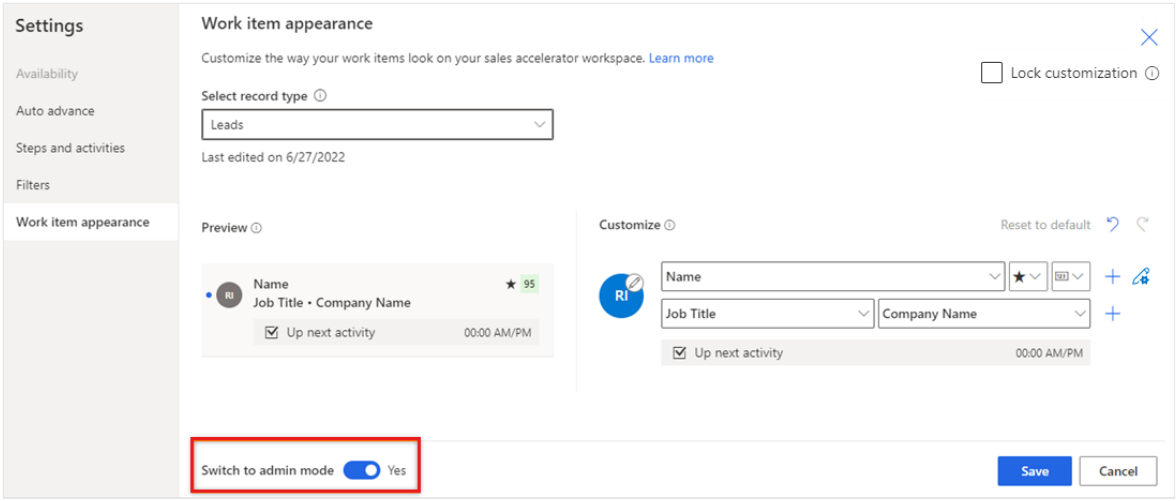
4. On the **Settings** page, select **Work item appearance**.



   If you don't see **Work item appearance** in the **Settings** list, it means your admin hasn't turned on work item customization. Follow these steps again when that's been done.

5. Turn on **Switch to admin mode** to allow work items to be customized. With this setting off, work items can't be changed by anyone, not even an administrator.

Turning on admin mode reveals another setting, **Lock customization**. To prevent sellers from overriding your customizations, select this setting. To allow sellers to make their own changes to work items, clear it.

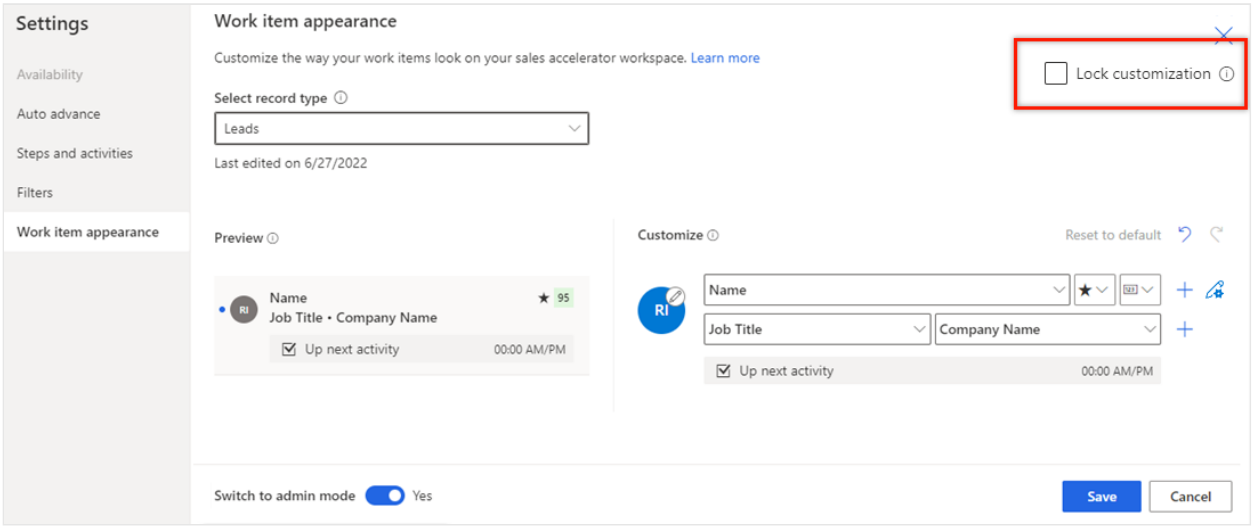


The administrator mode is turned on. Now, you can customize the work item for your organization and also, let other user roles in your organization to customize the work item.

Lock or unlock customization for other user roles

As an administrator, you can let other user roles to override the customizations you made to the work items according to their requirements.

Turn on the admin mode and the **Lock customization** settings is revealed. More information: Turn on customizations



For the **Lock customization** settings, choose one of the following options to configure:

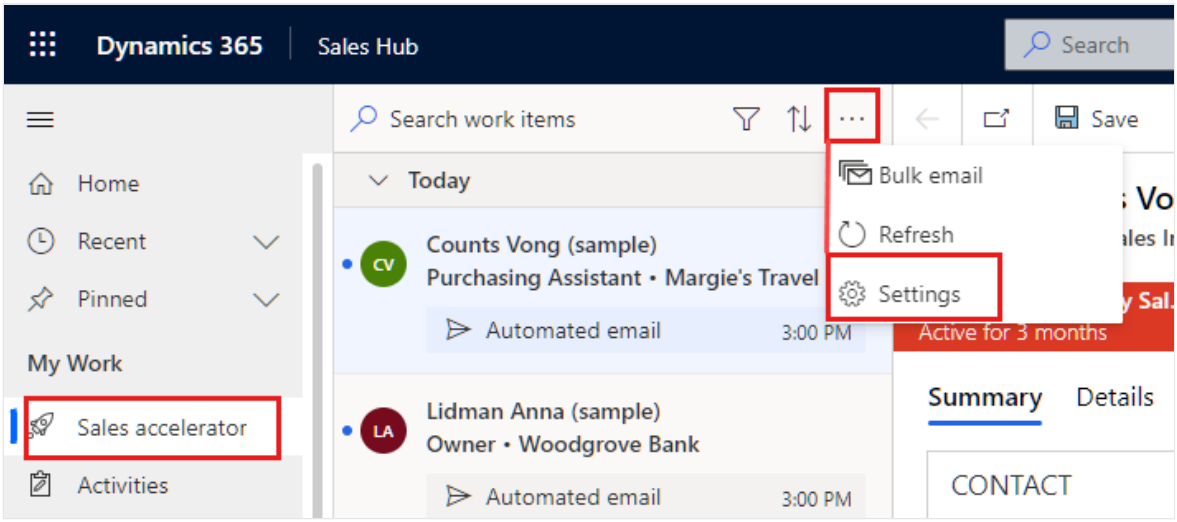
- To allow sellers to make their own changes to work items, clear it.
- To prevent sellers from overriding your customizations, select this setting.

Customize work items

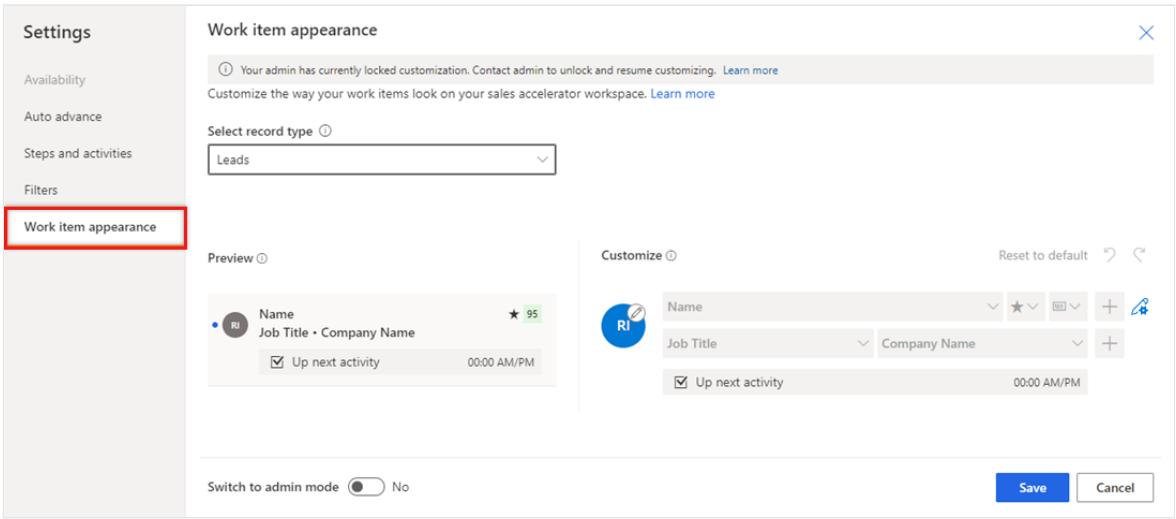
If you aren't an admin, you'll need to ask your admin to let you customize work item. More information: Lock or unlock customization for other user roles

The procedure to customize work items is the same for both administrators and other primary sales roles.

1. Sign in to the Dynamics 365 Sales Hub app, and go to **Change area** > **Sales**.
2. In the left pane, under **My Work**, select **Sales accelerator**.
3. On the work list page, select **More options** > **Settings**.



4. On the **Settings** page, select **Work item appearance**.



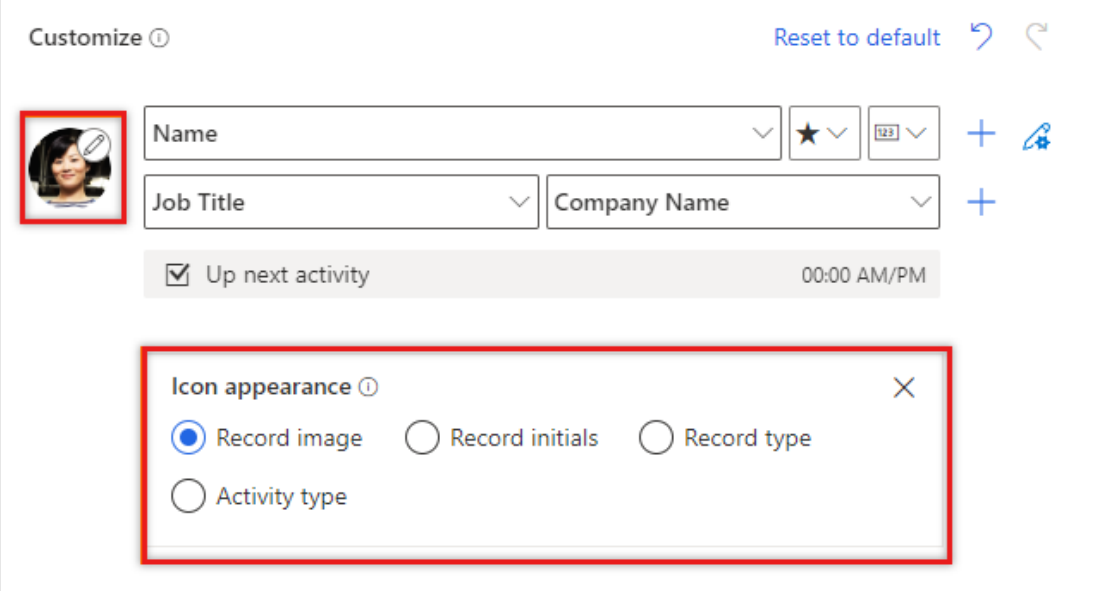
> **Note**

- The **Switch to admin mode** and **Lock customization** options are available only for administrators.
- If you're not an administrator, you must ask your administrator to turn on admin mode before you can customize work items.

5. In the **Select record type** list, select the record type you're customizing work items for.

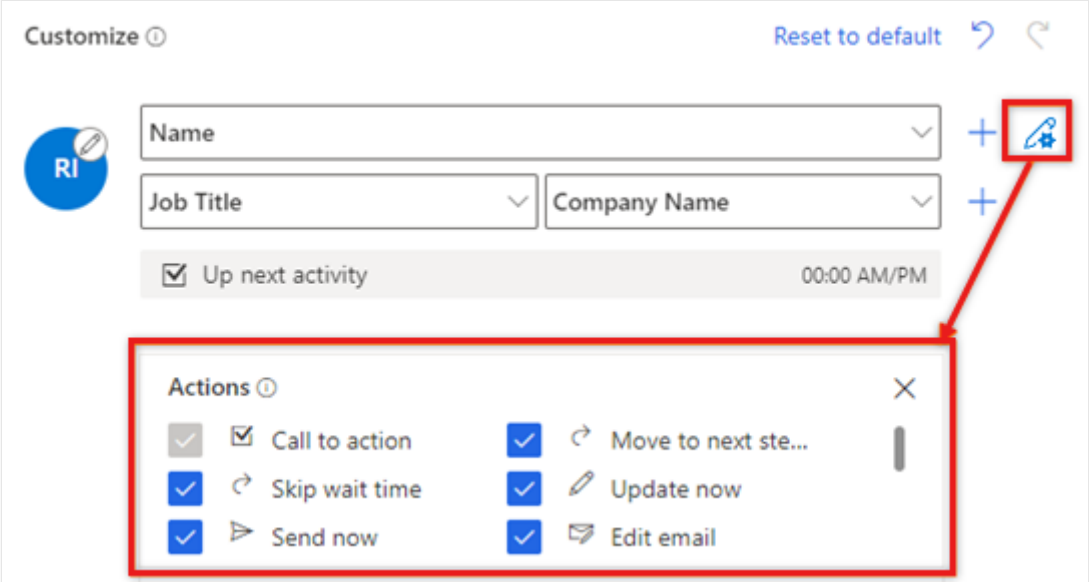
6. Under the **Customize** section, use the following options to customize:

   - To change the icon that appears on a work item, select the pencil icon, and then choose one of the following options:
     - **Record image**: A photo of the contact, if one is available
     - **Record initials**: The contact's first and last initials
     - **Record type**: The icon associated with the record type
     - **Activity type**: The icon associated with the current activity on the record



   - To change the content of work items, select the fields or attributes to display:
     - To change an existing attribute, select a different one in its place.
     - To add an attribute in the same row, hover over an existing attribute and select **More options** > **Add a field**. You can show up to three fields in a row.
     - To add an icon in the same row, hover over an existing attribute and select **More options** > **Add an icon**. You can show up to three icons in a row.
     - To add a row, select the add icon (+). You can show up to four rows of information in a work item.
     - To change the action that's displayed when the work item's **More options** icon is selected, select the pencil-and-gear icon and then choose one or

more actions.



- To delete a field or an icon, hover over it and select **More options** > **Remove**.

- To remove all customizations and restore work items to their original appearance, select **Reset to default**.

7. Select **Save**.

Default work item appearance

By default, the work item appearance is set to the following values:

Entity type	Default values
Accounts	Row 1: Account name and follow indicator Row 2: Primary contact full name and job title Row 3: Up next activity
Contacts	Row 1: Full name and follow indicator Row 2: Job title and company name Row 3: Up next activity
Custom entity	Row 1: Name and follow indicator
Leads	Row 1: Name, follow indicator, and predictive score Row 2: Job title and company name Row 3: Up next activity
Opportunities	Row 1: Contact full name, follow indicator, and predictive score Row 2: Contact Job title and company name Row 3: Topic and estimated revenue Row 4: Up next activity

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Prioritize your sales pipeline by using the work list

Understand the Up next widget

Article • 10/10/2023

The **Up next** widget displays activities that you can view and perform actions on records.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise. More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager. More information: Primary sales roles

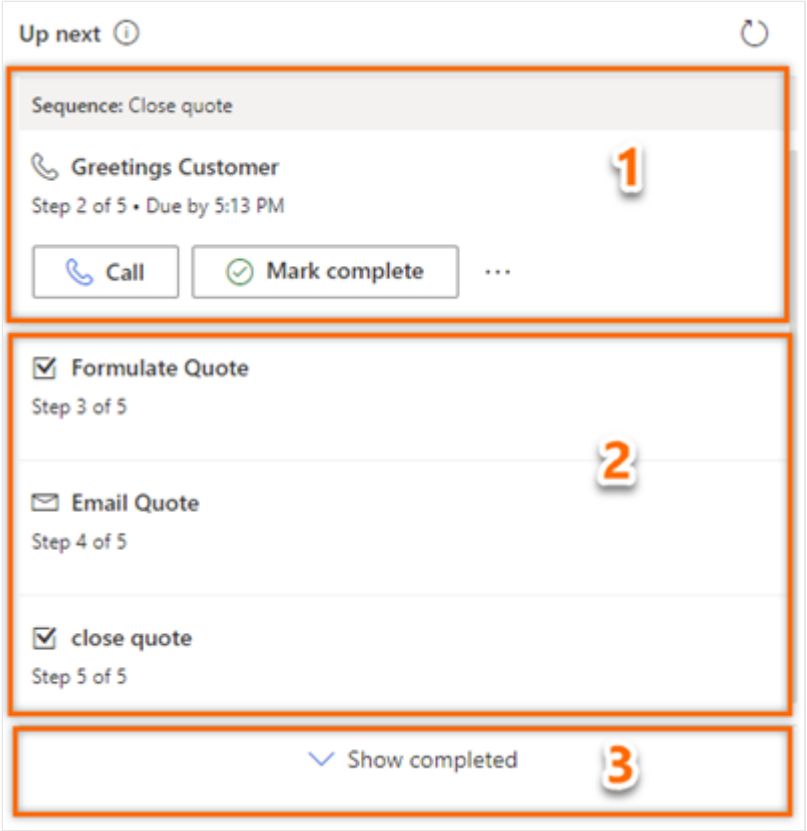
What is the Up next widget?

Using the **Up next** widget, you can view and perform actions on activities on a record. The widget displays the current activity, upcoming activity, and completed activities. You can add these activities to a record manually or by using a sequence:

- In a sequence, a sales manager creates activities and applies them to the record according to business requirements. The activities in the sequence are displayed in the **Up next** widget.
- For manual activities, you or a sales manager can create an activity on the timeline. The activity is displayed in the **Up next** widget as a current, upcoming, or completed activity, depending on its due date. This activity is available to you and other sellers who have access to the record.

To do actions on activities, see Connect with customers by using a record or the Up next widget.

The following image shows an example of the **Up next** widget.



1. **Current activity**: The current activity is a task that you must complete or skip to go to the next activity, which moves the record closer to completion. To perform an action such as making a phone call or sending an email, select the action icon displayed in the activity. More information: Connect with customers by using a record or the Up next widget.

   After you complete the action, select **Mark complete**, and the activity is closed and moved automatically to completed items and is displayed on the timeline.

   You can choose to skip the activity if you think it's not relevant to the record or you don't want to perform the action. Select **More options**, and then select **Skip**. The activity is skipped and moved to completed items.

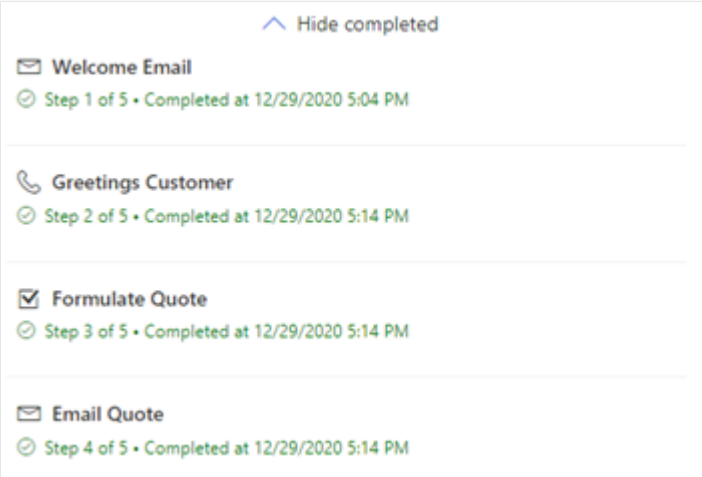
   Also, you can view suggestions for the record and preview the sequence to get an overview of the sequence steps. More information: Preview a sequence

2. **Upcoming activity**: The upcoming activity section is view-only, and you can't perform an action on these tasks. This section is displayed so you know which activity will appear next when you complete the current activity.

3. **Completed activities**: These activities are marked as complete or skipped for a record.

   To view the completed activities list, select **Show completed**. The section expands to display the list of completed activities with details such as whether the activity was completed (with date and time) or was it skipped. You can't perform any

actions on these tasks; they're view-only. The following image is an example of an expanded section of completed items.



Activity ownership

By default, activities are assigned to the owner of the record. When the owner of the record changes, the current active step remains with the previous owner, while the next steps in the sequence will be automatically assigned to the new owner.
The owner of the record can also assign a particular activity to a team or an individual. To do this, on the worklist card or the Up next widget, select **More options** > **Assign** and choose the user or team accordingly.

Add manual activities to records

Using the sequence, your sales manager can define activities for you such as email, phone calls, tasks, and appointments. To meet business requirements, you might have to add extra activities to a record. You can manually add activities for records to appear in the **Up next** widget in addition to activities defined in the sequence for a given day. The manual activities include email, phone calls, tasks, and appointments.

Only one manual activity is displayed in the **Up next** widget at a time. After the activity is marked as complete, the other manual activity is displayed. Activities with due date are prioritized and displayed first and then the activities with no due date.

The characteristics of manual activities are similar to an activity defined in a sequence. Sellers must perform the activity and mark it as complete. Then the activity will be moved to the list of completed activities in the **Up next** widget. A sales manager or you, as a seller, can add the manual activity to the records that you or your security role owns.

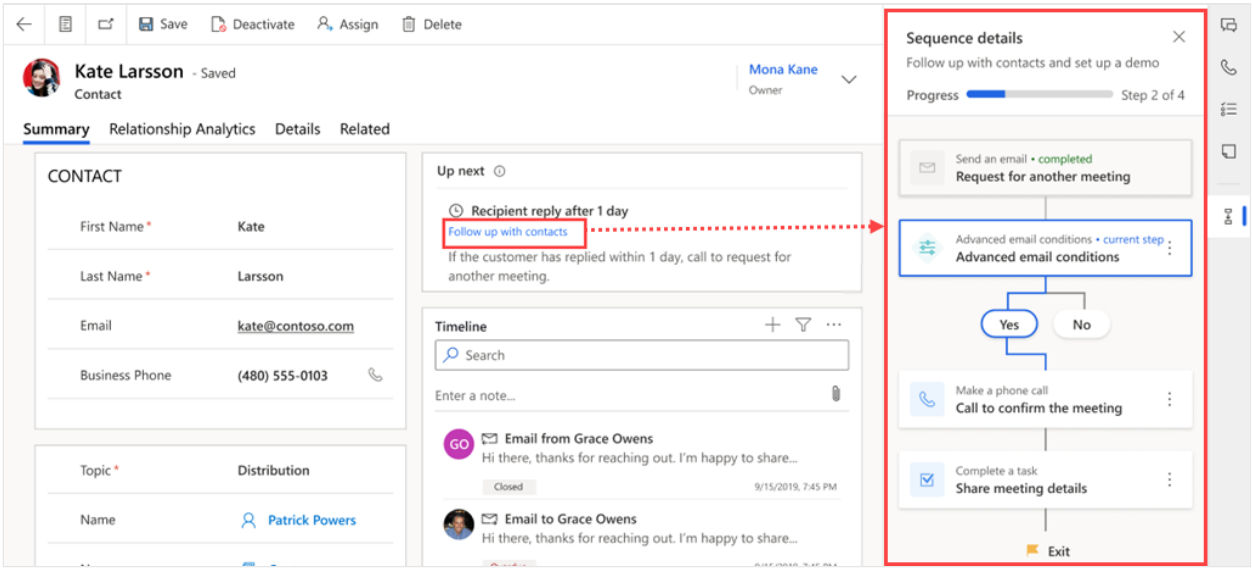
To add manual activities, see Track and manage activities. After the activity is added to the record, based on its due date, the activity will be displayed in the **Up next** widget.

Preview a sequence

> **Important**
>
> This topic is pre-release documentation and is subject to change.

The sequence preview gives you a complete overview of the sequence, including the progress and activities related to different paths. To preview a sequence, select the name of the sequence in the **Up next** widget. The sequence opens in a pane displaying the list of activities that have been defined within the sequence.
https://www.microsoft.com/en-us/videoplayer/embed/RW16PET?postJsllMsg=true

The following image shows an example of a sequence preview.



Using sequence preview, you get the following information of the sequence:

- View the total number of steps along with the number of steps that have been completed and remaining.
- View the number of days spent on each activity and along with the days required for completion.

By analyzing this information, you can track the progress made throughout the sequence and make necessary adjustments to ensure that you reach your goal. Also, you can review the activities that have been completed to ensure that nothing has been missed.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

What is the sales accelerator?
Create and manage sequences
Connect with customers by using a record or the Up next widget
Prioritize sales pipeline through work list

Connect with customers through your work list or the Up next widget

Article • 10/10/2023

As a seller using Dynamics 365 Sales, you can connect with your customers daily by phone, email, and in Teams meetings. You don't lose context or need to switch among multiple applications.

When a sequence contains a customer contact activity, your work list and the **Up next** widget display the corresponding icon (phone, email, or Teams meeting). After you make the phone call, send the email, or attend the meeting, you'll mark the activity complete and continue with the next activity in the sequence. If an activity doesn't need to be completed or you can't connect with a customer, you can skip or snooze the activity. You can add notes to activities to help you remember important information.

By default, activities are assigned to the owner of the record. When the owner of the record changes, the current active step remains with the previous owner, while the next steps in the sequence will be automatically assigned to the new owner. The owner of the record can also assign a particular activity to a team or an individual. To do this, on the worklist card or the Up next widget, select **More options** > **Assign** and choose the user or team accordingly.

License and role requirements

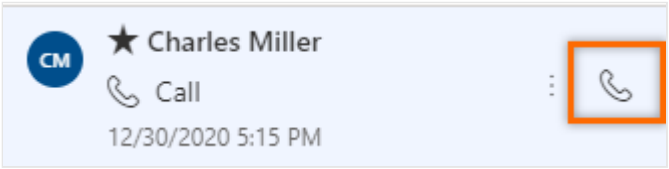
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Call a customer

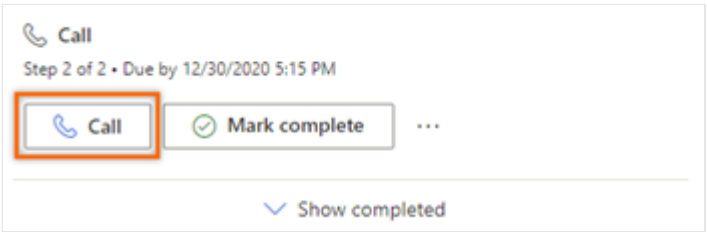
You can make a phone call to your customer from the record in the **My work** list or an activity in the **Up next** widget. The app calls the contact's business phone number if there's one. If no business phone number is available, the app calls the contact's mobile phone number. If both a business and a mobile phone number aren't available, the app displays the softphone dialer for you to dial a phone number manually. If the contact

has indicated they don't want to be contacted by phone, the app displays a warning message before you make the call.

To make a call from your work list, select the phone icon in the **My work** list record.

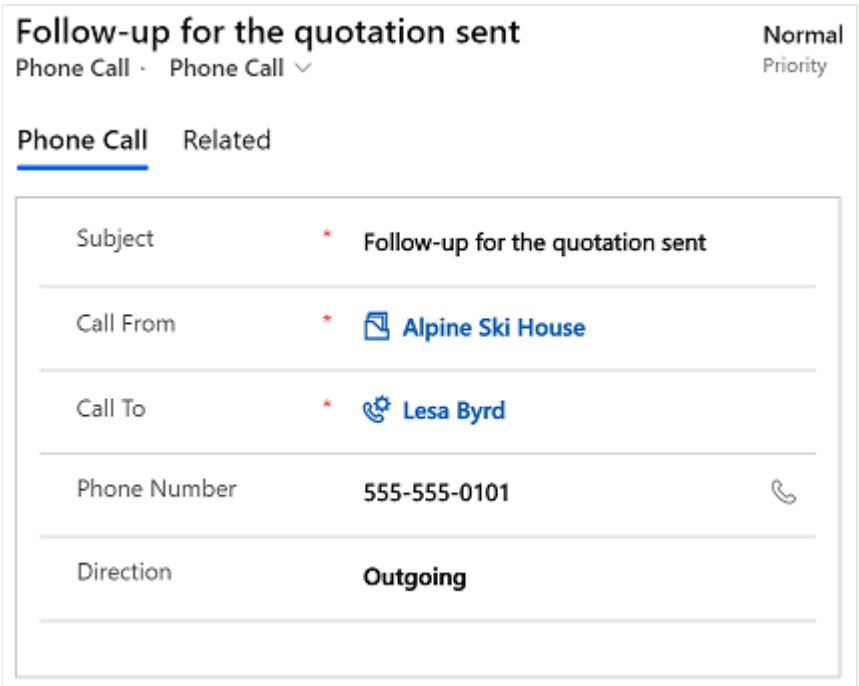


To make a call from the **Up next** widget, select **Call** in the activity. After you've successfully made the phone call, mark the **Phone Call** activity complete.



When you make a phone call, the app creates a **Phone Call** activity and links it to the lead or opportunity. The **Phone Call** activity captures the following information:

- **Subject**: The name of the activity in the **Up next** widget
- **Call From**: The name of the person who made the call
- **Call To**: The name of the person who was called
- **Phone Number**: The phone number of the person who was called
- **Direction**: The direction of the call; always **Outgoing**

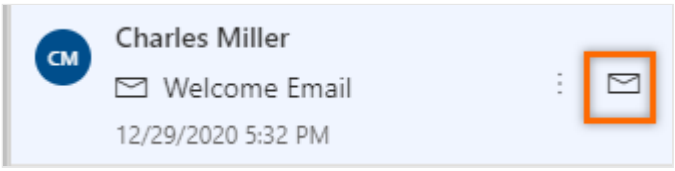


Send an email to a customer

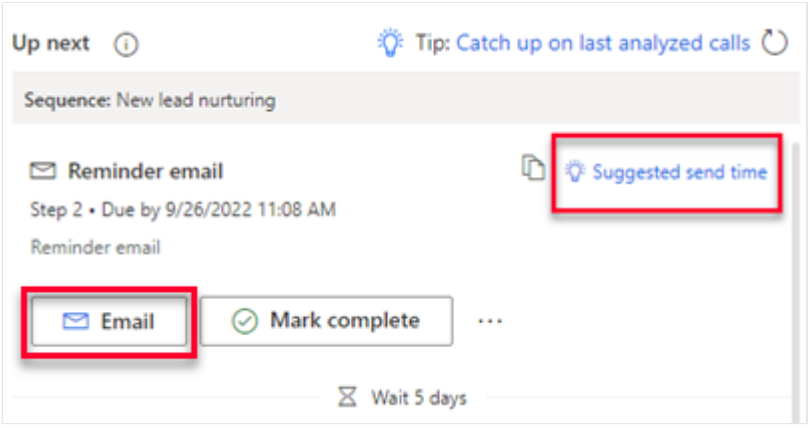
You can send an email to your customer from the record in the **My work** list or an activity in the **Up next** widget. If the email address of a contact isn't available, the app displays a warning message. When you send an email, the app creates an **Email** activity and links it to the lead or opportunity.

If you try to navigate to another record or send an email from another lead or opportunity while you're composing an email, the app warns you to save the email first.

To send an email from your work list, select the email icon in the **My work** list record.



To send an email from the **Up next** widget immediately, select **Email** in the activity.

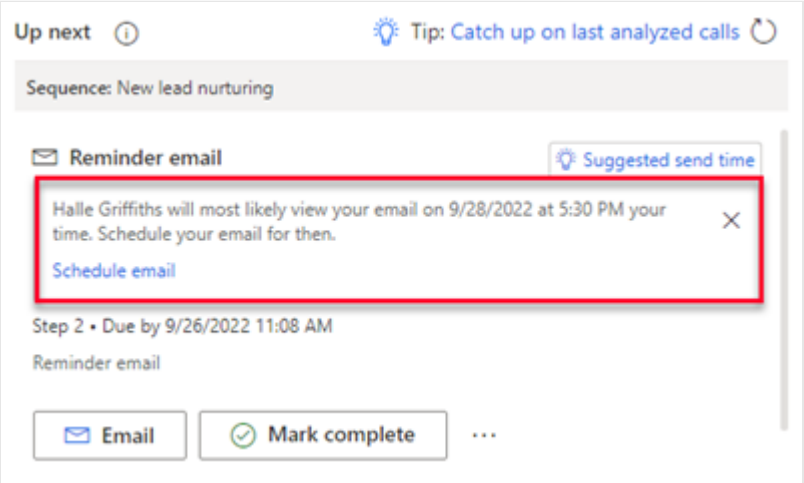


You can also compose an email from the **Up next** widget and send it later.

1. Select **Suggested send time**.

   > **Note**
   >
   > If email suggestions don't appear, ask your administrator to **turn on email engagement** for your organization.

2. The app suggests when the recipient is likely to read the email. To accept the suggestion or send the email at a different time, select **Schedule email**.



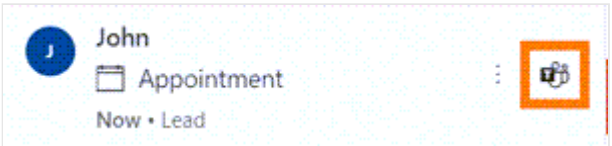
3. The **Schedule email** box fills with the suggested time. Select a different time if you like, and then select **Schedule email**.

   The email task closes and the app adds it to the timeline. The status of the email task remains **Pending** until the email is sent at the scheduled time. Then the status changes to **Complete**.

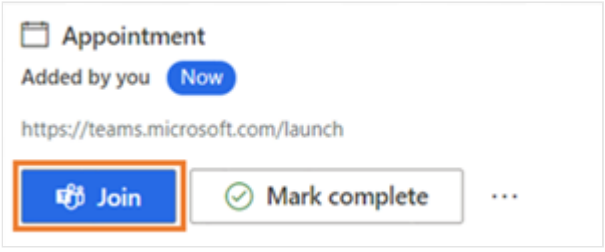
Join a Teams meeting or view appointment details

You can create an appointment in Dynamics 365 or create one in Outlook and track it in Dynamics 365. In both cases, the appointment is associated with a record and appears in your work list. If you created the appointment as a Teams meeting, the work list and **Up next** widget display the Teams meeting icon, and you can join the meeting by selecting it. If the appointment isn't associated with a Teams meeting, you can view the appointment details, such as participants, scheduled time, and description.

To join a Teams meeting from your work list, select the Teams meeting icon in the **My work** list record.

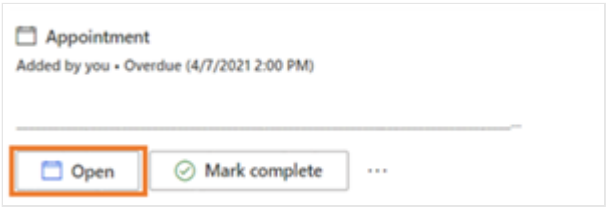


To join a Teams meeting from the **Up next** widget, select **Join** in the activity.



To open an appointment from your work list, select the **Event** icon in the **My work** list record.

To open an appointment from the **Up next** widget, select **Open** in the activity.



Send a text message to customers

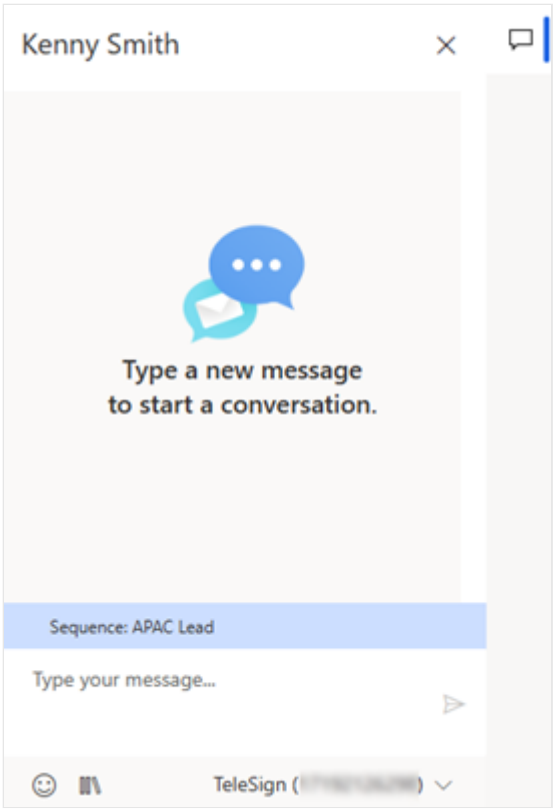
You can send a text message (SMS) to your customer from the record in the My work list or an activity in the **Up next** widget.

A phone number must be available for the contact you're sending the message to. If not, a warning message is displayed. When you send an SMS, the app creates an activity and links it to the record and updates the Timeline wall accordingly.

You can select the text message option in the following ways:

- From your work list, hover over the work list card and then select the message icon.
- From the **Up next** widget, select **Text message** in the activity.

When the text message is selected, the conversation pane opens, allowing you to compose your message or select a template through the text box to send. Additionally, if you have multiple phone numbers associated, you can choose which number to use for sending the message.



The message history is linked to the record and available for you or other sellers who work on the record for reference. Also, you can view replies from the customers and respond to them through the conversation pane. More information: Manage text message conversations

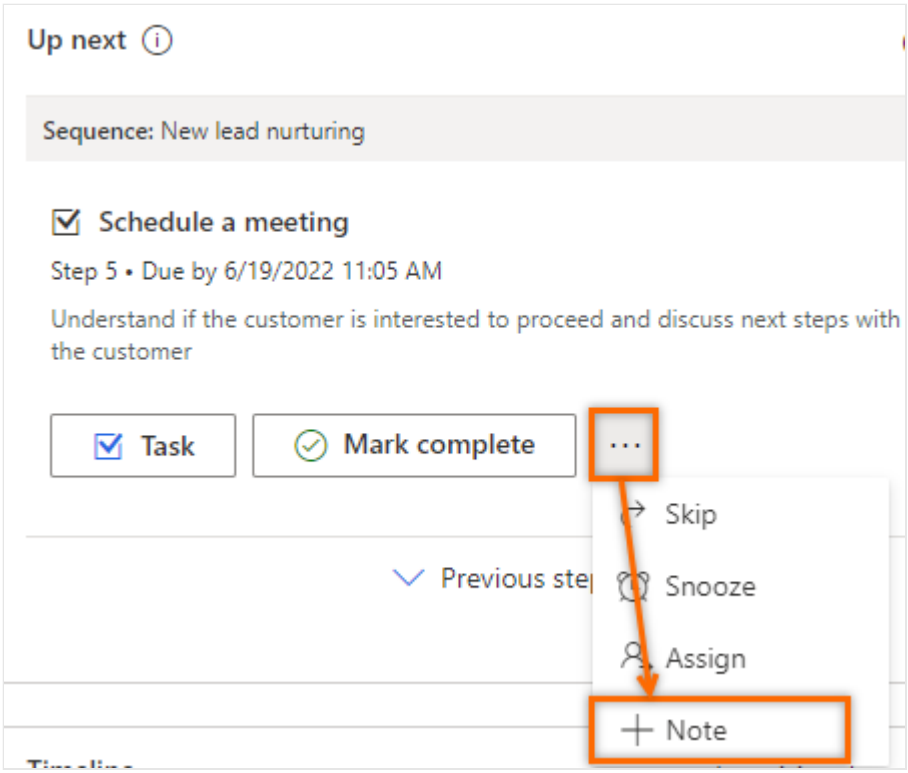
Add a note to an activity

Notes that you add to an activity appear on the record's timeline.

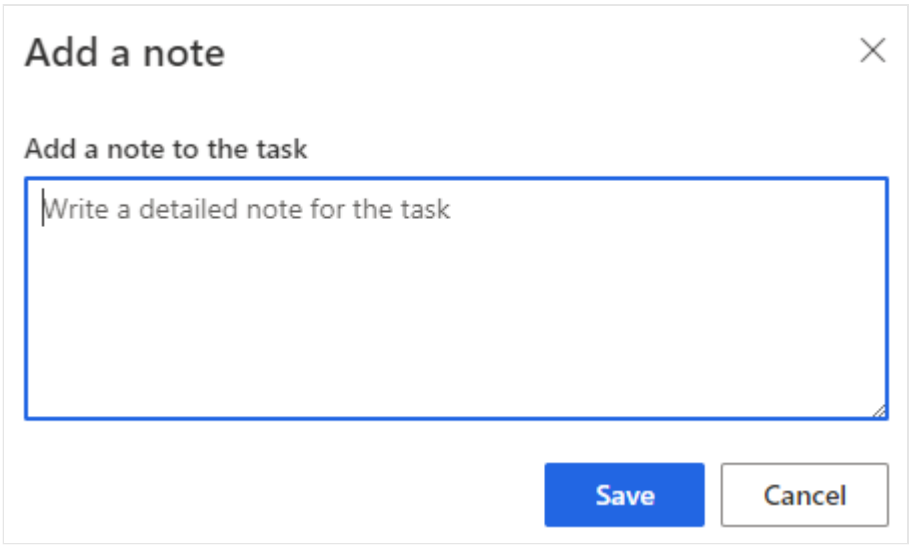
> ⓘ **Note**
>
> If you're using custom forms and the timeline doesn't appear on a form, add it. **Learn how to add, configure, move, or delete sections on a form.**

You can add a note when an activity is in progress.

1. In the activity in the **Up next** widget, select **More options** (...) > **+ Note**.



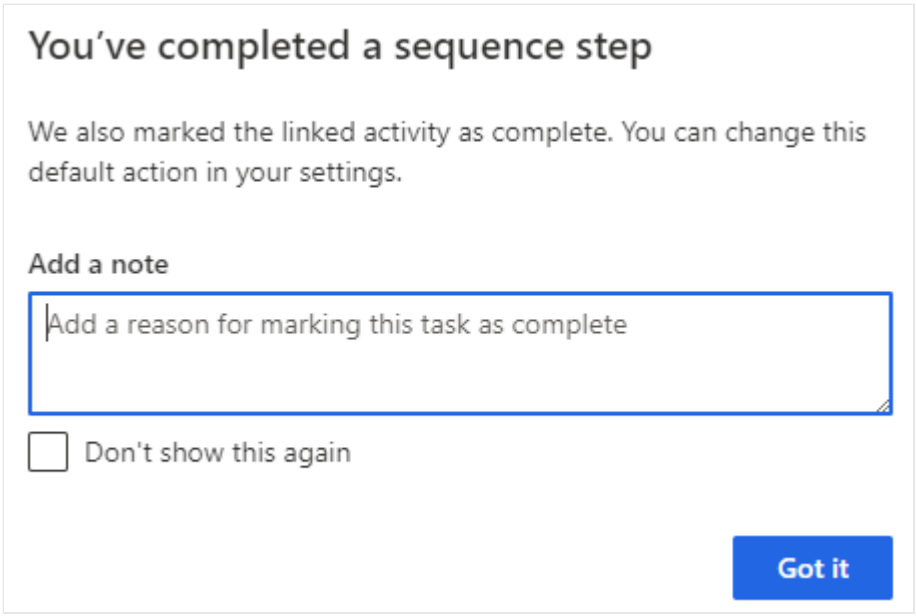
2. Enter your note, and then select **Save**.



You can add a note when you mark an activity complete, too.

1. In the activity, select **Mark complete**.

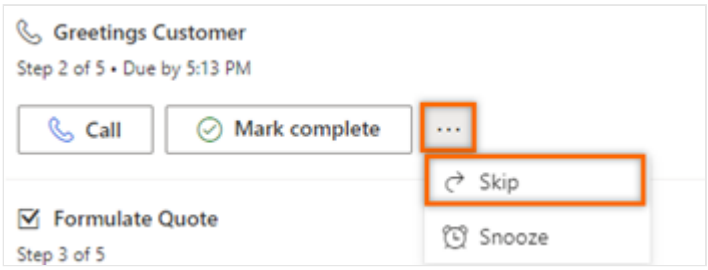
2. Enter your note, and then select **Got it**.



Skip or snooze an activity

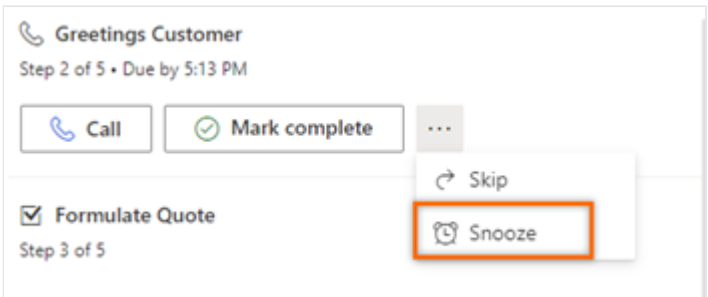
You can skip an activity if it doesn't need to be completed. The next activity in the sequence takes the place of the skipped activity in the work list, and the skipped activity is moved to the completed list. If you skip a manual task that isn't part of a sequence, it's marked as canceled.

To skip an activity, in the **Up next** widget, select **More actions** (...) > **Skip**.

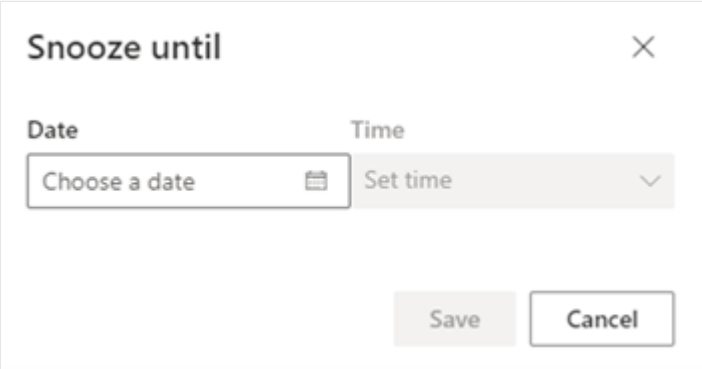


If you can't connect with a customer by the due date and want to follow up later, you can snooze the activity and select a new date and time to connect. You can't snooze a manual task.

1. In the **Up next** widget, select **More actions** (...) > **Snooze**.



2. Select a new date and time by which the activity should be completed, and then select **Save**.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Prioritize your sales pipeline by using the work list
Understand the Up next widget
Use Outlook category to track appointments and emails
Track Outlook appointments in Dynamics 365 for Outlook
Integrate a sample softphone dialer with Dynamics 365 Sales
Microsoft Teams integration with customer engagement apps in Dynamics 365

Work with LinkedIn activities

Article • 09/30/2022

You can use LinkedIn-related activities that have been defined for sequences in the sales accelerator to display steps in the work list and **Up next** widget.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What are LinkedIn activities?

As a seller, you can use the LinkedIn network, which contains millions of users and offers a unique depth and quality of information that can help you research and connect with your customers. This functionality allows you to use LinkedIn Sales Navigator in your sequence to recommend the next best action.

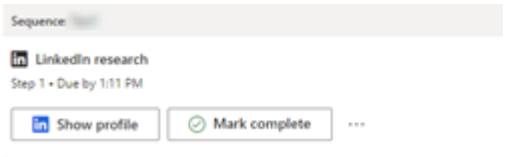
When a sequence contains steps that are related to LinkedIn activities, you can perform the following actions to interact with customers:

- Research a customer to learn more about their preferences. More information: Research activity
- Get introduced to a customer. More information: Get introduced activity
- Send personal messages to connect with a customer. More information: Connect activity
- Send an InMail to a customer. More information: Send InMail activity

Research activity

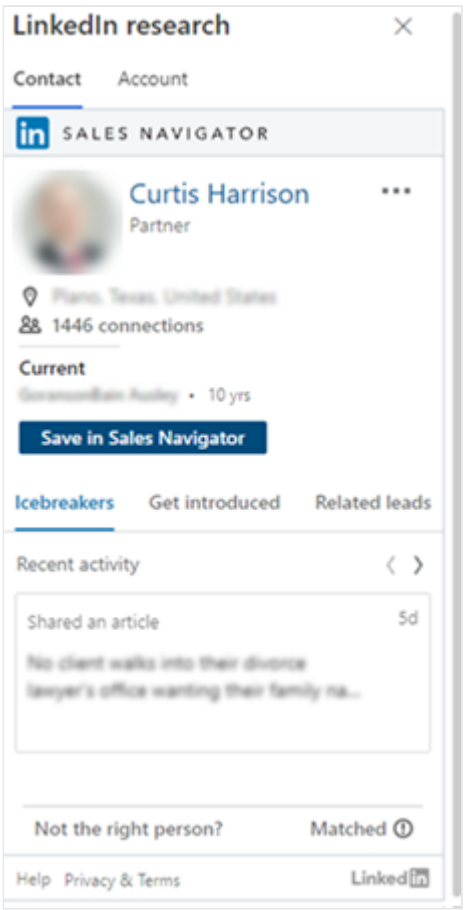
You can use the **Research** activity to view LinkedIn profiles, including customer contact and account information. This can help you to better understand customers before you start working with them.

You can perform the actions described in the following table.

	Up next widget	Work list item
Sample image		
Action	Select **Show profile**.	Hover over the item, and then select the LinkedIn icon.
Close the step	Select **Mark complete**, to close the step and move to the next step. or Select **More options (...)**, and then choose an appropriate option: • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.	Select **More options (⋮)**, and then choose an appropriate option: • **Mark complete** to close the step and move to the next step. • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.

When the action is selected, the **LinkedIn research** pane opens on the right side with information about the customer profile and account.

The following image is an example of the **LinkedIn research** side pane:

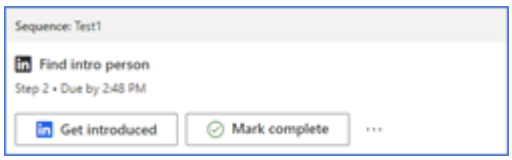


For more information on contacts and accounts, go to Leads Module References and Accounts Module References, respectively.

Get introduced activity

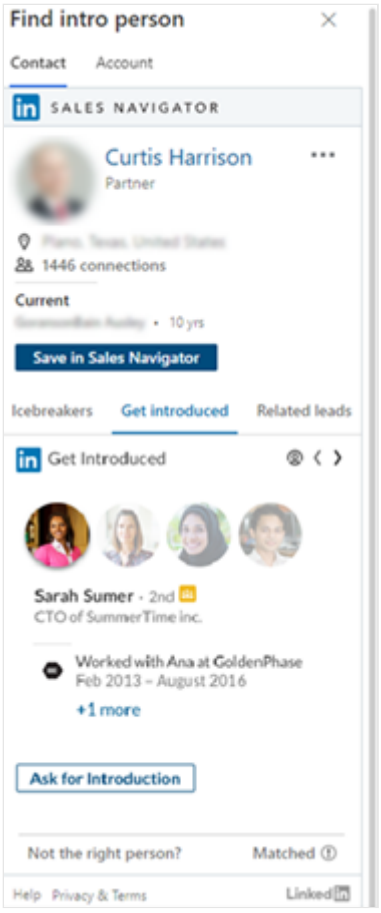
Use the **Get introduced** activity to ask for an introduction to a customer from anyone within your network who's already connected to the customer. If the Sales Navigator instance has licensed TeamLink, you'll be able to see anyone in your organization who's connected to the customer and can make the introduction.

You can perform the actions described in the following table.

	Up next widget	**Work list item**
Sample image		
Action	Select **Get introduced**.	Hover over the item, and then select the LinkedIn icon.
Close the step	Select **Mark as complete** to close the step and move to the next step. or Select **More options (...)**, and then choose an appropriate option: • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.	Select **More options (⋮)**, and then choose an appropriate option: • **Mark as complete** to close the step and move to the next step. • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.

When the action is selected, the **Find intro person** pane opens on the right side. On the **Contact** tab, select the **Get introduced** tab. The list of contacts who might be able to introduce the customer is displayed.

The following image is an example of the **Get introduced** tab on the **Find intro person** side pane:

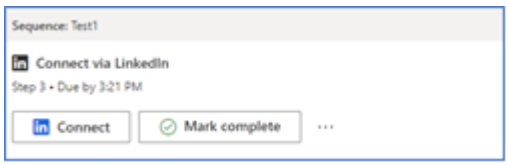


For more information on customer introductions, go to Get Introduced.

Connect activity

Use the **Connect** activity to send connection invites along with personal messages, to help solidify relationships with customers and add them to your network.

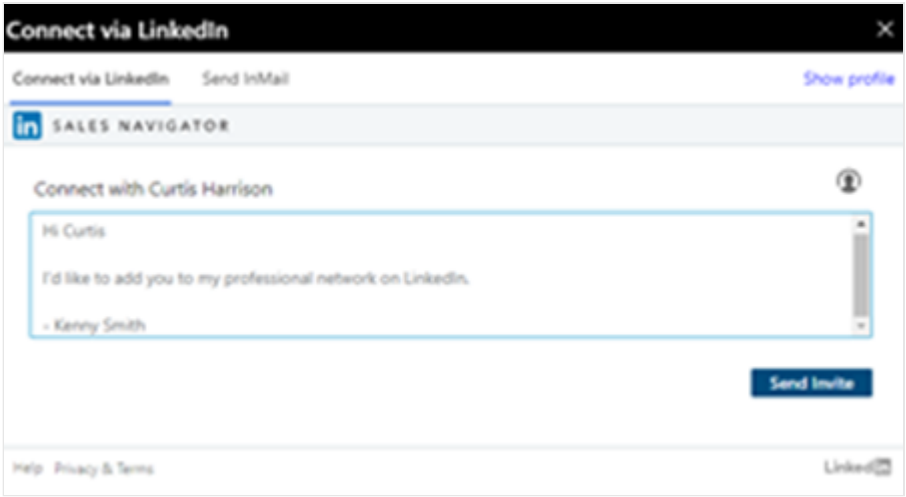
You can perform the actions described in the following table.

	Up next widget	**Work list item**
Sample image		
Action	Select **Connect**.	Hover over the item, and then select the LinkedIn icon.

	Up next widget	Work list item
Close the step	Select **Mark complete** to close the step and move to the next step. or Select **More options (...)**, and then choose an appropriate option: • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.	Select **More options (⋮)**, and then choose an appropriate option: • **Mark complete** to close the step and move to the next step. • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.

When the action is selected, the **Connect via LinkedIn** pane opens in the lower-right corner. On the **Connect via LinkedIn** tab, you can see the default message used to connect with the customer.

The following image is an example of the **Connect** message side pane:



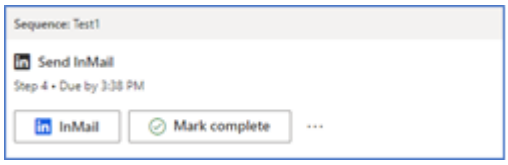
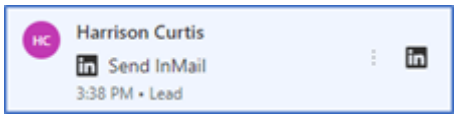
For more information on connecting with a customer, go to Connect.

Send InMail activity

Use the **Send InMail** activity to directly message customers who you're not already connected to on LinkedIn.

You can perform the actions described in the following table.

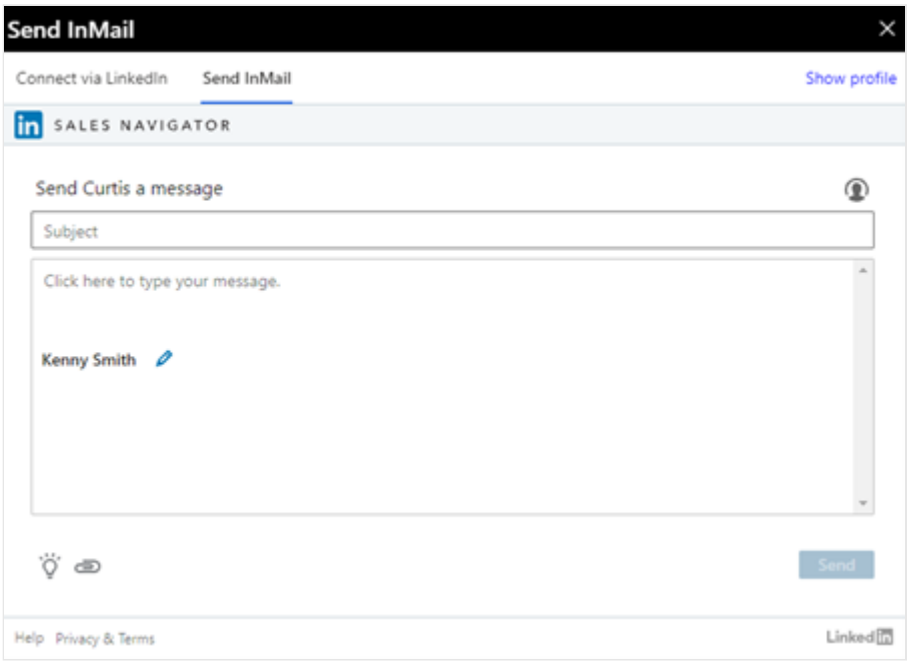
	Up next widget	Work list item

	Up next widget	Work list item
Sample image		
Action	Select **InMail**.	Hover over the item and then select the LinkedIn icon.
Close the step	Select **Mark complete** to close the step and move to the next step. or Select **More options** (...), and then choose an appropriate option: • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.	Select **More options** (⋮), and then choose an appropriate option: • **Mark complete** to close the step and move to the next step. • **Skip** to ignore the step. • **Snooze** to look into the step later. • **Assign** to transfer the step to a different seller.

When the action is selected, the **Send InMail** pane opens in the lower-right corner. Go to the **Send InMail** tab, enter a subject and message, add any attachments if necessary, and then select **Send**. The InMail message is sent to the customer.

> ⓘ Note
>
> To view the profile of the customer, select **Show profile**.

The following image is an example of the **Send InMail** side pane:



For more information on sending InMail, go to Send an InMail Message.

See also

Add LinkedIn activities to sequence

Personalize sales accelerator

Article • 03/21/2023

Use personal settings to determine how activities are scheduled based on work availability and decide what happens when an activity is complete.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What can you personalize?

As a seller, you can personalize the sales accelerator by determining how activities are scheduled based on your work availability and deciding what happens when you complete an activity. The following personal settings are available for you to configure:

- Configure your work availability
- Configure the auto advance steps
- Configure steps and activities
- Show or hide filters

Configure your work availability

Configure your working days, hours, and days off to adjust scheduled tasks and lead assignment according to your availability. For example, you're taking a day off on April 1, 2021, and you have a few activities to complete that day. When you configure the calendar with your day off, any activities that were scheduled for that day will be moved to your next available date or time.

> **Note**
>
> As a sales manager, you can configure the availability of sellers who report to you.
> More information: **Manage seller availability**

Depending on the license you have in the organization, you use one of the following ways to configure your work availability:

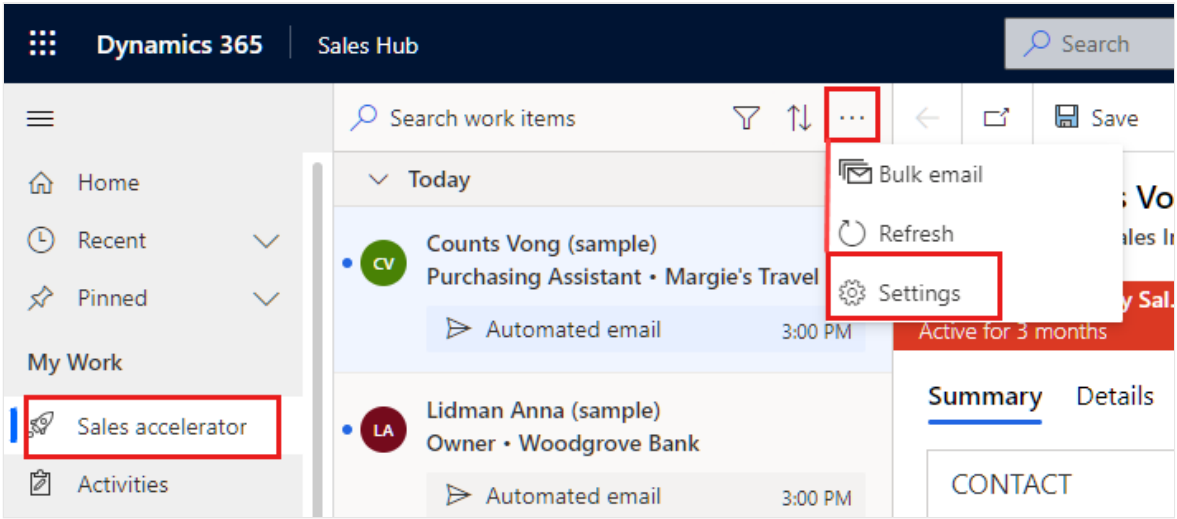
- Sales Premium: Through work list settings
- Sales Enterprise: Through personal settings

> **Note**
>
> - Ensure that you have read and write privileges to the **Calendar** entity. More information: **Security roles and privileges**
> - Verify that the administrator has enabled the option to configure your availability:
>   - Through sequence settings. More information: **Seller availability**
>   - Through sales accelerator configuration. More information: step 4 in **Configure sales accelerator for assignment rules**

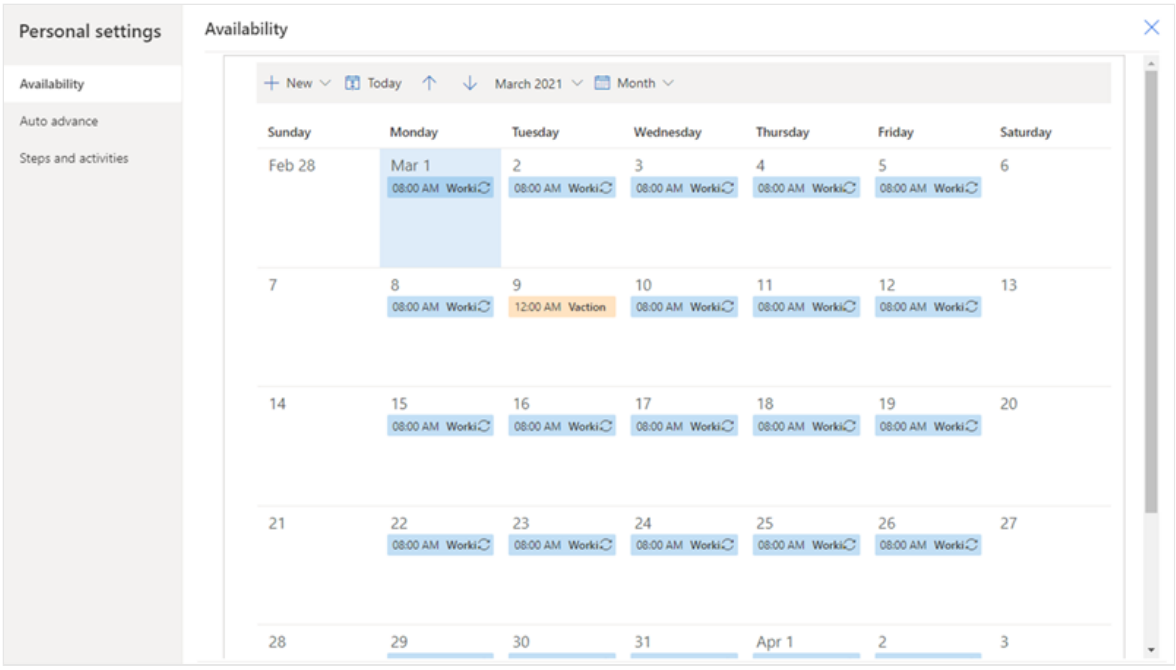
Through work list settings (Sales Premium)

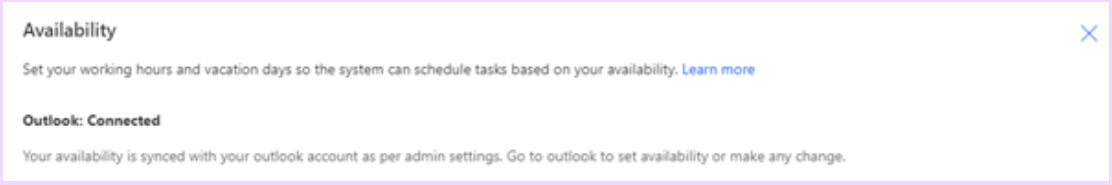
1. Sign in to the Dynamics 365 Sales Hub app, and go to **My work** > **Sales accelerator**.

2. In the work list section, select **More options** > **Settings**.



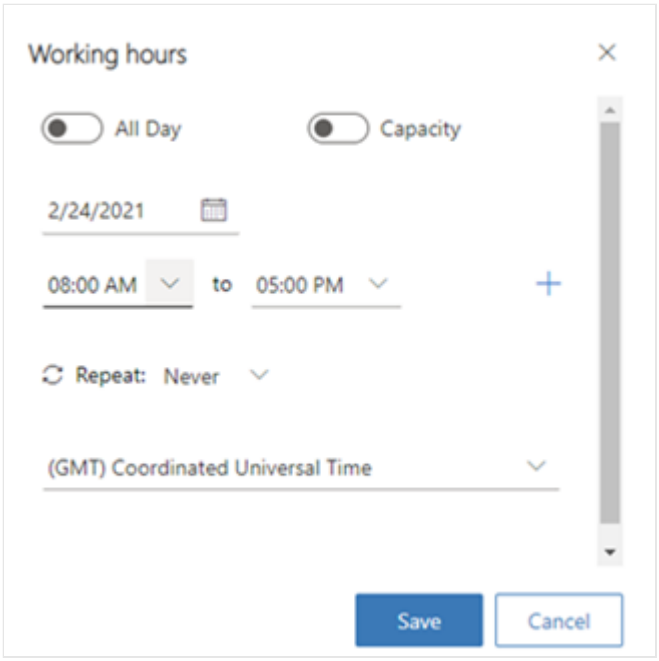
3. On the **Personal settings** page, select **Availability**.



> **Note**
>
> If your administrator has chosen the Outlook calendar option, a message is displayed to configure your work availability through Outlook.
>
> 
>
>
> Go to your Outlook calendar, set your work hours and vacation days, and then save the calendar events. Your availability will be automatically updated in the Dynamics 365 application calendar.

4. Select **New**, and choose an option to configure your calendar according to your requirements:

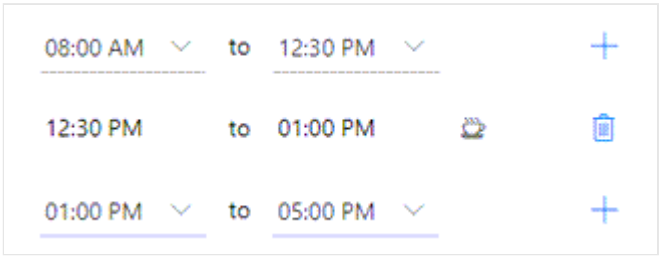
    - **Working hours**: Configure your regular working hours between dates you define. This helps the sales accelerator to consider the assignment of activities to your work list.



Configure the following options:

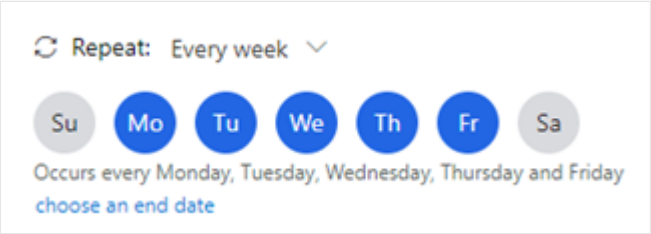
a. Select a date for which you want to configure your working hours.

b. Select the working hours in your day. By default, nine working hours are configured from 8:00 AM to 5:00 PM, without any breaks. To add a general break or lunch hours between working hours, select **Add** (+). In the following example, you can see that a break of 30 minutes has been added to the working hours. You can continue adding breaks as needed.

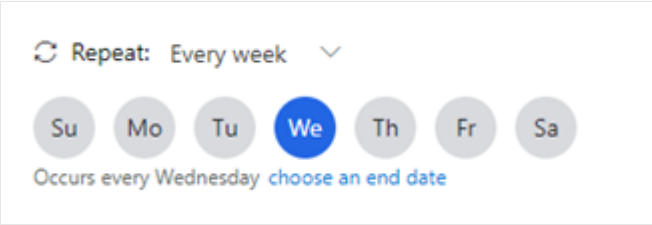


c. Choose whether you want to repeat this working hour configuration each day or only on this day of the week:

   - If you select **Every day**, the configured working hours are applied to each day of the week, including Saturday and Sunday. You can select any days for which you don't want to apply these working hours. In the following example, Saturday and Sunday have been removed from this working hour configuration. Also, you can **choose an end date** on which you want to end this working hour configuration.



- If you select **Every week**, the configured working hours are applied to the same day every week. In the following example, the configuration is applied on Wednesday, and all subsequent Wednesdays will have the same working hour configuration. Also, you can **choose an end date** on which you want to end this working hour configuration.

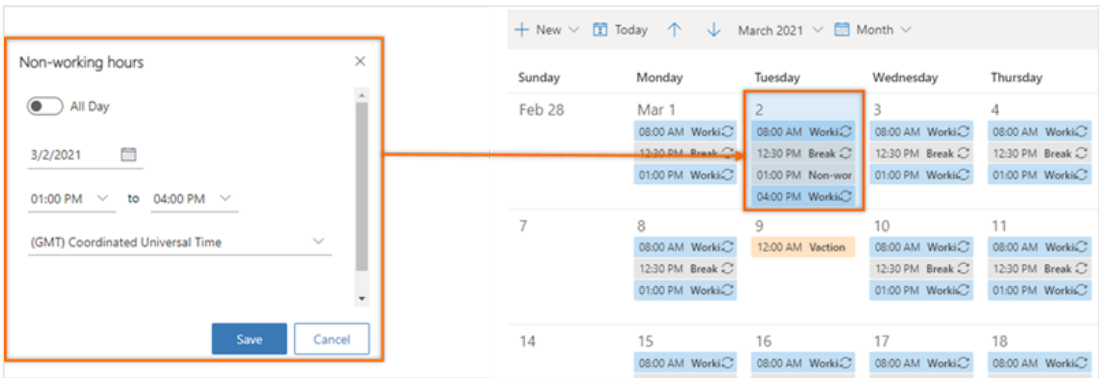


d. Select your time zone. The time zone allows you to match the time properly when your team is spread across countries or regions. By default, Coordinated Universal Time (Greenwich Mean Time) is selected.

e. Save the configurations.

- **Non-working hours**: Configure a break or time you're taking off from work on a particular day. Choose the period of time you want to take off, and then select **Save**.

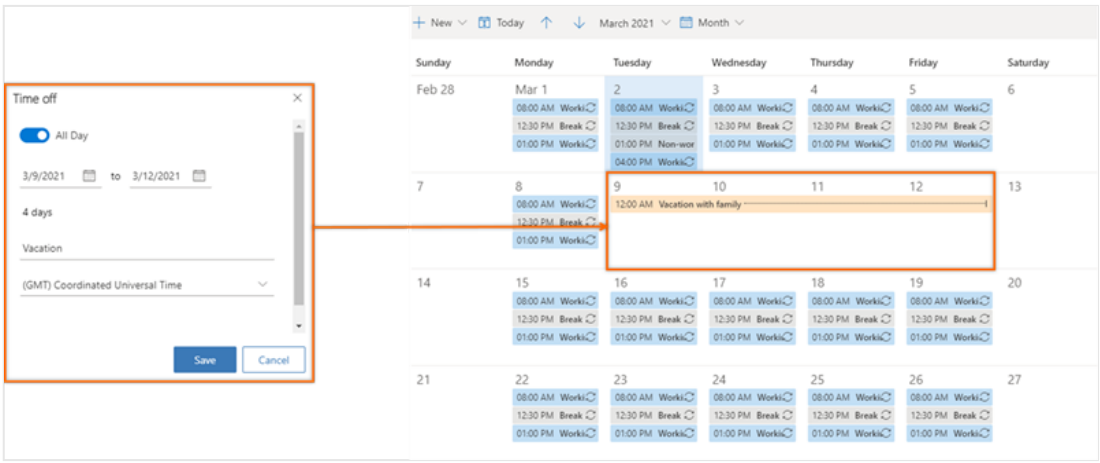
  In the following example, you have an appointment with a doctor for a checkup between 1:00 and 4:00 PM on March 2, 2021. When you use the **Non-working hours** option to update your calendar, the sales accelerator will consider the break and adjust your activity timeline to match your working hours.



- **Time off**: Configure vacations or personal days off from work. This option blocks a full day or multiple days. When you're applying for multiple days, select the **All-day** option, and then choose start and end dates.

  Provide a description so other sellers can know your status and your reason for being away. Select your time zone, and then save the configurations.

  In the following example, you plan to go on vacation with family from March 9 to March 12, and you use the **Time off** option to update your calendar. The sales accelerator will consider the vacation and adjust the activity timeline to match your vacation.

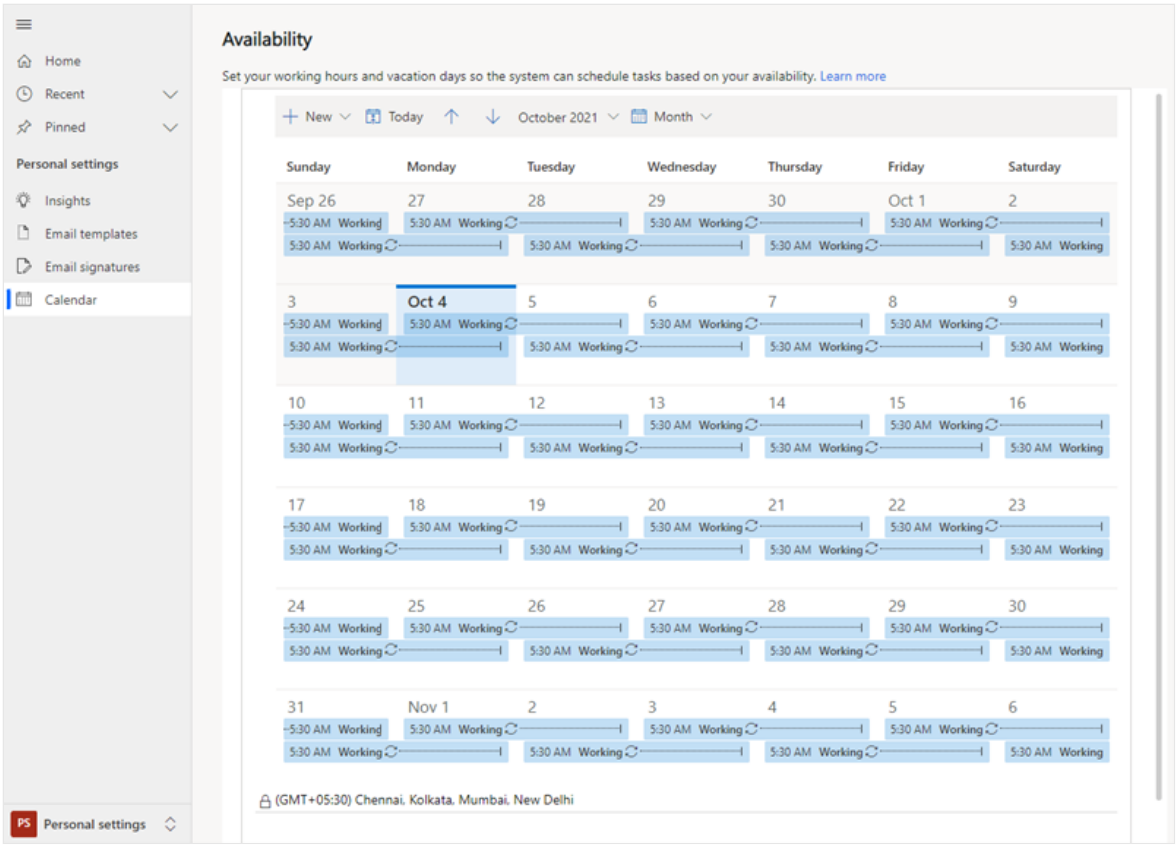


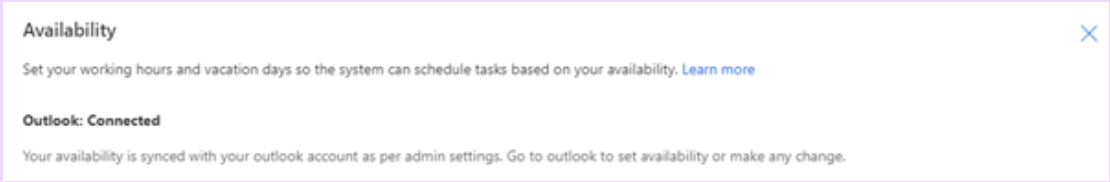
Through personal settings (Sales Enterprise)

1. Sign in to your Sales Hub app, and in the lower-left corner, go to **Change area** > **Personal settings**.

2. Select **Calendar**.

   The calendar opens for the current month with your work availability. Also, at the bottom of the calendar, you can see the default local time of your organization.



> **Note**
>
> If your administrator has chosen the **Outlook** option, a message is displayed to configure your work availability through your Outlook calendar.
>
> 
>
>
> Go to your Outlook calendar, set your work hours and vacation time, and then save the calender events. Your availability will be automatically updated in the Dynamics 365 application calendar.

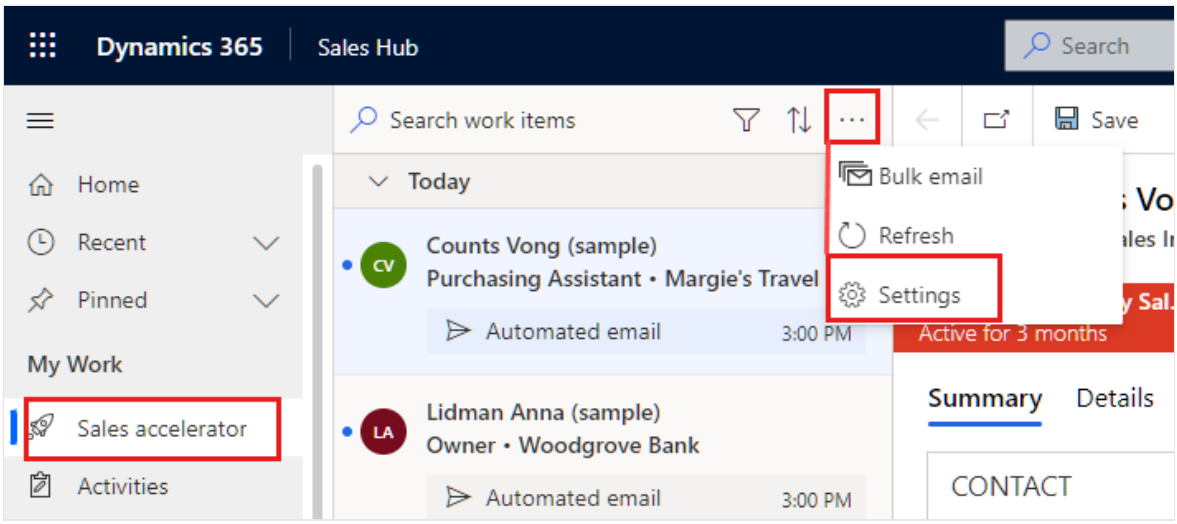
3. Configure your calendar according to your requirements as described in step 4 of the Through work list settings section, earlier in this topic.

Configure the auto advance steps

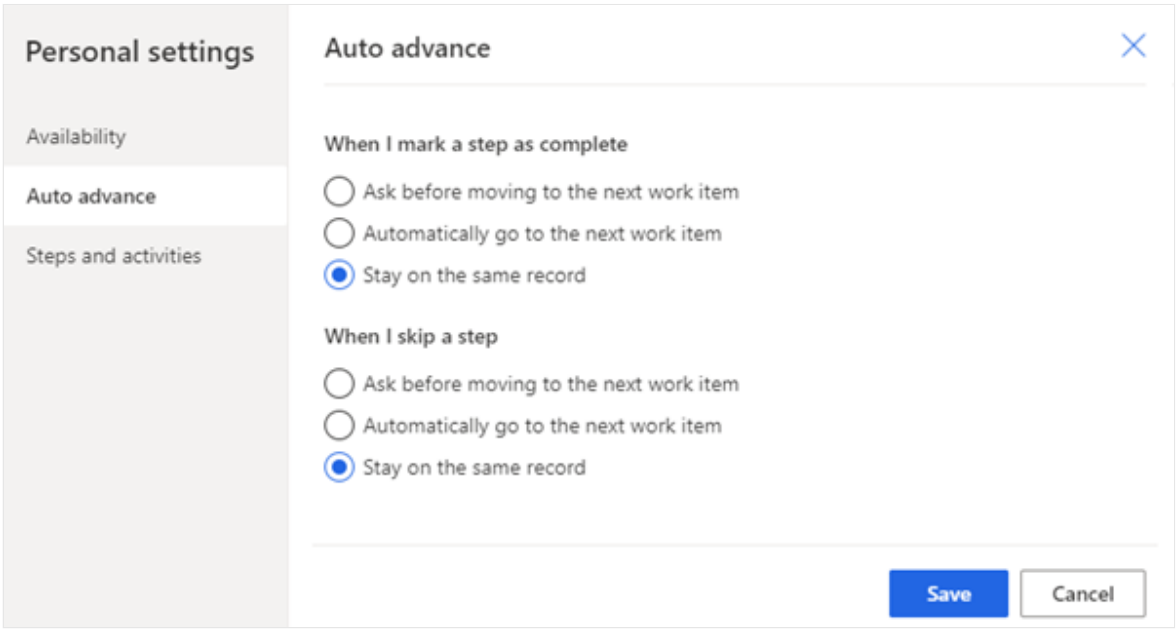
The **Auto advance** settings specify the next course of action to take when you complete or skip a step.

1. Sign in to the Dynamics 365 Sales Hub app, and go to **My Work** > **Sales accelerator**.

2. In the work list, select the settings icon.

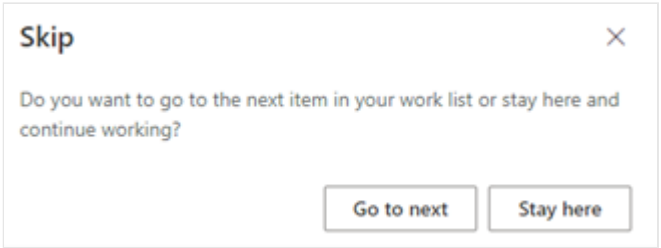


3. On the **Personal settings** page, select **Auto advance**.



The following settings are available for completing or skipping an activity:

- **Ask before moving to the next work item**: When an activity is completed or skipped, a message is displayed before you move to the next record in the work list. On the message, you select an appropriate option to proceed. The following image shows the message that's displayed when you skip an activity.



- **Automatically go to the next work item**: When an activity is completed or skipped, the next record in the work list queue is automatically displayed.
- **Stay on the same record**: When an activity is completed or skipped, the same record still is displayed, and the **Up next** widget displays the next activity that has been defined in the sequence.

4. Save and close the settings page.

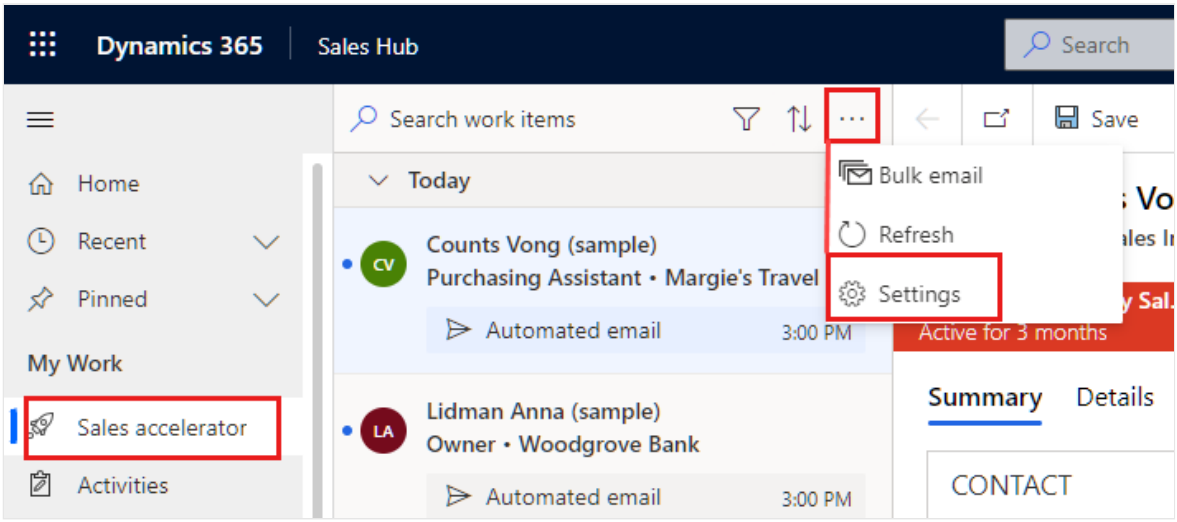
Configure steps and activities

When a step is displayed in the **Up next** widget, a corresponding activity is automatically created on the timeline and linked to the step. When you complete the action, such as sending an email or making a call through the timeline, the step is updated. By configuring the activities and steps, you can choose how the actions you perform on steps will affect the linked activities and sequence steps.

> **Note**
>
> Verify that the administrator has enabled the option to configure steps and activities. More information: **Enable the availability option in sequence settings**

1. Sign in to the Dynamics 365 Sales Hub app, and go to **My work** > **Sales accelerator**.

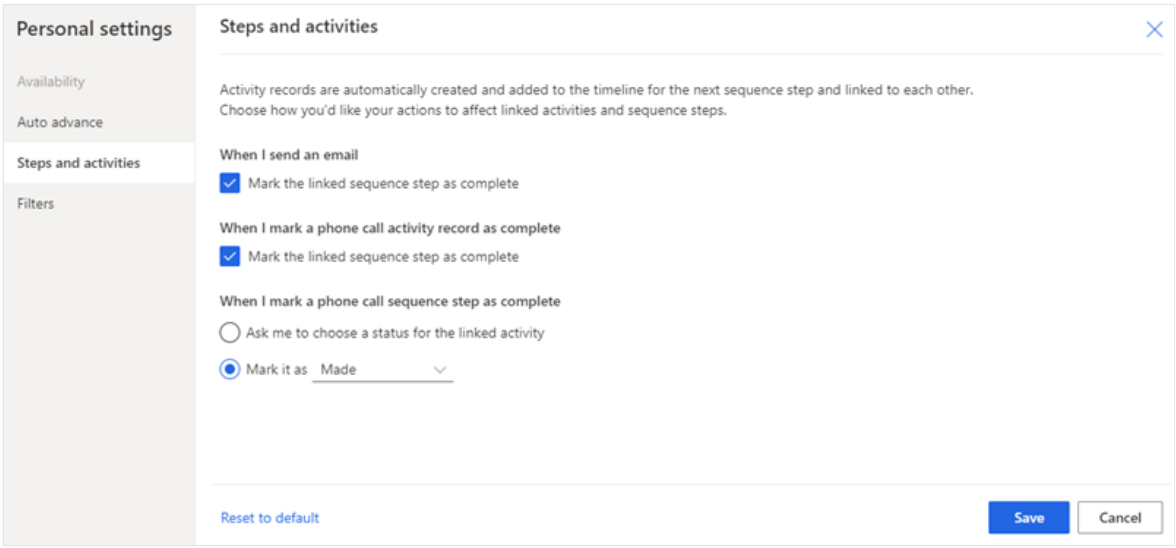
2. In the work list, select the settings icon.



3. On the **Personal settings** page, select **Steps and activities**.

4. On the **Steps and activities** page, configure the following options as required:

- **When I send an email**: When you select this checkbox and send an email through the timeline, the sequence step that's related to this activity is automatically marked as complete.
- **When I mark a phone call activity record as complete**: When you select this checkbox and make a phone call through the timeline, the sequence step that's related to this activity is automatically marked as complete.
- **When I mark a phone call sequence step as complete**: When you complete a phone call activity in the sequence step, you can choose to enter the status of the activity or enter a default value that has been defined for your organization.

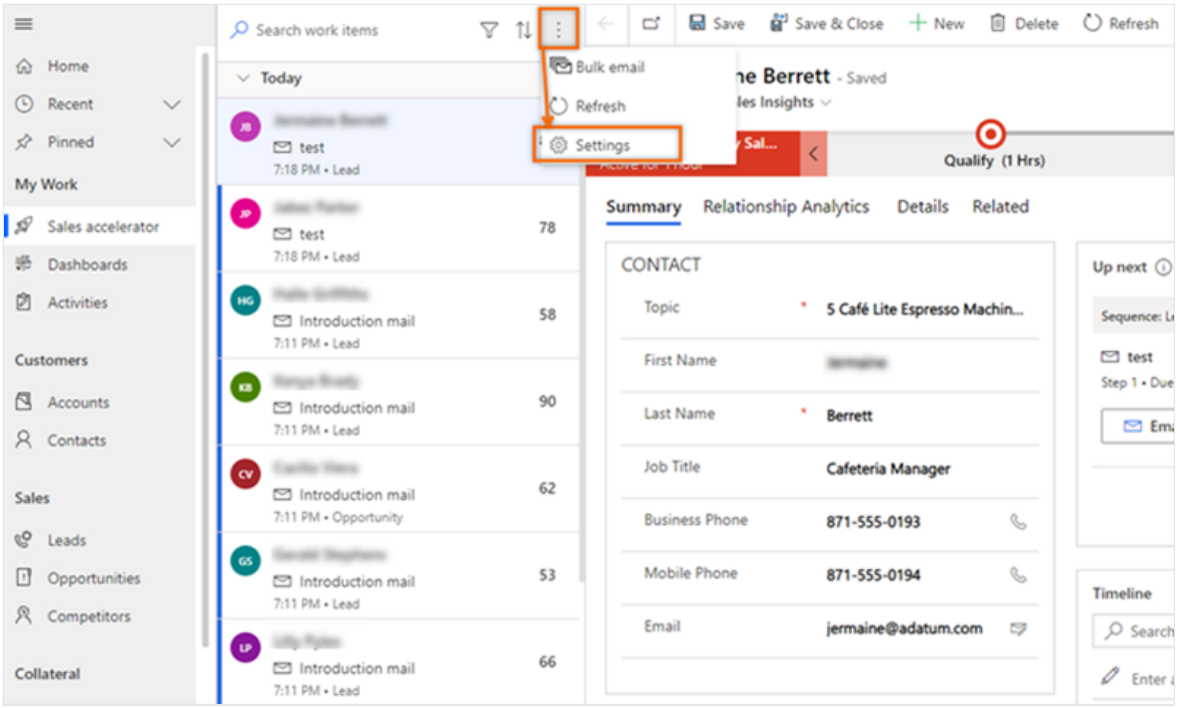


5. Save and close the settings page.

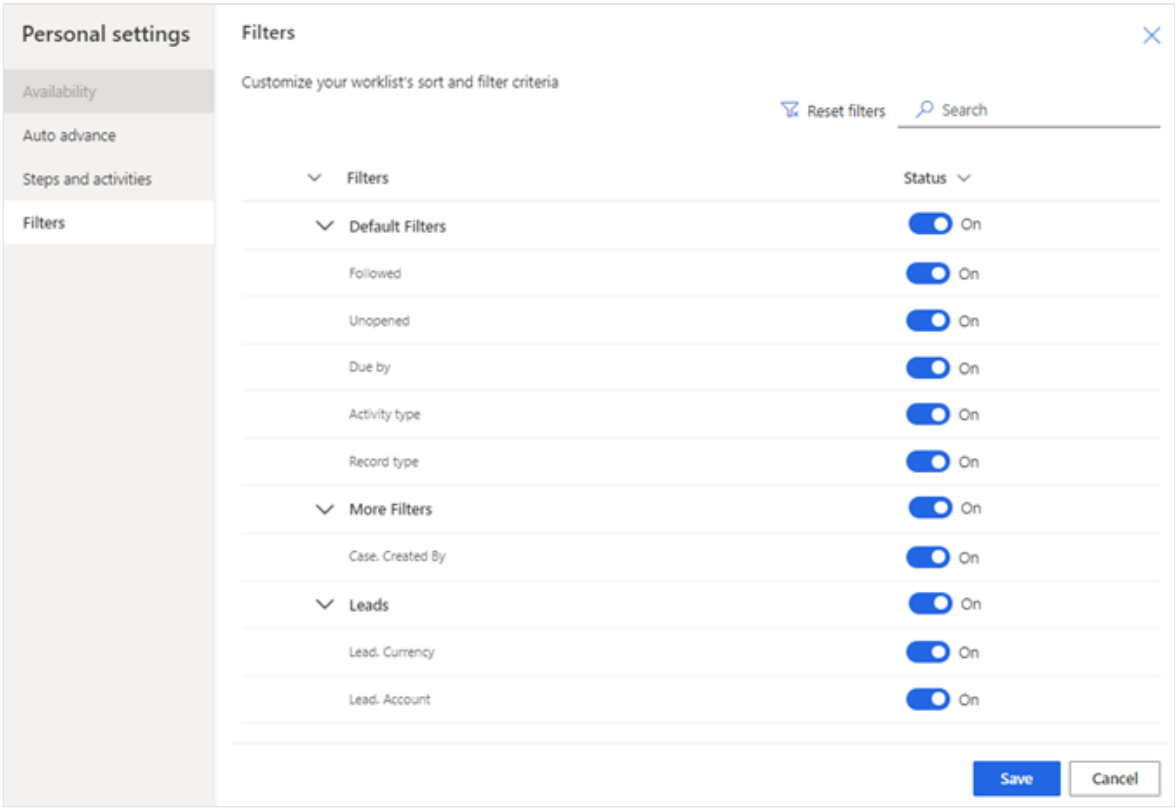
Show or hide filters

As a seller, you can hide any filter that's available in the filter list. After hiding a filter, you can't view the filter option in your list.

1. In the work list section, select **More options** > **Settings**.



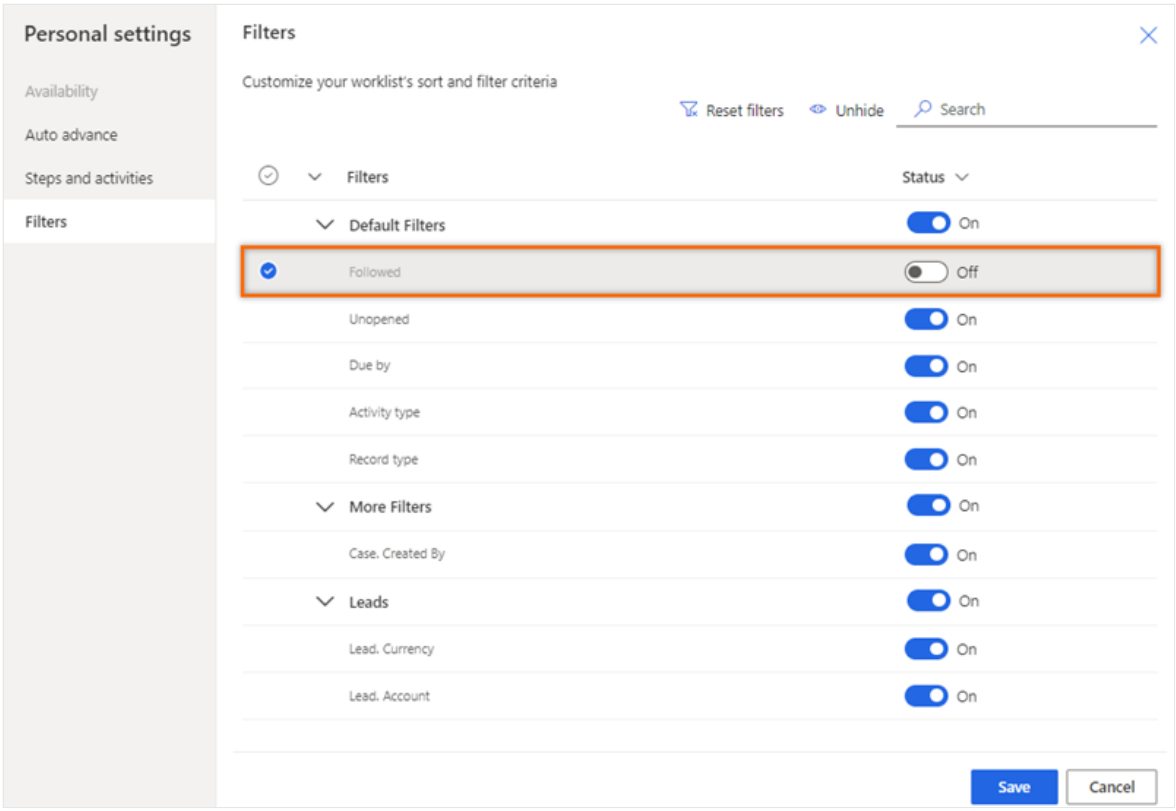
2. On the **Personal settings** page, select **Filters**.



3. Go to the filter that you want to hide, and turn off the toggle.

> ⓘ **Note**
>
> - To hide a group, turn off the toggle for the group.
> - If the administrator hides filters or groups, you can't see them in your list. Contact your administrator to show the filters for you to use. More

information: **Hide filters**



4. Select **Save**.

The filter is hidden from your list.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Configure sales accelerator settings for sellers to personalize
Prioritize your sales pipeline by using the work list

Create and connect sequences for yourself

Article • 09/30/2022

Create sequences to automate your work by creating a set of activities such as, send an email, call the customer, and wait time, and personalize communication while reaching out to prospects.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Salesperson More information: Predefined security roles for Sales

What is a sequence?

A sequence enforce best practices by introducing a set of consecutive activities for you to follow during your day. You can create and connect sequences to records—such as leads, opportunities, and accounts that appear in your work queue—to help prioritize activities that help you focus on selling, be more productive, and better align to your organization's business processes.

When you create a sequence, you define a set of activities that you want to perform on records, and the order to perform them in. This lets you concentrate on selling and gives you a better understanding of what to do next.

Permissions required to create and connect sequences

- When the sales accelerator workspace isn't enabled in your organization, you can create and connect sequences through the Salesperson role. You can also delete and edit the sequences that you've created.

- When the sales accelerator workspace is enabled in your organization and the access is restricted to specific security roles, only the users who have those roles can create and connect sequences. To get access to create and connect sequences, ask your administrator to provide permissions for your security role. More information: Manage access and record type

> **Note**
>
> If you have the the Sequence Manager role and want to create sequences, go to **Create and activate a sequence**.

Who has access to my sequences?

The sequences that you create are available for your business unit. Other sellers can only view, connect, or create a copy of your sequence. However, administrators and users who have the Sequence Manager role have all privileges, such as editing and deleting the sequence.

How to create sequences

Create sequences by using the sequence designer. You can access the sequence designer in the following ways:

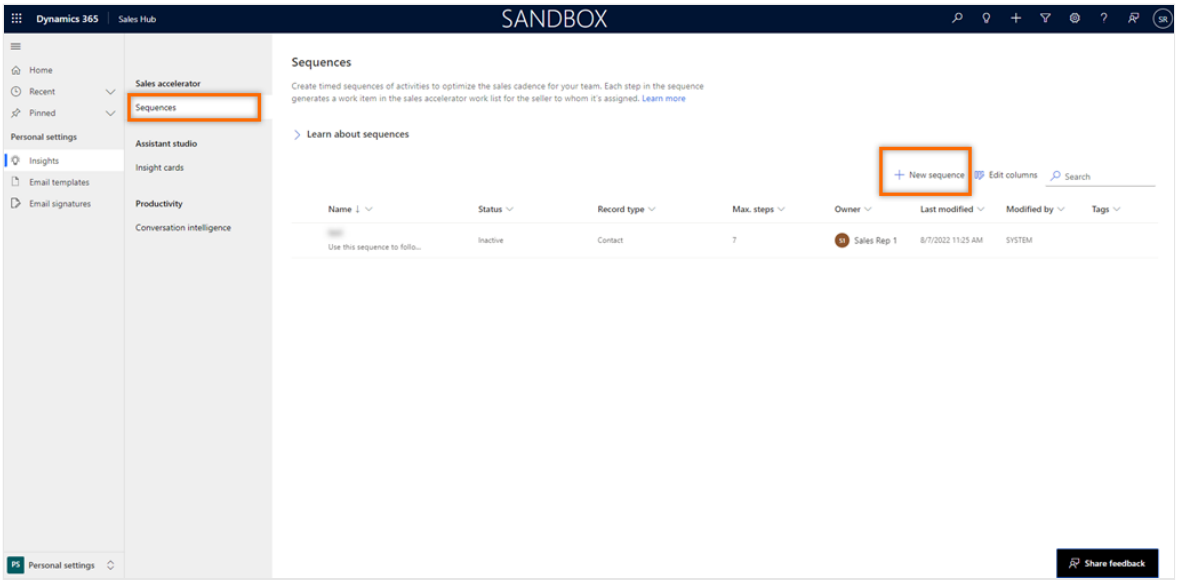
- Personal settings
- Up next widget
- Record grid view

Personal settings

We recommend using personal settings to access the sequence designer. Here you can create, edit, delete, and connect sequences.

To access the sequence designer

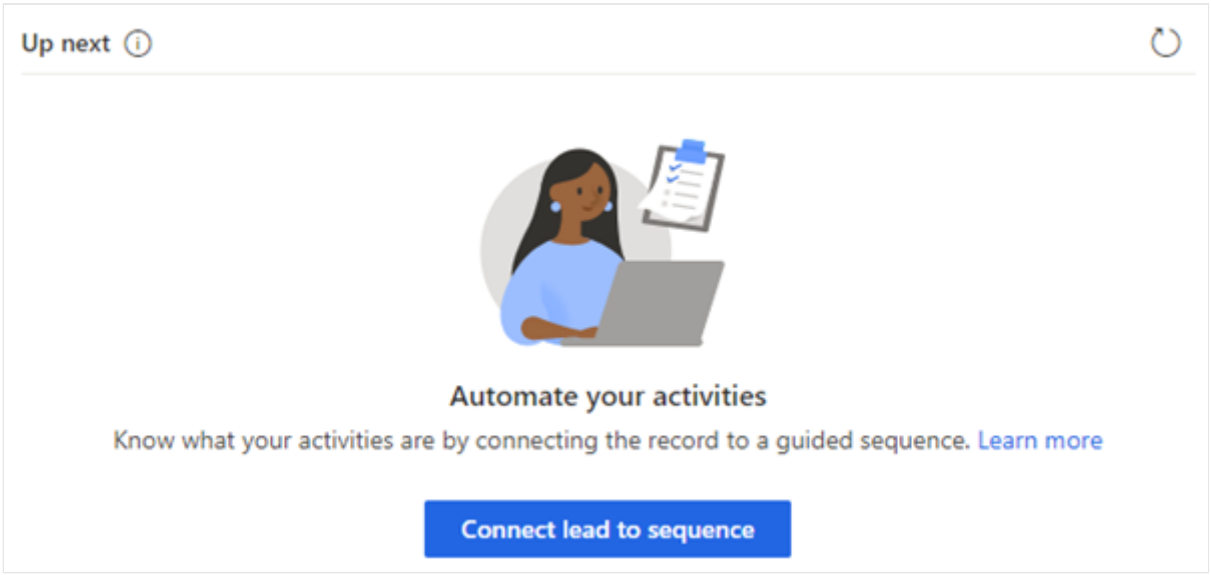
1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings**.
2. On the **Personal settings** page, under **Sales accelerator** > **Sequence**, select **New sequence**.



The **Create a sequence** dialog opens. To continue creating the sequence, go to Create a sequence later in this topic.

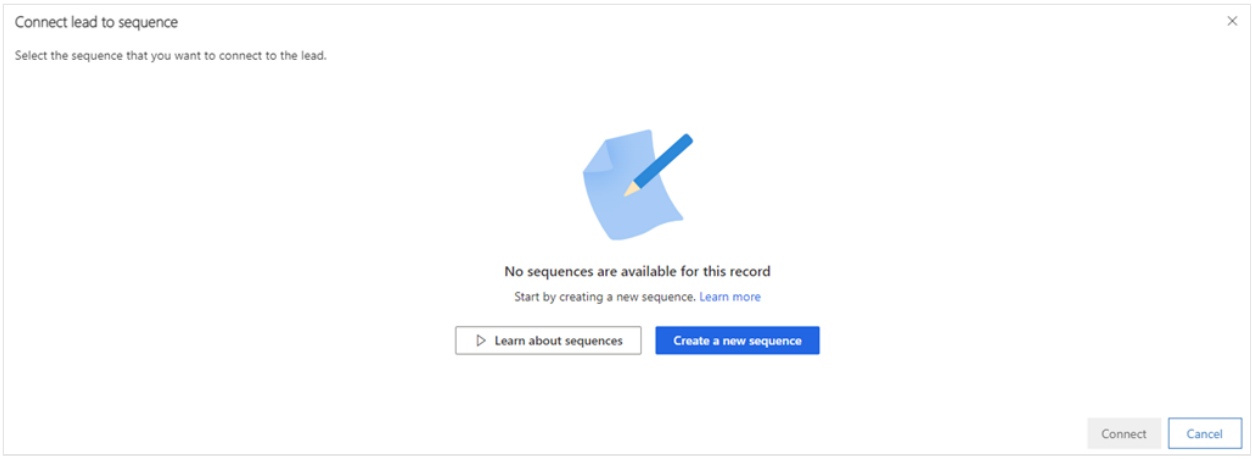
Up next widget

The **Up next** widget is available on the out-of-the-box contact, opportunity, lead, and account forms. When you open a record, by default the main form displays the **Up next** widget. For example, when you open a lead record, the **Lead** form displays the **Up next** widget.



When a sequence isn't connected to a record, the **Up next** widget displays a message to connect a sequence.

Select **Connect *record type* to a sequence**, and the **Connect *record type* to sequence** dialog opens. In the following example, we opened the connect sequence dialog for leads, which have had no sequences connected yet.



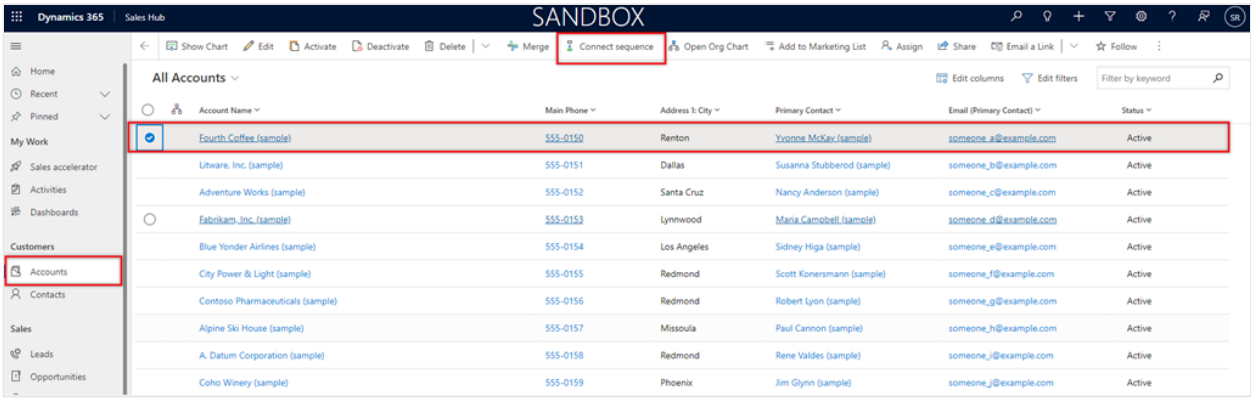
> **Note**
>
> If sequences are available for the record type, the list is displayed. To create a sequence, select **Create new sequence**.

Select **Create a new sequence** and the **Create a sequence** dialog opens in a new tab. To continue creating the sequence, go to Create a sequence, later in this topic.

Record grid view

While connecting a record to a sequence, you can create a new sequence if there are no sequences available for the record type or the existing list doesn't meet your requirements.

Open the record type—such as lead, contact, or opportunity—in the grid view for which you want to create the sequence. Select a record, and then select **Connect sequence**. In this example, we opened the **Accounts** grid view to connect the sequence.



The **Connect account to sequence** dialog opens.

> **Note**

If sequences are available for the record type, the list is displayed. To create a sequence, select **Create new sequence**.

Select **Create a new sequence**. The **Create a sequence** dialog opens in a new tab. To continue creating the sequence, go to the following section, Create a sequence.

Create a sequence

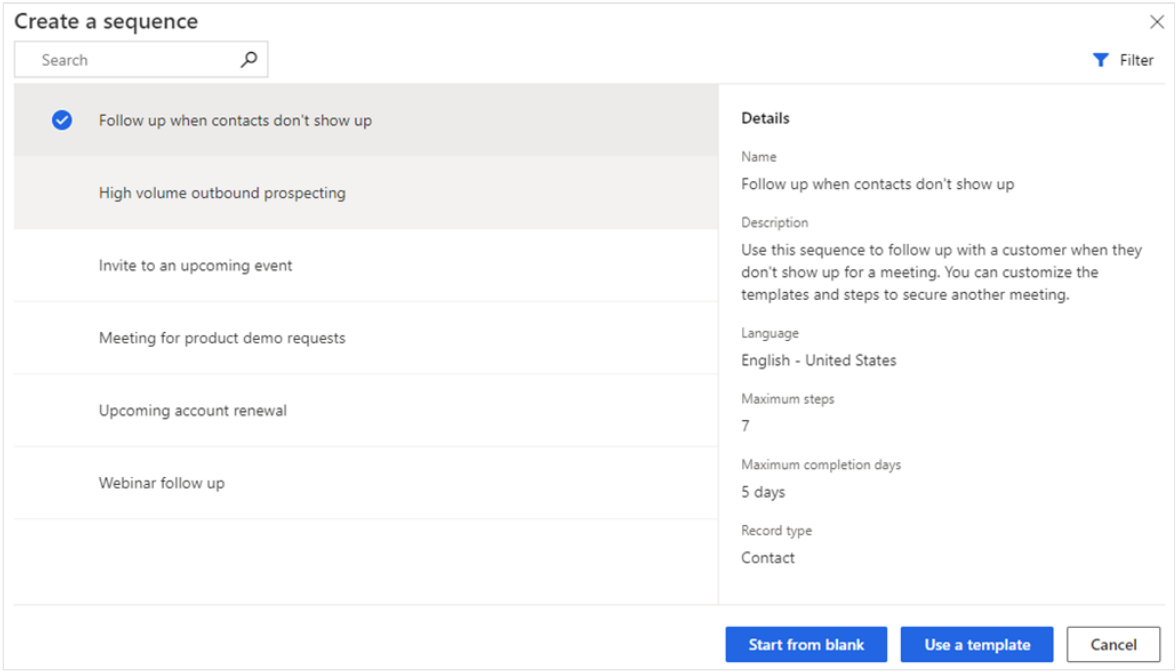
Now that you've opened the sequence creation dialog through one of the ways described in How to create sequence, follow these steps to complete the sequence creation:

1. In the **Create a sequence** dialog, select one of the following options to create the sequence:

   - **Use template**: Use the templates to quickly set up sequences. Sequence templates provide a set of activities to guide sellers with the next best action to take to achieve a task, such as getting introduced to a lead and winning the deal. More information: Sequence templates

     When you use the Up next widget or record grid view to create a sequence, the templates displayed here are relevant for that record type.

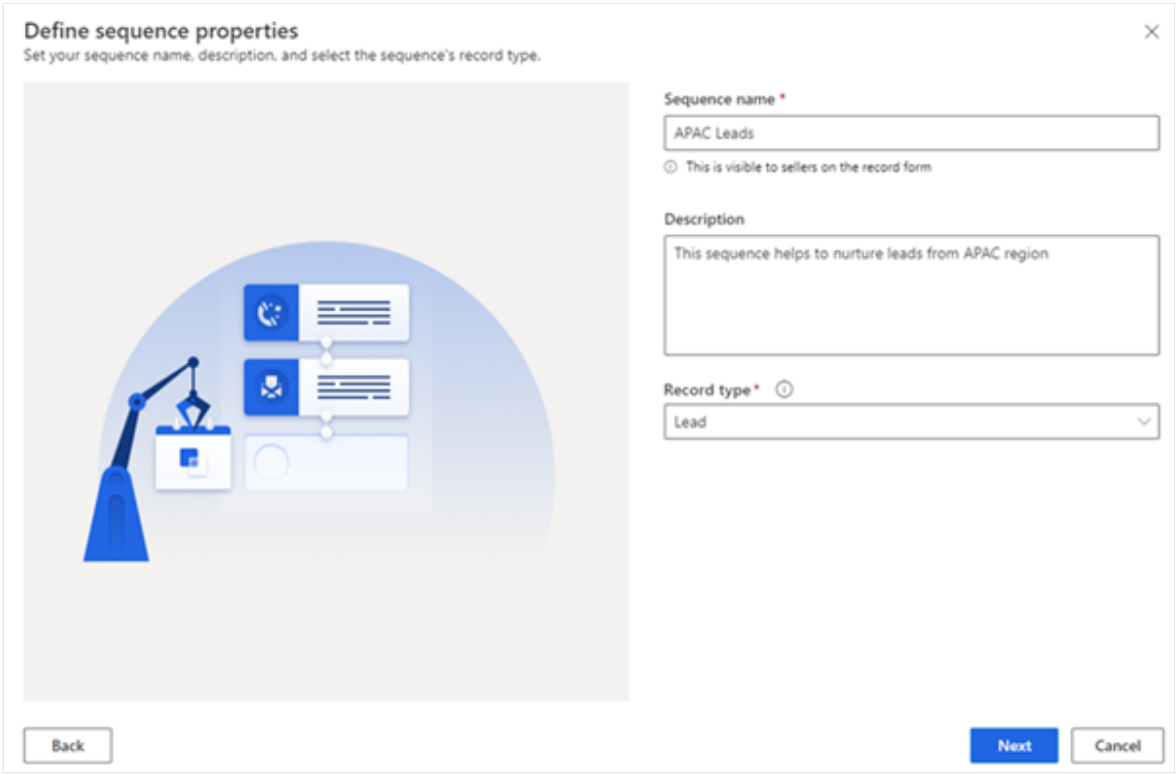
   - **Start from blank**: Use a blank sequence to create a sequence from scratch.



2. In the **Define sequence properties** dialog, enter the following information.

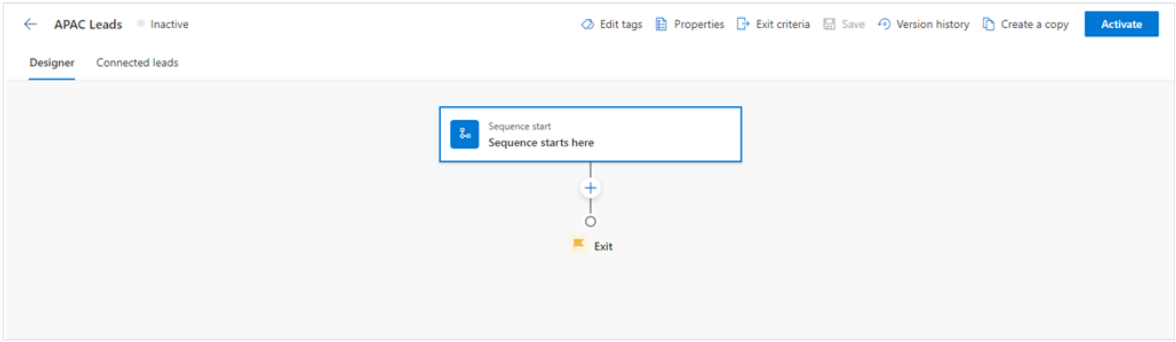
Parameter	Description

Parameter	Description
Sequence name	The name of the sequence.
Description	A description of the sequence (optional.)
Entity	The entity type to which you want to apply the sequence. By default, the lead entity type is selected.



3. Select **Next**.

   The sequence designer page opens.



   By default, the **Sequence starts here** step is added to the sequence as the first step.

4. After the **Sequence starts here** step, select **Add** (+), and configure the sequence steps. The steps are categorized into the following four groups:

- **Steps**: A step in a sequence is an engagement task that a seller performs for sales outreach, such as an email, phone call, or task. More information: Add steps to sequence
- **Conditions**: The condition step in a sequence determines the next course of action that the sequence will take after the condition is either met or not met, based on the completed activity. More information: Add condition steps to sequences
- **Commands**: The command step in a sequence determines the next course of action according to the value given in the field or stage of a business process. More information: Add command steps to sequences
- **LinkedIn**: The LinkedIn activity step in a sequence allows sellers to diversify their day-to-day activities by including social selling functions. You can use LinkedIn's vast network with recommended actions that your sellers can take to build deeper connections. More information: Add LinkedIn activities to sequence

5. Select **Add**, and then repeat step 4 for all the activities that you want to add to the sequence.

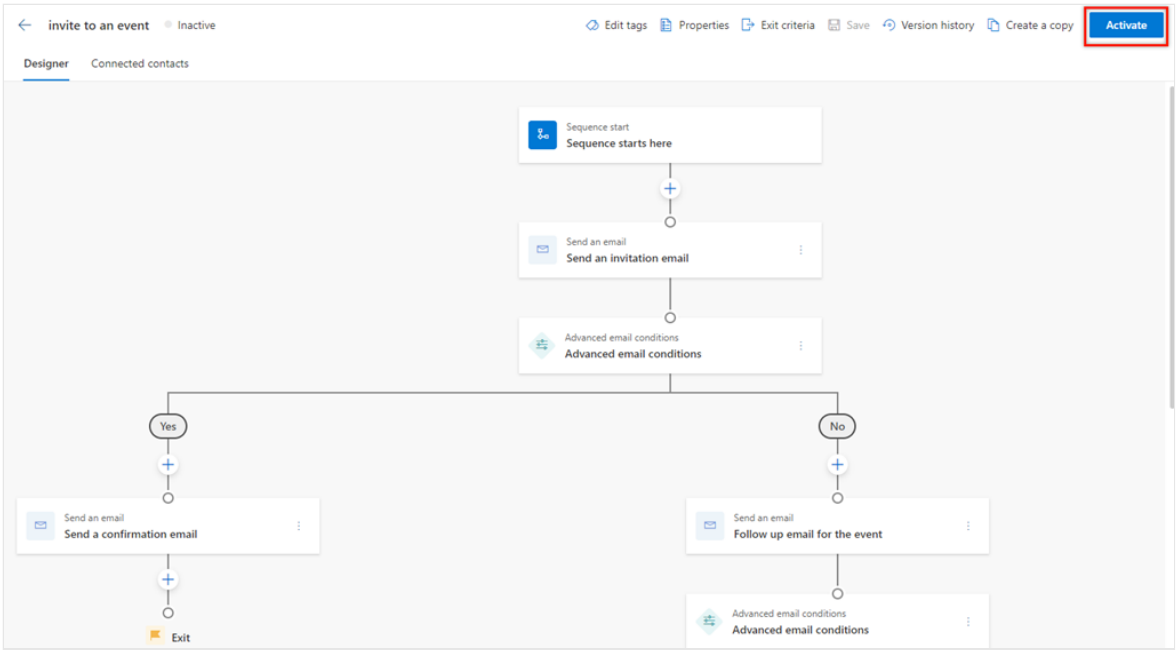
6. Save the sequence.

Now, you can activate the sequence.

Activate the sequence

1. Open a sequence, and then select **Activate**.

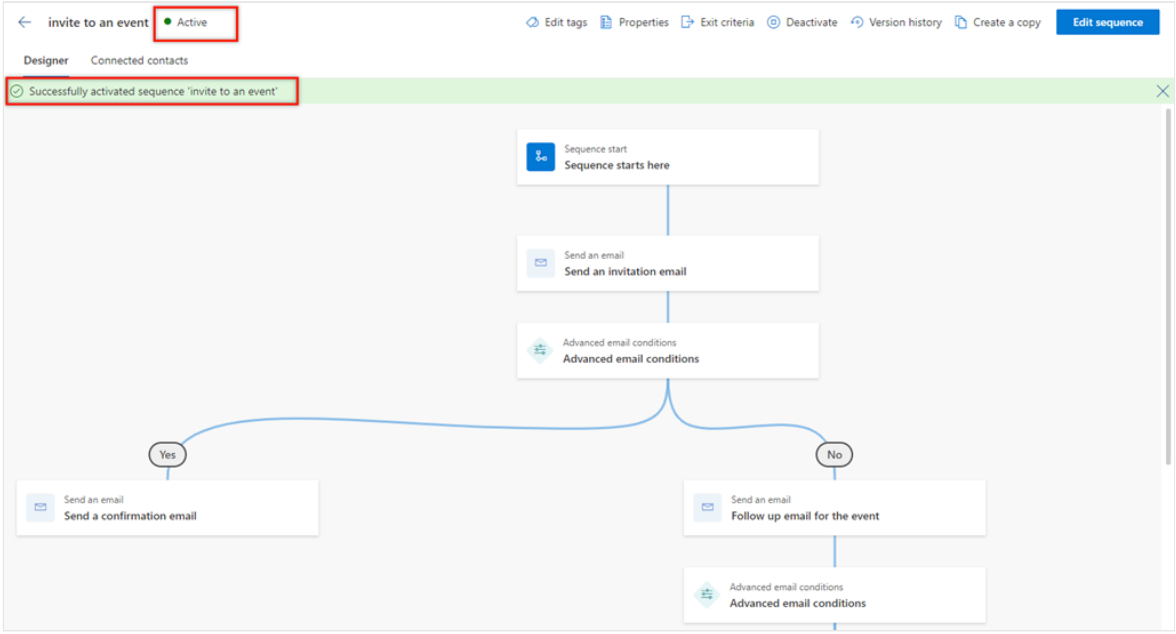
> ⓘ **Note**
>
> You can have up to 250 active sequences at a time in your organization.



2. In the confirmation message that appears, select **Activate**.

> **Note**
>
> An error might occur if you've added **Set wait time** as the last activity of the sequence. You must delete this last **Set wait time** activity, and then save and activate the sequence.

The sequence is activated and listed on the sequence designer home page. You can see the status of the sequence beside the name and you can see a confirmation message.



Next, you connect the active sequence to records.

Connect sequences to records

After you create and activate a sequence, you can connect the sequence to records depending on the record type that you created the sequence for.

You can use one of the following ways to connect a sequence to a record:

- Through a sequence
- Through the record type grid view
- Through a record

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

What is the sales accelerator?
Manage your sequences
Apply and remove tags from your sequences

Manage sequences

Article • 12/08/2022

Manage your sequences in the sales accelerator by viewing details and cloning, editing, deleting, and applying tags to them.

License and role requirements

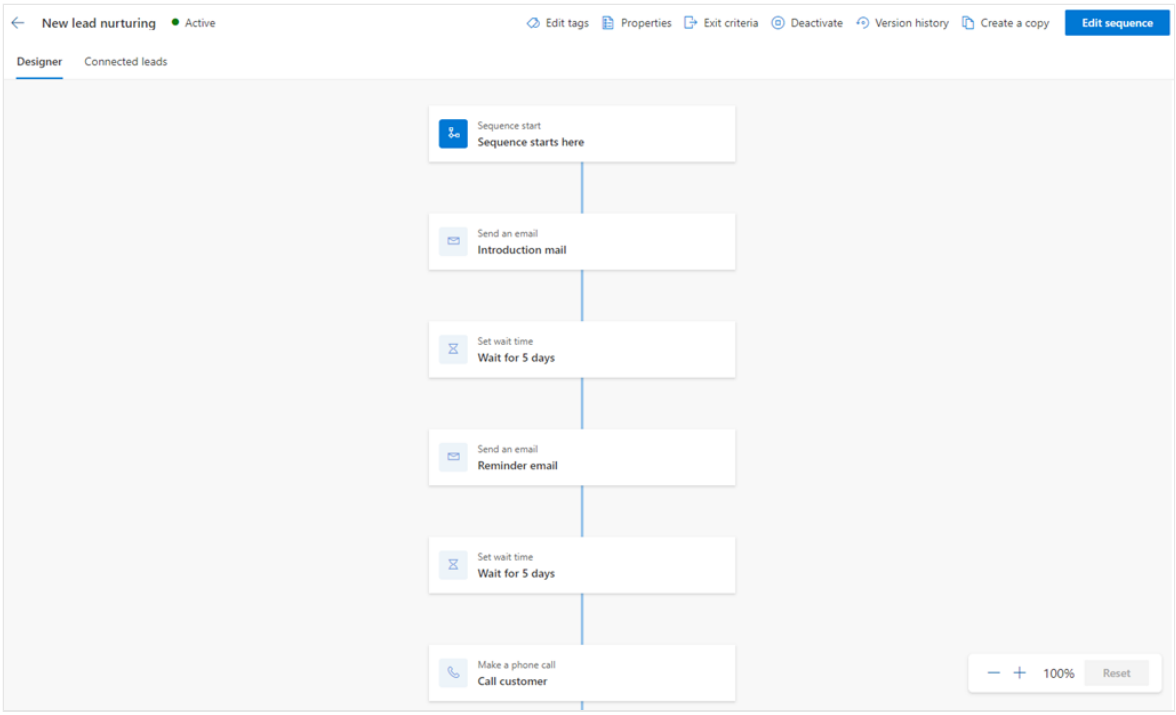
Requirement type	You must have
License	Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Salesperson More information: Predefined security roles for Sales

View details of sequences and connected records

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings**.
2. Under **Sales accelerator**, select **Sequences**.
3. On the **Sequences** page, select and open the sequence for which you want to view details such as activities and assigned records.

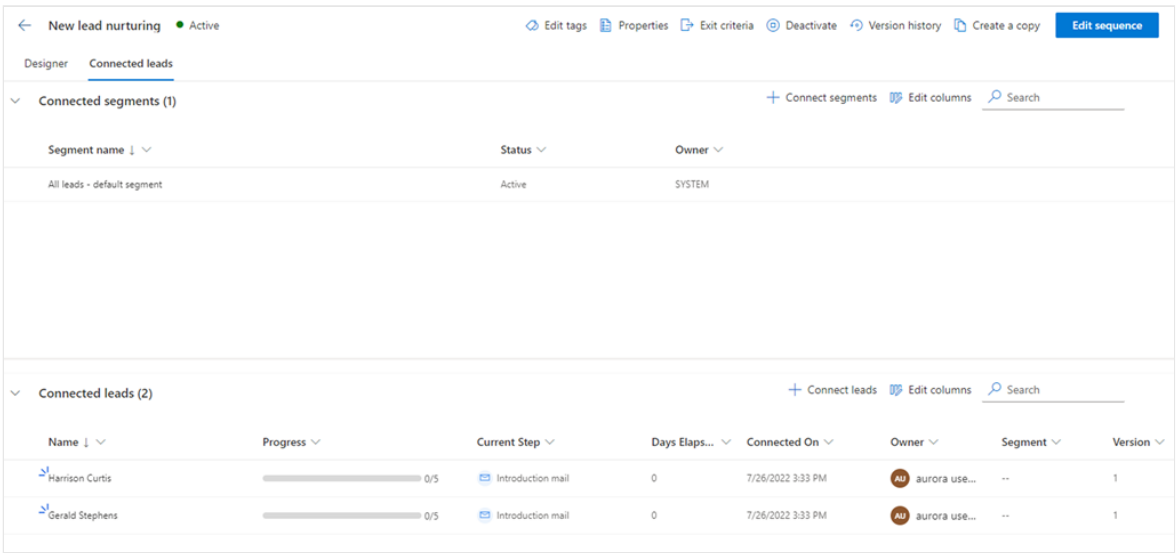
   > **Tip**
   >
   > Alternatively, you can hover over a sequence and then select **More options** > **View sequence**.

   The sequence opens and on the **Designer** tab, you can view the activities that are defined for the sequence.

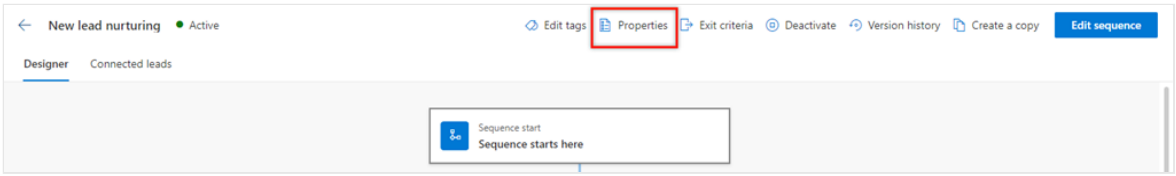


4. To view the list of connected records, select the **Connected *record*** tab. In this example, we're selecting a sequence with the lead record type. You can also remove and connect records with the sequence through this view. More information: Connect a sequence to records

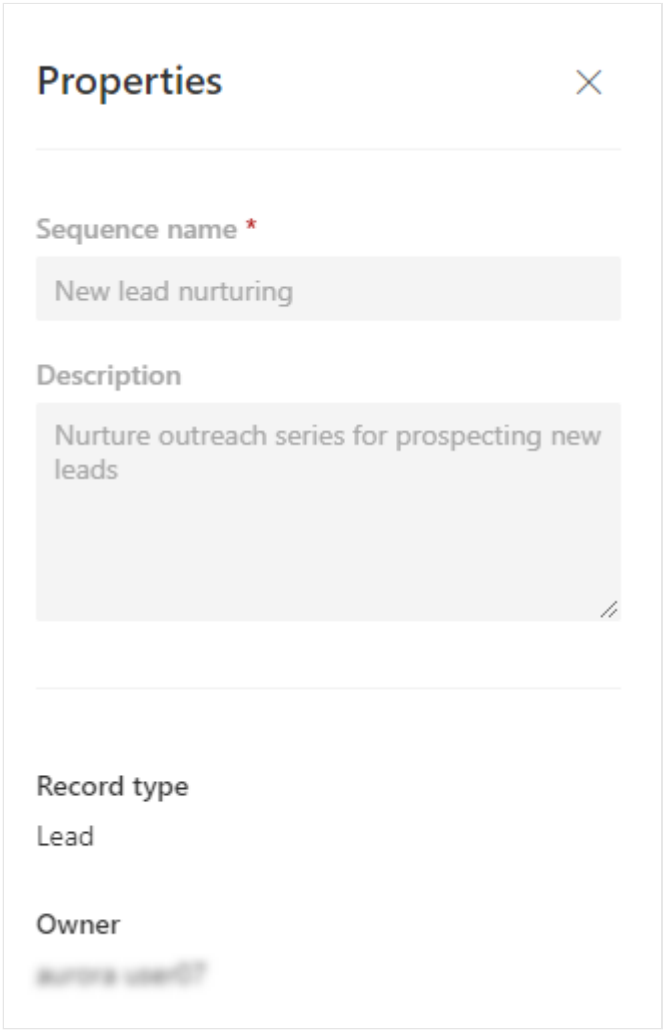
    - The **Connected segments** section lists the segments that are associated with the sequence.
    - The **Connected *records*** section displays the list of records that are connected to the sequence, with the following columns:
        - **Progress**: Shows the number of steps that have been completed in the record.
        - **Current step**: Shows the step that is to be completed.
        - **Days elapsed**: Shows the number of days since the record moved into the current step.



5. To view the properties of the sequence—such as, name, description, record type, and owner—select **Properties**. If the sequence is in the active state, you can only view the information. To update the name or description, you must deactivate the sequence. You can't edit record type or owner information at any time.



The **Properties** pane opens.



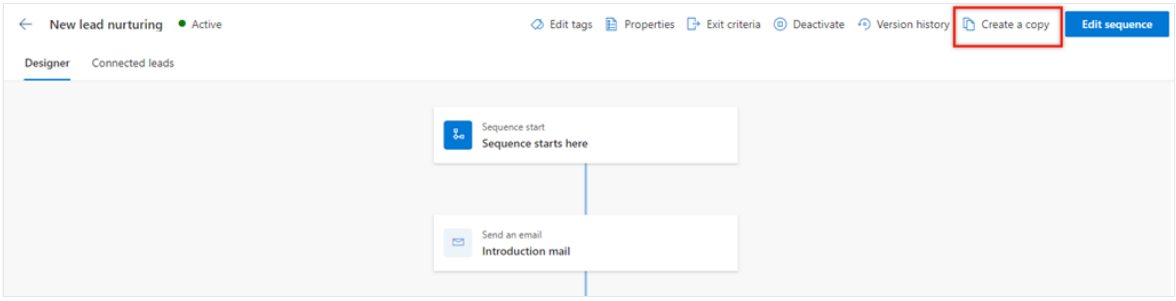
More information: View details of a sequence and its connected records

Clone and edit a sequence

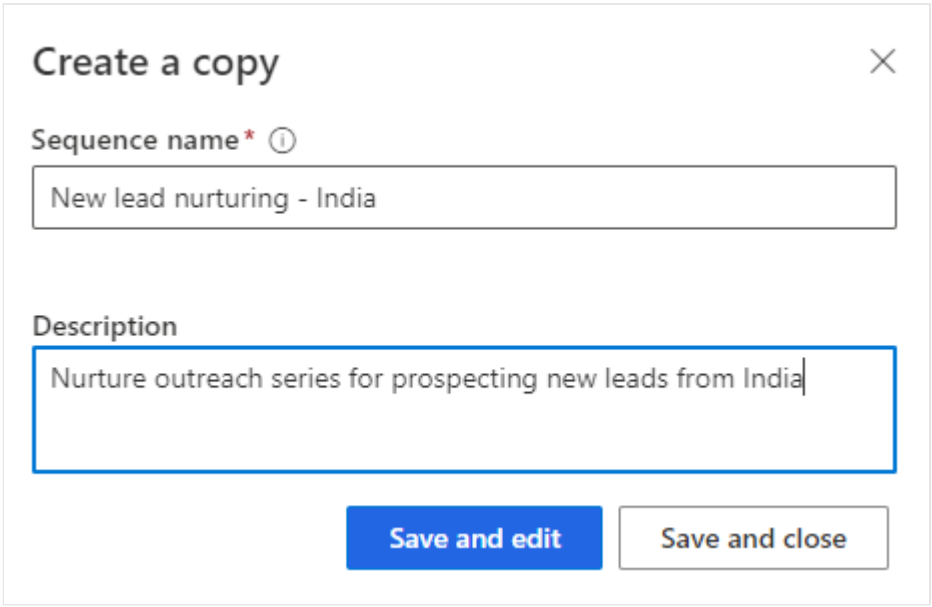
Cloning a sequence makes it easier to edit, and save the changes to create new sequence. Also, cloning pulls down a full copy of the sequence data that you're cloning at that point in time, including all steps and configurations. After you edit, you can save and activate the cloned sequence and apply it to records.

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings**.
2. Under **Sales accelerator**, select **Sequences**.
3. Open the sequence that you want to clone, and then select **Create a copy**.

> **Tip**
>
> Alternatively, you can hover over a sequence and then select **More options** > **Create a copy**.



4. In the **Create a copy** dialog, enter a name for the sequence and a description.



5. Select one of the following:

   - **Save and edit**: Select this button to open the sequence editor and add steps as necessary. For details, go to the following section.
   - **Save and close**: Select this button to save and create the sequence.

To edit the sequence

1. Open the sequence that you want to edit.

> **Note**
>
> If the sequence is in the **Active** state, you can do one of the following:
>
> - Deactivate the sequence, or create a copy.
> - Select **Edit sequence**.

2. Do one of the following:

   - To add an activity, perform **step 4** from Create and connect sequences for yourself.
   - To edit an activity, select the activity. In the right pane, make the edits you want, and then select **Save**.

3. (Optional) If you want the sequence to be available to connect with records, select **Activate**.

4. Select **Save**, and then exit the sequence designer.

More information: Clone and edit a sequence

Delete a sequence

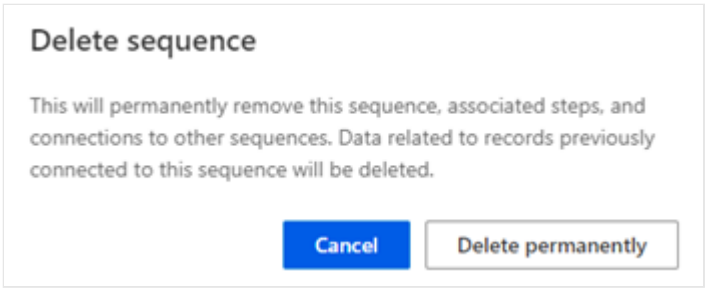
1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings**.

2. Under **Sales accelerator**, select **Sequences**.

3. On the **Sequences** page, hover over the sequence you want to delete, and then select **More options** > **Delete**.

4. In the confirmation message that appears, select **Delete permanently**.

> **Note**
>
> If you're deleting a sequence that's in the active state, a confirmation message is displayed that the sequence will be deactivated and deleted. Select **Deactivate and delete**.



Apply and remove tags from your sequences

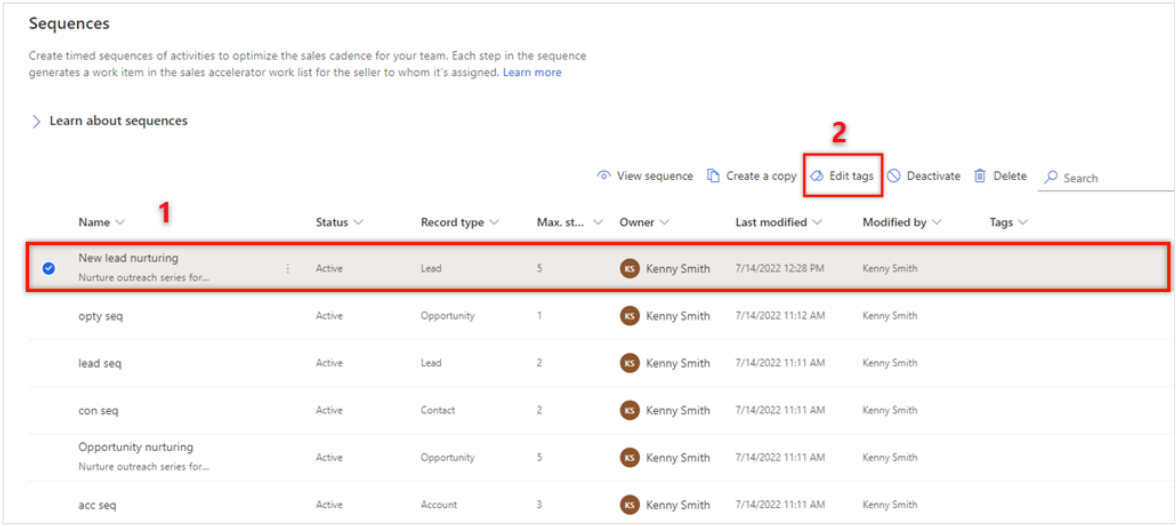
Tags help you quickly filter and identify sequences from a list by categories that you define. To know more about tags, go to Manage tags for sequences.

Apply tags to a sequence

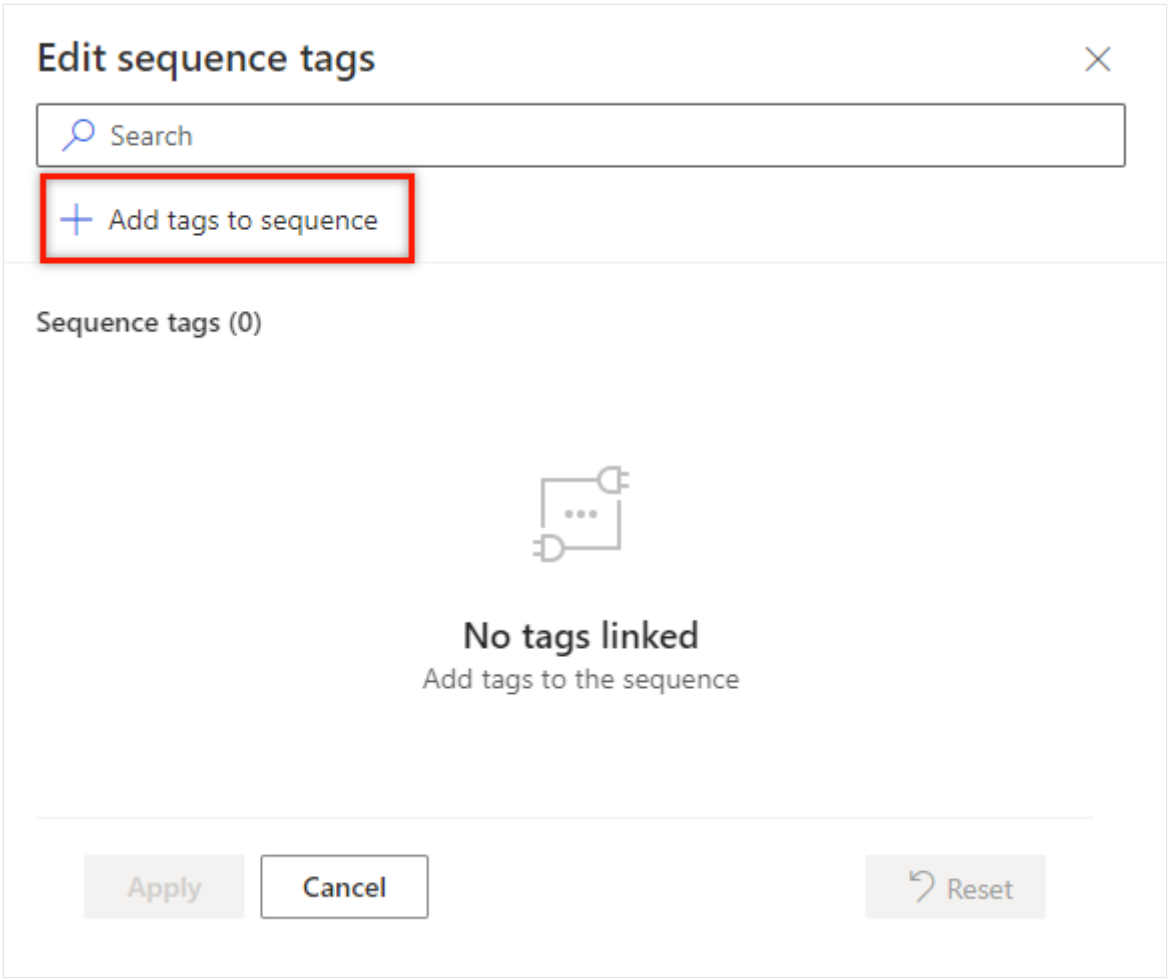
With the Salesperson role, you can't create, edit, or delete tags. However, if your sales manager or administrator created tags, you can apply them to sequences.

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings**.
2. Under **Sales accelerator**, select **Sequences**.
3. Select the sequence to which you want to apply tags, and then select **Edit tags**.

> **Note**
>
> You can also select the **Edit tags** option by opening the sequence.

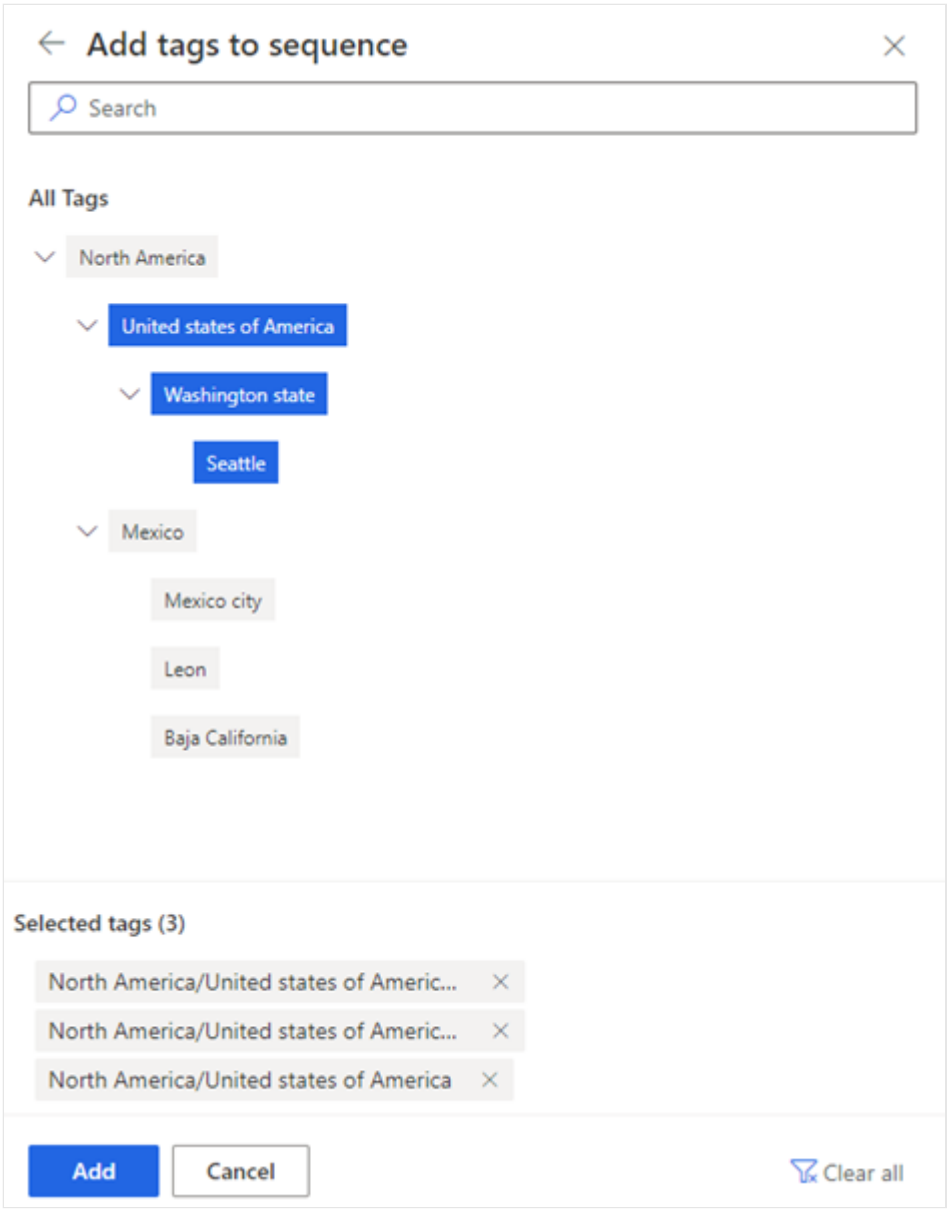


4. On the **Edit sequence tags** pane, select **Add tags to sequence**.



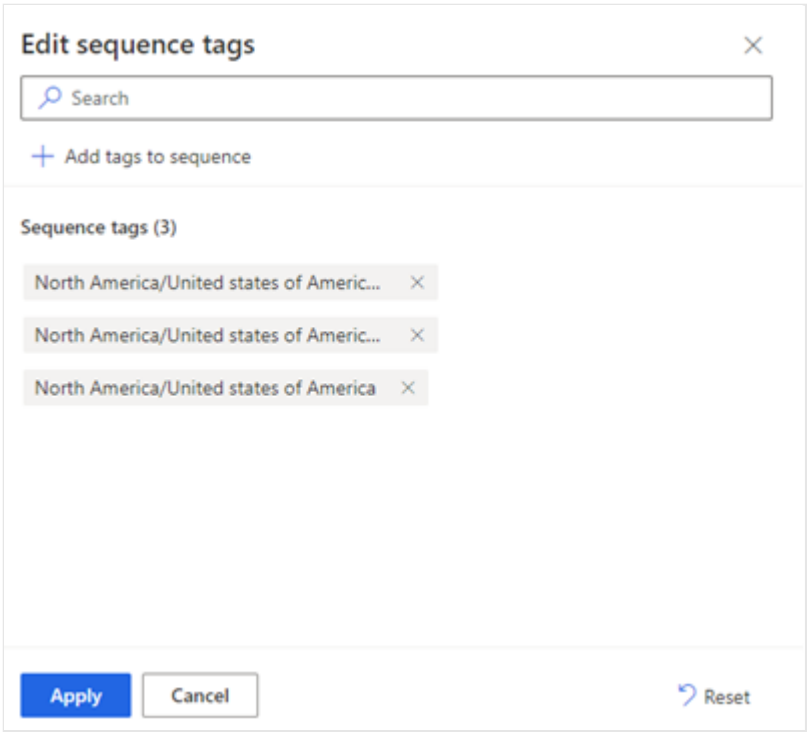
5. Select the tags that you want to apply to the sequence.

   The tags you select are highlighted in blue, and they're also listed with their full hierarchy path in the **Selected tags** section.



6. Select **Add**.

   The tags, including their hierarchy path, are listed in the sequence. Hover over a tag to view the full path.



7. Select **Apply**.

Remove tags from a sequence

1. In your sales app, go to the **Change area** in the lower-left corner of the page, and select **Sales Insights settings**.
2. Under **Sales accelerator**, select **Sequence**.
3. Select the sequence from which you want to remove tags, and then select **Edit tags**.
4. In the **Sequence tags** section, select the **X** next to the tag, and then select **Apply**.

The tag is removed from the sequence.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

What is the sales accelerator?
Create and connect sequences for yourself
Apply and remove tags from your sequences

Improve sequence efficiency with insights

Article • 07/03/2023

Sequence insights provide valuable information about how well your sales sequences are performing. You can use them to find where improvements are needed, optimize your sales processes, and identify best practices that are working well across your sales team. Then you can use these successful practices to streamline your processes through common patterns and strategies that contribute to their success.

The sequence insights feature is available in version 9.0.23041.10001 and later of Dynamics 365 sales accelerator. Insights data is provided only for sequences that were created or updated after the feature is rolled out to your organization. To view insights for sequences that were activated before the feature rollout, reactivate the sequences.

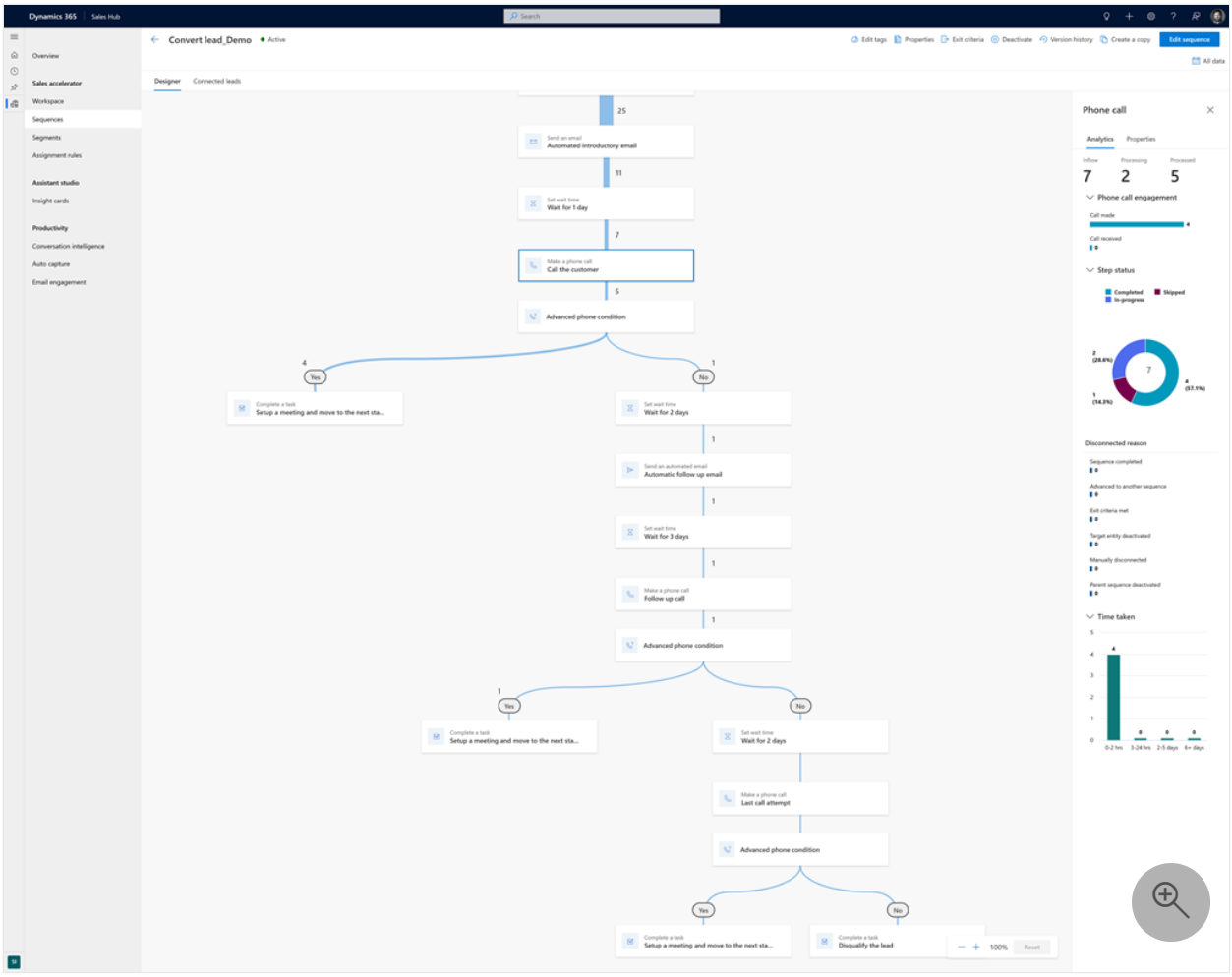
Prerequisites

Sequences are configured and implemented in your organization. Learn more about sequences in sales accelerator.

View and understand sequence insights

To view sequence insights, open an active sequence. The sequence is shown as a Sankey diagram that illustrates the number of records that passed through each step in the sequence. The diagram offers an easy way to view the sequence's overall performance. It can also help you identify steps where more records are getting stuck or leaving the sequence.

By default, the data covers the entire time the sequence has been active. You can filter it to show a specific duration; for example, the last seven days. Select **All data** in the upper-right corner of the page, and then select a duration.



To get insights on how sellers are executing a step, select it in the diagram.

The first step displays the following insights for the sequence as a whole:

- The total number of records that have flown into the sequence, including the number of records that are being processed and that have already been processed.
- The maximum number of steps taken to process the sequence and the average number of days it took to complete.
- The reasons the sequence is disconnected from the records. The number listed below each reason indicates how many records were disconnected for that reason. For example, a sequence is disconnected from a record when a seller completes it.

Other steps display a detailed analysis, with the following insights shown for each step:

- The total number of records that have flown into the sequence, including the number of records that are being processed and that have already been processed.
- An analysis of the actions that are performed for the step, which may vary by step. For example, in the phone call step, basic actions that can be performed are making and receiving calls. Each action shows the number of records that performed it.
- The step status, or the number of records that are in progress, completed, or skipped.

- The reasons the sequence is disconnected from the records. The number listed below each reason indicates how many records were disconnected for that reason.
- How long each record took to complete the step.

Analytics aren't available for condition steps.

See also

Create and connect sequences for yourself
View and understand sales acceleration reporting
Understand the sequence stats page

Engage with customers through text messages

Article • 06/23/2023

Sending and receiving text messages through SMS is an effective way for sellers to reach out to potential customers. It's fast, convenient, and allows for quick responses. Sellers use SMS to stay in touch with their customers, by responding to questions or concerns, and providing updates and information on products and services.

Dynamics 365 Sales enables your sellers to send and receive SMS from customers through the text message feature. Also, sellers can refer to their past communication in context without leaving the application or losing their view of their customers' details.

In the sequences, SMS can be included as a step to send reminders or updates about key events.

> **Note**
>
> The text message feature is only supported in web browsers.

How can I use the text message feature?

Depending on your role, you can use the text message feature as described in the list:

- System administrator or similar role:
  - Configure the SMS provider in your organization for sellers to use. More information: Configure SMS provider
  - Assign or remove phone numbers of users. More information: Edit phone numbers
  - Add the text message option to custom forms. More information: Add text message option to custom forms
- Sales manager, seller, or any other similar role:
  - Choose a service provider to send and receive SMS. More information: Understand the conversation pane
  - Add text message and automated text message as steps in a sequence. More information: Send a text message and Send an automated text message
  - Create and add SMS templates. More information: Personalize text messages through templates

- Send SMS from the Sales accelerator workspace or the Up next widget. More information: Send a text message to customers
- Access past SMS interactions in context with relevant sales records such as lead and opportunity. More information: Manage text message conversations

In which regions is the text message feature available?

The text message feature is available in the following regions:

- Asia Pacific (APAC)
- Canada (CAN)
- Europe (EUR)
- France (FRA)
- Great Britain (GBR)
- India (IND)
- Japan (JPN)
- North America (NAM)
- Oceania (OCE)
- South America (SAM)
- Switzerland (CHE)
- United Arab Emirates (UAE)

> **Note**
>
> Currently, the text message feature is not available in the following datacenters—Germany, China, South Africa, Korea, Norway, and Government Community Cloud (GCC), including USG, Department of Defense (DoD).

Permissions required

Verify that the users who need to use the text message feature have the following permissions.

> **Note**
>
> If you've already enabled Sales accelerator and provided access to the required security roles, no additional permissions are required for the SMS feature. To provide permissions in Sales accelerator, see **Sales accelerator first-run setup**.

For salesperson or similar role:

Tab name	Entity name	Access level	Privileges required
Core Records	- Activity - Note	User	- Create - Write - Delete - Append
Core Records	- Activity - Note	Business Unit	Read
Core Records	Lead	Business Unit	- Create - Read
Custom Entities	Channel Instance	User	Append To
Custom Entities	- Channel Instance - Channel Instance Account - Channel Definition - SalesOmnichannel Message - Transcript	Business Unit	Read
Custom Entities	- Environment variable definition - Consuming Application	Organization	Read
Custom Entities	Model-driven App User Setting	Organization	- Create - Read - Write - Append
Custom Entities	Notification	User	Read
Custom Entities	SalesOmnichannel Message	User	- Create - Write - Delete - Append - Assign
Custom Entities	Setting definition	Organization	- Read - Append
Custom Entities	Text message template	Business Unit	- Create - Write - Read - Delete
Custom Entities	Transcript	User	- Create - Write - Delete

Tab name	Entity name	Access level	Privileges required
			- Append - Append To

For sales manager, sequence manager, or similar role:

The following roles are required along with the roles defined in the salesperson section:

Tab name	Entity name	Access level	Privileges required
Custom Entities	Channel Instance	Business Unit	- Assign - Write
Custom Entities	- Channel Definition locale - Telesign channel instance account - Twilio channel instance account	Business Unit	Read
Custom Entities	- Telesign channel instance - Twilio channel instance	Business Unit	- Read - Write - Assign

See also

Configure SMS provider
Edit phone numbers

Personalize text messages through templates

Article • 05/05/2023

Personalize the text messages (SMS) by inserting placeholders in your template for the specific information that is different for each recipient. The placeholders then dynamically populate values such as customer name, appointment time, location, or any other unique data.

Example

For example, you have a template that says:

Hi {{ContactFirstName1}},
Happy to connect with you on a phone call at {{UserUTCConversionTimeZoneCode}} regarding 3D printer.
Best regards,
{{UserFirstName}}

You can use this template to send personalized messages to each of your customers by dynamically filling the placeholders, such as {{ContactFirstName1}} and {{UserFirstName}}, with appropriate information for each recipient.

To create a message template

1. Sign in to your sales app, and in the lower-left corner of the page, go to **Change area** > **Personal settings** > **Text message templates**.
2. From the tool bar, select **New**.
3. On the **Create a text message template** dialog box, enter the following information:
    - **Template name**: Enter a name for the template.
    - **Category**: Select a category (entity) from which you want to use the placeholders that are used in the template. The entities that are supported are Account, Contact, Lead, and Opportunity. When you select an entity, its corresponding related entities are also displayed while adding the placeholders.

- **Language**: Display installed language packs. Language also helps to categorize your templates.

4. Select **Create**.

   The template editor opens.

5. On the **Text message template** page, in the **Message** section, enter the message including placeholders for dynamic content. For more information on dynamic content, see Insert dynamic content.

6. Save and close.

   The template is created and added to the list of text message templates.

Insert dynamic content

Dynamic text replaces a placeholder entity with the value of the entity when you send the email. For example, your email template might contain "Dear {!User:First Name;}" but your customer sees “Dear Kenny.”

1. In the **Message** section from the **Text message template** page, select the **Personalization** icon.

   Brackets are inserted as placeholders and the **Personalization** dialog box opens to choose the field to insert.

2. Select **Choose an attribute** and then select the required field from the entity.

3. (Optional) In the **Display name** field, enter a display name for the placeholder. By default, the name is displayed as entity type field name. For example, when you select the Account Name field from the Account entity, the display name is **AccountAccountName**.

4. (Optional) In the **Default value** field, enter a default value. When there's no value available for the placeholder field, the default value is added to the message.

5. Select **Save**.

To add more placeholders for dynamic content, repeat steps 1 to 5.

See also

Send a text message
Send an automated text message

Send a text message to customers

Manage text message communications

Manage text message conversations

Article • 05/12/2023

You can manage customer conversations through incoming and outgoing text messages as a part of your sales outreach.

Prerequisites

Before you start using the inbound text message feature, verify that the following prerequisites are met:

- The text message feature is enabled with the callback URL configured in your SMS provider settings to receive incoming (replies) messages. For more information on the callback URL, see step 4 in Set up the SMS provider in Dynamics 365 Sales.
- Contact your administrator to enable the **In-app notifications** option in Power Apps portal for your organization. Also, verify that you have the necessary permissions to view the in-app notifications. More information: Enable the in-app notification feature
- You must have the **Salesperson** privileges to receive incoming messages. If you have insufficient privileges, you're notified about the same through the in-app notification center. Contact your administrator to get sufficient privileges to use the text message feature. More information: Salesperson permissions for the SMS feature

How incoming text messages are routed

The incoming messages (replies) are attached to a record with the phone number from which the outbound message was sent. If the same phone number is associated with multiple records, then the incoming messages are routed to the record in the following priority order:

- Contains most recent conversation between the seller and the customer.
- Owned by a seller to whom the incoming message is addressed.
- Owned by a seller who belongs to the team owning the phone number.
- Record entity type in following order:
  - Contact
  - Account
  - Opportunity

    - Lead
- Active record receives the message over the inactive record.
- Updated most recently.

When you receive a message from a number that isn't associated with a record, a new lead is created with the number and the incoming message is linked to that lead.

Open text message conversations

You can only view conversations if the outbound phone number or record is assigned to you or your team. To view the conversations, use one of the following:

- **Activities grid**:

    1. Go to the **Activities** grid and select **Conversation** > **My text messages** from the view selector.

       A list of conversations that are related you is displayed.

    2. Double-click a conversation.

       The conversation pane opens on the right side of the page.

- **Record**:

    1. Open a record (account, contact, lead, or opportunity).

    2. Select the message icon corresponding to a phone number (Business Phone or Mobile Phone),

       > ⓘ **Note**
       >
       > For opportunity records, open the **Activity** tab and then double-click a conversation that you want to view.
       > The conversation pane opens on the right-side of the page.

- **Notification center**:

    1. Open your sales app and, on the navigation bar, select the bell icon.

       The in-app notifications are displayed.

    2. Select the notification.

       The conversation pane opens on the right side of the page.

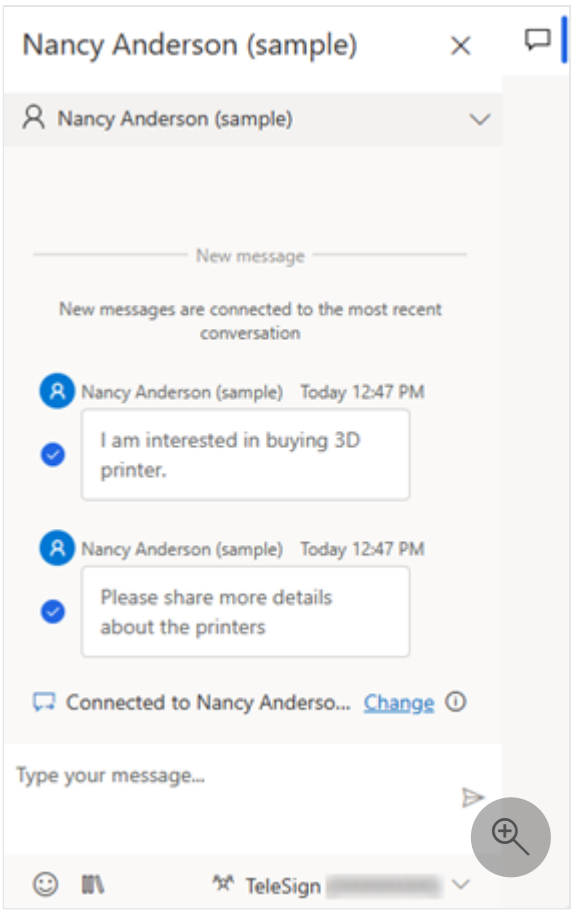
- **Sales accelerator workspace**:

  Open the text message step from the **Up next** widget or the work list item. More information: Send a text message to customers

Move conversations to a different record

The inbound text messages are connected to the record that has the most recent conversation between the seller and the customer. If the conversation is related to a different record, you can move the conversation to that record. Also, you can move conversation from one record type to another. For example, if the conversation related to a contact record is associated with an account record, you can move the conversation to the contact record.

1. From the conversation window, select the conversations.



2. Select **Change**.

3. Use the lookup field and select the record to which you want to move the conversation.

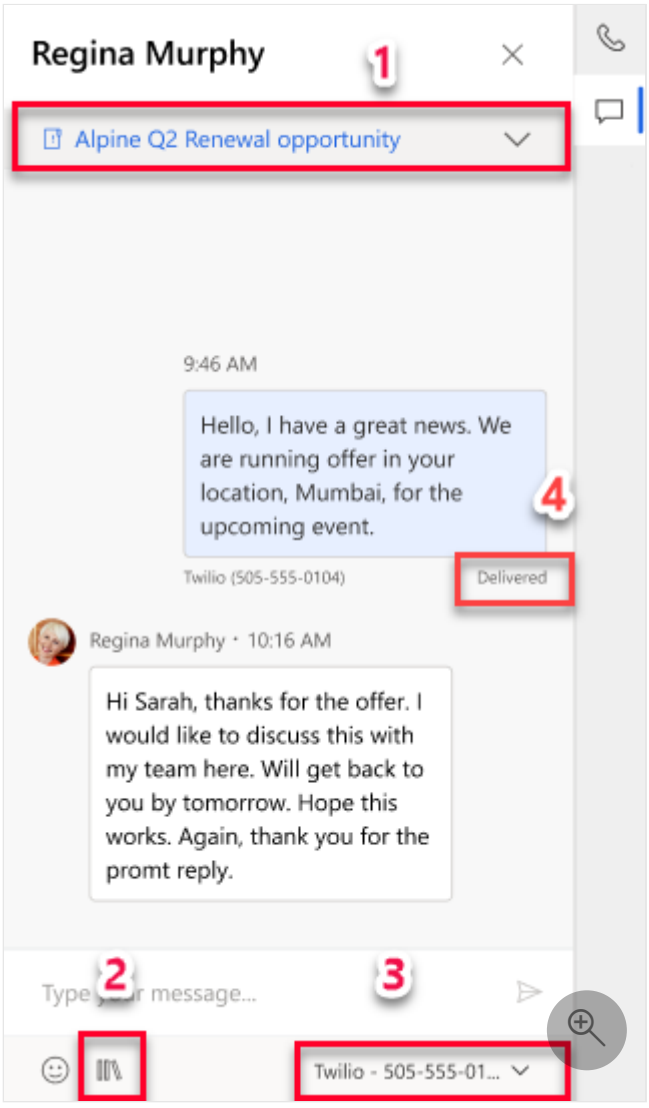
The conversation are moved to the selected record. To verify, go to the target record and open the conversation pane.

Understand the conversation pane

The conversation pane is where you, as a seller, interact with your customer. You can do the following tasks through the conversation pane:

- Send and receive text messages.
- Choose templates to send personalized messages.
- Choose a phone number to send a message.
- View the history of the conversation related to the record.

The following image is an example of the conversation pane.



1. **Related conversation to the selected phone number**: This option is available only for contact and opportunity records. When you open a contact, the drop-down list displays opportunities that are related to this contact. You can choose an option from the list to view the history and manage conversations related to that record.

2. **Manage templates**: Choose templates to send personalized messages to customers. Also, you can choose to create templates if any of the existing

templates don't meet your requirements. More information: Personalize text messages through templates

3. **Choose phone number**: If multiple phone numbers are assigned to you or your team, you can choose a number from which you want to send and receive the message. More information: Set up the SMS provider in Dynamics 365 Sales

4. **Delivery report**: Delivery report of the text message is displayed below the message. It's displayed only if the SMS provider supports it. More information: Configure SMS provider.
   If the message is undelivered, hover over the delivery message to view the reason for the failure. Take appropriate action to resolve the failure. For example, if the message is sent to an invalid number, the reason for the failure is displayed as **InvalidSendingParameters**. To resolve the failure, ensure that the number is valid and is in the international telephone numbering plan (E.164 format).

See also

Engage with customers through text messages
Send a text message to customers

Get intelligent insights to improve sales (preview)

Article • 07/21/2023

> **ⓘ Important**
>
> This topic is pre-release documentation and is subject to change.

Seller insights provide sellers with valuable insights and workflows for customer engagement. Therefore, sellers can efficiently engage with customers, save time on information gathering, and increase productivity by focusing on tasks that matter.

Seller insights are generated based on data from custom insights models. These models are imported into Dataverse and used to generate contextual and intelligent insights. Based on these insights, sellers can assign tasks, create activities, and establish connections with other sellers. For example, if there is risk from an account that isn't well engaged, the following suggestions might be displayed for the account:

- Engagement is low as number of activities are going down.
- Customer didn't respond to the last email since 3 weeks.
- Negative intent detected in last call. Check call summary.

How can I use the seller insights feature?

Depending on your role, you can use the seller insights feature in the following ways:

- **System administrator or a similar role**:
  - Import your custom insights model, and map the attributes with the `msdyn_salessuggestion` entity attributes. For more information, go to Import a custom insights model into Dataverse.
  - Enable the seller insights feature. For more information, go to Enable seller insights.
  - Configure who can use the seller insights feature. For more information, go to Manage access to view insights.
  - Configure assignment rules to automatically assign insights to sellers. For more information, go to Configure assignment rules to automatically assign insights.
- **Sales manager, seller, or any other similar role**:
  - View insights on records.

- Perform actions based on insights. These actions include connecting a sequence, creating an activity, assigning an insight to a seller, reassigning an insight to yourself, and declining or closing an insight.

For more information, go to View and work on seller insights.

View and work on seller insights (preview)

Article • 07/21/2023

> **Important**
>
> This topic is pre-release documentation and is subject to change.

The seller insights feature displays contextual and intelligent insights about Dynamics 365 Sales records, based on specific criteria. For example, sellers can view insights about an account that they are working on. They can then either perform suggested actions to move the deal forward or assign the insight to another colleague to work on.

Prerequisites

- Your administrator must enable the seller insights feature for your organization. For more information, go to Enable seller insights.
- Your administrator must grant your security role access to view and act on seller insights. For more information, go to Manage access to view insights.

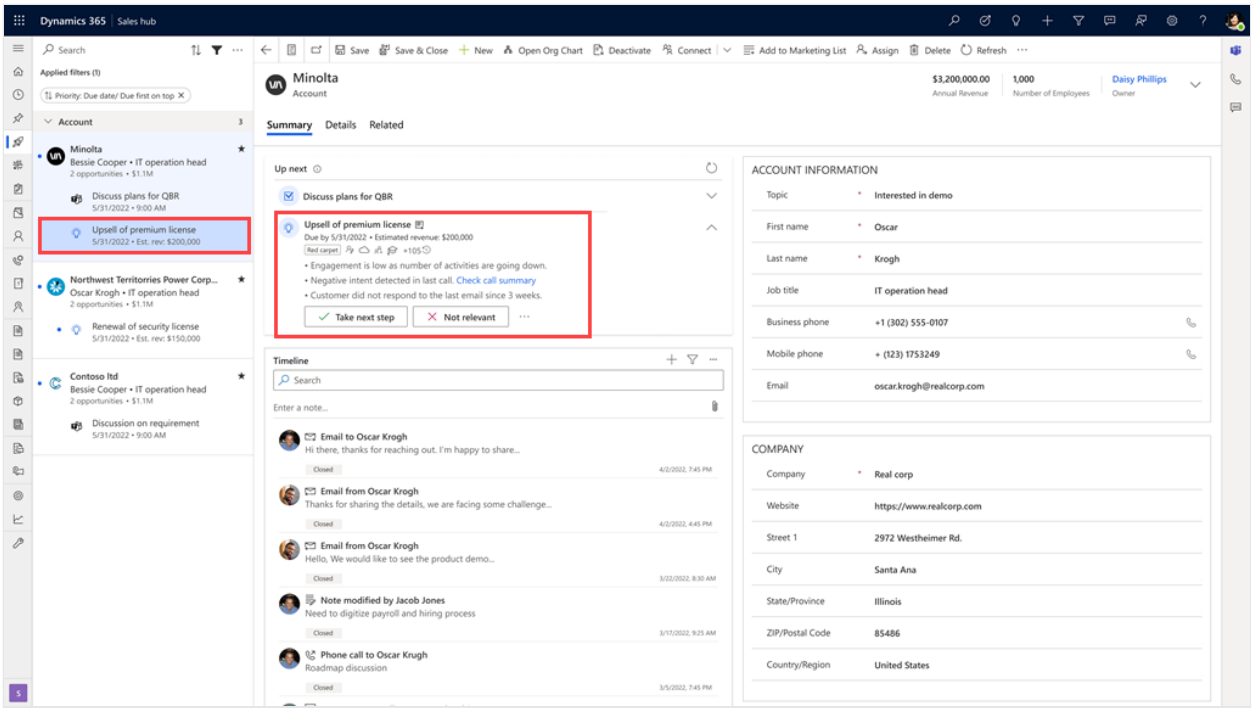
View insights

You can view the insight for a record from the Sales Accelerator work list. Insights are indicated by a light bulb symbol in the work list. View the insight through the following items in the sales accelerator workspace:

- **Work list**: Only the heading of the insight is displayed. From here, you can perform tasks such as accepting the insight, declining it, or assigning it to another individual. A blue dot next to the insight indicates that it hasn't been viewed.
- **Up next widget**: Detailed information for the insight is displayed, such as the due date and estimated revenue. From here, you can perform tasks such as accepting the insight, declining it, or assigning it to another individual.

For more information about how to perform tasks, go to the Work on insights section.

The following image shows an example of insights in the work list and the Up next widget.



Work on insights

As an owner, you can perform basic tasks such as accepting the insights that are displayed, declining them, or assigning them to another seller.

- **Accept**: If you find that an insight is relevant and believe that it helps move the deal forward, select **Accept**. After the insight is accepted, you can perform the following actions, based on the requirement:
  - Connect to a sequence.
  - Create an activity.
  - Close the insight.

- **Decline**: If you find that an insight isn't relevant to the record, follow these steps:

  1. Select **Decline**.
  2. In the confirmation dialog box, enter your reason for declining the insight, and then select **Submit**. The insight is removed from the record.

- **Assign to a seller**: If you find that an insight is relevant to another seller who might be better suited to work on it, follow these steps:

  1. Select **Assign to a seller**.
  2. Select a seller or team to assign the insight to. The insight is assigned to the selected seller or team, and is removed from your list.

> ⓘ Note

If you're the owner of the insight, and the seller or team that you assigned it to doesn't accept it, you can assign it back to yourself.

Connect to a sequence

When you open a record that is connected to a sequence, the activities that are defined in the sequence are displayed. Complete the activities as appropriate to move the deal forward.

To connect a sequence, select **Connect Sequence**. If a sequence is already defined for the insight, it's automatically connected. Otherwise, create one, and then connect it to the insight.

For more information, go to Create and connect sequences for yourself.

Open the record to view and work on the tasks. When a task is completed, the timeline of the record is automatically updated.

To view the list of activities in the sequence, and the current step that the record is in, select the sequence name.

Create an activity

Based on the insight, you can add manual activities such as an appointment, email, phone call, or task to the record. To add an activity, follow these steps:

1. Select **Create activity**, and then select the activity.
2. Enter the information about the activity, and save your changes. The activity is created for the insight and added to the record. You can view the activities on the timeline wall.

Close the insight

After you complete the activities that are defined for an insight, mark the insight as completed. To close the insight, follow these steps:

1. Select **Close insight**.
2. In the confirmation dialog box, enter your reason for closing the insight, and then select **Submit**. The insight is marked as completed and removed from the record. The timeline of the record is updated accordingly.

Filter insights

The work list displays all records, based on your related work items. To view the insights that you're interested in, you can filter the records.

Select the **Filter** button on the work list command bar, and then select the filters that meet your requirements. The following default insight filters are available:

- **Insights view type**: Select the view type to view only the work items that have insights. Select **Insights** as the view type.
- **Insights status**: Select the filter to view work items that are in an active or in-progress status.
- **Insights with activities**: Select the filter to view work items where activities are defined for the insights.
- **Insights assigned to others**: Select the filter to view work items that are assigned to other sellers.

You can also create custom filters for insights. For more information, go to Custom filters.

See also

Enable seller insights
Get intelligent insights to improve sales

Get started with in-app marketing

Article • 06/21/2022

Promote your business and improve sales with targeted marketing campaigns in Dynamics 365 Sales. Create activities for each campaign and assign them to different team members. Track customer response and costs for each campaign. Follow this step-by-step guide to get started with your marketing campaigns.

> **Note**
>
> In-app marketing is not fully supported in the Dynamics 365 app for Teams.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Import contacts, accounts, and leads

Get your customer records into Dynamics 365 Sales, and add these to marketing lists so you can target your campaigns. More information: Import data

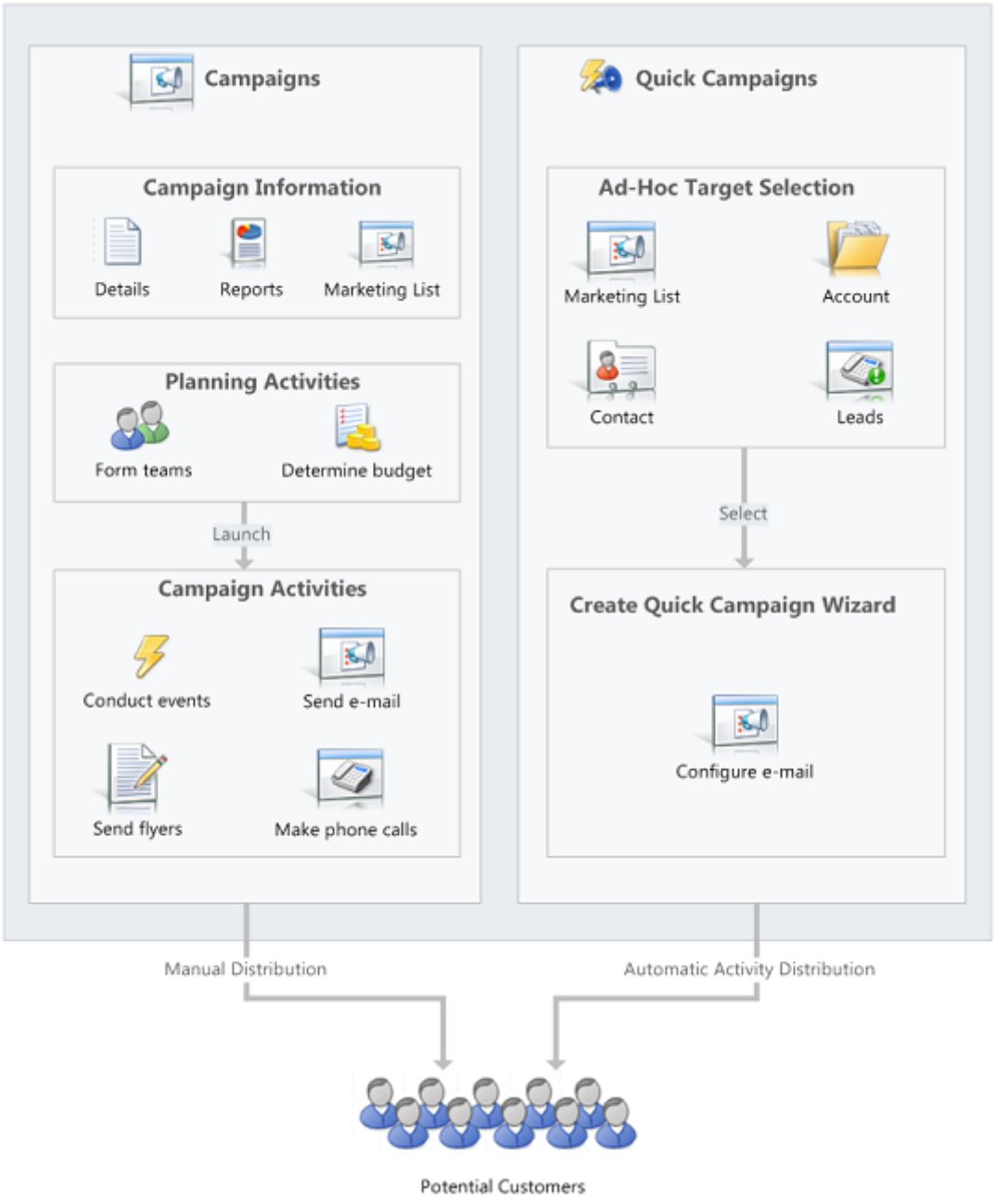
Create marketing lists

You can group accounts, contacts, or leads into a targeted marketing list. You can create a marketing list easily with the search functionality in Dynamics 365 Sales, For example, you can find all of your customers in a particular area and add them to the member list. More information: Create a marketing list using in-app marketing

Understand the difference between a campaign and a quick campaign

In the marketing area, use standard campaigns to manage the end-to-end process of a complete marketing campaign, which includes managing campaign and planning activities, distributing the activities to other team members, and tracking how the campaign did. Campaigns include extensive tracking features like detailed information, reports, and multiple marketing lists.

In contrast to standard campaigns, you can use quick campaigns to automatically distribute a single activity to selected accounts, contacts, or leads, or to a single marketing list. The effects of a quick campaign are immediate.



Create a campaign or a quick campaign

Depending on your requirements, you can track your marketing activities through a campaign or a quick campaign. More information: Create or edit a campaign using in-

app marketing, Create a quick campaign using in-app marketing

Track a campaign response

Record the replies you get from potential customers in response to a specific marketing campaign to make sure your team can act on the responses. Measure the success of specific campaign activities based on customer response rates. More information: Track a marketing campaign response using in-app marketing

See how your campaigns are doing with default marketing reports

Use one of the following reports to assist you in monitoring and analyzing marketing activities:

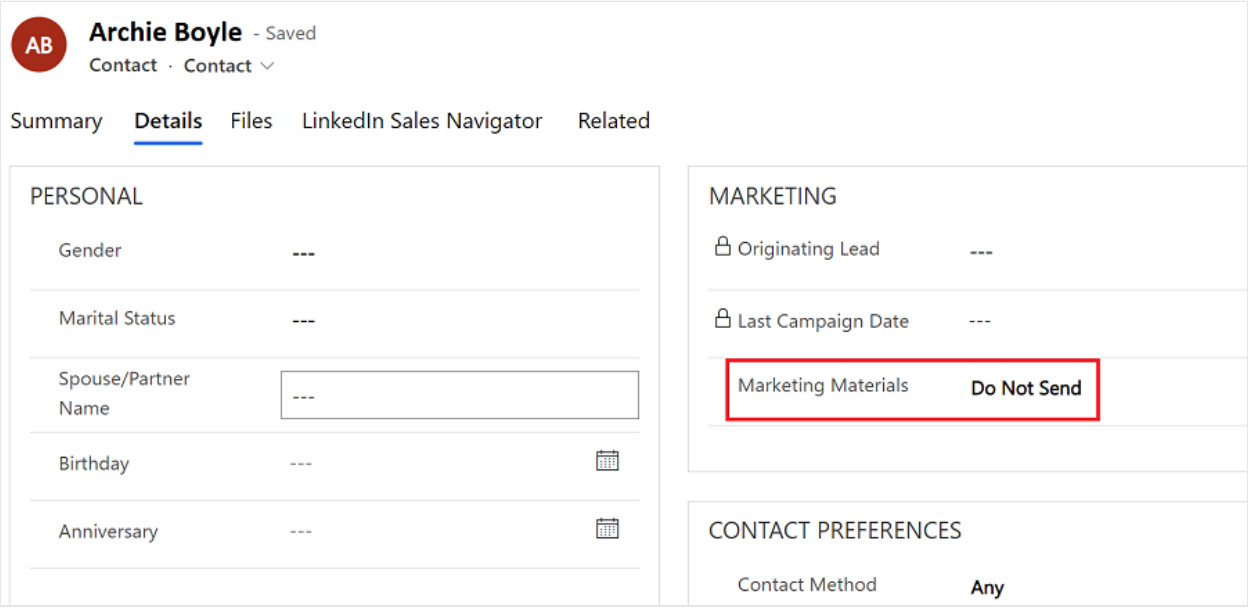
- **Campaign Activity Status**: Use this report to track a campaign. The report displays a summary for one campaign.
- **Campaign Comparison**: Use this report to identify your most and least successful campaigns.
- **Campaign Performance**: Use this report to track the progress and status of your campaigns.

Let your customers unsubscribe from marketing communications

You can enable customers to unsubscribe from email marketing communications that your organization sends them.

1. Add the unsubscribe link to your marketing campaign email. More information: Distribute a campaign activity
2. On the **Marketing Settings** page, set the option **Set "Do Not Send Marketing Material" option when unsubscribe email is received** to **Yes**. More information: Configure in-app marketing settings

When a member selects the unsubscribe link, the **Marketing Materials** setting for that member will be automatically set to **Do not send**. They'll be removed from any future marketing email communications.



> **Note**
>
> You can't add unsubscribe functionality to direct email or email templates.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create a marketing list using in-app marketing
Create or edit a campaign using in-app marketing
Create a quick campaign using in-app marketing
Add an activity to a campaign using in-app marketing
Add a marketing list, sales literature, or product to a campaign using in-app marketing
Track a marketing campaign response using in-app marketing
Troubleshoot issues with in-app marketing

Create a marketing list using in-app marketing

Article • 09/07/2023

Your marketing list is the core of running a successful marketing campaign. It can include any one type of customer record, such as leads, accounts, or contacts.

You can create two types of marketing lists:

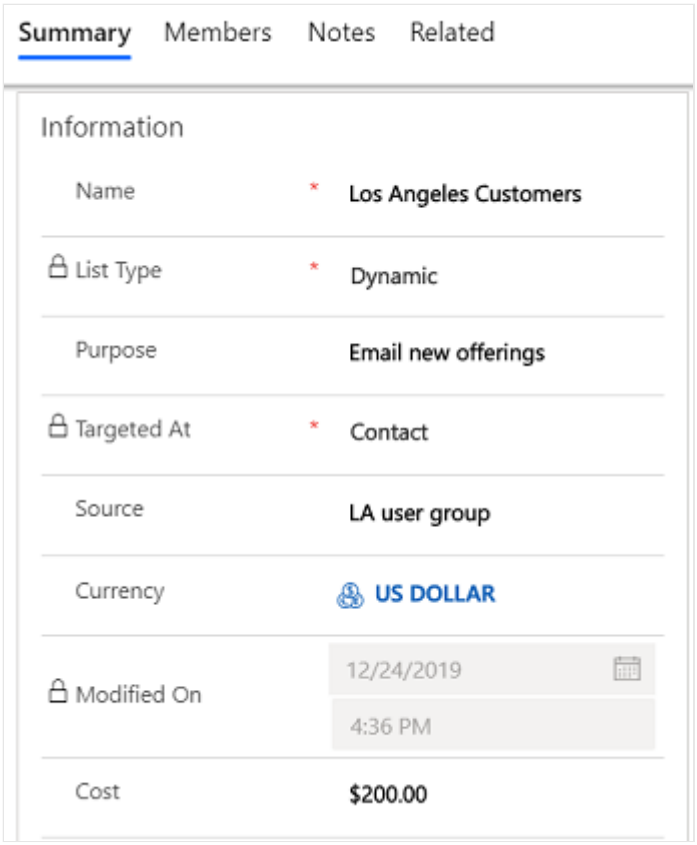
- **Static** Use a static list if you prefer to add and update members manually.
- **Dynamic** Use a dynamic marketing list if you want the list to return a list of members dynamically when needed, based on search criteria you set. For example, if you want to run a campaign to members of a specific city, use a dynamic list. A dynamic marketing list retrieves the updated list of members each time you open the list, create a quick campaign from the list, or distribute a campaign activity for a campaign associated with the list.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create a marketing list

1. In the site map, select **Marketing Lists**.
2. Select **New**.
3. On the **Summary** tab, add the required information.



> ⓘ **Note**
>
> To look up records in the **Owner** field, first select **Save**, or you'll lose your changes.

4. Select **Save** so you can enter information in other areas of the form.
5. Select the **Notes** tab to add any other information that applies to your marketing list.
6. Select **Save**.

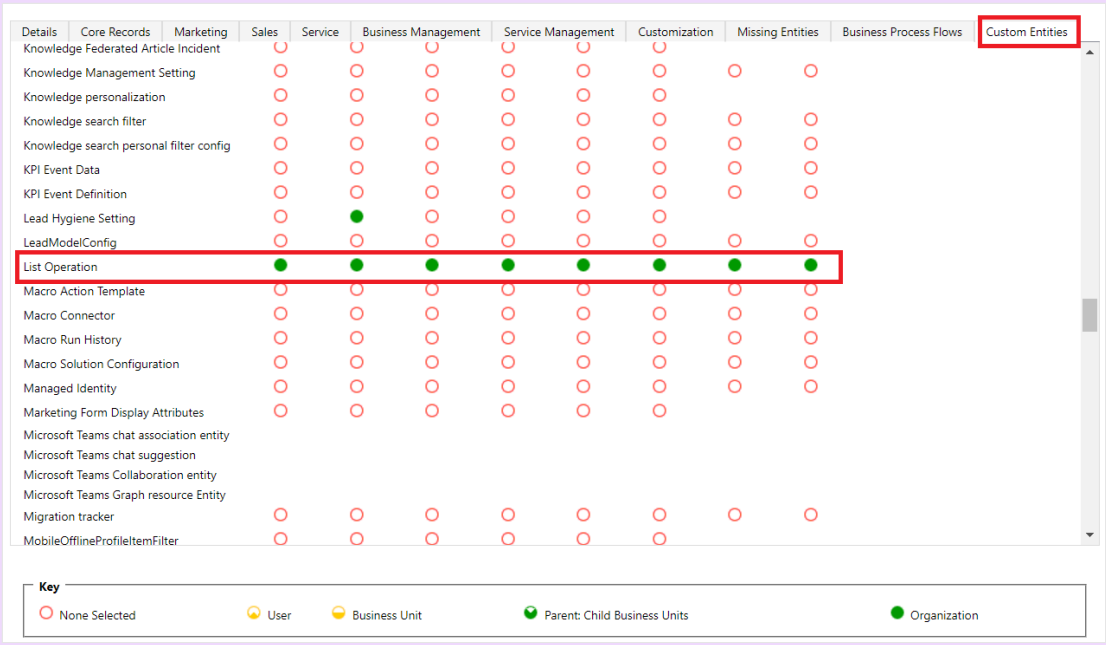
Manage members in a static marketing list

You can manage members in a static marketing list by using one of the following options:

- Add using Lookup
- Add using Advanced Find
- Remove using Advanced Find
- Evaluate using Advanced Find

> ⓘ **Note**

- To add more than 30,000 members to a static marketing list, you must either be a part of the Salesperson security role or higher, or have the **List Operation** permission.



- When you add up to 30000 members to the marketing list, the add operation is performed synchronously. However, when the number of members exceeds 30000, the add operation is performed asynchronously in batches of 1000.
- You can add up to 120,000 members to a static marketing list through a single Add operation. If you need to add more than 120,000 members to a static marketing list, split those members and perform multiple add operations. One way to do this is by using the **Advanced Find** dialog to create queries that return less than 120,000 members. Alternatively, depending on your scenario, you can also consider using a dynamic marketing list instead of static list. More information: **Create a dynamic marketing list**

Add using Lookup

This option allows you to add members to a marketing list by searching through the records.

1. In a marketing list record, select the down arrow next to **Manage Members** on the command bar, and then select **Add using Lookup**.
2. In the **Lookup Records** dialog box, select your search criteria.
3. Select the records that you want to add, and then select **Add**.

Add using Advanced Find

This option allows you to add members to a marketing list in bulk based on a search criteria.

1. In a marketing list record, select the down arrow next to **Manage Members** on the command bar, and then select **Add using Advanced Find**.
2. In the **Add members using advanced find** dialog box, the entity that the marketing list is targeted at is automatically selected.
3. In the **Use Saved View** drop-down box, select a view for the selected entity, which will be used for filtering.
4. Select **Add**, and then select **Add row**, to define the search criteria. For example, to find all the contacts in the Seattle city, in the first box select the field as **Address 1: City**. Then, in the second box, select the query relational operator as **Equals**. In the third box, type **Seattle**. You can select fields from the current record type, or from related record types.
5. Select **Find**.
6. Select the members that you want to add, and then select one of the following options:
    - Add only selected
    - Add all

Remove using Advanced Find

This option allows you to remove members from a marketing list in bulk based on a search criteria.

1. In a marketing list record, select the down arrow next to **Manage Members** on the command bar, and then select **Remove using Advanced Find**.
2. In the **Remove members using advanced find** dialog box, the entity that the marketing list is targeted at is automatically selected.
3. In the **Use Saved View** drop-down box, select a view for the selected entity, which will be used for filtering.
4. Select **Add**, and then select **Add row**, to define the search criteria. For example, to find all the contacts in the Seattle city, in the first box select the field as **Address 1: City**. Then, in the second box, select the query relational operator as **Equals**. In the

third box, type **Seattle**. You can select fields from the current record type, or from related record types.

5. Select **Find**.

6. Select the members that you want to remove, select one of the following options:

    - Remove only selected
    - Remove all

> ⓘ **Note**
>
> For the better performance of application and avoid time outs, remove the members in the marketing list in groups of 10000 at a time. For example, if there are 20000 members in a marketing list and you want to remove the members. Remove 10000 members first and then remove the other 10000.

Evaluate using Advanced Find

This option allows you to evaluate which members to keep in the marketing list based on search criteria.

1. In a marketing list record, select the down arrow next to **Manage Members** on the command bar, and then select **Evaluate using Advanced Find**.

2. In the **Evaluate members using advanced find** dialog box, the entity that the marketing list is targeted at is automatically selected.

3. In the **Use Saved View** drop-down box, select a view for the selected entity, which will be used for filtering.

4. Select **Add**, and then select **Add row**, to define the search criteria. For example, to find all the contacts in the Seattle city, in the first box select the field as **Address 1: City**. Then, in the second box, select the query relational operator as **Equals**. In the third box, type **Seattle**. You can select fields from the current record type, or from related record types.

5. Select **Find**.

6. Select the members that you want to keep, select one of the following options:

    - Keep only selected
    - Keep all

Define the member selection criteria for a dynamic marketing list

1. In any marketing list, on the command bar, select **Manage Members**.
2. In the **Manage Dynamic List Members** dialog box, the entity that the marketing list is targeted at is automatically selected.
3. In the **Use Saved View** drop-down box, select a view for the selected entity, which will be used for filtering.
4. Select **Add**, and then select **Add row**, to define the search criteria. For example, to find all the contacts in the Seattle city, in the first box select the field as **Address 1: City**. Then, in the second box, select the query relational operator as **Equals**. In the third box, type **Seattle**. You can select fields from the current record type, or from related record types.
5. Select **Find**.
6. Select **Use Query** to add the matching records to your dynamic marketing list.

Associate campaigns or quick campaigns to a marketing list

After you have created a campaign or quick campaign, you can associate it to your marketing list. You can also create a new campaign or quick campaign from your marketing list.

1. In the **Campaigns** or **Quick Campaigns** area, select **New Campaign** or **New Quick Campaign**.
2. Search for the campaign or quick campaign you want to associate to this marketing list.

> ⓘ **Note**
>
> - If you don't have any campaigns, or if you want to create a new one, you can select **New**.
> - If you don't have any quick campaigns, the Quick Campaign Wizard will start.

Customized marketing list form

If you're using a custom form for a marketing list that doesn't include certain fields, you'll see the following message: 'The form is missing the following elements: 'query', 'membertype', 'accountsUCI', 'contactsUCI', 'leadsUCI', 'dynamic_accounts', 'dynamic_contacts', 'dynamic_leads'. Functionalities will be affected.

The elements listed in the message are required to populate the members list that is included in the default form. If your custom form doesn't display the members list, you can ignore the message.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Get started with in-app marketing
Create or edit a campaign using in-app marketing
Create a quick campaign using in-app marketing
Add an activity to a campaign using in-app marketing
Add a marketing list, sales literature, or product to a campaign using in-app marketing
Track a marketing campaign response using in-app marketing

Create a quick campaign using in-app marketing

Article • 09/07/2023

Send an e-mail blast to customers who fit a specific demographic, a mail campaign to clients in a specific region, or perhaps a phone call campaign to previous buyers of a particular product by using a quick campaign in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

When to use quick campaign

A quick campaign is a single campaign activity geared towards a targeted audience. Track the success of your quick campaign through campaign responses, and convert the positive responses into new leads, quotes, orders, or opportunities.

If you need to perform more than one activity for your campaign, such as an email blast and a phone call, create a standard campaign instead. More information: Create or edit a campaign using in-app marketing

Create a quick campaign and activity

When you create a quick campaign activity, an activity is created for each member in the marketing list that's part of the quick campaign.

> **Note**
>
> - The average time for distributing a quick campaign activity to 100,000 members is 24 hours. For larger campaigns and faster activity distribution, use

Dynamics 365 Marketing. For more information, go to **Dynamics 365 Marketing documentation**.

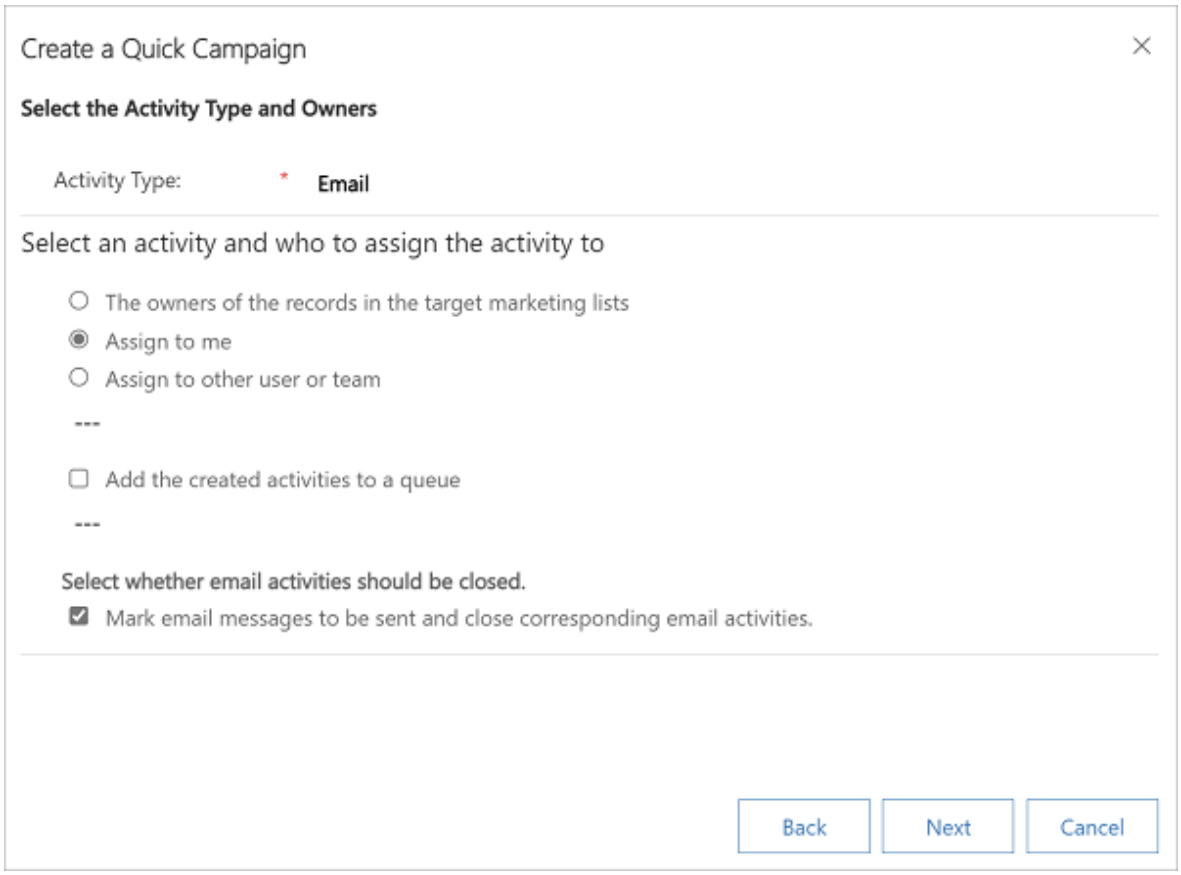
- When creating a quick campaign using the following options, the application verifies the record preferences settings to ensure that the campaign is sent only to the records that allow it. This setting is found under the **Details** tab of a record.
  - Through marketing list, the target record must allow both bulk email and marketing materials.
  - Through accounts, contacts, or leads grid, the target record must allow marketing materials.

1. In the site map, select **Marketing Lists**.
2. Open a record, and then in the **Quick Campaigns** area, select **New Quick Campaign**.

   > ⓘ **Note**
   >
   > You can't add members to a quick campaign after you create it.

3. In the **Create a Quick Campaign** wizard, read the instructions on the welcome page, and then select **Next**.
4. On the **Specify the Campaign Name** step, enter a name for the quick campaign, and then select **Next**.
5. On the **Select the Activity Type and Owners** step, from the **Activity Type** list, select the type of activity you want to create.

   > ⓘ **Note**
   >
   > Supported activity types are email, appointment, phone call, fax, and letter. Custom activities or other out-of-the-box activities are not supported.



You can also select who you want Dynamics 365 Sales to assign the activity to and whether Dynamics 365 Sales should perform the activity automatically for appropriate activities, such as sending email messages. For example, if you are creating a phone call activity for all the sales representatives, you can select the **Activity Type** as **Phone Call**, and then select **The owners of the records in the target marketing lists**. Each sales representative can then see the activity and take action on it. However, if you are creating a large number of email activities that Dynamics 365 Sales will perform automatically, you can assign the email activity to yourself instead of the record owners.

6. When you select the **Activity Type** as *Email*, you'll see an additional checkbox **Mark email messages to be sent and close corresponding email activities**. Perform one of the following actions:

    - Select the checkbox if you want the system to create an email activity for each member in the marketing list, send the email, and close the activity. In this case, an activity is considered successful when the email is marked to be sent.

    - Clear the checkbox if you want the system to just create an email activity for each member in the marketing list, and you want to manually send the email and close the activity. In this case, an activity is considered successful when the activity is created.

You'll see the number of successes and failures after you create the campaign.

7. Select **Next**.
8. On the **Specify the Content of the Activity** step, specify the details of the activity to be created, and then select **Next**.
9. On the **Completing the Create Quick Campaign Wizard** step, select **Create**. The campaign activity is added to the **Quick Campaigns** section.
10. After the **Status Reason** field is marked as Completed, verify the **No. of Successes** and **No. of Failures** fields to know the number of activities that have succeeded or failed. In the case of email activities, successes and failures don't indicate email delivery status, instead they indicate the status of email activity creation in Dynamics 365.
11. To view more details about the activities, open the quick campaign:
    - To view more information about the type, owner, and status of the activities created for the campaign, view the **Timeline** section.

      > ⓘ **Note**
      >
      > If your campaign has letter or fax activities, they'll not be listed in the timeline by default. To view them, select **Related** > **Activities**.

    - To view the reasons for failures, select **Related** > **Members** and select the corresponding failure view. For example, if your campaign was targeted to accounts, select **Account Bulk Operations Failures** view.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Get started with in-app marketing

Create a marketing list using in-app marketing

Create or edit a campaign using in-app marketing

Add an activity to a campaign using in-app marketing

Add a marketing list, sales literature, or product to a campaign using in-app marketing

Track a marketing campaign response using in-app marketing

Customize quick campaign and campaign activity distribution forms

Add a marketing list, sales literature, or product to a campaign using in-app marketing

Article • 03/30/2022

Add all items to the campaign that your organization needs in this marketing context. Usually you need to add marketing lists, but you might also want to refer campaigns to products and related campaigns, or you might want to add sales literature that documents sales procedures.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Add product list, product, or sales literature to a campaign

1. In the site map, select **Marketing Lists**.
2. Open a marketing list record, and then in the **Campaigns** area, open the campaign to which you want to add a list, product, or sales literature.

   The following table shows what you need to do to add each type of item.

To add	Do this
A marketing list	On the **Related** tab, select **Target Marketing Lists**, and then select **Add Existing Marketing List**.
A product	On the **Related** tab, select **Target Products**, and then select **Add Existing Product**.

To add	Do this
Sales literature	On the **Related** tab, select **Sales Literature**, and then select **Add Existing Sales Literature**.
A related campaign	On the **Related** tab, select **Related Campaigns**, and then select **Add Existing Campaign**.

3. Select the type of record you want in the **Lookup Records** panel. In the **Look for records** field, type the first few letters of the name of the record to narrow your search, and then select the **Search** icon .

4. Select the records that you want to add in the list of records that appears, and then select **Add**.

5. Select **Save** or **Save and Close**.

> **Note**
>
> To verify that the item you selected was added to the campaign, reopen the campaign. Under **Marketing**, select **Target Marketing Lists**, or under **Sales** select either **Target Products** or **Sales Literature**. The information you added appears in the list.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See Also

Get started with in-app marketing
Create a marketing list using in-app marketing
Create or edit a campaign using in-app marketing
Create a quick campaign using in-app marketing

Add an activity to a campaign using in-app marketing

Track a marketing campaign response using in-app marketing

Create or edit a campaign using in-app marketing

Article • 03/30/2022

Promote your business, expand your reach to new customers, and improve sales by using campaigns in Dynamics 365 Sales. Use campaigns to store all your marketing information and activities, and to measure the success of your efforts. Campaigns contain planning tasks and campaign activities you need to manage for the marketing campaigns.

Add strategic campaign information to your campaign, such as:

- Budgets and expenses
- Promotion codes
- Target products
- Marketing collateral, including sales literature
- Target marketing lists

Campaigns can include planning activities that you want to perform before you launch the campaign, and also the campaign activities you want to manage as part of the campaign. More information: Add an activity to a campaign using in-app marketing

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create or edit a campaign

Note

- The number of campaign emails you can send in a day depends on your organization's limit for outgoing emails from Exchange.
- The average time for distributing a campaign activity to 100,000 members is 24 hours. For larger campaigns and faster activity distribution, use Dynamics 365 Marketing. For more information, go to **Dynamics 365 Marketing documentation**.

1. In the site map, select **Marketing Lists**.
2. Open a marketing list record, and then in the **Campaigns** area, select **New Campaign**.

   - OR -

   To edit a campaign, open a campaign from the list.
3. In the **Campaign** section, enter the campaign details such as, name, type, and the expected response rate.
4. In the **Schedules** section, enter the proposed and actual start and end dates of the campaign.
5. Go to the **Details** tab and enter the **Allocated Budget** and **Misc. Cost** of the campaign.
6. Select **Save**.
7. In the **Timeline** section, add activities to track conversations in the planning phase of the campaign. More information: Use timeline
8. To add a marketing list to the campaign, go to the **Marketing Lists** section, select vertical ellipses, and then select **Add Existing Marketing List**. In the **Lookup Records** panel, find and select a marketing list.
9. To create planning and campaign activities for your campaign, for example, identifying advertising channels or prepare campaign communications to send to the members on the marketing lists, see Add an activity to a campaign using in-app marketing.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See Also

Create a marketing list using in-app marketing
Create a quick campaign using in-app marketing
Add an activity to a campaign using in-app marketing
Add a marketing list, sales literature, or product to a campaign using in-app marketing
Track a marketing campaign response using in-app marketing

Add activity to campaign using in-app marketing

Article • 10/03/2022

Make your marketing campaigns successful by creating, distributing, and assigning planning and campaign activities in Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Planning and campaign activities

Planning activities are those you want to perform before you launch the campaign, and campaign activities are those you want to manage as part of the campaign. Examples of planning and campaign activities you can add include:

- Identify advertising channels and supporting materials
- Contact media channels to reserve time or space for advertising
- Create or refine target marketing lists
- Contact a design agency to request creation of collateral pieces and advertising materials

  By default, a campaign targets an activity to the group of marketing lists that you select for the campaign. If you want to run a campaign activity on a subset of your marketing lists, you can distribute the activity to certain members instead.

Add a planning activity to a campaign

1. In the site map, select **Marketing Lists**.

2. Open a marketing list record, and then in the **Campaigns** area, open the campaign to which you want to add a planning activity.

3. To add a new activity, on the **Related** tab, select **Planning Activities**, then select **New Activity**, and then select the type of activity you want to create.

   -OR-

   To add an existing activity, select **Add Existing Activity**. In the **Lookup Records** panel, search for and select the required activities, and then select **Add**.

4. In the **Quick Create (record)** form, add the required information.

5. When you're ready to save your data, select **Save**.

Add a campaign activity to a campaign

When you add and distribute a campaign activity, an activity is created for each member in the marketing lists that you've chosen for the campaign.

> ⓘ **Note**
>
> The average time for distributing a campaign activity to 100,000 members is 24 hours. For larger campaigns and faster activity distribution, use Dynamics 365 Marketing. For more information, go to **Dynamics 365 Marketing documentation**.

1. In the site map, select **Marketing Lists**, and from the **Campaigns** area, open the campaign to which you want to add a campaign activity.

2. On the **Related** tab, select **Campaign Activities**, and then select **New Campaign Activity**.

3. In the **Summary** section of the **Campaign Activity** form, enter the required information:

   a. **Subject**. Type the objective of the campaign activity.

   b. **Used in Campaign.** When you create the campaign activity from a campaign, the campaign is automatically added here.

   c. **Channel.** Select the channel through which the communication for this activity must be sent. For example, the channel might be phone, letter, or email.

> ⓘ Note
>
> Supported channels are email, appointment, phone call, fax, and letter. Custom activities or other out-of-the-box activities are not supported.

d. Scheduled start and end date. Enter the expected date and time that the activity is scheduled to start and end.

4. In the **Anti-Spam Settings** section, enter the frequency cap (in days) for marketing activities directed at any contact. Contacts that have been contacted more recently than this will be excluded from new campaign activity distributions. Enter "0" to disable the limit.

5. (Optional) Select the **Audiences** tab to view the information about the records (account, contact, and lead) for whom the activity has been created based on the channel type of the campaign activity. These records are the ones present in the marketing list(s) associated with the campaign activity.

   > ⓘ Note
   >
   > To view the **Audiences** tab, select the **Campaign Activity** form.

Option type	Description
Accepted *table type*	Activity is created for these records to be acted on based on the activity type mentioned in the channel for the campaign activity.
Excluded *table type*	The users in this section have opted out of any **Marketing Materials** or opted out of certain types of marketing materials such as email or phone calls. This information for the respective record can be seen on the **Details** tab of the record (account, contact, or lead). The other reason to be excluded could be lack of information. For example, for **Channel Type as Email** of a campaign activity, the records with no associated email ID will be excluded.

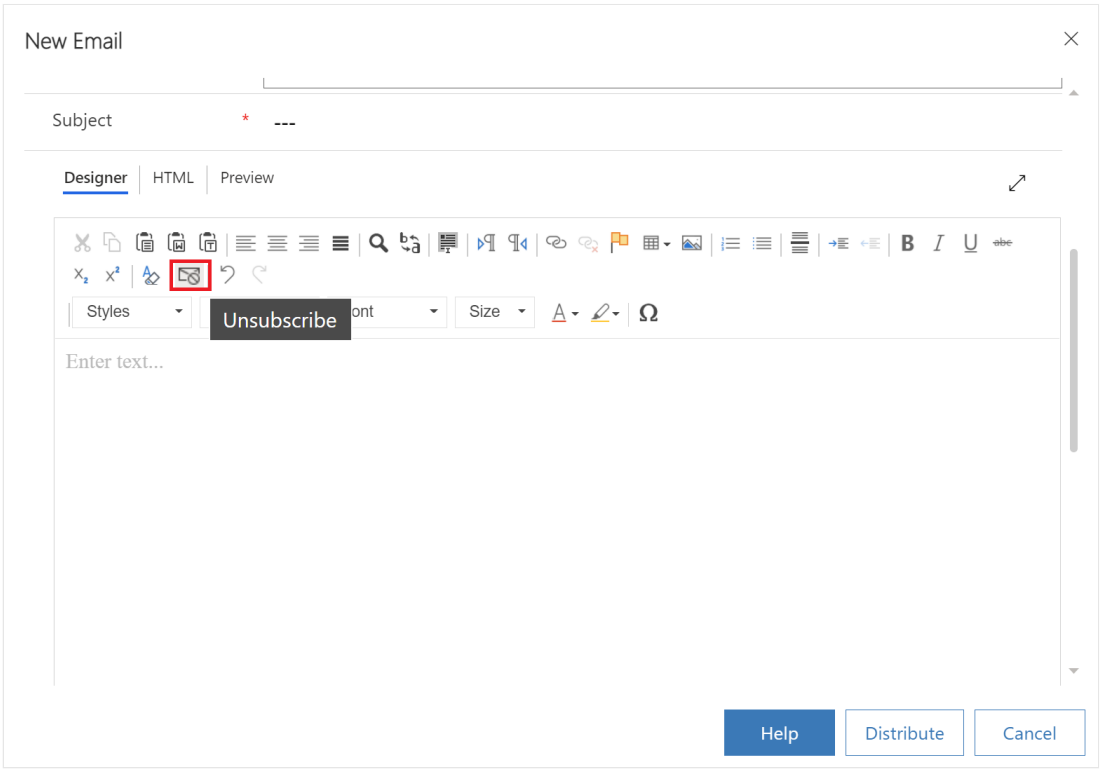
6. On the **Campaign Activity** form, select **Save**.

   The marketing list from which the campaign activity is created is automatically added in the Marketing list section. To add more marketing lists, select the **More Commands** icon , and then select **Add Existing Marketing List**.

Distribute a campaign activity

You can distribute a campaign activity when you're ready to initiate the campaign.

1. Open the campaign activity and on the command bar select **Distribute Campaign Activity**.
2. In the activity form, enter the information that you want to distribute. For email activities,
   - Draft the email that you want to send to the members.
   - To allow your members to unsubscribe from any future marketing email communication, add the unsubscribe link to the email. Select the **Unsubscribe** option in the designer.



3. Select **Distribute**.
4. Choose who will own the activities, and then select **Distribute**.

> **Note**
>
> - When you distribute a campaign activity or run a quick campaign, and if a contact, account, or lead in the target audience (typically specified in a marketing list) doesn't have data in the Email, Fax, Address, or Primary

Phone fields, respective activities like Email, Phone, Letter, and Fax won't be created for that contact, account, or lead.

5. After the activity's status turns **Completed**, you can view more details about the activities:

   - To view more information about the type, owner, and status of the activities created for the campaign, view the **Timeline** section. If your campaign has letter or fax activities, they'll not be listed in the timeline by default. To view them, select **Related** > **Activities**.
   - To view the reasons for failures, select **Related** > **Successes/failures** and then select the corresponding failure view. For example, if your campaign was targeted to accounts, select **Account Bulk Operations Failures** view.

     > **Note**
     >
     > In the case of email activities, successes and failures don't indicate email delivery status, instead they indicate the status of email activity creation in Dynamics 365.

Close a campaign activity

After all the distributed activities are closed, you can close the campaign activity.

To close the campaign activity:

1. Open the campaign activity record and, on the command bar, select **Close Campaign Activity**.
2. Set an appropriate status for the activity, and then select **Close Campaign Activity**.
3. (Optional) Update the campaign activity record with the actual costs in the **Actual Cost** field. This helps guide you in planning the budget for future campaign activities.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See Also

Get started with in-app marketing
Create a marketing list using in-app marketing
Create or edit a campaign using in-app marketing
Create a quick campaign using in-app marketing
Add a marketing list, sales literature, or product to a campaign using in-app marketing
Track a marketing campaign response using in-app marketing
Customize quick campaign and campaign activity distribution forms

Track a marketing campaign response by using in-app marketing

Article • 04/04/2022

Record the replies you get from potential customers in response to a specific marketing campaign to make sure your team can act on the responses. Measure the success of specific campaign activities based on cutomer response rates. You can manually create campaign responses or have Dynamics 365 Sales generate them automatically.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Create campaign responses manually

1. In the site map, select **Marketing Lists**.
2. Open a marketing list record, and then in the **Campaigns** area, open the campaign to which you want to add campaign responses.
3. On the **Related** tab, select **Campaign Responses**.
4. Select **New Campaign Response**.
5. In the **New Campaign Response** form, add the required information.
6. Select **Save**.

Create campaign responses automatically

Prerequisite: Make sure that you have the System Administrator or System Customizer security role or equivalent permissions.

Set the **Create campaign responses for incoming email** option to **Yes** on the Marketing Settings page.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

System Settings dialog box - Marketing tab
Get started with in-app marketing
Create a marketing list using in-app marketing
Create or edit a campaign using in-app marketing
Create a quick campaign using in-app marketing
Add an activity to a campaign using in-app marketing
Add a marketing list, sales literature, or product to a campaign using in-app marketing
Create or edit a campaign template using in-app marketing

Assistant for Dynamics 365 Sales

Article • 10/18/2023

The assistant (formerly known as Relationship Assistant) is part of Dynamics 365 Sales. The assistant keeps an eye on your daily actions and communications, and helps you stay on top of your day with insight cards that are displayed prominently throughout the application to provide tailored and actionable insights.

> **Tip**
>
> If you'd like to try Dynamics 365 Sales for free, you can sign up for a **30-day trial**.

How can I use the assistant feature?

Depending on your role, you can use the text message feature as described in the list:

System administrator or any similar role:

- Configure the assistant for your organization. More information: Configure the assistant
- Create custom insight cards. More information: Create custom insight cards
- Edit insight cards. More information: Edit insight cards
- Optimize the ranking of insight cards. More information: Optimize ranking of insight cards
- Add the assistant widget to custom forms. More information: Add assistant widget to custom forms
- Disable teaser cards. More information: Disable teaser cards

Sales manager, seller, or any other similar role:

- Use the assistant to stay on top of your day. More information: Use the assistant to guide customer communications
- Manage your insight cards by turning on or off. More information: Turn on or off insight cards
- Reference of default insight cards. More information: Insight cards reference

Assistant studio tutorials

Assistant tutorials are available for you to learn how to create custom insight cards by using minimal or no code through Power Automate. Using the tutorials, you learn from

creating a basic custom insight, a "hello world" equivalent, and gradually increase the complexity as you go along.

More information: Assistant studio tutorials for Dynamics 365 Sales Insights

Use the assistant to guide customer communications

Article • 10/18/2023

The assistant helps you to stay on top of your customer communications. By analyzing your interactions and activities with customers, the assistant displays actionable insight cards to ensure you never miss any important activities with your customers. Here are some ways the assistant reminds you of upcoming activities:

- Evaluating your communications and notifying you when a contact or account has been inactive for a while.
- Identifying email messages that might be waiting for a reply.
- Alerting you when an opportunity is nearing its close date.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

Your administrator must enable the assistant before you can try it. For complete details about prerequisites, how to enable the feature, and how to set it up, see Configure the assistant.

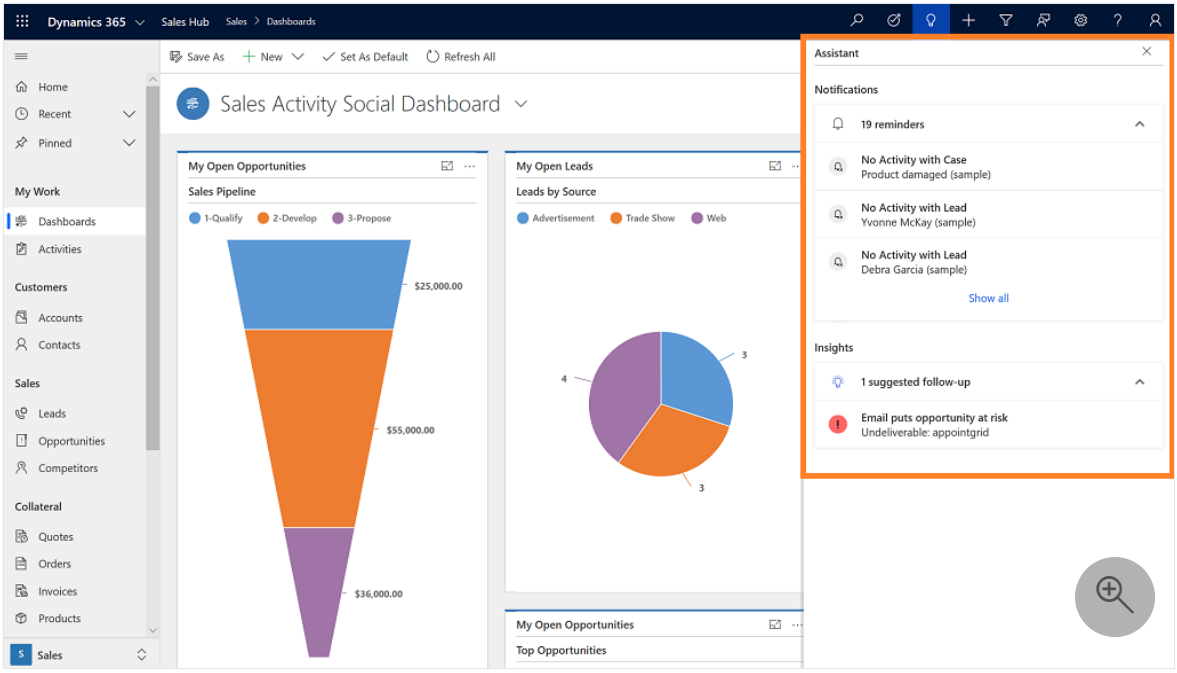
How and where the assistant helps

The assistant works by analyzing the data at its disposal and generating a collection of insight cards, each of which includes a message that summarizes the content of the card and presents a set of actions. The assistant sorts the cards by priority and filters them for your current context. You can access the assistant in a variety of ways in the Sales Insights app.

> **Note**

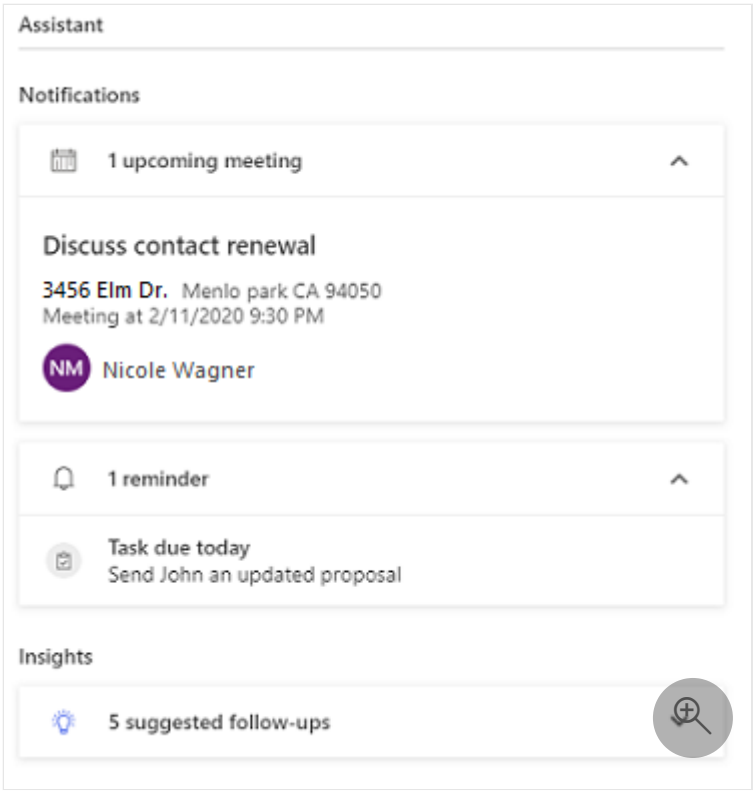
The locations where you access the assistant might vary depending on the configuration set by your administrator.

- **Navigation bar**: When you select the bulb icon to open the assistant, insight cards are displayed in a pane as shown in the following example.



- **Dashboards**: Go to your dashboard and the **Assistant** widget is displayed in the **Sales Activity Social Dashboard** view.

- **Entities**: An assistant widget displays insight cards related to the following entities: accounts, contacts, leads, opportunities, and cases. The following image is an example of an assistant widget displayed on an entity.



What cards do I see?

- When you open the assistant by using the navigation bar or dashboard, you'll see the cards that you own or are part of a team that owns the card.

  > **Note**
  >
  > Meeting cards are special and displayed to users who are either the owner, organizer, or an attendee in the meeting.

- When you open the assistant through an entity record, you'll see the cards that belongs to the record or to related records. The list of related records varies from one entity to another:
  - **Account**: Account and its related contacts, opportunities, and incidents.
  - **Opportunity**: Opportunity and its related contacts.
  - **Incident**: Incident and its related contacts, and accounts.
  - **Lead**: Lead and its related contacts.
  - **Custom Entity**: Related accounts and contacts.
  - **All other entities**: The entity itself only.

How are insight cards categorized?

Insight cards are categorized either as notifications that need immediate attention, or insights that provide information to be acted on later.

- **Notifications** display insight cards about your upcoming—and past-due—items and events. They include **upcoming meetings** cards for any meetings scheduled for the day and **reminders** for items that require your attention.

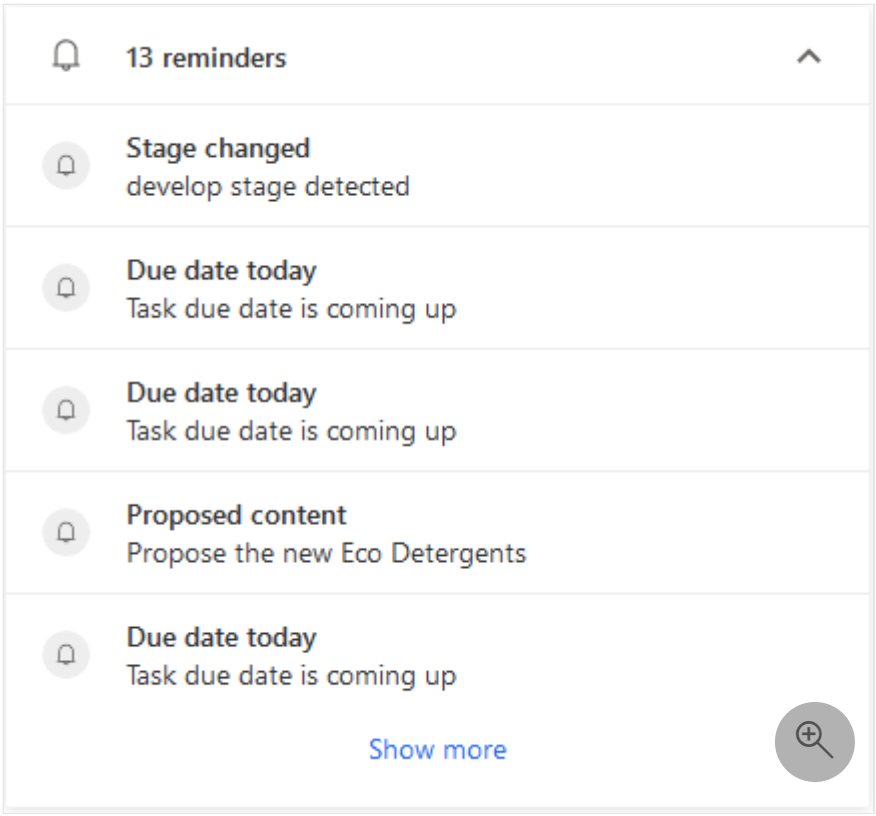
  > ⓘ **Note**
  >
  > Any custom insight cards created by your organization through Assistant Studio will be displayed as reminders.

- **Insights**: Displays suggestions based on AI-driven models for things that require your attention. For example, a card might highlight an email with a negative sentiment that could put an opportunity at risk, suggest ways to prioritize an opportunity, suggest a cross-sale, or prompt you to look at recent items that have been auto-captured.

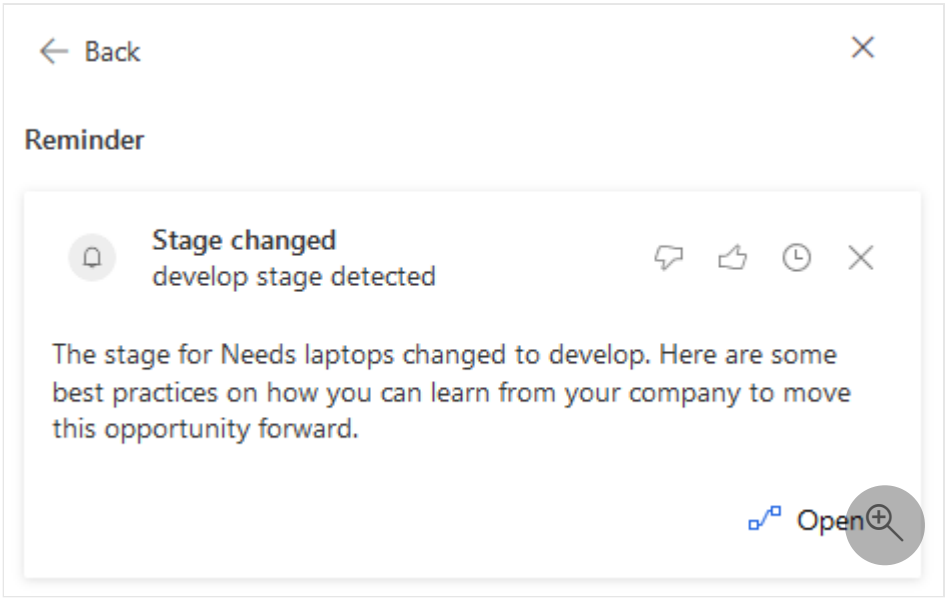
Characteristics of insight card categories

By default, the top five insight cards are displayed in the assistant for upcoming meetings, reminders, and insights. Select **Show more** to view more available cards. The heading displays the total number of insight cards that are available for you or for the record you're associated with in each category.

In this example, we're viewing the **reminders** category. The heading specifies that there's a total of 13 reminders available. The latest five are displayed, along with summary information about them.



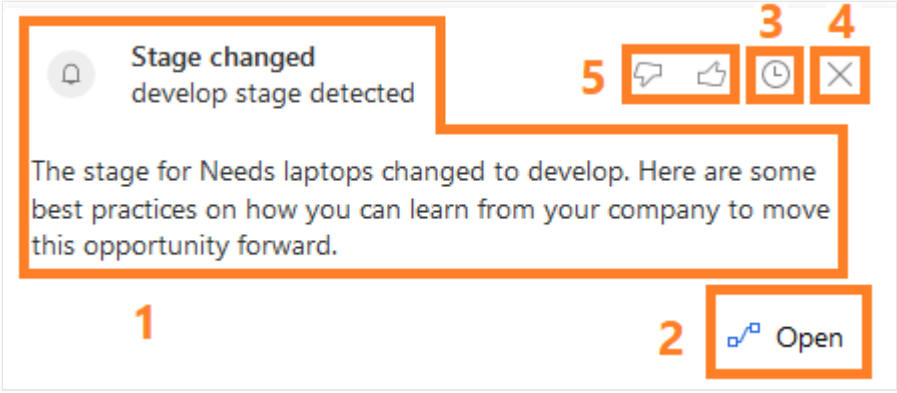
To view complete details of the activity, select the card. In this example, we've selected the meeting **Stage changed**. You can select **Open** to view more details.



You can perform actions such as open, snooze, dismiss, like, or dislike on the card. These actions are described in the following section.

Elements of an insight card

When you open the assistant, it displays the name and basic description of each card. Select and open the card to view further details. Typically, a card consists of the elements illustrated in the following image.



1. **Main content area**: Shows the title of the record the card refers to, its summary, card type, and other basic information.

2. **Actions area**: Provides convenient links to help you complete whatever action the card is recommending. The type of links and number of links (up to two) vary by card type. More information: Insight cards reference

3. **Snooze**: The snooze time varies by card type. All the high priority and cards of type Today will be snoozed for 1 hour, and all other cards will be snoozed for 24 hours. After the snooze time expires, the card will again be visible.

4. **Dismiss**: Select this button to dismiss the card permanently, regardless of whether you've completed the action it recommends.

   > **Note**
   >
   > - When you snooze or dismiss a card, a confirmation message is displayed for a specified time. If you don't undo the action before the time expires, the card is automatically snoozed or dismissed. You can configure how long to display the confirmation message. More information: **Configure Sales Insights Assistant**
   > - After a certain period of time, insight cards are automatically dismissed if no action has been performed on the cards.

5. **Feedback**: Helps you give feedback about whether the card was useful for you. The feedback helps Microsoft and your organization administrators to improve the card experience and make it more helpful for you. More information: View card usage metrics

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure the assistant
Turn on or off the insight cards
Insight cards reference

Turn on or off insight cards

Article • 10/18/2023

You can decide which insight cards you'd like to see or hide.

License and role requirements

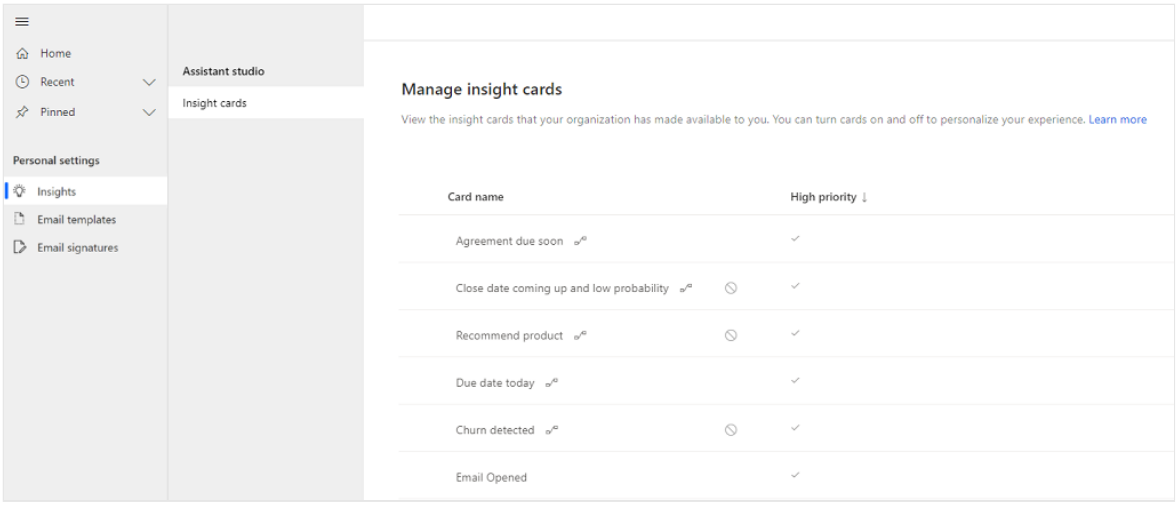
Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Turn on or off a card

> **Note**
>
> You can override the administrator configuration for certain cards, such as **No activity with a record**, where you can display the card when there is activity for the set number of days on the record. This configuration will be applicable only for you.

1. In the Sales Hub app, go to **Change area** in the lower-left corner of the page, and select **Personal settings** > **Insights**.
2. Under **Assistant studio**, select **Insight cards**.

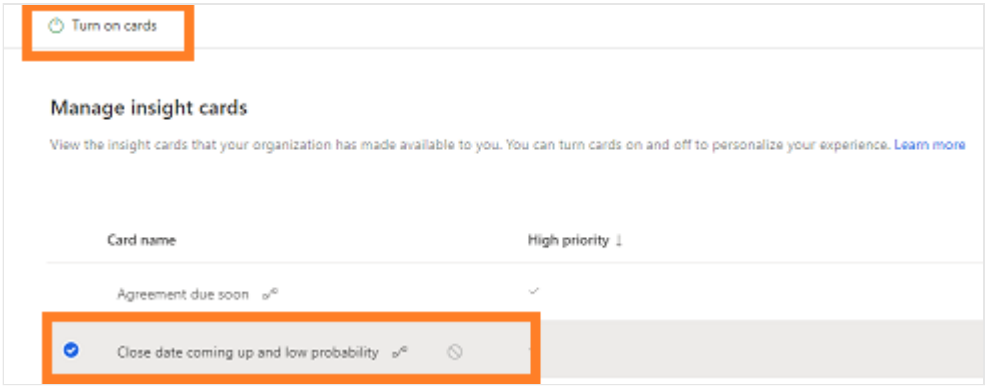
   The **Manage insight cards** page opens with the list of insight cards ordered by status and priority.



To turn on a card

Choose a card that's turned off, and then select **Turn on cards**.

Alternatively, you can select the **More options** icon on the card, and then select **Turn on card**.

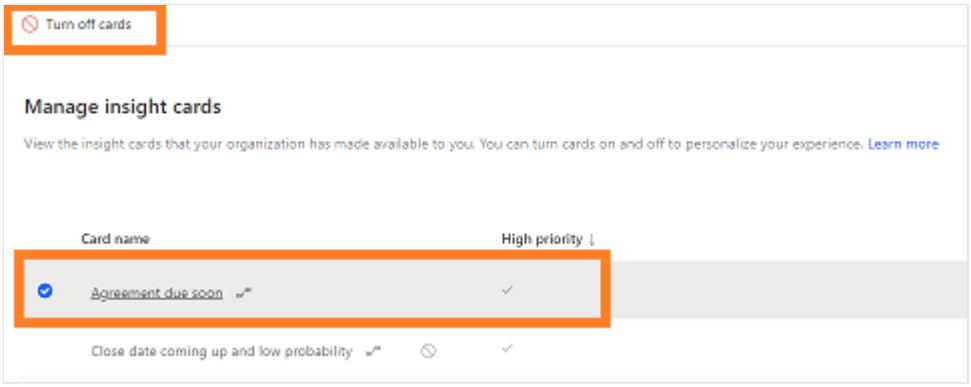


> **Note**
>
> You can select multiple cards that are turned off, and then turn them on simultaneously.

To turn off a card

Choose a card that's turned on, and then select **Turn off cards**. The card will no longer be displayed for you.

Alternatively, you can select the **More options** icon on the card, and then select **Turn off card**.



> **Note**
>
> You can select multiple cards that are turned on, and then turn them off simultaneously.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Use the assistant to guide customer communications
Insight cards reference

Default insight cards

Article • 09/08/2023

Insight cards help keep you up to date with your work in Dynamics 365 Sales, letting you know when you need to follow up on an email, attend a meeting, and much more. They're displayed throughout the application to provide relevant information for the context you're working in. The cards are generated by the assistant based on data stored in Dynamics 365 Sales and your Exchange inbox and calendar. This topic lists each of the available cards and provides details about what each card does, how it gets generated, and how you can use it. More information: Use Sales Insights Assistant to guide customer communications

Note

- Your system administrator must enable the assistant before you can try it out. For prerequisites, how to enable the feature, and how to set it up, see **Configure Sales Insights Assistant**.
- Some of the Exchange-based cards will be deprecated starting from Sunday, October 1, 2023. **Learn more**.

The assistant displays cards in the following categories:

- Upcoming meetings
- Reminders
- Insights

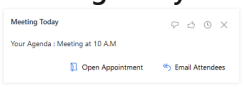
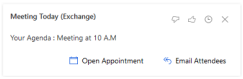
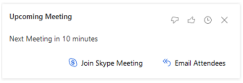
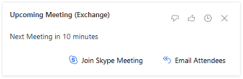
Upcoming meetings

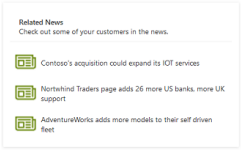
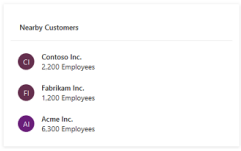
The following cards are available under **Upcoming meetings**.

Meeting today/Meeting today (Exchange)	Upcoming meeting/Upcoming meeting (Exchange)	Related news
Nearby customers		

Note

The standard insight card types are available to you with the Sales Enterprise license.

Insight card	Type	Description
Meeting today  **Meeting today (Exchange)**  	Standard	**Description**: Tells that you have a meeting scheduled for today. The **Meeting Today** card is derived from your appointments in the Dynamics 365 Sales organization. The **Meeting Today (Exchange)** card is derived from your **Exchange** server. **Features**: Shows the meeting title, with a link to the meeting record. Shows the meeting description, location, start time, and key participants. Open the detailed view to see the regarded entity and a collection of closely related insight cards, including relevant people, companies, opportunities, nearby customers, news, and more. **Actions**: Open Appointment Email Attendees
Upcoming Meeting  **Upcoming Meeting (Exchange)**  	Standard	**Description**: Tells that you have a meeting scheduled to start in 30 minutes or less. When available, this card is given highest priority and appears at the top of the stack. That way, you'll have all of your important meeting information available. The "meeting today" card is similar, but it's shown all day until the meeting ends, provides fewer features, and is given lower priority. **Features**: Shows the meeting title, with a link to the meeting record. Shows the meeting description (shortened for space if needed). Shows the regarding record (with link). Shows a list of attendees (with a link to the full list if there are more than four). Displays a map of the location (if relevant and available; not for online meetings). Open the detailed view to see a collection of closely related insight cards, including relevant people, companies, opportunities, news, and more. **Actions**: Join Meeting Email Attendees

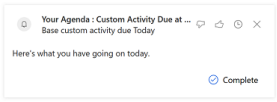
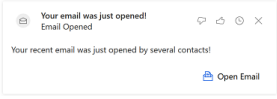
Insight card	Type	Description
Related News 	Standard	**Description**: The card displays news headlines related to companies that are **set as regarded** for the meeting. It's shown in the card details view when you tap a meeting card from the assistant feed. Only news in English is supported. You must have a ticker symbol defined for the company and it is used to fetch the news articles using Microsoft Bing and MSN Money. More information: Privacy notice for Sales Insights standard features **Features**: Shows the date when the news was last updated. Thumbnail image and headline for each found article. Select to view the full article.
Nearby Customers 	Standard	**Description**: The card finds customers that are located near the meeting location. It's shown in the card details view when you tap a meeting card from the assistant feed. **Features**: Shows the top three nearby customers. Shows basic information about each company.

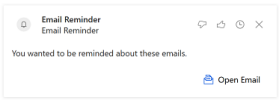
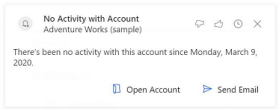
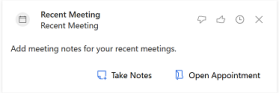
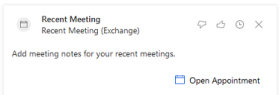
Reminders

The following cards are available under **Reminders**.

{*activity*} due today	Close date coming soon	Missed (opportunity) closed date
Email opened	Email reminder	No activity with {*record type*}
Recent meeting/Recent meeting (Exchange)	Missed email	

> **Note**
>
> - The standard insight card types are available to you with the Sales Enterprise license.
> - The premium insight card types are available to you with the Sales Insights license.

Insight card	Type	Description
{*Activity*} due today 	Standard	**Description**: Tells you that an open activity is due today. **Features**: Indicates the type of activity (email, letter, phone call, task, or custom). **Actions**: Close (for activities, such as phone call and task) Complete
Close date coming soon 	Standard	**Description**: Tells you that an open opportunity will soon reach its estimated close date. **Features**: Identifies the opportunity. Tells how far away the close date is. **Actions**: Open opportunity **Configuration options**: Set how many days before the close date to start showing the card. The default value is set by your administrator. **Note**: When you are viewing a dashboard, you'll only see these cards for opportunities that are assigned to you, but when you view a specific opportunity you'll see this card even if that opportunity is assigned to somebody else.
Missed (opportunity) close date 	Standard	**Description**: Tells you that an open opportunity has passed its close date. **Features**: Identifies the opportunity. **Actions**: Open opportunity **Note**: When you are viewing a dashboard, you'll only see these cards for opportunities that are assigned to you, but when viewing a specific opportunity you'll see this card even if that opportunity is assigned to somebody else.
Email opened 	Standard	**Description**: A followed email was opened by its recipient. **Features**: Names the contact you sent the email to. Provides descriptive text that shows the subject of the email, the time it was opened, and the approximate location where it was opened. **Actions**: Open Email **Prerequisites**:

Insight card	Type	Description
		Enable email engagement to use this card. To learn more, see Configure and enable email engagement.
Email reminder 	Standard	**Description**: You set a follow-up reminder for an email you recently sent, and its trigger conditions have just been met. Trigger conditions always include a date but may also include conditionals such as whether the email wasn't opened or replied to by that date. **Features**: Names the contact that you sent the email to. Tells you that you set a follow-up reminder for this email. Provides a description that summarizes the trigger conditions. **Actions**: Open Email **Prerequisites**: Enable email engagement to use this card. To learn more, see Configure and enable email engagement.
No activity with {*record type*} 	Standard	**Description**: Allows you to know that a record you own has been inactive for some time. Applies to contact, opportunity, lead, account, and case records. **Features**: Identifies the type and name of the relevant record. Explains why the card was generated. **Actions**: Open {*record type*} Send Email **Configuration options**: Set the number of days of inactivity that must pass before a card is generated. You can set a different value for each type of supported record (contact, opportunity, lead, account, and case).
Recent meeting  **Recent meeting (Exchange)** 	Standard	**Description**: Tells you that a meeting you organized (where you are the record owner) has recently ended, giving you an easy opportunity to document the meeting in Dynamics 365 Sales. The card is displayed for 30 minutes after the scheduled end of the meeting, and then removed. **Features**: Identifies the meeting. **Actions**: Take Notes (Only for recent meeting) Open Appointment

Insight card	Type	Description
Missed Email 	Standard	**Description**: Tells you that an important email is unread for a configured number of days. **Actions**: Open Email **Configuration options**: The threshold number of days configurable on the Settings page. To learn more, see Assistant. By default, the number of days for Unread email is three.

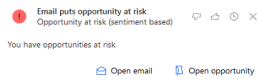
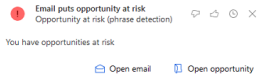
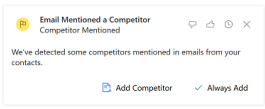
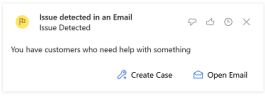
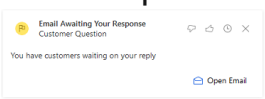
Insights

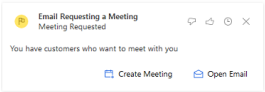
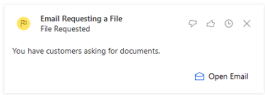
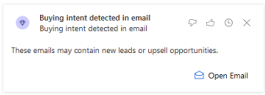
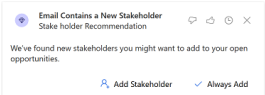
The following cards are available under **Insights**.

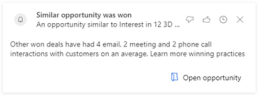
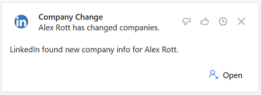
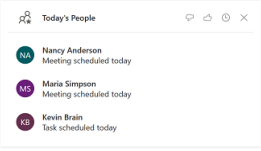
Opportunity at risk (sentiment detection)	Opportunity at risk (phrase detection)	Competitor mentioned
Issue detected	Customer question	Meeting requested
File requested	Buying intent detected in email	Suggested stakeholder
Relationship analytics	Contact is no longer with the company	Today's top people
Today's top records	Upcoming flight	

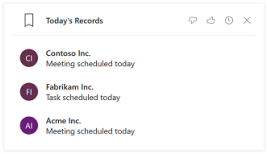
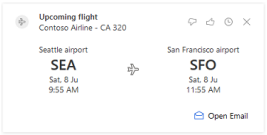
> **Note**
>
> - The standard insight card types are available to you with the Sales Enterprise license.
> - The premium insight card types are available to you with the Sales Insights license.
> - The premium insight card types that get data from LinkedIn require the Sales Navigator license.

Insight card	Type	Description
Opportunity at Risk (sentiment	Standard	**Description**: Tells you when an email is received concerning an open opportunity with negative sentiment, which can put the

Insight card	Type	Description
detection) 		opportunity at risk. **Actions**: Open Email Open opportunity
Opportunity at Risk (phrase detection) 	Standard	**Description**: Tells you when an email is received concerning an open opportunity that contains a phrase about legal, delay, or budget issues that can put the opportunity at risk. **Actions**: Open Email Open opportunity
Competitor mentioned 	Standard	**Description**: A tracked email that is set as regarding a sales opportunity appears to refer to a company that is listed as a competitor in your system. **Actions**: Add Competitor Always Add **Configuration options**: Set this feature to add the competitor automatically rather than showing the card. **Note**: This is the same as the configuration setting available for this card type, and you can reset it by going to your Assistant settings. To learn more, see Assistant.
Issue detected 	Standard	**Description**: An email from a known contact in your inbox appears to include a support request. **Features**: Shows the name of the contact. Tells you that an email that appears to include a support request has arrived. Displays the sentence from the email that appears to be asking for help. **Actions**: Create Case Open Email
Customer question 	Standard	**Description**: An email from a known contact in your inbox appears to be asking a question. **Features**: Shows the name of the contact. Tells you that a question has arrived. Displays the sentence from the email that appears to be asking a simple question.

Insight card	Type	Description
		Actions: Open Email
Meeting requested 	Standard	**Description**: An email from a known contact in your inbox appears to include a meeting request. **Features**: Shows the name of the contact. Tells you that a meeting request has arrived. Displays the sentence from the email that appears to be asking for a meeting. **Actions**: Create Meeting Open Email
File requested 	Standard	**Description**: An email from a known contact in your inbox appears to include a request for a file. **Features**: Shows the name of the contact. Tells you that a request for a file has arrived. Displays the sentence from the email that appears to be asking for a file. **Actions**: Open Email
Buying intent detected in email 	Standard	**Description**: An email received from a known or unknown contact requesting more information about a product. For known contacts, this may be an upsell opportunity. For unknown contacts, this could be a new lead. **Features**: Shows the name of the sender. Tells you that an email has arrived that may represent an upsell or new-lead opportunity. Displays the sentence from the email that is requesting more information about a product. **Actions**: Open email
Suggested stakeholder 	Standard	**Description**: An email regarding an open opportunity has arrived, and it includes an extra recipient that is not yet listed as a stakeholder for that opportunity. **Features**: Shows the name of the potential stakeholder. Tells you that this person might be a stakeholder in an open opportunity.

Insight card	Type	Description
		Displays a short description that includes the name of the opportunity. **Actions**: Add Stakeholder Always Add **Configuration options**: You can choose to add the stakeholder automatically rather than show the card. **Note**: This is the same as the configuration setting available for this card type, and you can reset it by going to your Assistant settings. To learn more, see Assistant.
Relationship analytics 	Premium	**Description**: This card is provided as an alert when you have an opportunity that is similar to deals that were won recently. **Feature**: Indicates that the current opportunity is similar to the opportunities that had been previously won. **Actions**: Open opportunity By selecting the action, you can view comparable information on the KPIs, graphs, activity history, and relationship health with similar deals that had been won. **Prerequisite**: Enable preview to view similar opportunities in Relationship analytics to use this card. To learn more, see Configure Relationship analytics. You must purchase a Sales Insights license.
Contact is no longer with the company 	Premium	**Description**: Tells you that one of your contacts has left the company based on the information LinkedIn has. **Actions**: Open – Opens the contact record **Prerequisite**: Users should have a **LinkedIn Sales Navigator** license to use this card. To learn more, see Install, enable, and disable default LinkedIn Sales Navigator controls.
Today's Top People 	Standard	**Description**: The system analyzes your appointments, tasks, and other work for the day and generates this card to show the contacts you're most likely to interact with today. **Features**: Shows each contact's name and portrait. Shows each contact's title and any business they have with you today (such as a meeting, task, or phone call). Click to view full contact details.

Insight card	Type	Description
Today's Top Records 	Standard	**Description**: The system analyzes all of the Sales records that are related to you and lists the records that you are most likely to be working with today based on your recent activities and date information (such as a due date or appointment) in each record. **Features**: Shows a thumbnail image and a summary of each found record. Click to view the full record.
Upcoming Flight 	Standard	**Description**: This card is generated when your Exchange inbox includes an email message that contains a flight confirmation. The system then matches the flight dates to upcoming meetings and finds other information related to the location that you are flying to, such as other nearby customers. **Note**: This card doesn't show live or updated flight information, just information from the flight confirmation email message that triggered the card. **Features**: Flight company and flight number, with a link to the flight record. Departure and arrival times, with airport codes. Related meeting record, with link. Up to three meetings may be listed here. List of customer offices near the destination airport, with links. **Actions**: Open Email

See also

Use the assistant to guide customer communications

Turn on or off the insight cards

Relationship analytics and KPIs overview

Article • 10/10/2023

> **Important**
>
> This feature is intended to help sellers or sales managers enhance their team's performance. This feature is not intended for use in making, and should not be used to make, decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with end users. This also includes adequately notifying end users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from end users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with end users may be monitored, recorded, or stored.

Relationship analytics uses the activity history of a seller with a contact or account and calculates KPIs based on their interactions. The KPIs are available at various levels such as, contact, account, opportunity, and lead. The graphical display of the KPIs help you quickly identify relationships that need to be nurtured and the KPIs to be improved for the same.

Relationship analytics help sales professionals and managers answer questions such as:

- Which opportunities should I spend my time on?
- Do we have a good relationship with the customer?
- How much time have we spent with our customer?
- When was the last time we contacted them?
- When is the next time we will contact them?
- How many emails and meetings have we exchanged?
- What is the customer's response rate?
- How many activities were initiated by the customer?
- How long does it take our team to respond?

Depending on your license and configuration, you get the following insights:

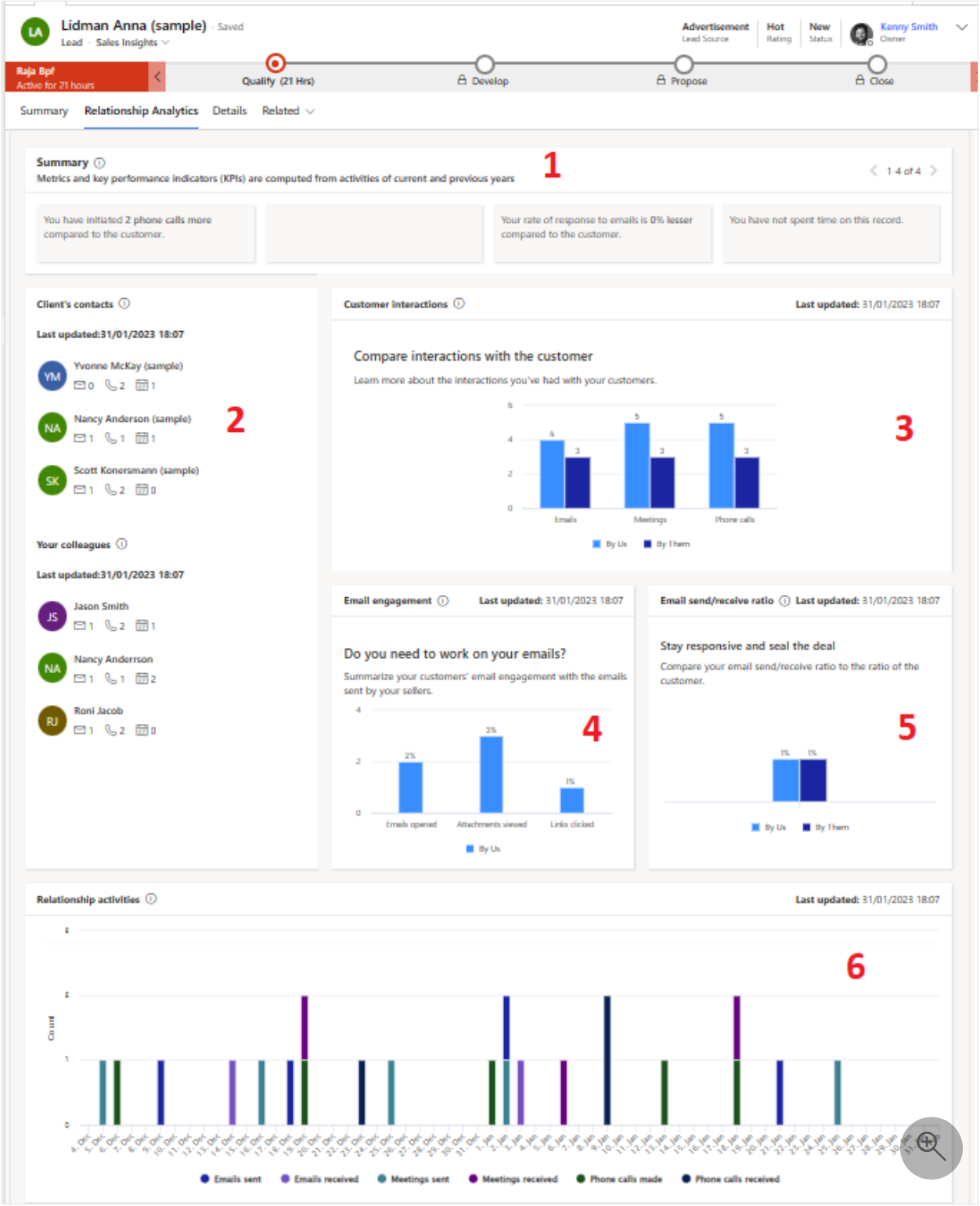
- Basic relationship insights

- Enhanced relationship insights

Basic relationship insights

Basic relationship insights are generated by using emails and appointments sent and received from Dynamics 365. These insights are available out-of-the-box and don't require any setup. The seller-customer interaction history is used to calculate KPIs and understand who knows whom. For information on how to view the insights, View analytics and KPIs for a record

The following screenshot displays the widgets that are available out-of-the-box in the **Relationship Analytics** tab of a lead. Similar widgets are also available in Contact, Account, and Opportunity entities.



Number	Widget	Description	Available for
1	Summary	Shows the summary of metrics and KPIs obtained for the records from your interactions with customers through emails, meetings, and phone calls. For example, *You have initiated 3 meetings more compared to the customer.*	Account, Contact, Lead, Opportunity
2	Most contacted and Most contacted by	Shows the top three active contacts for the deal from your and your customer's organizations, with details about the number of times they've interacted and the modes of interaction. The **Last**	Account, Lead, and Opportunity

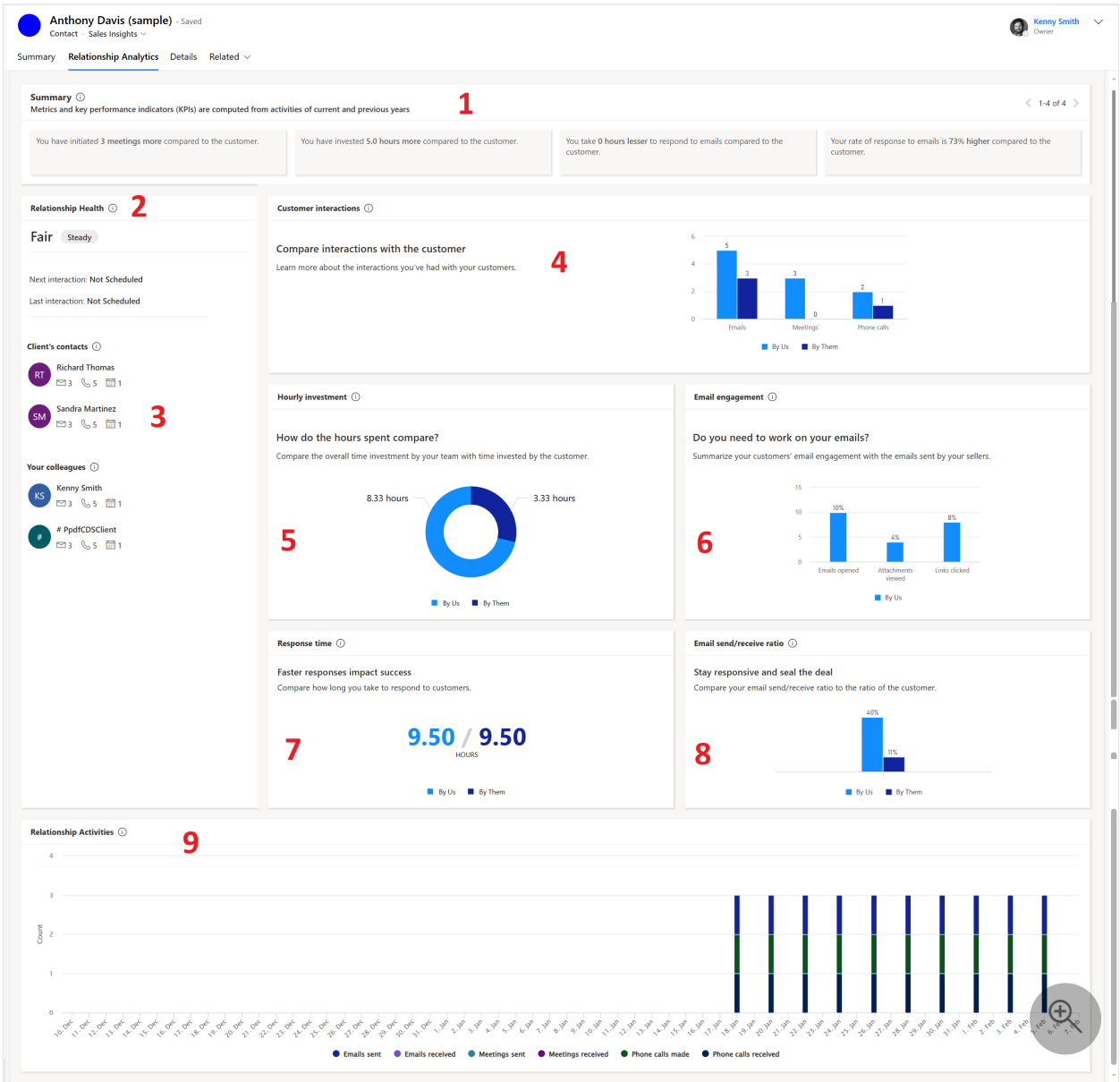
Number	Widget	Description	Available for
		updated date shows the timestamp of the last KPI calculation.	
3	Customer interactions	Shows the number of interactions initiated by you versus your customer's contacts. The graph displays the total number of activities initiated by members of your team and by the customer's contacts. The activities are broken down by general type, such as email, meetings, and phone calls.	Account, Contact, Lead, Opportunity
4	Email engagement	Summarizes how your customer has interacted with the followed emails that your team has sent to them. Unfollowed emails are not included, so you must enable and use the email-engagement feature to see any information here. More information: Use email engagement to view message interactions.	Account, Contact, Lead, Opportunity
5	Email sent/received ratio	Compares the number of emails sent by the seller and customer, and displays the following ratios: **By them**: Indicates the ratio of emails sent by customer as compared to the emails sent by seller. A high ratio means the customer is more active and interested in the conversation. A low customer sent/received ratio means the customer is less responsive and may need more attention or follow-up. **By us**: Indicates the ratio of emails sent by the seller as compared to the emails sent by the customer. A high seller sent/received ratio means the seller is more proactive and helpful in the conversation. A low seller sent/received ratio means the seller is less engaged and may need to improve their communication skills or offer more value.	Account, Contact, Lead, Opportunity
6	Relationship activities	Provides a detailed look at activities over 60 days, broken down by date and activity type, such as emails sent, emails received, meetings sent, meetings received, phone calls made, and phone calls received. Use this widget to view the seller-customer interactions over the last 60 days and gain insight into interaction frequency and period of non-interaction. You can use this insight to define healthy interaction frequency.	Account, Contact, Lead, Opportunity

Enhanced relationship insights

Enhanced relationship insights are available with the Sales Premium license and requires your administrator to enable and configure relationship intelligence. Your administrator can configure relationship intelligence to use the Exchange data as well. In this case, the insights will be generated based on emails and meetings information in Dynamics 365 and emails in Microsoft Exchange. More information: Enable relationship intelligence

For information on how to view the insights, see View analytics and KPIs for a record.

The following screenshot displays the enhanced relationship insights that are available in the **Relationship Analytics** tab of an opportunity. Similar widgets are also available in Contact, Account, and Lead entities. For Opportunity records, the KPIs are compared with similar won deals. For more information, see Compare the KPIs of an opportunity with similar opportunities.



Number	Widget	Description	Available for
1	Summary	Shows the summary of metrics and KPIs obtained for the records from your interactions with customers through emails, meetings, and phone calls. For example, *You have initiated 3 meetings more compared to the customer.*	Account, Contact, Lead, Opportunity
2	Relationship health	Shows your overall relationship health with the customer, and includes the recent trend for the deal. - **Next interaction.** Shows the date and time for the next activity that's scheduled for the record. If you have access to that activity, you'll also see its name or subject. The next and last interactions are only shown for opportunity and lead entities. - **Last interaction.** Shows the date and time for the last activity that you completed for the record. If you have access to that activity, you'll also see its name or subject. The next and last interactions are only shown for opportunity and lead entities.	Contact, Lead, Opportunity
3	Most contacted and Most contacted by	Shows the top three most active contacts for the deal from you and your customer's organizations, with details about the last time these contacts interacted.	Account, Lead, and Opportunity
4	Customer interactions	Shows the number of interactions initiated by you versus your customer's contacts. The graph displays the total number of activities initiated by members of your team and by the customer's contacts. The activities are broken down by general type, such as email, meetings, and phone calls.	Account, Contact, Lead, Opportunity
5	Hourly investment	Use this widget to compare the time spent by sellers versus the customer's contacts on a specific record. For more information on how this value is calculated, see Relationship analytics KPI calculations	Account, Lead, and Opportunity
6	Email engagement	Summarizes how your customer has interacted with the followed emails that your team has sent to them. Unfollowed emails are not included, so you must enable and use the email-engagement feature to see any information here. More information: Use email engagement to view message interactions.	Account, Contact, Lead, Opportunity
7	Response time	Shows the average amount of time taken by your sellers to respond to customer emails as compared	Account, Contact

Number	Widget	Description	Available for
		to the time taken by your customers to respond. Connect to Exchange Online to view data in this widget.	
8	Email sent/received ratio	Compares the number of emails sent by the seller and customer, and displays the following ratios: **By them**: Indicates the ratio of emails sent by customer as compared to the emails sent by seller. A high ratio means the customer is more active and interested in the conversation. A low customer sent/received ratio means the customer is less responsive and may need more attention or follow-up. **By us**: Indicates the ratio of emails sent by the seller as compared to the emails sent by the customer. A high seller sent/received ratio means the seller is more proactive and helpful in the conversation. A low seller sent/received ratio means the seller is less engaged and may need to improve their communication skills or offer more value.	Account, Contact, Lead, Opportunity
9	Relationship activities	Provides a detailed look at activities over 60 days, broken down by date and activity type, such as emails sent, emails received, meetings sent, meetings received, phone calls made, and phone calls received. Use this widget to view the seller-customer interactions over the last 60 days and gain insight into interaction frequency and period of non-interaction. You can use this insight to define healthy interaction frequency.	Account, Contact, Lead, Opportunity
10	Similar won deals (**not shown in the screenshot**)	Shows the list of similar opportunities that have been closed as won. The columns display activities count, time spent, response time, and the response ratio for each opportunity. You can select and open an opportunity to view what has worked better in a deal that was closed as won, and implement these observations in the current deal to help close it as well. The list is refreshed every seven days. To know how the similar won deals are identified, see How are similar won deals identified?	Opportunity

Relationship analytics KPI calculations

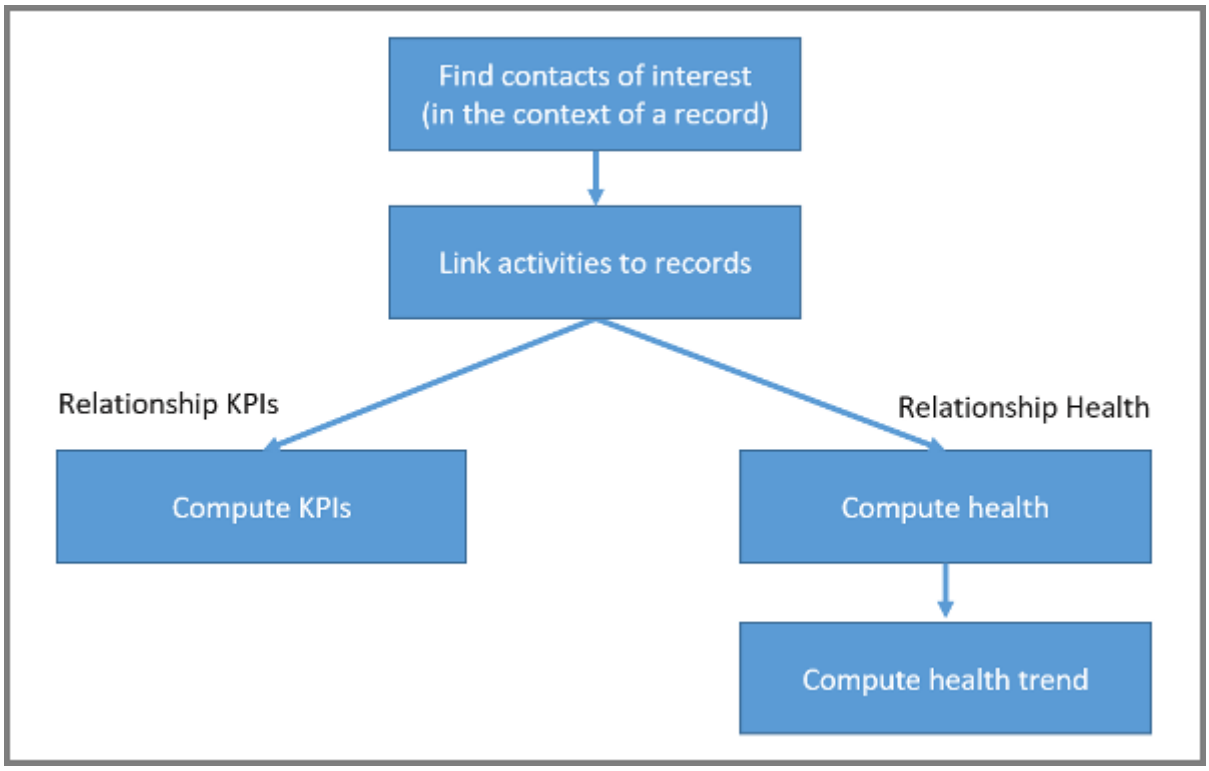
Article • 02/07/2023

Relationship analytics values are derived from a careful analysis of the many related people, activities, companies, appointments, and emails stored on your Dynamics 365 Sales and Microsoft Exchange servers. Exchange data is only available for Sales Premium customers.

More information: View relationship analytics and KPIs

How relationship analytics KPIs are calculated?

The process for finding and calculating the scores is summarized in the following flow chart.



The following sections describe the function of each block in the flow chart.

Step 1: Find contacts of interest for the record

Relationship analytics is concerned with activities performed by the *people* associated with a given record. The first step in finding the relevant activities is to find out which contacts to include in the analysis. Relationship analytics also provides time-spent values for you, your team, and your customer's team, so the identity of who did what is important throughout the process.

This table shows how the system finds contacts that have an interest in each type of record. Later, the system will look for activities associated with each contact and decide which of those activities should be included in KPI calculations for that record.

Records	Internal contacts	External contacts
Account	- Any Dynamics 365 Sales user.	- The **Primary Contact** for the account. - All contacts in the account's **Contacts** list.
Opportunity	- The **Owner** of the opportunity record. - All users in the opportunity's **Sales Team** list.	- The customer **Contact** listed for the opportunity. - All contacts in the opportunity's **Stakeholders** list. - The primary contact for the related **Account** record.
Lead	- The **Owner** of the lead record.	- Contact information in the lead's **Contact** section. - All contacts in the lead's **Stakeholders** list.
Contact	- Any Dynamics 365 Sales user.	- Contact information in the contact's **Contact** section.

Step 2: Link activities to the record

Once the system has identified contacts of interest, it looks for activities associated with each contact and then identifies which activities to include in the relationship analytics for the record you are looking at. It identifies relevant activities as follows:

- **Regarding records.** Any activity that has its **Regarding** value set to the current record is explicitly assigned to it and will always be included in its relationship analytics, even if that activity isn't also associated with a contact of interest.
- **Email messages.** Includes all metadata from messages where the email address (or a reference to the contact record) for a contact of interest is shown in the **To**, **Cc**, or **From** field.
- **Appointments.** Includes all metadata from appointments where a contact of interest is shown in the **Required** or **Optional** fields.
- **Phone calls.** Includes all calls where a contact of interest is shown in the **From** or **To** fields.

Examples of how relevant activities are identified

Here are a few examples of how the rules outlined in the previous sections might be applied:

- If you are assigned to a lead and register a phone call activity with one of the stakeholders for that lead, then that phone call will be counted in the KPIs for that lead. Other users who call that same stakeholder, but who are not assigned to the lead, will not have their calls counted in the KPIs for that lead.
- If you are on the sales team for an opportunity and send an email regarding that opportunity to one of its stakeholders, then the metadata about that email will be counted in the KPIs for that account. An email from another user, who isn't on the team for that account, to that same stakeholder will not be counted for that opportunity.
- If you attend a meeting with the primary contact for an account, then the metadata about that appointment will be counted in the KPIs for that account and for that contact. If that account is also associated with an opportunity, the appointment will only count for that opportunity if you are also **Assigned** to that opportunity (or are on its **Sales Team**) and if the appointment is set as **Regarding** that opportunity.

Step 3: Compute relationship analytics KPIs

After the system has found all the relevant activities, it's ready to calculate the KPIs and other analytics for each record. The following table summarizes the KPIs that are available.

Activity type	Initiated or completed by your team	Initiated or completed by the customer's team
Emails	Total number Total time spent Time line (number per week) Number of replies	Total number Total time spent Time line (number per week) Number of replies Interaction results for followed emails (opens, attachment views, and link views)

Activity type	Initiated or completed by your team	Initiated or completed by the customer's team
Appointments	Total number	Total number
	Total time spent by your team (if several team members were present at an appointment, then the duration is multiplied by the number of team members present)	Total time spent (not multiplied by the number of customer contacts that were present)
	Time line (number per week)	Time line (number per week)
Phone calls	Total number	Total number
	Total time spent	Total time spent
	Time line (number per week)	Time line (number per week)
Overall (all activities)	Total time spent	Total time spent

> **Note**
>
> Email interaction statistics are only provided for *followed emails*, which requires you to use the *email engagement* feature. For more information about how to create and send followed emails, see **Use email engagement to view message interactions**.

For KPIs that report your team and your customer, the system finds durations by applying the rules outlined in the following table:

Activity type	Source of duration value
Appointments	**Duration** field for the appointment record
Calls	**Duration** field for the phone call record
Emails	Estimated (2.5 minutes to read, 5 minutes to write)
Other	**Duration** field for each record

> **Tip**

The time calculations for appointments are a bit special. The details are given in the previous tables, but here's an example to illustrate it. <br/

If you hold an appointment where three members of your team (including you) meet with two members of your customer's team, and the appointment lasts for 30 minutes, then that appointment contributes to your time KPIs as follows:

- **Time spent by my team**: *90 minutes* (30 minutes × 3 team members present)
- **Time spent by the customer**: *30 minutes* (time isn't multiplied by customer participants)

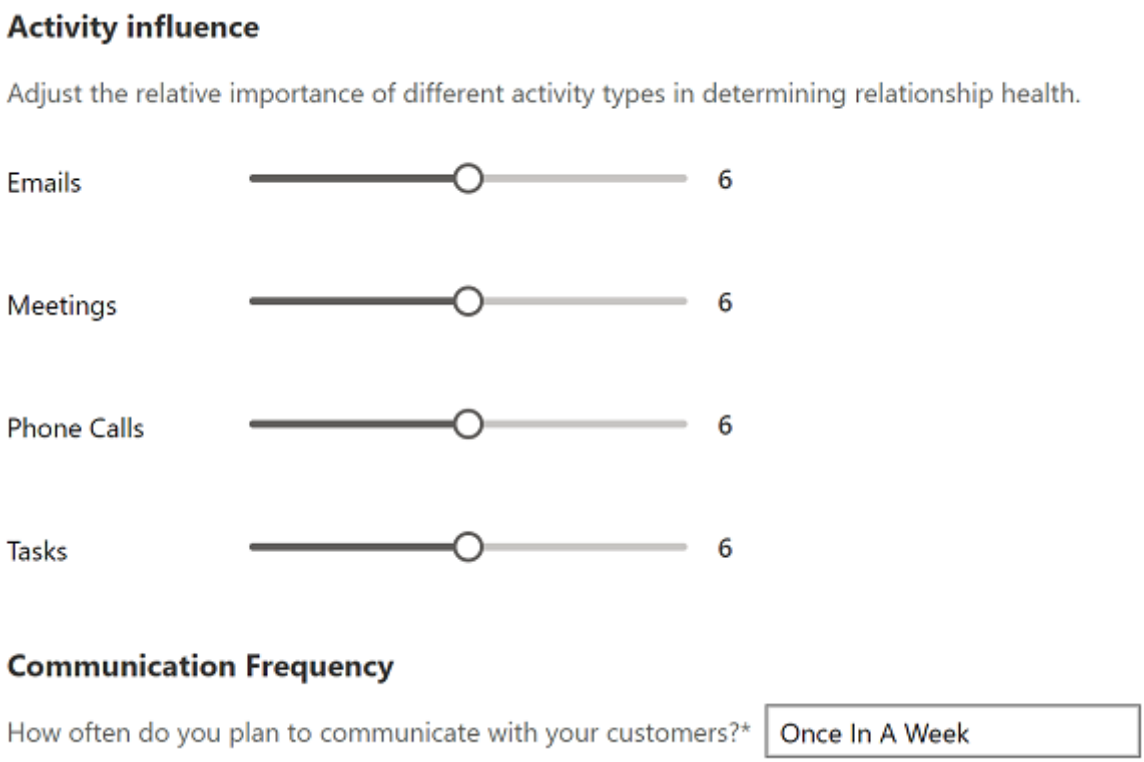
Step 4: Compute the relationship health and health trend

The overall relationship health score is calculated by collecting the relevant activities, and weighting the activity by type (which enables your admin to set some types of activities to count more than others). The result is normalized to produce a health score between 0 and 100, and the health characterized as *good* (for a score of 60-100), *fair* (40-59) or *poor* (0-39).

Note:

- Health scores are computed for leads if they are in an active state. This stops once they reach a qualified or disqualified state.
- Health scores are computed for opportunities if the opportunity is open and ignored if it’s won or lost.
- Health scores are computed for contacts irrespective of their state.

Your administrator can choose which types of activities are most relevant for your business. By default, all types of activities count the same, but your admin can increase or decrease the contribution of each type by up to 50 percent. In addition, your admin can choose how often salespeople should contact a customer (such as once a week); this setting also affects the health score.



In addition to the absolute health score, the system also reports the general trend (up, down, or neutral) based on the number and value of recent activities. The trend direction updates relatively slowly, so it might take a little while to indicate a recent increase or decrease in activity.

Improve customer relationship with relationship analytics

Article • 04/21/2023

Relationship analytics uses the activity history of a seller with a contact or account and calculates KPIs based on their interactions. The KPIs are available at various levels such as, contact, account, opportunity, and lead. The graphical display of the KPIs help you quickly identify relationships that need to be nurtured and the KPIs to be improved for the same.

Depending on your license and configuration, you'll either see basic insights or enhanced insights. Basic insights are available for early access.

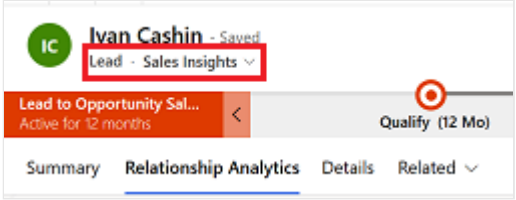
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise or Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

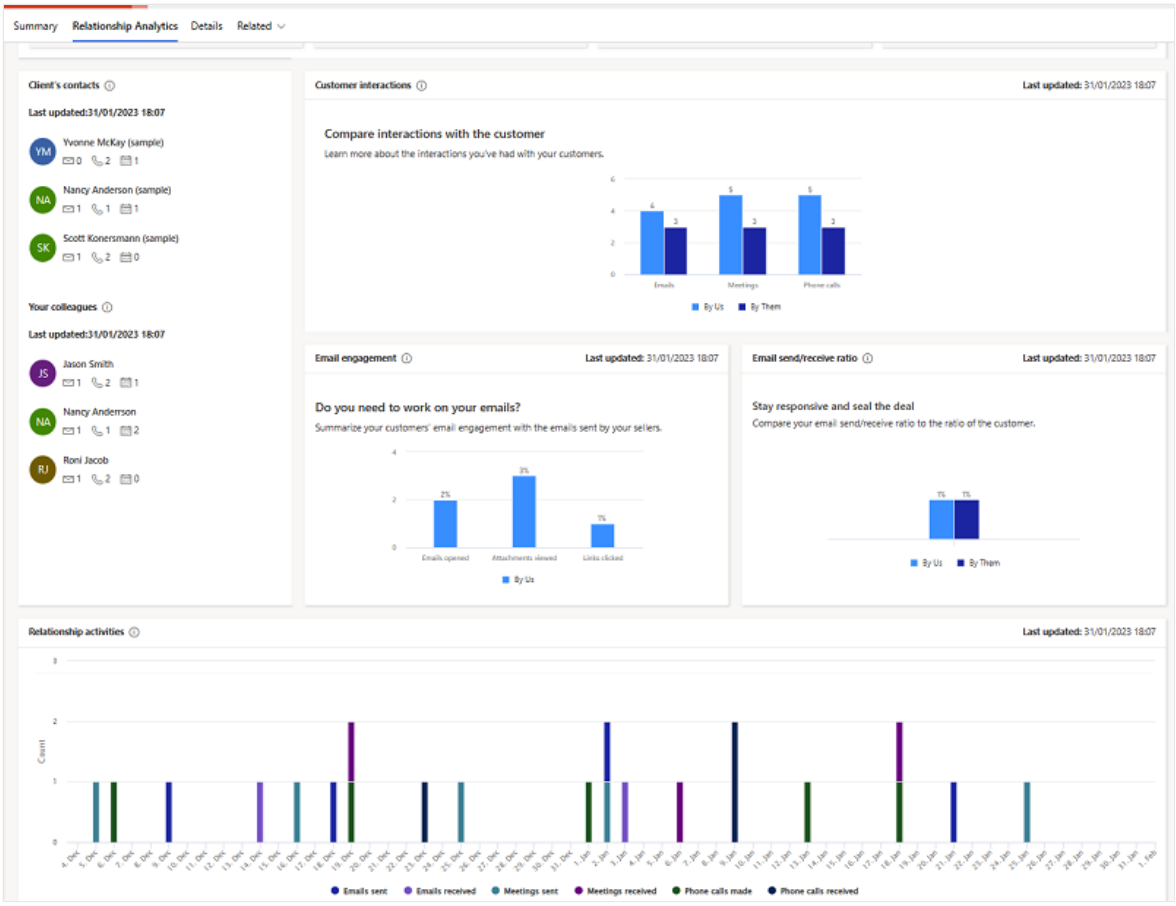
View analytics and KPIs for a record

The record-level analytics includes graphs for each KPI and provides a drill-down of the activities. The following steps describe how to access the analytics page for a lead. Use similar steps to view relationship analytics for account, contact, and opportunity records.

1. In the Sales Hub app, select **Leads** and open a lead.
2. Select the **Sales Insights** form from the drop-down.



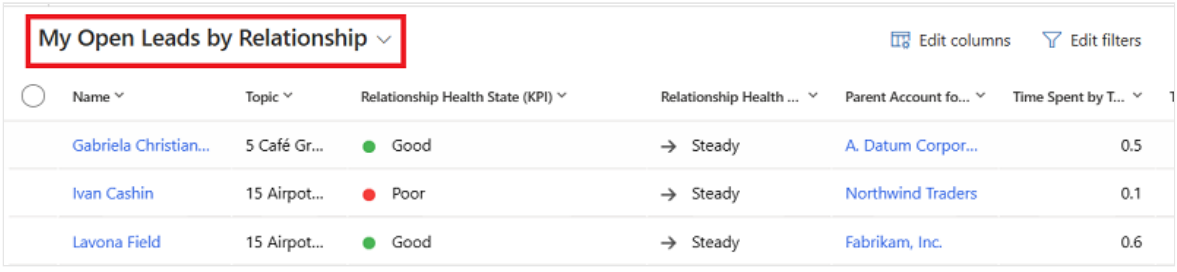
3. Select the **Relationship Analytics** tab. The tab includes widgets that display useful relationship insights.



Get the big picture with the relationship analytics view

The relationship analytics view lists the relationship KPIs and health for all your open records such as open opportunities, leads, accounts, and contacts. The following steps describe how to view the relationship analytics for all your open leads. Use similar steps to view relationship analytics for all your open accounts, contacts, and opportunities.

1. In the Sales Hub app, select **Leads**.
2. From the views drop-down, select **My Open Leads by Relationship**.



The list view provides the following information for contacts, opportunities, leads, and accounts:

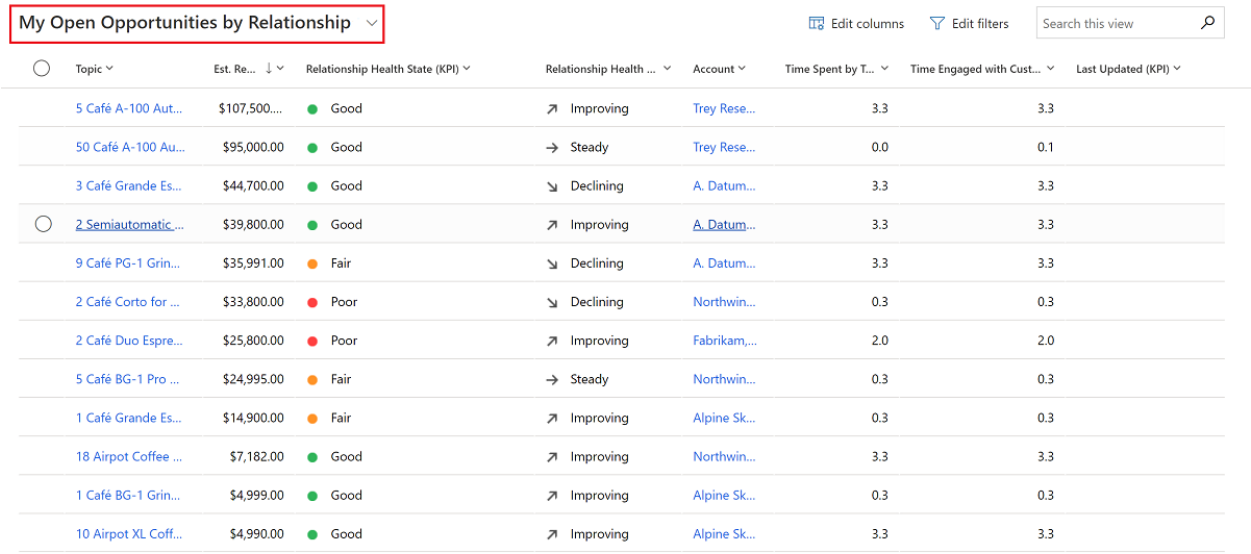
- Activity history and KPIs for contact, opportunity, lead, and account records.

- Health score and health trend for contact, opportunity, and lead records. The most important KPIs (including your team's previous and next activity) are shown in the list view for each of these record types, so you can get an overview and sort the list by them.

Identify critical opportunities with the relationship pipeline view

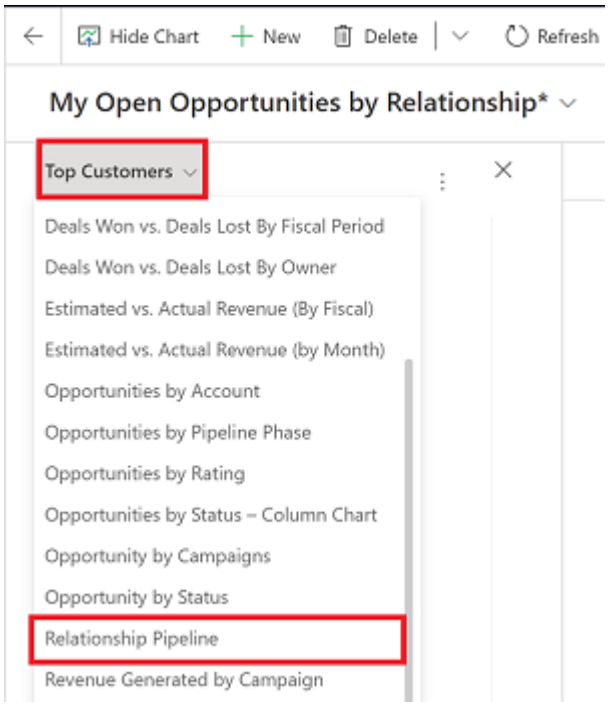
The relationship pipeline view provides a bubble chart that gives you a quick overview of the health, close date, and estimated revenue for your upcoming opportunities. To view it:

1. Go to **Sales** > **Opportunities**.
2. From the drop-down menu, select **My Open Opportunities by Relationship**.

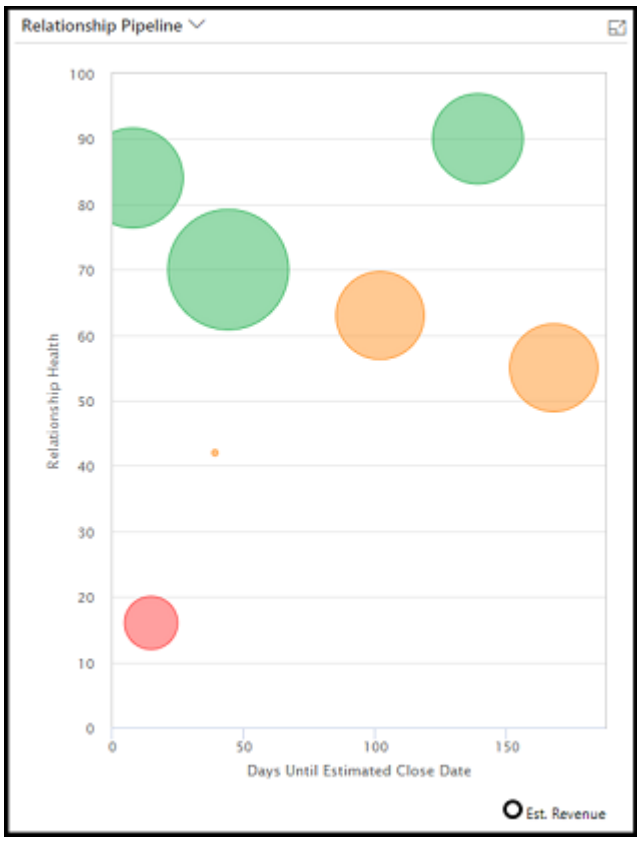


Topic	Est. Re...	Relationship Health State (KPI)	Relationship Health ...	Account	Time Spent by T...	Time Engaged with Cust...	Last Updated (KPI)
5 Café A-100 Aut...	$107,500....	Good	Improving	Trey Rese...	3.3	3.3	
50 Café A-100 Au...	$95,000.00	Good	Steady	Trey Rese...	0.0	0.1	
3 Café Grande Es...	$44,700.00	Good	Declining	A. Datum...	3.3	3.3	
2 Semiautomatic ...	$39,800.00	Good	Improving	A. Datum...	3.3	3.3	
9 Café PG-1 Grin...	$35,991.00	Fair	Declining	A. Datum...	3.3	3.3	
2 Café Corto for ...	$33,800.00	Poor	Declining	Northwin...	0.3	0.3	
2 Café Duo Espre...	$25,800.00	Poor	Improving	Fabrikam,...	2.0	2.0	
5 Café BG-1 Pro ...	$24,995.00	Fair	Steady	Northwin...	0.3	0.3	
1 Café Grande Es...	$14,900.00	Fair	Improving	Alpine Sk...	0.3	0.3	
18 Airpot Coffee ...	$7,182.00	Good	Improving	Northwin...	3.3	3.3	
1 Café BG-1 Grin...	$4,999.00	Good	Improving	Alpine Sk...	0.3	0.3	
10 Airpot XL Coff...	$4,990.00	Good	Improving	Alpine Sk...	3.3	3.3	

1. From the command bar, select **Show Chart**.
2. At the top of the charts pane, open the drop-down list, and then select **Relationship Pipeline**.



The relationship pipeline chart appears.



Each upcoming opportunity is plotted as a bubble on the relationship pipeline chart. The size of each bubble indicates the estimated revenue of the opportunity. Health is plotted on the y-axis, so the higher up the bubble appears on the chart, the higher its health. Estimated close date is plotted on the x-axis, so opportunities on the left side of the chart may expire soon. So, the most critical opportunities are those with the largest bubbles located near the lower-left corner, while the most promising opportunities are near the top of the chart.

Hover over a bubble to see the name of the opportunity and other details. Select a bubble to open its opportunity record. The color of each bubble indicates relationship health:

- green for good
- amber for fair
- red for poor
- blue for pending computation
- gray for no computation (indicates that the results have not been calculated, or that there is not enough data)

The relationship pipeline chart relies on several values being available for each opportunity record, but in some cases, these values may be missing for some or all opportunities. This could be due to an oversight, or it could be because you don't use these fields at your organization. The chart represents missing values as follows:

- Opportunities that don't have a relationship health value are gray, with a value of zero. They are plotted at the bottom of the chart.
- Opportunities with an estimated close date in the past are not shown.
- Opportunities without an estimated close date are not shown.
- Opportunities without an estimated revenue value show a value of zero. They are plotted as very small bubbles.

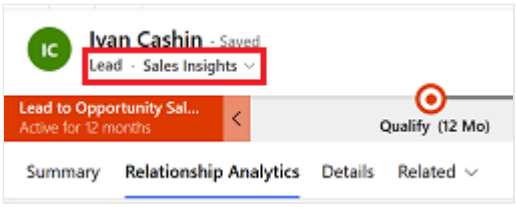
Compare the KPIs of an opportunity with similar opportunities

As a seller, it's important for you to understand what's working better for a deal and learn about the best engagement practices from similar deals that were won in the past. The enhanced relationship analytics displays comparable information on the KPIs, graphs, activity history, and relationship health with similar deals that were won. Also, a list of similar deals that were won is displayed at the bottom. By opening the deals, you can learn what has worked and what didn't work, and implement these learnings in the deal you're currently trying to close.

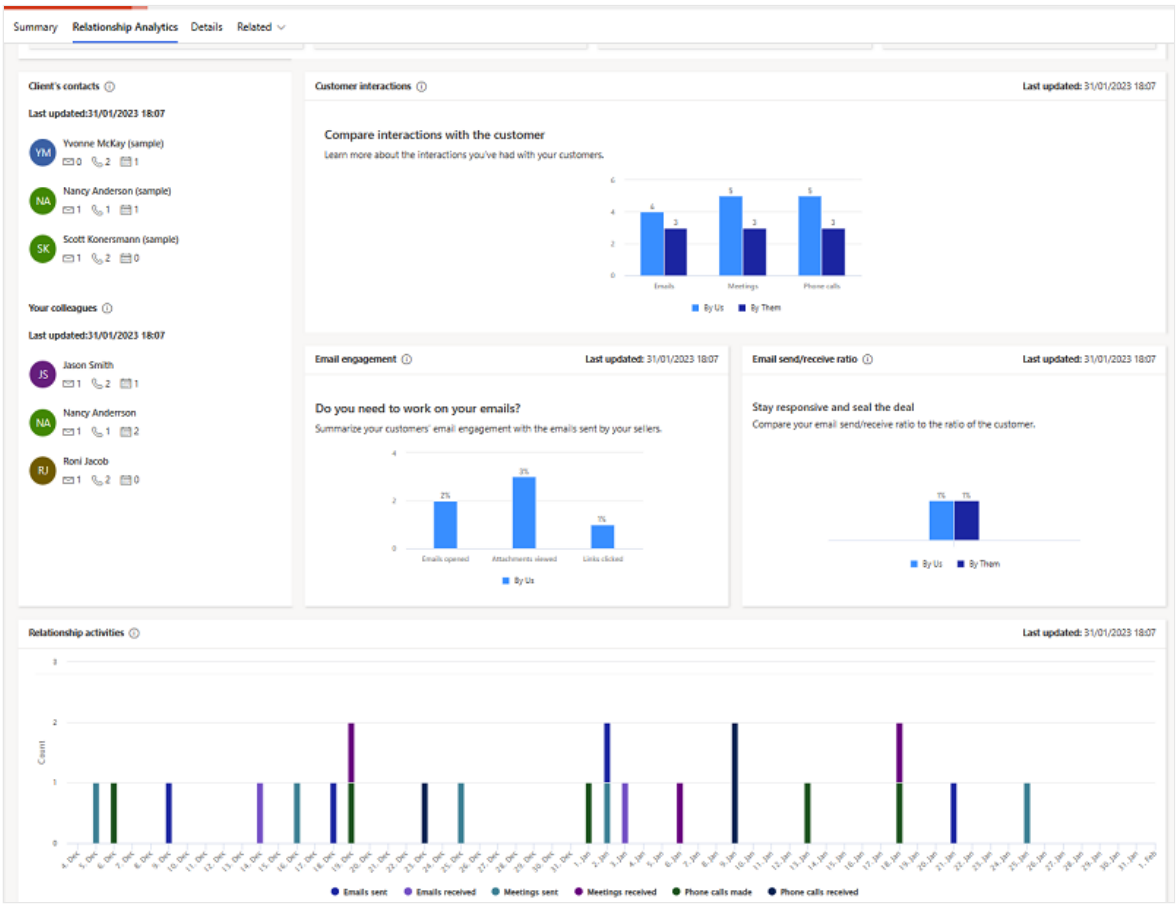
Your administrator must have enabled the feature before you can start using it. More information: Configure relationship analytics.

1. In the Sales Hub app, select **Opportunities** and open an opportunity.

2. Select the **Sales Insights** form from the drop-down.



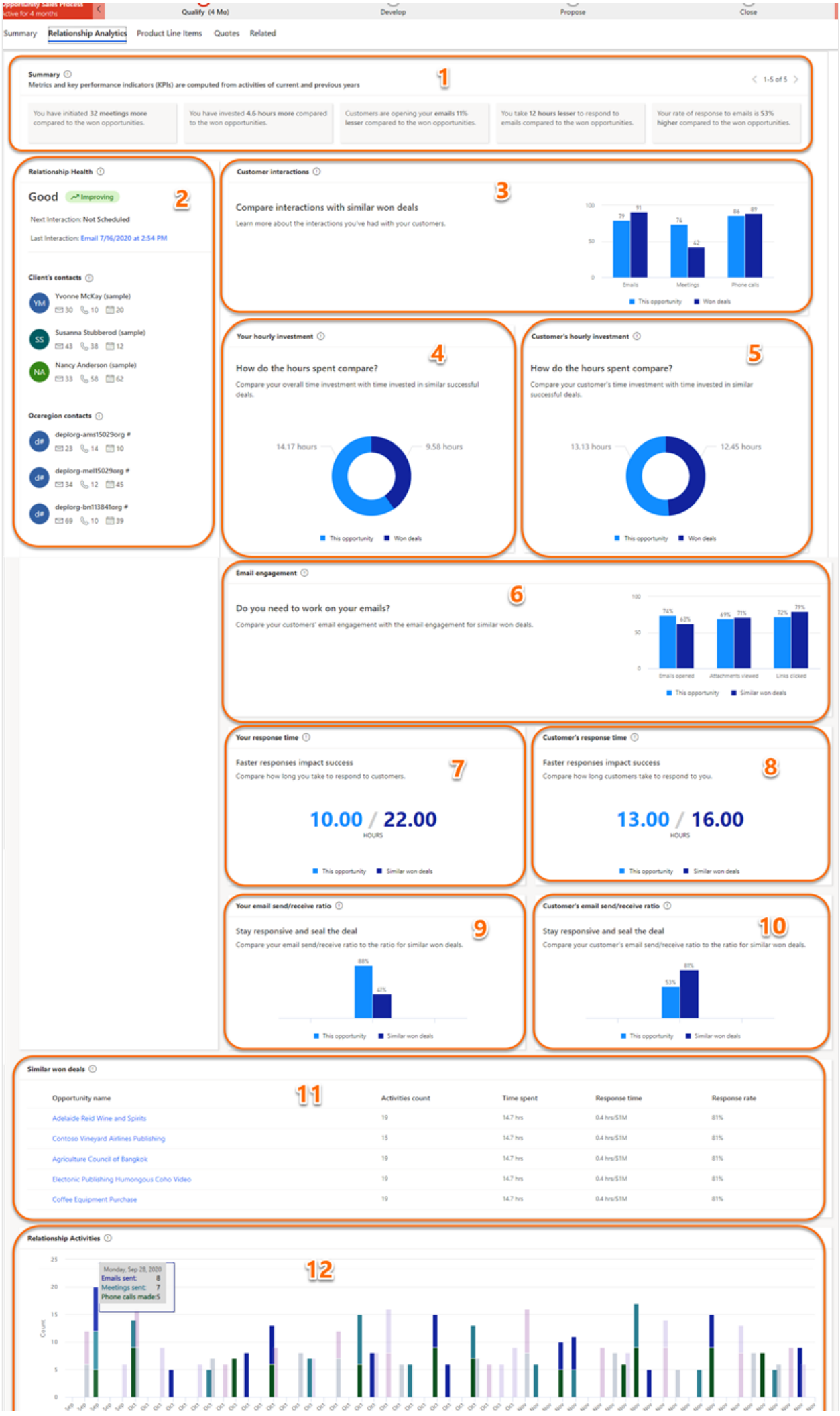
3. Select the **Relationship Analytics** tab to view how the KPIs for the opportunity compare with similar won opportunities. The screenshot is an example of the relationship analytics available for an opportunity.

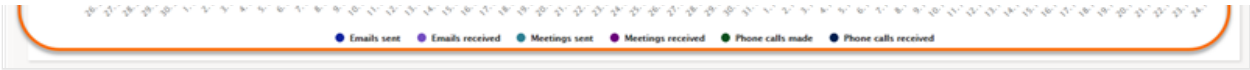


> **Note**
>
> If relationship analytics can't detect the similar opportunities for the current opportunity, relationship analytics takes top 100 won opportunities and displays KPIs to compare with the current opportunity.

For more information about KPIs and how they're generated, see Enhanced relationship insights.

The following screenshot shows an example of enhanced relationship analytics available for an opportunity:


Qualify (4 Mo)
Develop
Propose
Close
Summary
Relationship Analytics
Product Line Items
Quotes
Related
Summary
Metrics and key performance indicators (KPIs) are computed from activities of current and previous years
1
1-5 of 5
You have initiated 32 meetings more compared to the won opportunities.
You have invested 4.6 hours more compared to the won opportunities.
Customers are opening your emails 11% lesser compared to the won opportunities.
You take 12 hours lesser to respond to emails compared to the won opportunities.
Your rate of response to emails is 53% higher compared to the won opportunities.
Relationship Health
Good
Improving
2
Next Interaction: Not Scheduled
Last Interaction: Email 7/16/2020 at 2:54 PM
Client's contacts
Yvonne McKay (sample)
Susanna Stubberod (sample)
Nancy Anderson (sample)
Oceregion contacts
deplorg-ams15029org #
deplorg-mel15029org #
deplorg-bn113841org #
Customer interactions
3
Compare interactions with similar won deals
Learn more about the interactions you've had with your customers.
Emails
Meetings
Phone calls
This opportunity
Won deals
Your hourly investment
4
How do the hours spent compare?
Compare your overall time investment with time invested in similar successful deals.
14.17 hours
9.58 hours
This opportunity
Won deals
Customer's hourly investment
5
How do the hours spent compare?
Compare your customer's time investment with time invested in similar successful deals.
13.13 hours
12.45 hours
This opportunity
Won deals
Email engagement
6
Do you need to work on your emails?
Compare your customers' email engagement with the email engagement for similar won deals.
Emails opened
Attachments viewed
Links clicked
This opportunity
Similar won deals
Your response time
7
Faster responses impact success
Compare how long you take to respond to customers.
10.00 / 22.00
HOURS
This opportunity
Similar won deals
Customer's response time
8
Faster responses impact success
Compare how long customers take to respond to you.
13.00 / 16.00
HOURS
This opportunity
Similar won deals
Your email send/receive ratio
9
Stay responsive and seal the deal
Compare your email send/receive ratio to the ratio for similar won deals.
This opportunity
Similar won deals
Customer's email send/receive ratio
10
Stay responsive and seal the deal
Compare your customer's email send/receive ratio to the ratio for similar won deals.
This opportunity
Similar won deals
Similar won deals
11
Opportunity name
Activities count
Time spent
Response time
Response rate
Adelaide Reid Wine and Spirits
Contoso Vineyard Airlines Publishing
Agriculture Council of Bangkok
Electonic Publishing Humongous Coho Video
Coffee Equipment Purchase
Relationship Activities
12
Monday, Sep 28, 2020
Emails sent: 8
Meetings sent: 7
Phone calls made:5
Count



See also

Configure relationship analytics
Sales Insights and privacy laws
View and export KPI data
Retrieve insights data using msdyn_RetrieveKPIValuesForGDPR action
Relationship analytics and health FAQ

How to get introduced to leads or contacts

Article • 08/07/2023

Use who knows whom to quickly identify colleagues who can introduce you to a lead or contact.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Enterprise (Basic who knows whom) or Dynamics 365 Sales Premium (Enhanced who knows whom) More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What is who knows whom?

As a sales representative, you often interact with leads whom you've never talked to or even met before. If only you knew someone who knew the lead, an introduction could increase the chances of a positive outcome. Who knows whom in Dynamics 365 Sales does exactly that. Who knows whom suggests the names and email addresses of your colleagues who had interacted with the lead through emails or meetings. It even helps you quickly email your colleagues to request an introduction.

Basic who knows whom information

For Sales Enterprise users, the who knows whom information is populated based on emails and meeting data in Dynamics 365. This information is available out-of-the-box in all regions and doesn't require any setup.

Enhanced who knows whom information

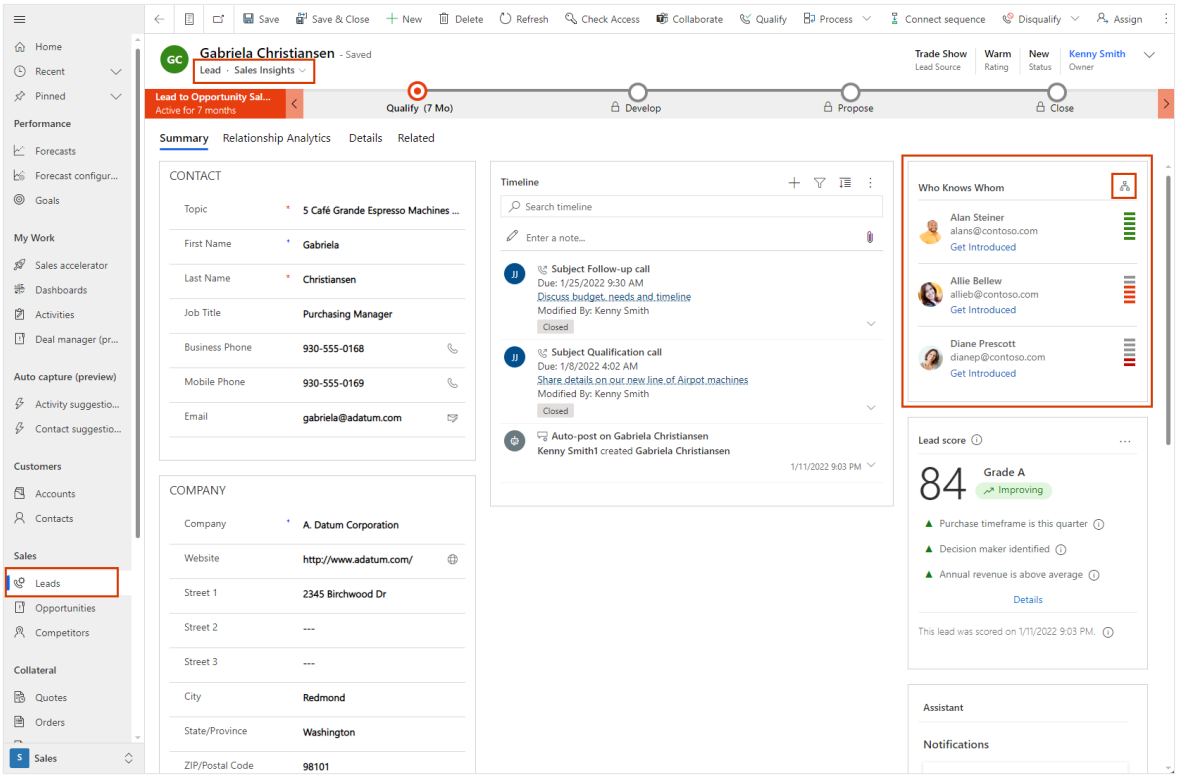
For Sales Premium users, the information is populated based on Exchange data, provided your administrator has configured the integration. If you don't want Dynamics 365 to collect your Exchange data, you can opt out of data sharing.

View who knows whom

The Who knows whom information is available for contacts and leads.

1. In the Sales Hub app, select a lead or a contact.

   The Who Knows Whom widget shows up to five people in your organization who have communicated with the lead or contact through calls and emails. It also shows you how strong their connection is. The widget is available in the **Sales Insights** form and in the main **Contact** or **Lead** form.



> **Note**
>
> If you see a message that you don't have sufficient privileges, ask your admin to provide necessary permissions.

2. Select the icon in the upper-right corner of the **Who Knows Whom** tile to switch between graph and list views.

3. Based on the connection strength, identify a colleague who can introduce you to the lead and select **Get introduced**.

> **Note**

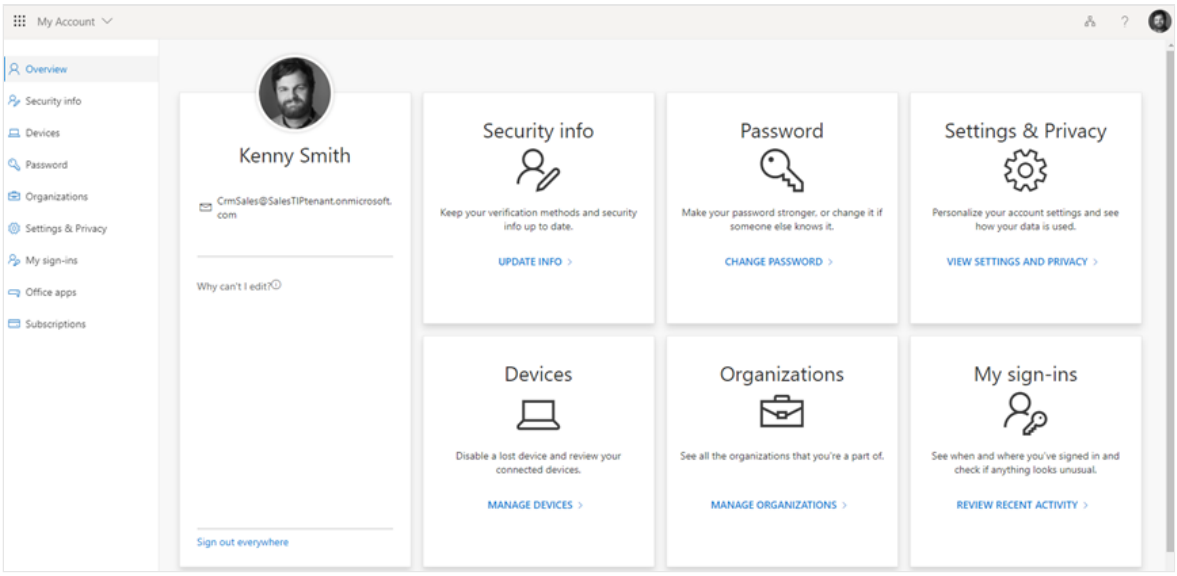
> If you don't see the **Get introduced** button, contact your administrator to **set up server-side synchronization**.

An email to the selected colleague is pre-populated with the template text. You can refine the email content and send it.

Turn off data sharing with Dynamics 365 applications

You can choose to opt out if you don't want Dynamics 365 to collect and analyze your Exchange data. Your Office 365 organization must be in one of the EMEA or Asia Pacific global geographies to opt out of who knows whom data collection.

1. Sign in to your Office 365 account.



2. Select **Settings & Privacy**, and then select the **Privacy** tab.
3. In the **Services** section, select the arrow next to **Dynamics 365 applications**.
4. Turn off the **Include my data in Dynamics 365 applications** toggle.

Dynamics 365 applications can no longer access, collect, or analyze your data.

See also

Configure who knows whom
Who knows whom FAQs

Coach sellers with conversation intelligence

Article • 06/29/2023

Conversation intelligence uses analytics and data science to gather data from sellers' call recordings and Dynamics 365 Sales. Conversation intelligence analyzes the data to provide you with the information and insights to intelligently manage your sales team and proactively coach sellers. To achieve this, conversation intelligence displays relevant key performance indicators (KPIs) and intelligent call data KPIs by team, seller, and call.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

How can I use conversation intelligence?

https://www.microsoft.com/en-us/videoplayer/embed/RE4Ub4r?postJsllMsg=true

Important

This feature is intended to help sales managers or supervisors enhance their team's performance. This feature isn't intended for use in making—and shouldn't be used to make—decisions that affect the employment of an employee or group of employees, including compensation, rewards, seniority, or other rights or entitlements. Customers are solely responsible for using Dynamics 365, this feature, and any associated feature or service in compliance with all applicable laws, including laws relating to accessing individual employee analytics and monitoring, recording, and storing communications with end users. This also includes adequately notifying end users that their communications with sales persons may be monitored, recorded, or stored and, as required by applicable laws, obtaining consent from end users before using the feature with them. Customers are also encouraged to have a mechanism in place to inform their sales persons that their communications with end users may be monitored, recorded, or stored.

Conversation intelligence is designed to help sales managers and sellers in their day-to-day job, providing the tools they need to track their sales performance in calls with leads and customers.

As a sales manager, you can:

> **Note**
>
> If you are a sales manager, verify that a proper manager hierarchy is defined for you, and that sellers or individuals are added to it. To learn more, see **Set up manager and position hierarchies**.

- Understand what customers are talking about and design sales strategies and training, with business insights on trending tracked keywords, brands, competitors, and more. To learn more, see View home page.
- View and compare what's happening in sales calls and get insights into best practices by learning more about the behaviors of your top sellers. To learn more, see View team information.
- View your team's performance, with insights, customer sentiment, and conversational style. To learn more, see View team information.
- View and understand each individual seller's conversation style, customer sentiment, insights, and call history. To learn more, see View sales rep information.
- View insights on the status of your current sales period such as the sum of actual revenue, total estimated revenues, total deals won, and the average revenue generated. To learn more, see View overall sales and seller insights.
- Listen to calls, read transcripts, see possible action items, view signals that occurred during the call (keywords, competitors, prices, and more), and business-critical insights. To learn more, see View and understand call summary.
- Translate non-English call transcript to English. To learn more, see View and understand call summary.

As a seller, you can:

- View your conversation insights, customer sentiment, conversations style, sales pipeline, and call history. To learn more, see View sales rep information.
- Listen to calls, read transcripts, see possible action items, view signals that occurred during the call (keywords, competitors, prices, and more), and business-

critical insights. To learn more, see View and understand call summary.

- Translate non-English call transcript to English. To learn more, see View and understand call summary.

As an administrator, you can:

- Configure tracked keywords and competitors that your managers want to track for their teams' calls with customers. To learn more, see Configure keywords and competitors to track.

  > **Note**
  >
  > Sales managers can also define tracked keywords and competitors. These tracked keywords and competitors apply only to their team.

- Configure how long you want to retain a team's or individual seller's data in your organization. To learn more, see Data retention and deletion through Privacy.
- Connect conversation intelligence to a Dynamics 365 environment
- Monitor call and insight processing data. To learn more, see Monitor call and insight processing.
- Configure the levels of hierarchy for which sales managers can view the call data. To learn more, see Monitor call and insight processing.

What languages are supported?

Currently, conversation intelligence supports the following languages:

Language	Code
Arabic	ar_BH
Chinese simplified	zh_CN
Danish	da_DK
Dutch	nl_NL
English	en_US and en_GB
Finnish	fi_FI
French	fr_FR and fr_CA

Language	Code
German	de_DE
Hebrew	he_IL
Italian	it_IT
Japanese	ja_JP
Norwegian	nb_NO
Portuguese	pt_PT and pt_BR
Spanish	es_ES and es_MX
Swedish	sv_SE

How to access conversation intelligence

Conversation intelligence for your Teams calls is available from the following apps:

- Sales Hub app
- Standalone conversation intelligence app

See also

Administer conversation intelligence

View overall sales and seller insights
Conversation Intelligence FAQs

View and understand the home page

Article • 01/27/2023

When you sign in to conversation intelligence as a sales manager, you'll see the home page. This page provides high-level information on the status of your current sales period and insights into what your customers are talking about, the behaviors of your top sellers, and the team's sales pipeline for the selected time period.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Sales Manager More information: Predefined security roles for Sales

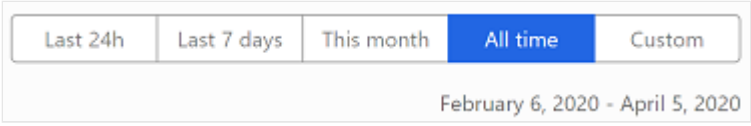
Sections of the home page

When you sign in to conversation intelligence, the home page appears with the following sections:

- Time period filter
- Base KPIs
- What are customers talking about?
- What characterizes top sellers?
- Call recording KPIs

Time period filter

You can filter the information on the home page based on a time period, such as the last 24 hours, the last seven days, this month, all time, or a custom time period. For example, to view information for the current month, select **This month**, and the information will be filtered to display the current month's status in the **Base KPIs**, **What are customers talking about?**, **What characterizes top sellers?**, and **Are my team's deals on track?** sections.



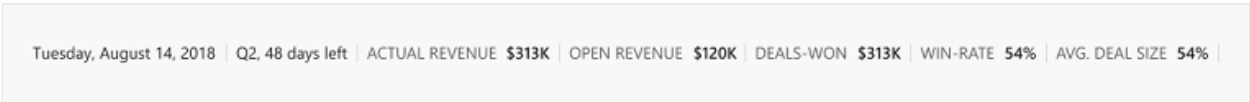
> **Note**
>
> By default, home page information is displayed starting from the day the application was configured for your organization.

Base KPIs

The base KPIs provide information on the status of your current sales period. By viewing these KPIs, you'll know:

- The time left in the current period to achieve your sales target.
- The sum of actual revenue of all won opportunities.
- The total estimated revenues of all open opportunities.
- The total deals that you won in this period.
- The percentage of deals that you won against available opportunities in this period.
- The average revenue generated through each deal in this period.

The following image is an example of how the base KPIs are displayed.



What are customers talking about?

The **What are customers talking about** section helps you to understand what's happening in sales calls and what customers are talking about. These insights can provide you with possible ideas for coaching scenarios for your sales team, helping them improve their performance during the sales calls.

This also helps in driving strategic motion by looking at the keywords, brands, and competitors mentioned during the call. For example, "3D printer" is trending more during customer calls, but 3D printer sales aren't reaching targets. You can coach the sales team on how to sell 3D printers more effectively to customers.

The following insights are available for you to understand what customers are talking about:

- Customer sentiment
- Tracked keywords
- Tracked competitors
- Other brands and organizations

Customer sentiment

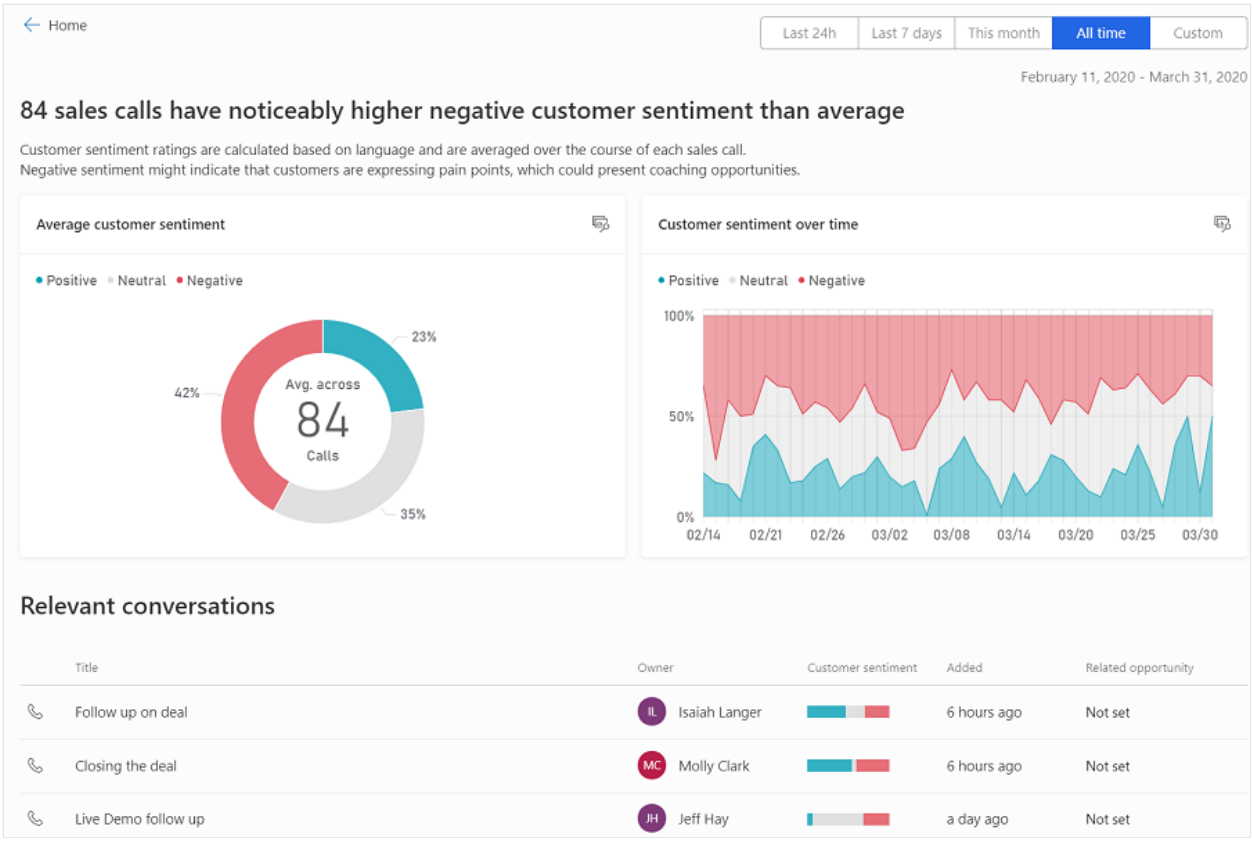
This insight shows the number of calls where the customer sentiments are more negative than average. Using this insight, you can:

- Analyze pain points that customers express during the call, and coach your sellers on how to handle customer conversations well.
- Analyze why customers are expressing these pain points, and identify selling opportunities by addressing the gaps that are causing pain points.

The following image is an example of how the "customer sentiment" insight is displayed.

In this example, you can see that 200 calls have been analyzed and 27 percent of them have higher than the average negative customer sentiment. The doughnut chart shows the percentage of calls that are positive, neutral, and negative.

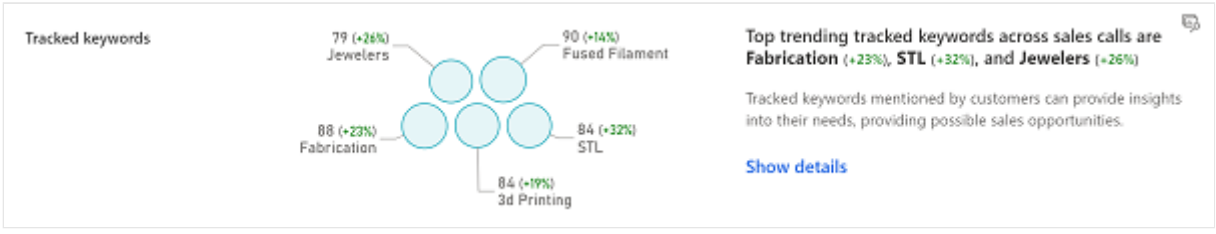
Select **Show details** to view more details on how the customer sentiment is trending over time and the list of calls that contributed to this analysis. Furthermore, you can select each call and view the summary. To learn more about call summary, see View and understand call summary.



Tracked keywords

This insight shows the tracked keywords that are defined in the application and that customers use the most during sales calls. Conversation intelligence highlights these tracked keywords in this insight. By using these tracked keywords, you can identify new sales opportunities that are related to them.

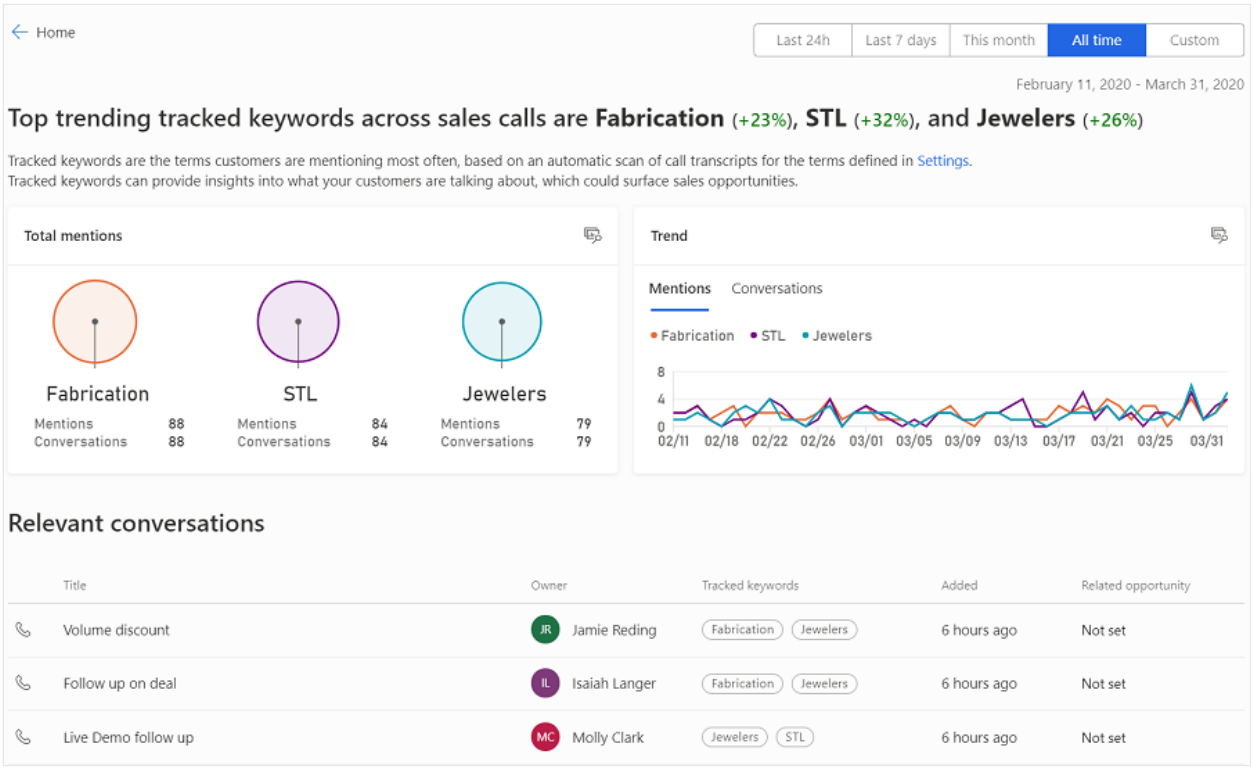
The following image is an example of how the "tracked keywords" insight is displayed.



In this example, you can see that STL (+32 percent), Jewelers (+26 percent), and Fabrication (+23 percent) are the keywords that are trending the highest, so you could theoretically define a sales strategy related to these keywords. The bubbles show the top 20 tracked keywords and the number of times that these keywords were mentioned in calls.

You can define what keywords you want to track during the sales call. To learn more, see Configure keywords and competitors to track.

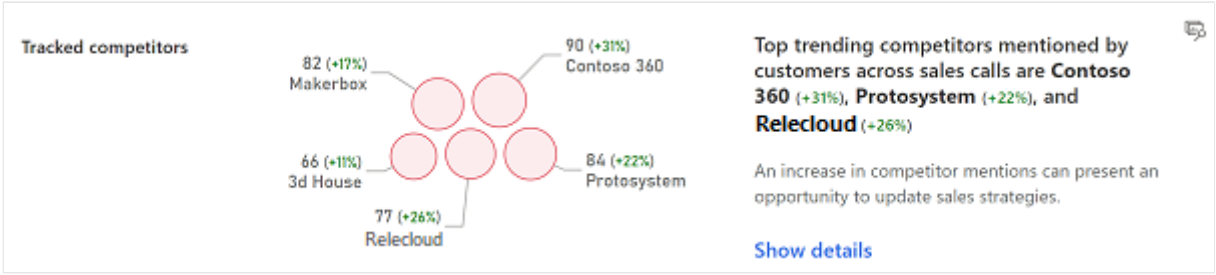
Select **Show details** to view more details on top trending keywords. The details include how many times each keyword is mentioned in the total number of calls, the trend of each keyword over time, and the list of calls that are contributing to the keyword analysis. Furthermore, you can select each call and view the summary. To learn more about call summary, see View and understand call summary.



Tracked competitors

This insight shows the defined competitors' names that customers use most and are trending upward during sales calls. Conversation intelligence highlights these competitors in this section. Using these competitors, you can identify new sales opportunities that are related to them.

The following image is an example of how the "competitors mentioned" insight is displayed.

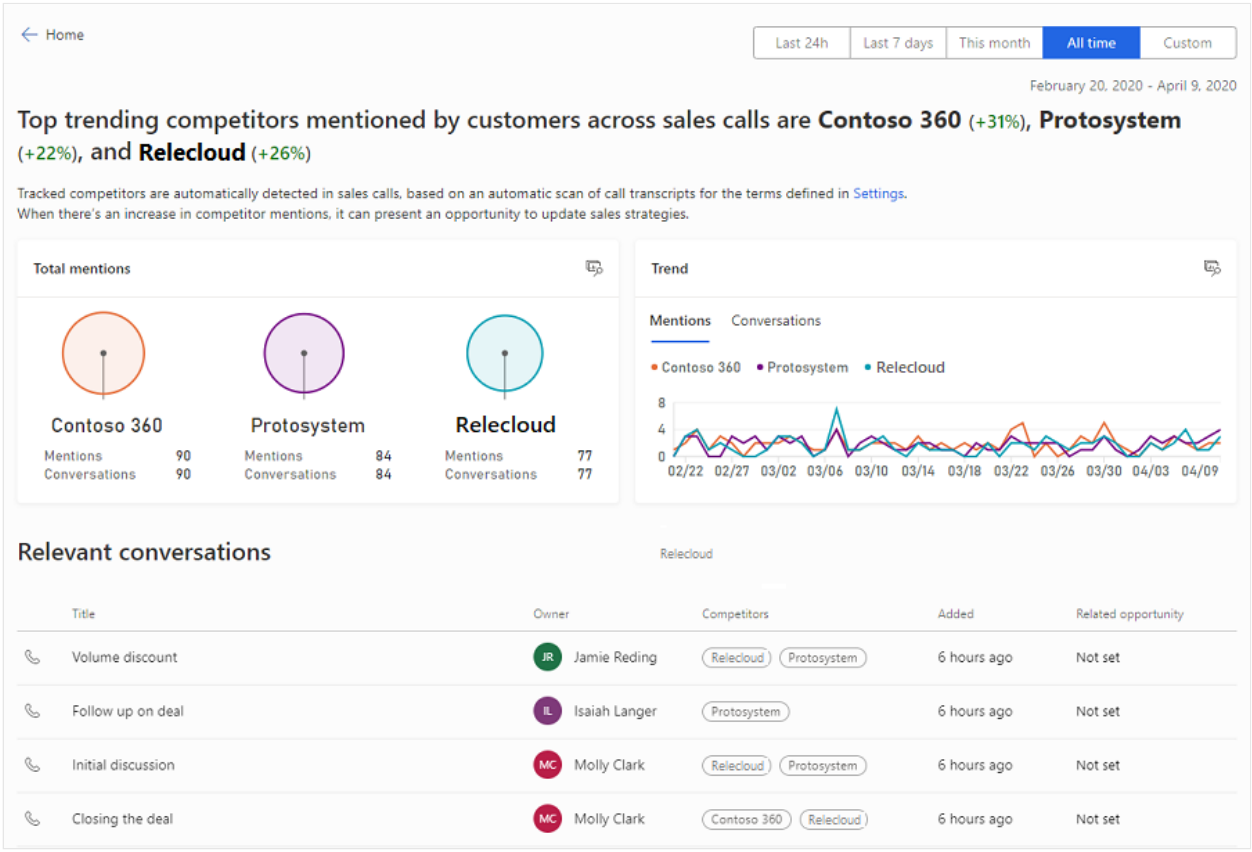


In this example, you can see that Contoso 360 (+31 percent), Relecloud (+26 percent), and Protosystem (+22 percent) are the top trending competitors, and you can define a

sales strategy related to them. The bubbles show the top 20 competitors and the number of times that these competitors were mentioned in the calls.

You can define which competitors you want to track during the sales call. To learn more, see Configure keywords and competitors to track.

Select **Show details** to view more details on top trending competitors. The details include how many times each competitor is mentioned in the total number of calls, the trend of each competitor over time, and the list of calls that are contributing in analyzing the competitors. Furthermore, you can select each call and view the summary. To learn more about call summary, see View and understand call summary.



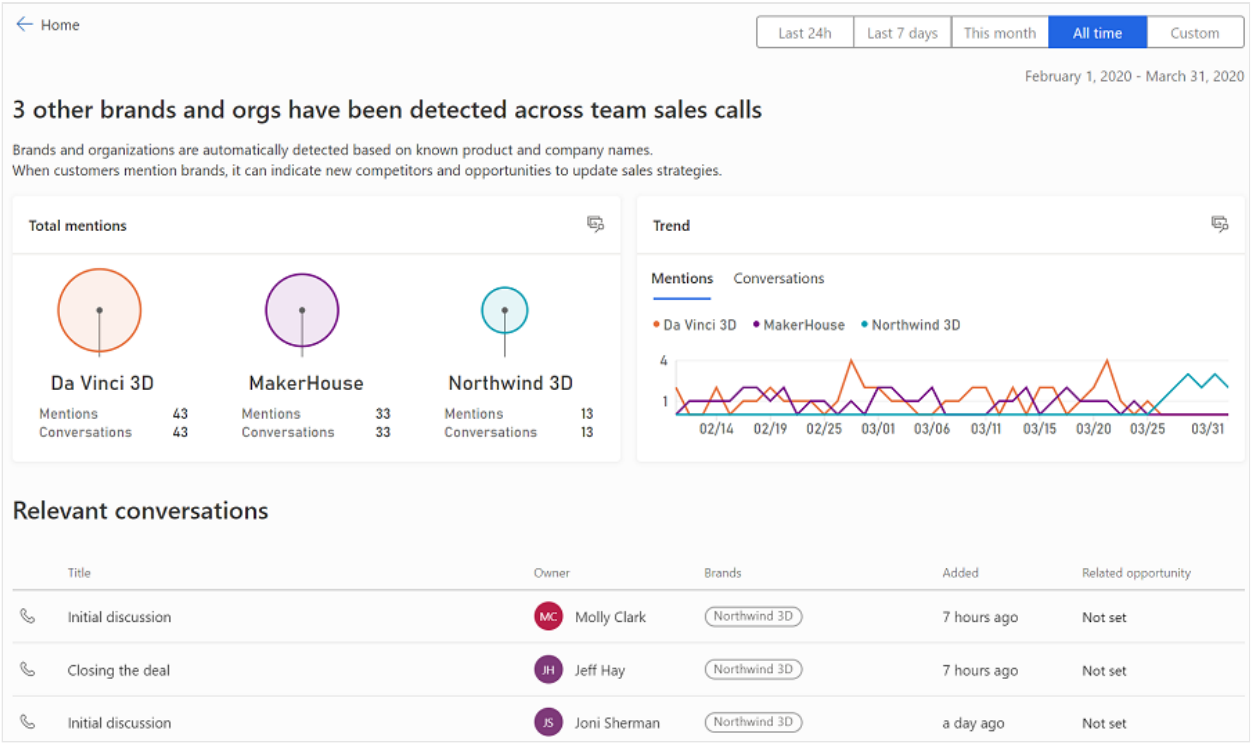
Other brands and organizations

This insight helps to discover new products, brands, and organizations that customers are speaking about in sales calls, which they never spoke of in previous calls. These products, brands, and organizations aren't defined in the application (under tracked keywords and competitors); the application uses the Microsoft Bing knowledge repository to identify the products, brands, and organizations to display. Using this insight, you can identify whether any competitor brands and organizations are mentioned on the sales calls and update your sales strategies accordingly.

The following image is an example of how the "brands and organizations detected" insight is displayed.

In this example, you can see that three brands and organizations (Da Vinci 3D, MakerHouse, and Northwind 3D) are trending most in sales calls. You can update the sales strategies to coach your sales teams to minimize the mention of these brands in the calls. The bubbles show the 20 brands that are used most and the number of times that these brands and organizations were mentioned in the calls.

Select **Show details** to view more details on top brands and organizations. The details include how many times each brand and organization is mentioned in the total number of calls, the trend of each brand and organization over time, and the list of calls that are contributing in analyzing the brands and organizations. Furthermore, you can select each call and view the summary. To learn more about call summary, see View and understand call summary.



What characterizes top sellers?

The **What characterizes top sellers** section helps you understand the conversational behavior of your top sellers. The insights are generated based on the revenue that the top sellers generate. For example, Bart and John are sellers, and they generate more

than average revenue on your team. The insights in this section are generated based on the conversational behavior of Bart and John.

By analyzing these insights, you can understand what makes the top sellers most effective in generating revenue. You can apply this knowledge to coach other sellers on how to generate revenue more effectively.

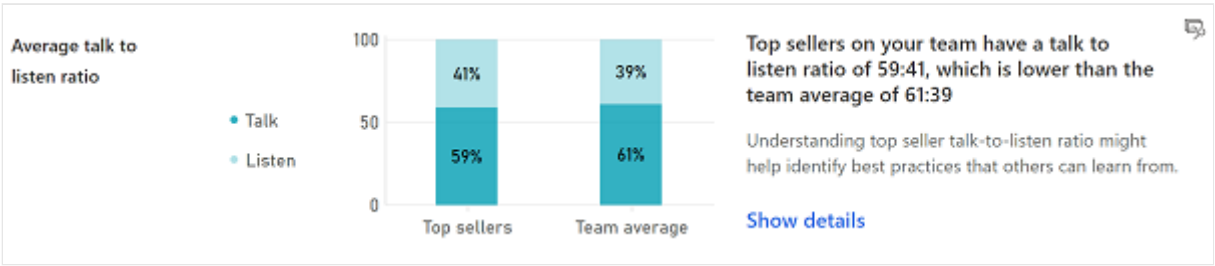
The following insights are available for you to understand what characterizes top sellers:

- Average talk-to-listen ratio
- Best practice keywords
- Customer sentiment
- Switch rate
- Engagement with customers

Average talk-to-listen ratio

This insight shows the average time top sellers spend talking instead of listening to customers compared to the rest of the sales team. By analyzing this insight, you can understand what works for top sellers to close deals and generate revenue.

The following image is an example of how the "talk-to-listen ratio" insight is displayed.



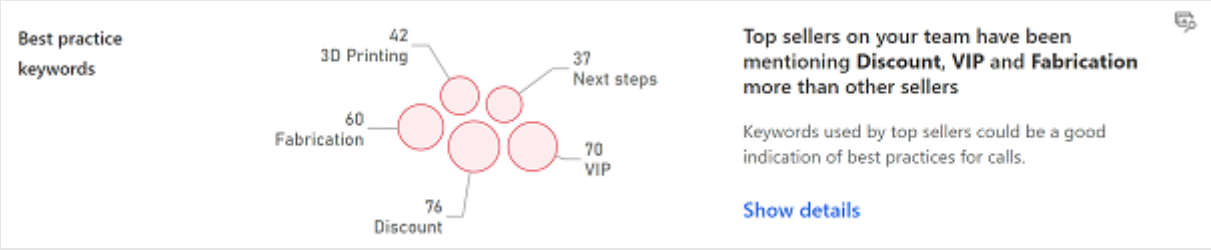
In this example, you can observe that when comparing how much they talk compared to how much they listen, the top sellers talk less than the team does on average (59 percent compared to 61 percent), and they listen more than the team does on average (41 percent compared to 39 percent). Through this insight, you can learn that talking less is helping the top sellers generate revenue, and you can suggest it as a best practice for other sellers to follow.

Select **Show details** and the Teams overview page opens, with details on each seller's talk-to-listen ratio with customers.

Best practice keywords

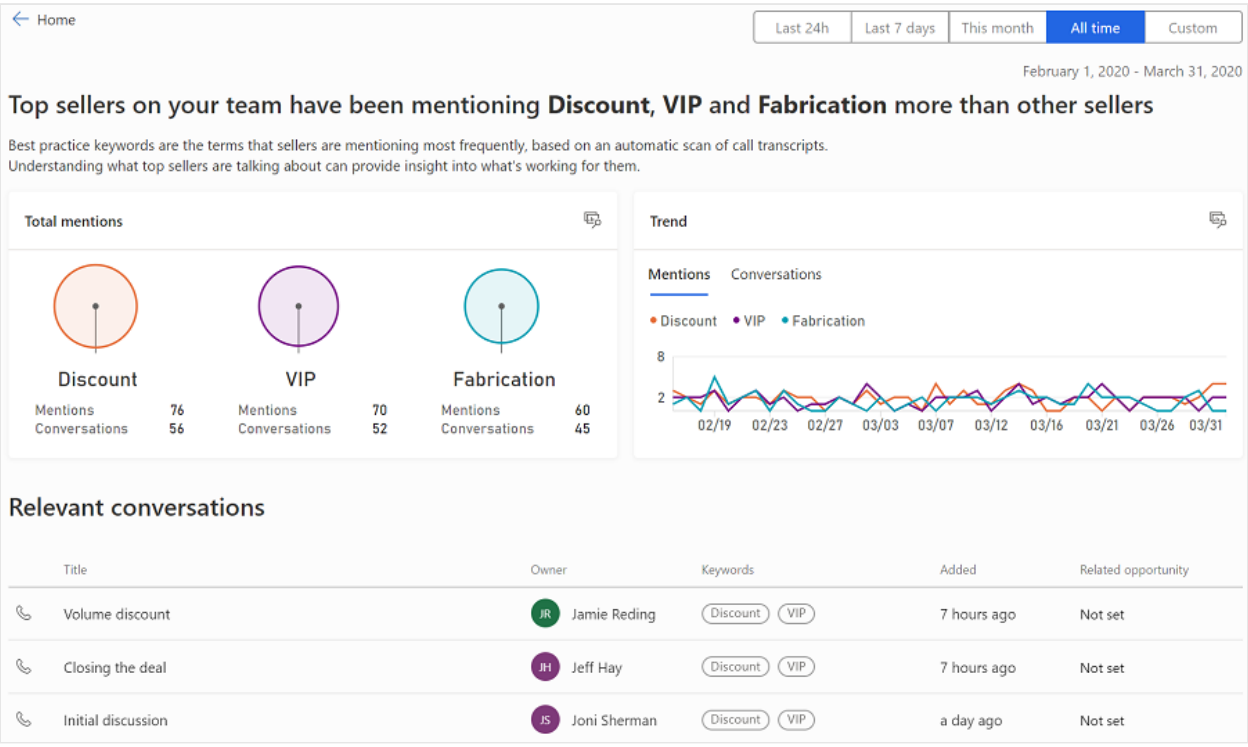
This insight shows the keywords that the top sellers use more frequently in conversations with customers. By analyzing this insight, you can understand what words the top sellers use that help them to close deals and generate revenue.

The following image is an example of how the "what are they talking about" insight is displayed.



In this example, you can see that **Discount**, **VIP**, and **Fabrication** are the top words mentioned by your top sellers. The bubbles show the top 20 trending keywords and the number of times these keywords were mentioned in the calls.

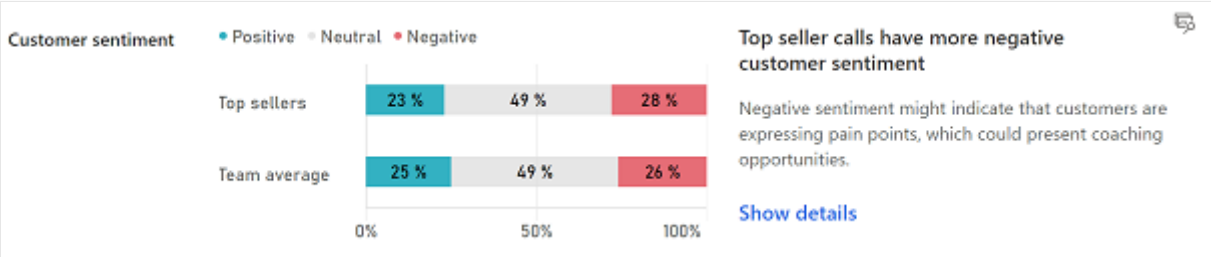
Select **Show details** to view more details on the top best practice keywords. The details include how many times each best practice keyword is mentioned in the total number of calls, the trend of each best practice keyword over time, and the list of calls that are contributing in analyzing the keywords. Furthermore, you can select each call and view the summary. To learn more about call summary, see View and understand call summary.



Customer sentiment

This insight shows how top sellers are doing when compared to the team in terms of positive, neutral, and negative customer sentiments during sales calls. Using this insight, you can analyze what makes the top sellers more efficient in addressing the customer's pain points during the call and how you can coach your other sellers to align their sentiment levels with your top sellers.

The following image is an example of how the "customer sentiment" insight is displayed.



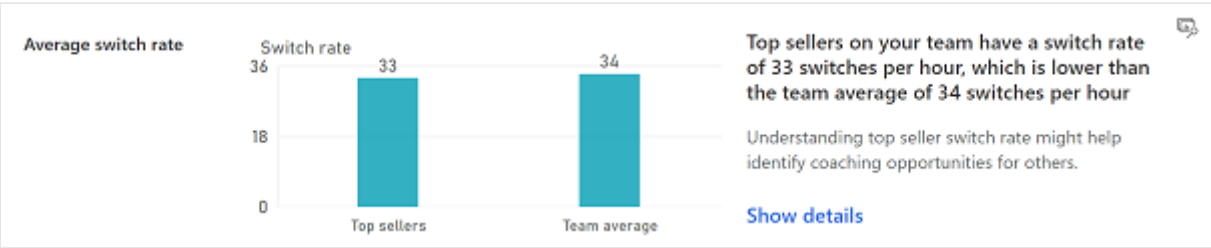
In this example, you can see that top sellers are driving more negative customer sentiment (28 percent) compared to the team as a whole (26 percent). This indicates that top sellers might be asking more questions to identify the customer's pain points, in order to resolve them and key out selling opportunities.

Select **Show details** and the Teams overview page opens, with details on customer sentiment.

Switch rate

This insight shows the rate at which top sellers are talking and listening in conversations with customers. Using this insight, you can understand the switch rate of top sellers per hour and identify coaching opportunities for other sellers to improve their switch rate.

The following image is an example of how the "switch rate" insight is displayed.



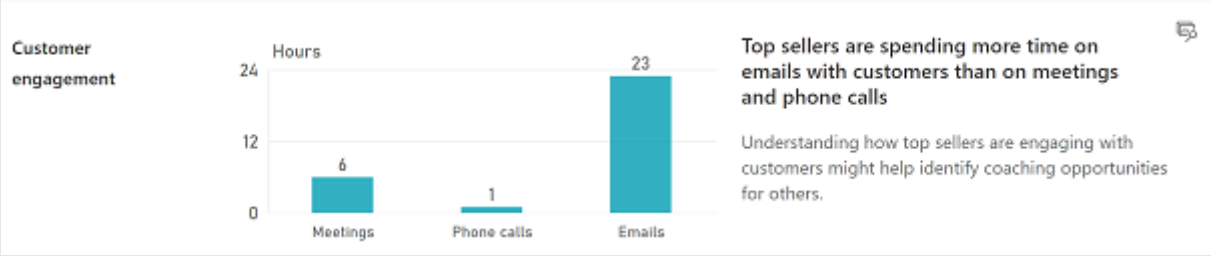
In this example, you can see that top sellers are switching less during the conversation with customers (33 times per hour) than the team average (34 times per hour). Through this, you can identify coaching opportunities for the other sellers to improve their switch rates during customer conversations.

Select **Show details** and the Teams overview page opens, with details on each seller's switch rates with customers compared to the team average.

Engagement with customers

This insight helps you understand what type of communication mode top sellers spend their time in while engaging with customers. Using this insight, you can identify coaching opportunities for other sellers on the communication mode they use.

The following image is an example of how the "engagement with customers" insight is displayed.



In this example, you can see that top sellers are spending more time engaging with customers on email (23 hours) than in phone calls (1 hour) or meetings (6 hours). By analyzing this, you see that top sellers are engaging customers through email, so you can plan to coach around these communication modes for other sellers to improve.

Call recording KPIs

The call recording KPIs provide an understanding of how calls are trending month over month. By viewing these KPIs, you'll know the total number of:

- The number of calls that are recorded, and how that's trending.
- The number of hours that calls were recorded, and how that's trending.
- Calls that mention the keywords you're tracking, and how they're trending.
- Calls that mention the brands and competitors you're tracking, and how they're trending.

The following image shows how the call recording KPIs are displayed.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.

- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Administer conversation intelligence
Improve seller coaching and sales potential with conversation intelligence
Dashboards in Dynamics 365 Customer Service
Conversation Topics dashboard in Dynamics 365 Customer Service

Analyze behavior of your team on customer calls

Article • 01/18/2023

Sales calls are one of the most important part of your business as these calls help you to change the shape of your business by improving sales and generating revenue. The **Team overview** page in conversation intelligence helps sales managers analyze the overall behavior of their team during customer calls. This insight helps in identifying coaching scenarios for the team to increase sales wins and productivity gains for the business.

License and role requirements

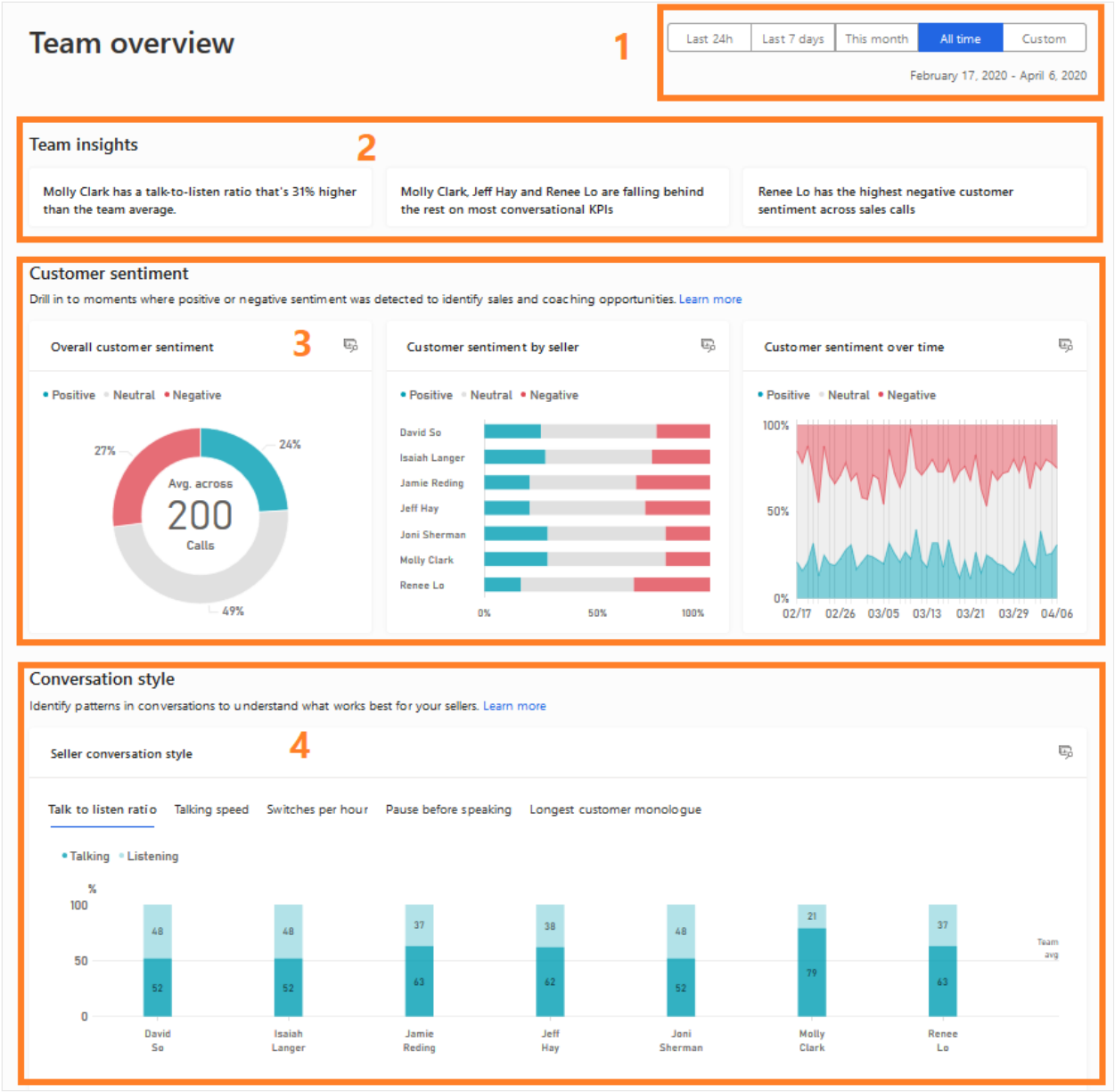
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Analyze your team's behavior

As a sales manager, these KPIs and insights help you to:

- Assess overall customer sentiments and sentiment trends.
- Assess your team's contributions toward customer sentiment.
- Gain insight into what's going on with your team.
- Analyze your team's conversational style.

Sign in to the Conversation intelligence app, and select **Team Overview**.



KPI/Insights	Description
1. Date filter	Provides a time period for which you can view your team's call data and insight.
2. Team insights	Displays what's happening in your team and the latest trends. You can view insights such as sellers who are scoring high in customer satisfaction and sellers who might need coaching based on the customer sentiments they are generating and keywords that are trending.
3. Customer sentiment	• **Overall customer sentiment:** Specifies the customer sentiment in percentage—positive, negative, or neutral. • **Customer sentiment over time:** Displays how the three customer sentiments (positive, negative, and neutral) are spanning across the specified timeframe. • **Customer sentiment by sales rep:** Specifies how each of your sales reps contributed toward generating the overall customer sentiment. Also, shows which sales rep have the highest or lowest contributions.

KPI/Insights	Description
4. Conversation style	• **Talk to listen ratio:** Specifies the average listen and talk ratio of sales reps in conversations with customers. • **Talking speed:** Displays the average number of words used per minute by sales reps. • **Switches per hour:** Displays the average switches between a sales rep and customer in a conversation, meaning the number of times the conversation switched from one person to another. This KPI is a sign of engagement during conversations. • **Pause before speaking:** Displays how many milliseconds the sales rep paused before responding to customer queries; this KPI is a signal of patience by the sales rep. • **Longest customer monologue:** Displays the longest length of speech without a break by the customer with a sales rep in seconds; this KPI is a signal that sales reps are asking good questions and showing understanding of customer needs.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Overview of conversation intelligence
First-run set up experience
Connect conversation intelligence to an environment
View agent insights in Dynamics 365 Customer Service

View a seller's performance to identify best practices and coaching opportunities

Article • 01/23/2023

View insights and analysis of each seller's performance during calls with customers and leads.

Sign in to the Conversation intelligence app, and select **Seller Details**. The information you see on the page varies according to your role (sales manager or seller).

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

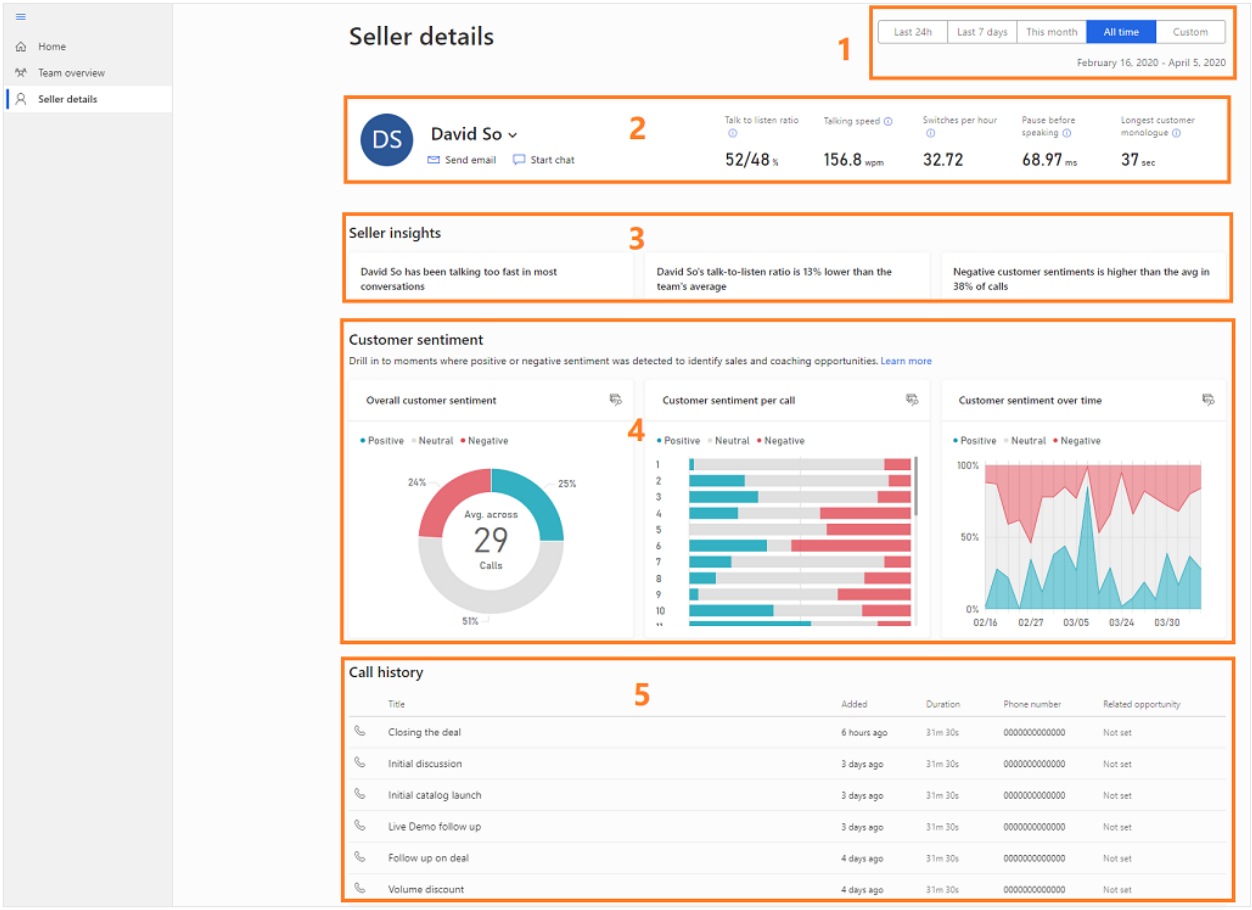
Seller details page for sales managers

As a sales manager, the **Seller details** page helps you analyze the overall behavior of an individual seller during customer calls. Using this analysis, you can identify coaching scenarios to increase wins and productivity gains for the business. With the **Seller details** page, you can:

- Identify keywords that customers use during calls.
- Identify competitor names that customers mention during calls.
- Identify potential sellers who might need coaching.
- Identify best practices of your top sellers.
- Drill down into each seller view and analyze the data, such as conversational KPIs, insights, and customer sentiment.
- Analyze call transcripts and identify the areas where sellers need coaching, or where top sellers excel.

- Comment on call transcripts and share with sellers.
- Drill down into specific seller's calls to follow up on action items, signals, such as keywords, competitors mentioned during the call, and identify possible coaching activities.

The following image is an example of how the seller page is displayed for sales managers:



Let's look at the KPIs and insights in detail:

KPI/Insights	Description
1. Date filter	Select a timeline for which you want to view the data.
2. Basic information	Select a seller from the drop-down list to view that seller's information such as insights, statistics, and call history. With this information, you can assess a seller's behavior and identify areas where the seller requires coaching. You can comment directly on call transcripts to provide coaching inputs or gather information as required. You can also send them an email or chat directly. Select the email icon to send an email and select the chat icon to chat with the seller. These insights also show the seller's conversational style, with KPIs such as average talking speed, switch per conversations, average pause, and longest customer monologue.

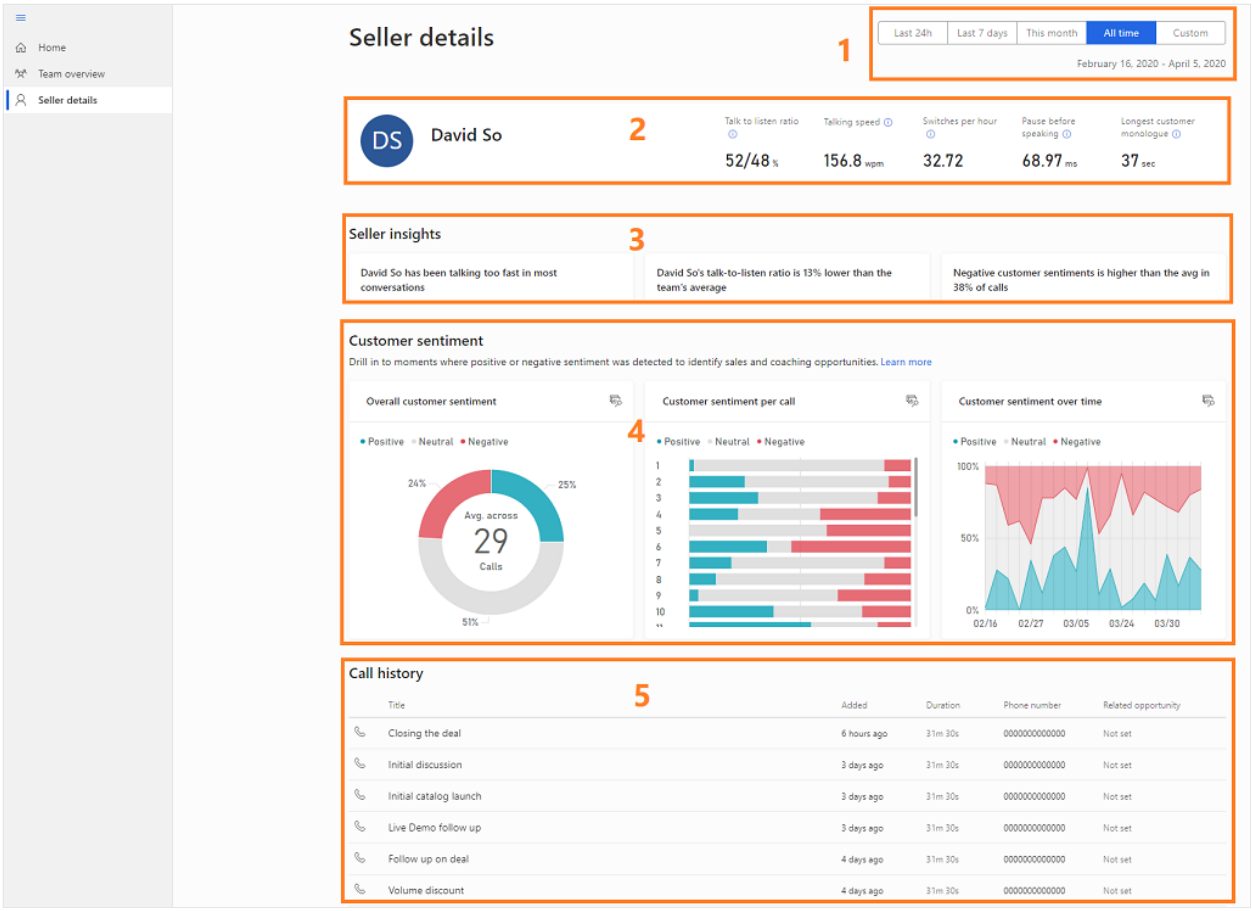
KPI/Insights	Description
3. Insights	Displays what's happening with the seller and the latest trends specific to each seller, such as customer sentiment and talk-to-listen ratio.
4. Statistics	• **Average customer sentiment level:** Displays the customer sentiments (positive, negative, and neutral) for each call that the seller handled. • **Average talk to listen ratio:** Displays the average talk-to-listen ratio of the seller during calls with a customer. • **Sentiment over time:** Shows the three customer sentiments (positive, negative, and neutral) across the specified timeframe for the seller.
5. Call history	Displays a list of the seller's calls. Open a specific call to listen to the call, see the transcript, and view the call signals (e.g. keywords mentioned during the call). To learn more, see View and understand call summary

Seller details page for sellers

As a seller, the **Seller details** page helps you analyze your overall behavior during customer calls. Using this analysis, you can identify best practices, as well as areas that you need to improve. With the **Seller details** page, you can:

- Identify the main keywords that customers use during calls.
- Identify competitor names that customers mention during calls.
- Analyze call transcripts and identify the areas where you need coaching.
- View your manager's comments on your call transcripts.
- Drill down into specific calls to follow up on action items, view signals (e.g, keywords, competitors mentioned during the call), read the transcript, and more.

The following image is an example of how the seller page is displayed for sellers:



Let's look at the KPIs and insights in detail:

KPI/Insights	Description
1. Date filter	Select a timeline for which you want to view the data.
2. Basic information	Displays your conversational style, with KPIs such as average talking speed, switch per conversations, average pause, and longest customer monologue.
3. Insights	Displays the latest trends specific to you, such as customer sentiment and talk-to-listen ration.
4. Statistics	• **Average customer sentiment level:** Displays the customer sentiments (positive, negative, and neutral) for each call that you have handled. • **Average talk to listen ratio:** Displays your average talk-to-listen ratio during calls with a customer. • **Sentiment over time:** Shows the three customer sentiments (positive, negative, and neutral) across the specified timeframe.
5. Call history	Displays a list of your calls. Open a specific call to listen to the call, see the transcript, and view the call signals (e.g. keywords mentioned during the call). To learn more, see View and understand call summary

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Overview of conversation intelligence

First-run set up experience of conversation intelligence

Connect conversation intelligence to an environment

Agents insights report in Omnichannel intraday insights

View and understand call summary page in Conversation Intelligence app

Article • 06/29/2023

Sellers and their managers need an easy way to review the conversations they've had with their customers and quickly find relevant talking points, keywords, and insights. The call summary page provides a high-level view of how the conversation with a customer went, and includes action items and relevant keywords, a timeline, a transcript of the call, and more.

The information on the call summary page helps both sellers and managers:

- Sellers can quickly ramp up on past conversations with customers, and highlight important topics and commitments.
- Managers can get a high-level view of how their team is managing their relationships with customers.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

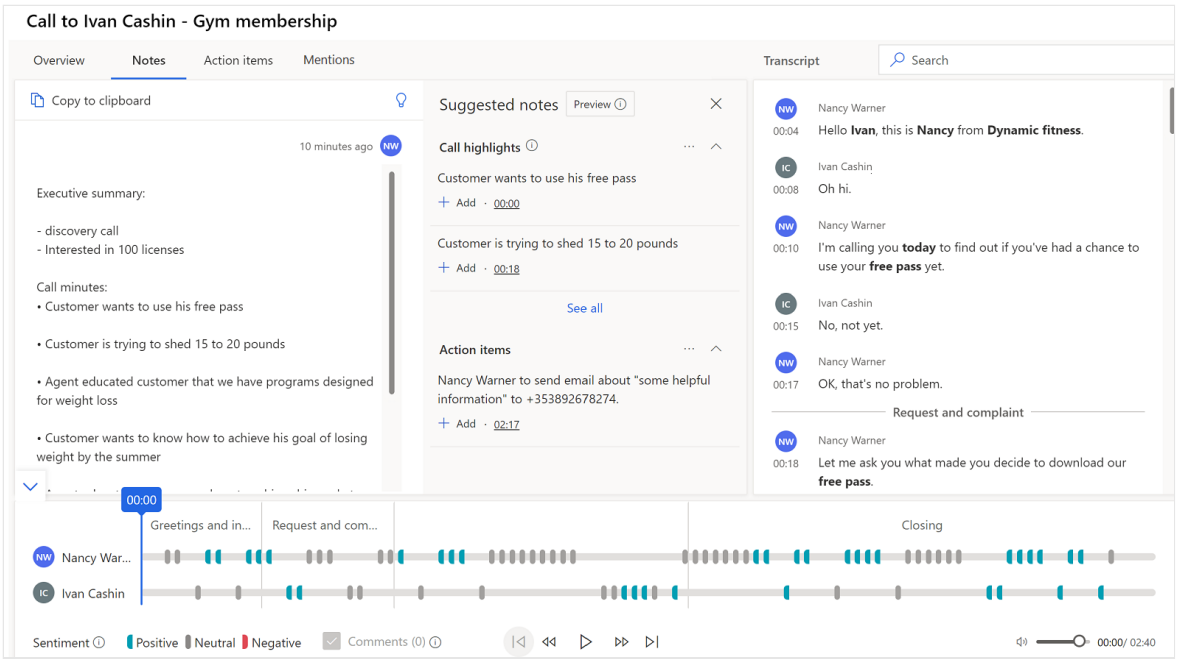
- Configure conversation intelligence to process call recordings. More information: Set up Microsoft Teams for conversation intelligence
- To display the **Call Insights** tab in Sales Hub, ensure that the latest version of Sales Insights is installed in your organization.

View the call summary page

1. In the Conversation intelligence app, open the **Seller Details** page and go to the **Call history** section.

   If you don't see any call data, change the time period at the top of the page.

2. Select a call to view its summary and other insights.



Understand the call summary page

A call summary page includes the following sections:

- Overview, notes, action items, and mentions
- Call transcript and translation
- Call playback timeline and segmentation

Overview, notes, action items, and mentions

Overview tab

The **Overview** tab displays the names of the people who participated in a conversation, along with KPIs such as average talking speed, switch per conversations, average pause, and longest customer monologue. Also, you can see the tags that have been added to the conversation to improve searchability.

View categorization tag for short duration calls (Preview)

> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or

different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Conversation intelligence can detect and tag short duration calls for the following categories:

- Voicemail
- Contact is unavailable
- Short calls with reschedule requests
- Short calls in which the contact indicates the call is unwanted

If the tag is inappropriate, you can delete it.

Your administrator must enable the **Call categorization (preview)** feature for the system to tag short duration calls. You can also view these tags in the Conversation intelligence app under **Seller Details** > **Call History** section. For more information, see View a seller's performance to identify best practices and coaching opportunities.

Notes tab

The **Notes** tab in the call summary page helps you reduce the time to summarize the call and add the provided intelligent suggestions to the summary including action items, commitments, call minutes, and next steps.

You can write a quick and personalized summary without moving away from the context of the call in the **Notes** tab. Providing a summary of the call helps you to save time, focus on the customer's call, quickly review the key points, and understand the next course of action.
Further, you can share the saved summary with the stakeholders through an email.

To write a call summary or notes

1. Go to the **Notes** tab. You would see any notes that you had taken during the meeting.

2. Edit your notes or check out the **Suggested notes** pane for call highlights and action items.

    - To add notes from the call highlights and action items, select **Add** corresponding to the item. Call highlights won't be generated if the meeting recording duration exceeds 70 minutes.

    - To add all the suggested notes, select More options (…) corresponding to Suggested notes, and then select **Add all**.

    - To understand and know more about the context of the note, select the timestamp corresponding to the notes and you are directed to the section in the transcript and the playback.

3. Select **Save**. The call summary is saved. You can use the summary to:

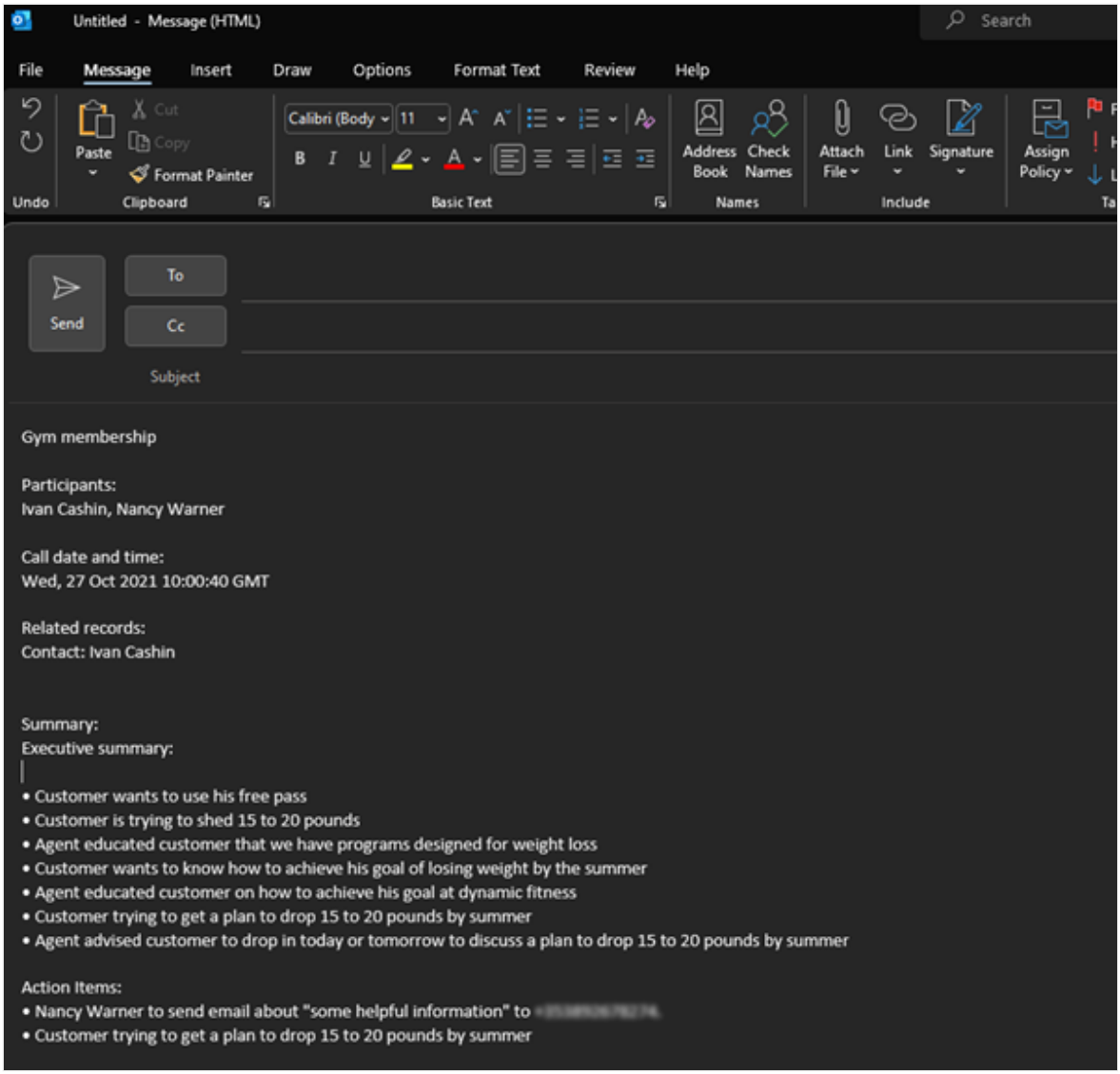
    - Share with the stakeholders.
    - Keep as a reference.

Email call summary or notes to participants and stakeholders

1. From the notes section, select **Copy to clipboard**.

2. Open your email and paste the copied summary. The summary is pasted in the following format:

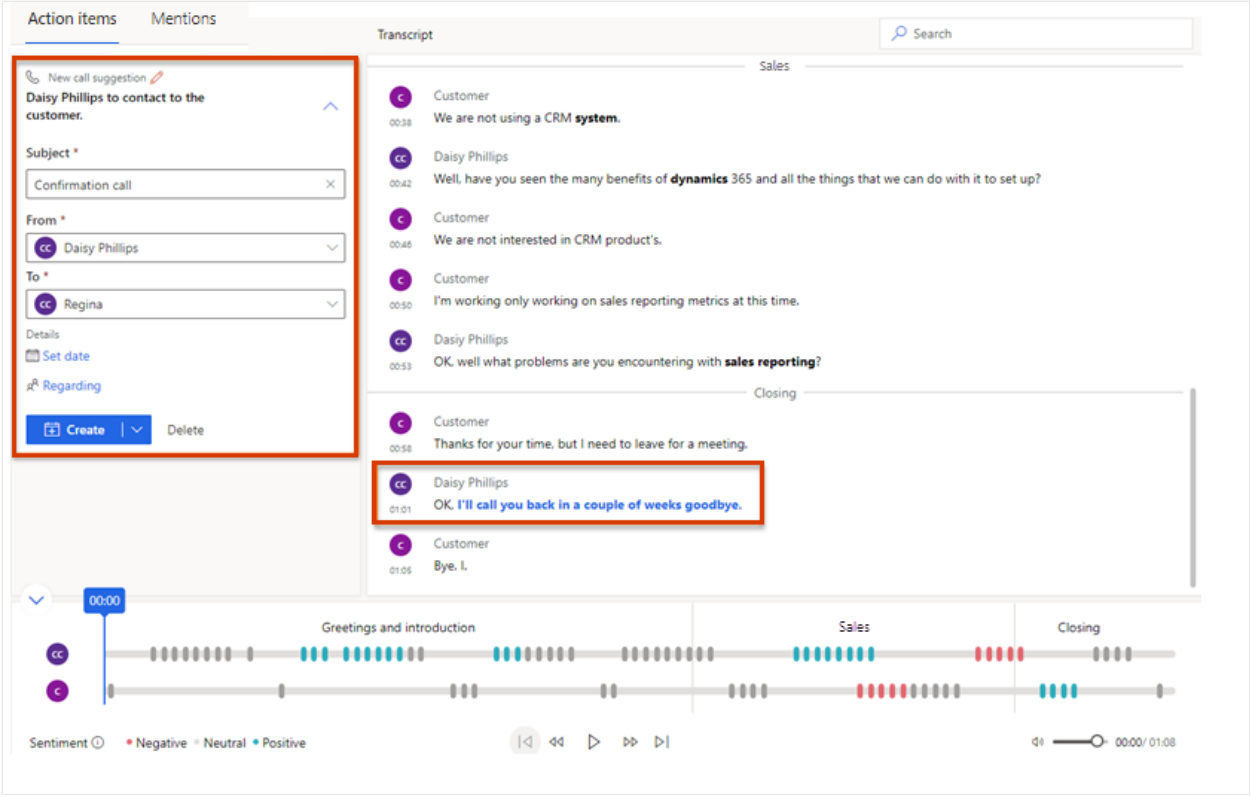
    - **Subject**: Specifies the subject of the call. For example, Gym membership.
    - **Participants**: Lists the players who are connected during the call.
    - **Call date and time**: Specifies the date and time of the call.
    - **Related records**: Lists the records that are related to the call such as, contact, lead, and opportunity.
    - **Summary**: Specifies the summary of the call that you've provided.



Action items tab

Displays a list of items mentioned during the call that sellers will need to keep track of and take action on after the call ends—for example, "I'll send you an email" or "I'll follow up with Michelle tomorrow." When you select an action item, you can see where it was mentioned on the transcript. Actionable items include: **Set up a call**, **create a task**, **send an email**, and **set up a meeting**.

The action items are highlighted in blue and a suggestion to create an appropriate action is displayed. Select the action item link to set up a call or meeting, create a task, or send an email, without losing context. The following screenshot depicts how a task is highlighted in the transcript and how you can create task right from the **Action items** tab:

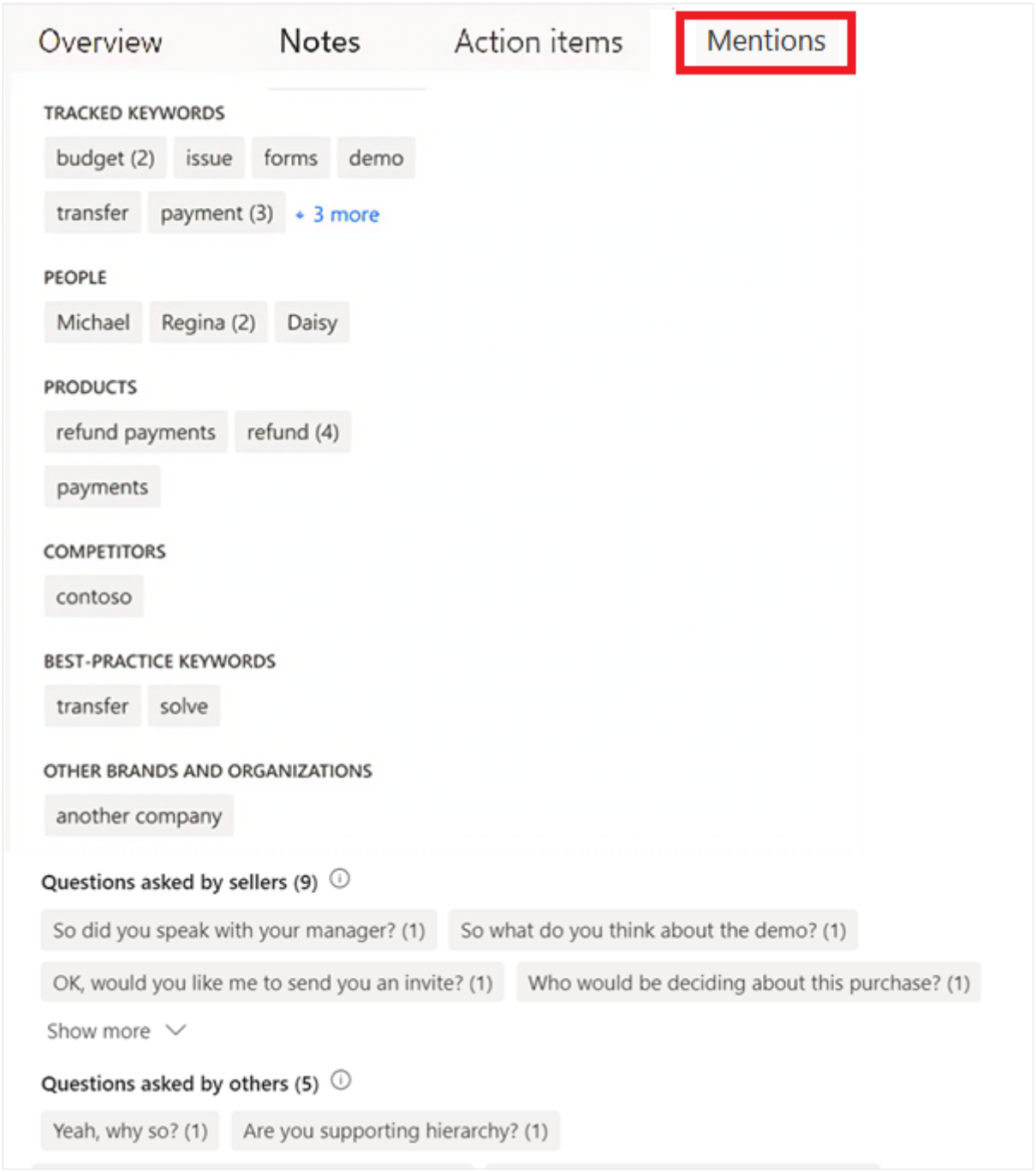


> **Note**
>
> - If you want to enter more details while setting up a call or task, expand **Create** and then select **Create and Edit**.
> - If you think the action item would be better handled as a task than a call, meeting, or email, select **Create task**.
> - You can view the call and task activities under the activities of the attached record entity and on the seller's activity list.

Mentions tab

The **Mentions** tab displays talking points—such as keywords, stakeholders, questions, and competitors—that were mentioned during the call.

The following image is an example of a **Mentions** tab.



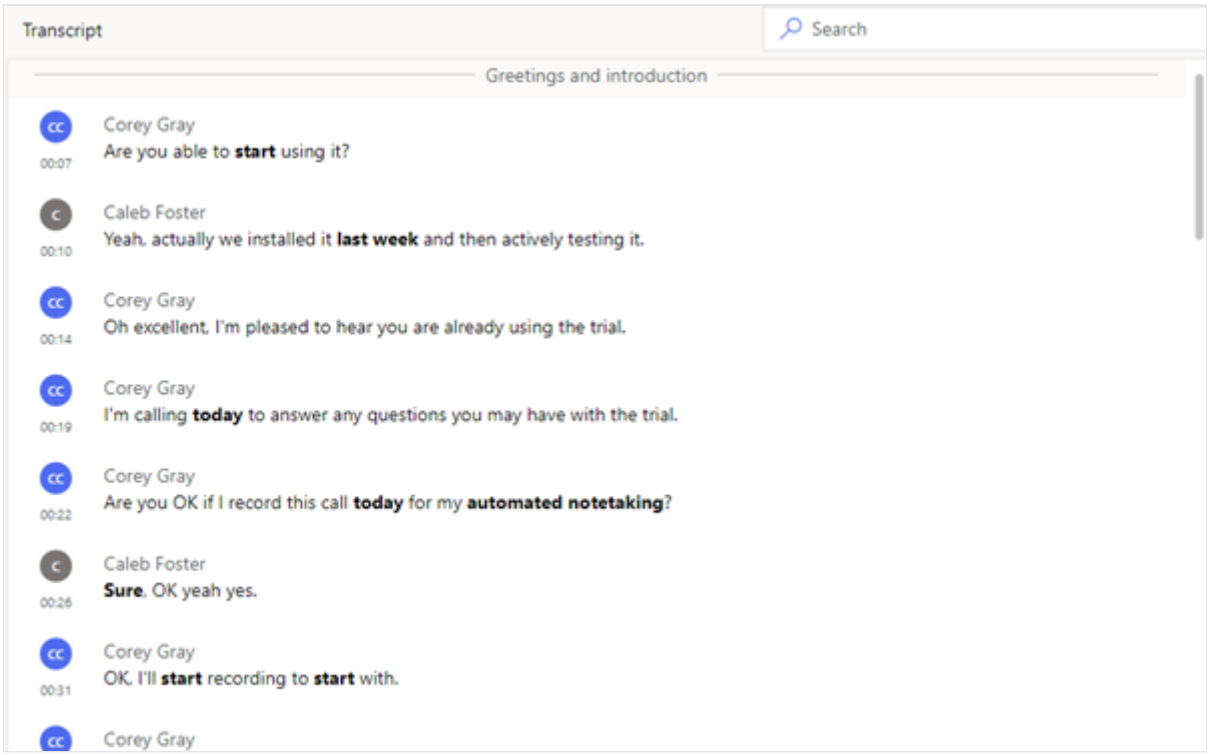
Select a mentioned item to view when the item was mentioned in the transcript and playback.

- **Competitors mentioned**: Displays the predefined competitors that customers mentioned during the call.
- **Brands mentioned**: Displays brand and organization names (other than your own) that the customer mentioned during the call.
- **Tracked keywords mentioned**: Displays the predefined keywords that customers mentioned during the call.
- **Keywords mentioned**: Displays the keywords and terms that were most frequently mentioned during the call.

- **People**: Displays the names of people mentioned during the call; for example, Sarah calling from Contoso.
- **Times**: Displays mentions related to time and date during the call; for example, let's talk next week.
- **Prices**: Displays prices mentioned during the call; for example, the product will cost $50.
- **Questions asked by sellers**: Displays questions asked by the Dynamics 365 users during the call. For example, What do you think about the demo?
- **Questions asked by others**: Displays the questions asked by the other participants during the call.

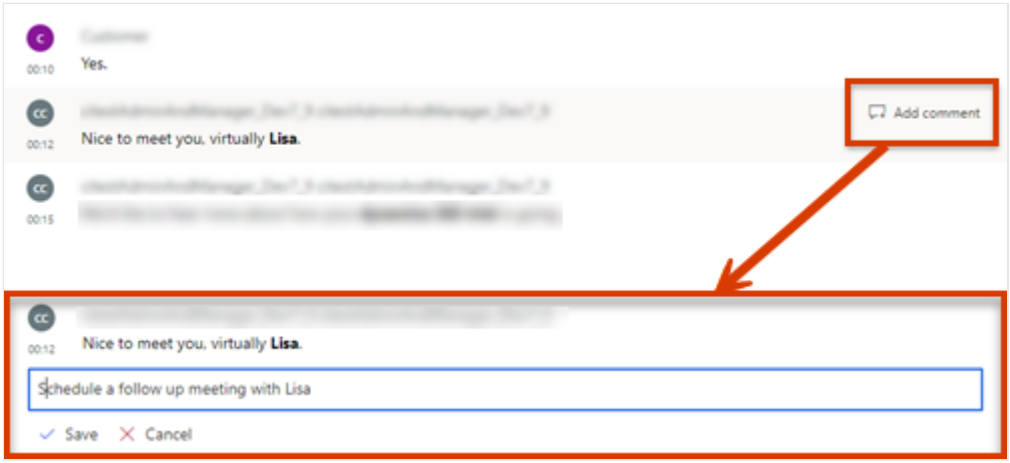
Call transcript and translation

The **Transcript** tab displays a written record of the call—which you can read, comment on, and translate—and the timeline of the call. The following image shows an example of a **Transcript** tab.



- As a manager, you can review the transcript and leave a comment—for example, suggesting how the seller might handle a similar situation in the future.
- As a seller, you can review the transcript and comments that have been posted by your manager or coach.
  You can reply to comments, or add your own. Hover over the relevant area of the transcript, select **Add comment** to reply or make a comment yourself, and then

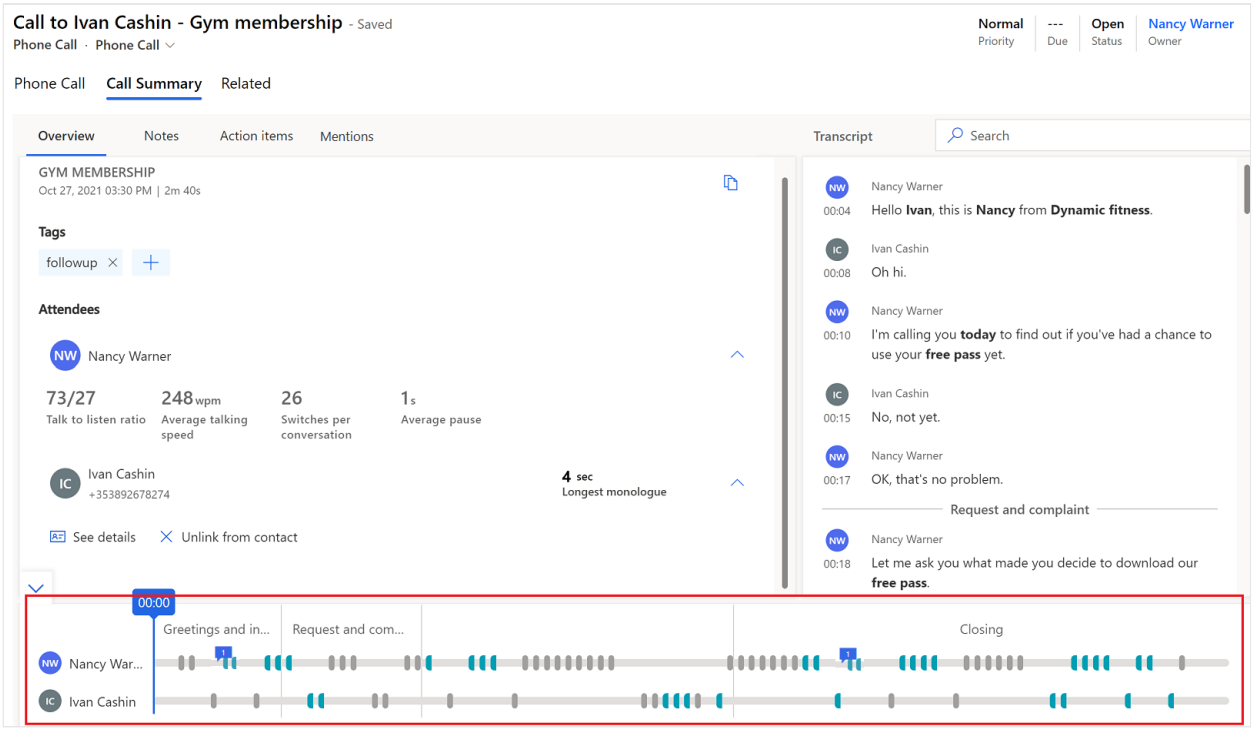
select **Save**. A comment icon is also added to the corresponding time in the timeline.



The brands, tracked keywords, and competitors mentioned in the conversation are formatted in bold in the transcript. If the transcript is in a language other than English (and is one of the languages supported by Microsoft), you can select the translate icon to convert the transcript into English.

Call playback timeline and segmentation

The following image shows an example of call playback timeline.



Using the call playback feature, you can listen to the entire recorded call or choose a point on the timeline—by dragging the progress bar or selecting the specific point—at which you want to start listening. The call transcript will automatically scroll to that moment in the call. You can also pause, rewind, and move forward through the call, and

adjust volume as you like. The playback timeline also displays the sentiments detected in the conversation (positive, neutral, or negative).

When you go to the **Mentions** tab and select a keyword or other mentions, a diamond icon appears on the playback timeline to indicate the time that the selected word was mentioned. Also, hovering over a keyword displays gray diamond icons on the timeline.

You can also quickly go to the comments added by your colleagues from the timeline. Select the comment icon (

) on the timeline to go to the corresponding comment in the transcript.

On the timeline, you can see how the conversation was segmented. The topics (if any) that were discussed in a segment are identified. To better drill down into the conversation, you can choose a specific segment and see the insights that are relevant to it. Some examples of segments are introduction, solution, price quote, and call close. The transcript is adjusted to display the start of the segment, and the playback timeline is highlighted for the selected segment. If the selected segment contains any action items or keywords, they're displayed on their respective tabs.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Overview of Conversation Intelligence
Track and manage activities
View call recordings and transcripts in Dynamics 365 Customer Service

Monitor call and insight processing

Article • 06/29/2023

As a user of conversation intelligence, you might want to track and understand the status of calls with customers. The **System monitoring** page in the conversation intelligence app helps you ensure that the calls were successfully processed. You can monitor the status of calls that have been processed, are yet to be processed, or could not be processed. When call processing errors occur, you can view the reasons for each error and take the appropriate steps.

License and role requirements

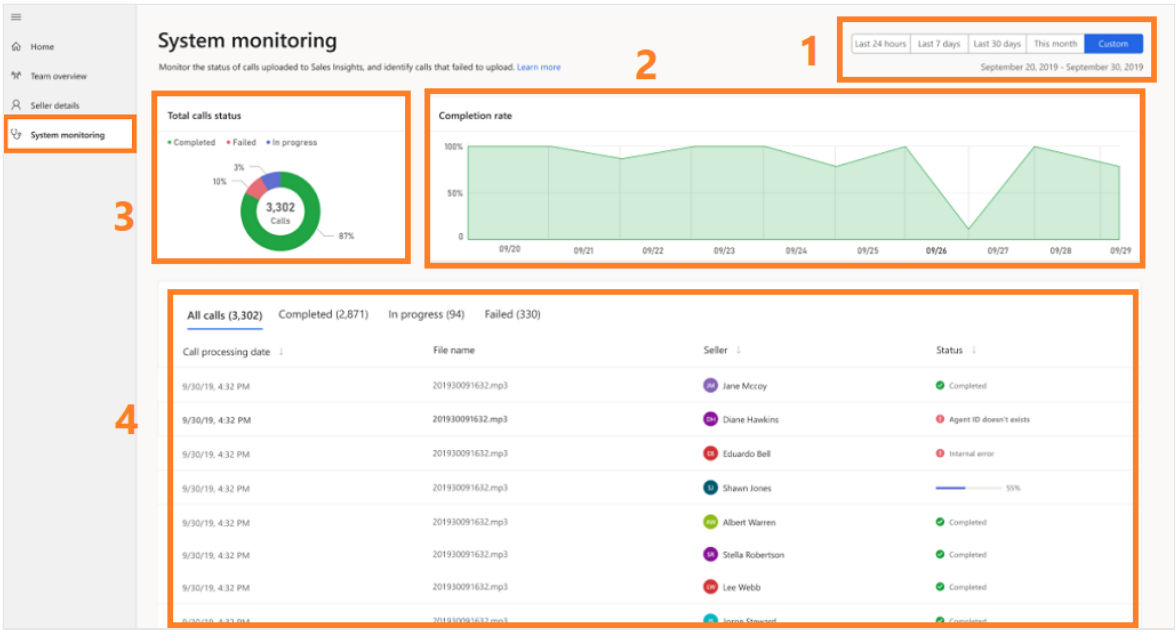
Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View the System monitoring page

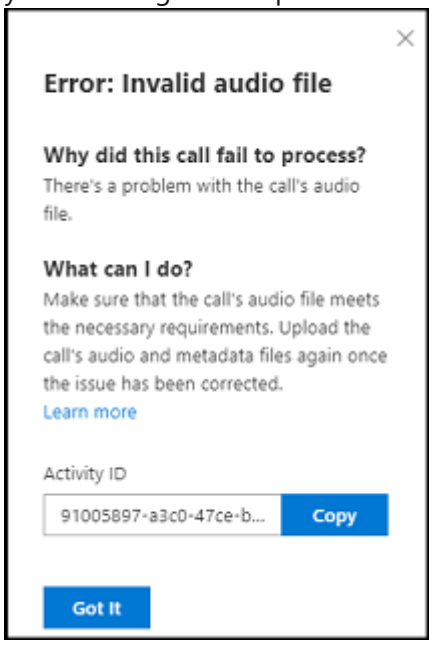
The call processing information you can view and track on the page depends on the role that you are assigned.

Role	Which calls can I track?
Administrator	Call processing information of the entire organization.
Sales Manager	Call processing information of your and your teams'.
Seller	Call processing information of your calls.

1. Sign in to the Conversation intelligence app and select **System Monitoring** to open the system monitoring page.



Number	Feature	Description
1	Time period filter	You can filter the information on the page based on a time period, such as last 24 hours, last seven days, last month, current month, or a custom time period. For example, to view the information of the current month, select **This month**, and the information is filtered to display the current month's status in the **Total call status**, **Completion rate**, and **list of calls**.
2	Completion rate	This insight shows the average percentage of total calls that are processed successfully at a given time. **Note**: If calls aren't uploaded at all, for any reason, they will not appear in the graph.
3	Total call status	This insight shows a pie chart of the total number of calls uploaded and the average percentage of calls in progress, failed, and completed. In this example you can see that a total of 3,302 calls were uploaded in which an average of 87% of calls were completed (successfully processed), 10% of calls failed, and 3% of calls are in progress.

Number	Feature	Description
4	View list of calls	This table lists the total number of calls that are uploaded for processing. The table has four columns: Call process date, File name, Seller, and Status. By default, the calls are sorted according to the date they are processed in descending order. You can also sort the call list according to file name, seller name, or status. The **Status** column helps you identify the status of a call, such as completed, in progress, or failed. If a call is failed, an error is displayed. When you select the error, a pop-up window is displayed with information such as why the call failed to process, what you can do to resolve the error, and an **Activity ID**. You can copy the activity ID and provide it to your support team (or Microsoft Support) for further investigation, which can help you to debug the call process and resolve the error.  **Note**: To view the list of calls according to their status, select one of the tabs: **Completed**, **In progress**, or **Failed**.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

View and understand the call summary page

Article • 05/16/2023

Sellers and their managers need an easy way to review their conversations with customers and quickly find talking points and insights. The call summary page provides that high-level view of how a conversation with a customer went. It includes action items and relevant keywords, a timeline, and a transcript of the call to help both sellers and managers.

- Sellers can quickly review past conversations with a customer and highlight important topics and commitments.
- Managers can get a high-level view of how their sales team is managing their relationships with customers.

Call summaries are available from the conversation intelligence capabilities of the Sales Insights Add-in for Dynamics 365 Sales.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

- Configure conversation intelligence to process call recordings.
- To display the **Call summary** tab in Sales Hub, make sure that the latest version of Sales Insights is installed in your organization.

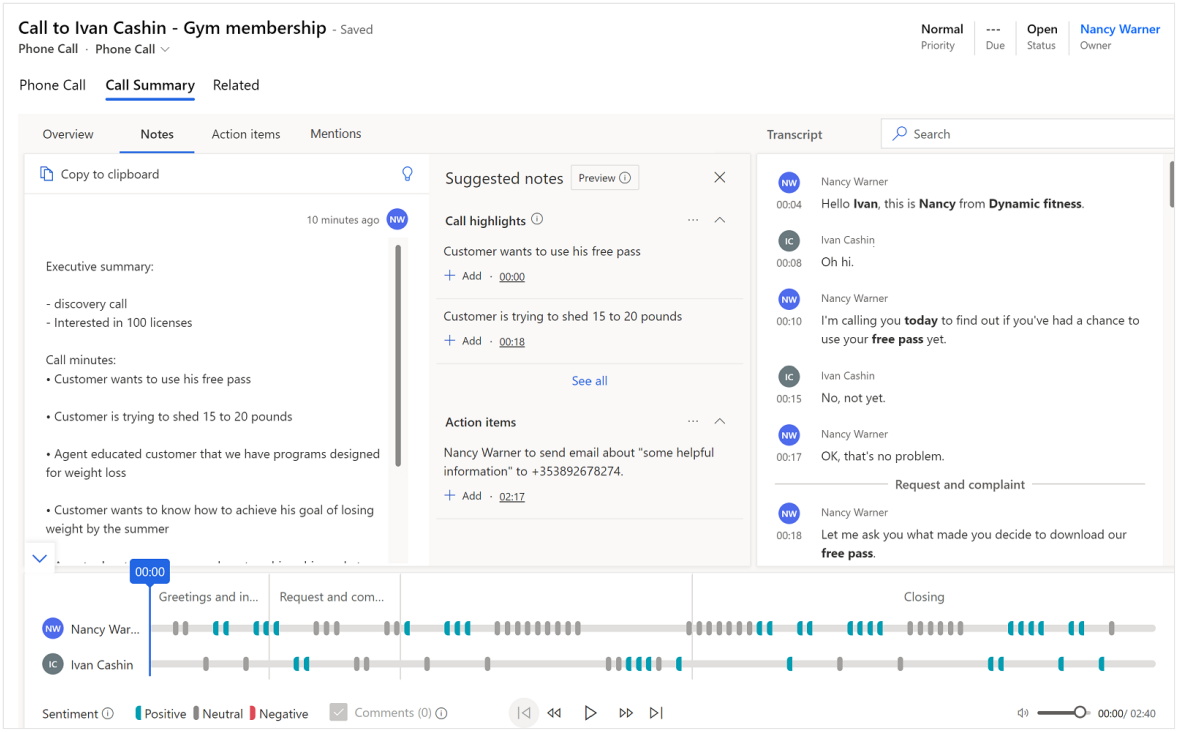
View the call summary page

The **Call Summary** page is a tab that's available under activities for leads and opportunities.

1. In Dynamics 365, select **Change area** > **Sales**, and then select **Activities**.

2. Select a phone call activity for which you want to view the call summary.

3. Select the **Call summary** tab.



If one or more opportunities are associated with the call, select the **Related opportunity** tab to view them. To add a related opportunity to the call, search for and select the opportunity.

Understand the call summary page

The call summary page includes the following sections:

- Overview, notes, action items, and highlights
- Call transcript and translation
- Call playback timeline and segmentation

Overview, notes, action items, and highlights

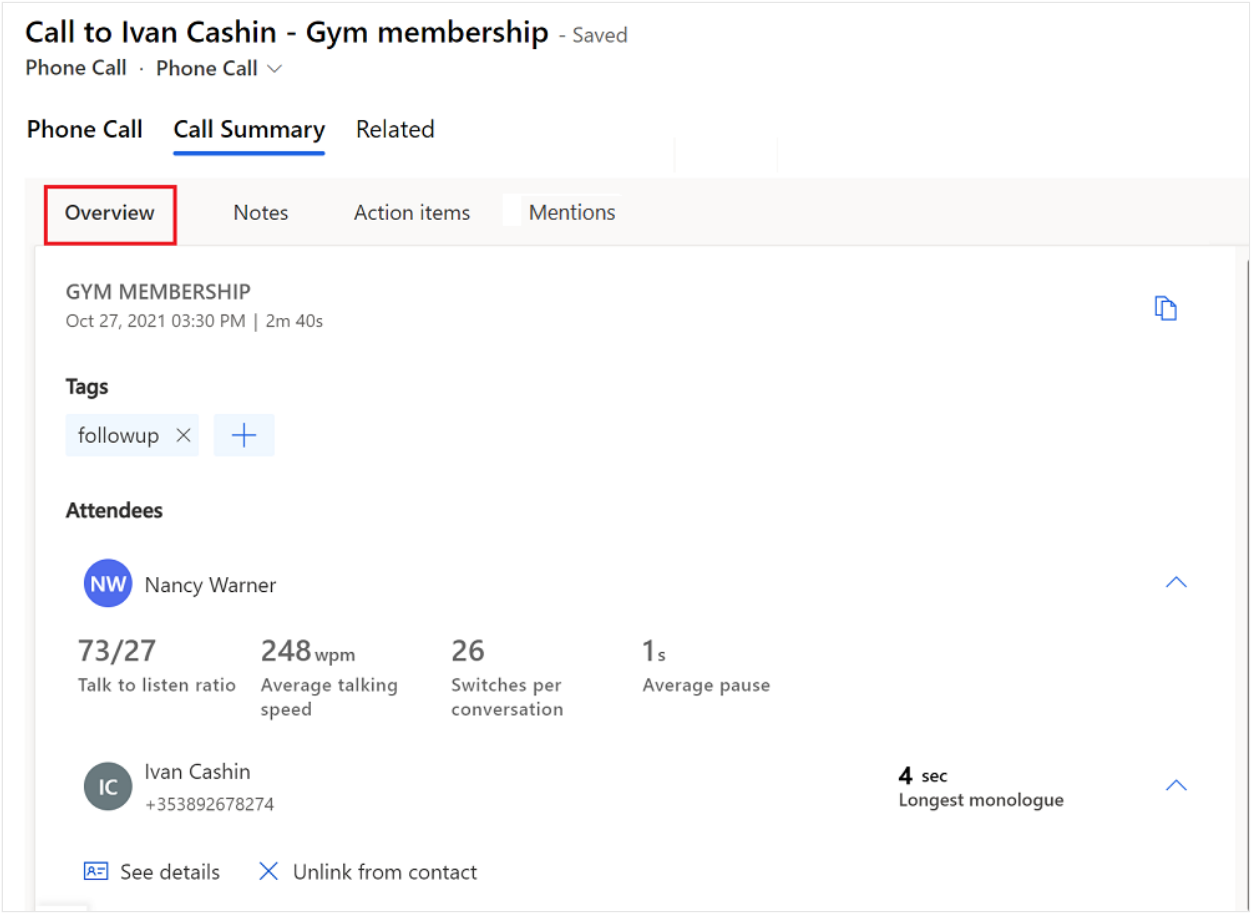
This section is where you'll find key insights generated from conversation intelligence.

Overview tab

The **Overview** tab displays the following information about the conversation:

- The date, time, and length of the call
- Tags that were added to the conversation to improve searchability

- The names of the people who participated in the call
- KPIs for each person
  - For the seller: Talk to listen ratio, average talking speed, number of switches per conversation, and average pause length
  - For the customer: Length of the longest monologue



View categorization tag for short duration calls (Preview)

> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support

Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Conversation intelligence can detect and tag short duration calls for the following categories:

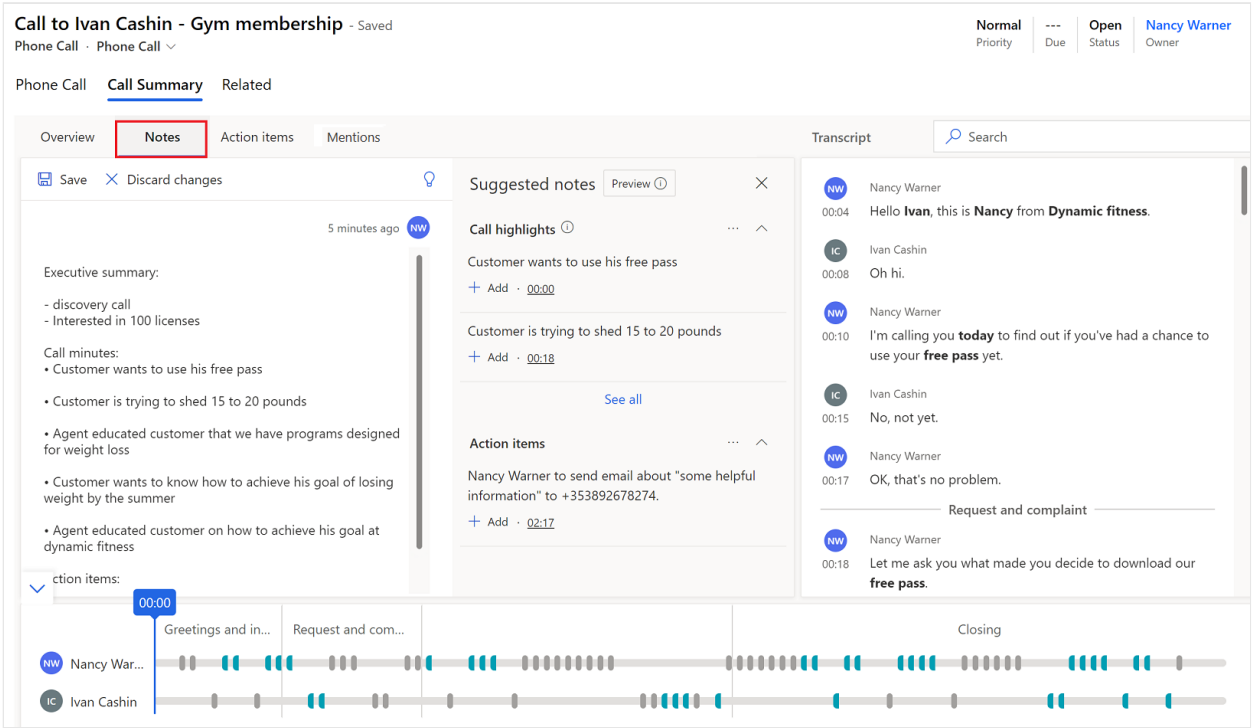
- Voicemail
- Contact is unavailable
- Short calls with reschedule requests
- Short calls in which the contact indicates the call is unwanted

If the tag is inappropriate, you can delete it.

Your administrator must enable the **Call categorization (preview)** feature for the system to tag short duration calls. You can also view these tags in the Conversation intelligence app under **Seller Details** > **Call History** section. For more information, see View a seller's performance to identify best practices and coaching opportunities.

Notes tab

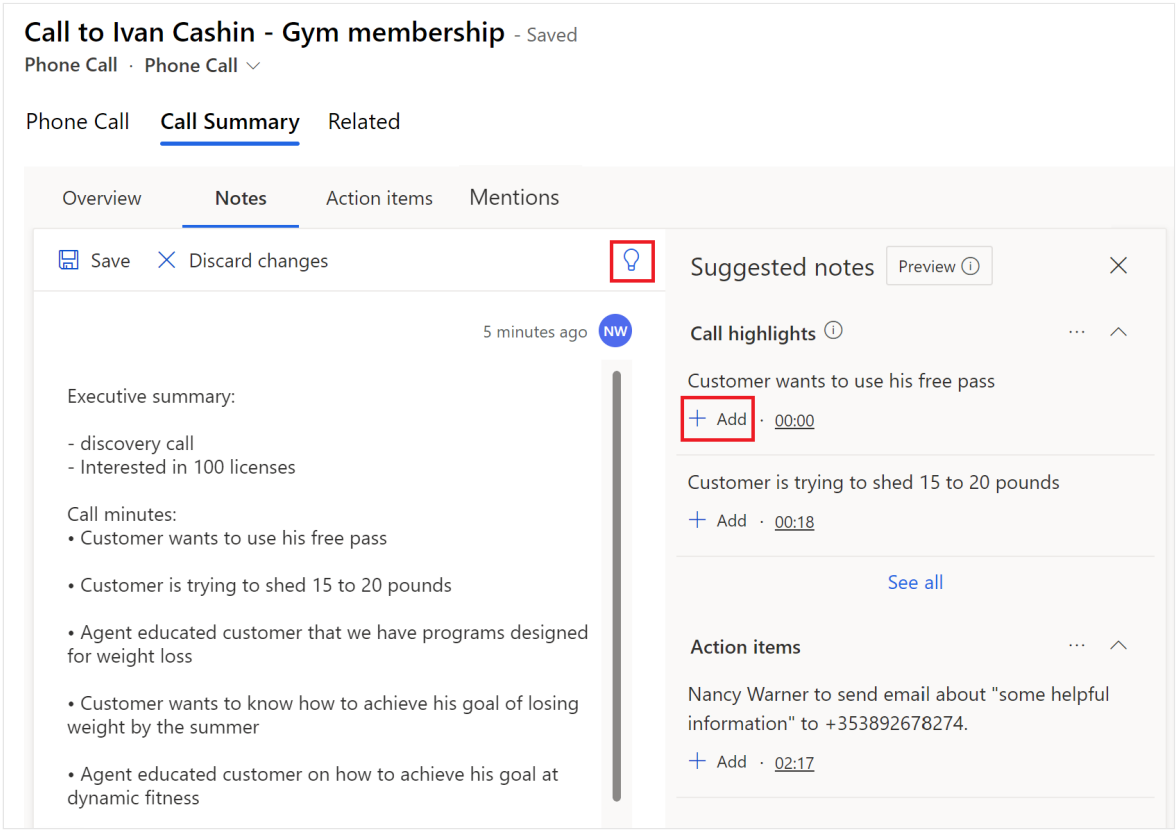
The **Notes** tab helps reduce the time it takes you to summarize the call by offering intelligent suggestions, including action items, commitments, call minutes, and next steps. Writing a personalized summary of the call helps you to focus on the customer's need, quickly review key points, and understand the next course of action. You can share the summary with stakeholders through email.



Write a call summary

1. On the **Notes** tab, edit any notes you took during the call, and check the **Suggested notes** pane for call highlights and action items. If you don't see the **Suggested notes** pane, select the bulb icon to open the pane.

    - Select **Add** to add a call highlight or action item to your summary.
    - To add all the call highlights or action items, select **More options** (...), and then select **Add all**.
    - To understand the context of a call highlight or action item, select the timestamp to go to that point in the call transcript and playback.

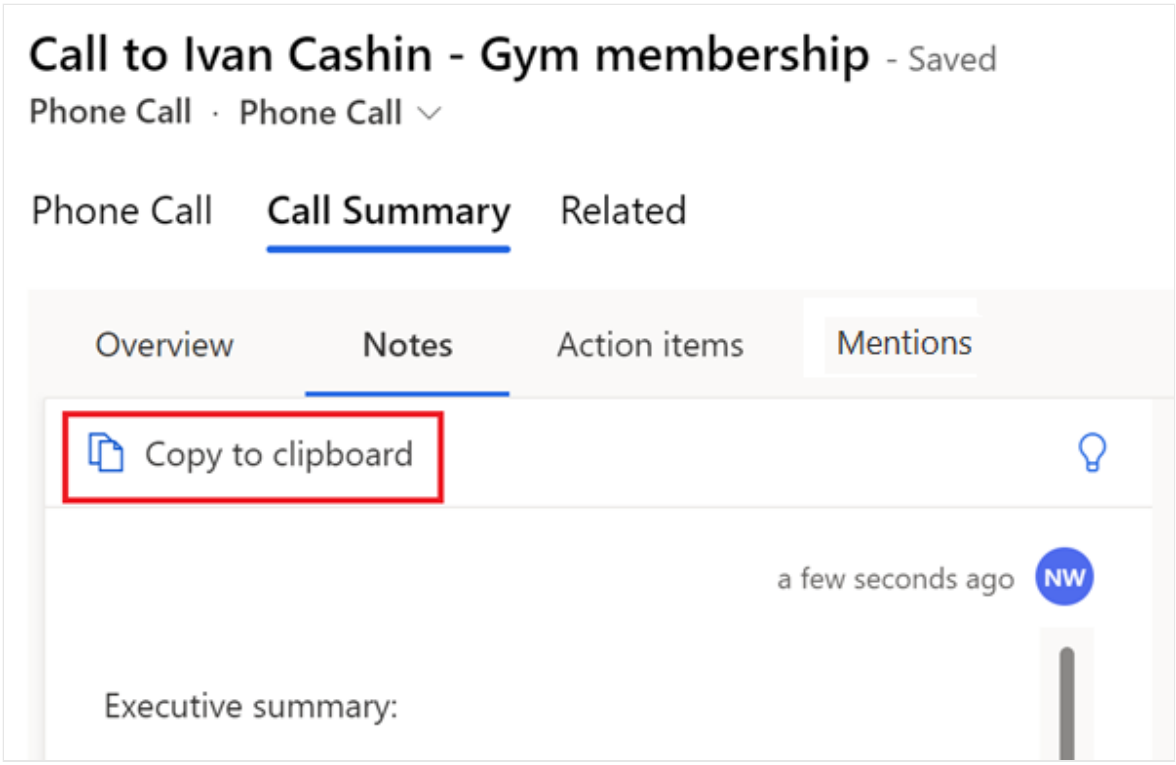


2. Select **Save**.

Share a call summary

1. In the notes section of the **Notes** tab, select **Copy to clipboard**.

    This option doesn't appear if you haven't saved your notes.



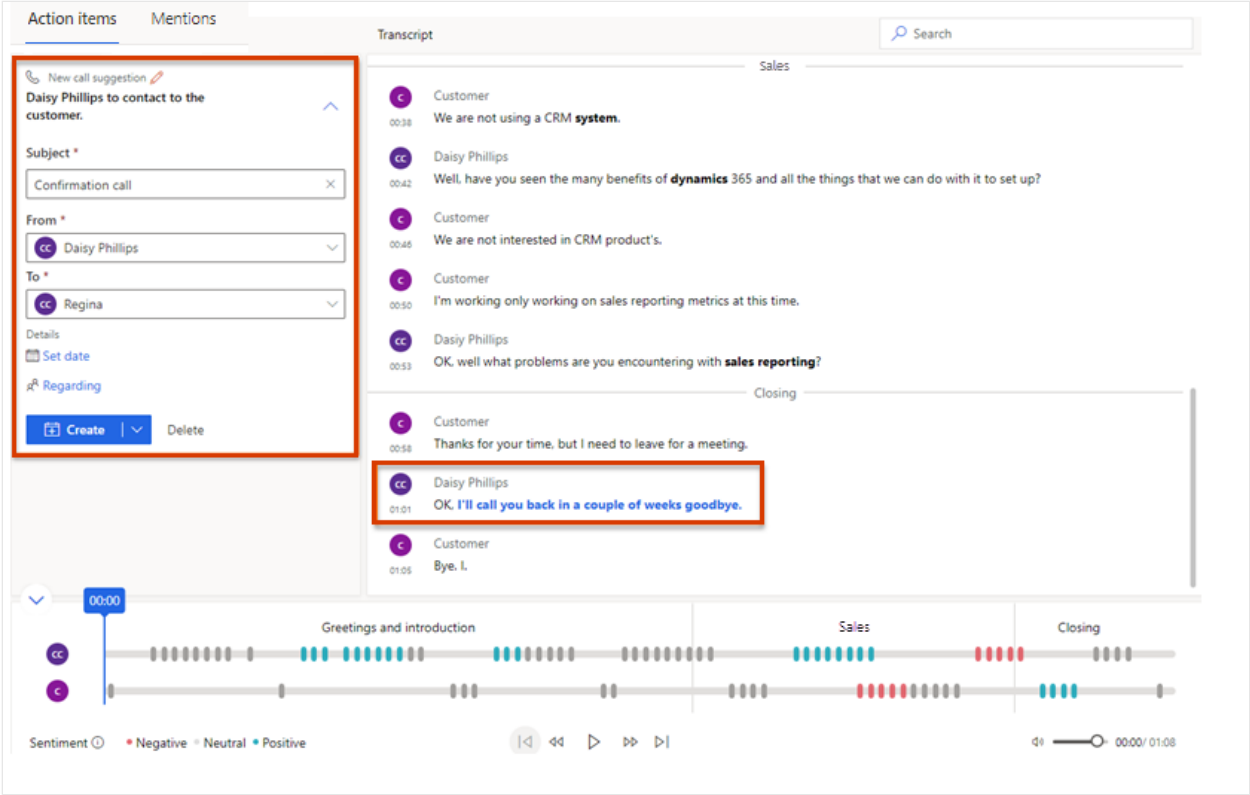
2. Paste the notes in the body of an email.

Action items tab

The **Action items** tab displays a list of actions mentioned during the call—for example, "I'll send you an email" or "I'll follow up with Michelle tomorrow." When you select an action item, the call transcript is highlighted and a pointer on the playback indicates when it was mentioned. Actionable items include **Set up a call**, **create a task**, **send an email**, and **set up a meeting**.

Set up a call

If a call is mentioned in the transcript, the transcript is highlighted in blue and a suggestion to create a call is displayed.



1. Enter the following details:

    - **Subject**: Summarize what the call is about.
    - **From**: Select the name of the seller who will call the customer.
    - **To**: Select the name of the customer to call.
    - **Set date**: Select the date and time at which the seller must make the call.
    - **Regarding**: Select a record from an entity—such as opportunity, lead, contact, or account—that provides relevant information about the call.

2. Select one of the following actions:

    - Select **Create** to create the call activity.
    - Expand **Create** and then select **Create and Edit** to enter more details before saving the call activity.
    - Select **Create task** if you think this action item would be better handled as a task than a call.

You can view the call activity under the activities of the attached record entity and on the seller's activity list. After you create the call activity, select the call under **See call** and the call activity will open in a new browser tab.

Create a task

If something the seller commits to do is mentioned in the transcript, the transcript is highlighted in blue and a suggestion to create a task is displayed.

1. Enter the following details:

    - **Subject**: Summarize what's involved in the task.
    - **Owner**: Select the owner of the task.
    - **Date and time**: Select a date by which the owner must complete the task.
    - **Regarding**: Select a record from an entity—such as an opportunity, lead, contact, or account—that provides relevant information about the task.

2. Select one of the following actions:

    - Select **Create** to create the task activity.
    - Expand **Create** and then select **Create and Edit** to enter more details before saving the task activity.

You can view the task activity under the activities of the attached record entity and on the owner's activity list. After you create the task activity, select the task under **See task** and the task activity will open in a new browser tab.

Send an email

If email is mentioned in the transcript, the transcript is highlighted in blue and a suggestion to send an email is displayed.

1. Enter the following details:

    - **Subject**: Summarize what the email is about.
    - **From**: By default, the name of the seller who participated in the call is selected, but you can select another sender if needed.
    - **To**: Select the contacts to send the email to.

2. Select one of the following actions:

    - Select **Open email** to create the email.
    - Expand **Open email** and then select **Create task** if you think this action item would be better handled as a task than an email.

Set up a meeting

If a meeting is mentioned in the transcript, the transcript is highlighted in blue and a suggestion to set up a meeting is displayed.

1. Enter the following details:

    - **Subject**: Summarize the reason for the meeting.

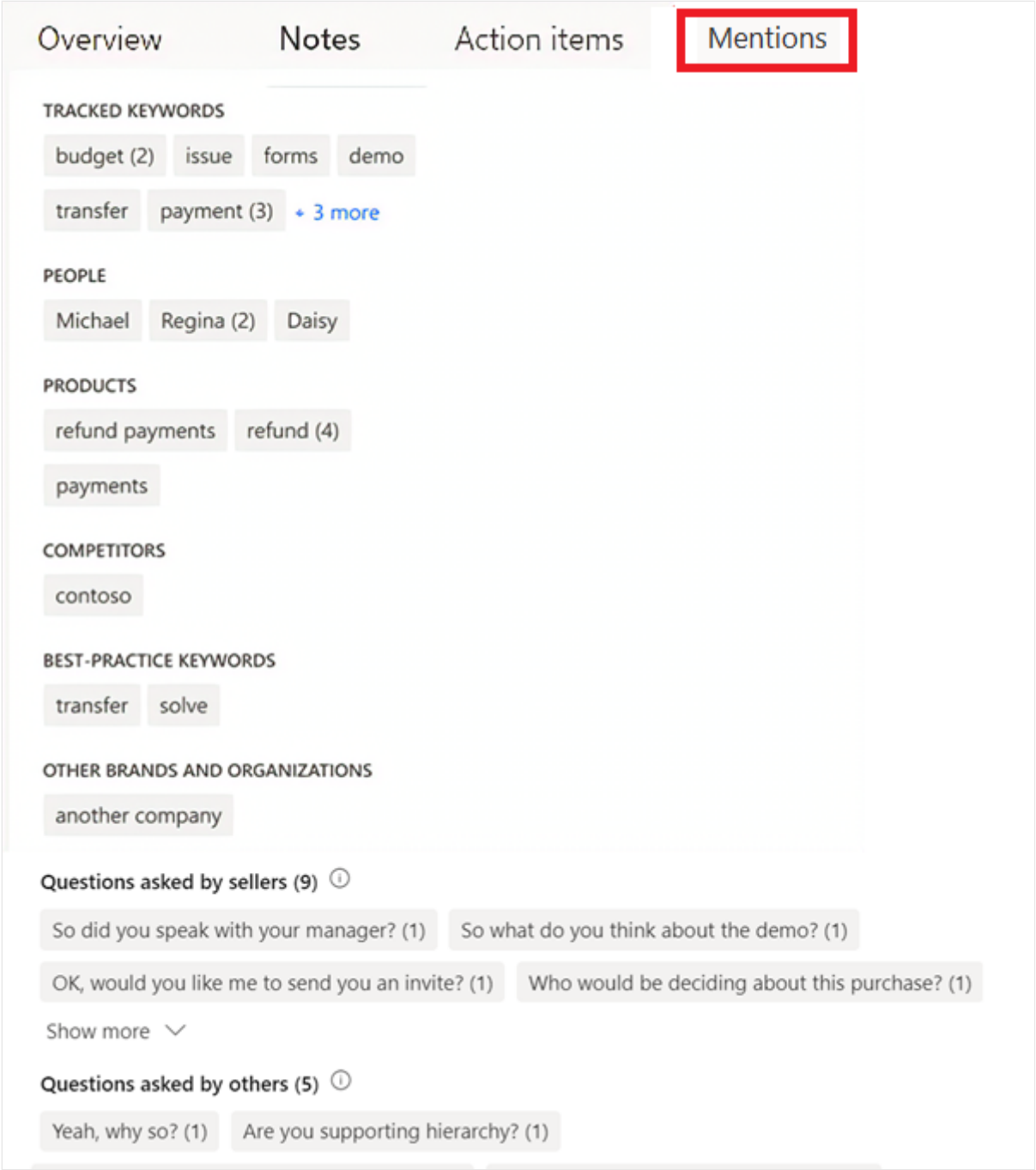
- **Owner**: By default, the name of the seller who participated in the call is selected, but you can select another owner if needed.
- **To**: Select the contacts to meet with.
- **Date and time**: Select the date and time of the meeting.

2. Select one of the following actions:

    - Select **Open calendar** to open your default calendar and create the meeting invitation.
    - Expand **Open calendar** and then select **Create task** if you think this action item would be better handled as a task than a meeting.

Mentions tab

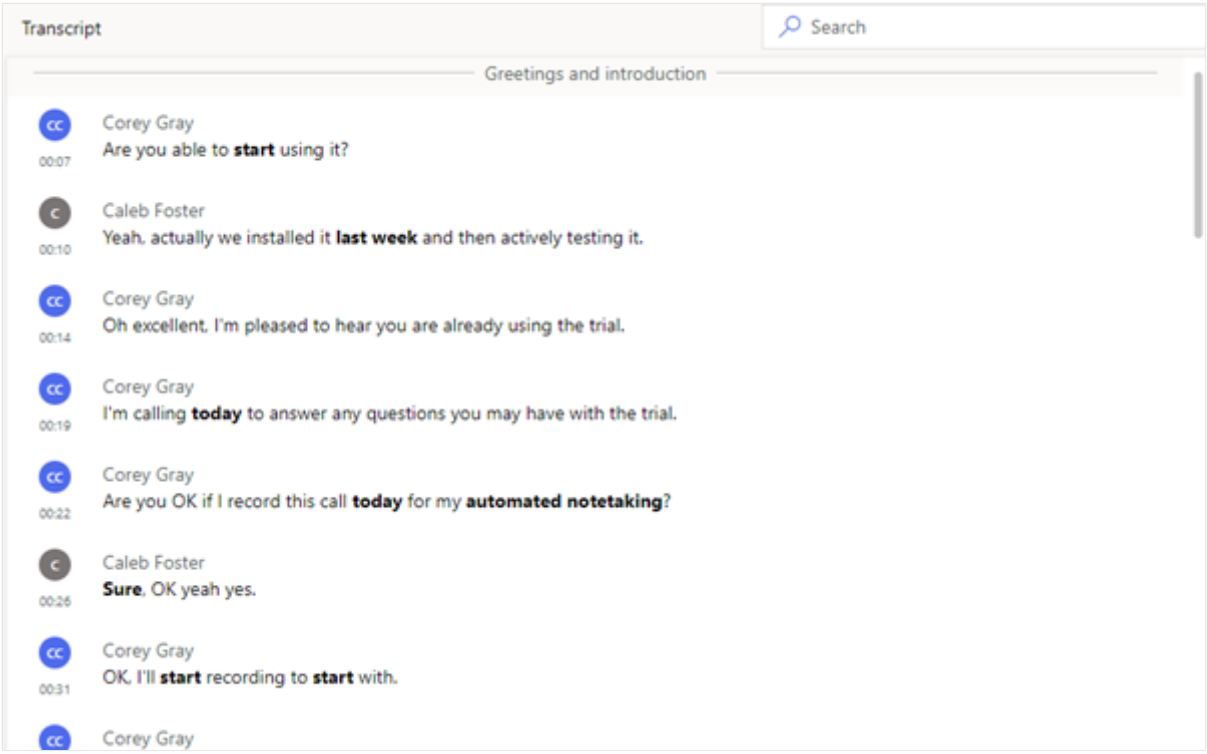
The **Mentions** tab displays talking points—keywords, stakeholders, products, questions, and competitors—that were mentioned during the call. When you select any of these items, the call transcript is highlighted and a pointer on the playback indicates when it was mentioned.



- **Tracked keywords**: Predefined keywords that customers mentioned during the call
- **People**: The names of people mentioned during the call
- **Products**: The names of the products mentioned during the call
- **Competitors**: Predefined competitors that customers mentioned during the call
- **Best-practice keywords**: Keywords that can be used as best practices during the call
- **Other brands and organizations**: Brand and organization names, other than your own, that the customer mentioned during the call
- **Questions asked by sellers**: Questions that the Dynamics 365 user—the seller—asked during the call
- **Questions asked by others**: Questions asked by the other participants during the call

Call transcript and translation

The **Transcript** tab displays a timeline and written record of the call, which you can read, comment on, and translate. Icons indicate where comments have been added to the timeline. Brands, tracked keywords, and competitors mentioned in the conversation are formatted in bold in the transcript.



If the transcript is in a language other than English and the language is one that Microsoft supports, select the translate icon to convert the transcript to English.

Credit card details that were shared during the call are visible in the transcript unless your administrator has turned on the **Hide personal data (preview)** setting to comply with Payment Card Industry regulations. If that setting is turned on, the account number, expiration date, and CVV are masked in the transcript.

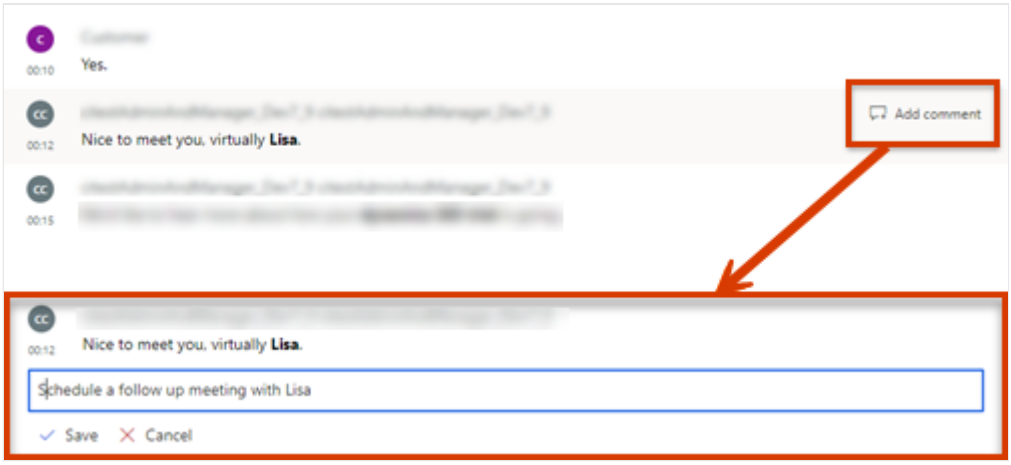
> **Important**
>
> A preview is a feature that is not complete, but is made available to you before general availability so you can evaluate the preview and provide feedback to Microsoft. Previews may have restricted functionality and may employ reduced or different privacy, security, or compliance commitments than a commercial version. As such, previews are not intended for production use, which means they are not meant for "live" Customer Data, Personal Data, or other data that is subject to heightened compliance requirements. Use of such data is at your sole risk and it's your sole responsibility to notify your end users about not including personal or sensitive information with their use of previews, as appropriate. We don't provide

support for previews and Microsoft Dynamics 365 Technical Support won't be able to help you with issues or questions. This preview, and any one-off support Microsoft may elect to provide, is provided "as-is," "with all faults," "as available," and without warranty.

Comment on the transcript

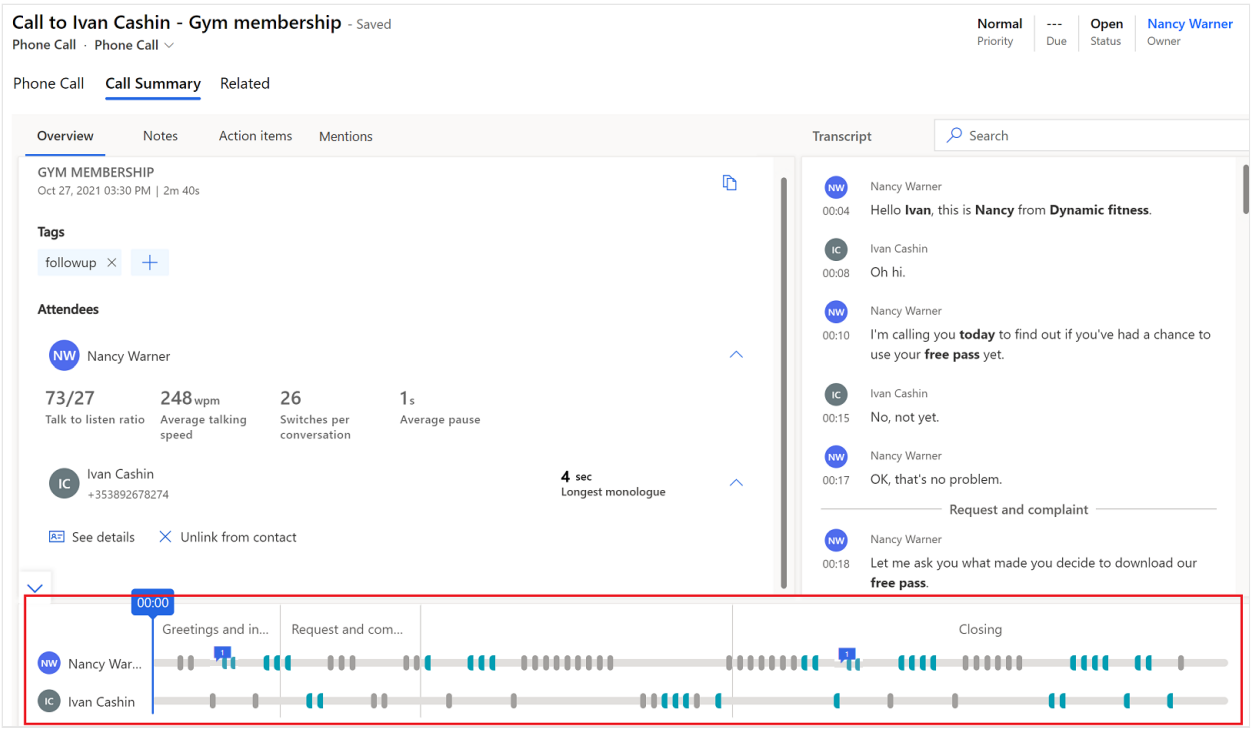
As a manager, you can review the transcript and leave a comment—for example, suggesting how the seller might handle a similar situation in the future. As a seller, you can review the transcript and comments from your manager or coach, reply to their comments, and add your own.

1. Hover over the part of the transcript you want to comment on and select **Add comment**.
2. Enter a comment or reply to a comment.
3. Select **Save**.



Call playback timeline and segmentation

Use the call playback feature to listen to the recorded call. To skip to a specific point, drag the progress bar or select a location in the playback. The call transcript automatically scrolls to that moment in the call. You can also pause, rewind, and move forward through the call and adjust the volume. The playback timeline also displays the sentiments detected in the conversation, positive, neutral, or negative.



When you go to the **Highlights** tab and hover over or select a keyword or other highlight, a diamond icon appears on the playback timeline to indicate the time that it was mentioned.

You can quickly go to comments from the timeline. Select the comment icon (1) on the timeline to go to the corresponding comment in the transcript.

The timeline shows how the conversation was segmented and the topics that were discussed in a segment. You can choose a specific segment to drill down into relevant insights. The transcript adjusts to display the start of the segment and highlights the segment in the playback timeline. If the selected segment contains any action items or keywords, they're displayed on their respective tabs.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Overview of Conversation Intelligence

Track and manage activities

View call recordings and transcripts in Dynamics 365 Customer Service

View and share auto-summarized conversations in Dynamics 365 Customer Service

Get real-time call data through Teams calls

Article • 09/13/2023

Conversation intelligence with Teams calls gives you real-time call data analysis that includes overview, summary, transcription, insights, and action items. To use this feature, an administrator must configure Microsoft Teams in your organization. More information: First-run setup experience for conversation intelligence in sales app

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

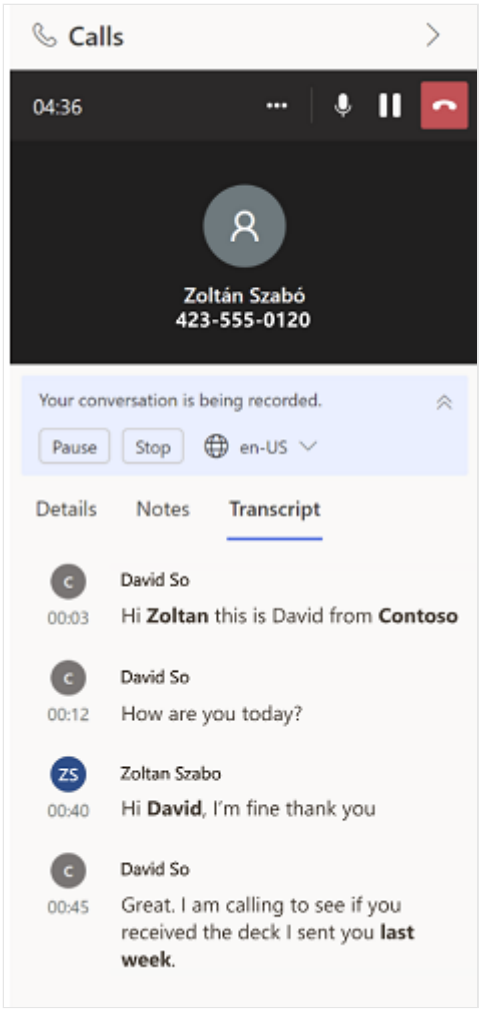
View real-time analysis of call data

Before you start a call, choose the call language on the dialer.

When a call is connected, the **Record** option appears. Turn on this option to get real-time analysis of the call.

You can perform the following actions during the call:

- **Connect and edit the record**: On the **Details** tab, you can connect the record that's relevant to the call and edit it if required. You can also view the phone call activity.
- **Take notes**: On the **Notes** tab, you can take meeting notes to summarize key points or any other important information about the call. The added notes are automatically saved to the activity's timeline, and are also available in the **Call summary** tab of the phone call activity. For more information about activities, see Track and manage activities.



- **Transcript**: On the **Transcript** tab, a real-time transcript is displayed during the call, with a timeline showing who said what, when. The transcript helps you analyze the call. The defined keywords and competitors that were mentioned in the call are highlighted in bold text. More information: Configure keywords and competitors

After the call is ended, select **Full summary** to view the summary of the call. More information: View and understand call summary

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box Sales Hub and Sales Professional apps.

See also

Configure Microsoft Teams dialer

Call using Microsoft Teams

Overview of the Dynamics 365 Sales mobile app

Article • 02/27/2023

Mobile apps help sellers build great customer relationships, stay up-to-date with important information, and respond to their customers faster. The new Microsoft Dynamics 365 Sales mobile app is optimized for core field seller scenarios to help sellers make use of the time that they spend on the road while traveling to meet customers. It helps sellers with the right data anywhere, anytime, and lets them log and share information quickly.

> **Note**
>
> The Dynamics 365 Sales mobile app doesn't work in Sovereign cloud and Microsoft Dynamics 365 Customer Engagement (on-premises).

In contrast to the Dynamics 365 for phones and tablets app, which is a model-driven app that you use to open any customer engagement app like Sales Hub or Customer Service Hub on mobile, the Dynamics 365 Sales mobile app is specifically designed for core sales scenarios while still supporting model-driven configurations.

> **Note**
>
> It is recommended for all Dynamics 365 Sales users who are using the Dynamics 365 for phones and tablets app to migrate and start using the Dynamics 365 Sales app instead. To know about the difference between Dynamics 365 Sales app and Dynamics 365 for phones and tablets app, see **Difference between Dynamics 365 Sales app and Dynamics 365 for phones and tablets app**.

With the Dynamics 365 Sales mobile app, you can do the following (and much more):

- **Plan your day**: Before you start your day, you want to see what it has in store. You can immediately see reminders about your customer meetings or insights for the day.
- **Do post-meeting work**: After you're out of a meeting, you can quickly add notes, create contacts, and update data in relevant records.
- **Find required information and act accordingly**: Find a contact you want to reach out to with ease, or find the recent records you worked on.

The Dynamics 365 Sales mobile app can be installed on iOS and Android.

Difference between Dynamics 365 Sales app and Dynamics 365 for phones and tablets app

Capability	Dynamics 365 Sales app	Dynamics 365 for phones and tablets app
Supported licenses	All	All
Supported devices	iOS and Android mobile phones. The app supports tablets, but the app's user interface is displayed using Unified Interface (same as in Dynamics 365 for tablets).	iOS and Android mobile phones and tablets
App store availability	Apple App Store, Google Play	Apple App Store, Google Play
Offline	Partial. If the app is launched by a user having mobile offline profile defined, the app's user interface is displayed using Unified Interface (same as in Dynamics 365 for phones).	Yes
Supported model-driven apps	All, including custom app modules. **Note**: The app is not recommended for app modules that are not Dynamics 365 Sales.	All, including custom app modules.
Supported search capabilities	Relevance search and categorized search. The app has an improved user experience for relevance search.	Relevance search and categorized search.
Online meeting	Supported. You can attend meetings through Exchange Online.	Not supported. You can only view meetings.
Server-side sync integration (allows you to track meetings and perform other tasks)	Supported	Not supported

Capability	Dynamics 365 Sales app	Dynamics 365 for phones and tablets app
Exchange Online calendar integration	Supported	Not supported
Join Microsoft Teams meeting	Supported	Not supported
Voice dictation for capturing notes	Supported	Not supported
Push notifications	Supported	Not supported
Lightweight record and activity forms	Supported	Not supported

See also

Prerequisites for the Dynamics 365 Sales mobile app

Use the Dynamics 365 Sales mobile app

Install the app on iOS and Android

Article • 02/27/2023

The Dynamics 365 Sales mobile app is supported on both iOS and Android. If you are reading this document on a computer, use the camera on your mobile device to scan the relevant QR code to install the mobile app on your device.

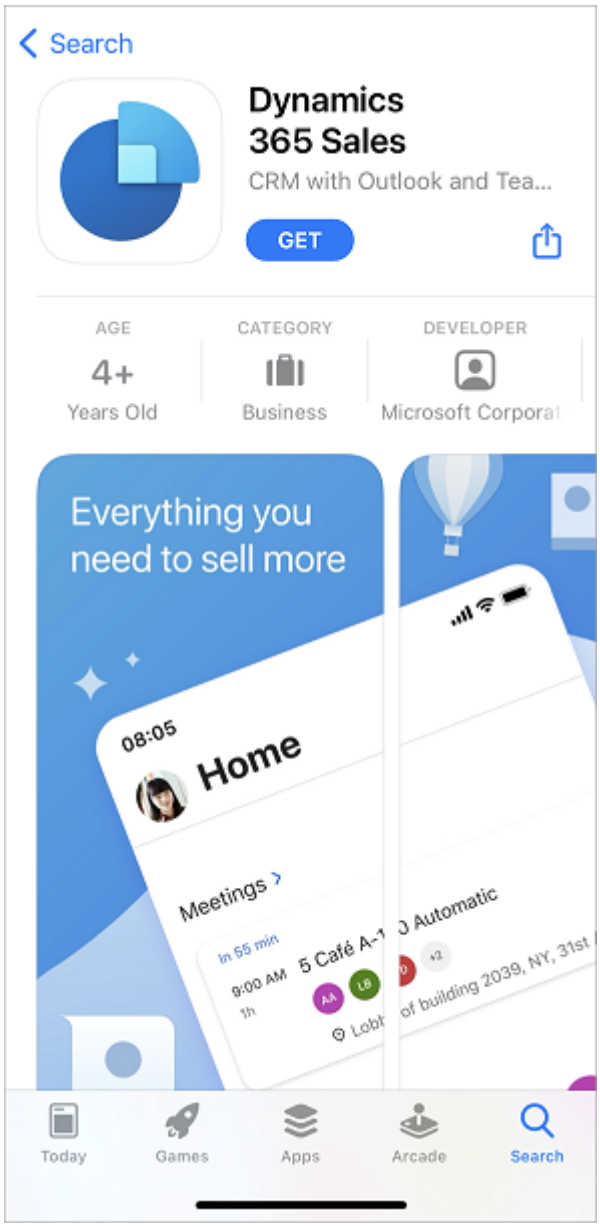
If you are reading this document on your mobile device, you can install the app as mentioned in the following sections.

Install the app on iOS

1. On your iOS device, go to the Apple App Store, and search for **Dynamics 365 Sales**.

   Alternately, tap here to open the app on App Store.

2. Tap **Get** to install the app.

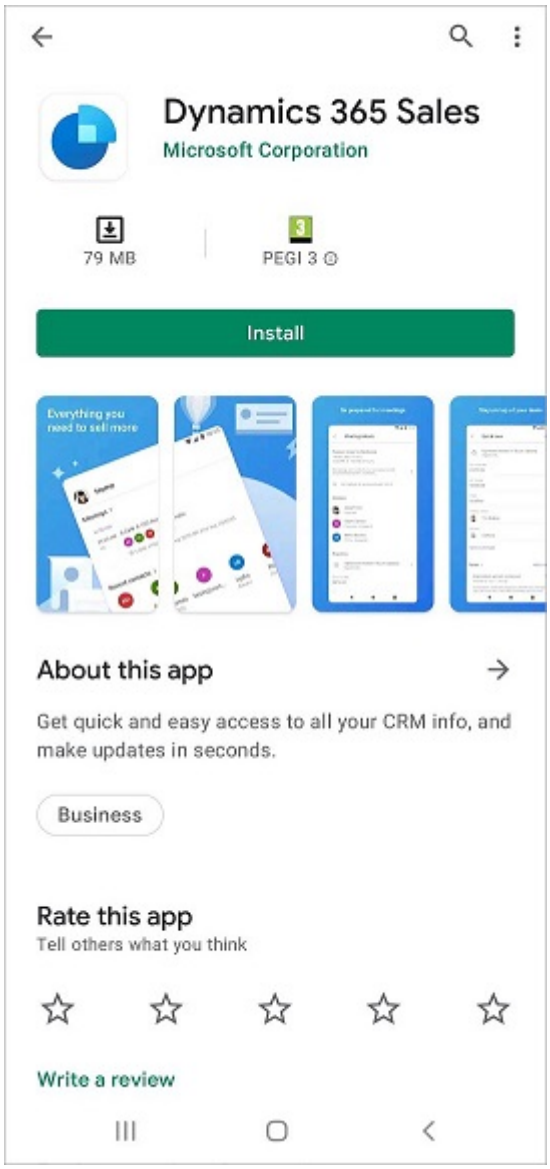


Install the app on Android

1. On your Android device, go to the Google Play Store, and search for **Dynamics 365 Sales**.

   Alternately, tap here to open the app on Play Store.

2. Tap **Install** to install the app.



See also

Configure mobile apps with Microsoft Intune

Use the Dynamics 365 Sales mobile app

Article • 03/30/2022

Use the Dynamics 365 Sales mobile app to plan your day by seeing what it has in store such as upcoming meetings and insights. You can also take post-meeting actions such as adding notes, creating contacts, and updating data in relevant records.

License and role requirements

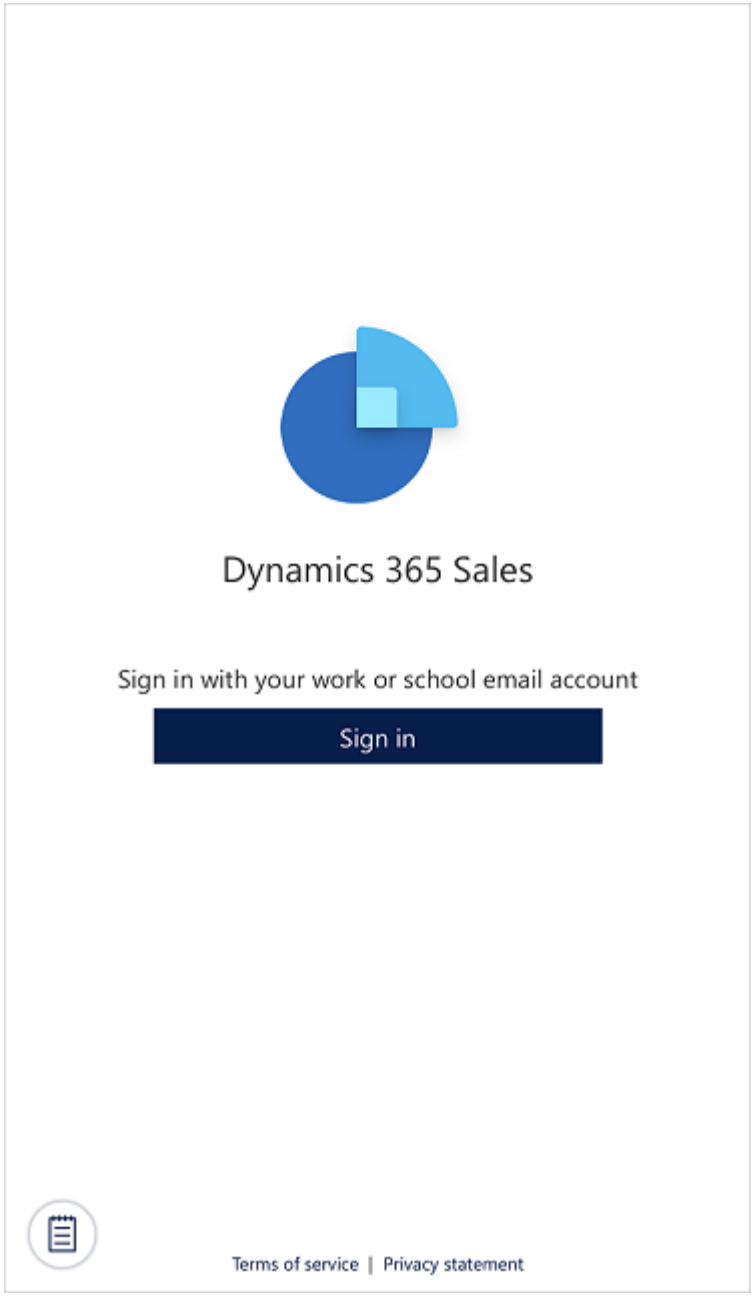
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Sign in and sign out from the app

You can sign in to the Dynamics 365 Sales mobile app by using the work email address you use for Dynamics 365. If you need help with your sign-in information, contact your Dynamics 365 administrator.

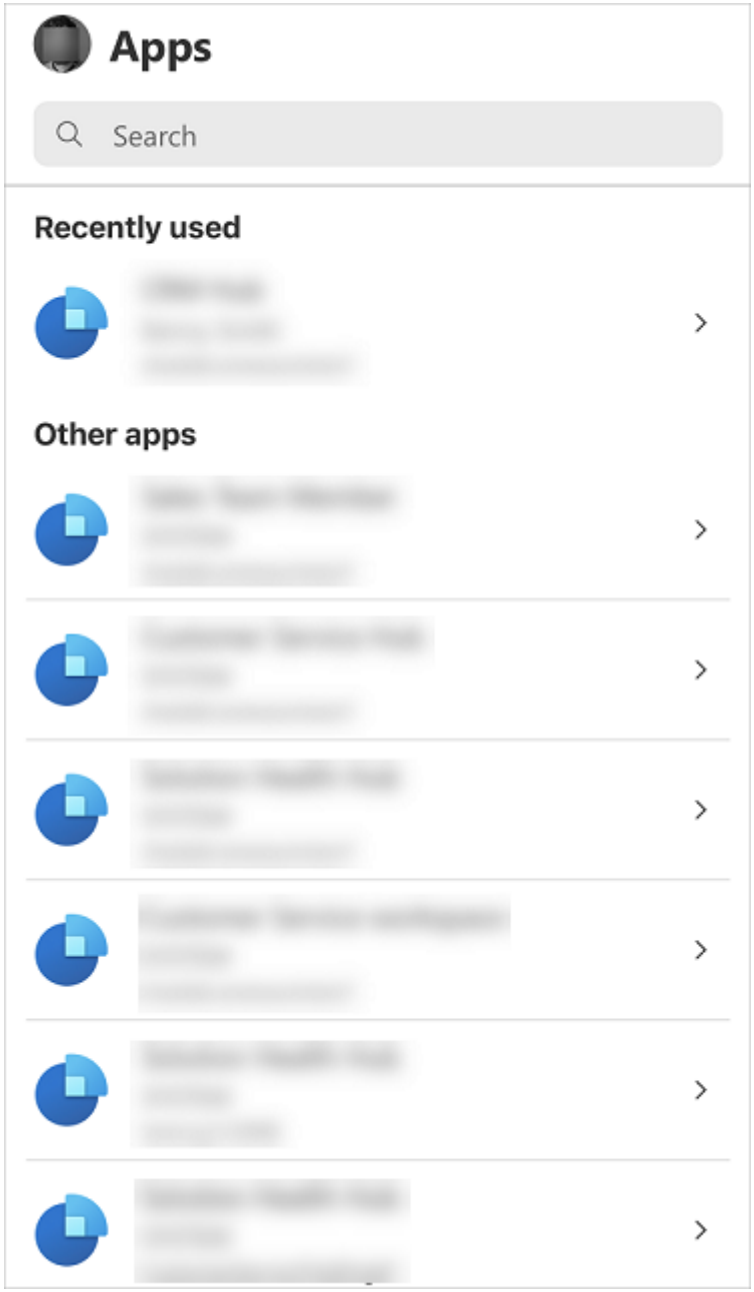
Sign in to the app

1. On your mobile device, search for **Dynamics 365 Sales**, and then open the app.
2. On the welcome screen, tap **Sign in**.



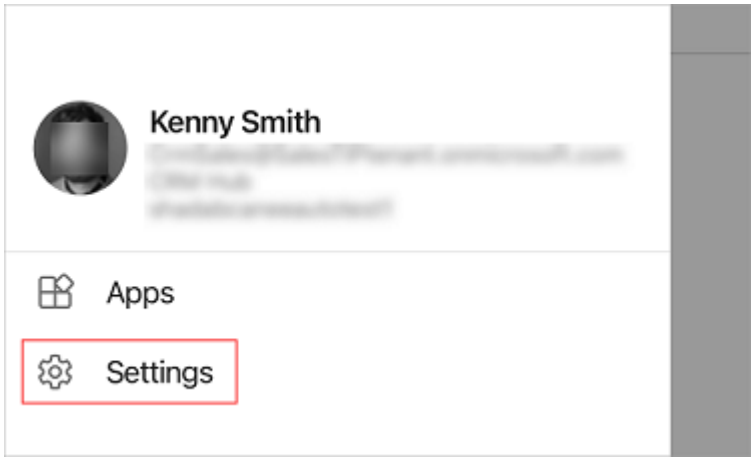
3. Enter your email and password.

4. From the list of apps, tap the app you want to use.

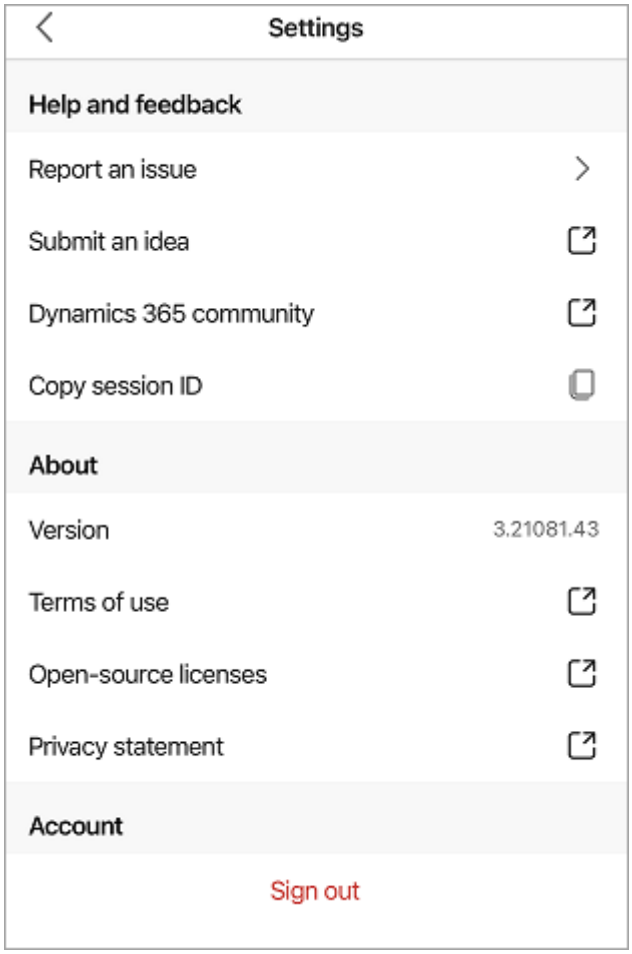


Sign out from the app

1. Tap your profile picture at the top left of the screen.
2. Tap **Settings**.



3. Under the **Account** section, tap **Sign out**.



View non-production apps

By default, only the production apps are displayed for you to choose from. If you want to view non-production apps, that is apps from your trial or sandbox environment, you must enable the **Show non-production apps** setting.

If no app module is currently in use

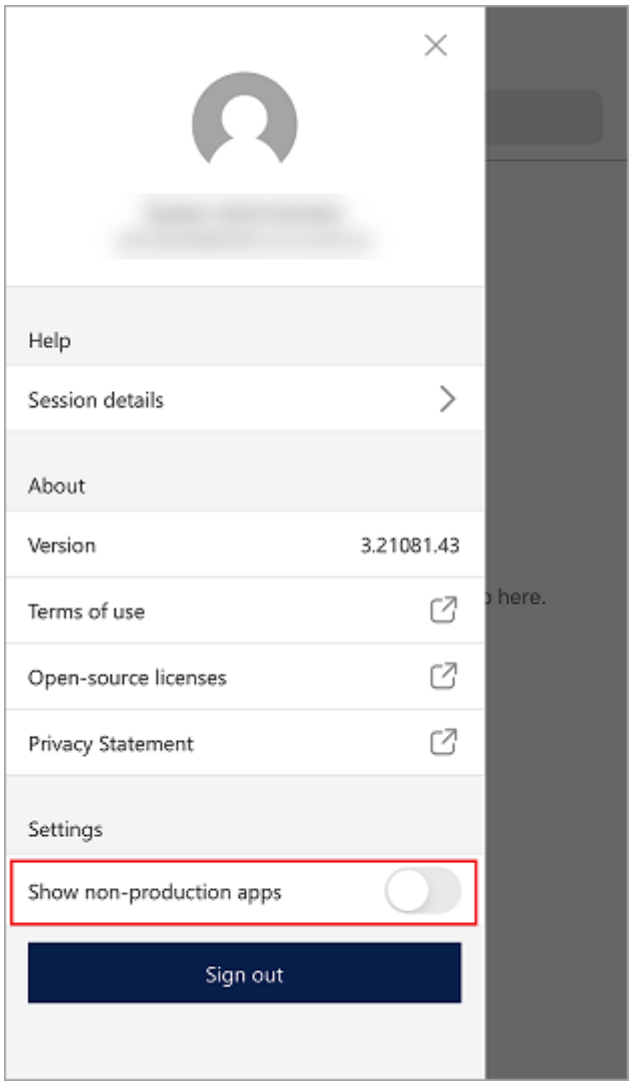
There are two ways in which you can view non-production apps.

Option 1

- Tap at the upper right of the screen, and then tap **Show non-production apps**.

Option 2

1. Tap your profile picture at the upper left of the screen.
2. Turn on the **Show non-production apps** toggle.



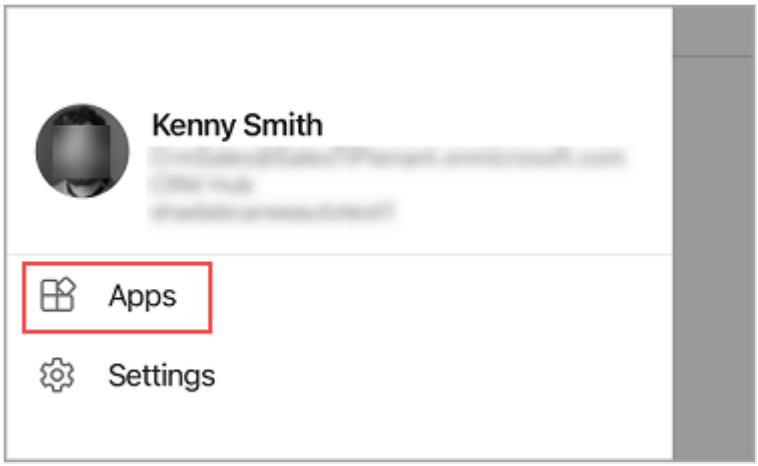
3. In the confirmation message, tap **Confirm**.
4. Go to the **Apps** screen, pull down the screen to refresh and wait for at least a few minutes.

If you've selected the app module to use

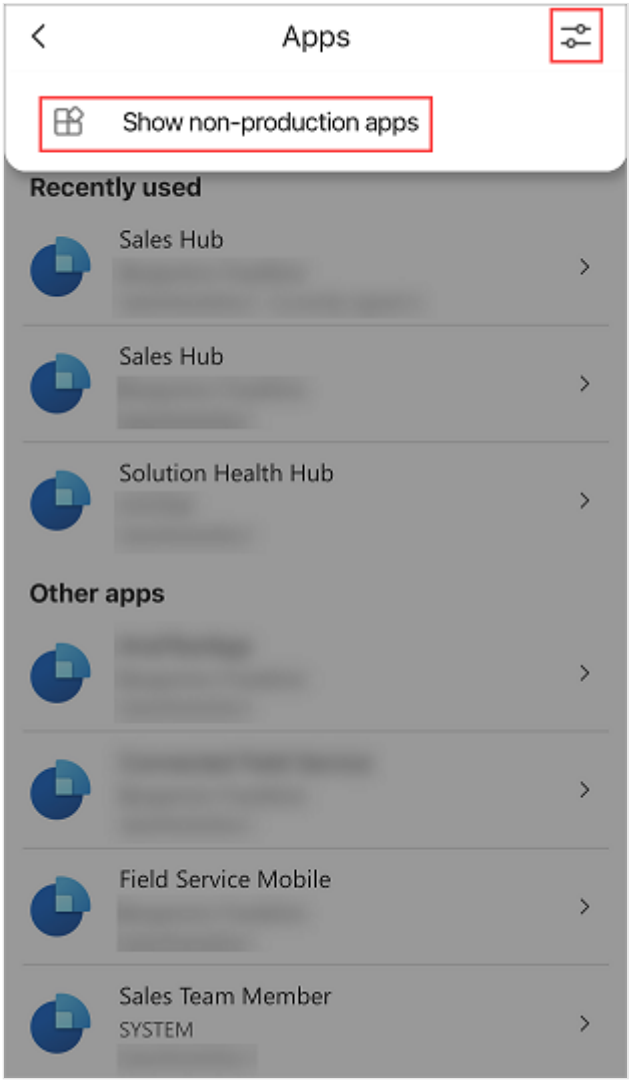
There are two ways in which you can view non-production apps.

Option 1

1. Tap your profile picture at the upper left of the screen, and then tap **Apps**.

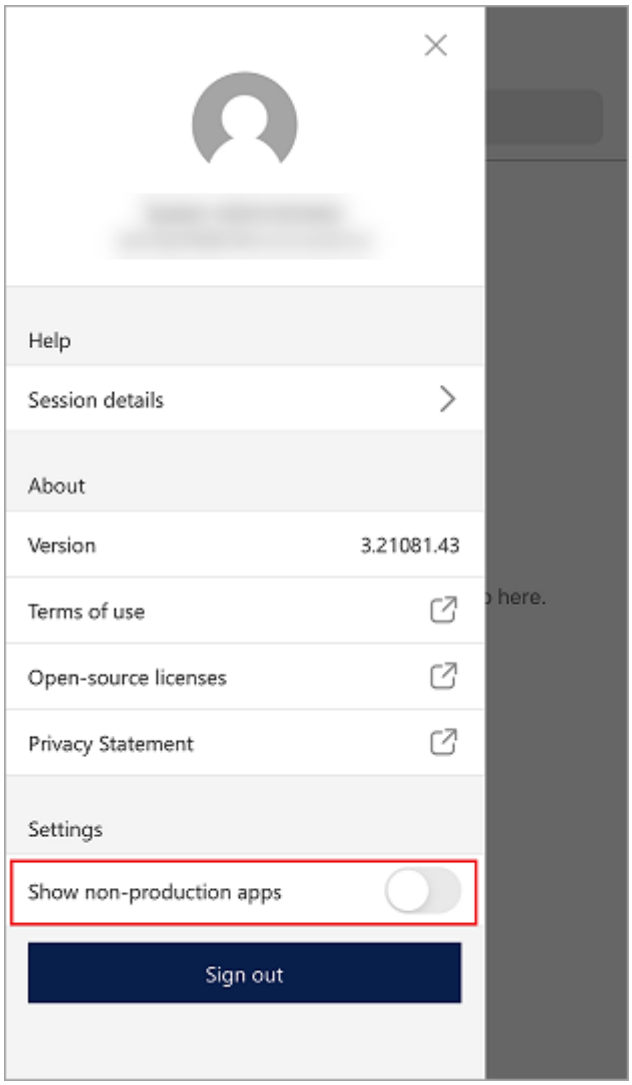


2. Tap at the upper right of the screen, and then tap **Show non-production apps**.



Option 2

1. Sign out from the app.
2. Sign in to the app.
3. Tap your profile picture at the upper left of the screen.
4. Turn on the **Show non-production apps** toggle.

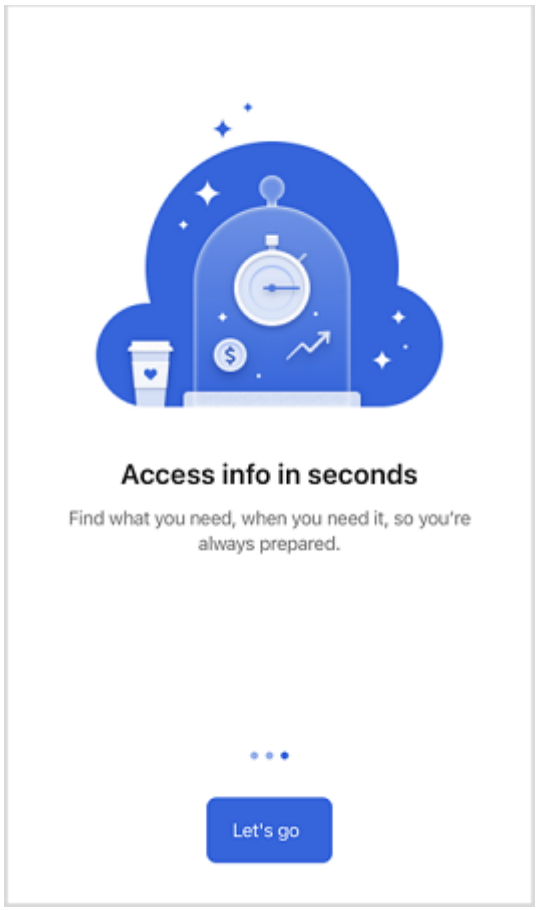


5. In the confirmation message, tap **Confirm**.
6. Go to the **Apps** screen, pull down the screen to refresh and wait for at least a few minutes.

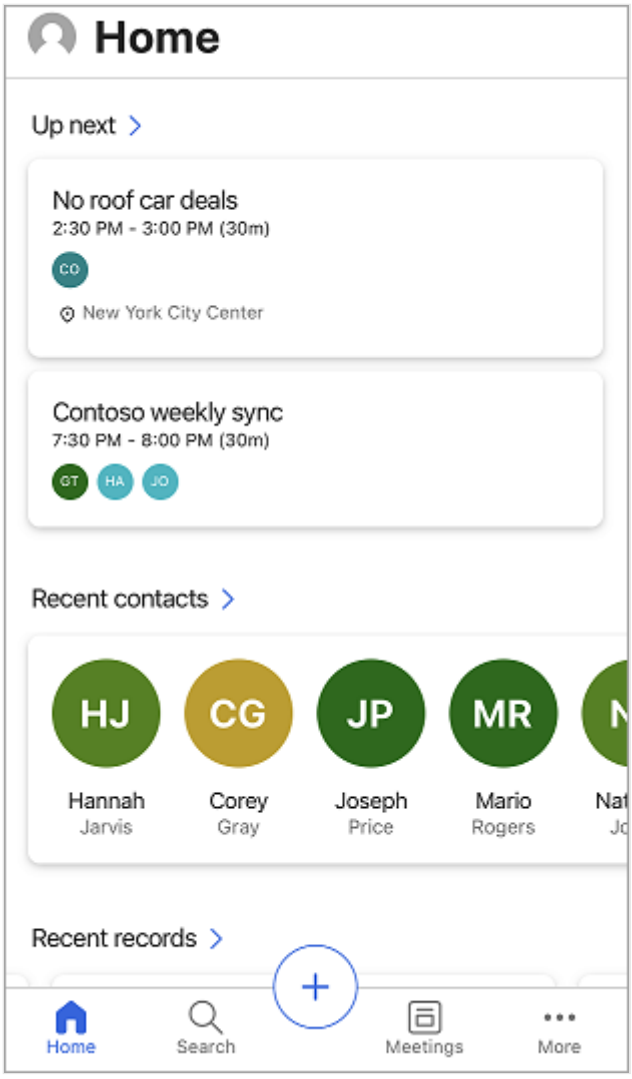
> ⓘ **Note**
>
> If you close the app, the **Show non-production apps** toggle is turned off and the non-production apps are removed from the list when you reopen the app. To view the non-production apps again, turn on the **Show non-production apps** toggle.

First run experience

When you sign in and select the app for the first time, you'll see the display cards. Review the display cards on the app and on the last card, select **Let's go** to move to the home page.



The home page is displayed as shown in the following example screen:



See also

Learn the basics

Learn the basics

Article • 02/27/2023

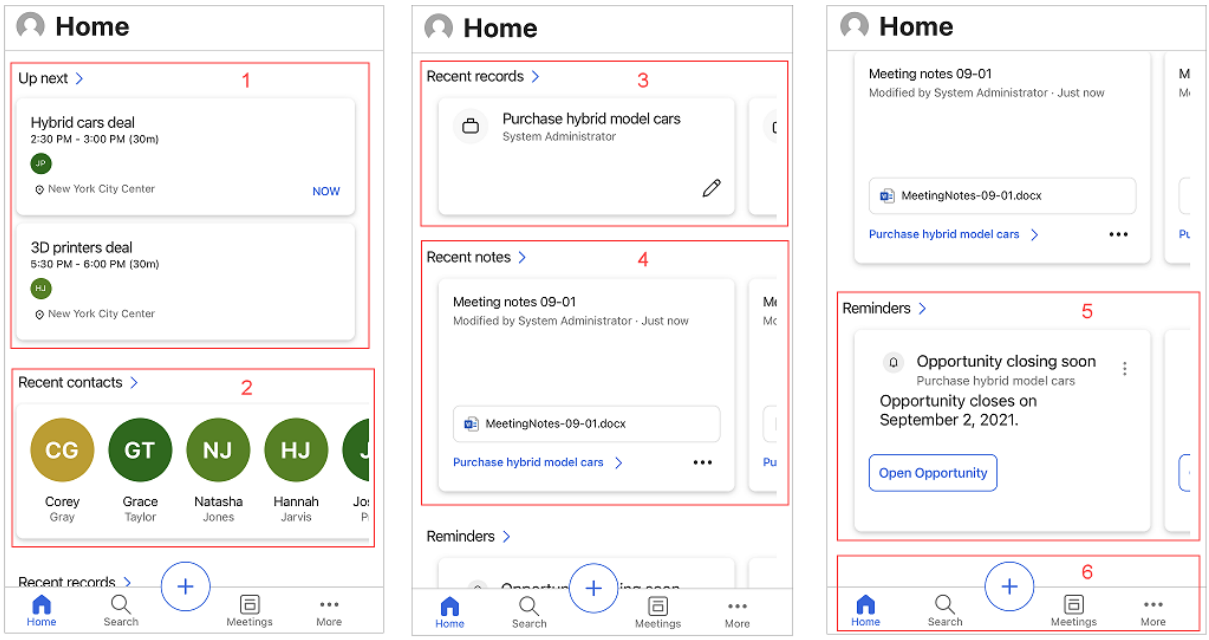
Know the basic functions and the information displayed on the home screen of the Dynamics 365 Sales mobile app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Overview

When you open the Dynamics 365 Sales mobile app on your mobile device, you'll see the home page. This home page provides high-level information on the meetings and insight cards that are specific to you. Typically, the home page displays the following kinds of information:



1. Meetings
2. Recent contacts

3. Recent records
4. Recent notes
5. Reminders and insights
6. Navigation bar

Meetings

The **Up next** section of the home page shows important information about the last meeting you were in and the next one coming up. When you tap a meeting, the meeting details page opens. More information: View meeting details

> **Note**
>
> The **Up next** section only includes meetings that have at least one participant who's outside of your organization's domain.

Recent contacts

The **Recent contacts** section of the home page shows a few contacts you have recently accessed through the web or mobile app. You can tap a contact to views its details or tap **Recent contacts** to open an extended list of recent contacts. More information: Manage contacts

Recent records

The **Recent records** section of the home page shows a few records you recently accessed through the web or mobile app, such as an account or opportunity. You can tap a record to views its details or tap **Recent records** to view an extended list. More information: Manage records.

Recent notes

The **Recent notes** section of the home page shows a few notes you recently created or updated through the web or mobile app. You can tap a note to views its details or tap **Recent notes** to view an extended list. You can also open the record to which a note is added by tapping its name on the note card. More information: Manage notes.

Reminders and insights

The **Reminders** and **Insights** sections on the home page show action cards from the relationship assistant. The cards show up to three reminders and three insights. If your administrator has created custom cards, they can be shown here, too.

Insight cards help keep you up to date with your work in Dynamics 365 Sales, letting you know when you need to follow up on an email, attend a meeting, and much more. The cards are generated by the assistant based on data stored in Dynamics 365 Sales and your Exchange inbox and calendar. More information: Insight cards reference

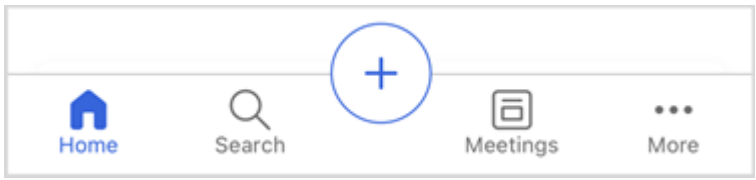
> **Note**
>
> Not all types of insights and reminders cards are displayed in this section. More information: **Notes and reminders**

When you tap **Reminders** or **Insights**, an extended list appears. Tap a reminder or an insight to see details about it. Tap **Open** in the card to open the reminder or the insight card.

Tap ⋮ on the card to take further action on a reminder, such as to dismiss and snooze.

Navigation bar

You can use the navigation bar at the bottom of the screen to navigate through the app.



The navigation bar includes the following options:

- Home
- Search
- Add option
- Meetings
- More options

Home

Tap **Home** from anywhere in the app to go to the home page.

Search

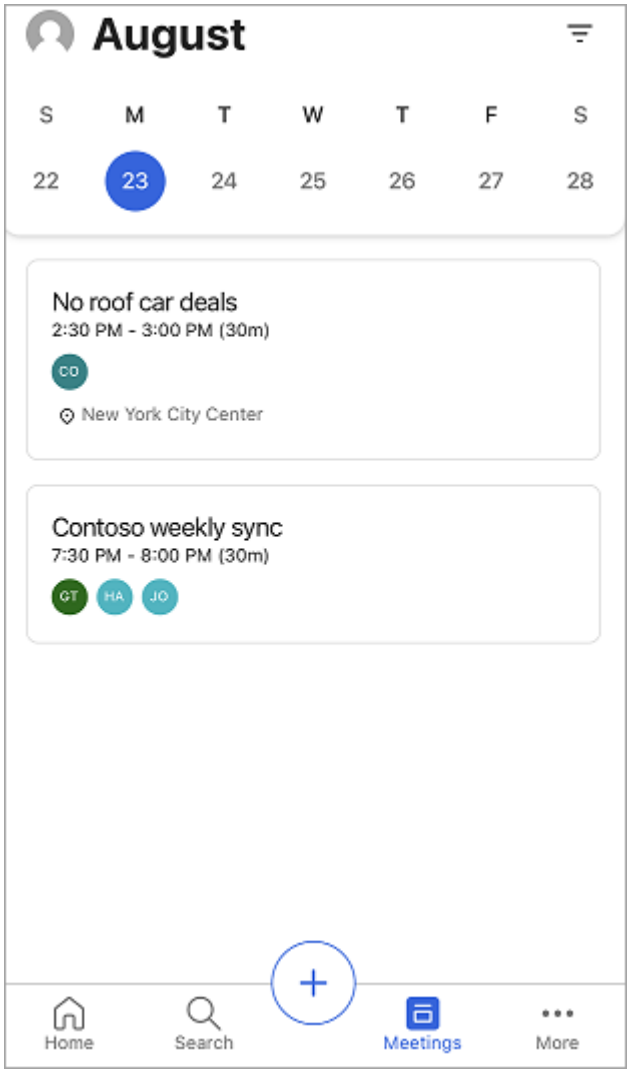
Tap the **Search** icon and enter text in the search box to find related information quickly. When you start typing, suggested records are displayed that include the text. Enter the complete words for better results. More information: Search records

Add option

To add notes, contacts, and records, tap . More information: Manage records, Manage notes and Manage contacts

Meetings

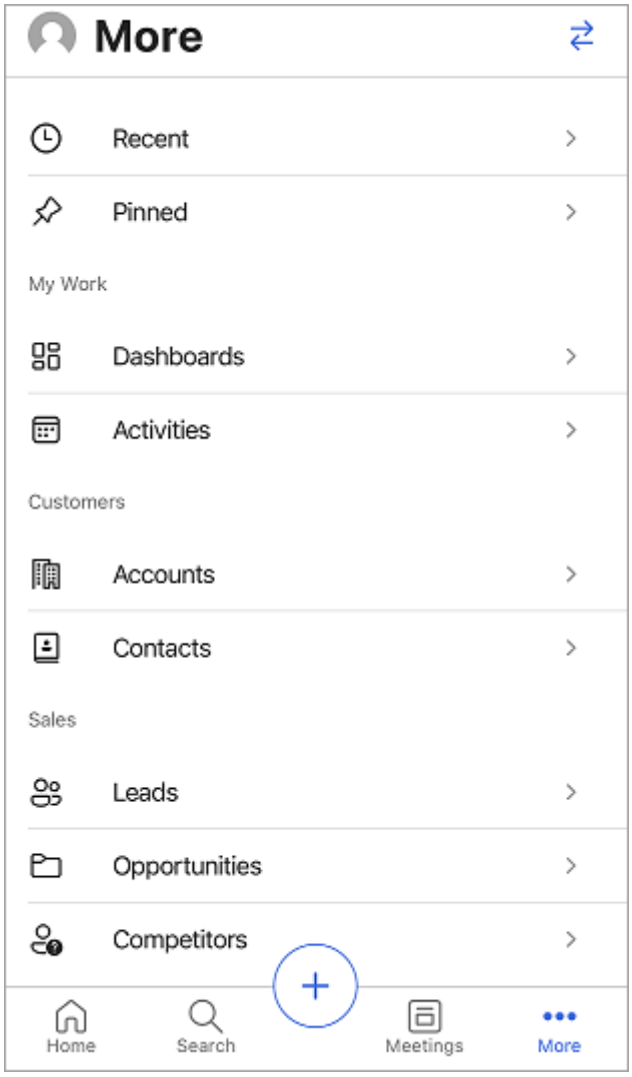
Tap the **Meetings** icon. The calendar selection view is opened with a list of meetings that are scheduled for the current date. By default, information for the current date is displayed. You can swipe left or right to choose a date for which you want to view scheduled meetings.



To learn more, go to View meetings.

More options

To navigate to other areas of the app, tap the **More** icon to view the site map or menu of the Sales Hub app or any other custom app module you are using. The following screen is a site map sample:



The **Recent** option, listed at the top of the site map, displays the records that you have accessed recently through the Sales mobile app. Tap the **Pinned** option to display any pinned records.

Select the bidirectional arrows ⇄ in the upper-right corner to switch to other menus such as App settings and Sales Insights settings.

> **Note**
>
> If you've added icons for a custom table, they are not displayed on the sitemap when the app is viewed on an Android device. Instead, the default icons are displayed. Icons for custom tables are not supported on Android.

Mobile app settings

The **Settings** panel provides more information about the app, helpful links to submit ideas, report issues, and share feedback, and a sign-out option.

To open the **Settings** panel, tap your profile picture at the upper left of the screen, and then tap **Settings**.

More information: Dynamics 365 Sales mobile app settings

See also

View meetings
Open a record

View meetings in the mobile app

Article • 02/27/2023

The information on the home page of the Dynamics 365 Sales mobile app can help you better plan your day. For example, the **Meetings** section displays your most recent meeting and the next upcoming meeting. To see more meetings for the day, tap **Meetings** either on the home page or on the navigation bar. Meetings that have been scheduled in Microsoft Outlook are displayed.

> **Note**
>
> - You can't create a meeting from the Dynamics 365 Sales mobile app.
> - The **Meetings** section only include meetings that have at least one participant who's outside of your organization's domain.

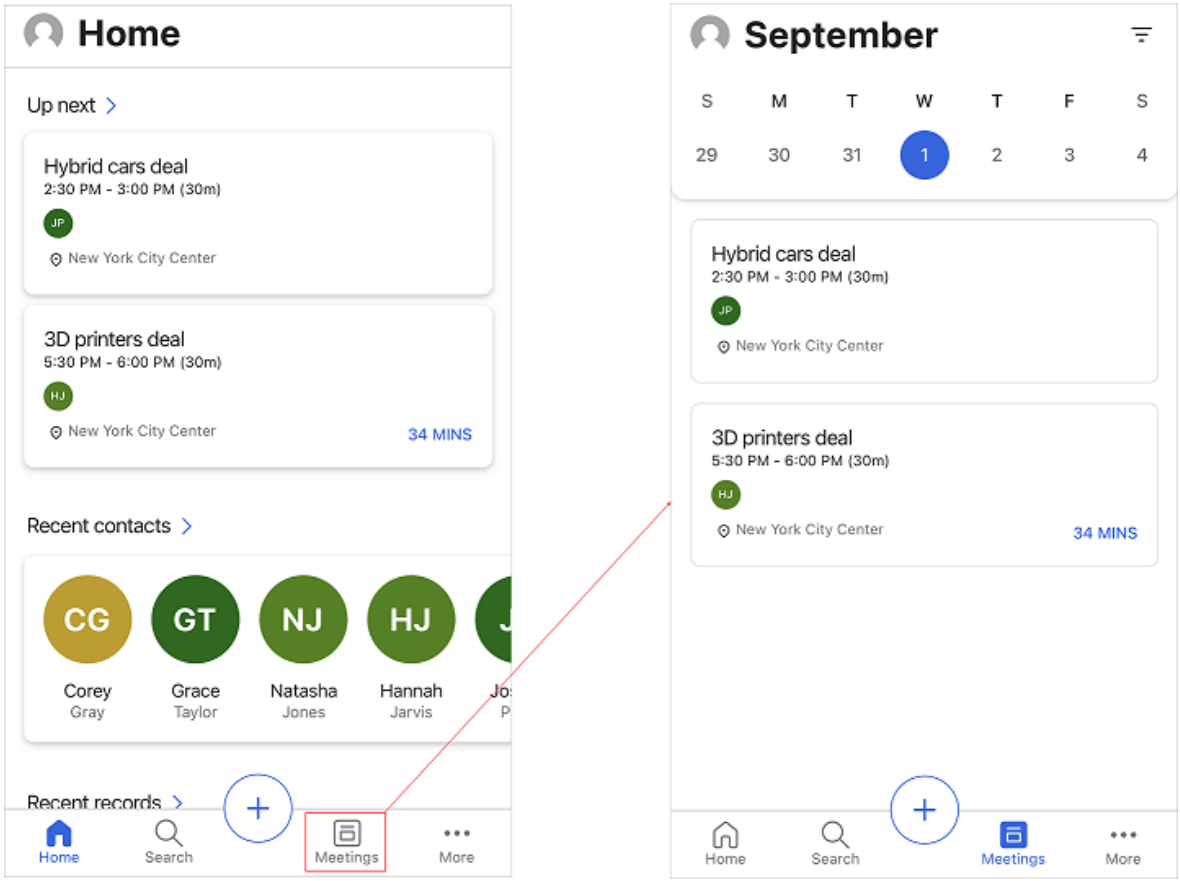
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View meetings

1. On the navigation bar, tap **Meetings**.

   The calendar view opens.

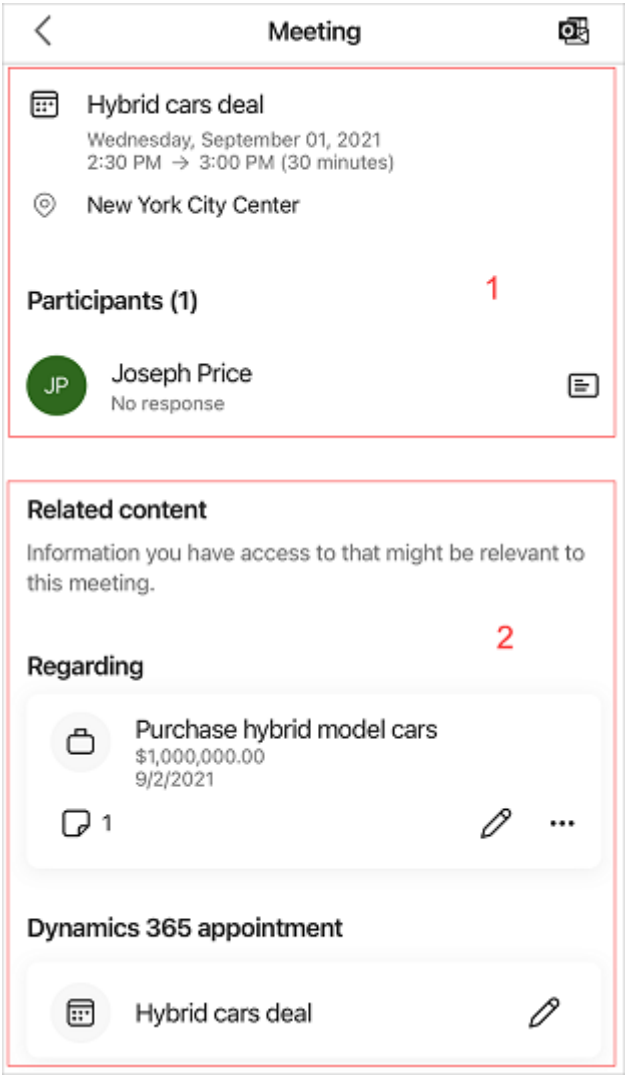


2. Do one of the following:

    - To see the details of a meeting, tap the meeting record.
    - To see meetings for a specific date, tap a date in the calendar. If there are no meetings scheduled for the day, nothing is displayed.

View meeting details

To see details of a specific meeting, tap the meeting record on either the home page or in the calendar view. The meeting details are displayed, as shown in the following image.



Meeting details include the following:

1. Meeting information and participants
2. Related content

Meeting information and participants

> **Note**
>
> The data that is displayed in this section is retrieved from your Microsoft Exchange server.

Meeting information

The meeting information section provides information about the meeting subject, location, time, and description. Tap the description section to show more details. Note that the meeting information can be viewed but cannot be edited in the app.

Participants

Up to five meeting participants are shown in the **Participants** section, such as customers and the meeting organizer. You can see participant's acceptance status, such as accepted, tentative, declined, or no response. When you tap the name of a participant, the quick view of their contact record opens. You can perform the following actions on the contact: view, edit, and create. More information: Manage contacts

Related content

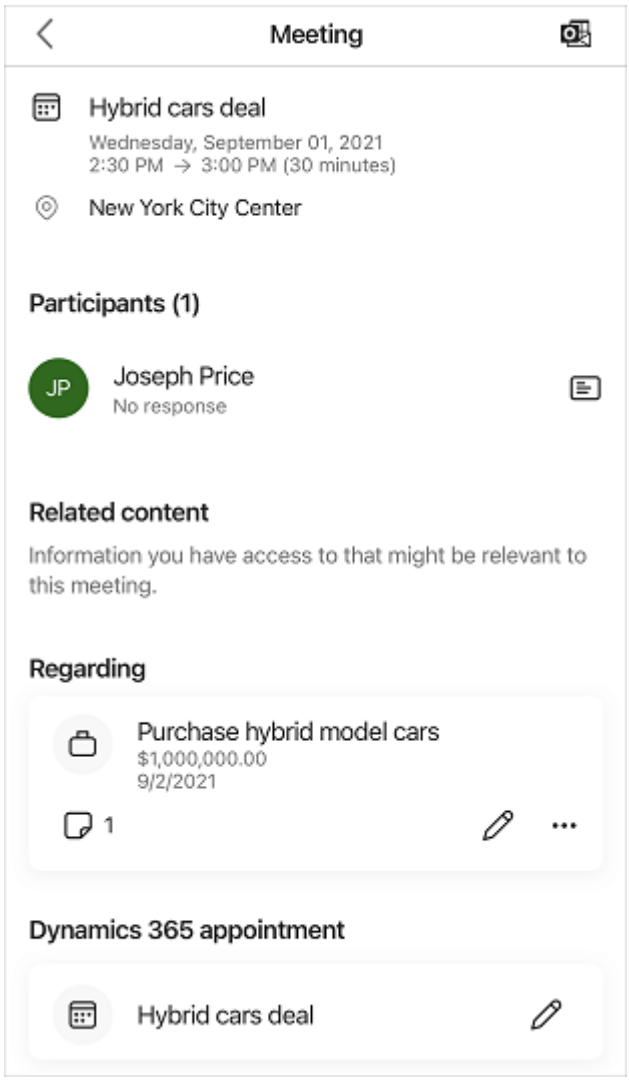
This section displays information relevant to the meeting such as regarding record and appointment.

> **Note**
>
> The data that is displayed is related to the selected regarding record and retrieved from your Dynamics 365 Sales organization.

Regarding record

The **Regarding** section specifies what the meeting is about, such as an opportunity, lead, contact, or account. When a meeting is attached to a record, the meeting displays the timeline, insight, participant information, and corresponding related entities. Also, the regarding record helps you to understand what the meeting is about, so you can come prepared with relevant information.

In the following screenshot, you can see that the meeting is about an opportunity to purchase hybrid model cars.



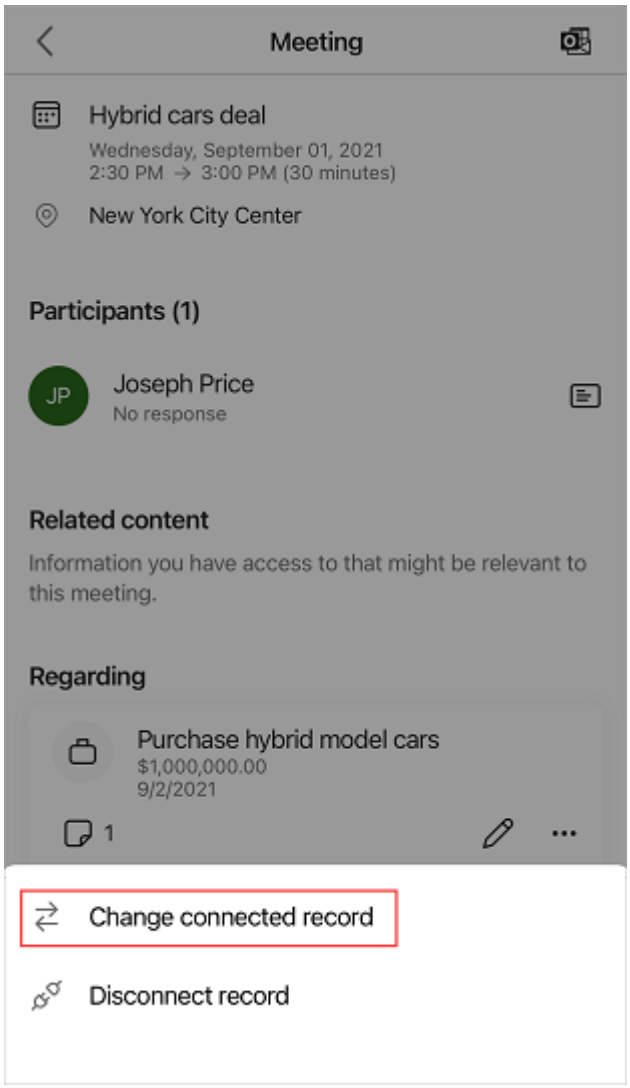
You can perform the following action on regarding entities: view and edit the records along with change regarding record in meetings and add regarding record in meetings. You can also disconnect the regarding record when it is no longer relevant to the current meeting.

> **Note**
>
> - You'll be able to set the regarding record only if server-side synchronization has been enabled in your environment and email address is approved. Contact your administrator to do the settings.
> - If you are not able to add a regarding record to meetings even after the appropriate settings are in place, uninstall and reinstall the app.

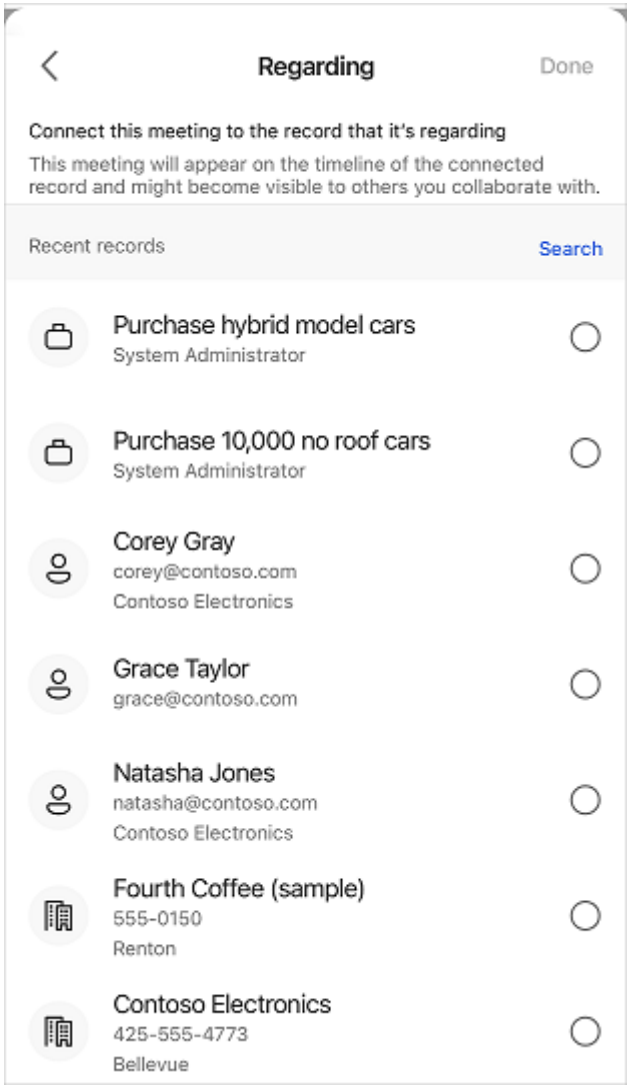
Change regarding record in meetings

You can update the regarding record when it is no longer relevant or there are changes to the meeting. To change the regarding record, follow these steps:

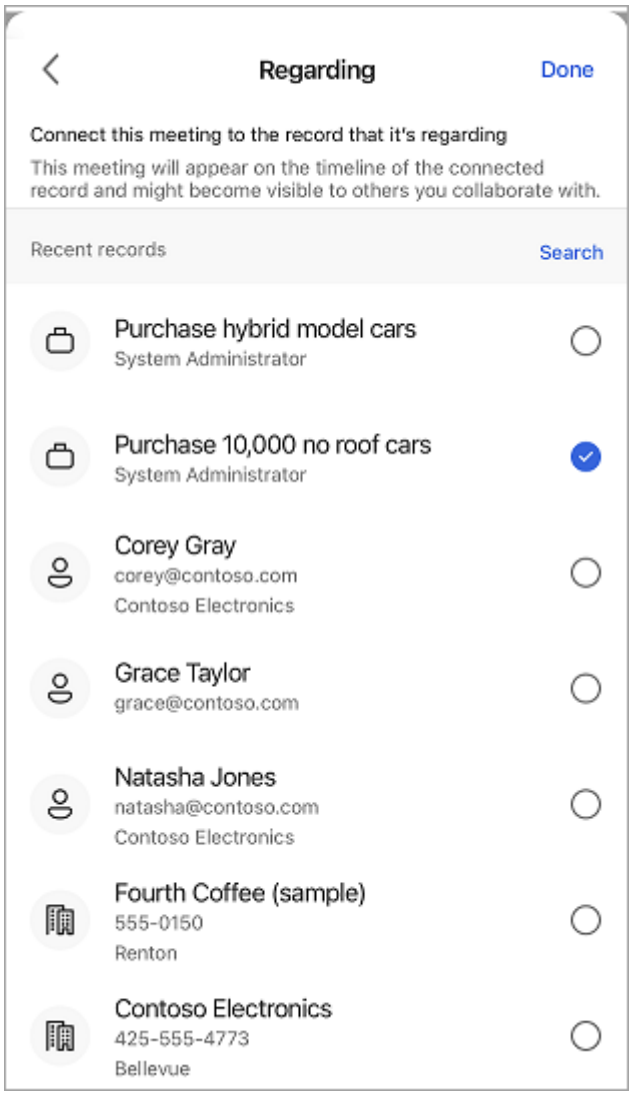
1. In the record card, tap •••, and then tap **Change connected record**.



2. On the **Regarding** page, either select a recent record or tap **Search** to look for the record you want.



3. After selecting a record, tap **Done**.



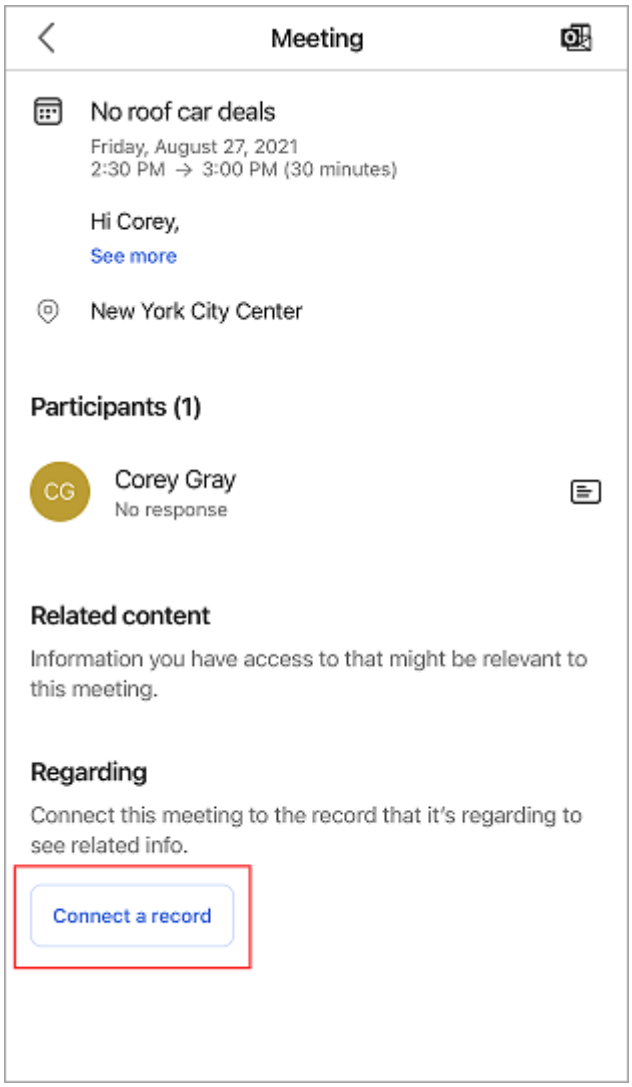
The connected record details are displayed in the Regarding section.

Add regarding record in meetings

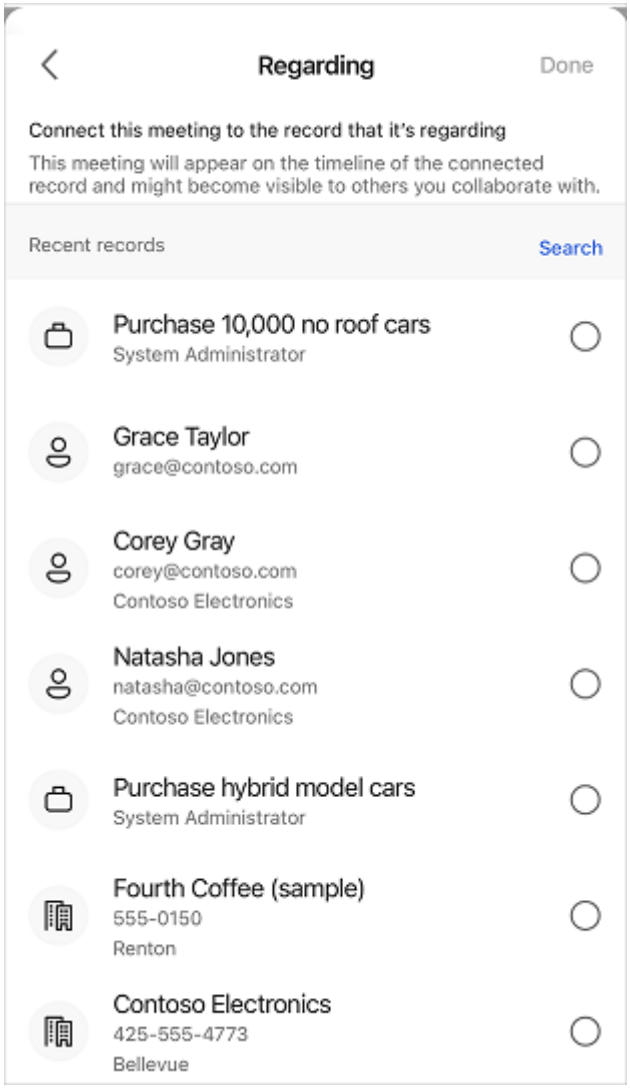
You can add a regarding record to a meeting when no regarding record is attached to it. When you add the regarding record, its corresponding related entities are also added to the meeting.

> **Note**
>
> Once you add a regarding record, you cannot delete it. However, you can update the record if you find that the added record is inappropriate.

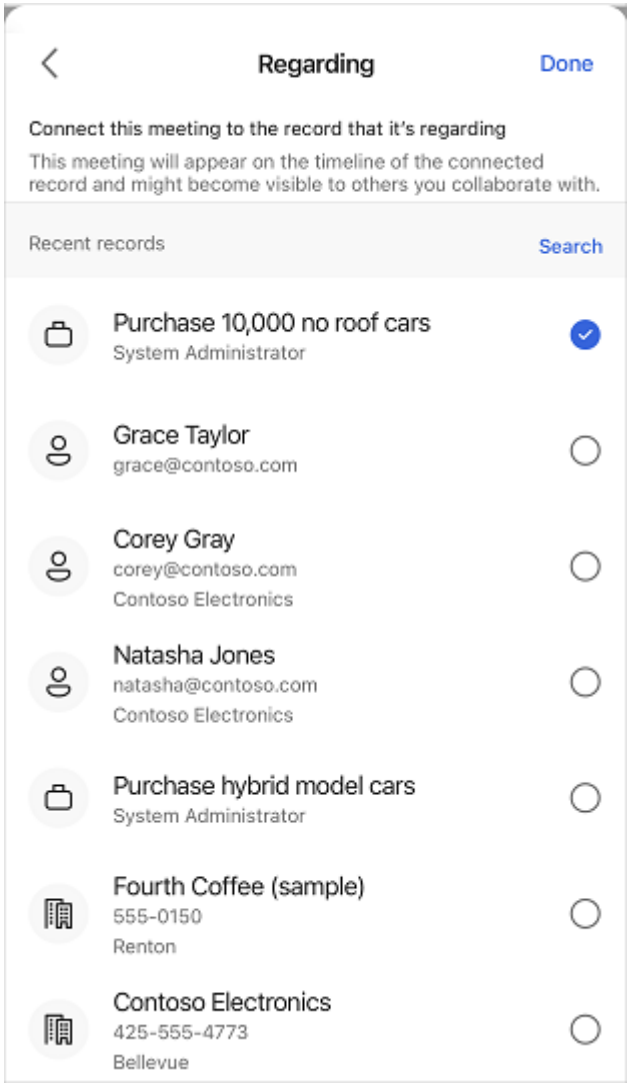
1. On the meeting details page, tap **Connect a record**.



2. On the **Regarding** page, either select a recent record or tap **Search** to look for the record you want.



3. After selecting a record, tap **Done**.

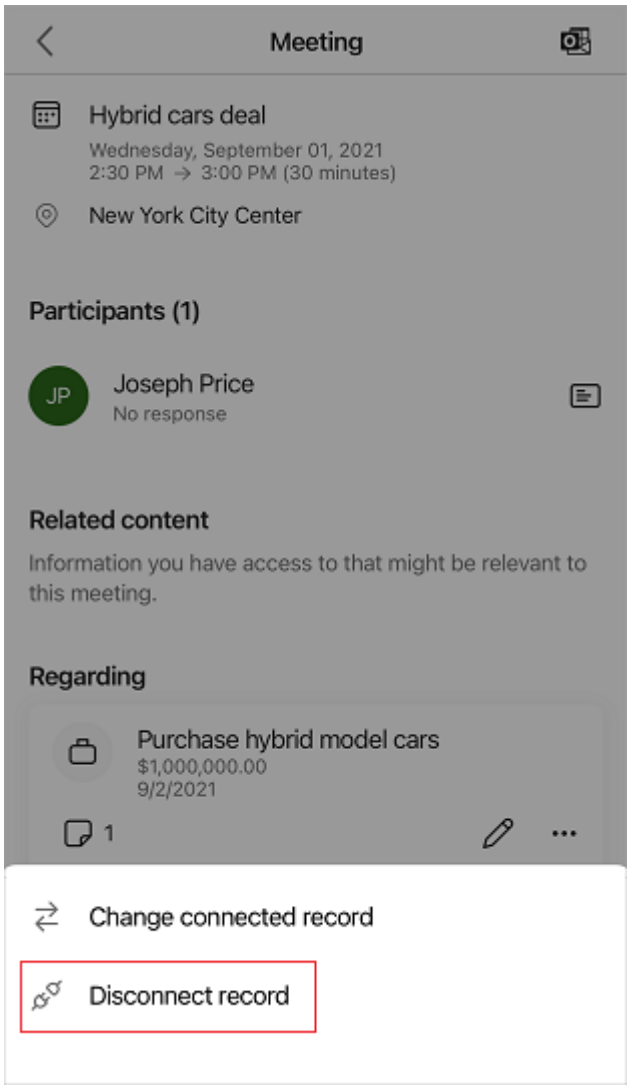


The connected record is displayed in the **Regarding** section.

Disconnect regarding record

You can disconnect the regarding record when it is no longer relevant to the current meeting.

- In the record card, tap •••, and then tap **Disconnect record**.



The record is disconnected from the meeting, and the **Connect a record** button is displayed.

Notes and reminders

Notes and reminders are displayed within the corresponding connected record. View details of the record to see notes and reminders.

To view only the notes attached to the connected record, tap on the connected record card.

See also

Use the Dynamics 365 Sales mobile app
Manage contacts
Manage records

Search records in the mobile app

Article • 03/30/2022

You can search for records such as contacts, accounts, leads, notes, and opportunities in the Dynamics 365 Sales mobile app.

License and role requirements

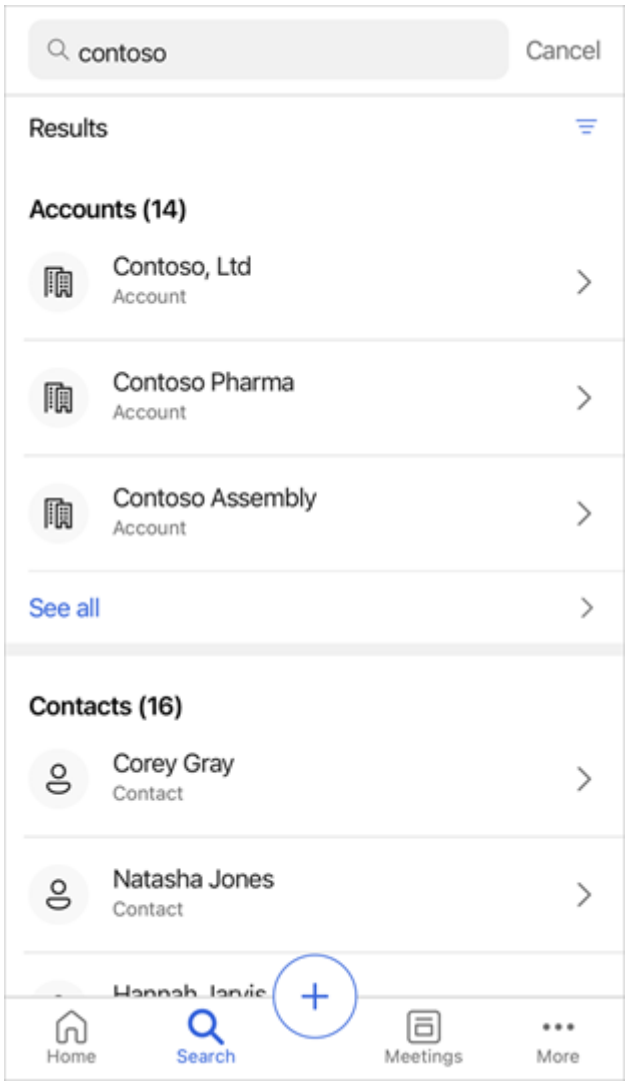
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Search records

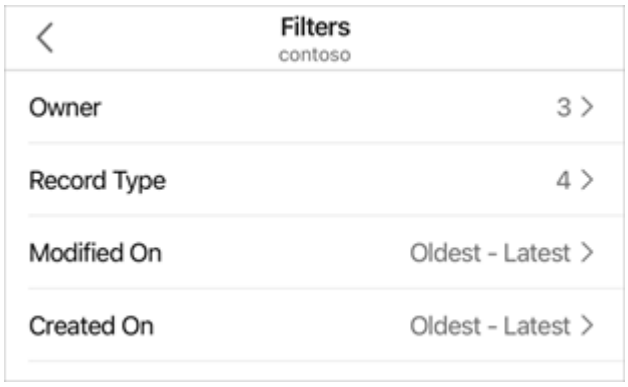
On the navigation bar at the bottom of the screen, tap **Search** and enter text in the search box to find related information quickly. When you start typing, suggested records are displayed that include the text. Enter the complete words for better results.

> **Note**
>
> You must enable relevance search for the environment in which you enable the mobile app. More information: **Configure relevance search to improve search results and performance**

When you perform a search, the results are categorized according to the type of table, such as contacts, accounts, leads, notes, and opportunities. For example, if you searched for **contoso**, the results would include records that contain this text, including contacts, accounts, and leads. Tap the record to view more details. You can also tap **See all** to expand the list for a category.



Below the search box, you can see the number of records found in the search results. Next to the results count is an option to filter the results. You can narrow your results to include only relevant owners or record types, and limit results based on modified and created dates. Tap the filter icon ( ), and then choose a filter option.



- **Owner**: Specifies the name of the owners who are associated with the search text. You can tap an owner to further refine the search results.
- **Record Type**: Specifies the type of records that appear in the search results, such as leads, opportunities, email messages, accounts, contacts, attachments, and notes. You can tap a record type to further refine the search results.

- **Modified On**: Shows the timespan for the last modified date of the records that appear in the search results. To change the timespan, tap the option, and then choose the **From** and **To** time periods. For example, if you select **From** > **One week ago** and **To** > **Today**, the results are refined to display records modified within the last week.

- **Created On**: Shows the timespan for the creation date of the records that appear in the search results. To change the timespan, tap the option, and then choose the **From** and **To** time periods. For example, if you select **From** > **One year ago** and **To** > **Today**, the results are refined to display records created within the last year.

See also

Use the Dynamics 365 Sales mobile app
Learn the basics

Manage records

Article • 03/30/2022

Records can be accessed from the home page or the Meetings page.

- On the home page, go to the **Recent records** section.
- On the Meetings page, go to the **Regarding** section.

You can view details, create new records, and edit records on the home and Meetings pages. Additionally, you can change a regarding record and add a regarding record on the Meetings page.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View details

> **Note**
>
> - The fields that you see on the compact form are defined in the quick view form of the table.
> - The lightweight view doesn't include all attributes of the table.
> - This is a lightweight form that contains any attributes defined in the first form on quick view form set order. More information: **Set the form order**

You can view the details of records in the following ways:

On the home page

The home page displays a list of records that you have recently accessed. These records include opportunities, leads, contacts, quotes, accounts, and notes. When you tap a

record, the record details are displayed partially at the bottom half of the screen. Scroll up for a quick view or tap ↕ to display complete record details in a lightweight form. This form provides the basic details, including related notes and reminders.

On the Meeting page

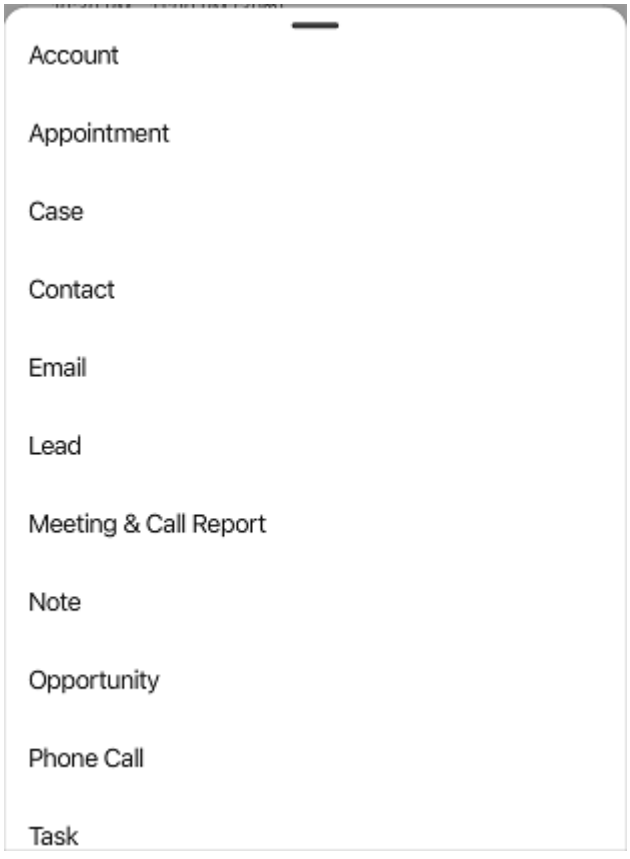
The Meeting details page displays the regarding record that is related to the meeting. Tap the record, and then scroll up for a quick view or tap ↕ to display complete record details in a lightweight form. The details include basic information about the record, related notes, and reminders.

> **Note**
>
> To learn more about notes, go to **Manage notes**.

Create records and activities

Follow these steps to quickly create records and activities in the Dynamics 365 Sales mobile app.

1. On the navigation bar at the bottom of the screen, tap ⊕ .
2. Select a table type from the list.



3. In the **Create new (table)** form, fill in the details, and then tap **Save**.

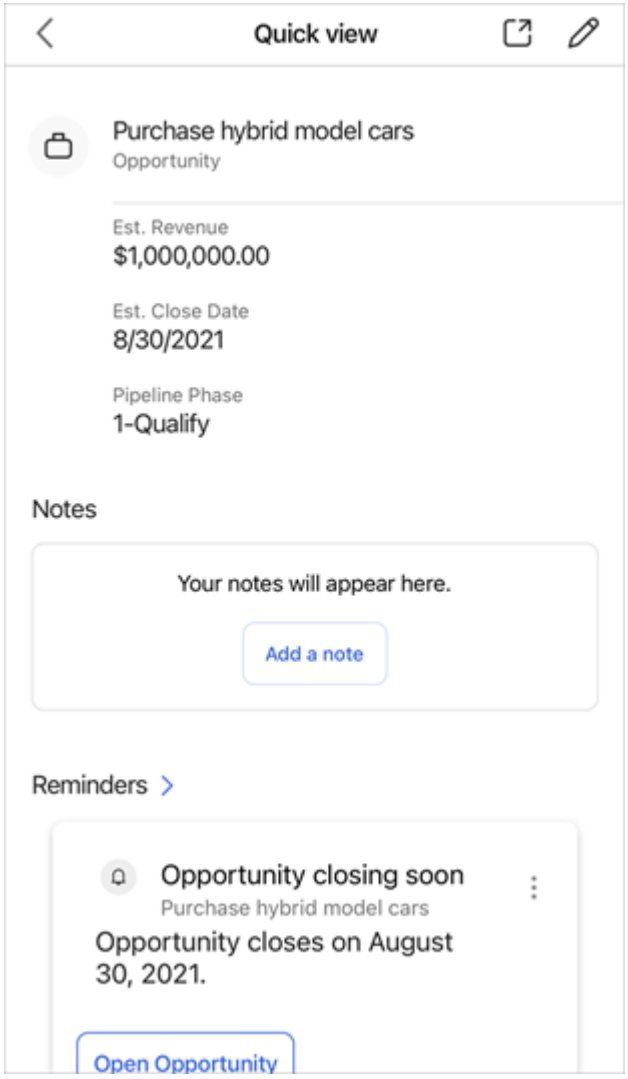
> **Note**
>
> To understand which table types are supported for quick creation of records and activities, go to **Configure tables for quick creation**.

Edit records

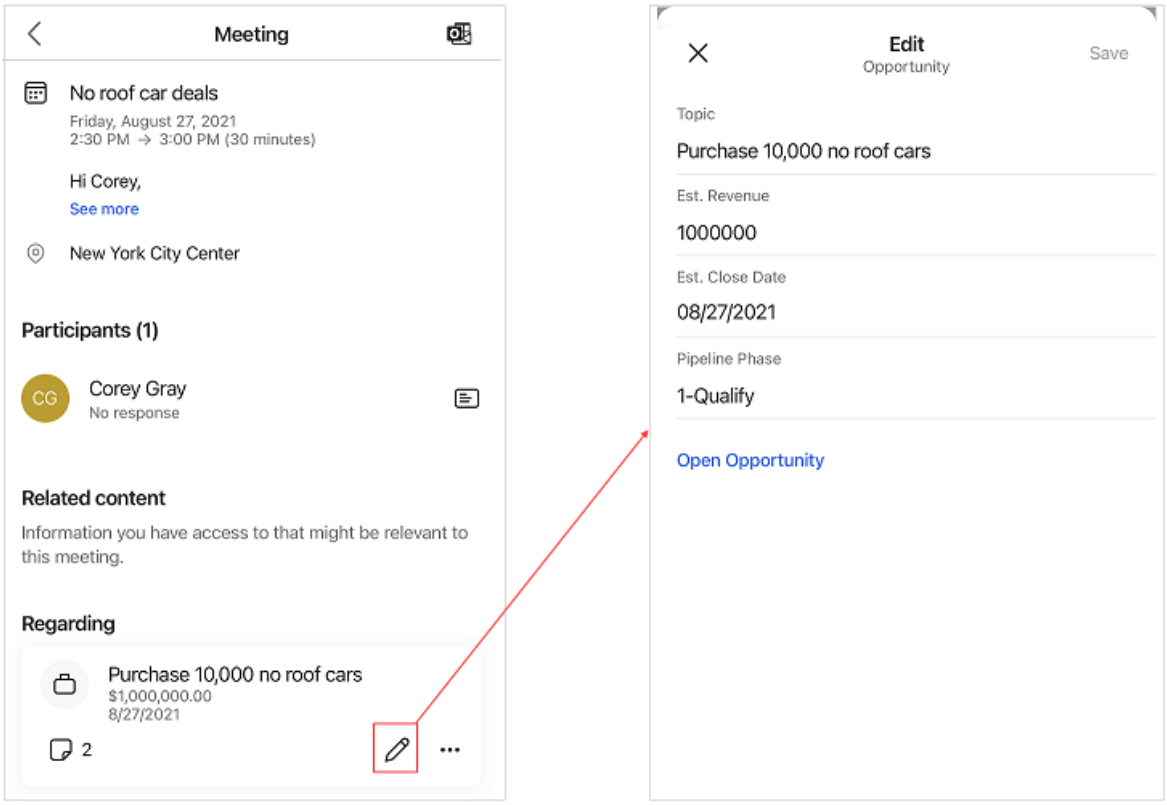
Follow these steps to edit records in the Dynamics 365 Sales mobile app.

- To edit records on the home page, open the record. In the upper-right corner of the quick view form, tap ✎. Edit the details in the **Edit** form and tap **Save**.

  To open the record in the Sales Hub app, tap ⧉.



- To quickly edit the basic information about the regarding record on the **Meeting** page, tap ✎ on the record card. Edit the details in the **Edit** form and tap **Save**.



To edit the whole record, tap **Open Opportunity**. The record opens in the Sales Hub app for editing.

Notes and reminders

Notes

Notes displayed in the Notes section are related to the regarding record that is associated with the meeting. You can add, edit, and delete notes. More information: Manage notes

Reminders

You can see the reminders through insight cards based on the regarding record that is associated with the meeting. By tapping ⋮ on the card, you can take actions such as dismiss and snooze the card. The cards are retrieved from your Dynamics 365 Sales organization for the selected regarding record.

The following reminder insight cards are supported:

{activity} due today	Buying intent detected in email	Close date coming soon
Competitor mentioned	Email opened	Email reminder
File requested	Issue detected	Meeting requested
Missed (opportunity) closed	Missed email	No activity with {record

date		type}
Opportunity at risk (phrase detection)	Opportunity at risk (sentiment detection)	Suggested stakeholder

To learn more about insight cards, go to Insight cards reference.

See also

Learn the basics
View meetings

Manage contacts

Article • 03/30/2022

In the Dynamics 365 Sales mobile app, you can view, edit, and create contacts.

- View details
- Edit contact details
- Create contact

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

View details

> **Note**
>
> - The fields that you see on the compact form are defined in the quick view form of the table.
> - The lightweight view doesn't include all attributes of the table.
> - This is a lightweight form that contains any attributes defined in the first form on quick view form set order. More information: **Set the form order**

You can view the details of a contact in the following ways:

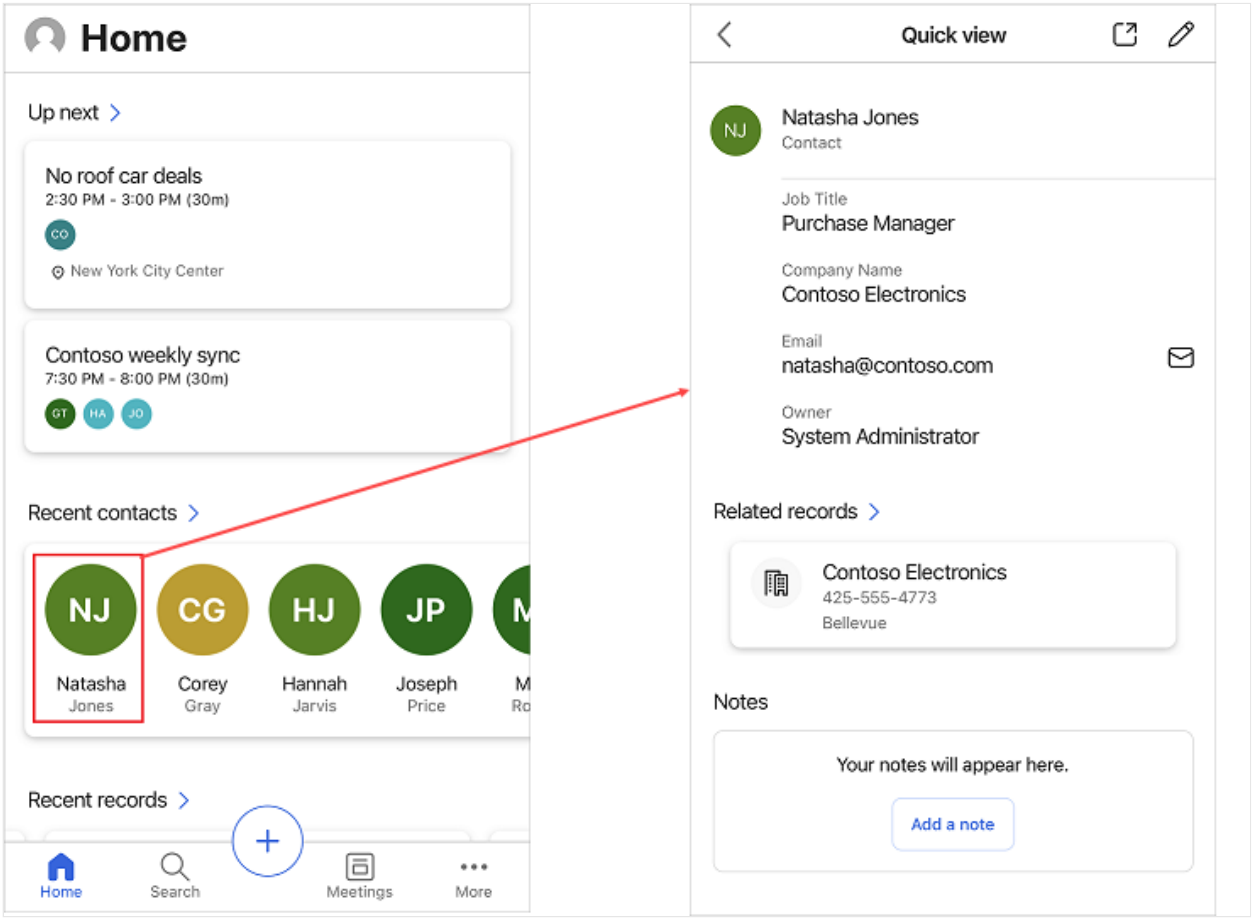
On the home page

The home page displays a list of contacts that you have recently accessed. When you tap a contact, the details are displayed partially at the bottom half of the screen. Scroll up for a quick view or tap ↕ to display the complete contact details in a lightweight form.

On the Meetings page

The Meeting details page displays contacts are invited for the meeting. Also, the notes and insights that are displayed in the meeting are related to the displayed regarding record. Tap a contact to view the details of the contact in a quick view form.

In the following example, the details of a recent contact shown on the home page are displayed in a quick view form:

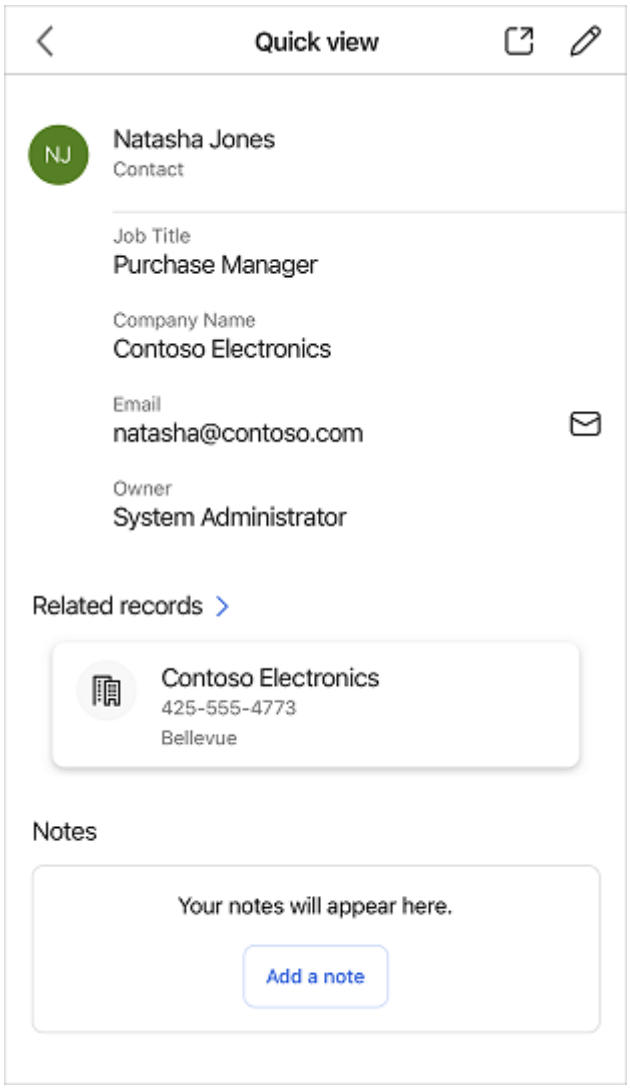


Edit contact details

If the contact already exists in your Dynamics 365 Sales organization, you can update the contact details, such as mobile number and business email, by using the edit option in the quick view form.

In the upper-right corner of the quick view form, tap ✎. Edit the details in the **Edit** form and tap **Save**.

To open the record in the Sales Hub app, tap ⧉.



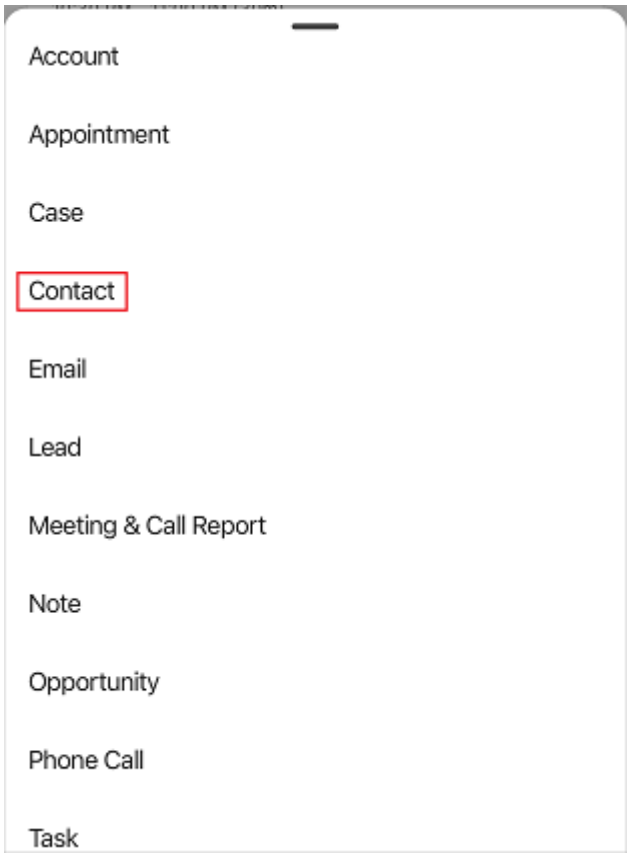
Create contact

If you need to create a contact that doesn't already exist in your Dynamics 365 Sales organization, you can use the mobile app to create the contact from the following pages:

- Home page
- Meetings page

Home page

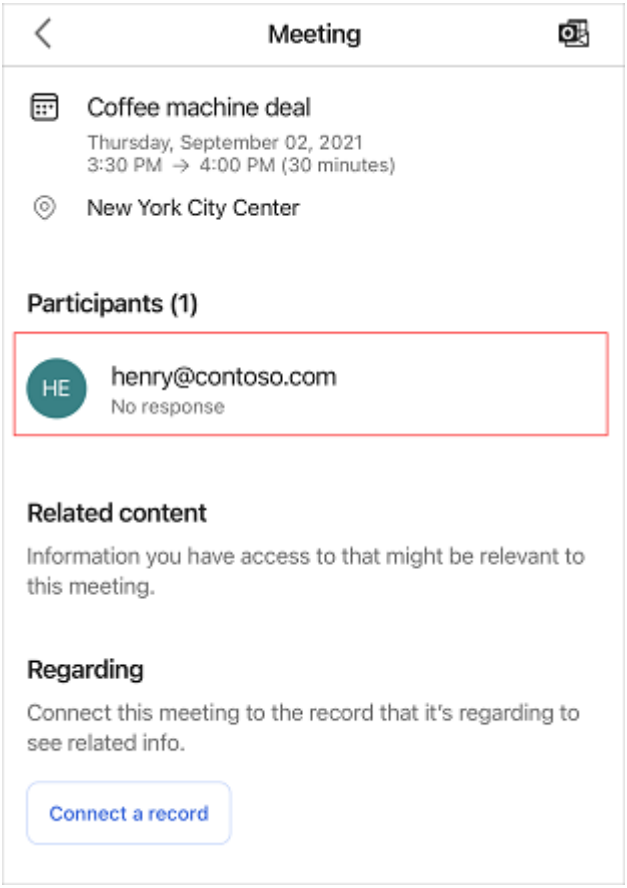
1. On the navigation bar at the bottom of the screen, tap , and then tap **Contact**.



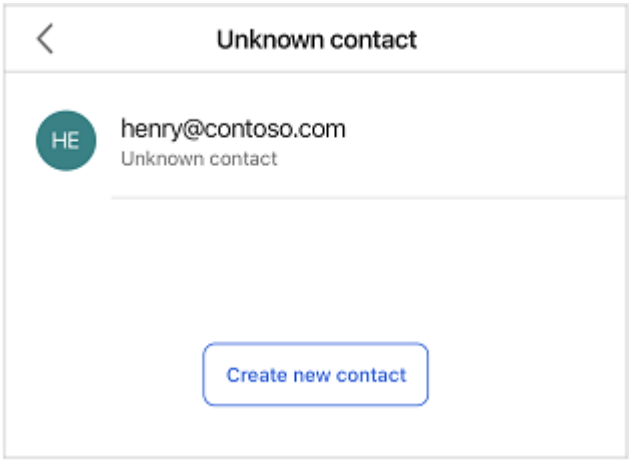
2. In the **Create new Contact** form, fill in the details, and then tap **Save**.

Meetings page

1. In the participant list for a meeting, tap the name of a participant. Note that you can create a contact from a participant only if the participant isn't already a contact in your Dynamics 365 organization.



2. Tap **Create new contact**.



3. In the **Create new contact** form, fill in the details, and then tap **Save**.

See also

Learn the basics

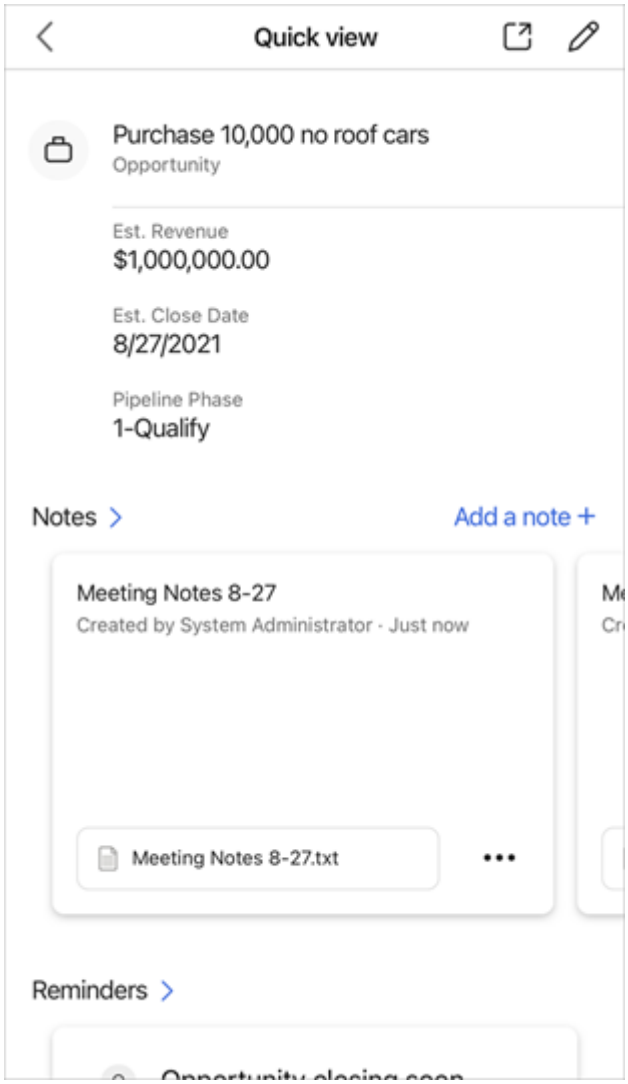
View meetings

Manage notes

Article • 04/25/2022

You can see the notes associated with a record in the **Notes** section of the record details.

> **Note**
>
> You can associate annotations with only those custom entities that are created with the **CreateEntityRequest.HasNotes Property**



License and role requirements

Requirement type	You must have

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

What actions can performed?

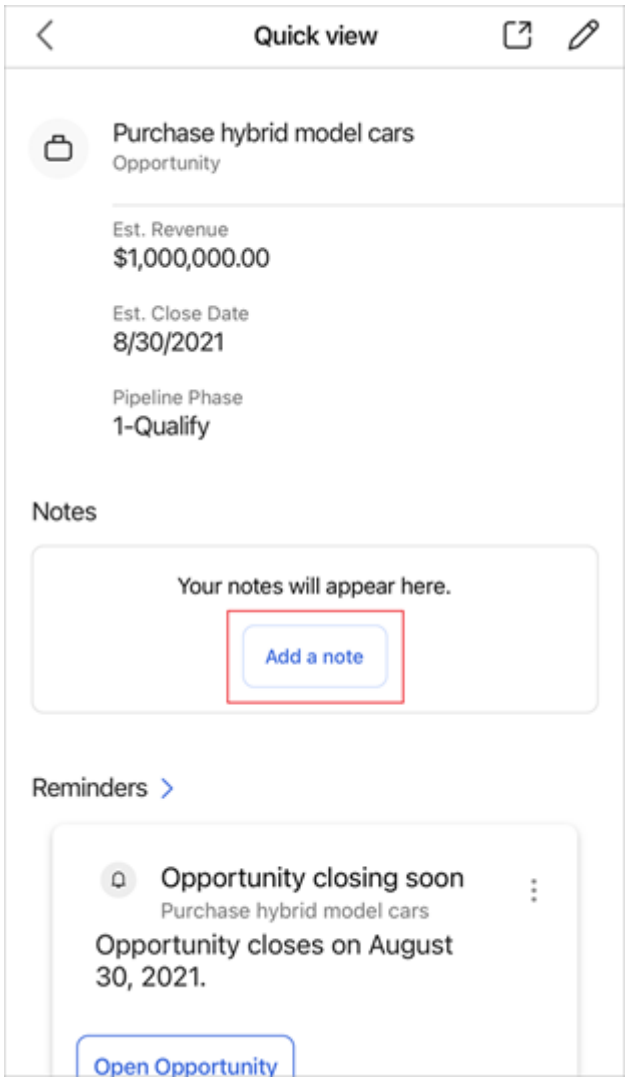
You can perform the following actions in the **Notes** section.

To do this	Do this
Open a list of notes.	Tap **Notes**.
See an image associated with a note.	Tap the image name.
Open or edit a note	Tap the note.
Take more actions, like change the connected record or delete a note.	Tap •••.
Create a note.	Tap **Add a note**.

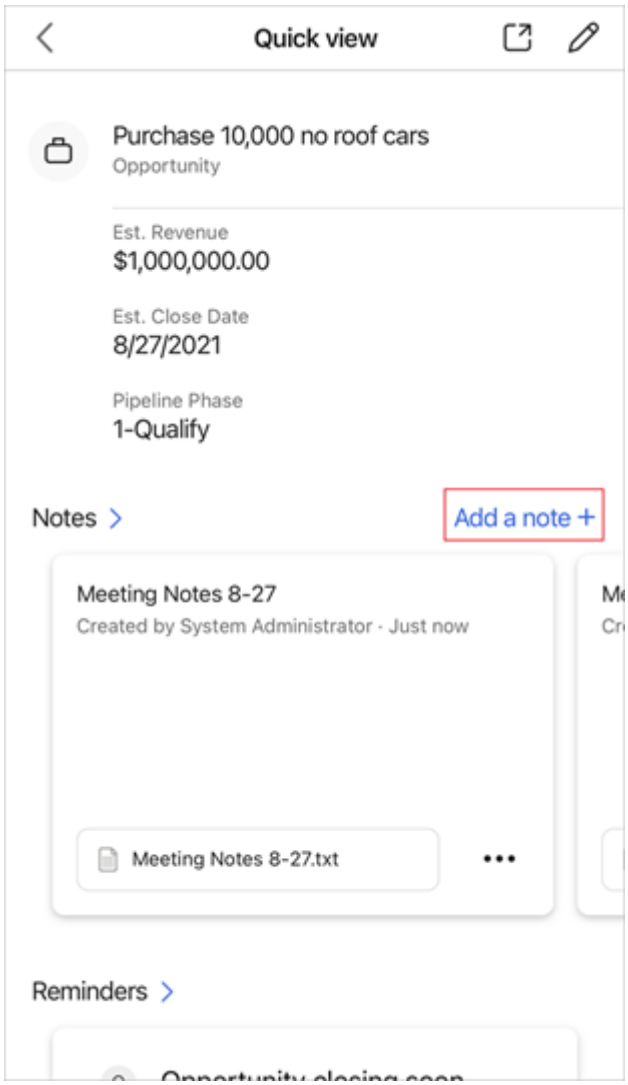
Add a note

1. Perform one of the following actions:

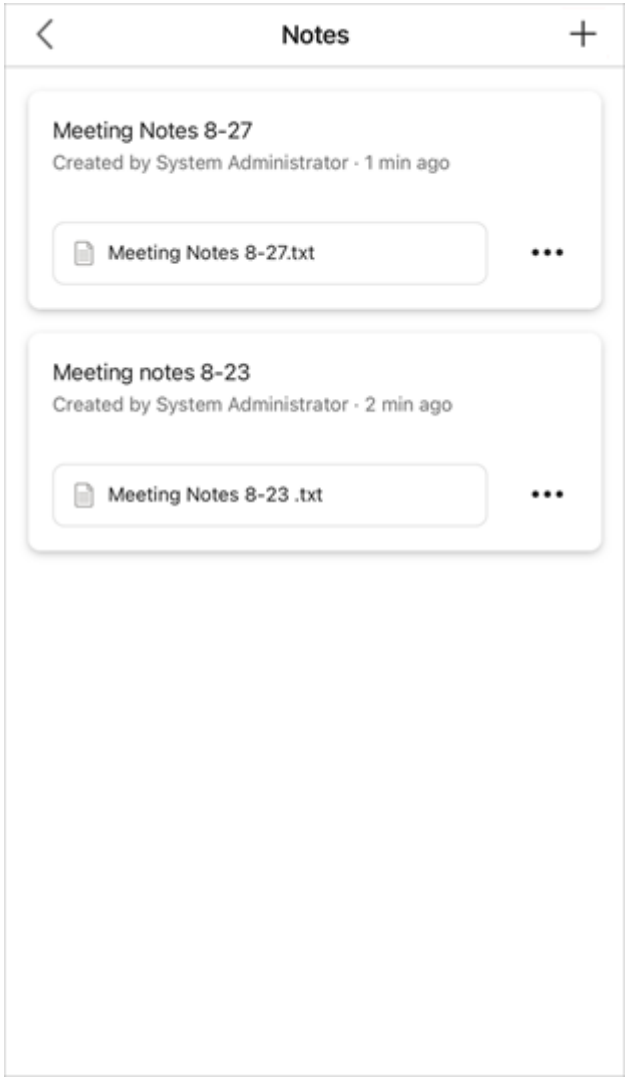
    - When viewing details of a record that has no notes added to it yet, tap **Add a note**.



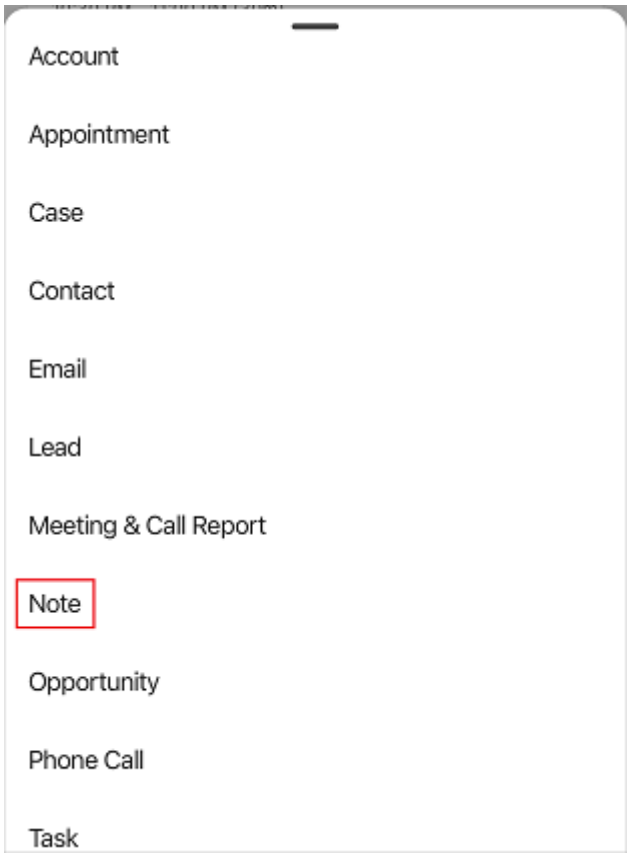
- When viewing details of a record that has already had notes added to it, tap **Add a note**.



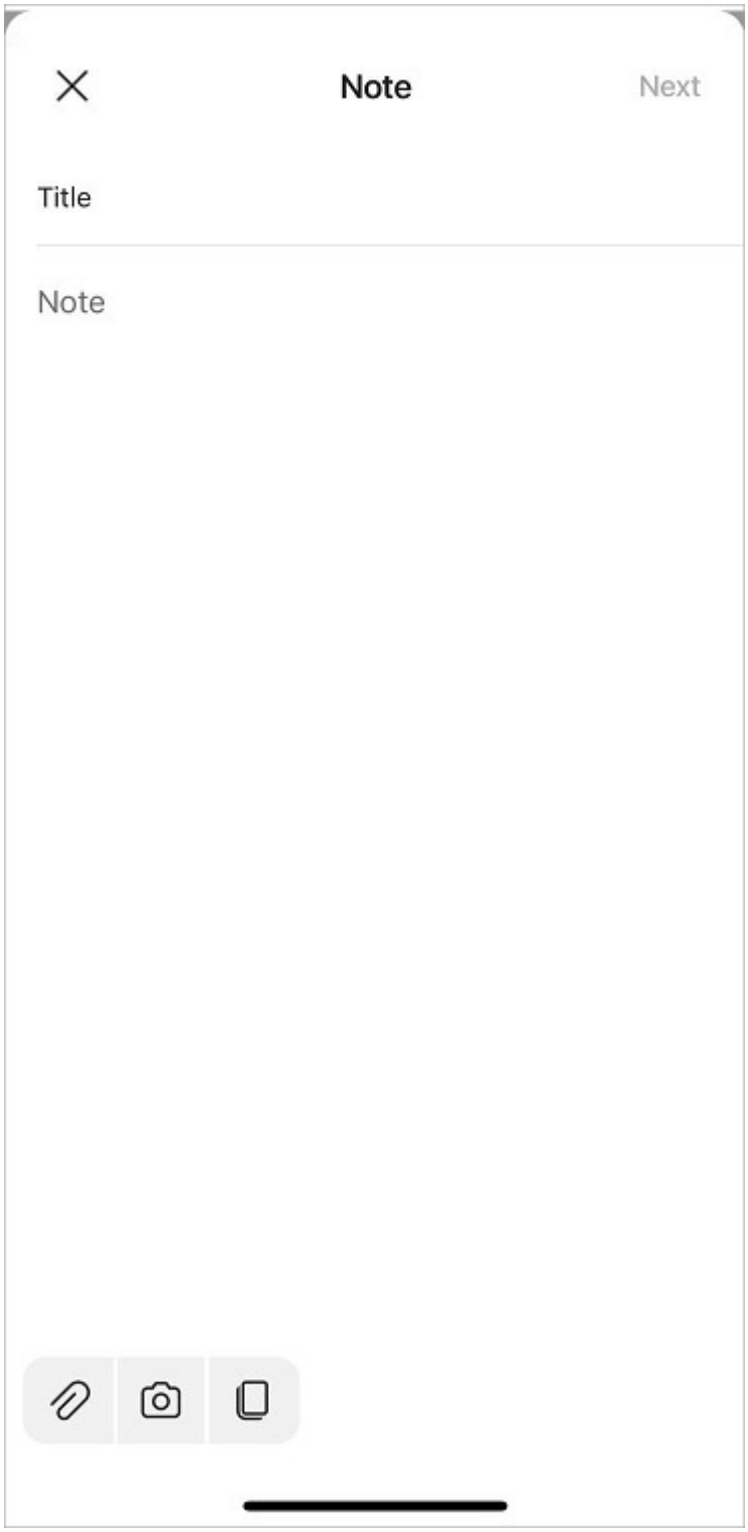
- When viewing a list of notes, tap + at the upper-right corner of the **Notes** page.



- On the navigation bar at the bottom of the screen, tap , and then tap **Note**.



2. In the **Note** form, enter a title and the text of your note.



You can perform the following actions from the bottom command bar while adding text to your note.

Icon	Description
	Attach a file or an image stored on your mobile device.
	Take a photo from your mobile camera and attach it to the note.

Icon	Description
	Copy the note's content.

> **Note**
>
> If you're adding the note by using the navigation bar at the bottom of the screen, you must connect the note to the record that it's regarding. Tap **Next**, and then select the record you want to associate the note with. More information about annotation: **annotation EntityType**

3. Tap **Save**.

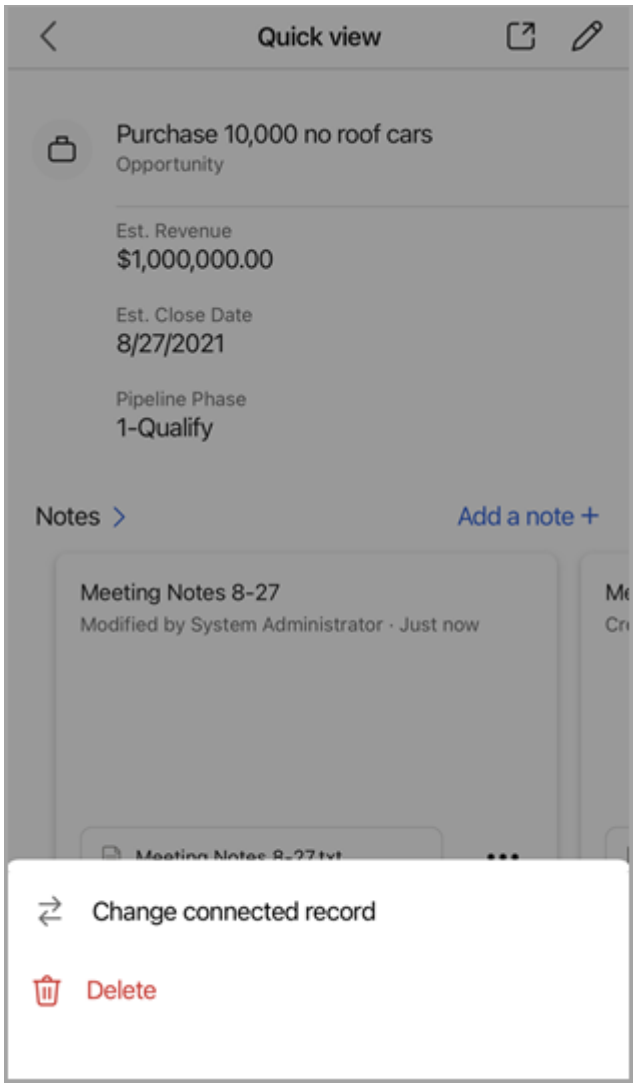
Open or edit a note

You can open a note by tapping the note card. When you open a note, you can make changes to the note as you want, and then tap **Save**.

Delete a note

You can delete a note when it is no longer needed.

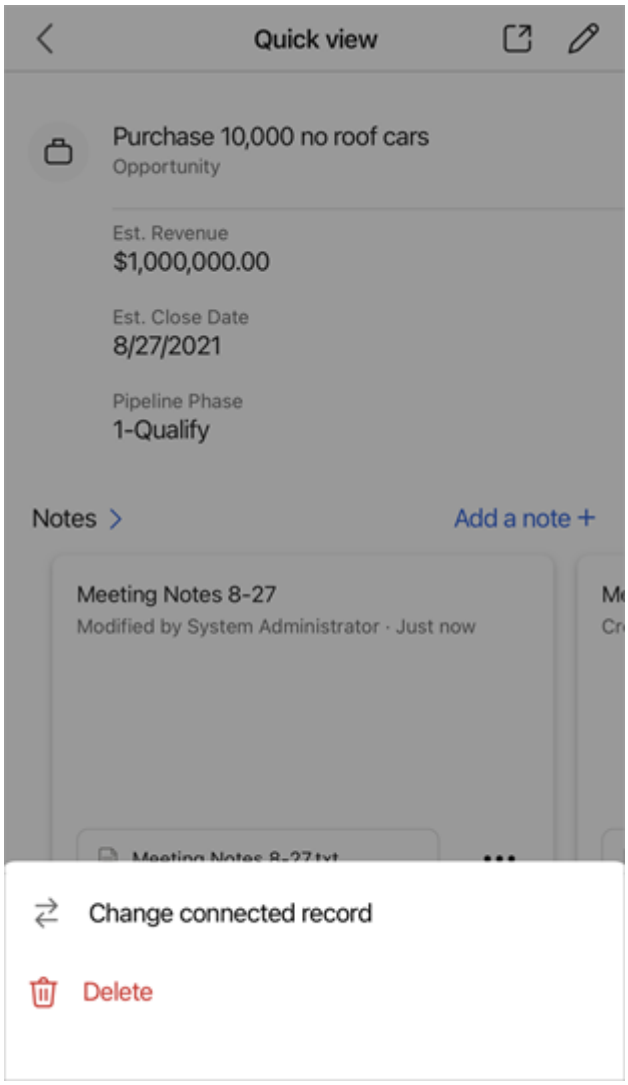
- In the note card, tap •••, and then tap **Delete**.



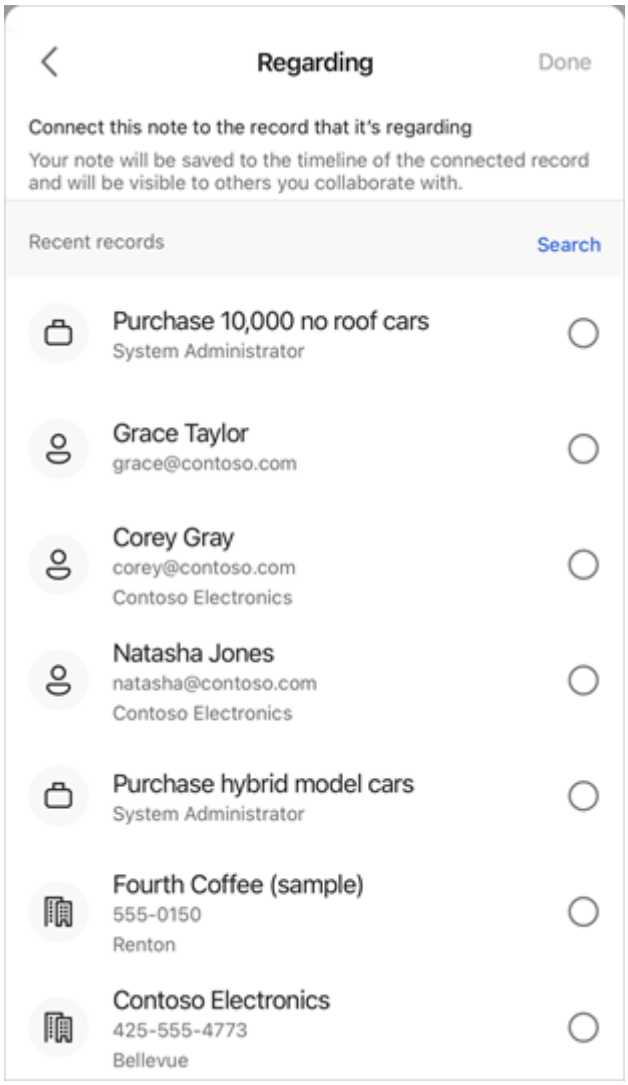
Change connected record

You can change the record to which a note is added when it is no longer relevant to the current record.

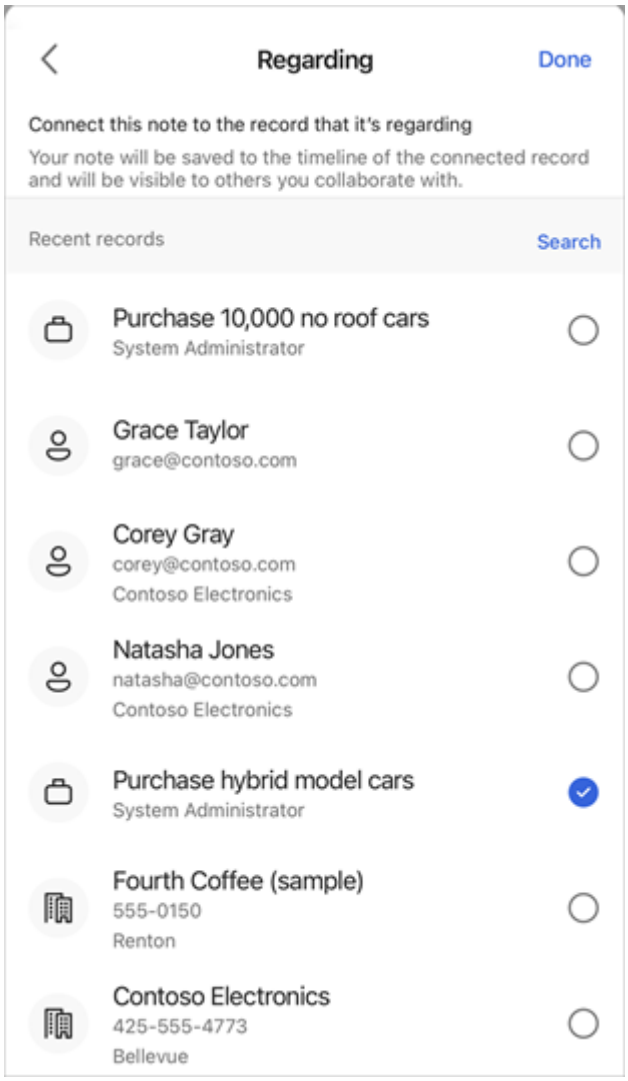
1. In the note card, tap •••, and then tap **Change connected record**.



2. On the **Regarding** page, either select a recent record or tap **Search** to look for the record you want.



3. After selecting a record, tap **Done**.



The note will be removed from the current record and attached to the selected record.

See also

Learn the basics

View meetings

View activities of a record or contact

Article • 03/30/2022

You can view upcoming and overdue activities related to a record or contact in the Dynamics 365 Sales mobile app. You can filter activities based on activity type and take various actions on them.

> **Note**
>
> The mobile app supports only task and phone call activities. To view all associated activity types, use the Sales Hub app.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Professional, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Premium, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security Role	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

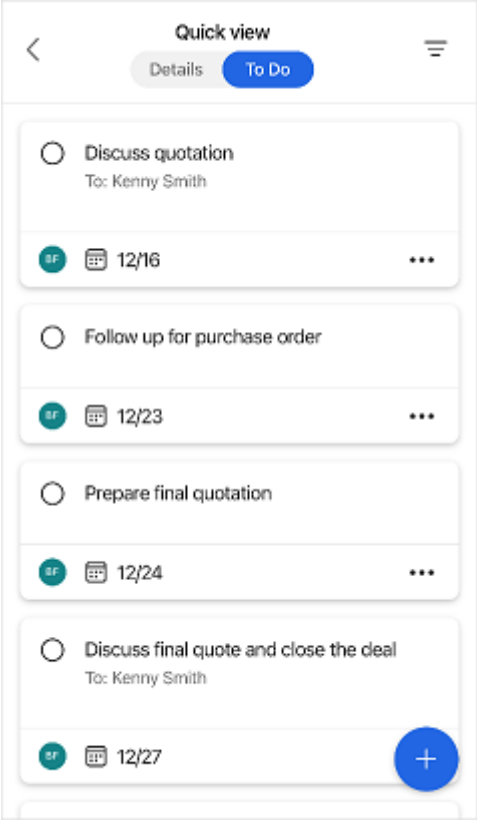
View activities

You can view upcoming and overdue task and phone call activities created for a record or contact. The list of activities is displayed on the **To Do** tab and is sorted based on the due date of the activities.

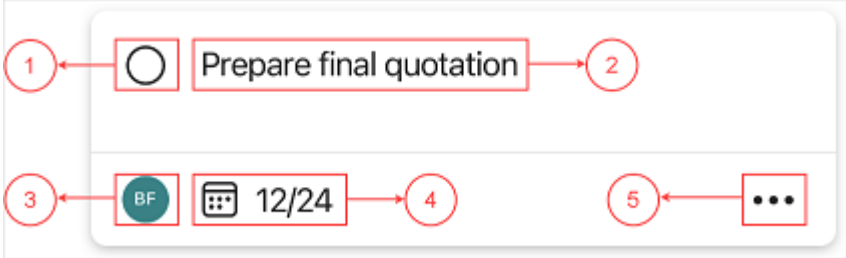
To view activities

1. Open a record or contact to view its details in a quick view form.
2. Tap **To Do** at the top of the form.

A list of activities is displayed.



Anatomy of an activity



Number	Description
1	Select the option button to mark the activity as complete.
2	The name of the activity.
3	The owner of the activity.
4	The due date for the activity.
5	More actions for the activity.

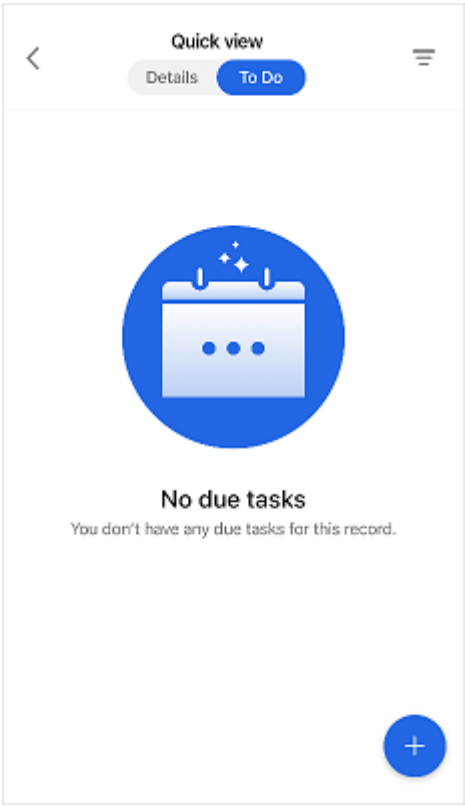
Add an activity

You can add an activity from the quick view form of a record or from the home page. When you add an activity from the quick view form of a record, the activity is

automatically associated with the record. When you add an activity from the home page, you must manually associate the activity with a record.

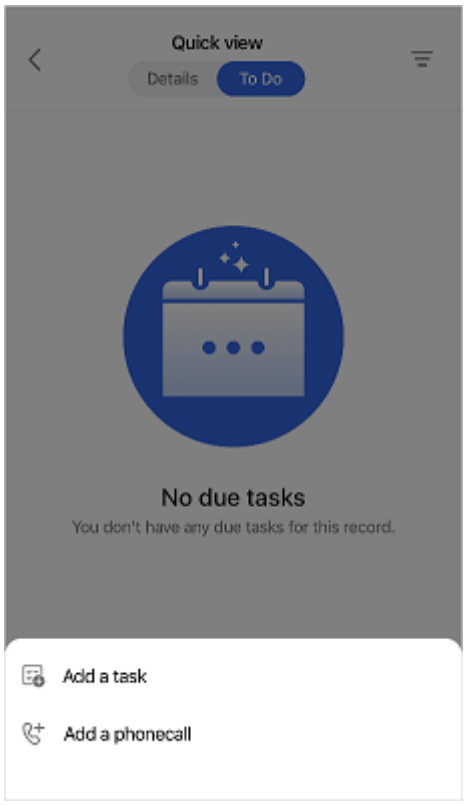
To add an activity from the quick view form

1. Open a record or contact to view its details in a quick view form.
2. Tap **To Do** at the top of the form.

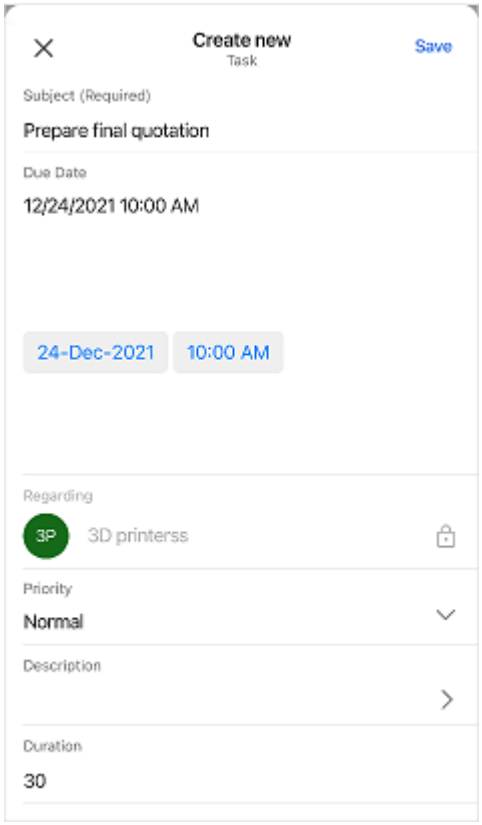


3. Tap at the lower-right corner of the form, and then tap one of the following options:

    - Add a task
    - Add a phone call



4. In the **Create new** form, enter the details, and then tap **Save** at the upper-right corner of the form.



The activity is created and displayed on the **To Do** tab.

To add an activity from the home page

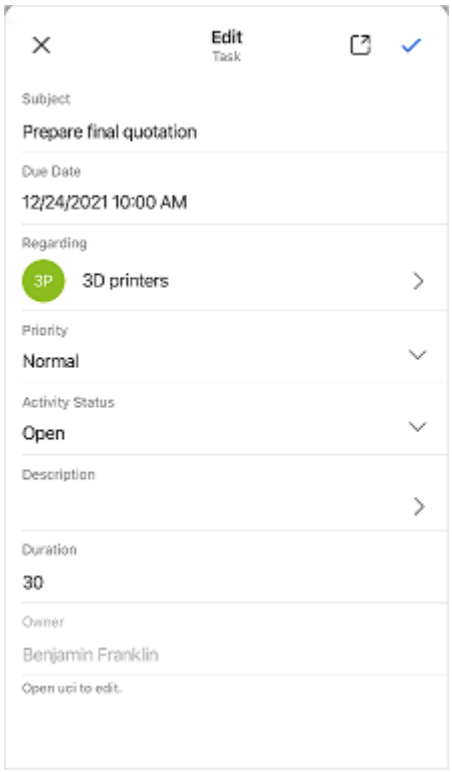
1. On the navigation bar at the bottom of the screen, tap , and then tap **Phone Call** or **Task**.
2. In the **Create new** form, enter the details.
3. In the **Regarding** field, select the name of the record to which this activity belongs, and then tap **Save** at the upper-right corner of the form.

> **Note**
>
> The **Regarding** field is not a required field, but selecting a value in the **Regarding** field helps in associating the activity with a record.

Open or edit an activity

1. Open a record or contact to view its details in a quick view form.
2. Tap **To Do** at the top of the form.
3. Tap an activity to open it.
4. In the **Edit** form, make changes as you want, and then tap ✓ at the upper-right corner of the form.

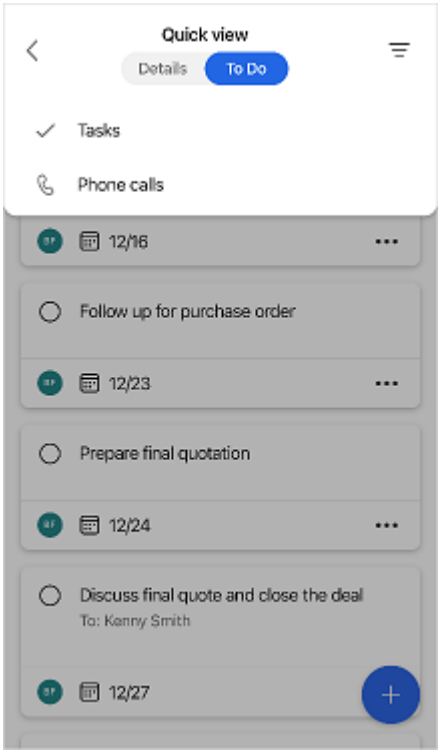
   Alternately, you can tap ••• on an activity card, and then tap **Edit**. Make changes as you want, and then tap ✓ at the upper-right corner of the form.



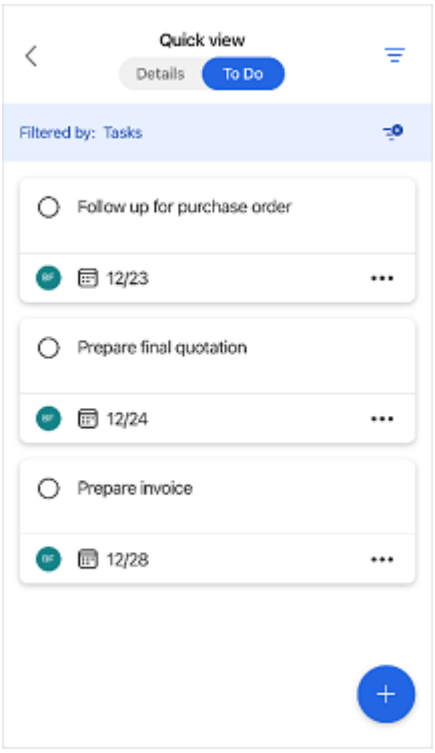
Filter activities

You can filter the list of activities to view only one type of activity at a time.

1. Open a record or contact to view its details in a quick view form.
2. Tap **To Do** at the top of the form.
3. Tap at the upper-right corner of the form, and then tap one of the following options:
    - Tasks
    - Phone calls



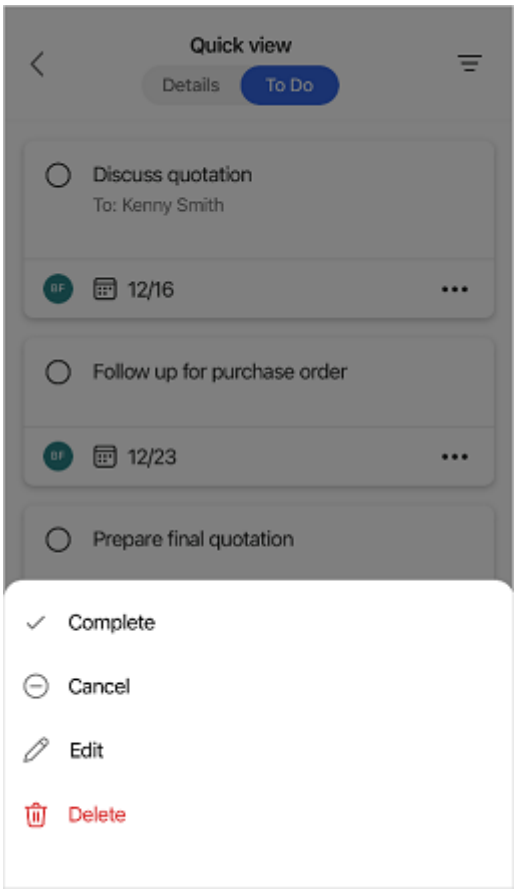
The list is filtered based on the selected activity type.



4. To remove the filter, tap on the **Filtered by** bar.

Mark an activity as complete

After you call someone or complete a task, you can mark the activity as complete. To mark an activity as complete, tap the option button on the activity card. Alternately, tap ••• on the activity card, and then tap **Complete**.



Cancel an activity

If an activity is no longer relevant but you want to keep a record of it, you can mark the activity as canceled. To mark an activity as canceled, tap ••• on the activity card, and then tap **Cancel**. Canceling an activity removes it from the **To Do** view.

Delete an activity

If you created an activity by mistake, or the activity is no longer required, you can delete it. To delete an activity, tap ••• on the activity card, and then tap **Delete**.

Reassign an activity

You can reassign an activity to a team or another user from Unified Interface.

1. Open or edit an activity, and then tap ⧉ at the upper-right corner of the form.
2. In Unified Interface, tap **More** at the lower-right corner of the form, and then tap **Assign**.
3. In the **Assign to Team or User** window, tap the **Assign to** field, and then select **User or team**.

4. In the **User or team** field, browse and select the user you want to assign the activity to.

See also

Manage records
Manage contacts

Dynamics 365 Sales mobile app settings

Article • 02/27/2023

The **Settings** panel provides a consolidated view for relevant information about the app, helpful links to submit ideas, report issues, share feedback, and a sign-out option.

The settings are divided into the following categories:

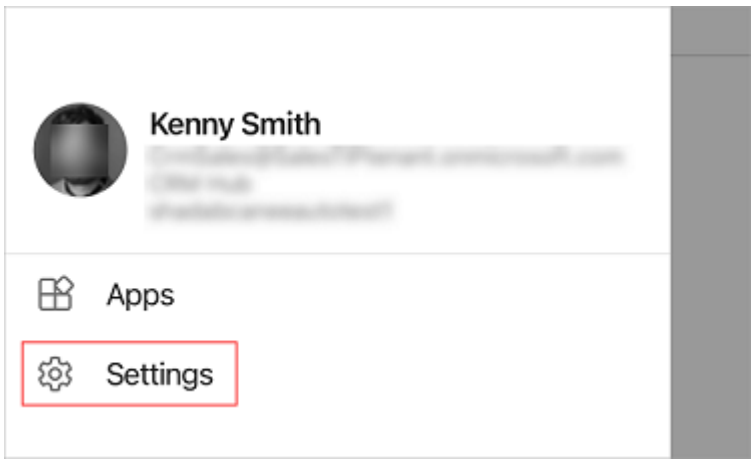
- Help and feedback
- About
- Account

License and role requirements

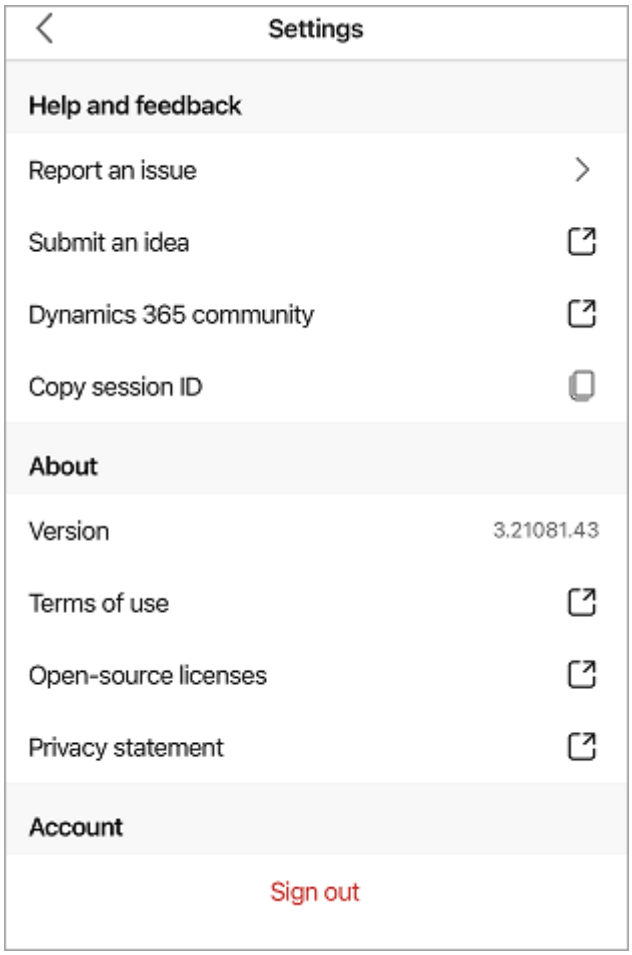
Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, Dynamics 365 Sales Professional, or Microsoft Relationship Sales More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Open the Settings panel

1. Tap your profile picture at the upper left of the screen.
2. Tap **Settings**.



The **Settings** panel is displayed.



Help and feedback

This section contains links to actions such as submitting an idea and reporting an issue with the app.

- **Report an issue**: Report issues with the mobile app.

  > **Note**
  > - By including your email address, you agree that Microsoft can send you an email if we have questions about your feedback.
  > - You should not include any confidential or personal information in your comment.
  > - By pressing submit, your feedback will be used to improve Microsoft products and services. Your IT admin will be able to collect this data.

- **Submit an idea**: Submit ideas for the mobile app from the Dynamics 365 Sales idea submission page.

- **Dynamics 365 Community**: Go to the Dynamics 365 Sales community forum to get help from experts and peers, discover blogs, webinars, videos, and events, and

more.

- **Copy session ID**: Copy the session ID to your clipboard. The session ID is helpful for troubleshooting. When you are asked to provide it, tap to copy the session ID and then share it with the required person.

About

This section contains links to actions such as viewing the version of the mobile app and various legal documents.

- **Version**: Displays the current version of the Dynamics 365 Sales mobile app.
- **Terms of use**: View the terms and conditions, license terms, and legal information.
- **Open-source licenses**: View the open-source licenses and third-party notices.
- **Privacy statement**: View the Microsoft Privacy Statement.

Account

This section contains a link to sign out from the mobile app.

- **Sign out**: Sign out from the app.

See also

Use the Dynamics 365 Sales mobile app
Learn the basics

Use the Sales Hub or Sales Professional app on your phones and tablets

Article • 02/22/2023

The Dynamics 365 for phones and Dynamics 365 for tablets apps are model-driven apps that you can use to open any customer engagement app such as Sales Hub or Sales Professional on your phones and tablets. The apps work the same whether you're using it on your mobile device or on a web browser on your computer.

> **Important**
>
> For a seamless mobile experience, we recommend that you switch to the Dynamics 365 Sales mobile app instead of using the Dynamics 365 for phones and tablets apps. For more information, go to **Overview of the Dynamics 365 Sales mobile app**.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium, Dynamics 365 Sales Enterprise, or Dynamics 365 Sales Professional More information: Dynamics 365 Sales pricing
Security roles	Any primary sales role, such as salesperson or sales manager More information: Primary sales roles

Prerequisites

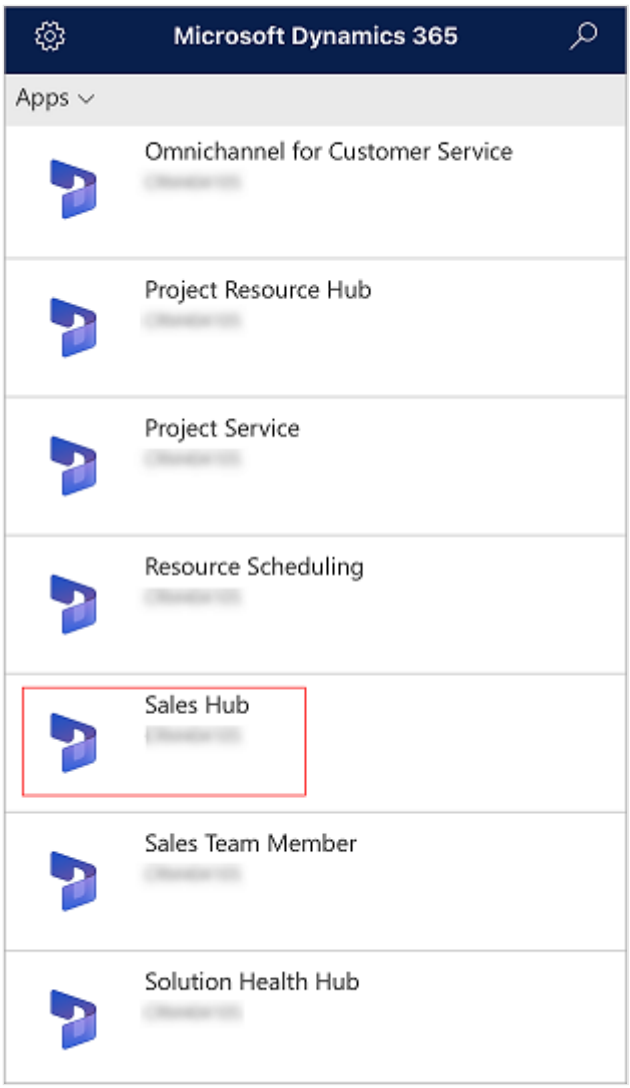
Before you can start using the app, you need to install the Dynamics 365 for phones or tablets app on your device.

More information: Install Dynamics 365 for phones and tablets

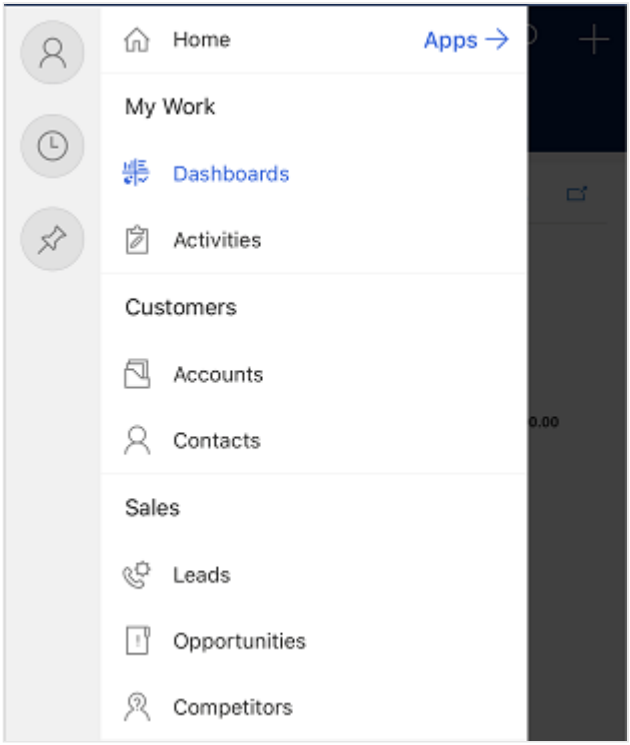
Open the app and navigate to records

1. When you sign in, you'll see the MyApps page with all your apps listed.

2. Select **Sales Hub** or **Sales Professional** based on your license.



3. Use the site map to get to your work area, create a new record, search, or do other tasks. To access the site map, tap **Menu** ( ) at the top-left of the screen.



4. Use the **Pinned** and **Recent** sections to get quick access to your records, views, and dashboards.

    - To access these sections, tap **Menu** at the top-left of the screen, and then tap either **Recent** or **Pinned** .
    - To pin an item, go to **Recent** list, and then tap the pin.

How to use the Sales Hub or Sales Professional app on the go

The Sales Hub or Sales Professional app on the Dynamics 365 for phones mobile app is designed to be your work assistant. The app helps you to engage with customers, close more deals, and acts as your office assistant.

Here are a few tasks that you can perform during your day-to-day activities by using the Sales Hub or Sales Professional app on the Dynamics 365 for phones mobile app:

- Plan for your day
- Attend meetings with information at your fingertips
- Send email
- Take notes in a meeting
- Update deals and customer information after a meeting
- Search for a record
- Add and qualify leads
- Generate and share a quote or order
- Manage your to-do list

Plan for your day

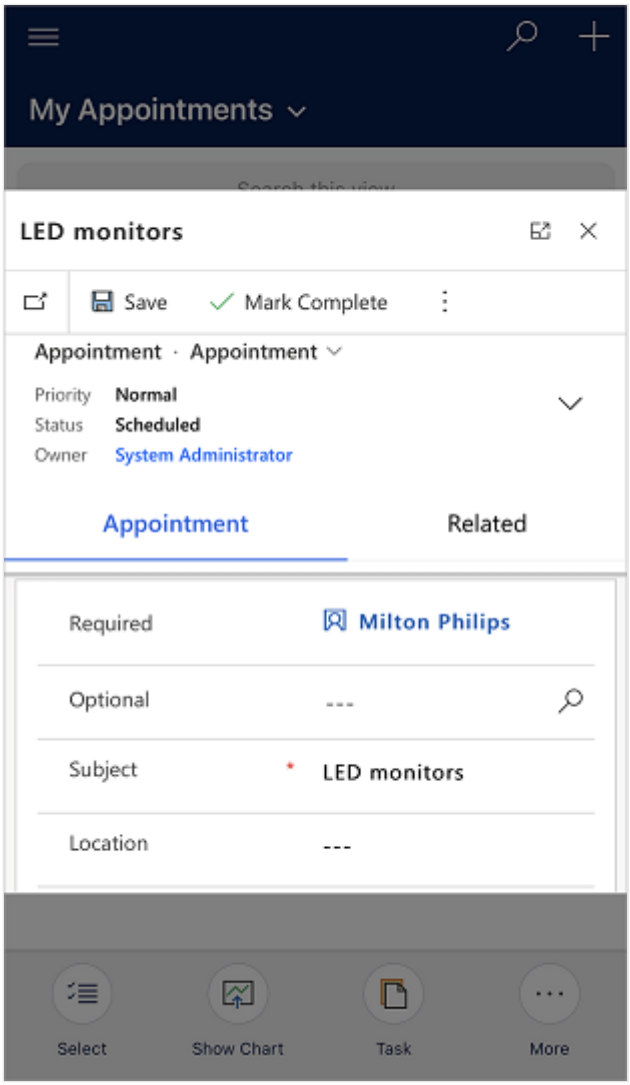
As you start your day, go to **My Appointments** to find out how busy you're going to be. The **My Appointments** feature provides insights into your meetings, travel, and free time. With this information, you can plan for the day by reviewing who you'll be meeting, where you'll need to travel, and how much free time you'll have left.

To view your appointments

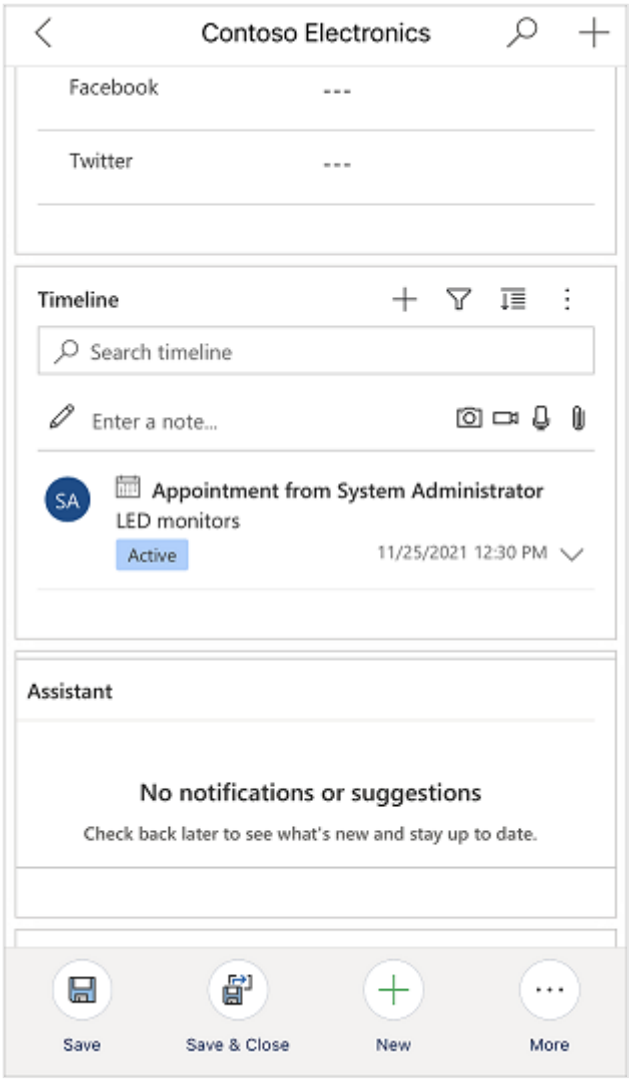
- On the site map, tap **Activities**, and then select the **My Appointments** view.

Attend meetings with information at your fingertips

While you're traveling, you can open any appointment to view more details such as start time, duration, and description of the meeting. The following image shows an example.



In addition, you can select the **Regarding** record to view which opportunity or account the meeting is about. As you view the opportunity or account, you can review the timeline of notes and past activities to ramp up on context before the meeting begins.



Send email

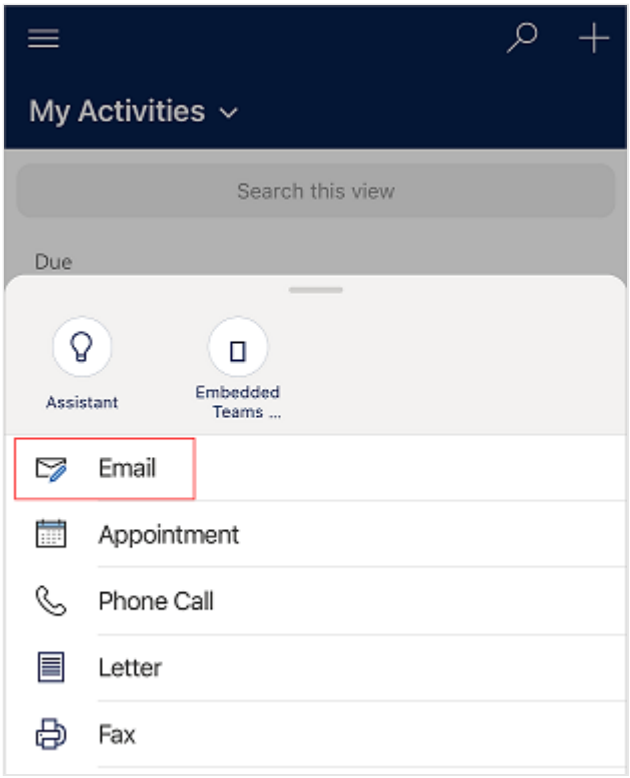
Use the Dynamics 365 for phones and tablets app to compose an email within the app with the following capabilities:

- Full email editor formatting supported as available in Unified Interface apps.
- Add attachments to an email.
- Search for and apply a predefined template to an email.

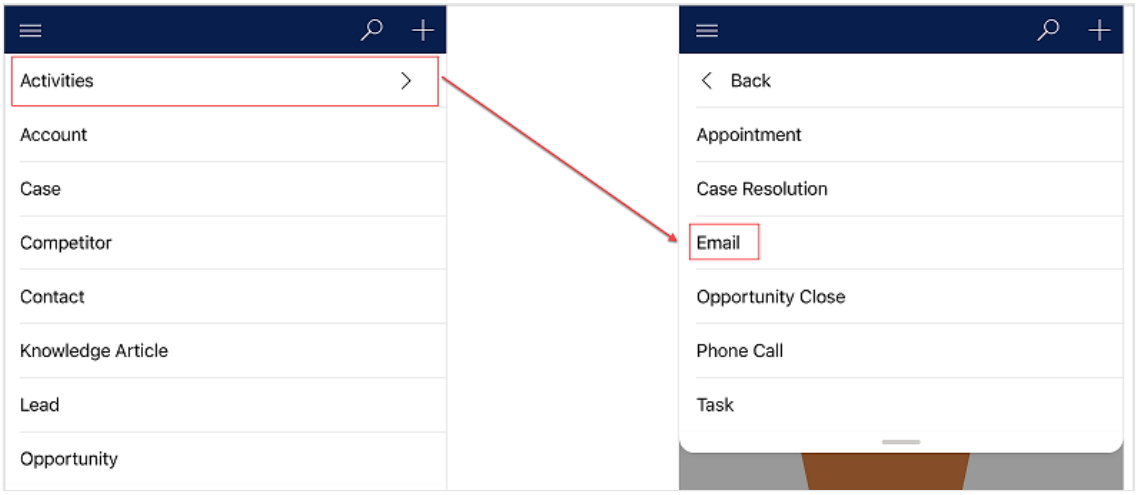
> ⓘ **Note**
>
> This feature isn't available in the **offline mode**.

1. You can create emails from home page grid or by using quick create.

    a. **Home page grid**: On the home page, tap the site map button at the the top-left corner, tap **Activities**, tap **More** at the bottom command bar, and then tap **Email**.



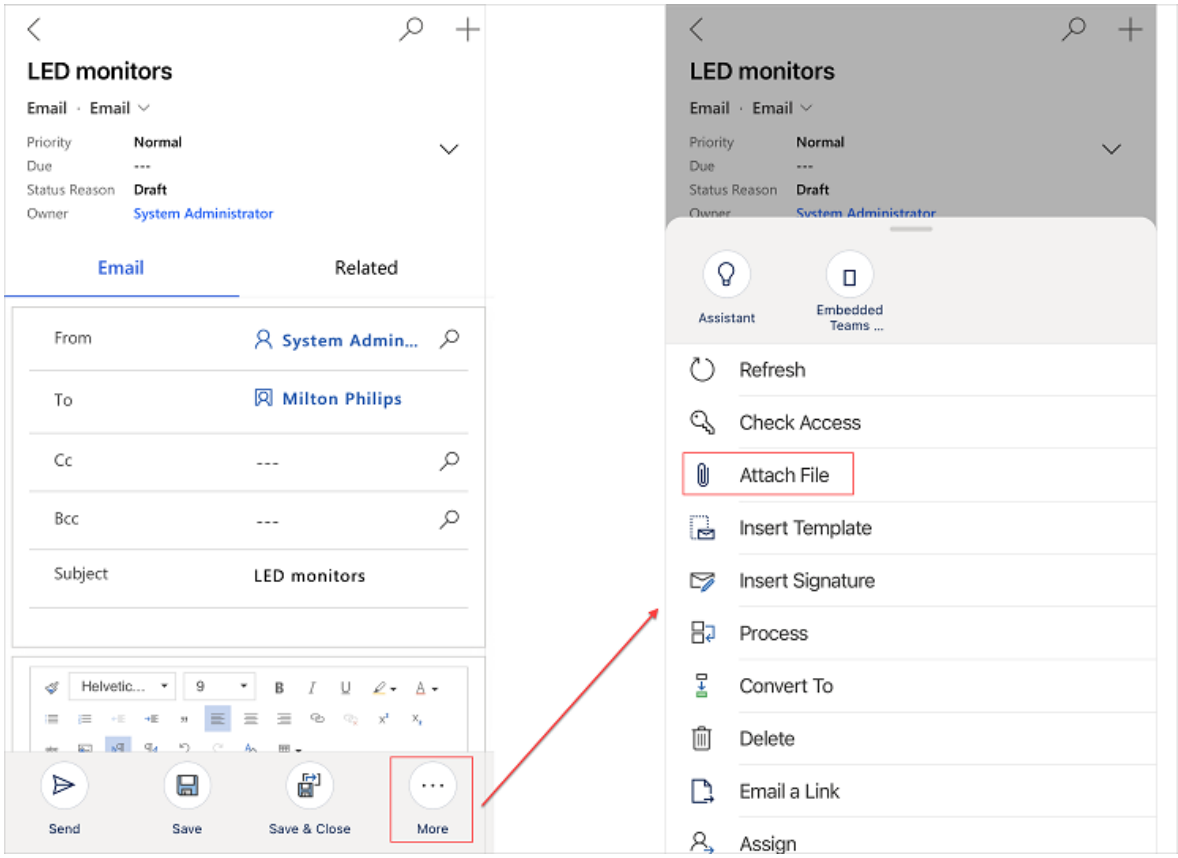
b. **Quick create**: On the command bar at the top, tap + > **Activities** > **Email**.



2. Draft the email and tap **Save** at the top-right to save your changes.

   The email is saved, a command bar is displayed at the bottom of the screen.

3. To add an attachment to the email, tap **More** at the bottom command bar, and then tap **Attach File**. Choose the file you want to attach to the email.



4. To use a template for the email body, tap **More** at the bottom command bar, and then tap **Insert Template**. Select or search for a template from the available templates, and tap **Select**.

5. When you're ready to send the email, tap **Send** at the bottom command bar.

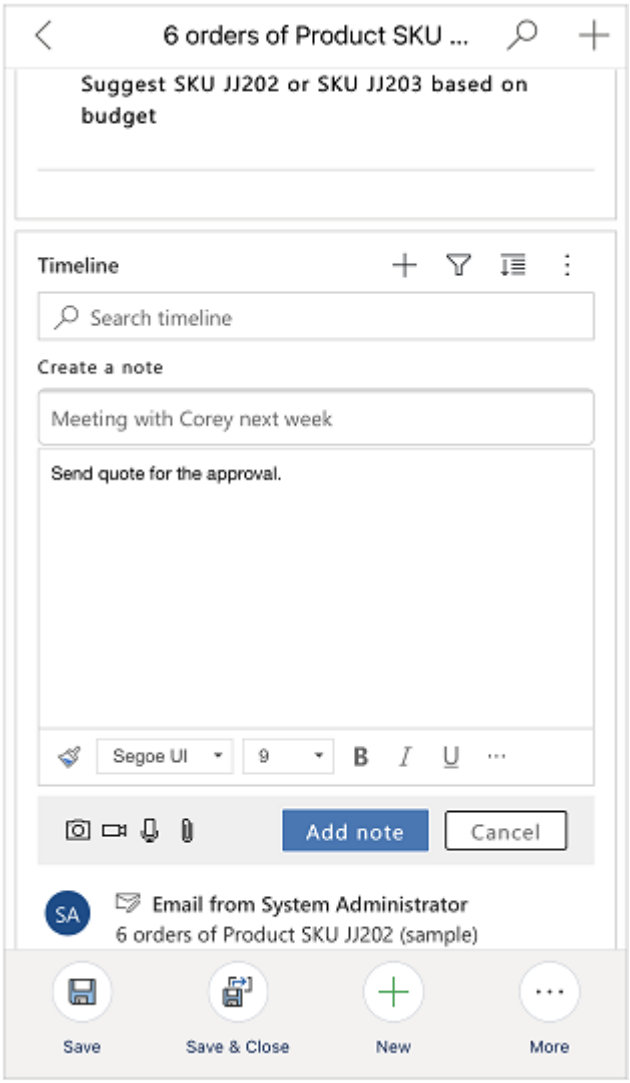
Take notes in a meeting

It's no longer necessary for you to open a laptop to add notes to an opportunity. You can use the app to quickly add notes to an opportunity by using your mobile device.

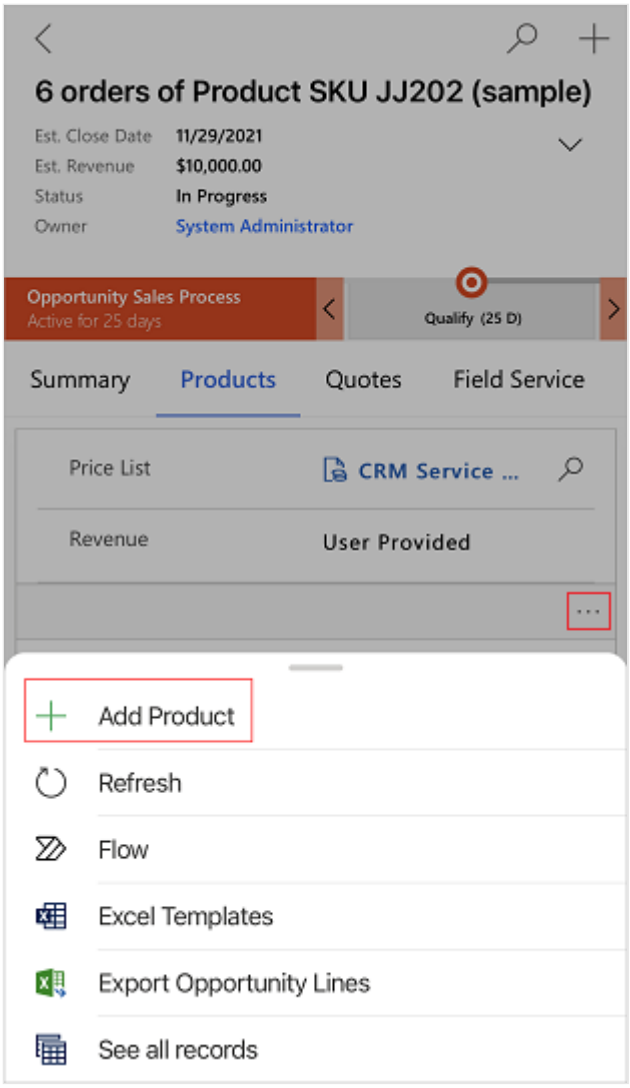
To add notes to an opportunity

1. On the site map, tap **Opportunities** > **My Open Opportunities**.

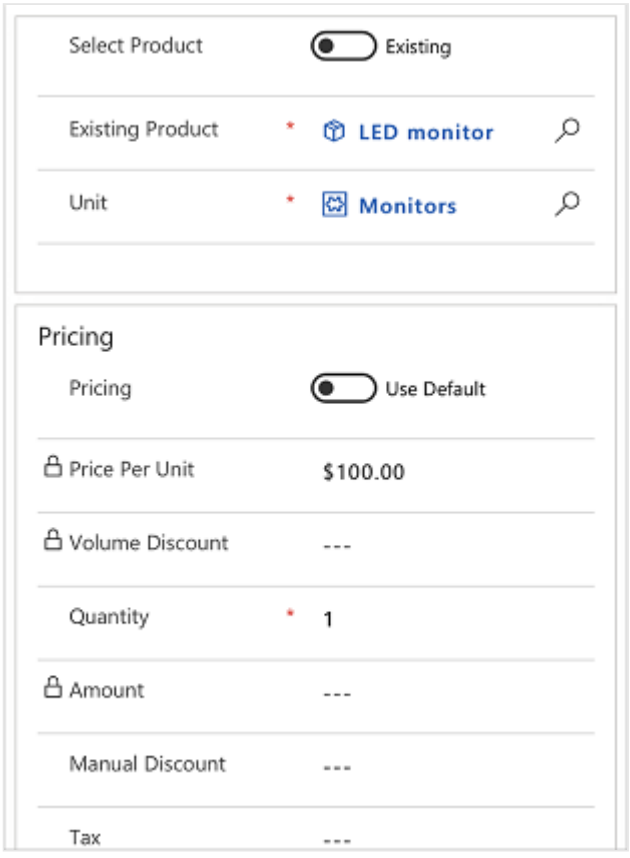
2. On the opportunity, go to **Timeline** section and add a note.



3. (Optional) If the customer shows interest in additional products, go to the **Products** tab, tap **More options** (...), and then tap **Add Product**.



4. Select an existing product from the catalog, or create a new product.



5. (Optional) If you've met a new stakeholder at the customer's office, on the **Summary** tab, go to the **Stakeholders** section, tap **More options** (...), and then tap **New Connection**. Then add the stakeholder. You can also add the contact from an account record.

Update deals and customer information after a meeting

After you step out of a meeting, you can quickly update information about the deal or the opportunity.

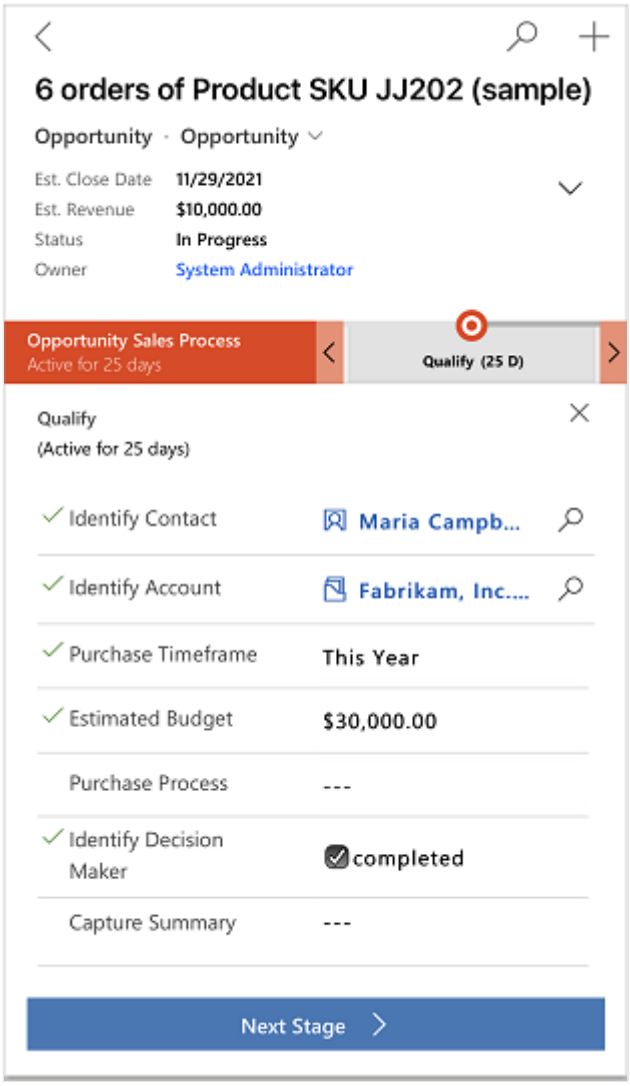
To update information after a meeting

1. Open the opportunity from the relevant appointment.

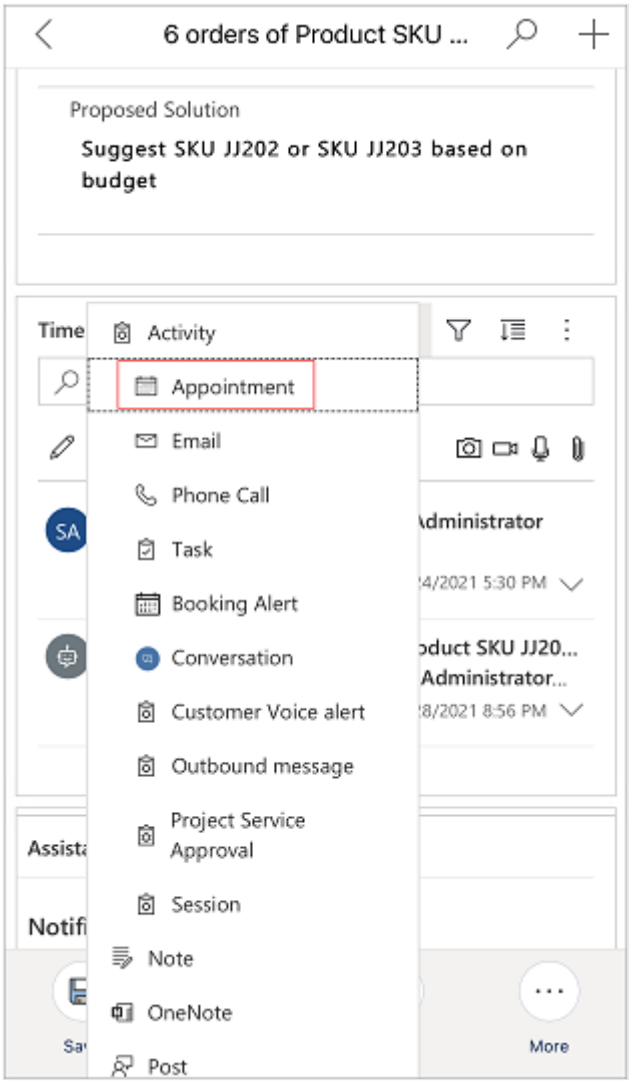
   Or

   On the site map, tap **Opportunities**, and then select the **My Open Opportunities** view.

2. On the opportunity, you can update the estimated revenue or move to the next stage.



3. To create a follow-up appointment for the opportunity, go to the **Timeline** section, tap **Create a timeline record** (+), and then tap **Appointment**.



On the **Quick Create: Appointment** form, enter the necessary information, and then save the appointment.

After you're done, you can open the appointment and mark it as complete.

Search for a record

You can search for records such as contacts, accounts, leads, and opportunities in the mobile app.

To search for a record

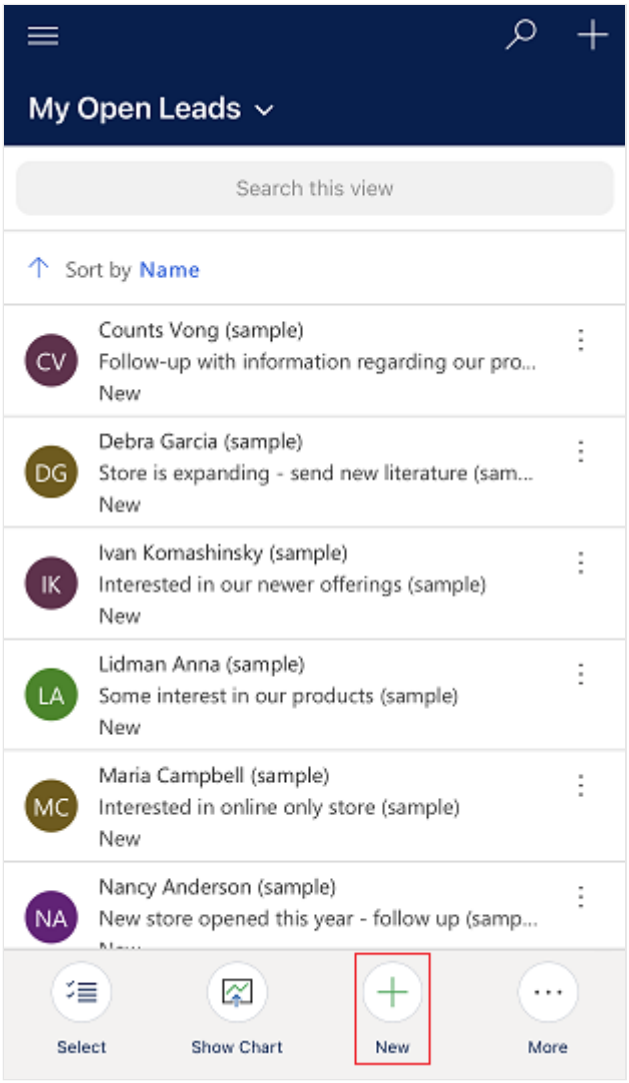
1. On the command bar at the top, tap the search icon.
2. On the **Search** page, enter text in the search box to find related information.
3. In the search results, tap and open the record to view more information.

Add and qualify leads

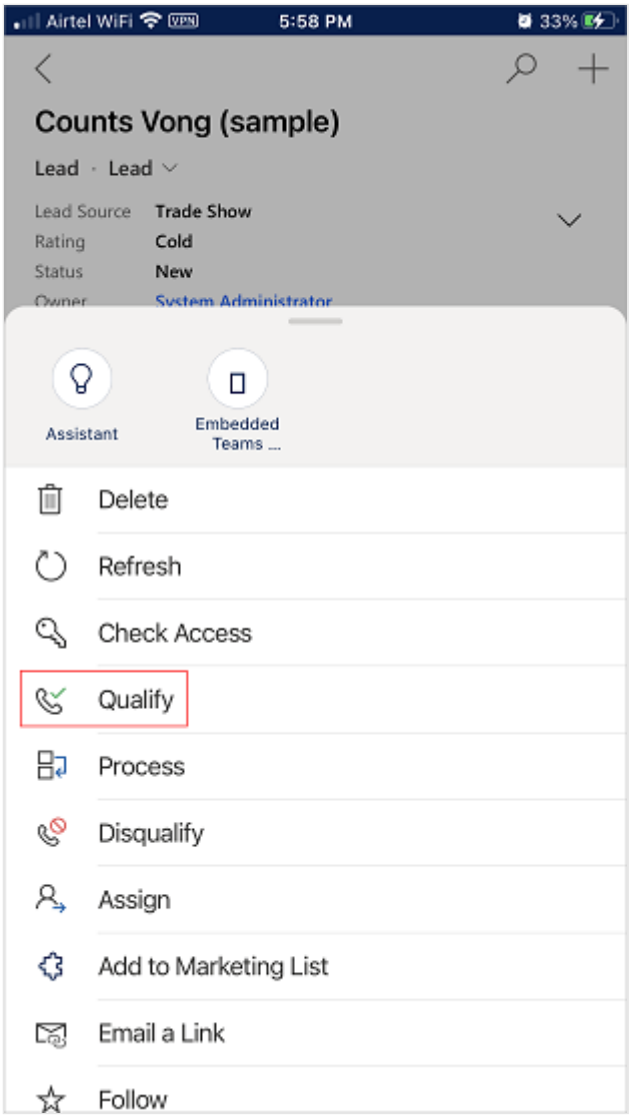
When you meet a new lead at an event, you can immediately add and qualify the lead with the app to make sure your team has visibility right away of the progress you've made.

To add and qualify a lead

1. On the site map, tap **Leads**.
2. On the leads page, tap **New** at the bottom command bar.



3. Enter the necessary information, and then save the lead.
4. To qualify a lead, open the lead, tap **More** at the bottom command bar, and then tap **Qualify**.

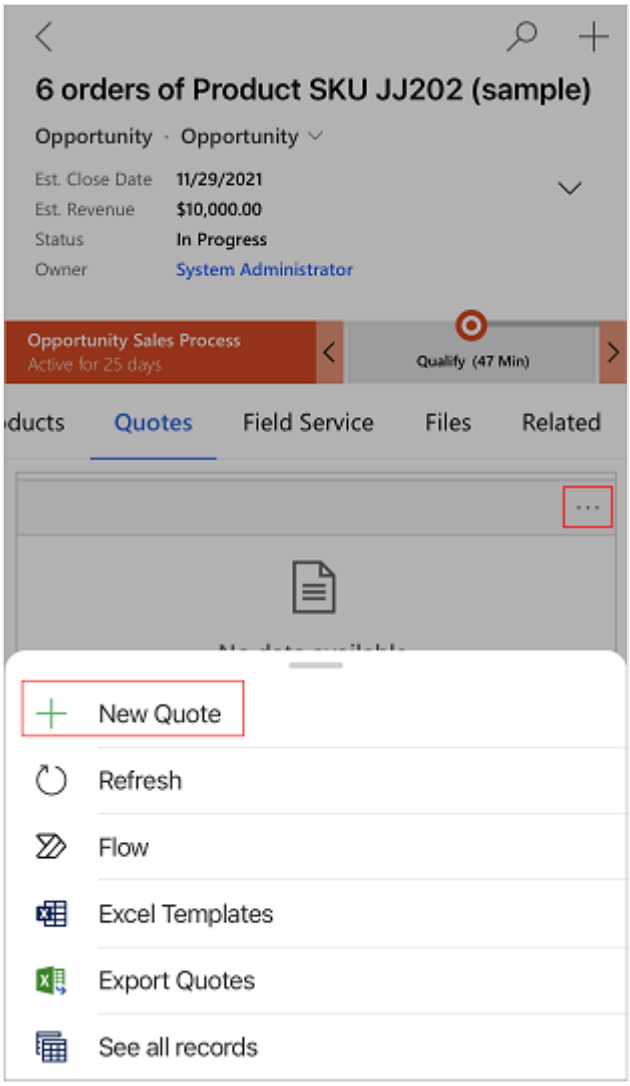


Generate and share a quote or order

After a successful meeting, you can quickly generate a PDF of the quote from an opportunity or a PDF of the order related to an account and share it with the customer who requests it.

To generate and share a quote or order

1. On the site map, tap **Opportunities**, and then select the **My Open Opportunities** view.
2. Open the opportunity for which you want to generate a PDF of the quote, and then go to the **Quotes** tab.
3. In the quote section, tap **More option** (...), and then tap **New Quote**.



A quote is generated.

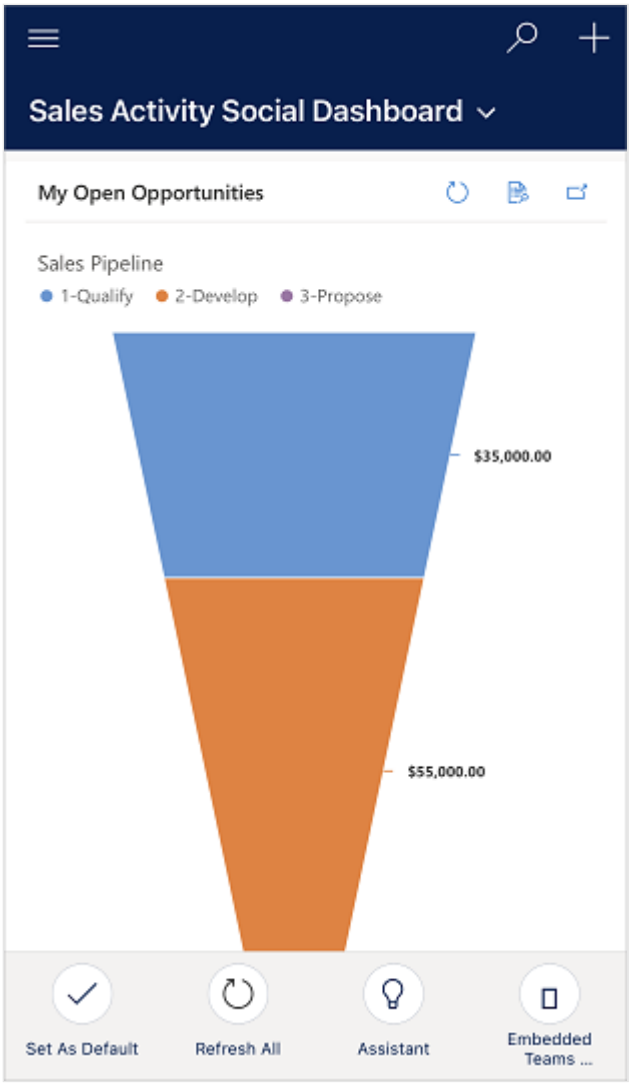
4. From the quote page, tap **More** at the bottom command bar, tap **Email as PDF**, and then tap **Print quote for customer**.

   An email opens with the quote as an attachment. Verify the existing information and then save the email.

5. When you're ready to send the email, tap **Send** at the bottom command bar.

Manage your to-do list

Before you wrap up the day, make sure your opportunity status is reflected correctly in the dashboards.



Quickly review pending tasks and close the ones you got to during the day.

To manage your to-do list

1. On the site map, tap **Activities**.
2. On the activities page, select the **My Tasks** view.
3. Review your tasks, and close any tasks that you've completed.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

User Guide
Actions supported in online and offline mode

Actions supported in online and offline mode

Article • 02/22/2023

You can use the Sales Hub app on Dynamics 365 for mobile in offline mode when you're experiencing intermittent connectivity. Select the **Enable Mobile Offline** option in the app module properties to access the Sales Hub or Sales Professional app offline.

> **Note**
>
> Custom fields of all types are available to use when you're offline. For lookup fields, only downloaded records can be referenced.

Your administrator must have associated a mobile offline profile to your user record before you can work offline. The administrator can either use the **Sample Sales Scenario** mobile offline profile that's shipped out of the box, or create a profile. For more information, see Set up mobile offline synchronization to allow users to work in offline mode on their mobile device.

More information: Work offline on your mobile device

The following table lists the actions that are supported in online and offline mode for entities.

Record type	Actions supported online	Actions supported offline
Appointment	- New - Edit and save - Mark Complete - Close Appointment - Process - Email a link - Convert to opportunity - Delete - Assign - Word templates - Add to Queue - Queue Item Details - Flow - Word Templates - Run Report	- New - Edit and save - Mark Complete - Convert to opportunity - Delete

Record type	Actions supported online	Actions supported offline
Opportunity	- New - Close as won - Close as lost - Recalculate Opportunity - Create PDF - Email as PDF - Assign - Email a link - Delete - Process - Unfollow - Flow - Word Templates - Run Report - Edit and save - Add product lines (both existing products and write-in products, through subgrid) - Add related contacts (through subgrid) - Add activities (from timeline or through subgrid) - Add notes (from timeline)	- New - Close as won - Close as lost - Delete - Edit and save - Add product lines (both existing products and write-in products, through subgrid)
Account	- New - Deactivate - Connect - Add to Marketing List - Assign - Email a Link - Delete - Create PDF - Email as PDF - Process - Follow - Flow - Word Templates - Edit and save - Add related contacts (through subgrid) - Add activities (from timeline or through subgrid) - Add notes (from timeline)	- New - Delete - Edit and save

Record type	Actions supported online	Actions supported offline
Contact	- New - Deactivate - Connect - Add to Marketing List - Assign - Email a link - Delete - Process - Follow - Flow - Word Templates - Edit and save	- New - Delete - Edit and save
Lead	- New - Delete - Qualify - Process - Disqualify - Assign - Add to Marketing List - Email a Link - Follow - Flow - Word Templates - Run Report - Edit and save	- New - Delete - Qualify - Disqualify - Edit and save
Quote	- New - Delete - Look Up Address - Activate Quote - Create PDF - Email as PDF - Get Products - Process - Assign - Email a Link - Flow - Word Templates - Run Report - Edit and save - Add product lines (both existing products and write-in products, through subgrid)	- New - Delete - Edit and save - Add product lines (both existing products and write-in products, through subgrid)

Record type	Actions supported online	Actions supported offline
Order	- New - Delete - Create Invoice - Create PDF - Email as PDF - Process - Fulfill Order - Cancel Order - Recalculate - Look Up Address - Use Current Pricing - Assign - Email a Link - Flow - Word Templates - Run Report - Edit and save - Add product lines (both existing products and write-in products, through subgrid)	- New - Delete - Edit and save - Add product lines (both existing products and write-in products, through subgrid)
Invoice	- New - Delete - Look Up Address - Invoice Paid - Cancel Invoice - Recalculate - Get Products - Lock Pricing - Create PDF - Email as PDF - Process - Assign - Email as Link - Flow - Word Templates - Edit and save - Add product lines (both existing products and write-in products, through subgrid)	- New - Delete - Edit and save - Add product lines (both existing products and write-in products, through subgrid)

Record type	Actions supported online	Actions supported offline
Task	- Mark Complete - Close Task - Process - Delete - Email a Link - Assign - Add to Queue - Convert To - Queue Item Details - Flow - Word Templates - Run Report - Edit and save	- New - Mark Complete - Delete - Edit and save - Convert to Opportunity
Phone Call	- Mark Complete - Close Phone Call - Process - Delete - Email a Link - Assign - Add to Queue - Convert To - Queue Item Details - Flow - Word Templates - Run Report - Edit and save	- New - Delete - Edit and save

Known issues

This section lists the known issues with the offline mode of the Dynamics 365 for phones and tablets app.

- **Business process flows**: Business process flows aren't supported for mobile offline. When you're offline, business process flows grids and views won't be available to be rendered on records that are opened in offline mode. If a record containing a business process flow was loaded prior to going offline, business process flow functions—such as move next or move previous—won't work. Business process flows support the ability to branch to a different set of stages, based on conditions defined on fields of the record. In offline mode, the conditions that determine the next set of stages in the business process flows won't be evaluated.
- **Qualify a lead**: After you've created and qualified a lead in mobile offline, when you go back online the business process stage will still be shown as the qualify

stage. You'll have to manually select **Next stage** to move the lead to next stage.

- **Views**: Views aren't supported for the following entities in offline mode:
  - Email
  - Task
  - Appointment
  - Phone call

  Any views that have linked entities (related entity) that aren't available offline are also not supported.

- Adding stakeholders, competitors, and sales teams to opportunities isn't supported in offline mode.

- Product suggestions (when you're adding product lines to opportunities, quotes, orders, or invoices) aren't supported in offline mode.

- Product property–related entities (DynamicProperty, DynamicPropertyInstance, DynamicPropertyOptionSetItem, and ProductSubstitute) aren't enabled for offline out of the box. These entities must be enabled for offline and added to an offline profile if you want to use product properties in offline mode.

Developer Guide for Dynamics 365 Sales

Article • 07/21/2023

Welcome to the Dynamics 365 Sales Developer Guide.

> **ⓘ Important**
>
> Dynamics 365 Sales runs on **Microsoft Dataverse** and uses Power Apps model-driven app design. It supports the standard extensibility model for model-driven apps and Dataverse to perform operations programmatically. For more information, see **Model-driven apps Developer Guide** and **Microsoft Dataverse Developer Guide**

Model your business data

- Competitor table
- Lead entity
- Opportunity entity
- Quote, order, and invoice tables
- Marketing entities (campaign, list)
- Goal management tables
- Product catalog tables
- Sales literature tables

Table reference

- Invoice
- Lead
- Opportunity
- Product
- Quote
- SalesOrder

Sales Action Reference

- msdyn_ForecastApi
- RecalculatePrice Action

Sales Premium

- msdyn_ConnectSequence Action
- Entity reference

Related resources

Overview of Sales and Sales Hub

Help resources for seller in Dynamics 365 Sales

Administrator and Sales Manager Guide

Developers: Understand terminology in Microsoft Dataverse

Article • 09/09/2023

Dataverse is not just a database, but also web services that enable developers to interact with data.

If you are familiar with the ADO.NET Entity Framework, architects and developers of data-oriented applications have struggled with the need to achieve two different objectives.

- They must model the entities, relationships, and logic of the business problems they are solving.
- They must also work with the data services used to store and retrieve the data.

The Entity Framework enables developers to work with data in the form of domain-specific objects and properties, such as customers and customer addresses, without having to concern themselves with the underlying database tables and columns where this data is stored.

In Power Apps and Dataverse, while *tables* and *columns* are used in the user interface and refer to the general idea of how data is stored in the Dataverse database, specific terminology (such as *entity* and *attributes*) is used to refer to the underlying data model and interfaces that developers work with depending on the protocol or technology used to interact with data.

The data structures that developers work with are exposed as entities, and the term is baked in the names of things developers use. For example:

To...	Using...	Developers will...
Create a Dataverse table	Web API	POST an instance of the EntityMetadata EntityType to the `/EntityDefinitions` resource
Create a Dataverse table	.NET SDK	Create an instance of the EntityMetadata Class and use the CreateEntityRequest Class when using the SDK for .NET.
Create a row or record in a Dataverse table	Web API	POST data defined as an a specific EntityType. You can find a list of these EntityTypes here: Web API EntityType Reference
Create a row or record in a Dataverse table	.NET SDK	Create an instance of the Entity Class or a class that inherits from it (Account, Contact, etc.) and use the CreateRequest Class when

To...	Using...	Developers will...
		using the SDK for .NET. A developer can find the information they need to use the Entity class in the entity reference.

Terminology use depending on protocol or technology

The terminology used in the developer documentation depends on the protocol or class library used by developers.

- When working with the Web API, we use the terminology defined by the OData protocol. Data structures are defined as *EntityTypes*, which have properties and navigation properties.
- When working with the .NET SDK, we use *Entity* because there is an Entity class. The Entity class has an Attributes property that contains a collection of attributes that are defined by data in an AttributeMetadata Class and many other classes derived from it.

We use the appropriate terminology to describe the SDK and Web API technology. The developer documentation will *at times* use different terminology than the Power Apps user interface. The table below will help guide you to some of the terminology differences between the developer documentation and rest of the Power Apps documentation.

Power Apps UI	Dataverse SDK	Dataverse Web API
Table	Entity	EntityType
Column	Attribute	Property
Row	Record	Record
Choices	OptionSet/Picklist	OptionSet
Yes/No	Boolean	Boolean

Sales tables (lead, opportunity, competitor, quote, order, and invoice)

Article • 03/03/2023

You use the entities described in this section to manage various phases of a sales process. They include tracking leads, opportunities, competitors, and managing quotes, orders, products, and sales goals.

In This Section

Competitor table

Lead table

Opportunity table

Quote, Order and Invoice tables

Related Sections

Model your business data with Dataverse

Marketing tables (Campaign, List)

Competitor tables

Article • 03/03/2023

A *competitor* is another company that offers competing products and services. Each competitor record in Dynamics 365 for Customer Engagement can contain detailed information about the competitor that includes a company profile, a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats), and any relevant sales materials and presentations. In addition, competitor articles can contain links to relevant information in the marketing encyclopedia.

With competitor tracking, you can find competitors and analyze their sales strategies, their products, and what contracts they win. This functionality includes adding and maintaining competitor records, and storing competitor documents. Competitor tracking lets you disperse competition information to everyone who deals with an opportunity so that they can compete in the most effective way possible to close the sale and maintain the relationship. Competitor tracking helps you compare your business unit to the competition, including opportunities lost to and won against competitors.

One or many competitors can be associated with any opportunity. By using this association, salespeople give management the ability to track their overall win/loss record versus specific competitors, and to do further analysis regarding the cause of losses and other outcomes.

See also

Competitor Tables
Sales Tables
Opportunity Tables
Lead Tables

Lead table

Article • 03/03/2023

A *lead* table represents an individual that is identified as someone who is interested in receiving specific information about the products or services offered by the company. The information is provided to a lead by a salesperson through email or other communication activities available in Dynamics 365 for Customer Engagement. A lead is used to track contacts or accounts that are potential customers, but who have not yet been qualified.

Lead management is largely the same as opportunity management. However, a lead is kept separate from customer and opportunity data until the lead is qualified. The possible states for a lead are Open, Qualified, and Disqualified. A qualified lead may be converted to an account, contact or opportunity. To convert, use the QualifyLeadRequest message.

The following items can be associated with a lead:

- Contact and account information
- Customer requests
- Activities
- Notes
- Attachments

A link is maintained between the lead and any accounts and contacts. You can create this link by using the IOrganizationService.Execute method with the AssociateRequest or the DisassociateRequest messages. This makes it possible to generate reports that indicate the value of different lead sources.

When you enter a lead into Dynamics 365 Sales, you can use the process (workflow) engine to automatically route it to a specific user or team based on rules that are defined by the business unit or channel partner. Upon qualification, the lead is either converted to an opportunity or is inactivated, but retained to allow for accurate business reporting, for example, analysis of the effectiveness of different lead sources. For more information, see Business process flows.

See Also

Lead Table
Sample: Qualify a Lead
Sales Tables
Opportunity Tables

Sample: Qualify a lead

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the complete sample here Business management samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to qualify a lead and create an account, contact, or opportunity based on the lead.

Example

C#

```
using System;
using System.ServiceModel;
using Microsoft.Crm.Sdk.Messages;
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;

namespace Microsoft.Crm.Sdk.Samples
{
    public class WorkingWithLeads
    {
        #region Class Level Members
        private OrganizationServiceProxy _serviceProxy;
        private Guid _lead1Id;
        private Guid _lead2Id;
        private Guid _accountId;
```

```
        private Guid _leadAccountId;
        private Guid _contactId;
        private Guid _opportunityId;
        #endregion

        #region How To Sample Code

        public void Run(ServerConnection.Configuration serverConfig,
            bool promptforDelete)
        {
            using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,serverConfig.Credentials,
serverConfig.DeviceCredentials))
            {
                // This statement is required to enable early bound type
support.
                _serviceProxy.EnableProxyTypes();
                CreateRequiredRecords();

                Console.WriteLine("=== Creating and Qualifying Leads ===");

                // Create two leads.
                var lead1 = new Lead
                {
                    CompanyName = "A. Datum Corporation",
                    FirstName = "Henriette",
                    LastName = "Andersen",
                    Subject = "Sample Lead 1"
                };

                _lead1Id = _serviceProxy.Create(lead1);
                NotifyEntityCreated(Lead.EntityLogicalName, _lead1Id);

                var lead2 = new Lead
                {
                    CompanyName = "Adventure Works",
                    FirstName = "Michael",
                    LastName = "Sullivan",
                    Subject = "Sample Lead 2"
                };

                _lead2Id = _serviceProxy.Create(lead2);
                NotifyEntityCreated(Lead.EntityLogicalName, _lead2Id);

                // Qualify the first lead, creating an account and a contact
from it, but
                // not creating an opportunity.
                var qualifyIntoAccountContactReq = new QualifyLeadRequest
                {
                    CreateAccount = true,
                    CreateContact = true,
                    LeadId = new EntityReference(Lead.EntityLogicalName,
_lead1Id),
                    Status = new
```

```
OptionSetValue((int)lead_statuscode.Qualified)
                };

                var qualifyIntoAccountContactRes =

(QualifyLeadResponse)_serviceProxy.Execute(qualifyIntoAccountContactReq);
                Console.WriteLine("  The first lead was qualified.");
                foreach (var entity in
qualifyIntoAccountContactRes.CreatedEntities)
                {
                    NotifyEntityCreated(entity.LogicalName, entity.Id);
                    if (entity.LogicalName == Account.EntityLogicalName)
                    {
                        _leadAccountId = entity.Id;
                    }
                    else if (entity.LogicalName ==
Contact.EntityLogicalName)
                    {
                        _contactId = entity.Id;
                    }
                }

                // Retrieve the organization's base currency ID for setting
the
                // transaction currency of the opportunity.
                var query = new QueryExpression("organization");
                query.ColumnSet = new ColumnSet("basecurrencyid");
                var result = _serviceProxy.RetrieveMultiple(query);
                var currencyId = (EntityReference)result.Entities[0]
["basecurrencyid"];

                // Qualify the second lead, creating an opportunity from it,
and not
                // creating an account or a contact.  We use an existing
account for the
                // opportunity customer instead.
                var qualifyIntoOpportunityReq = new QualifyLeadRequest
                {
                    CreateOpportunity = true,
                    OpportunityCurrencyId = currencyId,
                    OpportunityCustomerId = new EntityReference(
                        Account.EntityLogicalName,
                        _accountId),
                    Status = new
OptionSetValue((int)lead_statuscode.Qualified),
                    LeadId = new EntityReference(Lead.EntityLogicalName,
_lead2Id)
                };

                var qualifyIntoOpportunityRes =

(QualifyLeadResponse)_serviceProxy.Execute(qualifyIntoOpportunityReq);
                Console.WriteLine("  The second lead was qualified.");

                foreach (var entity in
```

```
qualifyIntoOpportunityRes.CreatedEntities)
                {
                    NotifyEntityCreated(entity.LogicalName, entity.Id);
                    if (entity.LogicalName == Opportunity.EntityLogicalName)
                    {
                        _opportunityId = entity.Id;
                    }
                }

                DeleteRecords(promptforDelete);
            }
        }

        private void NotifyEntityCreated(String entityName, Guid entityId)
        {
            Console.WriteLine("  {0} created with GUID {{{1}}}",
                entityName, entityId);
        }

        private void CreateRequiredRecords()
        {
            // Create an account to relate the opportunity to.
            var account = new Account
            {
                Name = "Litware, Inc.",
                Address1_StateOrProvince = "Colorado"
            };
            _accountId = (_serviceProxy.Create(account));
        }

        private void DeleteRecords(bool prompt)
        {
            bool toBeDeleted = true;

            if (prompt)
            {
                // Ask the user if the created entities should be deleted.
                Console.Write("\nDo you want these entity records deleted?
(y/n) [y]: ");
                String answer = Console.ReadLine();
                if (answer.StartsWith("y") ||
                    answer.StartsWith("Y") ||
                    answer == String.Empty)
                {
                    toBeDeleted = true;
                }
                else
                {
                    toBeDeleted = false;
                }
            }

            if (toBeDeleted)
            {
                // Deleting the accounts will delete all of their related
```

```
records, and then
                // only the leads will be left.
                _serviceProxy.Delete(Account.EntityLogicalName, _accountId);
                _serviceProxy.Delete(Account.EntityLogicalName,
_leadAccountId);

                _serviceProxy.Delete(Lead.EntityLogicalName, _lead1Id);
                _serviceProxy.Delete(Lead.EntityLogicalName, _lead2Id);
            }
        }

        #endregion How To Sample Code

        #region Main method

        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                var app = new WorkingWithLeads();
                app.Run(config, true);
            }
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
```

```
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main method
    }
}
```

See also

Sales Tables (Lead, Opportunity, Competitor, Quote, Order, Invoice)

QualifyLeadRequest

Lead Table

Opportunity tables

Article • 03/03/2023

The *opportunity* table represents a potential sale to new or established customers. It helps you to forecast future business demands and sales revenues. You can create a new opportunity in Dynamics 365 for Customer Engagement to monitor an inquiry from your existing customer, or convert a qualified lead into an opportunity. Salespeople often use opportunities to keep track of the sales engagements that they are currently working on.

You can track the estimated revenue, estimated close date, and rating of the opportunity as well as what stage the opportunity is in. You can track the potential customer's name and salesperson's name. You can monitor activities related to the potential sale, such as telephone calls, email messages, and tasks.

An opportunity must be associated with one account or contact. An account and a contact may have links to multiple opportunities. Opportunities contain competitor information that helps you to analyze and find effective selling strategies.

Each opportunity may have multiple products associated with it. An association between an opportunity and a product is represented by the opportunity product table.

After you determine whether the prospective customer or an existing customer wants to purchase your product or service, you may close an opportunity. By closing an opportunity, you deactivate it, but you do not delete it. This gives you an option to reopen it later. When you close an opportunity, an opportunity close activity is created. It is represented by the opportunity close table. You can use this table to store information about the revenue, why you closed the opportunity, close date, and the competitor. It also contains the information about the user that created the opportunity.

The tables that can be associated with an opportunity to provide a complete set of information about the sales engagement include: activities, notes and attachments, competitors, quotes, orders, and sales literature.

See also

Creating an Opportunity
Converting an Opportunity to a Quote, Sales Order or Invoice
Opportunity Table
OpportunityProduct Table
OpportunityClose Table

Sample: Create an Opportunity (Early Bound)

Sample: Retrieve an Opportunity (Early Bound)

Sample: Convert an Opportunity to a Quote (Early Bound)

Sales Entities

Quote, order, and invoice entities

Set default price level for opportunity, quote, order, invoice

Create an opportunity

Article • 03/03/2023

You can create an opportunity from a qualified lead or you can create a new opportunity for one of your existing customers. You can track the information about each opportunity, such as state and status of the opportunity, the probability of the sale, and the estimated closing date. An opportunity contains important sales information that can be used later in quotes, sales orders, and invoices. The sales information includes:

- Products and services from the product catalog and write-in products that you plan to sell
- Overridden prices of the products and services from the product catalog
- Discounted prices of the products and services from the product catalog and the write-in products
- Calculated or estimated revenues
- Freight rates
- Calculated tax and cost totals

Prepare Data for an Opportunity

Before you create an opportunity, ensure that Dynamics 365 for Customer Engagement contains necessary data:

- Create accounts, contacts, and leads before you create an opportunity. You can create an opportunity for an existing account or contact, or convert a qualified lead into an opportunity.
- Each opportunity must be associated with one account or a contact.
- Qualify a lead for an opportunity by using your company's lead qualification criteria. The possible states for a lead are Open, Qualified, and Disqualified.

  If you add products to an opportunity, the system must contain a product catalog, products, price lists, and units of measure.

Add Existing Products and Write-in Products

A single opportunity may be associated with multiple products that include existing products and write-in products. Existing products are a part of the product catalog and are associated with the price lists in the product catalog. Write-in products are products that your company sells, but does not include in the product catalog. The prices of write-in products are not associated with the price lists in the product catalog. An existing product or a write-in product is a line item in the opportunity record. The existing products and the write-in products are represented by the opportunity product table. To associate the products with a specific opportunity, use the `OpportunityProduct.OpportunityId` column.

To set up a product catalog, products, price lists, and discount lists you must have system administrator privileges.

Add Existing Products from the Product Catalog

To specify an existing product from the catalog, set the `OpportunityProduct.IsProductOverridden` column to `false`. Specify the following information: product ID (`OpportunityProduct.ProductId`), price per unit (`OpportunityProduct.PricePerUnit`), quantity (`OpportunityProduct.Quantity`) and units of measure (`OpportunityProduct.UomId`). To associate a price list with the opportunity, use the `Opportunity.PriceLevelId` column. You can add other product-related data, such as tax amount (`OpportunityProduct.Tax`), volume discount (`OpportunityProduct.VolumeDiscountAmount`), or manual discount (`OpportunityProduct.ManualDiscountAmount`).

Add Write-in Products

Although, a write-in product is not in the product catalog, you can add it to an opportunity. To specify a write-in product, set the `OpportunityProduct.IsProductOverridden` column to `true`. Specify the following information: product description (`OpportunityProduct.ProductDescription`), price per unit (`OpportunityProduct.PricePerUnit`), and quantity (`OpportunityProduct.Quantity`). You can add other product-related data, such as tax amount (`OpportunityProduct.Tax`), volume discount (`OpportunityProduct.VolumeDiscountAmount`), or manual discount (`OpportunityProduct.ManualDiscountAmount`).

Price Overriding

For a write-in product, you can use any price that you want and the quantities that you plan to sell. However, if you add an existing product from the catalog, you have an option to override the list price. To override the list price of the existing product, set the `OpportunityProduct.IsPriceOverridden` column to `true`. Specify a desired price by using the `OpportunityProduct.PricePerUnit` column.

Apply Discounts

In addition to price overriding, you can apply volume discounts and manual discounts. The discounts can be applied to line items and to a whole opportunity.

For example, if the average order from your customers is for five units of your product, you could create an incentive for your customers to order more than five units by giving them a discount when they order six or more units. A discount can be specified as a percentage or an amount. To specify a volume discount for the opportunity product, use the `OpportunityProduct.VolumeDiscountAmount` column. To specify a manual discount for the opportunity product, use the `OpportunityProduct.ManualDiscountAmount` column. To specify an overall discount for the opportunity, use the `Opportunity.DiscountAmount` column.

Calculate Tax and Totals

The estimated tax and the estimated total value of the opportunity are automatically calculated. The estimated value is based on the combined cost of all products added to the opportunity and the associated price lists. Instead of using the system calculated value, you can specify the estimated revenue for the opportunity. To do this, set the `Opportunity.IsRevenueSystemCalculated` column to `false` and specify the estimated value in the `Opportunity.EstimatedValue` column.

The breakdown of the opportunity total costs is a follows:

- Total amount
- Total amount less freight
- Total discount amount
- Total line item amount
- Total line item discount amount
- Total discount

- Total tax

  Having information about individual costs helps you analyze your overall cost. You can make necessary adjustments to pricing, discounts, and freight cost to help with closing a deal.

Close an Opportunity

If a customer decides to purchase products or services from your company, you can close an opportunity as a won opportunity. The opportunity states are specified in the `Opportunity.StateCode` column. If you are using early bound types, you can use the `OpportunityState` enumeration. For a list of the state values, see the picklist values for this table. To view the entity metadata for your organization, install the Metadata Browser solution described in Browse the metadata for your organization. You can also browse the reference documentation for entities in the Entity Reference.

When you close an opportunity, an activity is created automatically by creating a record of the table type opportunity close. The states of the opportunity close activity are specified in the `OpportunityClose.StateCode` column. If you are using early bound types, you can use the `OpportunityCloseState` enumeration. For a list of the state values, see the picklist values for this table.

The opportunity close activity contains information about the user that created the activity, and the date and time when it was created. It also contains the information about the estimated revenue, close date, and competitor. You can add notes that explain the reasons why you closed the opportunity.

See also

Opportunity Tables
Converting an Opportunity to a Quote, Sales Order or Invoice
Product Catalog Tables
Sales Tables
Customer Tables
Generate early-bound classes for the Organization service (CrmSvcUtil.exe)

Convert an opportunity to a quote, sales order or invoice

Article • 03/03/2023

Opportunities, quotes, sales orders, and invoices are all part of the sales process. An opportunity is a possibility to sell products and services to a qualified customer. If an opportunity is won, you may convert it to a quote, or to a sales order or an invoice. The catalog products and write-in products that are included in an opportunity are added to a quote, a sales order, or an invoice during conversion. An opportunity, a quote, a sales order, and an invoice share common data that can be reused in the flow of the sales process. The shared data includes user information, product price and discounts, freight amount, total costs, and tax.

Converting an Opportunity to a Quote, a Sales Order, or an Invoice

The following table lists the messages that you can use to convert an opportunity to a quote, a sales order, or an invoice.

Message	Description
GenerateQuoteFromOpportunityRequest	Generates a quote from an opportunity.
GenerateSalesOrderFromOpportunityRequest	Generates a sales order from an opportunity.
GenerateInvoiceFromOpportunityRequest	Generates an invoice from an opportunity.

Copying Products from an Opportunity to a Quote, a Sales Order, or on Invoice

The following table lists the messages that you can use to add products from a new opportunity to existing quotes, invoices, or sales orders.

Message	Description
GetQuoteProductsFromOpportunityRequest	Retrieves the products from an opportunity and copies them to the specified quote.
GetSalesOrderProductsFromOpportunityRequest	Retrieves the products from an opportunity and copies them to the specified sales order.

Message	Description
GetInvoiceProductsFromOpportunityRequest	Retrieves the products from an opportunity and copies them to the specified invoice.

See also

Opportunity Tables
Creating an Opportunity
Quote, Order and Invoice Tables
Sales Tables
Opportunity Table

Sample: Create an opportunity (early bound)

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the Business Management samples

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to create an opportunity that contains a product from the product catalog and from a write-in product.

Example

C#

```
using System;
using System.ServiceModel;
using System.ServiceModel.Description;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// found in the SDK\bin folder.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;
```

```
namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// This Sample shows how to create an opportunity with
    /// one catalog and one write-in product.
    /// </summary>
    public class CreateOpportunity
    {
        #region Class Level Members

        /// <summary>
        /// Stores the organization service proxy.
        /// </summary>
        private OrganizationServiceProxy _serviceProxy;

        // Define the IDs needed for this sample.
        public Guid _unitGroupId;
        public Guid _defaultUnitId;
        public Guid _product1Id;
        public Guid _product2Id;
        public Guid _discountTypeId;
        public Guid _discountId;
        public Guid _priceListId;
        public Guid _priceListItem1Id;
        public Guid _priceListItem2Id;
        public Guid _accountId;
        public Guid _opportunityId;
        public Guid _catalogProductId;
        public Guid _catalogProductPriceOverrideId;
        public Guid _writeInProductId;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// Create and configure the organization service proxy.
        /// Initiate method to create any data that this sample requires.
        /// Create a new opportunity and few opportunity product
        /// including write-in product.
        /// Optionally delete any entity records that were created for this
sample.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptForDelete)
        {
            try
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
```

```
be properly disposed.
                using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,

serverConfig.Credentials, serverConfig.DeviceCredentials))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    CreateRequiredRecords();


                    // Create a new opportunity with user specified
estimated revenue
                    Opportunity newOpportunity = new Opportunity
                    {
                        Name = "Example Opportunity",
                        CustomerId = new
EntityReference(Account.EntityLogicalName,
                            _accountId),
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId),
                        IsRevenueSystemCalculated = false,
                        EstimatedValue = new Money(400.00m),
                        FreightAmount = new Money(10.00m),
                        DiscountAmount = new Money(0.10m),
                        DiscountPercentage = 0.20m
                    };

                    _opportunityId = _serviceProxy.Create(newOpportunity);
                    Console.WriteLine("Created {0} with user specified
estimated revenue.",
                        newOpportunity.Name);

                    // Create a new opportunity product from the catalog

                    // Create a catalog product
                    OpportunityProduct catalogProduct = new
OpportunityProduct
                    {
                        OpportunityId = new
EntityReference(Opportunity.EntityLogicalName,
                            _opportunityId),
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _product1Id),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                        Quantity = 8,
                        Tax = new Money(12.42m)
                    };
```

```
                    _catalogProductId =
_serviceProxy.Create(catalogProduct);
                    Console.WriteLine("Created the catalog product.");

                    // Create anothter catalog product and override the list
price
                    OpportunityProduct catalogProductPriceOverride = new
OpportunityProduct
                    {
                        OpportunityId = new
EntityReference(Opportunity.EntityLogicalName,
                            _opportunityId),
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _product2Id),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                        Quantity = 3,
                        Tax = new Money(2.88m),
                        IsPriceOverridden = true,
                        PricePerUnit = new Money(12)
                    };

                    _catalogProductPriceOverrideId = _serviceProxy.Create(
                        catalogProductPriceOverride);
                    Console.WriteLine(@"Created another catalog product and
                    overriden the list price.");

                    // create a new write-in opportunity product with a
manual discount applied
                    OpportunityProduct writeInProduct = new
OpportunityProduct
                    {
                        OpportunityId = new
EntityReference(Opportunity.EntityLogicalName,
                            _opportunityId),
                        IsProductOverridden = true,
                        ProductDescription = "Example Write-in Product",
                        PricePerUnit = new Money(20.00m),
                        Quantity = 5,
                        ManualDiscountAmount = new Money(10.50m),
                        Tax = new Money(7.16m)
                    };

                    _writeInProductId =
_serviceProxy.Create(writeInProduct);
                    Console.WriteLine("Created {0}.",
writeInProduct.ProductDescription);

                    DeleteRequiredRecords(promptForDelete);
                }
            }
            // Catch any service fault exceptions that Microsoft Dynamics
CRM throws.
            catch
```

```
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>)
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }


        /// <summary>
        /// This method creates any entity records that this sample
requires.
        /// Create a unit group.
        /// Retrieve the default unit.
        /// Create few products.
        /// Create new discount list and discount.
        /// Create new price list and few price list items.
        /// Create an account record.
        /// </summary>
        public void CreateRequiredRecords()
        {
            // Create a unit group
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };

            _unitGroupId = _serviceProxy.Create(newUnitGroup);
            Console.WriteLine("Created {0}", newUnitGroup.Name);

            // Retrieve the default unit id that was automatically created
            // when we created the Unit Group
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression
                {
                    Conditions =
                        {
                            new ConditionExpression
                            {
                                AttributeName = "uomscheduleid",
                                Operator = ConditionOperator.Equal,
                                Values = { _unitGroupId }
                            }
                        }
                },
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };
```

```
            // Retrieve the unit.
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];

            _defaultUnitId = unit.UoMId.Value;

            Console.WriteLine("Retrieved {0}", unit.Name);

            // Create a few products
            Product newProduct1 = new Product
            {
                ProductNumber = "1",
                Name = "Example Product 1",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                    _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };

            _product1Id = _serviceProxy.Create(newProduct1);
            Console.WriteLine("Created {0}", newProduct1.Name);

            Product newProduct2 = new Product
            {
               ProductNumber = "2",
               Name = "Example Product 2",
               ProductStructure = new OptionSetValue(1),
               QuantityDecimal = 3,
               DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                   _unitGroupId),
               DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };

            _product2Id = _serviceProxy.Create(newProduct2);
            Console.WriteLine("Created {0}", newProduct2.Name);

            // Create a new discount list
            DiscountType newDiscountType = new DiscountType
            {
                Name = "Example Discount List",
                IsAmountType = false
            };

            _discountTypeId = _serviceProxy.Create(newDiscountType);
            Console.WriteLine("Created {0}", newDiscountType.Name);

            // Create a new discount
            Discount newDiscount = new Discount
            {
```

```
                DiscountTypeId = new
EntityReference(DiscountType.EntityLogicalName,
                    _discountTypeId),
                LowQuantity = 5,
                HighQuantity = 10,
                Percentage = 3
            };

            _discountId = _serviceProxy.Create(newDiscount);

            Console.WriteLine("Created new discount for the {0}.",
newDiscountType.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };

            _priceListId = _serviceProxy.Create(newPriceList);
            Console.WriteLine("Created {0}", newPriceList.Name);

            // Create a price list item for the first product and apply
volume discount
            ProductPriceLevel newPriceListItem1 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(20),
                DiscountTypeId = new
EntityReference(DiscountType.EntityLogicalName,
                    _discountTypeId)
            };

            _priceListItem1Id = _serviceProxy.Create(newPriceListItem1);
            Console.WriteLine(@"Created price list item for the {0} and
applied
                volume discount.", newProduct1.Name);

            // Create a price list item for the second product
            ProductPriceLevel newPriceListItem2 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(15)
            };
```

```
            _priceListItem2Id = _serviceProxy.Create(newPriceListItem2);
            Console.WriteLine("Created price list item for the {0}.",
newProduct1.Name);

            //Publish Product1
            SetStateRequest publishRequest1 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product1Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest1);

            //Publish Product2
            SetStateRequest publishRequest2 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product2Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest2);
            Console.WriteLine("Published both the products");

            // Create an account record for the opporutnity's potential
customerid
            Account newAccount = new Account
            {
                Name = "Example Account"
            };
            _accountId = _serviceProxy.Create(newAccount);

            Console.WriteLine("Created {0}", newAccount.Name);

            return;
        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user to
delete
        /// the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            bool deleteRecords = true;

            if (prompt)
            {
                Console.WriteLine("\nDo you want these entity records
deleted? (y/n)");
                String answer = Console.ReadLine();

                deleteRecords = (answer.StartsWith("y") ||
```

```
answer.StartsWith("Y"));
            }

            if (deleteRecords)
            {
                _serviceProxy.Delete("opportunityproduct",
_writeInProductId);
                _serviceProxy.Delete("opportunityproduct",
_catalogProductPriceOverrideId);
                _serviceProxy.Delete("opportunityproduct",
_catalogProductId);
                _serviceProxy.Delete("opportunity", _opportunityId);
                _serviceProxy.Delete("account", _accountId);
                _serviceProxy.Delete("productpricelevel",
_priceListItem1Id);
                _serviceProxy.Delete("productpricelevel",
_priceListItem2Id);
                _serviceProxy.Delete("pricelevel", _priceListId);
                _serviceProxy.Delete("product", _product1Id);
                _serviceProxy.Delete("product", _product2Id);
                _serviceProxy.Delete("discount", _discountId);
                _serviceProxy.Delete("discounttype", _discountTypeId);
                _serviceProxy.Delete("uomschedule", _unitGroupId);

                Console.WriteLine("Entity records have been deleted.");
            }
        }

        #endregion How To Sample Code

        #region Main
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                CreateOpportunity app = new CreateOpportunity();
                app.Run(config, true);
            }

            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
```

```
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe
                        = ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
```

```
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main
    }
}
```

See also

Opportunity Tables
Sample: Retrieve an Opportunity (Early Bound)

Sample: Retrieve an opportunity (early bound)

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Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to retrieve an opportunity and products related to the opportunity.

Example

C#

```
using System;
using System.ServiceModel;
using System.ServiceModel.Description;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// found in the SDK\bin folder.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;
```

```
namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// This Sample shows how to retrieve an opportunity with
    /// related opportunity products.
    /// </summary>
    public class RetrieveOpportunity
    {
        #region Class Level Members

        /// <summary>
        /// Stores the organization service proxy.
        /// </summary>
        OrganizationServiceProxy _serviceProxy;

        // Define the IDs needed for this sample.
        public Guid _unitGroupId;
        public Guid _defaultUnitId;
        public Guid _product1Id;
        public Guid _product2Id;
        public Guid _discountTypeId;
        public Guid _discountId;
        public Guid _priceListId;
        public Guid _priceListItem1Id;
        public Guid _priceListItem2Id;
        public Guid _accountId;
        public Guid _opportunityId;
        public Guid _opportunityProduct1Id;
        public Guid _opportunityProduct2Id;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// Create and configure the organization service proxy.
        /// Initiate method to create any data that this sample requires.
        /// Retrieve opportunity and opportunity products.
        /// Optionally delete any entity records that were created for this
sample.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptForDelete)
        {
            try
            {

                // Connect to the Organization service.
                // The using statement assures that the service proxy will
be properly disposed.
```

```
                using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,serverConfig.Credentials,
serverConfig.DeviceCredentials))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();


                    // Call the method to create any data that this sample
requires.
                    CreateRequiredRecords();

                    // Retrieve Opportunity record.
                    Opportunity checkOpportunity =
(Opportunity)_serviceProxy.Retrieve(
                        Opportunity.EntityLogicalName,
                        _opportunityId,
                        new ColumnSet("name"));

                    Console.WriteLine("Retrieved {0}",
checkOpportunity.Name);

                    // Retrieve the related opportunity products
                    QueryExpression opportunityProductsQuery = new
QueryExpression
                    {
                        EntityName = OpportunityProduct.EntityLogicalName,
                        ColumnSet = new ColumnSet("opportunityproductid",
"volumediscountamount"),
                        Criteria = new FilterExpression
                        {
                            Conditions =
                        {
                            new ConditionExpression
                            {
                                AttributeName = "opportunityid",
                                Operator = ConditionOperator.Equal,
                                Values = { _opportunityId }
                            }
                        }
                        }
                    };

                    DataCollection<Entity> opportunityProducts =
_serviceProxy.RetrieveMultiple(
                        opportunityProductsQuery).Entities;

                    foreach (Entity entity in opportunityProducts)
                    {
                        OpportunityProduct opportunityProduct =
(OpportunityProduct)entity;
                        Console.WriteLine("Retrieved Opportunity Product
{0}",
```

```
                            opportunityProduct.OpportunityProductId.Value);
                    }

                    DeleteRequiredRecords(promptForDelete);
                }
            }
            // Catch any service fault exceptions that Microsoft Dynamics
CRM throws.
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>)
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }


        /// <summary>
        /// This method creates any entity records that this sample
requires.
        /// Create a unit group.
        /// Retrieve the default unit.
        /// Create few products.
        /// Create new discount list and discount.
        /// Create new price list and few price list items.
        /// Create an account record.
        /// Create a new opportunity and few opportunity products.
        /// </summary>
        public void CreateRequiredRecords()
        {
            // Create a unit group
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };

            _unitGroupId = _serviceProxy.Create(newUnitGroup);
            Console.WriteLine("Created {0}", newUnitGroup.Name);

            // Retrieve the default unit id that was automatically created
            // when we created the Unit Group
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression
                {
                    Conditions =
                        {
                            new ConditionExpression
                            {
                                AttributeName = "uomscheduleid",
                                Operator = ConditionOperator.Equal,
```

```
                                Values = { _unitGroupId }
                            }
                        }
                },
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };

            // Retrieve the unit.
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];

            _defaultUnitId = unit.UoMId.Value;

            Console.WriteLine("Retrieved {0}", unit.Name);

            // Create a few products
            Product newProduct1 = new Product
            {
                ProductNumber = "1",
                Name = "Example Product 1",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                    _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };

            _product1Id = _serviceProxy.Create(newProduct1);
            Console.WriteLine("Created {0}", newProduct1.Name);

            Product newProduct2 = new Product
            {
               ProductNumber = "2",
               Name = "Example Product 2",
               ProductStructure = new OptionSetValue(1),
               QuantityDecimal = 3,
               DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                   _unitGroupId),
               DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };

            _product2Id = _serviceProxy.Create(newProduct2);
            Console.WriteLine("Created {0}", newProduct2.Name);

            // Create a new discount list
            DiscountType newDiscountType = new DiscountType
            {
```

```
                Name = "Example Discount List",
                IsAmountType = false
            };

            _discountTypeId = _serviceProxy.Create(newDiscountType);
            Console.WriteLine("Created {0}", newDiscountType.Name);

            // Create a new discount
            Discount newDiscount = new Discount
            {
                DiscountTypeId = new
EntityReference(DiscountType.EntityLogicalName,
                    _discountTypeId),
                LowQuantity = 5,
                HighQuantity = 10,
                Percentage = 3
            };

            _discountId = _serviceProxy.Create(newDiscount);

            Console.WriteLine("Created new discount for the {0}.",
newDiscountType.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };

            _priceListId = _serviceProxy.Create(newPriceList);
            Console.WriteLine("Created {0}", newPriceList.Name);

            // Create a price list item for the first product and apply
volume discount
            ProductPriceLevel newPriceListItem1 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(20),
                DiscountTypeId = new
EntityReference(DiscountType.EntityLogicalName,
                    _discountTypeId)
            };

            _priceListItem1Id = _serviceProxy.Create(newPriceListItem1);
            Console.WriteLine(@"Created price list item for the {0} and
applied
                volume discount.", newProduct1.Name);

            // Create a price list item for the second product
            ProductPriceLevel newPriceListItem2 = new ProductPriceLevel
```

```
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(20)
            };

            _priceListItem2Id = _serviceProxy.Create(newPriceListItem2);
            Console.WriteLine("Created price list item for the {0}.",
newProduct1.Name);

            //Publish Product1
            SetStateRequest publishRequest1 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product1Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest1);

            //Publish Product2
            SetStateRequest publishRequest2 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product2Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest2);
            Console.WriteLine("Published both the products");

            // Create an account record for the opporutnity's potential
customerid
            Account newAccount = new Account
            {
                Name = "Example Account"
            };
            _accountId = _serviceProxy.Create(newAccount);

            Console.WriteLine("Created {0}", newAccount.Name);

            // Create a new opportunity
            Opportunity newOpportunity = new Opportunity
            {
                Name = "Example Opportunity",
                CustomerId = new EntityReference(Account.EntityLogicalName,
                    _accountId),
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                    _priceListId)
            };
```

```
            _opportunityId = _serviceProxy.Create(newOpportunity);
            Console.WriteLine("Created {0}.", newOpportunity.Name);

            // Create some opportunity products
            OpportunityProduct newOpportunityProduct1 = new
OpportunityProduct
            {
                OpportunityId = new
EntityReference(Opportunity.EntityLogicalName,
                    _opportunityId),
                ProductId = new EntityReference(Product.EntityLogicalName,
                    _product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Quantity = 8
            };

            _opportunityProduct1Id =
_serviceProxy.Create(newOpportunityProduct1);

            OpportunityProduct newOpportunityProduct2 = new
OpportunityProduct
            {
                OpportunityId = new
EntityReference(Opportunity.EntityLogicalName,
                    _opportunityId),
                ProductId = new EntityReference(Product.EntityLogicalName,
                    _product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Quantity = 1
            };

            _opportunityProduct2Id = _serviceProxy.Create(
                newOpportunityProduct2);

            Console.WriteLine("Created few opportunity products.");

            return;
        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user to
delete
        /// the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            bool deleteRecords = true;

            if (prompt)
            {
                Console.WriteLine("\nDo you want these entity records
```

```
deleted? (y/n)");
                String answer = Console.ReadLine();

                deleteRecords = (answer.StartsWith("y") ||
answer.StartsWith("Y"));
            }

            if (deleteRecords)
            {
                _serviceProxy.Delete("opportunityproduct",
_opportunityProduct1Id);
                _serviceProxy.Delete("opportunityproduct",
_opportunityProduct2Id);
                _serviceProxy.Delete("opportunity", _opportunityId);
                _serviceProxy.Delete("account", _accountId);
                _serviceProxy.Delete("productpricelevel",
_priceListItem1Id);
                _serviceProxy.Delete("productpricelevel",
_priceListItem2Id);
                _serviceProxy.Delete("pricelevel", _priceListId);
                _serviceProxy.Delete("product", _product1Id);
                _serviceProxy.Delete("product", _product2Id);
                _serviceProxy.Delete("discount", _discountId);
                _serviceProxy.Delete("discounttype", _discountTypeId);
                _serviceProxy.Delete("uomschedule", _unitGroupId);

                Console.WriteLine("Entity records have been deleted.");
            }
        }

        #endregion How To Sample Code

        #region Main
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                RetrieveOpportunity app = new RetrieveOpportunity();
                app.Run(config, true);
            }

            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
```

```
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe
                        = ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.
```

```
            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main
    }
}
```

See also

Opportunity Tables
Sample: Convert an Opportunity to a Quote (Early Bound)

Sample: Convert an opportunity to a quote (early bound)

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the business management samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to convert an opportunity that contains products from the product catalog and a write-in product to a quote. It also illustrates how to overwrite a price of a product from the product catalog.

Example

C#

```
using System;
using System.ServiceModel;
using System.ServiceModel.Description;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// found in the SDK\bin folder.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
```

```
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;

namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// This sample shows how to convert an opporutnity to a quote.
    /// </summary>
    public class ConvertOpportunityToQuote
    {
        #region Class Level Members

        /// <summary>
        /// Stores the organization service proxy.
        /// </summary>
        private OrganizationServiceProxy _serviceProxy;

        // Define the IDs needed for this sample.
        public Guid _unitGroupId;
        public Guid _product1Id;
        public Guid _product2Id;
        public Guid _priceListId;
        public Guid _priceListItem1Id;
        public Guid _priceListItem2Id;
        public Guid _accountId;
        public Guid _opportunityId;
        public Guid _opportunityProduct1Id;
        public Guid _opportunityProduct2Id;
        public Guid _writeInProductId;
        public Guid _quoteId;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// Create and configure the organization service proxy.
        /// Initiate creating all entity records that this sample requires.
        /// Convert an opportunity to quote
        /// Optionally delete any entity records that were created for this
sample.
        /// </summary>
                /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptForDelete)
        {
            try
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
be properly disposed.
                using (_serviceProxy = new
```

```
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,

serverConfig.Credentials, serverConfig.DeviceCredentials))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    // Call the method to create any data that this sample
requires.
                    CreateRequiredRecords();

                    // Convert an opportunity to quote.
                    GenerateQuoteFromOpportunityRequest quoteRequest = new
GenerateQuoteFromOpportunityRequest()
                    {
                        // Columns that will be transferred
                        ColumnSet = new ColumnSet("name", "customerid"),
                        OpportunityId = _opportunityId
                    };

                    GenerateQuoteFromOpportunityResponse quoteResponse =

(GenerateQuoteFromOpportunityResponse)_serviceProxy.Execute(quoteRequest);

                    _quoteId = quoteResponse.Entity.Id;
                    Console.WriteLine("Created the quote from an
opportunity.");

                    DeleteRequiredRecords(promptForDelete);
                }
            }
            catch
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }

        /// <summary>
        /// This method creates any entity records that this sample
requires.
        /// Create a unit group, few products, price list and price list
items.
        /// Create an account record.
        /// Create few opportunities, opportunity products and a write-in
product.
        /// </summary>
        public void CreateRequiredRecords()
        {
            // Create a unit group.
            UoMSchedule newUnitGroup = new UoMSchedule
            {
```

```
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };

            _unitGroupId = _serviceProxy.Create(newUnitGroup);

            Console.WriteLine("Created {0}", newUnitGroup.Name);

            // retrieve the unit id.
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression(),
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };
            unitQuery.Criteria.AddCondition("uomscheduleid",
ConditionOperator.Equal, _unitGroupId);

            // Retrieve the unit.
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];

            Console.WriteLine("Retrieved {0}", unit.Name);


            // Create a few products
            Product newProduct1 = new Product
            {
                ProductNumber = "1",
                Name = "Example Product 1",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName, _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
unit.Id)
            };
           _product1Id = _serviceProxy.Create(newProduct1);

           Console.WriteLine("Created {0}", newProduct1.Name);

            Product newProduct2 = new Product
            {
                ProductNumber = "2",
                Name = "Example Product 2",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName, _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
```

```
unit.Id)
            };
            _product2Id = _serviceProxy.Create(newProduct2);

            Console.WriteLine("Created {0}", newProduct2.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };
            _priceListId = _serviceProxy.Create(newPriceList);

            Console.WriteLine("Created {0}", newPriceList.Name);

            // Create a price list items for the products
            ProductPriceLevel newPriceListItem1 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
                Amount = new Money(20)
            };
            _priceListItem1Id = _serviceProxy.Create(newPriceListItem1);

            Console.WriteLine("Created price list for {0}",
newProduct1.Name);

            ProductPriceLevel newPriceListItem2 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
                Amount = new Money(20)
            };
            _priceListItem2Id = _serviceProxy.Create(newPriceListItem2);

            Console.WriteLine("Created price list for {0}",
newProduct2.Name);

            //Publish Product1
            SetStateRequest publishRequest1 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product1Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest1);

            //Publish Product2
```

```
            SetStateRequest publishRequest2 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product2Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest2);
            Console.WriteLine("Published both the products");


            // Create an account record for the opportunity's potential
customerid
            Account newAccount = new Account
            {
                Name = "Example Account"
            };
            _accountId = _serviceProxy.Create(newAccount);

            Console.WriteLine("Created {0}", newAccount.Name);

            // Create a new opportunity
            Opportunity newOpportunity = new Opportunity
            {
                Name = "Example Opportunity",
                CustomerId = new EntityReference(Account.EntityLogicalName,
_accountId),
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                FreightAmount = new Money(10.00m)
            };
            _opportunityId = _serviceProxy.Create(newOpportunity);

            Console.WriteLine("Created {0}", newOpportunity.Name);

            // Create an opportunity product
            OpportunityProduct newOpportunityProduct1 = new
OpportunityProduct
            {
                OpportunityId = new
EntityReference(Opportunity.EntityLogicalName, _opportunityId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
                Quantity = 3,
                Tax = new Money(4.80m)
            };
            _opportunityProduct1Id =
_serviceProxy.Create(newOpportunityProduct1);

            Console.WriteLine("Created opportunity product for {0} and {1}",
newOpportunity.Name, newProduct1.Name);

            // Create a catalog product and override the price per unit
            OpportunityProduct newOpportunityProduct2 = new
```

```
OpportunityProduct
            {
                OpportunityId = new
EntityReference(Opportunity.EntityLogicalName, _opportunityId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
                Quantity = 1,
                IsPriceOverridden = true,
                PricePerUnit = new Money(12),
                Tax = new Money(0.96m)
            };
            _opportunityProduct2Id =
_serviceProxy.Create(newOpportunityProduct2);

            Console.WriteLine("Created opportunity product for {0} and {1}",
newOpportunity.Name, newProduct2.Name);

            // Create a write-in product with a manual discount
            OpportunityProduct newWriteInProduct = new OpportunityProduct
            {
                OpportunityId = new
EntityReference(Opportunity.EntityLogicalName, _opportunityId),
                // set this attribute to make it a write-in product
                IsProductOverridden = true,
                ProductDescription = "Example Write-in Product",
                PricePerUnit = new Money(20.00m),
                Quantity = 5,
                ManualDiscountAmount = new Money(10.50m),
                Tax = new Money(7.16m)
            };
            _writeInProductId = _serviceProxy.Create(newWriteInProduct);

            Console.WriteLine("Created {0}",
newWriteInProduct.ProductDescription);

            return;
        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user to
delete the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            bool deleteRecords = true;

            if (prompt)
            {
                Console.WriteLine("\nDo you want these entity records
deleted? (y/n)");
                String answer = Console.ReadLine();

                deleteRecords = (answer.StartsWith("y") ||
```

```
answer.StartsWith("Y"));
            }

            if (deleteRecords)
            {
                _serviceProxy.Delete(Quote.EntityLogicalName, _quoteId);
                _serviceProxy.Delete(OpportunityProduct.EntityLogicalName,
_writeInProductId);
                _serviceProxy.Delete(OpportunityProduct.EntityLogicalName,
_opportunityProduct1Id);
                _serviceProxy.Delete(OpportunityProduct.EntityLogicalName,
_opportunityProduct2Id);
                _serviceProxy.Delete(Opportunity.EntityLogicalName,
_opportunityId);
                _serviceProxy.Delete(Account.EntityLogicalName, _accountId);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem1Id);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem2Id);
                _serviceProxy.Delete(Product.EntityLogicalName,
_product1Id);
                _serviceProxy.Delete(Product.EntityLogicalName,
_product2Id);
                _serviceProxy.Delete(PriceLevel.EntityLogicalName,
_priceListId);
                _serviceProxy.Delete(UoMSchedule.EntityLogicalName,
_unitGroupId);

                Console.WriteLine("Entity records have been deleted.");
            }
        }

        #endregion How To Sample Code

        #region Main
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                ConvertOpportunityToQuote  app = new
ConvertOpportunityToQuote();
                app.Run(config, true);
            }
```

```
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
```

```
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }

        }
        #endregion Main
    }
}
```

See also

Opportunity Tables

GenerateQuoteFromOpportunityRequest

Quote, order, and invoice tables

Article • 03/03/2023

Dynamics 365 Sales supports robust *quote*, *sales order (order)*, and *invoice* building. You can build a quote by selecting products directly from the product catalog, specifying the price list (such as wholesale or retail), and entering the requested number of units. If you have permission, you can also apply discounts. Multiple pricing models are supported, such as wholesale versus retail, and discounting can be done by line item based on volume or manual override. In addition, overall discounts can be applied to the whole quote.

A quote is a formal offer for products or services proposed at specific prices and related payment terms that is sent to a prospective customer. You can create a quote, save it as a draft, and specify whether it is active (presented to the customer) or closed (completed, either as an order or not). A quote can have a due date (when it was promised to the customer), effective dates (when it must be accepted or rejected by), and the requested delivery dates. In addition, a quote can contain many "ship to" addresses (by line item) or a "will call" setting for items to be picked up by the customer.

If a quote is created from an opportunity, Dynamics 365 Sales will use the products associated with the opportunity as the basis for the draft. When a quote is converted to an order, the user can keep the opportunity open or close it. If the user closes it, the final revenue amount is recorded.

A quote can be associated with the following tables:

- One or more products and one price list
- One or more competitors
- An opportunity
- A customer
- One or more notes and attachments
- One or more customer addresses

  The `quote detail (quote product)` entity represents a line item in a quote. Each quote can have multiple quote detail (quote product) records.

  The `quote close activity` entity represents an activity that is generated when a quote is closed.

A sales order (entity name: order) is a quote that has been accepted. When the order is fulfilled, you close the order and mark the status as fulfilled. More information: Sample: Fulfill a sales order

> **Note**
>
> You can't set the status of multiple orders to fulfilled at one go.

An invoice is an order that has been billed.

See Also

Quote Table
QuoteDetail Table
QuoteClose Table
SalesOrder Table
SalesOrderDetail Table
OrderClose Table
Invoice Table
InvoiceDetail Table
Sample: Set Negative Prices in Opportunities, Quotes and Sales Orders
Sample: Process Quotes, Sales Orders and Invoices
Sample: Fulfill a Sales Order
Opportunity Tables
Sales Tables
Set default price level for opportunity, quote, order, invoice

Sample: Set negative prices in opportunities, quotes, and sales orders

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the complete sample here Business management samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to set negative prices in opportunities, quotes, and sales orders.

Example

C#

```
using System;
using System.Collections.Generic;
using System.ServiceModel;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// located in the SDK\bin folder of the SDK download.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;
```

```
namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    ///  Show how to set negative values for amount and number attributes in
    ///  opportunities, quotes, sales orders.
    /// </summary>
    /// <remarks>
    /// At run-time, you will be given the option to delete all the
    /// database records created by this program.</remarks>
    public class WorkingWithNegativePrices
    {
        #region Class Level Members

        private Guid _salesManagerId;
        private Guid _unitGroupId;
        private Guid _defaultUnitId;
        private Guid _product1Id;
        private Guid _product2Id;
        private Guid _priceListId;
        private Guid _priceListItem1Id;
        private Guid _priceListItem2Id;
        private Guid _catalogProductId;
        private Guid _quoteId;
        private Guid _quoteDetailId;
        private Guid _orderId;
        private Guid _orderDetailId;
        private Guid _opportunityId;
        private Guid _accountId;
        private List<Guid> _salesRepresentativeIds = new List<Guid>();
        private OrganizationServiceProxy _serviceProxy;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// This method first connects to the Organization service.
Afterwards, an
        /// opportunity is created to demonstrate a negative estimated
value. This is
        /// followed by the creation of a quote with a negative product
quantity.
        /// Finally, a sales order with a negative product price is shown.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptforDelete)
        {
            try
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
```

```
be properly disposed.
                using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,serverConfig.Credentials,
serverConfig.DeviceCredentials))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    CreateRequiredRecords();

                    #region Opportunity with negative estimated value

                    // Create a new opportunity with user-specified negative
                    // estimated value.
                    Opportunity opportunity = new Opportunity
                    {
                        Name = "Example Opportunity",
                        CustomerId = new
EntityReference(Account.EntityLogicalName,
                            _accountId),
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId),
                        IsRevenueSystemCalculated = false,
                        EstimatedValue = new Money(-400.00m),
                        FreightAmount = new Money(10.00m),
                        ActualValue = new Money(-390.00m),
                        OwnerId = new EntityReference
                        {
                            Id = _salesRepresentativeIds[0],
                            LogicalName = SystemUser.EntityLogicalName
                        }
                    };
                    _opportunityId = _serviceProxy.Create(opportunity);
                    opportunity.Id = _opportunityId;

                    // Create a catalog product for the opportunity.
                    OpportunityProduct catalogProduct = new
OpportunityProduct
                    {
                        OpportunityId = opportunity.ToEntityReference(),
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _product1Id),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
                            _defaultUnitId),
                        Quantity = 8,
                        Tax = new Money(12.42m),
                    };
                    _catalogProductId =
_serviceProxy.Create(catalogProduct);

                    Console.WriteLine("Created opportunity with negative
```

```
estimated value.");

                    #endregion

                    #region Quote with negative quantity

                    // Create the quote.
                    Quote quote = new Quote()
                    {
                        CustomerId = new
EntityReference(Account.EntityLogicalName,
                            _accountId),
                        Name = "Sample Quote",
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId)
                    };
                    _quoteId = _serviceProxy.Create(quote);
                    quote.Id = _quoteId;

                    // Set the quote's product quantity to a negative value.
                    QuoteDetail quoteDetail = new QuoteDetail()
                    {
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _product1Id),
                        Quantity = -4,
                        QuoteId = quote.ToEntityReference(),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
                            _defaultUnitId)
                    };
                    _quoteDetailId = _serviceProxy.Create(quoteDetail);

                    Console.WriteLine("Created quote with negative
quantity.");

                    #endregion

                    #region Sales Order with negative price

                    // Create the sales order.
                    SalesOrder order = new SalesOrder()
                    {
                        Name = "Faux Order",
                        DateFulfilled = new DateTime(2010, 8, 1),
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId),
                        CustomerId = new
EntityReference(Account.EntityLogicalName,
                            _accountId),
                        FreightAmount = new Money(20.0M)
                    };
                    _orderId = _serviceProxy.Create(order);
                    order.Id = _orderId;
```

```
                    // Add the product to the order with the price overriden
with a
                    // negative value.
                    SalesOrderDetail orderDetail = new SalesOrderDetail()
                    {
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _product1Id),
                        Quantity = 4,
                        SalesOrderId = order.ToEntityReference(),
                        IsPriceOverridden = true,
                        PricePerUnit = new Money(-40.0M),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
                            _defaultUnitId)
                    };
                    _orderDetailId = _serviceProxy.Create(orderDetail);

                    Console.WriteLine("Created order with negative price per
unit.");

                    #endregion

                    DeleteRequiredRecords(promptforDelete);
                }
            }

            // Catch any service fault exceptions that Microsoft Dynamics
CRM throws.
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>)
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }

        /// <summary>
        /// Creates any entity records that this sample requires.
        /// </summary>
        public void CreateRequiredRecords()
        {
           #region Create or Retrieve the necessary system users

            // Retrieve the ldapPath
            String ldapPath = String.Empty;
            // Retrieve the sales team - 1 sales manager and 2 sales
representatives.
            _salesManagerId =
                SystemUserProvider.RetrieveSalesManager(_serviceProxy, ref
ldapPath);
            _salesRepresentativeIds =
                SystemUserProvider.RetrieveSalespersons(_serviceProxy, ref
ldapPath);
```

```
            #endregion

            #region Create records to support Opportunity records
            // Create a unit group
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };
            _unitGroupId = _serviceProxy.Create(newUnitGroup);

            // Retrieve the default unit id that was automatically created
            // when we created the Unit Group
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression
                {
                    Conditions =
                        {
                            new ConditionExpression
                            {
                                AttributeName = "uomscheduleid",
                                Operator = ConditionOperator.Equal,
                                Values = { _unitGroupId }
                            }
                        }
                },
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };

            // Retrieve the unit.
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];
            _defaultUnitId = unit.UoMId.Value;

            // Create a few products
            Product newProduct1 = new Product
            {
                ProductNumber = "1",
                Name = "Example Product 1",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                    _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };
```

```
            _product1Id = _serviceProxy.Create(newProduct1);
            Console.WriteLine("Created {0}", newProduct1.Name);

            Product newProduct2 = new Product
            {
                ProductNumber = "2",
                Name = "Example Product 2",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 3,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName,
                    _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };
            _product2Id = _serviceProxy.Create(newProduct2);
            Console.WriteLine("Created {0}", newProduct2.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };
            _priceListId = _serviceProxy.Create(newPriceList);

            // Create a price list item for the first product and apply
volume discount
            ProductPriceLevel newPriceListItem1 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product1Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(20)
            };
            _priceListItem1Id = _serviceProxy.Create(newPriceListItem1);

            // Create a price list item for the second product
            ProductPriceLevel newPriceListItem2 = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_product2Id),
                UoMId = new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(15)
            };
            _priceListItem2Id = _serviceProxy.Create(newPriceListItem2);

            //Publish Product1
            SetStateRequest publishRequest1 = new SetStateRequest
            {
```

```
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product1Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest1);

            //Publish Product2
            SetStateRequest publishRequest2 = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _product2Id),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest2);
            Console.WriteLine("Published both the products");

            // Create an account record for the opportunity's potential
customerid
            Account newAccount = new Account
            {
                Name = "Margie's Travel",
                Address1_PostalCode = "99999"
            };
            _accountId = (_serviceProxy.Create(newAccount));

            #endregion Create records to support Opportunity records

        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user
        /// to delete the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            // Two of the contracts, their associated account and the
contract template
            // records that were created and used in this sample will
continue to exist
            // on your system because contracts that have been invoiced
cannot be deleted
            // in Microsoft Dynamics CRM. They can only be put on hold or
canceled.

            bool toBeDeleted = true;

            if (prompt)
            {
                // Ask the user if the created entities should be deleted.
                Console.Write("\nDo you want these entity records deleted?
(y/n) [y]: ");
                String answer = Console.ReadLine();
```

```
                if (answer.StartsWith("y") ||
                    answer.StartsWith("Y") ||
                    answer == String.Empty)
                {
                    toBeDeleted = true;
                }
                else
                {
                    toBeDeleted = false;
                }
            }

            if (toBeDeleted)
            {
                _serviceProxy.Delete(SalesOrderDetail.EntityLogicalName,
_orderDetailId);
                _serviceProxy.Delete(SalesOrder.EntityLogicalName,
_orderId);
                _serviceProxy.Delete(QuoteDetail.EntityLogicalName,
_quoteDetailId);
                _serviceProxy.Delete(Quote.EntityLogicalName, _quoteId);
                _serviceProxy.Delete(Opportunity.EntityLogicalName,
_opportunityId);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem1Id);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem2Id);
                _serviceProxy.Delete(PriceLevel.EntityLogicalName,
_priceListId);
                _serviceProxy.Delete(Product.EntityLogicalName,
_product1Id);
                _serviceProxy.Delete(Product.EntityLogicalName,
_product2Id);
                _serviceProxy.Delete(UoMSchedule.EntityLogicalName,
_unitGroupId);
                _serviceProxy.Delete(Account.EntityLogicalName, _accountId);
                Console.WriteLine("Entity record(s) have been deleted.");
            }
        }

        #endregion How To Sample Code

        #region Main method

        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
```

```
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                WorkingWithNegativePrices app = new
WorkingWithNegativePrices();
                app.Run(config, true);
            }
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
```

```
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main method
    }
}
```

See also

Sales Tables (Lead, Opportunity, Competitor, Quote, Order, Invoice)

Quote, Order and Invoice Tables

PriceLevel Table

Opportunity Table

Sample: Set Negative Prices in Opportunities, Quotes and Sales Orders

Sample: Process quotes, sales orders and invoices

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the complete sample here Business management samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to convert an opportunity that is won to a quote, then convert a quote to a sales order, and then convert a sales order to an invoice. It also shows how to lock and unlock the sales order and the invoice prices.

Example

C#

```
using System;
using System.ServiceModel;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// located in the SDK\bin folder of the SDK download.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Messages;
```

```
using Microsoft.Xrm.Sdk.Query;

namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// Demonstrates how to convert a "won" opportunity to a quote and then
convert a quote
    /// to a sales order, and a sales order to an invoice. Also demonstrates
    /// locking/unlocking prices on both sales orders and invoices.
</summary>
    /// <remarks>
    /// At run-time, you will be given the option to delete all the
    /// database records created by this program.</remarks>
    public class ProcessingQuotesAndSalesOrders
    {
        #region Class Level Members

        private Guid _opportunityId;
        private Guid _loseOpportunityId;
        private Guid _unitGroupId;
        private Guid _defaultUnitId;
        private Guid _productId;
        private Guid _priceListId;
        private Guid _priceListItemId;
        private Guid _accountId;
        private Guid _quoteId;
        private Guid _closeQuoteId;
        private Guid _quoteDetailId;
        private Guid _salesOrderId;
        private Guid _closeSalesOrderId;
        private Guid _invoiceId;

        private OrganizationServiceProxy _serviceProxy;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// This method first connects to the Organization service.
Afterwards, a
        /// quote is created. This quote is then converted to an order, and
the pricing
        /// is unlocked and relocked. This is followed by the order being
converted
        /// to an invoice, and the pricing is locked then unlocked.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptforDelete)
        {
            try
```

```
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
be properly disposed.
                using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,serverConfig.Credentials,
serverConfig.DeviceCredentials))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    CreateRequiredRecords();

                    #region Create Opportunities

                    // Create an opportunity
                    var crmOpportunity = new Opportunity
                    {
                        CustomerId = new
EntityReference(Account.EntityLogicalName, _accountId),
                        Name = "Sample",
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId)
                    };
                    _opportunityId = _serviceProxy.Create(crmOpportunity);

                    crmOpportunity = new Opportunity
                    {
                        CustomerId = new
EntityReference(Account.EntityLogicalName, _accountId),
                        Name = "Another Sample",
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName,
                            _priceListId)
                    };
                    _loseOpportunityId =
_serviceProxy.Create(crmOpportunity);

                    Console.WriteLine("Opportunities created.");

                    #endregion

                    #region Win Opportunity

                    // Close the opportunity as won
                    var winOppRequest = new WinOpportunityRequest
                    {
                        OpportunityClose = new OpportunityClose
                        {
                            OpportunityId = new EntityReference
                                (Opportunity.EntityLogicalName,
_opportunityId)
```

```
                        },
                        Status = new
OptionSetValue((int)opportunity_statuscode.Won)
                    };

                    _serviceProxy.Execute(winOppRequest);

                    Console.WriteLine("Opportunity closed as Won.");

                    #endregion

                    #region Lose Opportunity
                    var loseOppRequest = new LoseOpportunityRequest
                    {
                        OpportunityClose = new OpportunityClose
                        {
                            OpportunityId = new EntityReference
                                (Opportunity.EntityLogicalName,
_loseOpportunityId)
                        },
                        Status = new
OptionSetValue((int)opportunity_statuscode.Canceled)
                    };

                    _serviceProxy.Execute(loseOppRequest);

                    Console.WriteLine("Opportunity closed as Lost.");

                    #endregion

                    #region Convert Opportunity to a Quote

                    // Convert the opportunity to a quote
                    var genQuoteFromOppRequest = new
GenerateQuoteFromOpportunityRequest
                    {
                        OpportunityId = _opportunityId,
                        ColumnSet = new ColumnSet("quoteid", "name")
                    };

                    var genQuoteFromOppResponse =
(GenerateQuoteFromOpportunityResponse)
                        _serviceProxy.Execute(genQuoteFromOppRequest);

                    Quote quote =
genQuoteFromOppResponse.Entity.ToEntity<Quote>();
                    _quoteId = quote.Id;

                    Console.WriteLine("Quote generated from the
Opportunity.");

                    #endregion

                    #region Close Quote
```

```
                    // convert the opportunity to a quote
                    genQuoteFromOppRequest = new
GenerateQuoteFromOpportunityRequest
                    {
                        OpportunityId = _opportunityId,
                        ColumnSet = new ColumnSet("quoteid", "name")
                    };
                    genQuoteFromOppResponse =
(GenerateQuoteFromOpportunityResponse)
                        _serviceProxy.Execute(genQuoteFromOppRequest);

                    Quote closeQuote =
genQuoteFromOppResponse.Entity.ToEntity<Quote>();
                    _closeQuoteId = closeQuote.Id;

                    // Activate the quote
                    SetStateRequest activateQuote = new SetStateRequest()
                    {
                        EntityMoniker = closeQuote.ToEntityReference(),
                        State = new OptionSetValue((int)QuoteState.Active),
                        Status = new
OptionSetValue((int)quote_statuscode.InProgress)
                    };
                    _serviceProxy.Execute(activateQuote);

                    // Close the quote
                    CloseQuoteRequest closeQuoteRequest = new
CloseQuoteRequest()
                    {
                        QuoteClose = new QuoteClose()
                        {
                            QuoteId = closeQuote.ToEntityReference(),
                            Subject = "Quote Close " +
DateTime.Now.ToString()
                        },
                        Status = new OptionSetValue(-1)
                    };
                    _serviceProxy.Execute(closeQuoteRequest);

                    Console.WriteLine("Quote Closed");

                    #endregion

                    #region Create Quote's Product

                    // Set the quote's product
                    QuoteDetail quoteDetail = new QuoteDetail()
                    {
                        ProductId = new
EntityReference(Product.EntityLogicalName,
                            _productId),
                        Quantity = 1,
                        QuoteId = quote.ToEntityReference(),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
                            _defaultUnitId)
```

```
                    };
                    _quoteDetailId = _serviceProxy.Create(quoteDetail);

                    Console.WriteLine("Quote Product created.");

                    // Activate the quote
                    activateQuote = new SetStateRequest()
                    {
                        EntityMoniker = quote.ToEntityReference(),
                        State = new OptionSetValue((int)QuoteState.Active),
                        Status = new
OptionSetValue((int)quote_statuscode.InProgress)
                    };
                    _serviceProxy.Execute(activateQuote);

                    Console.WriteLine("Quote activated.");


                    // Mark the quote as won
                    // Note: this is necessary in order to convert a quote
into a
                    // SalesOrder.
                    WinQuoteRequest winQuoteRequest = new WinQuoteRequest()
                    {
                        QuoteClose = new QuoteClose()
                        {
                            Subject = "Quote Close" +
DateTime.Now.ToString(),
                            QuoteId = quote.ToEntityReference()
                        },
                        Status = new OptionSetValue(-1)
                    };
                    _serviceProxy.Execute(winQuoteRequest);

                    Console.WriteLine("Quote won.");

                    #endregion

                    #region Convert Quote to SalesOrder


                    // Define columns to be retrieved after creating the
order
                    ColumnSet salesOrderColumns =
                        new ColumnSet("salesorderid", "totalamount");

                    // Convert the quote to a sales order
                    ConvertQuoteToSalesOrderRequest convertQuoteRequest =
                        new ConvertQuoteToSalesOrderRequest()
                        {
                            QuoteId = _quoteId,
                            ColumnSet = salesOrderColumns
                        };
                    ConvertQuoteToSalesOrderResponse convertQuoteResponse =
```

```
(ConvertQuoteToSalesOrderResponse)_serviceProxy.Execute(convertQuoteRequest)
;
                    SalesOrder salesOrder =
(SalesOrder)convertQuoteResponse.Entity;
                    _salesOrderId = salesOrder.Id;

                    Console.WriteLine("Converted Quote to SalesOrder.");

                    #endregion

                    #region Cancel Sales Order


                    // Define columns to be retrieved after creating the
order
                    salesOrderColumns = new ColumnSet("salesorderid",
"totalamount");

                    // Convert the quote to a sales order
                    convertQuoteRequest =
                        new ConvertQuoteToSalesOrderRequest()
                        {
                            QuoteId = _quoteId,
                            ColumnSet = salesOrderColumns
                        };
                    convertQuoteResponse =

(ConvertQuoteToSalesOrderResponse)_serviceProxy.Execute(convertQuoteRequest)
;
                    SalesOrder closeSalesOrder =
(SalesOrder)convertQuoteResponse.Entity;
                    _closeSalesOrderId = closeSalesOrder.Id;

                    CancelSalesOrderRequest cancelRequest = new
CancelSalesOrderRequest()
                    {
                        OrderClose = new OrderClose()
                        {
                            SalesOrderId =
closeSalesOrder.ToEntityReference(),
                            Subject = "Close Sales Order " + DateTime.Now
                        },
                        Status = new OptionSetValue(-1)
                    };
                    _serviceProxy.Execute(cancelRequest);

                    Console.WriteLine("Canceled sales order");

                    #endregion

                    #region Lock pricing on SalesOrder

                    // Note: after converting a won quote to an order, the
pricing of
                    // the order is locked by default.
```

```
                    // Retrieve current price list
                    ProductPriceLevel priceListItem =
                        (ProductPriceLevel)_serviceProxy.Retrieve(
                            ProductPriceLevel.EntityLogicalName,
                            _priceListItemId,
                            new ColumnSet("productpricelevelid", "amount")
                        );

                    Console.WriteLine("Current price list retrieved.");
                    Console.WriteLine();

                    Console.WriteLine("Details before update:");
                    Console.WriteLine("----------------");
                    Console.WriteLine("Current order total: {0}",
                        salesOrder.TotalAmount.Value);
                    Console.WriteLine("Current price per item: {0}",
                        priceListItem.Amount.Value);
                    Console.WriteLine("</End of Listing>");
                    Console.WriteLine();

                    // Update the price list
                    priceListItem.Amount = new Money(30.0M);

                    UpdateRequest updatePriceListItem = new UpdateRequest()
                    {
                        Target = priceListItem,
                    };
                    _serviceProxy.Execute(updatePriceListItem);

                    Console.WriteLine("Price list updated.");

                    // Retrieve the order
                    SalesOrder updatedSalesOrder =
(SalesOrder)_serviceProxy.Retrieve(
                            SalesOrder.EntityLogicalName,
                            _salesOrderId,
                            new ColumnSet("salesorderid", "totalamount")
                        );

                    Console.WriteLine("Updated order retrieved.");
                    Console.WriteLine();

                    Console.WriteLine("Details after update:");
                    Console.WriteLine("----------------");
                    Console.WriteLine("Current order total: {0}",
                        updatedSalesOrder.TotalAmount.Value);
                    Console.WriteLine("Current price per item: {0}",
                        priceListItem.Amount.Value);
                    Console.WriteLine("</End of Listing>");
                    Console.WriteLine();

                    // Unlock the order pricing
                    UnlockSalesOrderPricingRequest unlockOrderRequest =
```

```
                    new UnlockSalesOrderPricingRequest()
                    {
                        SalesOrderId = _salesOrderId
                    };
                _serviceProxy.Execute(unlockOrderRequest);

                Console.WriteLine("Order pricing unlocked.");

                // Retrieve the order
                updatedSalesOrder = (SalesOrder)_serviceProxy.Retrieve(
                        SalesOrder.EntityLogicalName,
                        _salesOrderId,
                        new ColumnSet("salesorderid", "totalamount")
                    );

                Console.WriteLine("Updated order retrieved.");
                Console.WriteLine();

                Console.WriteLine("Details after update and unlock:");
                Console.WriteLine("----------------");
                Console.WriteLine("Current order total: {0}",
                    updatedSalesOrder.TotalAmount.Value);
                Console.WriteLine("Current price per item: {0}",
                    priceListItem.Amount.Value);
                Console.WriteLine("</End of Listing>");
                Console.WriteLine();

                // Relock the order pricing
                LockSalesOrderPricingRequest lockOrderRequest =
                    new LockSalesOrderPricingRequest()
                    {
                        SalesOrderId = _salesOrderId
                    };
                _serviceProxy.Execute(lockOrderRequest);


                Console.WriteLine("Order pricing relocked.");

                #endregion

                #region Convert SalesOrder to Invoice

                // Define columns to be retrieved after creating the
invoice
                ColumnSet invoiceColumns =
                    new ColumnSet("invoiceid", "totalamount");

                // Convert the order to an invoice
                ConvertSalesOrderToInvoiceRequest convertOrderRequest =
                    new ConvertSalesOrderToInvoiceRequest()
                    {
                        SalesOrderId = _salesOrderId,
                        ColumnSet = invoiceColumns
                    };
                ConvertSalesOrderToInvoiceResponse convertOrderResponse
```

```
=

(ConvertSalesOrderToInvoiceResponse)_serviceProxy.Execute(convertOrderReques
t);
                    Invoice invoice = (Invoice)convertOrderResponse.Entity;
                    _invoiceId = invoice.Id;

                    Console.WriteLine("Converted SalesOrder to Invoice.");

                    #endregion

                    #region Lock pricing on Invoice

                    // Note: after converting a SalesOrder to Invoice, the
pricing of
                    // the Invoice is locked by default.

                    // Retrieve current price list
                    priceListItem =
(ProductPriceLevel)_serviceProxy.Retrieve(
                            ProductPriceLevel.EntityLogicalName,
                            _priceListItemId,
                            new ColumnSet("productpricelevelid", "amount")
                        );

                    Console.WriteLine("Current price list retrieved.");
                    Console.WriteLine();

                    Console.WriteLine("Details before lock and update:");
                    Console.WriteLine("---------------");
                    Console.WriteLine("Current invoice total: {0}",
                        invoice.TotalAmount.Value);
                    Console.WriteLine("Current price per item: {0}",
                        priceListItem.Amount.Value);
                    Console.WriteLine("</End of Listing>");
                    Console.WriteLine();

                    // Update the price list
                    priceListItem.Amount = new Money(40.0M);

                    updatePriceListItem = new UpdateRequest()
                    {
                        Target = priceListItem
                    };
                    _serviceProxy.Execute(updatePriceListItem);

                    Console.WriteLine("Price list updated.");


                    // Retrieve the invoice
                    Invoice updatedInvoice =
(Invoice)_serviceProxy.Retrieve(
                            Invoice.EntityLogicalName,
                            _invoiceId,
                            new ColumnSet("invoiceid", "totalamount")
```

```
            );

        Console.WriteLine("Updated invoice retrieved.");
        Console.WriteLine();

        Console.WriteLine("Details after lock and update:");
        Console.WriteLine("----------------");
        Console.WriteLine("Current invoice total: {0}",
            updatedInvoice.TotalAmount.Value);
        Console.WriteLine("Current price per item: {0}",
            priceListItem.Amount.Value);
        Console.WriteLine("</End of Listing>");
        Console.WriteLine();

        // Unlock the invoice pricing
        UnlockInvoicePricingRequest unlockInvoiceRequest =
            new UnlockInvoicePricingRequest()
            {
                InvoiceId = _invoiceId
            };
        _serviceProxy.Execute(unlockInvoiceRequest);

        Console.WriteLine("Invoice pricing unlocked.");

        // Retrieve the invoice
        updatedInvoice = (Invoice)_serviceProxy.Retrieve(
                Invoice.EntityLogicalName,
                _invoiceId,
                new ColumnSet("invoiceid", "totalamount")
            );

        Console.WriteLine("Updated invoice retrieved.");
        Console.WriteLine();

        Console.WriteLine("Details after update and unlock:");
        Console.WriteLine("----------------");
        Console.WriteLine("Current invoice total: {0}",
            updatedInvoice.TotalAmount.Value);
        Console.WriteLine("Current price per item: {0}",
            priceListItem.Amount.Value);
        Console.WriteLine("</End of Listing>");
        Console.WriteLine();

        // Relock the invoice pricing
        LockInvoicePricingRequest lockInvoiceRequest =
            new LockInvoicePricingRequest()
            {
                InvoiceId = _invoiceId
            };
        _serviceProxy.Execute(lockInvoiceRequest);

        Console.WriteLine("Invoice pricing relocked.");

        #endregion
```

```
                    DeleteRequiredRecords(promptforDelete);
                }
            }

            // Catch any service fault exceptions that Microsoft Dynamics
CRM throws.
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>)
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }

        /// <summary>
        /// Creates any entity records that this sample requires.
        /// </summary>
        public void CreateRequiredRecords()
        {
            // Create a unit group
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };
            _unitGroupId = _serviceProxy.Create(newUnitGroup);
            Console.WriteLine("Create {0}", newUnitGroup.Name);

            // Retrieve the default unit id that was automatically created
            // when we created the Unit Group
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression
                {
                    Conditions =
                        {
                            new ConditionExpression
                            {
                                AttributeName = "uomscheduleid",
                                Operator = ConditionOperator.Equal,
                                Values = { _unitGroupId }
                            }
                        }
                },
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };

            // Retrieve the unit.
```

```
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];
            _defaultUnitId = unit.UoMId.Value;

            // Create a few products
            Product newProduct = new Product
            {
                ProductNumber = "1",
                Name = "Example Product",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 1,
                DefaultUoMScheduleId =
                    new EntityReference(UoMSchedule.EntityLogicalName,
_unitGroupId),
                DefaultUoMId =
                    new EntityReference(UoM.EntityLogicalName,
_defaultUnitId)
            };
            _productId = _serviceProxy.Create(newProduct);
            newProduct.Id = _productId;
            Console.WriteLine("Create {0}", newProduct.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };
            _priceListId = _serviceProxy.Create(newPriceList);

            // Create a price list item for the product and apply volume
discount
            ProductPriceLevel newPriceListItem = new ProductPriceLevel
            {
                PriceLevelId =
                    new EntityReference(PriceLevel.EntityLogicalName,
_priceListId),
                ProductId =
                    new EntityReference(Product.EntityLogicalName,
_productId),
                UoMId =
                    new EntityReference(UoM.EntityLogicalName,
_defaultUnitId),
                Amount = new Money(20.0M),
            };
            _priceListItemId = _serviceProxy.Create(newPriceListItem);

            // Publish the product
            SetStateRequest publishRequest = new SetStateRequest
            {
                EntityMoniker = new
EntityReference(Product.EntityLogicalName, _productId),
                State = new OptionSetValue((int)ProductState.Active),
                Status = new OptionSetValue(1)
            };
            _serviceProxy.Execute(publishRequest);
```

```
            Console.WriteLine("Published {0}", newProduct.Name);

            // Create an account record for the opportunity's potential
customerid
            Account newAccount = new Account
            {
                Name = "Litware, Inc.",
                Address1_PostalCode = "60661"
            };
            _accountId = _serviceProxy.Create(newAccount);
            newAccount.Id = _accountId;

        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user
        /// to delete the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            // The three system users that were created by this sample will
continue to
            // exist on your system because system users cannot be deleted
in Microsoft
            // Dynamics CRM.  They can only be enabled or disabled.

            bool toBeDeleted = true;

            if (prompt)
            {
                // Ask the user if the created entities should be deleted.
                Console.Write("\nDo you want these entity records deleted?
(y/n) [y]: ");
                String answer = Console.ReadLine();
                if (answer.StartsWith("y") ||
                    answer.StartsWith("Y") ||
                    answer == String.Empty)
                {
                    toBeDeleted = true;
                }
                else
                {
                    toBeDeleted = false;
                }
            }

            if (toBeDeleted)
            {
                // Delete all records created in this sample.
                _serviceProxy.Delete("invoice", _invoiceId);
                _serviceProxy.Delete("salesorder", _salesOrderId);
                _serviceProxy.Delete("salesorder", _closeSalesOrderId);
                _serviceProxy.Delete("quotedetail", _quoteDetailId);
                _serviceProxy.Delete("quote", _quoteId);
```

```
                _serviceProxy.Delete("quote", _closeQuoteId);
                _serviceProxy.Delete("opportunity", _opportunityId);
                _serviceProxy.Delete("opportunity", _loseOpportunityId);
                _serviceProxy.Delete("account", _accountId);
                _serviceProxy.Delete("productpricelevel", _priceListItemId);
                _serviceProxy.Delete("pricelevel", _priceListId);
                _serviceProxy.Delete("product", _productId);
                _serviceProxy.Delete("uomschedule", _unitGroupId);

                Console.WriteLine("Entity record(s) have been deleted.");
            }
        }

        #endregion How To Sample Code

        #region Main method

        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                ProcessingQuotesAndSalesOrders app = new
ProcessingQuotesAndSalesOrders();
                app.Run(config, true);
            }
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
```

```
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main method
    }
}
```

See also

Sales Tables (Lead, Opportunity, Competitor, Quote, Order, Invoice)
Quote, Order and Invoice Tables
Sample: Fulfill a Sales Order
WinQuoteRequest
ConvertQuoteToSalesOrderRequest
UnlockSalesOrderPricingRequest
LockSalesOrderPricingRequest

Sample: Fulfill a sales order

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the complete sample here Business management samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to create a sales order and then close it by fulfilling it.

Example

C#

```
using System;
using System.Linq;
using System.ServiceModel;
using Microsoft.Crm.Sdk.Messages;
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Messages;
using Microsoft.Xrm.Sdk.Metadata;
using Microsoft.Xrm.Sdk.Query;

namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// This sample creates a SalesOrder record and demonstrates how to use
the
    /// FulfillSalesOrderRequest to deactivate the record.
    /// </summary>
```

```
    /// <remarks>
    /// At run-time, you will be given the option to delete all the
    /// database records created by this program.
    /// </remarks>
    public class FulfillSalesOrder
    {
        #region Class Level Members
        private OrganizationServiceProxy _serviceProxy;
        private Guid? _salesOrderId;
        private Guid? _accountId;
        #endregion

        #region How To Sample Code

        /// <summary>
        /// Creates a sales order and shows how to close using the
FulfillSalesOrderRequest
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig,
           bool promptforDelete)
        {
            using (_serviceProxy = new
OrganizationServiceProxy(serverConfig.OrganizationUri,
serverConfig.HomeRealmUri,serverConfig.Credentials,
serverConfig.DeviceCredentials))
            {
                // This statement is required to enable early-bound type
support.
                _serviceProxy.EnableProxyTypes();

                CreateCustomer();
                CreateSalesOrder();
                CloseSalesOrder();
                DeleteRequiredRecords(promptforDelete);
            }
        }

        /// <summary>
        /// Creates a customer for the sales order
        /// </summary>
        private void CreateCustomer()
        {
            // Create an account to be used with the sales account.
            _accountId = _serviceProxy.Create(new Account
            {
                Name = "Microsoft"
            });

            Console.WriteLine(String.Concat("Created account for sales
order: ",
```

```
                _accountId.Value));
        }

        /// <summary>
        /// Creates the sales order to close
        /// </summary>
        private void CreateSalesOrder()
        {
            // Create a sales order with an account
            _salesOrderId = _serviceProxy.Create(new SalesOrder
            {
                CustomerId = new EntityReference
                {
                    LogicalName = Account.EntityLogicalName,
                    Id = _accountId.Value
                },
                Description = "Sales Order Description",
            });

            Console.WriteLine(String.Concat("Created sales order: ",
                _salesOrderId.Value));
        }

        /// <summary>
        /// Calls the FulfillSalesOrderRequest and closes it as completed
        /// </summary>
        private void CloseSalesOrder()
        {
            if (!_salesOrderId.HasValue)
                return;

            // Close the sales order with a status of Complete
            int newStatus = (int)salesorder_statuscode.Complete;
            var request = new FulfillSalesOrderRequest
            {
                OrderClose = new OrderClose
                {
                    SalesOrderId = new EntityReference
                        { LogicalName = SalesOrder.EntityLogicalName, Id =
_salesOrderId.Value }

                },
                Status = new OptionSetValue(newStatus)
            };

            Console.WriteLine(String.Concat("Executing
FullfillSalesOrderRequest on sales order: ",
                _salesOrderId.Value, ",\n\t new status: ",
                GetLabelForStatus(SalesOrder.EntityLogicalName,
"statuscode", newStatus)));

            _serviceProxy.Execute(request);

            // Validate that the sales order is complete
            var salesOrder =
```

```
_serviceProxy.Retrieve(SalesOrder.EntityLogicalName, _salesOrderId.Value,
                new ColumnSet("statuscode")).ToEntity<SalesOrder>();

            Console.WriteLine(String.Concat("Validation of closed sales
order: ", _salesOrderId.Value,
                ",\n\t status: ",
salesOrder.FormattedValues["statuscode"]));
        }

        /// <summary>
        /// Returns the label for a status option
        /// </summary>
        /// <param name="entity">entity logical name</param>
        /// <param name="attribute">statuscode </param>
        /// <param name="value">numeric value</param>
        /// <returns>user label</returns>
        private string GetLabelForStatus(string entity, string attribute,
int value)
        {
            // Retrieve the attribute metadata
            var attributeMD = ((RetrieveAttributeResponse)
_serviceProxy.Execute(
                new RetrieveAttributeRequest
                {
                    EntityLogicalName = entity,
                    LogicalName = attribute,
                    RetrieveAsIfPublished = true,
                })).AttributeMetadata;

            // find the option based on the numeric value and return the
label
            if (attributeMD.AttributeType == AttributeTypeCode.Status)
            {
                var options =
((StatusAttributeMetadata)attributeMD).OptionSet.Options;

                var crmOption = options.FirstOrDefault(x => x.Value ==
value);
                if (crmOption != null)
                    return crmOption.Label.UserLocalizedLabel.Label;
            }

            return string.Empty;
        }

        /// <summary>
        ///
        /// </summary>
        /// <param name="prompt"></param>
        private void DeleteRequiredRecords(bool prompt)
        {
            bool toBeDeleted = true;

            if (prompt)
            {
```

```
                // Ask the user if the created entities should be deleted.
                Console.Write("\nDo you want these entity records deleted?
(y/n) [y]: ");
                String answer = Console.ReadLine();
                if (answer.StartsWith("y") ||
                    answer.StartsWith("Y") ||
                    answer == String.Empty)
                {
                    toBeDeleted = true;
                }
                else
                {
                    toBeDeleted = false;
                }
            }

            if (toBeDeleted)
            {
                // Delete records created in this sample.  Delete the sales
order first
                // or there will be an error due to restrict delete.
                if (_salesOrderId.HasValue)
                {
                    Console.WriteLine(String.Concat("Deleting sales order:
", _salesOrderId.Value));
                    _serviceProxy.Delete(SalesOrder.EntityLogicalName,
_salesOrderId.Value);
                }
                if (_accountId.HasValue)
                {
                    Console.WriteLine(String.Concat("Deleting account: ",
_accountId.Value));
                    _serviceProxy.Delete(Account.EntityLogicalName,
_accountId.Value);
                }

                Console.WriteLine("Entity records have been deleted.");
            }
        }

        #endregion

        #region Main method
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
```

```
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                var app = new FulfillSalesOrder();
                app.Run(config, true);
            }
            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
```

```
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                        }
                    }
                }
                // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
                // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

                finally
                {
                    Console.WriteLine("Press <Enter> to exit.");
                    Console.ReadLine();
                }
            }
            #endregion
        }
}
```

See also

Sales Tables (Lead, Opportunity, Competitor, Quote, Order, Invoice)
Quote, order, and invoice tables
FulfillSalesOrderRequest

Enable sales order processing integration

Article • 03/29/2023

Connect Dynamics 365 Sales with an external order processing application by enabling this integration.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

How the integration works?

Sales order processing integration makes it convenient to connect Dynamics 365 Sales with an external back-office order processing application. It allows a sales order created on Dynamics 365 Sales to be submitted, after which the order can be synced to an external order processing application where the lifecycle of the order continues. A submitted order is locked for editing on Dynamics 365 Sales unless it was submitted by an integration user (to sync changes from the external order processing system to Dynamics 365 Sales).

By default, sales order processing is turned off. When sales order processing is turned off, Dynamics 365 Sales allows invoices to be created from orders. More information: Create an invoice from an order

> **Note**
>
> Price computation can be triggered by Dynamics 365 Sales only if the sales entities like Opportunity, Quote, Sales order, and Invoice are editable.

Turn on sales order processing integration

You can enable sales order processing integration by setting the value of the IsSOPIntegrationEnabled column on the Organization table to **Yes (1)**.

What happens when sales order processing is turned on?

When sales order processing is turned on:

- The **Create Invoice** button isn't shown on the command bar of the order records.
- Order records will support a **Submit** order button. When the order is submitted, the status for the order is marked as `Submitted` and the order is made read-only, unless it was created by an integration user. More information: IsIntegrationUser column

The following table lists the conditions that need to be satisfied before Dynamics 365 Sales executes price computation for various entities.

Table name	Create	Update	Delete	Recalculate
Opportunity	Calculate always	Calculate always	Not applicable	Calculate always
Quote	Calculate always	Calculate always	Not applicable	Calculate always
Sales order	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the sales order is in a submitted state or the signed-in user is an integration user	Not applicable	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the sales order is in a submitted state
Invoice	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Not applicable	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user
Opportunity product	Calculate always	Calculate always	Calculate always	Not applicable
Quote product	Calculate always	Calculate always	Calculate always	Not applicable
Sales order product	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user or the sales order is in a submitted state	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user or sales order is in a submitted state	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Not applicable
Invoice product	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Calculation is skipped if the IsSOPIntegrationEnabled flag is set to **Yes (1)** and the signed-in user is an integration user	Not applicable

Turn off the sales order processing setting

By default, sales order processing integration is turned off. If you've turned it on using the `IsSOPIntegrationEnabled` column, you can turn it off using the **App Settings** page or by setting `IsSOPIntegrationEnabled` to **No**.

1. Go to **Sales Hub**, and then select **App Settings**.
2. Select **General/Overview**, and then select **Back Office Order Processing Integration**.
3. Select **Manage**, and then set the toggle switch to **Off**.

> **Note**
>
> The setting won't be visible in the **App Settings** page if the integration is turned off.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Organization table reference
System user table reference
Quote, order, and invoice tables

Marketing tables (campaign, list)

Article • 03/03/2023

The marketing tables let you perform detailed campaign planning, manage the creation and execution of a campaign, and assess a campaign's performance.

In This Section

Campaign Tables

List (Marketing List) Table

Sample: Distribute a Quick Campaign

Sample: Distribute Campaign Activities to Dynamic and Static Lists

Sample: Distribute Campaign Activities to Qualified Marketing List

Related Sections

Model your business data with Dataverse)

Campaign tables

Article • 03/03/2023

A *campaign* in Dynamics 365 Customer Engagement (on-premises) is designed to accomplish a specific result, such as introducing a new product or increasing market share. The main way to accomplish this result is through communicating the benefits of a product or service to people and businesses. Campaigns often include more than one communication method, such as print advertisements, promotional discounts, and direct mail. A campaign can be thought of as a container in which a business keeps planning tasks, campaign activities, and campaign responses. It has a list of related products, sales literature, and a set of marketing lists of existing or potential customers. This information is used to plan and track the results of a marketing campaign throughout its life.

Marketing automation supports campaign execution through *campaign activities* that are used to distribute emails, phone calls, and other activities to qualified customers. Each campaign activity may include a set of marketing lists of existing or potential customers. Bulk email may result in the responses from the customers that are captured in a *campaign response* record.

If you plan to distribute only one type of the activity, such as an email, use a *quick campaign*. The results of a quick campaign are captured in the quick campaign log.

Campaigns and Quick Campaigns

A campaign or a quick campaign can be used to accomplish the following:

- Create campaign activities to communicate with a customer, such as sending an email, a letter, or making a telephone call.
- Use marketing lists to distribute the campaign activities. Marketing lists are usually assembled based on certain criteria, such as customers that previously bought a particular product or used a particular service.
- Analyze campaign responses to the campaign activities.

  The following table compares campaigns and quick campaigns:

Feature	Campaign	Quick Campaign

Feature	Campaign	Quick Campaign
Campaign activities	A campaign may include different marketing activities. Some activities, such as tasks, are assigned to team members to perform specific tasks, for example, preparing a marketing list or printing sales literature. Other activities, such as emails, faxes, or letters are distributed through multiple campaign activities represented by the campaign activity entity (`CampaignActivity`). Each campaign activity is used to distribute one type of activity that specifies a recipient: phone call, appointment, letter, letter vial mail merge, fax, fax via mail merge, email, email via mail merge. The activities can be distributed over a period of time and at different times.	A quick campaign distributes one type of activity that specifies a recipient: phone call, appointment, letter, letter vial mail merge, fax, fax via mail merge, email, email via mail merge. The activities are distributed to recipients at one point in time.
Marketing lists	You can distribute a campaign to the members of different marketing lists. Each campaign activity (`CampaignActivity`) may contain multiple lists. A marketing list contains the records of one type, such as accounts or leads. To distribute a campaign to accounts and leads, you must create two separate marketing lists.	A quick campaign can be distributed to the members of one marketing list, or to the accounts, contacts, or leads selected by a query.
Campaign response	A reply to a campaign activity can be captured in the campaign response (`CampaignResponse`) and converted to an opportunity, lead, order, or quote.	The results of a quick campaign are captured in the quick campaign log (`BulkOperationLog`).
Tables	Use the campaign (`Campaign`) entity, the campaign activity (`CampaignActivity`) entity and the campaign response (`CampaignResponse`) entity to distribute a campaign.	Use the bulk operation (quick campaign) (`BulkOperation`) entity and the bulk operation log (quick campaign log) (`BulkOperationLog`) entity to distribute a quick campaign.

Feature	Campaign	Quick Campaign
Distribute Activities	Use the DistributeCampaignActivityRequest message to distribute a campaign activity (`CampaignActivity`) to the members of a marketing list.	Use the PropagateByExpressionRequest message to distribute an activity, such as email or fax, to the accounts, contacts, or leads selected by the query. Use the CreateActivitiesListRequest message to distribute an activity, such as email or fax, to the members of a marketing list.

See also

BulkOperation Table
BulkOperationLog Table
Campaign Table
CampaignActivity Table
CampaignResponse Table
Sample: Distribute a Quick Campaign
Marketing Tables (Campaign, List)
List (Marketing List) Table

List (marketing list) table

Article • 03/03/2023

In Dynamics 365 Customer Engagement (on-premises), *list management* and the *list* (marketing list) table help you create lists of potential customers or existing customers for marketing purposes. Typically, a list is a potential target for a campaign. However, you can also use it for other marketing reasons. You can generate subsets of a list by using different parameters for a campaign or to run an activity in bulk mode.

There are two types of lists: static and dynamic. To specify whether the list is static or dynamic, use the `List.Type` attribute. All list members must be of the same table type, such as accounts, contacts, or leads. To add the members to a static list, use the AddListMembersListRequest message. The members for a dynamic list are selected dynamically based on the FetchXML query criteria during distribution of a campaign activity or a quick campaign. To specify the FetchXML criteria, use the `List.Query` attribute. Initially, the member count for the dynamic list is set to **null**. To determine how many records in the system satisfy the FetchXML query criteria, use the aggregate function on the query. You can create a new static list based on the existing dynamic list by using the CopyDynamicListToStaticRequest message. The newly created static list is locked.

See also

List Table
Use FetchXML to Construct a Query
Use FetchXML Aggregation
CopyDynamicListToStaticRequest
Marketing Tables (Campaign, List)
Sample: Distribute a Quick Campaign

Sample: Distribute a quick campaign

Article • 04/07/2023

This sample shows how to create and distribute a quick campaign. You can download the sample from here.

How to run this sample

1. Download or clone the Dynamics365-Apps-Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the Common Data Service instance you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you'll need to enter information about which Dataverse instance you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

Those samples in this repo that require a connection to a Common Data Service instance to run includes a linked reference to the dataverse/App.config file.

What this sample does

This sample shows how to create and distribute a quick campaign.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the current version of the org.
2. The `CreateRequiredRecords` method creates any table rows that this sample requires.

3. The `CreateAndRetrieveQuickCampaignForQueryExpression` method creates a quick campaign for a set of accounts selected by a query.
4. The `CreateAndRetrieveQuickCampaignForMarketingList` method creates quick campaign for a given marketing list and returns the Guid of the quick campaign.

Demonstrate

1. The `List` method creates the marketing list that is required for the sample.
2. The `QueryExpression` method constructs a query expression to specify which rows quick campaign should include.

Clean up

Display an option to delete the rows created in the Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the rows to achieve the same result.

See also

Campaign Tables
BulkOperation Table
Sample: Distribute Campaign Activities to Dynamic and Static Lists
List (Marketing List) Table
Marketing Tables (Campaign, List)
AddMemberListRequest
PropagateByExpressionRequest
CreateActivitiesListRequest

Sample: Distribute campaign activities to dynamic and static lists

Article • 04/07/2023

This sample shows how to create a dynamic marketing list, copy it to the static marketing list, and distribute campaign activities to the members of the marketing lists. You can download the sample from here.

How to run this sample

1. Download or clone the Dynamics365-Apps-Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the Common Data Service instance you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you'll need to enter information about which Dataverse instance you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

Those samples in this repo that require a connection to a Common Data Service instance to run includes a linked reference to the dataverse/App.config file.

How this sample works

In order to simulate the scenario described above, the sample will do the following:

Setup

1. Checks for the current version of the org.
2. The `CreateRequiredRecords` method creates any table rows that this sample requires.

Demonstrate

1. The `List` method creates a dynamic list. The list is considered to be a dynamic list only when the `Type` parameter is set to true.
2. The `Campaign` method creates a campaign.
3. The `AddItemCampaignRequest` method adds the dynamic list to the campaign.
4. The `CampaignActivity` method creates a campaign activity to distribute fax to the list members.
5. The `AddItemCampaignActivityRequest` method adds the dynamic list to the campaign activity.
6. The `CopyDynamicListToStaticRequest` method copies the dynamic list to a static list.
7. The `DistributeCampaignActivityRequest` method distributes the campaign activity to the marketing lists.

Clean up

Display an option to delete the rows created in the Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the rows to achieve the same result.

See also

Campaign Tables
Sample: Distribute a Quick Campaign
List (Marketing List) Table
Marketing Tables (Campaign, List)
Sample: Distribute Campaign Activities to Qualified Marketing List
AddMemberListRequest
AddItemCampaignRequest
AddItemCampaignActivityRequest
CopyDynamicListToStaticRequest
DistributeCampaignActivityRequest

Sample: Distribute campaign activities to qualified marketing list

Article • 04/07/2023

This sample shows how to distribute campaign activities to the qualified members of a marketing list. You can download the sample from here.

How to run this sample

1. Download or clone the Dynamics365-Apps-Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the Common Data Service instance you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you'll need to enter information about which Dataverse instance you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

Those samples in this repo that require a connection to a Common Data Service instance to run includes a linked reference to the dataverse/App.config file.

How this sample works

In order to simulate the scenario described above, the sample will do the following:

Setup

1. Checks for the current version of the org.
2. The `CreateRequiredRecords` method creates any table rows that this sample requires.

Demonstrate

1. The `DistributeCampaign` method creates and distributes campaign.

2. The `CreateMarketingList` method creates static marketing lists.
3. The `RemoveRelationships` method removes the marketing list from the campaign activity.

Clean up

Display an option to delete the rows created in the Setup. The deletion is optional in case you want to examine the table and data created by the sample. You can manually delete the rows to achieve the same result.

See also

Campaign Tables
Sample: Distribute a Quick Campaign
Sample: Distribute Campaign Activities to Dynamic and Static Lists
List (Marketing List) Table
Marketing Tables (Campaign, List)
AddMemberListRequest
AddItemCampaignRequest
AddItemCampaignActivityRequest
QualifyMemberListRequest
DistributeCampaignActivityRequest

Goal management tables

Article • 03/03/2023

The *goal management* in Dynamics 365 Sales lets you set sales, marketing, and other business goals for your organization and measure the results against the targets. The goal management will help you motivate your work force, identify successful programs, do better planning, and grow your business.

Goal management offers the following capabilities:

- Create a complex goal hierarchy where each goal is assigned to an individual goal contributor or a team.
- Use the goals in the hierarchy to track important business data, such as revenues, customer services cases, or phone calls. You can also track data represented by custom tables.
- Roll up the totals for each goal, such as total revenues or units shipped, in the hierarchy tree.
- Measure the results of the rollup against the targets or stretch targets.
- Track the goal results for a fiscal period or a custom period.
- Align the goal period with the current fiscal year settings.
- Support different goal types, such as Amount or Count.
- Track actual, in-progress, and custom data.
- Add complex queries to refine the results of the rollup.
- Override the results of the rollup to include new or additional data.
- Incorporate goal results in reports, charts, and dashboards.
- Support workflows and customizations.

In This Section

Create goal hierarchy, goals, and targets
Define goal metric and rollup fields
Add complex goal criteria
Roll up goal totals

Sample: Roll up goal data for a custom period against the target revenue
Sample: Roll up goal data for a fiscal period against the stretch target count
Sample: Use rollup queries to track goals
Sample: Override goal total count and close the goal

Related Sections

Goal Table
Metric Table
RollupField Table
GoalRollupQuery Table
Model your business data with Dataverse)
Product Catalog Tables

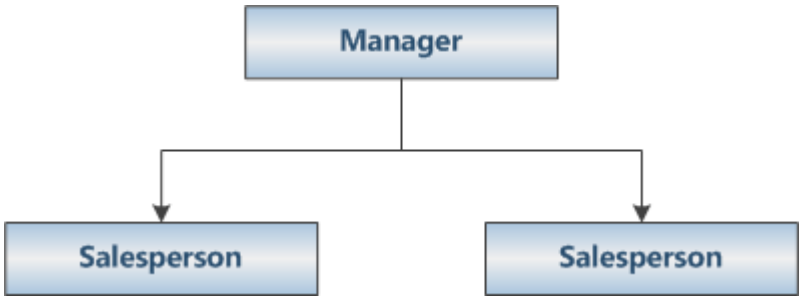
Create goal hierarchy, goals, and targets

Article • 03/03/2023

In preparation for goal management, you should specify a metric for a goal (amount or count), create a goal hierarchy, and set the targets. All goals in the hierarchy must be based on the same goal metric. A metric defines the type of the goal, and the rollup fields specify other important settings for the goal. For more information, see Use Goal Metric and Rollup Fields to Define a Goal.

Create Goal Hierarchy

Typically, the manager's goal is an aggregate of the goals assigned to the team members. A manager decides on the overall goal for the organization and then divides the goal into individual goals for each person. In a large organization, a goal for the company could be a combination of regional goals. In a simple goal hierarchy that is shown here, the manager's goal is composed of two salesperson goals.



The manager's goal can be referred to as a parent goal, and the salesperson goals as child goals. A goal can have multiple child goals (one-to-many relationship) and be a child goal of another goal. The relationship between a parent goal record and a child goal record can also be described as a referential relationship, in which a child goal references the parent goal. If you delete a parent goal, the child goal is not deleted, only a reference to the parent goal is removed. For more information, see Table relationship behavior.

The goal rollup is done from the bottom of the hierarchy to the top of the hierarchy. During rollup, the child goal totals are rolled into the parent goal totals. The ending total for the root goal at the top of hierarchy is a cumulative sum of all goal totals in the hierarchy.

Who Manages and Owns a Goal

A goal manager sets or modifies goal targets, adjusts the goal time period, and assigns a goal owner. A goal manager is the goal record owner (`Goal.OwnerID`) with full access rights to the goal. A goal owner (`Goal.GoalOwnerId`) is someone who has to meet the goal targets. A goal owner has Read and AppendTo access to the goal.

When a goal is created in Dynamics 365, it is automatically shared with a goal owner and a parent goal's manager. A parent goal's manager is the record owner (`Goal.OwnerId`) of the parent goal, and has Read access to the newly created goal. When a parent goal's manager or a goal owner is replaced, their access to the goal is revoked and the access is granted to the new parent goal's manager or goal owner. If a goal was explicitly shared with a previous parent goal's manager and goal owner, who were given specific access rights, these Dynamics 365 users may not lose all access to the goal.

Set and Monitor the Targets

For each goal you can specify a target value against which the results of the goal rollup are measured. In addition, you can specify a stretch target. For example, your target revenue could be $100,000, and the stretch target revenue is $120,000.

Logically, the target values should increase towards the top of the goal hierarchy to reflect an upward increase of cumulative totals in the hierarchy.

Depending on the type of the rollup data, you can use one of the following goal table attributes to set the targets: `Goal.TargetInteger`, `Goal.TargetDecimal` or `Goal.TargetMoney`. To set the stretch targets, use: `Goal.StretchTargetInteger`, `Goal.StretchTargetDecimal`, or `Goal.StretchTargetMoney`.

The following table lists the system-generated values that you can use to measure your progress against the target.

Goal table column	Description	Formula
`Goal.Percentage`	Percentage achieved against the target goal.	(Actual/Target) * 100
`Goal.ComputedTargetAsOfTodayPercentageAchieved`	Expected value for percentage achieved against the target goal.	100 * (Today's date – Start date)/(End date – Start date)
`Goal.ComputedTargetAsOfTodayInteger`	Expected amount for Actual (integer)	Target (integer) * (Today's date – Start

Goal table column	Description	Formula
	against the target goal.	date)/(End date – Start date)
`Goal.ComputedTargetAsOfTodayDecimal`	Expected amount for Actual (decimal) against the target goal.	Target (decimal) * (Today's date – Start date)/(End date – Start date)
`Goal.ComputedTargetAsOfTodayMoney`	Expected amount for Actual (money) against the target goal.	Target (money) * (Today's date – Start date)/(End date – Start date)

> **Note**
>
> The system-generated values are calculated against the target value. They are not calculated against the stretch target value.

Specify the Time Period

For each goal you must specify a particular fiscal period or a custom time period. To select the fiscal period or custom period, use the `Goal.IsFiscalPeriodGoal` column. If you select a fiscal period, you must specify a fiscal year by using the `Goal.FiscalYear` column. The possible values for this column are defined in the `goal_fiscalyear` global option set. A fiscal period, such as quarter or semi-annual, is specified in the `Goal.FiscalPeriod` column. The possible values for this column are defined in the `goal_fiscalperiod` global option set.

The goal's fiscal year and fiscal period are tied to the organization's fiscal year settings that are defined in the `Organization` table. The fiscal year settings for the organization can be redefined at any time. If the settings change, you can continue to use the existing goals with the old fiscal settings or you can realign them with the new fiscal settings.

> **Important**
>
> To realign, you must update the hierarchy's root goal with the new fiscal year and fiscal period values by using the **UpdateRequest** message.

The fiscal year and fiscal period values are defined in the `goal_fiscalperiod` global option set. All new goals can only be created by using the current fiscal year settings for

the organization.

If you select a custom period for the goal, you have to specify the goal start and end dates by using the `Goal.GoalStartDate` column and the `Goal.GoalEndDate` column.

If you use a custom period, the `Goal.FiscalYear` and `Goal.FiscalPeriod` values are ignored. If you use a fiscal period, the start and end dates for the custom period are ignored.

All goals in the goal hierarchy must be based on the same fiscal period or custom period. If you specify a different time period for a child goal, a time period for a parent goal will be used.

Other Important Settings

Other important goal settings include the following:

- Specify a parent goal for the goal by using the `Goal.ParentGoalId` column. If you delete a parent goal, the child goal is not deleted, but a parent goal GUID value is replaced with a null value by the system.
- Specify to roll up data only from the child goals by setting `Goal.RollupOnlyFromChildGoals` to `true`. If set to `false`, data is rolled up from the child goals, and from the goal's participating records specified in the goal's metric and rollup query. For more information about the goal metric and the rollup query, see Define Goal Metric and Perform Data Roll Up and Add Complex Goal Criteria.
- Specify whether you want to roll up data from all available records or only from goal owner's records by using the `Goal.ConsiderOnlyGoalOwnersRecords` column. For example, you can specify to roll up data only from the closed opportunities owned by the goal's owner, instead of rolling up data from all closed opportunities.

See also

Goal Management Entities
Define Goal Metric and Rollup Fields

Define goal metric and rollup fields

Article • 03/03/2023

To specify the goal metric type, participating tables, and whether you track actuals, custom or in-progress data, use the goal metric table (`Metric`) and the rollup field (`RollupField`) table. The goal metric and the rollup fields have a parental relationship in which all operations on the parent record are propagated to the child records. For more information about parental relationship and cascading rules, see Table relationship behavior.

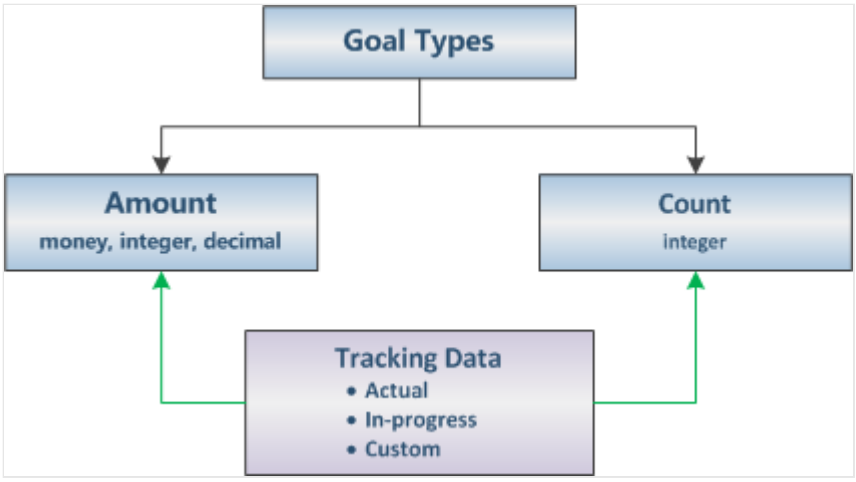
> **Important**
>
> All goals in the hierarchy must be based on the same goal metric and time period. If you create a child goal that is based on a different goal metric, an exception is thrown. If you specify a different time period for a child goal, the system will ignore the specified time period and use the parent goal time period. You can associate a goal with a new metric, if the goal does not have a parent goal or a child goal. Otherwise, an exception is thrown when you update the goal record.

Create Goal Metric

There are two goal metric types: Amount and Count. The Amount metric type is expressed as a money value, an integer, or a decimal number. The Count metric type is an integer. For example, you can use the Amount (money) goal metric to track the revenues from all active opportunities or sales orders. An integer type can be used to track sales calls made by a salesperson. A decimal number can represent a product sold by weight, such as grain or sugar.

To specify the goal metric type and whether you are tracking data against target or stretch target, use the goal metric table (`Metric`). To select Amount or Count, use the `Metric.IsAmount` attribute. Use the `Metric.AmountDataType` attribute to specify the Amount data type. The possible values for this attribute are defined in the `metric_goaltype` global option set. To specify whether the goal tracks data against target or stretch target, use the `Metric.IsStretchTracked` attribute. To associate a goal with a metric, use the `Goal.MetricId` attribute.

Each goal can track actual, in-progress, and custom data as shown in the following diagram.



To track actual, in-progress, and custom data, you use the goal table attributes, referred to as rollup fields. For example, if an opportunity is closed as "Won", an amount of revenue generated from this opportunity can be rolled into the actual money amount rollup field. Or, if an opportunity is "Open", the opportunity's estimated revenue can be added to the in-progress money amount rollup field. The following table lists the relationship between the goal metric type and the rollup fields available for each type.

Goal metric type	**Available rollup fields**

Amount (money)	`Goal.ActualMoney`
	`Goal.InProgressMoney`
	`Goal.CustomRollupFieldMoney`

Amount (integer) or Count	`Goal.ActualInteger`
	`Goal.InProgressInteger`
	`Goal.CustomRollupFieldInteger`

Amount (decimal)	`Goal.ActualDecimal`
	`Goal.InProgressDecimal`
	`Goal.CustomRollupFieldDecimal`

Other examples of rollup data are `Lead.EstimatedAmount` and `OpportunityClose.ActualRevenue` that can be rolled into the `Goal.InProgressMoney` and the `Goal.ActualMoney` rollup fields. The custom rollup fields are extra fields that you can use for integer, decimal, and money values.

Specify Rollup Fields

To specify other important rollup information, use the rollup field table.

Attribute	Rollup information
`RollupField.GoalAttribute`	A goal rollup field, such as `Goal.ActualMoney`, `Goal.CustomRollupFieldMoney` or `Goal.InProgressMoney`.
`RollupField.SourceEntity`	A source table from where data is being rolled up, such as lead, opportunity, or sales order.
`RollupField.SourceAttribute`	An table attribute from where data is being rolled up, such as `Opportunity.ActualValue` or `Lead.EstimatedValue`. A source attribute and a goal rollup field must be of the same type, such as money or integer; otherwise, an exception is thrown when you create a rollup field record.
`RollupField.DateAttribute`	The date that is validated against the goal time period, such as `Opportunity.ActualCloseDate` or `Lead.EstimatedCloseDate`. A record participates in the goal rollup, if the specified date falls between the start date and the end date for the goal. For example, if an opportunity is closed between the start and end dates for the goal, revenue generated from this opportunity is added to the goal's total revenue; otherwise, it is not included.
`RollupField.SourceState`	The state of the source record such as "Won" or" Lost" opportunity.
`RollupField.SourceStatus`	The status reason for the state of the source record, such as "Won" for won opportunities, or "Canceled" or "Out-sold" for the lost opportunities.
`RollupField.IsStateParentEntityAttribute`	Indicates whether state or status belong to the parent table. For example, for the opportunity product that does not have its own state, you can use state and status of the parent opportunity record.

For each goal metric, you can create up to three rollup field records. Each record can specify actual, in-progress, or custom amount or count. You can use the same source table or difference source tables for all rollup field records. For example, in a goal metric that specifies the Money type, you can use an opportunity table as a source table and `Opportunity.ActualValue` as a source attribute. This lets you track the actual money amounts in all opportunities that are closed as "Won". The `Opportunity.EstimatedValue` can be used to track the revenue that is expected after the opportunity is closed.

See also

Goal Management Tables
Add Complex Goal Criteria

Add complex goal criteria

Article • 03/03/2023

If you want to add complex rollup criteria for a goal, you can use a rollup query (`GoalRollupQuery`) entity. For example, you can specify revenue for a particular product line or revenue generated in a specific territory.

A rollup query can be used by different goals. However, a rollup query associated with a particular goal, applies only to that goal. A rollup query specified for a parent goal does not propagate to the child goal. A child goal can use the same query or a different query. A rollup query should use the same entity types that are specified in the rollup field records associated with the goal. If the goal tracks the sales order revenues, but the associated query uses the opportunity entity, an exception is thrown when you create or update the goal record.

> **Note**
>
> The maximum number of records that can be returned in a goal rollup query is 5000.

To specify query criteria, use the `GoalRollupQuery.FetchXml` attribute. To specify the entity type for the query, use the `GoalRollupQuery.QueryEntityType` attribute.

> **Note**
>
> The tables that can be specified in the `GoalRollupQuery.QueryEntityType` attribute must have the following `EntityMetadata` attributes set to `true`: `IsValidForAdvancedFind`, `IsUserOwned`, `IsCustomizable` and `CanCreateAttributes`. The following tables cannot be specified in this attribute: `SharePointDocumentLocation`, `SharePointSite` and `MailMergeTemplate`.

Depending on the goal metric type, you can use the queries to filter actual, in-progress, and custom amount or count data. The following table shows the goal metric types and the goal entity attributes that you can use to specify the queries for each type.

Goal metric type	Rollup query attributes

Goal metric type	Rollup query attributes

Amount (money)	`Goal.RollUpQueryActualMoneyId`
	`Goal.RollUpQueryCustomMoneyId`
	`Goal.RollUpQueryInprogressMoneyId`

Amount (integer) or Count	`Goal.RollupQueryActualIntegerId`
	`Goal.RollUpQueryCustomIntegerId`
	`Goal.RollUpQueryInprogressIntegerId`

Amount (decimal)	`Goal.RollUpQueryActualDecimalId`
	`Goal.RollUpQueryCustomDecimalId`
	`Goal.RollUpQueryInprogressDecimalId`

The query for the goal's participating records for a given rollup attribute should include the following clauses:

- A `Goal.ConsiderOnlyGoalOwnersRecords` value.
- A FetchXML expression specified in `GoalRollupQuery.FetchXml`.
- Date range (`RollupField.DateAttribute`), state and status specified in the respective rollup field for the referenced goal metric.

Preventing Double Counting and Other Erroneous Results

Queries are very effective in filtering the results of a rollup. However, if not used carefully, they can introduce the “double counting” or other erroneous results. The following examples demonstrate how queries may contribute in unwanted results:

- You are tracking the sales orders for a particular salesperson. However, the rollup did not return any sales orders. This can happen if the query that you used filtered out the territories where the salesperson has customers.
- You set two goals for a salesperson. One goal tracks the opportunities for a particular product and another goal tracks the opportunities in a particular territory. If the opportunity includes selling the specified product in the specified territory, the revenue from this opportunity is included in both goals. If the goals

have the same parent goal, their totals are added to the parent goal, resulting in double counting.

You can prevent double counting and other incorrect results by following these guidelines:

- Set the `Goal.ConsiderOnlyGoalOwnersRecords` attribute to `true` to use only the records owned by the goal owner.
- Do not assign multiple goals to a sales person for the same time period.
- Do not use a query if you are not sure it will provide the results that you expect.

See also

Goal Management Tables
Sample: Use Rollup Queries to Track Goals
Roll Up Goal Totals

Roll up goal totals

Article • 03/03/2023

To roll up data in the goal hierarchy, use the RecalculateRequest message. It recalculates the goal rollup field values, such as `Goal.ActualMoney` or `Goal.ActualInteger`, for all goals in the hierarchy. A rollup for each goal is performed in the context of the goal manager. This means that only the records that a manager of a goal has Read access to participate in the rollup. The system automatically switches the manager's context for each goal during rollup, as every goal may have a different goal manager.

The totals are rolled up from the child goals to the parent goals, from the bottom of the hierarchy to the top. The ending total for the root goal at the top of the hierarchy is an aggregate sum of all totals in the hierarchy. For example, if revenue metric is used, the total is an aggregate sum of the money amounts. If a count metric is used, the total is an aggregate count of the actual records in the system, such as telephone calls. Regardless of which particular goal is a target of the recalculate operation, all totals in a given hierarchy are updated.

If you set `Goal.RollupOnlyFromChildGoals` to `true`, only child goal records are used in the rollup. If you set it to `false`, the rollup includes the child records and other goal's participating records. A participating record must satisfy the following conditions:

- The source date of the record must be between the start date and the end date of the goal time period, or fall on the start date or the end date of the goal period.
- The state and status of the record must match the values defined in the goal metric.
- If a rollup query is specified for the goal, all query conditions must be met.
- The goal manager must have Read access to the record.

> **Note**
>
> The goal rollup fields that do not participate in the rollup are not updated, their values are **null**.

To specify the rollup expiration time, use the `Organization.GoalRollupExpiryTime` column. For example, if the rollup expiration time is set to six months, the goals older than six months will not be rolled up automatically. To specify the frequency of goal

rollup, use the `Organization.GoalRollupFrequency` column. The frequency can be set on an hourly basis. By default, the goal actual values are recalculated every 24 hours.

Override Calculated Values

To override the system calculated actual, in-progress, or custom goal rollup field values, use the UpdateRequest message to update the goal record. You must set the `Goal.IsOverride` column to `true` to notify the system that the rollup field values can be updated. To signal the system that the goal's rollup field values were overridden and must not be updated during next recalculate operation, set the `Goal.IsOverridden` column to `true`. If `Goal.IsOverride` is `false`, an exception is thrown during the update operation. If `Goal.IsOverridden` is `false`, the goal rollup field values will be overwritten during next recalculate operation with system calculated values.

See also

Goal Management Tables
Sample: Roll Up Goal Data for a Custom Period Against the Target Revenue
Sample: Roll Up Goal Data for a Fiscal Period Against the Stretch Target Count
Goal Table

Sample: Rollup goal data for a custom period against the target revenue

Article • 05/02/2023

This sample shows how to roll up goal data for a custom period against the target revenue. You can download the sample from here.

This sample requires additional three users that are not in your system. Create the three required users **as is** shown below manually in **Office 365**. Replace `yourorg` with the organization name.

First Name: Nancy
Last Name: Anderson
Security Role: Salesperson
UserName: nanderson@yourorg.onmicrosoft.com

First Name: David
Last Name: Bristol
Security Role: Salesperson
UserName: dbristol@yourorg.onmicrosoft.com

First Name: Kevin
Last Name: Cook
Security Role: SalesManager
UserName: kcook@yourorg.onmicrosoft.com

How to run this sample

To obtain a local copy of all samples and build them, follow these steps:

1. Download or clone the Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the instance or organization you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you need to enter information about which instance or org you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

What this sample does

This sample shows how to roll up goal data for a custom period against the target revenue.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the version of the org.
2. Retrieves the sales manager and 2 sales representatives created manually in **Office 365**.
3. Creates a sample unit group and retrieve the default unit id.
4. Creates few products and new discount list.
5. The `PriceLevel` creates the price list.
6. The `ProductPriceLevel` creates a price list item for the first product and apply volume discount.
7. Creates account row for the opportunity's potential customer id.
8. Creates a new opportunity with user specified estimated revenue.
9. Creates a catalog products and override the list price.
10. Creates a new write-in opportunity product with a manual discount applied.

Demonstrate

1. Creates Metric, and setting the Amount Data type to `Money`.
2. Creates a Rollup fields which targets the estimated values and actual values.
3. The `GoalRollupQuery` creates the goal rollup queries, locating the opportunities in the sales representative's area.
4. Creates three goals, one parent goal and two child goals.
5. The `RecalculateRequest` calculates the rollup for goals.

Clean up

Display an option to delete the sample data created in Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the records to achieve the same result.

Sample: Rollup goal data for a fiscal period against the stretch target count

Article • 05/02/2023

This sample shows how to roll up goal data for a fiscal period against stretch target count, representing a number of completed phone calls. You can download the sample from here.

This sample requires additional users that are not in your system. Create the three required users **as is** shown below manually in **Office 365**. Replace `yourorg` with the organization name.

First Name: Nancy
Last Name: Anderson
Security Role: Salesperson
UserName: nanderson@yourorg.onmicrosoft.com

First Name: David
Last Name: Bristol
Security Role: Salesperson
UserName: dbristol@yourorg.onmicrosoft.com

First Name: Kevin
Last Name: Cook
Security Role: SalesManager
UserName: kcook@yourorg.onmicrosoft.com

How to run this sample

To obtain a local copy of all samples and build them, follow these steps:

1. Download or clone the Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the instance or organization you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you need to enter information about which instance or

org you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

What this sample does

This sample shows how to roll up goal data for a fiscal period against stretch target count representing a number of completed telephone calls.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the version of the org.
2. Retrieves the sales manager and 2 sales representatives, created manually in **Office 365**.
3. Creates a `PhoneCall` row and supporting account row for the sample.
4. Creates ActivityPartys for the phone calls **From** field.
5. Creates an open phone call.
6. Closes the first phone call and creates a second one.
7. Closes the second phone call.

Demonstrate

1. Creates Metric, and setting the Metric type to **count** and enabling stretch tracking.
2. Creates a rollup field which targets completed (received) phone calls.
3. The `GoalRollupQuery` creates the goal rollup queries, locating the incoming and outgoing closed phone calls.
4. Creates three goals, one parent goal and two child goals.
5. The `RecalculateRequest` calculates the rollup for goals.

Clean up

Display an option to delete the sample data created in Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the records to achieve the same result.

Sample: Use rollup queries to track goals

Article • 03/03/2023

This sample shows how to use rollup queries to track goals. You can download the sample from here.

This sample requires additional three users that are not in your system. Create the three required users **as is** shown below manually in **Office 365**. Replace `yourorg` with the organization name.

First Name: Nancy
Last Name: Anderson
Security Role: Salesperson
UserName: nanderson@yourorg.onmicrosoft.com

First Name: David
Last Name: Bristol
Security Role: Salesperson
UserName: dbristol@yourorg.onmicrosoft.com

First Name: Kevin
Last Name: Cook
Security Role: SalesManager
UserName: kcook@yourorg.onmicrosoft.com

How to run this sample

To obtain a local copy of all samples and build them, follow these steps:

1. Download or clone the Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the instance or organization you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you need to enter information about which instance or org you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

What this sample does

This sample shows how to use rollup queries to track goals.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the current version of the org.
2. Retrieves the sales manager and 2 sales representatives, created manually in **Office 365**.
3. Creates records to support `SalesOrder` records.
4. Creates a new unit group for the sample.
5. Retrieves the default unit id that is automatically created when we created a new unit group.
6. The `Product` creates few products that are required for the sample.
7. The `PriceLevel` creates a new price list.
8. The `ProductPriceLevel` creates a price list item for the first product and applies volume discount.
9. Creates an account record for the sales order's potential customer id.
10. The `SalesOrderDetails` adds the product to the order with the price overridden with a negative value.

Demonstrate

1. Creates Metric, and setting the Metric type to `Amount` and setting amount data type to `Money`.
2. The `RollupField` creates a rollup field which targets the actual totals.
3. The `GoalRollupQuery` creates the goal rollup queries, locating the sales orders in the first sales representative's area (zip code: 60661) and with a value greater than $1000.
4. Creates two goals, one parent goal and one child goals.
5. The `RecalculateRequest` calculates the rollup for goals.

Clean up

Display an option to delete the sample data created in Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the records to achieve the same result.

Sample: Override goal total count and close the goal

Article • 03/03/2023

This sample shows how to override the goal total count and close the goal. You can download the sample from here.

This sample requires additional users that are not in your system. Create the required user **as is** shown below manually in **Office 365**. Replace `yourorg` with the `OrgName` of your organization.

First Name: Samantha
Last Name: Smith
Security Role: Marketing Manager
UserName: ssmith@yourorg.onmicrosoft.com

How to run this sample

To obtain a local copy of all samples and build them, follow these steps:

1. Download or clone the Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the instance or organization you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you need to enter information about which instance or org you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

What this sample does

This sample shows how to override the goal total count and close the goal.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the version of the org.
2. Retrieves the sales manager user created manually in **Office 365**.
3. Creates a `PhoneCall` row and supporting account row for the sample.
4. Creates ActivityPartys for the phone calls "From" field.
5. Creates an open phone call.
6. Closes the first phone call and creates a second one.
7. Closes the second phone call.

Demonstrate

1. Creates Metric, and setting the Metric type to `count` and also setting `IsAmount` to false.
2. The `RollupFields` creates a rollup field which targets completed (received) phone calls.
3. The `GoalRollupQuery` creates the goal rollup queries, locating the incoming and outgoing closed phone calls.
4. Creates a goal to track the open incoming phone calls.
5. The `RecalculateRequest` calculates the rollup for goals.
6. Overrides the actual and in-progress values of the goal.
7. Set `goal.IsOverridden =true` prevents the rollup values to be overwritten during the next recalculate operation.

Clean up

Display an option to delete the sample data created in Setup. The deletion is optional in case you want to examine the tables and data created by the sample. You can manually delete the rows to achieve the same result.

Product catalog tables

Article • 03/03/2023

A product catalog is a collection of products with their pricing information. The *product catalog* tables let you create a rich product classification system in Dynamics 365 Sales that provides support for:

- Defining hierarchical structure of product families and products with configurable properties (attributes) that help you reduce the number of product stock keeping units (SKUs) needed to maintain your product catalog.
- Selling individual products or grouping them into bundles and kits. A bundle or a kit is a collection of products that is sold as single unit. Product bundling is useful in grouping products in a way that customers get more benefit from the full line of products or to offer discounts on bundled products.

  > **Note**
  >
  > Kits are deprecated in the current release of Dynamics 365 Sales. You should use bundles instead.

- Defining related products in the system (substitute, cross-sell, up-sell, or accessory). The related products for a product are displayed as suggestions to the sales agents when they add the product to an opportunity, quote, order, or invoice.
- Defining multiple pricing and discounting models. You can also use custom pricing instead of the Dynamics 365 Sales system pricing to calculate prices when you associate a product or bundle to an opportunity, quote, order, or invoice. Further, you can select whether to apply discounts for products at the per-unit or line level.
- Specify whether you want the price level (price list) to be automatically set for an opportunity, quote, order, or invoice based on the sales territory relationship of the user.
- Specifying localized values for certain product properties (attributes) to make the product names and descriptions available in the user-preferred languages.

  Use the following tables in Dynamics 365 Sales to manage your product catalog.

Table	Description

Table	Description
`Product`	A *product* is either a physical inventory item (such as lumber or a nail), or a service (such as a haircut or tree pruning) that a company sells. Products from the product catalog can be used to build quotes and orders, and can be associated with opportunities or service cases. In addition, each product can contain links to sales literature and links to information about competitors and their products. More information: Product Table
`ProductSubstitute (Product Relationship)`	A *product relationship* contains information about the selling relationship between two products, including the relationship type, such as up-sell, cross-sell, substitute, or accessory. More information: ProductSubstitute Table
`DynamicProperty (Property)`	A *property* stores information about a product property such as its name, the product family record that its associated with, attributes such as data type, whether its read only, hidden, or required.
`DynamicPropertyOptionSetItem (Property Option Set Item)`	A *property option set item* stores information about individual options for a product property of option set data type.
`DynamicPropertyInstance (Property Instance)`	A *property instance* stores the instance of a product property along with its values. More information: DynamicPropertyInstance Table
`PriceLevel (Price List)`	A *price list* contains one to many individual product and bundle prices, aggregated together into a list for categorization purposes. This enables easier maintenance and usability of the list. More information: PriceLevel Table
`ProductPriceLevel (Price List Item)`	A *price list item* represents configurations that enable a business unit to control how prices are calculated in Dynamics 365 Sales such as quantity selling options, pricing method, rounding policy, and the rounding option. More information: ProductPriceLevel Table
`Discount`	*Discounts* enable a product to have different sales prices, depending on the quantity purchased. More information: Discount Table
`DiscountType (Discount List)`	A *discount list* is an aggregation of different discounts, specifying how much of a discount the user can receive when the purchasing amount falls between certain ranges. Discount lists can exist at each quantity level, together with detail lines that contain the quantity breakpoints, and the reduction in the price. More information: DiscountType Table

Table	Description
`UoM (Unit)`	A *unit* is a measurement that specifies in what quantity a product will be sold. More information: UoM Table
`UoMSchedule (Unit Group)`	A *unit group* contains one to many types of unit of measurement, as calculated from a base unit. A product is tied to a unit group in which it is sold. More information: UoMSchedule Table

These videos describe how products are administered and used in Microsoft Dynamics CRM 2015 and Microsoft Dynamics CRM Online 2015 Update:

- Video: Product Taxonomy Administration in Microsoft Dynamic CRM 2015
- Video: Salesperson Experience with Product Taxonomy in Microsoft Dynamics CRM 2015

In This Section

Manage product families, products and bundles

Publish, revise, revert, retire, and activate products (product lifecycle)

Manage Product Pricing

Use custom pricing for products

Set default price level for opportunity, quote, order, invoice

Product discounting methods

Localize product property values

Product Table

ProductSubstitute Table

ProductAssociation Table

DynamicPropertyInstance Table

PriceLevel Table

ProductPriceLevel Table

Discount Table

DiscountType Table

UoM Table

UoMSchedule Table

Sample: Create and publish products

Sample: Clone product records

Sample: Add products to a bundle

Sample: Calculate Price plug-in

Related Sections

Opportunity Tables

Quote, order, and invoice tables

See also

Video: Product Taxonomy Administration in Microsoft Dynamic CRM 2015

Video: Salesperson Experience with Product Taxonomy in Microsoft Dynamics CRM 2015

Create and manage product families, products, bundles, and product properties

Article • 03/03/2023

Define your product catalog by organizing your products in a hierarchical structure by creating products and bundles under a product family, defining related products, and adding properties (attributes) to the parent product family so that all the child products and bundles under a product family automatically inherit the properties.

By default, when you create a product family, product, or bundle record, they are in the **Draft** state. After you have created a product, defined related products, and configured attributes for the parent product family record, you must publish the product family, product, or bundle record for them to become available in the system to your sales agents for selling. More information: Publish a product family, product, or bundle

> **Note**
>
> For products not associated with a product family, that is, products that don't have a parent product family record assigned to them, you can create them directly in an **Active** state by setting the **Organization.CreateProductsWithoutParentInActiveState** column to `1` (true). By default, this column is set to `0` (false) for a fresh installation of Dynamics 365 for Customer Engagement and to `1` (true) if you're upgrading from a previous version of Customer Engagement to ensure compatibility for your applications working with the previous version of Customer Engagement where the product records were created in an **Active** state.
>
> You can also use the **Sales** tab in the system settings area in Dynamics 365 for Customer Engagement or Microsoft Dynamics 365 for Outlook to specify whether products are created in an **Active** state. More information: **Manage product catalog configuration**

Define products, product families, and bundles

Use the `Product.ProductStructure` column to define whether an item is a product family, product, or bundle. Set the value of this column to:

- **1** to create a product
- **2** to create a product family
- **3** to create a bundle

  Here are some important points to consider while defining product families, products, and bundles:

- A product family record can contain multiple child product family, product, and bundle instances in a hierarchical structure. For a child product family, child product, or child bundle instance, you define the parent product family instance using the `Product.ParentProductId` column. You can't change the parent record once you've set it.
- A product or bundle can't be set as a parent, which implies that a product or bundle record can't have child records.
- A product family, product, or bundle instance can be part of only one product family instance.
- There is no limit on the nesting level for a product family.
- The `Product.ValidFromDate` and `Product.ValidToDate` attributes don't have any out-of-box business logic associated with them, except that there is a check to ensure that the date in `Product.ValidToDate` should be later than or equal to the date in `Product.ValidFromDate`. If required, you can implement your own business logic based on these attributes. For example, you could run a scheduled job to automatically retire last season's products by using the date value in the `Product.ValidToDate` column.

  The following code sample demonstrates how you can create a product family and a child product record.

C#

```
// Create a product family
Product newProductFamily = new Product
{
   Name = "Example Product Family",
   ProductNumber = "PF001",
   ProductStructure = new OptionSetValue(2)
};
_productFamilyId = _serviceProxy.Create(newProductFamily);
Console.WriteLine("\nCreated {0}", newProductFamily.Name);

// Create a product record under the product family
```

```
Product newProduct1 = new Product
{
   Name = "Example Product 1",
   ProductNumber = "P001",
   ProductStructure = new OptionSetValue(1),
   ParentProductId = new EntityReference(Product.EntityLogicalName,
_productFamilyId),
   QuantityDecimal = 2,
   DefaultUoMScheduleId = new EntityReference(UoMSchedule.EntityLogicalName,
_unitGroupId),
   DefaultUoMId = new EntityReference(UoM.EntityLogicalName, _unit.Id)
};
_product1Id = _serviceProxy.Create(newProduct1);
Console.WriteLine("Created {0} under the product family", newProduct1.Name);
```

Define product properties

Product properties help you define the characteristics of product such as its size, color, or component. A product property is defined using the `DynamicProperty` table. While defining a product property, you can only associate it to a product family record in a `Draft` state, and not to a product or bundle record. The maximum number of product properties that can be associated to a draft product family record is determined by the following organization setting: **Organization.MaximumDynamicPropertiesAllowed**. The number comes into effect when you publish a child product record or bundle under a product family that the properties are attached to, and not at the time when you attach the properties to a *draft* product family record.

> **Tip**
>
> You can also use the **Sales** tab in the system settings area in Dynamics 365 Customer Engagement (on-premises) or Dynamics 365 for Outlook to configure the maximum number of product properties. More information: **Manage product catalog configuration**.

While creating a product property, you specify its name, the product family record in `Draft` state with which it is associated, attributes of the property such as whether its hidden, required, or read-only, and the data type of the property. A product property can be of one of the following data types:

Value	Data Type
0	Option Set
1	Decimal

Value	Data Type
2	Floating Point Number
3	Single Line of Text
4	Whole Number

You cannot change the data type of a product property after its created. When you create a product property, its created in the `Draft` state.

The following sample code demonstrates how you can create a product property:

C#

```
DynamicProperty newProperty = new DynamicProperty
{
    Name = "Example Property",
    RegardingObjectId = new EntityReference(Product.EntityLogicalName,
                                            _productFamilyId),
    IsReadOnly = true,
    IsRequired = true,
    IsHidden = false,
    DataType = new OptionSetValue(3), //Single line of text
    DefaultValueString = "Default Value"
};
_productPropertyId = _serviceProxy.Create(newProperty);
```

For the complete sample, see Sample: Create and publish products

> **Note**
>
> When you create a product property of `Option Set` data type, you must define individual options for the product property by creating `DynamicPropertyOptionSetItem` table records. Each table record stores information about the individual option where the `DynamicPropertyOptionSetItem.DynamicPropertyOptionName` and `DynamicPropertyOptionSetItem.DynamicPropertyOptionValue` attributes define the option name and value respectively, and you can associate individual option records to the parent product property instance using the `DynamicPropertyOptionSetItem.DynamicPropertyId` column.

For information about creating and managing product properties using the web client, see Use properties to describe a product

> **Note**
>
> The way you define a product property determines how it can be used by the sales agent at run time, that is, while adding an associated product to an opportunity, quote, order, or invoice. An *updatable* product property's value can be changed at run time, whereas the value of a *read-only* product property can't be. For a product property set as *required*, a value for the property must be specified at the run time. Otherwise, the property is displayed as unresolved. A *hidden* property won't be displayed to sales agents at the run time.
>
> Also, product properties don't affect the pricing of a product. This implies that the Dynamics 365 Customer Engagement (on-premises) pricing engine doesn't support changing the price of a product based on a change in the product property values.

Change product properties

It's important to know the various states of the product property in order to understand how and when it can be changed. A product property can be in **Draft**, **Active**, or **Retired** state. When a product is created, its in the **Draft** state, and changes to the **Active** state once the product family record with which it is associated is published. When the associated product family record is retired, the state of the product property also changes to `Retired`.

A product property can be changes at two levels: *first* at the product family level to which the product property is associated with; *second* at the child product family, product, or bundle level where the product property is inherited.

Changing product property for the product family that its associate with

For a `Draft` product family record, you can change a product property associated to it. Once you publish the product family record (changes to `Active` state), you cannot change the product property until you revise the product family record. After revising the product family record (changes to `Under Revision` state), and then *overwrite* the published (active) version of the property to make changes. For information about product life cycle, see Publish, revise, revert, retire, and activate products (product lifecycle)

Changing inherited product property for the child product family, product, or bundle

For a product property in the `Draft` state, the child product family, product, and bundle records can *override* the inherited property to define their own version of the property. For example, override the inherited property to change its name or change attributes

from hidden to visible, required to optional, or read-only to updatable. You cannot override or change the data type of the inherited property.

To override a product property, you create an instance of the product property and set the `BaseDynamicPropertyId` property to the GUID of the property you are overriding. Additionally, you also associate the new property instance to the child product family, product, or bundle record where its being overridden.

The following sample code demonstrates how you can override an existing product property record, say with GUID `_productPropertyId`, and associate the overridden property to the product record, say with GUID `_product1Id`. After this, you can update the attributes of the new property to specify your own values to complete the override.

C#

```
// Override a product property
DynamicProperty newOverrideProperty = new DynamicProperty();
newOverrideProperty.BaseDynamicPropertyId = new
EntityReference(DynamicProperty.EntityLogicalName,
                            _productPropertyId);
newOverrideProperty.RegardingObjectId = new
EntityReference(Product.EntityLogicalName, _product1Id);
_productOverridenPropertyId = _serviceProxy.Create(newOverrideProperty);

// Retrieve the attributes of the cloned property you want to update
ColumnSet columns = new ColumnSet();
columns.AddColumns("name", "isreadonly", "isrequired");
DynamicProperty retrievedOverridenProperty =
(DynamicProperty)_serviceProxy.Retrieve(

DynamicProperty.EntityLogicalName, _productOverridenPropertyId,
                                                columns);

// Update the attributes
retrievedOverridenProperty.Name = "Overridden Example Property";
retrievedOverridenProperty.IsReadOnly = true;
retrievedOverridenProperty.IsRequired = false;
_serviceProxy.Update(retrievedOverridenProperty);
```

For the complete sample, see Sample: Create and publish products

For a product property in the `Active` state, you can *overwrite* the inherited property for the child product family, product, or bundle record provided both the following clauses are true:

- The child product family, product, or bundle record is in the **Under Revision** state.
- The inherited active product property is already overridden.

To overwrite a product property, you create an instance of the product property and set the `BaseDynamicPropertyId` property to the GUID of the already overridden property. Additionally, you also associate the new property instance with the product family, product, or bundle record that is in the `Under Revision` stage.

The following sample code demonstrates how you can overwrite a product property record in the active state that is already overridden, say with GUID `_productOverridenPropertyId`, and associate the new property to the product record in the `Under Revision` state, say with GUID `_product1Id`. After this, you can update the attributes of the new property to specify your own values, and complete the overwrite.

C#

```
// Overwrite a product property
DynamicProperty newOverwriteProperty = new DynamicProperty();
newOverwriteProperty.BaseDynamicPropertyId = new
EntityReference(DynamicProperty.EntityLogicalName,
                            _productOverridenPropertyId);
newOverwriteProperty.RegardingObjectId = new
EntityReference(Product.EntityLogicalName,
    _product1Id);
_productOverwrittenPropertyId = _serviceProxy.Create(newOverwriteProperty);

// Retrieve the attributes of the cloned property you want to update
ColumnSet myCols = new ColumnSet();
myCols.AddColumns("name", "isreadonly", "isrequired");
DynamicProperty retrievedOverwrittenProperty =
(DynamicProperty)_serviceProxy.Retrieve(

DynamicProperty.EntityLogicalName, _productOverwrittenPropertyId,
                                                    myCols);

// Update the attributes of the cloned property to complete the overwrite
retrievedOverwrittenProperty.Name = "Overwritten Example Property";
retrievedOverwrittenProperty.IsReadOnly = true;
retrievedOverridenProperty.IsRequired = false;
_serviceProxy.Update(retrievedOverwrittenProperty);
```

For the complete sample, see Sample: Create and publish products

Bundles and kits

A *bundle* is a feature introduced in Customer Engagement to replace the older kit functionality. Similar to a kit, a bundle is a collection of products that is sold as single unit. Product bundling is useful in grouping products in a way that customers get more

benefit from the full line of products or to offer discounts on bundled products that enables you to group products and sell as a single unit.

Only products can be added to a bundle; you can't add a product family, a bundle, or a kit record to a bundle. You can add products to a bundle or a kit by creating a product association record using the `ProductAssociation` table. The `ProductAssociation.ProductId` record specifies the bundle or kit that you want to add a product to and the `ProductAssociation.AssociatedProduct` specifies the product to be added. The maximum number of products that can be added to a bundle is determined by the following organization setting: `Organization.MaxProductsinBundle`.

You can also use the **Sales** tab in the system settings area in Dynamics 365 Customer Engagement (on-premises) or Dynamics 365 for Outlook to specify the maximum number of products that can be added to a bundle. More information: Manage product catalog configuration

The following code sample demonstrates how you can add products to a bundle.

C#

```
// Add a product to a bundle
ProductAssociation newAssociation1 = new ProductAssociation
{
   AssociatedProduct = new EntityReference(Product.EntityLogicalName,
_product1Id),
   ProductId = new EntityReference(Product.EntityLogicalName, _bundleId),
   Quantity = new decimal(15),
   ProductIsRequired = new OptionSetValue(0),
   UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id)
};
_product1AssociationId = _serviceProxy.Create(newAssociation1);

// Add another product to the bundle
ProductAssociation newAssociation2 = new ProductAssociation
{
   AssociatedProduct = new EntityReference(Product.EntityLogicalName,
_product2Id),
   ProductId = new EntityReference(Product.EntityLogicalName, _bundleId),
   Quantity = new decimal(20),
   ProductIsRequired = new OptionSetValue(1),
   UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
};
_product2AssociationId = _serviceProxy.Create(newAssociation2);

if ((_product1AssociationId != null) && (_product1AssociationId != null))
Console.WriteLine("\nAdded both the products to the bundle");
```

For the complete sample, see Sample: Add products to a bundle.

Differences between kits and bundles

Both kits and bundles enable you to group products into a single unit, but here are some differences between the two.

Kits	Bundles
All the products in a kit are mandatory.	Some products in a bundle can be optional.
Kits support nesting; you can add a kit to another kit.	You can't add a bundle to another bundle. You can only add products to a bundle.
While adding a kit to an opportunity, quote, order, or invoice, you can only see the kit level details; you can't see individual products in the kit.	While adding a bundle to opportunity, quote, order, or invoice, you can see the bundle level details as well as individual products in the bundle.

> ⓘ **Note**
>
> Kits are deprecated in Dynamics 365 Customer Engagement (on-premises); you should use bundles instead.

Define product relationships for enhanced suggestions during product sale

You can define related products for a product that are displayed as suggestions to your sales agents during opportunity or order management. The product suggestions for a product enables your sales agents to recommend related products and bundles/kits to the customers, and increase product sales. You can define the following relationships for a product: **accessory**, **cross-sell**, **substitute**, and **up-sell**. For example, Surface Pro can be added as an up-sell product for Surface RT so that when your sales agent is adding Surface RT to any opportunity, quote, order, or invoice, Surface Pro will be suggested as the up-sell option.

Use the **ProductSubstitute.SalesRelationshipType** column to define product relationships. Set the value of this column to:

- **0** for up-sell
- **1** for cross-sell
- **2** for accessory

- **3** for substitute

  While defining product relationships, it's important to define the direction of the relationship to prevent duplication of data. The supported directions the product relationships are:

Product relationship	Direction
Accessory	Uni-directional
Cross-sell	Uni-directional or Bi-directional
Substitute	Uni-directional or Bi-directional
Up-Sell	Uni-directional

Use the **ProductSubstitute.Direction** column to specify direction for a product relationship. Set the value of this column to:

- **0** for uni-directional
- **1** for bi-directional

  The following code sample demonstrates how you can define relationships for products.

```
C#
```

```
// Set product relationship
// Set product1 and product2 as substitute of each other (bi-directional)
ProductSubstitute newProductRelation = new ProductSubstitute
{
   SalesRelationshipType = new OptionSetValue(3),
   Direction = new OptionSetValue(1),
   ProductId = new EntityReference(Product.EntityLogicalName, _product1Id),
   SubstitutedProductId = new EntityReference(Product.EntityLogicalName,
_product2Id)
};
_productRelationId = _serviceProxy.Create(newProductRelation);
```

Clone a product family, product, or bundle

Use the CloneProductRequest message to clone a product family, product, or bundle record, and create a copy of the record under the same parent node. You must provide the ID of the record to clone. Cloning a product record also copies the properties of the product. The cloned record is created with the date and time stamp appended to the original values in the **Product.Name** and **Product.ProductNumber** attributes; the date

time stamp denotes the time when the record was cloned. The following code sample demonstrates how to clone a product.

```
C#

CloneProductRequest cloneReq = new CloneProductRequest
{
   Source = new EntityReference(Product.EntityLogicalName, _productId)
};

CloneProductResponse cloned =
(CloneProductResponse)_serviceProxy.Execute(cloneReq);
_productCloneId = cloned.ClonedProduct.Id;

// Retrieve the cloned product record
Product retrievedProduct =
(Product)_serviceProxy.Retrieve(Product.EntityLogicalName, _productCloneId,
new ColumnSet(true));
Console.WriteLine("\nCreated clone product: {0}", retrievedProduct.Name);
```

Next step

Publish your product records to make products available for selling by your sales agents. More information: Publish a product family, product, or bundle

See also

Publish, revise, revert, retire, and activate products (product lifecycle)
Sample: Create and publish products
Sample: Clone product records
Sample: Add products to a bundle
Product catalog tables

View product hierarchy (Sales)

Article • 03/13/2023

Get a visual snapshot of the products your organization sells by looking at the product hierarchy.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System Administrator More information: Predefined security roles for Sales

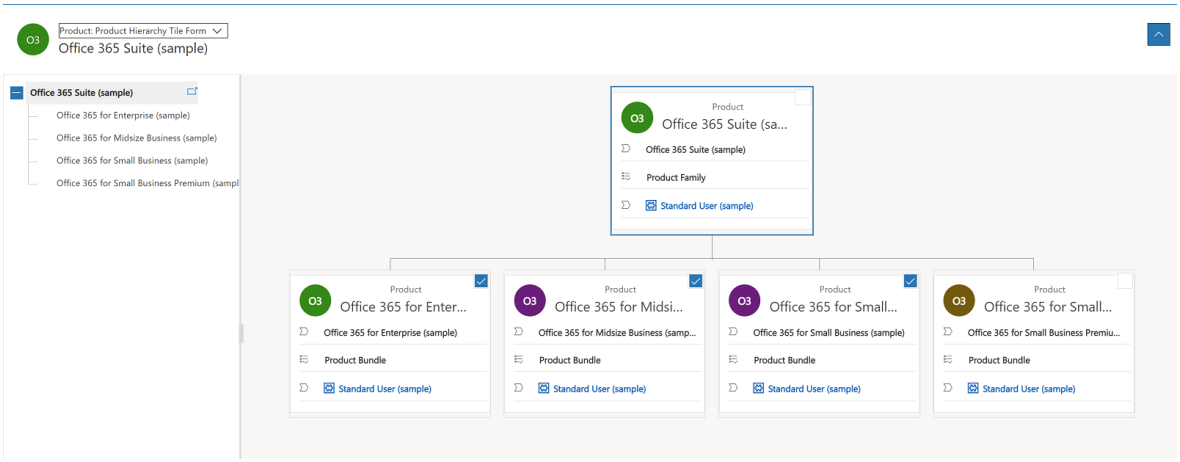
What is a product hierarchy

A product hierarchy gives you a visual snapshot of the products your organization sells. It makes it easy to see what products are available to sell and how they are connected. With this information at your fingertips, you can take whatever actions you need to on any product from a single place and improve your chances of a sale.

View hierarchy of a product family or bundle

1. Go to **Sales** > **Products**.
2. In the list of products, open a product family, or bundle whose hierarchy you want to see, and on the command bar, select **View Hierarchy**.

   You'll see the product in a tree structure and a visual organization of all products in the hierarchy.



Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Set up a product catalog: Walkthrough
Create a product family

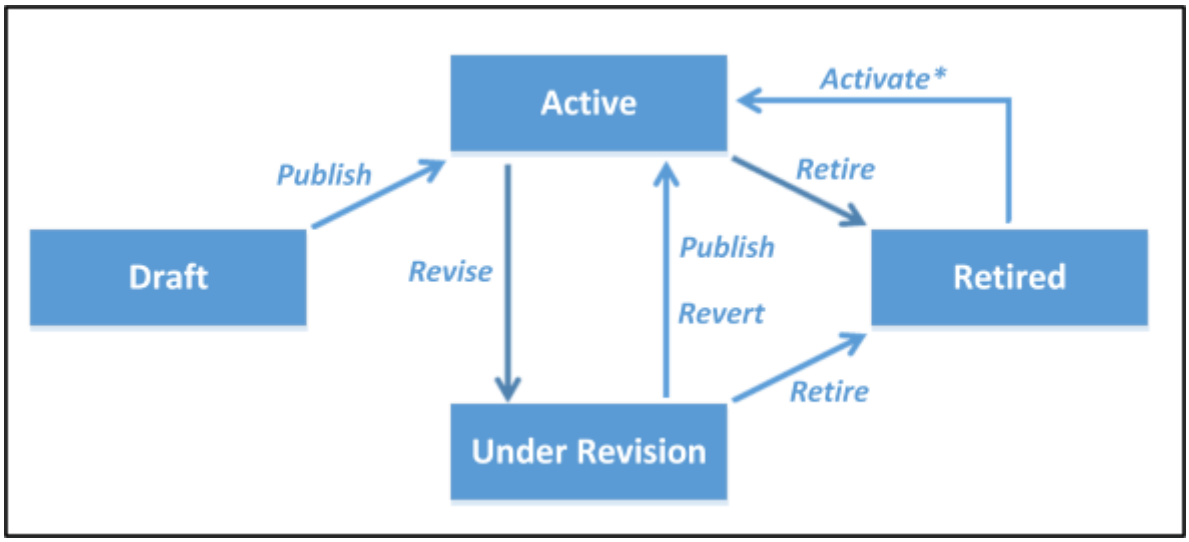
Publish, revise, revert, retire, and activate products (product lifecycle)

Article • 03/03/2023

By default, a product record is in the **Draft** state when you create it, and isn't available for your sales agents. The record becomes available to your sales agents only when you publish it, which changes the state of the record to **Active**. For products that aren't associated with a product family, that is, products that don't have a parent product family record, you can create them directly in an **Active** state by setting the **Organization.CreateProductsWithoutParentInActiveState** column to `1` (true). By default, this column is set to `0` (false) for a fresh installation of Dynamics 365 Sales and to `1` (true) if you're upgrading from a previous version of Dynamics 365 Sales to ensure compatibility for your applications working with the previous version of Dynamics 365 where the product records were created in an **Active** state.

You can also use the **Sales** tab in the system settings area in Dynamics 365 Sales or Microsoft Dynamics 365 for Outlook to specify whether products are created in an active state. More information: Manage product catalog configuration

Furthermore, you can revise, revert, retire, and activate your product records to maintain your product catalog as per your business requirements. The following illustration shows the state transitions of a product when you perform various operations on a product record in Dynamics 365 Sales.



Activate* : The activate operation is applicable for certain type of product records only. More information: Activate a product or kit record

Publish a product family, product, or bundle

Use the SetStateRequest message to publish an individual product family, product, or bundle record. In this case, the state of the target record changes from **Draft** to **Active**. A child product or bundle record under a product family record can be published only if the parent product family record is published (in the **Active** state). You cannot publish multiple product family, product, or bundle records at once.

Use the PublishProductHierarchyRequest message to publish a product family hierarchy including the child products and bundles. You can use this message only with a product family record. The state of the target product family record and all the child product or bundle records changes from **Draft** to **Active**.

The following code sample demonstrates how you can publish an individual product family, product, or bundle record.

C#

```
SetStateRequest publishRequest = new SetStateRequest
{
   EntityMoniker = new EntityReference(Product.EntityLogicalName,
_productId),
   State = new OptionSetValue((int)ProductState.Active),
   Status = new OptionSetValue(1)
};
_serviceProxy.Execute(publishRequest);
```

The following code sample demonstrates how you can publish a product family, including its child records.

C#

```
PublishProductHierarchyRequest publishRequest = new
PublishProductHierarchyRequest
{
   Target = new EntityReference(Product.EntityLogicalName, _productFamilyId)
};
_serviceProxy.Execute(publishRequest);
```

For the complete sample code, see Sample: Create and publish products.

> **Important**
>
> For the product or bundle records that aren't associated with a product family, you must publish them individually after creating or editing them to make them available to your sales agents. For product or bundle records associated with a

product family, use the **PublishProductHierarchyRequest** message on the parent product family record to publish multiple child product or bundle records, along with the parent product family record, at once.

Also, for products that aren't associated with a product family, you can create them directly in an **Active** state by setting the **Organization.CreateProductsWithoutParentInActiveState** column to `1` (true). Alternately, use the **Sales** tab in the system settings area in Dynamics 365 Sales or Microsoft Dynamics 365 for Outlook to specify whether products not associated with product families are created in an active state. More information: **Configure product catalog information**

Revise a product family, product, or bundle

Use the SetStateRequest message to revise a product family, product, or bundle record.

- When invoked for a product family record, it revises the product family and its child records.
- When invoked for a product or a bundle record, it revises the individual record only.

  The state of the target record changes from **Active** to **Under Revision**.

  After the product properties (columns) are updated, the target record must to be published for the changes to reflect. On publishing, the state of the target record changes from **Under Revision** to **Active**.

> **Note**
>
> When you revise a product and change the properties, Dynamics 365 Sales internally creates a new version of the product and copies the product details from the existing product to the newer version. The new product version has all the details including price lists, product relationships, and properties. The opportunities created with the older version of the product can continue to refer to the older version of the product. The opportunities that are created after the product is revised or retired will refer to the current (newer) product version.

Revert a product family, product, or bundle

Use the RevertProductRequest message to revert a product family, product, or bundle record to its last **Active** state. All the product property (column) changes done to the record since it was last published (**Active** state) will be lost.

- When invoked for a product family record, it reverts the product family and its child records to their last **Active** state, and all the changes done to the product properties of the records since they were last published will be lost.
- When invoked for a product or a bundle record, it reverts the individual product or bundle record to its last **Active** state, and all the changes done to the product properties of the record since it was last published will be lost.

  The state of the target record changes from **Under Revision** to **Active**.

  The following code sample demonstrates how to revert a product record.

```
C#

RevertProductRequest revertReq = new RevertProductRequest
{
   Target = new EntityReference(Product.EntityLogicalName, _productId)
};
RevertProductResponse reverted =
(RevertProductResponse)_serviceProxy.Execute(revertReq);
```

Retire a product family, product, or bundle

Use the SetStateRequest message to retire a product family, product, or bundle record.

- When invoked for a product family record, it retires the entire product family hierarchy.
- When invoked for a product or a bundle record, it retires the individual record only.

  The state of the target record changes to **Retired**.

> ⓘ **Note**
>
> You can't retire a product that is part of a published (**Active**) bundle. Also, you can't add a retired product to a bundle or can't add a product to a retired bundle.

Activate a product or kit record

Use the SetStateRequest message to activate only the following types of record:

- A retired product record that does not have a parent record.
- A retired kit record.

  The state of the target record changes from **Retired** to **Active**.

> **Note**
>
> You can't activate a retired product family or a retired bundle record.

See also

Manage Product Pricing
Create and manage product families, products and bundles
Product catalog tables

Product pricing methods

Article • 03/03/2023

Dynamics 365 Sales uses the `ProductPriceLevel.PricingMethodCode` column to determine prices. The value of this column affects:

- How the price for the product is determined for each unit of measure that is defined for that product.
- What columns are required when you create or update a product price level and its associated product.

  You can also use custom pricing for products instead of using the Dynamics 365 system pricing. More information: Use custom pricing for products

  The following table lists the formulas that are used for each value and the columns that are required by each value.

Drop-down list value and equivalent pricing method value	**Description and required columns**
Currency Amount CurrencyAmount = 1	The price is specified for each unit of measure for each product. price = amount For each unit of measure for each product, use the `ProductPriceLevel.Amount` column. **Note:** The `ProductPriceLevel.Amount` column isn't platform required if you're not using the pricing methods provided by Dynamics 365 for Customer Engagement. However, if you use the `Currency Amount` pricing method to determine a price, this column is platform required and you must specify a value for this column.
Percent of List PercentListPrice = 2	The price is calculated based on the manufacturer's or distributor's list price. calculated price = list price x percentage For each unit of measure for each product, you must enter data for the following columns: - `Product.Price` column. This is the **List Price** in the **Product** form. - `ProductPriceLevel.Percentage` column. This is the desired percentage of the list price. - `ProductPriceLevel.RoundingPolicyCode` column. This is the policy for rounding the price list.

Drop-down list value and equivalent pricing method value	Description and required columns
Percent Markup - Current Cost MarkupCurrentCost = 3	The price is calculated as a percentage of your current cost for the item. calculated price = current cost x 100% + percentage For each unit of measure for each product, you must enter data for the following columns: - `Product.CurrentCost` column. You must update this cost every time that you receive a shipment of the item. - `ProductPriceLevel.Percentage` column. This is the percent markup. - `ProductPriceLevel.RoundingPolicyCode` column.
Percent Margin - Current Cost MarginCurrentCost =4	The price is based on the profit percentage you want to achieve and your current cost for the item. calculated price = current cost + [(current cost x percentage)/ (100% - percentage)] For each unit of measure for each product, you must enter data for the following columns: - `Product.StandardCost` column. You must update this cost every time when you receive a shipment of the item. - `ProductPriceLevel.Percentage` column. This is the profit percentage you want to achieve. - `ProductPriceLevel.RoundingPolicyCode` column.
Percent Markup - Standard Cost MarkupStandardCost = 5	The price is calculated as a percentage of the standard cost of the item. calculated price = standard cost x 100% + percentage Because the standard cost is updated periodically, the standard cost amount in this equation is an average and will not always be the same as the amount you paid most recently for the item. For each unit of measure for each product, you must enter data for the following columns: - `Product.StandardCost` column. Every time that you update the standard cost, the price changes. - `ProductPriceLevel.Percentage` column. This is the percent markup. - `ProductPriceLevel.RoundingPolicyCode` column.

Drop-down list value and equivalent pricing method value	Description and required columns
Percent Margin - Standard Cost MarginStandardCost = 6	The price is based on the profit percentage you want to achieve and the standard cost of the item. calculated price = standard cost + [(standard cost x percentage)/(100% - percentage)] Because the standard cost is updated periodically, the standard cost amount in this equation is an average and will not always be the same as the amount you paid most recently for the item. For each unit of measure for each product, you must enter data for the following columns: - `Product.StandardCost` column. Every time that you update the standard cost, the price changes. - `ProductPriceLevel.Percentage` column. This is the profit percentage you want to achieve. - `ProductPriceLevel.RoundingPolicyCode` column.

To set the values for the `ProductPriceLevel.PricingMethodCode` column and the other product price level table columns, use the IOrganizationService.Update method, passing an instance of the `ProductPriceLevel` class. To set the values for the product columns, use the methods in the `Product` class.

See Also

ProductPriceLevel Table
Product Table
Product Catalog Tables

Use custom pricing for products

Article • 03/03/2023

The pricing engine in Dynamics 365 Sales supports a standard set of pricing and discounting methods, which might be limiting to your business depending on your specific requirements for applying taxation, discounts, and other pricing rules for your products. If you want to define custom pricing for your products in opportunities, quotes, orders and invoices, you can use the `CalculatePrice` message.

To use the custom pricing for your opportunities, quotes, orders, and invoices:

1. Set the value of the `Organization.OOBPriceCalculationEnabled` column to `0` (false). You can also use the **Sales** tab in the system settings area in Dynamics 365 or Microsoft Dynamics 365 for Outlook to disable system pricing. More information: Configure product catalog information

2. Create a plug-in that contains your custom pricing code for calculating the price for your opportunity, quote, order, or invoice.

3. Register the plug-in on the `CalculatePrice` message.

   When the `Organization.OOBPriceCalculationEnabled` column is set to `0`, every time an opportunity, quote, order, or invoice is created or changes, the plug-in registered on the `CalculatePrice` executes to calculate prices as specified in your custom code in the plug-in. The CalculatePriceRequest message doesn't have any usage scenario of its own. It's exposed so that you can plug in your own custom pricing calculation logic if you don't want to use the out-of-box pricing provided by Dynamics 365 Sales.

   For a sample plug-in that calculates custom pricing for opportunities, quotes, orders, and invoices, see Sample: Calculate Price plug-in.

   If you want to revert to using the out-of-box pricing for your opportunities, quotes, orders, and invoices, set the value of the `Organization.OOBPriceCalculationEnabled` column to `1` (true). You can also use the **Sales** tab in the system settings area in Dynamics 365 or Dynamics 365 for Outlook to enable system pricing. More information: Configure product catalog information

See also

Product pricing methods
Sample: Calculate Price plug-in

Product catalog tables

Set default price level for opportunity, quote, order, and invoice

Article • 03/03/2023

You can automatically set a default price level (price list) for an opportunity, quote, order, or invoice based on the sales territory of the user who creates or updates the opportunity, quote, order, or invoice row.

Enable automatic selection of default price level

To enable selection of default price level for opportunities, quotes, orders, or invoices based on the sales territory relationship, the following conditions must be true:

- The value of the `Organization.UseInbuiltRuleForDefaultPriceSelectionRule` column is set to 1 (true). By default, the value is set to 1 (true).

  You can also use the **Sales** tab in the system settings area in Dynamics 365 or Microsoft Dynamics 365 for Outlook to specify whether the default price level should be automatically selected for opportunities. More information: Configure product catalog information

- A price level is associated with a territory using the **Territory Default Pricelist** connection role, and the territory is assigned to the user who creates or updates the opportunity, quote, order, or invoice row.

- The user has permission on the price level that is associated with the territory by using the **Territory Default Pricelist** connection role.

  Dynamics 365 internally uses the GetDefaultPriceLevelRequest message to determine the default price level for an opportunity, quote, order, or invoice based on the current user and the territory relationship with the price level. This is how the price level is set:

- If a single price level is returned, the price level is automatically set for the opportunity, quote, order, or invoice row that the user is creating or updating.

- If multiple price levels are returned, the price level field isn't populated and the user must specify a price level for the opportunity, quote, order, or invoice row.

Disable automatic selection of default price level

You can turn off the automatic selection of a default price level for your opportunity, quote, order, or invoice by setting the value of the `Organization.UseInbuiltRuleForDefaultPriceSelectionRule` column to 0 (`false`), or by using the **Sales** tab in the system settings area in Dynamics 365 or Microsoft Dynamics 365 for Outlook. More information: Configure product catalog information

Extend default price level selection

Instead of using the out-of-box rule for the selection of default price level for an opportunity, quote, order, and invoice, you can use the GetDefaultPriceLevelRequest message to specify your custom logic for selecting default price level.

> **Note**
>
> This feature was introduced in Dynamics CRM Online 2015 Update 1 and CRM 2016 (on-premises).

To extend the default price level selection:

1. Ensure that the value of the `Organization.UseInbuiltRuleForDefaultPriceSelectionRule` column is set to 1 (true).
2. Create a plug-in that contains custom code for returning price levels based on your business requirement.
3. Register the plug-in on the `GetDefaultPriceLevel` message.

   When you register a plug-in on the `GetDefaultPriceLevel` message, every time you create an opportunity, quote, order, or invoice row in Dynamics 365, the plug-in is executed to return the price level based on your custom code.

- If a single price level is returned as a result of the plug-in execution, the price level is set for the opportunity, quote, order, or invoice row that the user is creating.
- If multiple price levels are returned as a result of the plug-in execution, the price level field is not populated and the user specifies a price level for the opportunity, quote, order, or invoice row.

> **Note**
>
> When you extend the default price level selection by registering a plug-in on the `GetDefaultPriceLevel` message, the out-of-box selection of price level is disabled.

See also

PriceLevel table
GetDefaultPriceLevelRequest
Territory table Opportunity tables
Quote, order, and invoice tables
Write a plug-in

Product discounting methods

Article • 03/03/2023

Discounts can be applied either at the line item level or at per unit level. Use the `Organization.DiscountCalculationMethod` column to specify the discount method. Set the value of the column to:

- **0** for discounting at line item level
- **1** for discounting at per unit level

  You can also use the **Sales** tab in the system settings area in the Dynamics 365 Sales or Microsoft Dynamics 365 for Outlook to specify the discount calculation method. More information: Manage product catalog configuration

  To illustrate the discounting model with an example, consider the following product line item entry in an opportunity:

Product Name	Price Per Unit	Quantity	Discount	Extended Amount
Example Product	100	200	10	?

Extended Amount for the product line item entry is calculated depending on your selected discounting model:

- **Line item**: The discount applied is 10, and the **Extended Amount** is 19990 ((Price Per Unit * Quantity) – discount applied).
- **Per unit**: The discount applied is 2000 (Quantity * Discount), and the **Extended Amount** is 18000 ((Price Per Unit * Quantity) – discount applied).

> **Note**
>
> If you upgrade from a previous version of Dynamics 365 Sales to the current version, by default the value of the `Organization.DiscountCalculationMethod` column is set to **0** (line item) to support the old discounting behavior where discounts could only be applied at the line level.

See also

Discount Table

DiscountType Table

Product catalog tables

Localize product property values

Article • 03/03/2023

Product names may be localized for different regions. With Dynamics 365 Sales you can provide localized labels for certain product attributes so that people will see the localized names that match their language preferences. This topic is about how developers can interact with this feature. For step-by-step instructions to use this feature in the application, see the previous versions documentation on Translate product names and properties into multiple languages.

Attributes that support localized property values

The following list contains the attributes that support localizable values:

- `Product.Name`
- `DynamicProperty.Name`
- `DynamicPropertyOptionSetItem.DynamicPropertyOptionName`
- `DynamicPropertyOptionSetItem.DynamicPropertyOptionDescription`

  The StringAttributeMetadata and MemoAttributeMetadata classes have a read-only `IsLocalizable` Boolean property that is `false` for all attributes except the four in the preceding table.

Retrieve localized property values

You don't need to do anything differently to retrieve the localized value that matches the user's language preference. If a localized value exists for the user's preferred language, it will be returned. If a localized value doesn't exist, the value for the organization's base language will be returned. This behavior maintains backwards compatibility; any code you currently have using the product name attribute will continue to work using any localized values. If the localization of property values is incomplete, people may see mixed language values.

To retrieve all the localized labels for a specific localizable attribute, use the RetrieveLocLabelsRequest message.

Query using localized values

When you query tables with conditions using values for localized attributes, the conditions will be evaluated using your preferred language first and will revert to the base language if there is no localized value for that attribute. Query results for localized attribute values will be those for your preferred language if they exist. Otherwise, the results will use the base language values.

Create or update records with localizable attributes

Records with localized attributes are read-only unless your preferred language is the organization's base language. You can only create records with localized property values using the organization's base language. If you update the base language value for a localizable attribute any localized values for that attribute are not changed except if you clear the value for the base language. If you set the base language value to null or an empty string, all localized values for that property will also be cleared.

To add or update localized labels for any specific localized attribute, use the SetLocLabelsRequest message or import translated values. Any changes to the localizable attributes will appear in the audit history for the record. The language code identifier (LCID) for the localized value will appear in the audit history.

Translate localizable attributes

The process of localizing localizable attributes programmatically is similar to the process used to translate localized solution labels. [!INCLUDE[proc_more_information]Translate customized table and column text

Unlike translating metadata values, the user exporting and importing localized attributes values does not have to have the system administrator security role. The sales manager security role has the privileges necessary to translate localizable attributes. The person translating localized property values can only export those records they have access to view and update those records they have privileges to update.

To translate localizable attributes programmatically you must first export the current localized label definitions using ExportFieldTranslationRequest. The ExportFieldTranslationResponse.`ExportTranslationFile` property contains a `byte[]` for a compressed crmFieldTranslations.zip file containing a [Content_types].xml file and a crmFieldTranslations.xml file that can be opened using Office Excel. The **Localized Labels**

worksheet contains a column with an LCID value for each provisioned language for the organization. The column with the base language values will be populated and the columns for each provisioned language will contain any previously localized values. This file can be edited by a translator to provide localized labels for the localizable properties.

> **Tip**
>
> If you want to perform a bulk update of just the base language names, you can also edit the base language values.

After the crmFieldTranslations.xml file is edited to provide localized labels, compress it together with the [Content_types].xml file and set that file as the `TranslationFile` property of the ImportFieldTranslationRequest.

Modify the values included when exporting translated property values

The values that are included in the exported translations are controlled by customizable views associated with the tables that support localizable property values. Only the product tables displays this view in the customization user interface. These views are named **Export Field Translations**. The following table provides the `SavedQueryId` for these views.

Table	`SavedQueryId`	**Default** `FetchXml`
product	9cfe2a9f-13c4-e311-8f2e-00155d9d2505	<fetch version="1.0" output-format="xml-platform" mapping="logical" distinct="false"> <entity name="product"> <attribute name="name" /> </entity> </fetch>
dynamicproperty	4833cf48-1ac4-e311-8f2e-00155d9d2505	<fetch version="1.0" output-format="xml-platform" mapping="logical"> <entity name="dynamicproperty"> <attribute name="name" /> </entity> </fetch>

Table	`SavedQueryId`	Default `FetchXml`
dynamicpropertyoptionsetitem	d64cce30-1fc4-e311-8f2e-00155d9d2505	<fetch version="1.0" output-format="xml-platform" mapping="logical"> <entity name="dynamicpropertyoptionsetitem"> <attribute name="dynamicpropertyoptionname" /> <attribute name="dynamicpropertyoptiondescription" /> </entity> </fetch>

You can edit the `FetchXml` property of these views to filter out any attribute property values you do not want to include. For example, you may want to exclude archived records or only include those updated after a certain date.

Monitor the progress of field translation import jobs

The system job tables contains the following views to monitor the progress of field translation import jobs:

- All Field Translation Import Jobs
- Completed Field Translation Import Jobs
- In Progress Field Translation Import Jobs
- My Field Translation Import Jobs
- Not Started Field Translation Import Jobs

  The following conditions will cause errors when importing translation jobs:

Message	Description
Warning: You don't have write permissions to one or more of the rows specified in the import file for worksheet {0}, Line {1}.	The person running the import may not have write permissions to a row included in the imported file. Processing of other rows will continue.
Warning: The base language translation string present in worksheet {0}, row {1}, column {2} is null.	A base language value cannot be cleared by importing translations. Processing of other rows will continue

Message	Description
Warning: The number of cells in row {0} don't match the number of cells in row 1 in worksheet {1}.	All rows in the spreadsheet must have the same number of cells. Processing of other rows will continue.
Warning: An invalid Table name was found in worksheet {0}, Line {1}, Column A.	There is no valid table in the system using a name in the worksheet. Processing of other rows will continue.
Warning: An invalid Object Column Name was found in worksheet {0}, Line {1}, Column C.	There is no valid localizable attribute in the system using a name in the worksheet. Processing of other rows will continue.
Warning: An invalid Object Id was found in worksheet {0}, Line {1}, Column B.	There is no matching record in the organization for item in this row. Processing of other rows will continue.
Error: No rows were found in worksheet {0}.	The worksheet to import is empty.
Error: The Organization ID present in worksheet {0} does not match the current Organization ID.	You can only import translations into the same organization they were exported from.
Warning: An invalid language code was found in worksheet {0}, Column {1}. | Details: {2}	The LCID in the column isn't a valid integer or the Language pack for the language is not installed. The translations in the column are ignored. Valid locale ID values can be found at Locale ID (LCID) Chart.
Error: A duplicate language code was found in worksheet {0}, Column {1}.	Each column must have a different language code.
Error: The translation file is invalid. The compressed file must contain the following files at its root: CrmFieldTranslations.xml, [Content_Types].xml	The compressed (zip) file to be imported must contain only the files described in the error.
Error: The translations file is invalid or doesn't conform to the required schema.	The CrmFieldTranslations.xml file included in the compressed (zip) file must be a file that was exported from the system and only edited to provide localized values. Other changes may invalidate the file.

Uninstall a language

Any localized labels provided for a language that is uninstalled will remain in the system so that they'll be in place if the language is reinstalled.

See also

Product catalog tables
Translate customized table and column text Translate product names and properties into multiple languages

Sample: Create and publish products

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the Product Catalog samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to:

- Create a product family, product property, and child products.
- Override a product property at a child product level.
- Publish the product hierarchy.
- Revise a child product to overwrite the overridden property.

Example

C#

```
using System;
using System.ServiceModel;
using System.ServiceModel.Description;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// found in the SDK\bin folder.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Messages;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;
```

```
// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;

namespace Microsoft.Crm.Sdk.Samples
{
    /// <summary>
    /// This sample shows how to:
    /// - Create a product family, product property, and child products.
    /// - Override a product property at a child product level.
    /// - Publish the product hierarchy.
    /// - Revise a child product to overwrite the overridden property.
    /// </summary>
    public class CreateAndPublishProducts
    {
        #region Class Level Members

        /// <summary>
        /// Stores the organization service proxy.
        /// </summary>
        private OrganizationServiceProxy _serviceProxy;

        // Define the IDs needed for this sample.
        public Guid _unitGroupId;
        public Guid _product1Id;
        public Guid _product2Id;
        public Guid _productFamilyId;
        public Guid _productPropertyId;
        public Guid _productOverridenPropertyId;
        public Guid _productOverwrittenPropertyId;
        public Guid _priceListId;
        public Guid _priceListItem1Id;
        public Guid _priceListItem2Id;
        public Guid _productRelationId;
        public UoM _unit;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// Create and configure the organization service proxy.
        /// Initiate creating all table rows that this sample requires.
        /// Create a product family with a product property and two child
product rows.
        /// Create a substitute relation between the two products.
        /// Override the product property for one of the child products.
        /// Publish the product family hierarchy, including the child rows.
        /// Revise a child product to overwrite the overridden property.
        /// Publish the child product.
        /// Optionally delete any table rows that were created for this
sample.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
```

```
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptForDelete)
        {
            try
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
be properly disposed.
                using (_serviceProxy =
ServerConnection.GetOrganizationProxy(serverConfig))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    // Call the method to create any data that this sample
requires.
                    CreateRequiredRecords();

                    //<snippetCreateandublishProducts1>
                    // Create a product family
                    Product newProductFamily = new Product
                    {
                        Name = "Example Product Family",
                        ProductNumber = "PF001",
                        ProductStructure = new OptionSetValue(2)
                    };
                    _productFamilyId =
_serviceProxy.Create(newProductFamily);
                    Console.WriteLine("\nCreated '{0}'",
newProductFamily.Name);

                    // Create a product property
                    DynamicProperty newProperty = new DynamicProperty
                    {
                        Name = "Example Property",
                        RegardingObjectId = new
EntityReference(Product.EntityLogicalName,
                                                _productFamilyId),
                        IsReadOnly = true,
                        IsRequired = true,
                        IsHidden = false,
                        DataType = new OptionSetValue(3), //Single line of
text
                        DefaultValueString = "Default Value"
                    };
                    _productPropertyId = _serviceProxy.Create(newProperty);
                    Console.WriteLine("\nCreated '{0}' for the product
family", newProperty.Name);

                    // Create couple of product rows under the product
family
                    Product newProduct1 = new Product
```

```
                    {
                        Name = "Example Product 1",
                        ProductNumber = "P001",
                        ProductStructure = new OptionSetValue(1),
                        ParentProductId = new
EntityReference(Product.EntityLogicalName, _productFamilyId),
                        QuantityDecimal = 2,
                        DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName, _unitGroupId),
                        DefaultUoMId = new
EntityReference(UoM.EntityLogicalName, _unit.Id)
                    };
                    _product1Id = _serviceProxy.Create(newProduct1);

                    Console.WriteLine("\nCreated '{0}' under the product
family", newProduct1.Name);

                    Product newProduct2 = new Product
                    {
                        Name = "Example Product 2",
                        ProductNumber = "P002",
                        ProductStructure = new OptionSetValue(1),
                        ParentProductId = new
EntityReference(Product.EntityLogicalName, _productFamilyId),
                        QuantityDecimal = 2,
                        DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName, _unitGroupId),
                        DefaultUoMId = new
EntityReference(UoM.EntityLogicalName, _unit.Id)
                    };
                    _product2Id = _serviceProxy.Create(newProduct2);

                    Console.WriteLine("Created '{0}' under the product
family", newProduct2.Name);

                    // Create a price list items for the products
                    ProductPriceLevel newPriceListItem1 = new
ProductPriceLevel
                    {
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                        ProductId = new
EntityReference(Product.EntityLogicalName, _product1Id),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
_unit.Id),
                        Amount = new Money(20)
                    };
                    _priceListItem1Id =
_serviceProxy.Create(newPriceListItem1);

                    Console.WriteLine("\nCreated price list for '{0}'",
newProduct1.Name);

                    ProductPriceLevel newPriceListItem2 = new
ProductPriceLevel
```

```
                    {
                        PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                        ProductId = new
EntityReference(Product.EntityLogicalName, _product2Id),
                        UoMId = new EntityReference(UoM.EntityLogicalName,
_unit.Id),
                        Amount = new Money(20)
                    };
                    _priceListItem2Id =
_serviceProxy.Create(newPriceListItem2);

                    Console.WriteLine("Created price list for '{0}'",
newProduct2.Name);

                    // Set the product relationship
                    // Set Example Product 1 and Example Product 2 as
substitute of each other (bi-directional)
                    ProductSubstitute newProductRelation = new
ProductSubstitute
                    {
                        SalesRelationshipType = new OptionSetValue(3),
                        Direction = new OptionSetValue(1),
                        ProductId = new
EntityReference(Product.EntityLogicalName, _product1Id),
                        SubstitutedProductId = new
EntityReference(Product.EntityLogicalName, _product2Id)
                    };
                    _productRelationId =
_serviceProxy.Create(newProductRelation);

                    Console.WriteLine("\nCreated a substitute relation
between the two products.");
                    //</snippetCreateandublishProducts1>

                    // Override a product property at the product level
                    // In this case we will override the property for
'Example Product 1'
                    DynamicProperty newOverrideProperty = new
DynamicProperty();
                    newOverrideProperty.BaseDynamicPropertyId = new
EntityReference(DynamicProperty.EntityLogicalName,
                                                    _productPropertyId);
                    newOverrideProperty.RegardingObjectId = new
EntityReference(Product.EntityLogicalName, _product1Id);
                    _productOverridenPropertyId =
_serviceProxy.Create(newOverrideProperty);

                    // Retrieve the columns of the cloned property you want
to update
                    ColumnSet columns = new ColumnSet();
                    columns.AddColumns("name", "isreadonly", "isrequired");
                    DynamicProperty retrievedOverridenProperty =
(DynamicProperty)_serviceProxy.Retrieve(
```

```
DynamicProperty.EntityLogicalName, _productOverridenPropertyId,
                                                columns);

                    // Update the columns
                    retrievedOverridenProperty.Name = "Overridden Example
Property";
                    retrievedOverridenProperty.IsReadOnly = true;
                    retrievedOverridenProperty.IsRequired = false;
                    _serviceProxy.Update(retrievedOverridenProperty);
                    Console.WriteLine("\nOverridden the product property for
'Example Product 1'.");

                    // Prompt the user whether to publish the product family
and products
                    bool publishRecords = true;
                    Console.WriteLine("\nDo you want the product rows
published? (y/n)");
                    String answer = Console.ReadLine();
                    publishRecords = (answer.StartsWith("y") ||
answer.StartsWith("Y"));

                    if (publishRecords)
                    {
                        PublishProductHierarchyRequest publishReq = new
PublishProductHierarchyRequest
                        {
                            Target = new
EntityReference(Product.EntityLogicalName, _productFamilyId)
                        };
                        PublishProductHierarchyResponse published =
(PublishProductHierarchyResponse)_serviceProxy.Execute(publishReq);
                        if (published.Results != null)
                        {
                            Console.WriteLine("Published the product rows");
                        }

                        // Overwrite a product property
                        Console.WriteLine("\nRevising 'Example Product 1' to
demonstrate product property overwrite.");

                        // Retrieve the StateCode of Product that you want
to revise
                        ColumnSet cols = new ColumnSet();
                        cols.AddColumns("name", "statecode");
                        Product retrievedPublishedProduct =
(Product)_serviceProxy.Retrieve(

Product.EntityLogicalName, _product1Id,
                                                    cols);

                        // Update the state of the Product to "Under
Revision"
                        retrievedPublishedProduct.StateCode =
ProductState.UnderRevision;
                        UpdateRequest updatePropertyState = new
```

```
UpdateRequest
                        {
                            Target = retrievedPublishedProduct
                        };
                        _serviceProxy.Execute(updatePropertyState);
                        Console.WriteLine("\nChanged '{0}' to 'Under
Revision' state.", retrievedPublishedProduct.Name);

                        DynamicProperty newOverwriteProperty = new
DynamicProperty();
                        newOverwriteProperty.BaseDynamicPropertyId = new
EntityReference(DynamicProperty.EntityLogicalName,

_productOverridenPropertyId);
                        newOverwriteProperty.RegardingObjectId = new
EntityReference(Product.EntityLogicalName,
                            _product1Id);
                        _productOverwrittenPropertyId =
_serviceProxy.Create(newOverwriteProperty);

                        // Retrieve the columns of the cloned property you
want to update
                        ColumnSet myCols = new ColumnSet();
                        myCols.AddColumns("name", "isreadonly",
"isrequired");
                        DynamicProperty retrievedOverwrittenProperty =
(DynamicProperty)_serviceProxy.Retrieve(

DynamicProperty.EntityLogicalName, _productOverwrittenPropertyId,
                                                    myCols);

                        // Update the columns of the cloned property to
complete the overwrite
                        retrievedOverwrittenProperty.Name = "Overwritten
Example Property";
                        retrievedOverwrittenProperty.IsReadOnly = true;
                        retrievedOverridenProperty.IsRequired = false;
                        _serviceProxy.Update(retrievedOverwrittenProperty);
                        Console.WriteLine("\nOverwritten the product
property for 'Example Product 1'.");

                        // Retrieve the StateCode of Product that you want
to publish
                        ColumnSet prodCols = new ColumnSet();
                        prodCols.AddColumns("name", "statecode");
                        Product retrievedRevisedProduct =
(Product)_serviceProxy.Retrieve(

Product.EntityLogicalName, _product1Id,
                                                    prodCols);

                        // Update the state of the Product to "Active"
                        retrievedRevisedProduct.StateCode =
ProductState.Active;
                        UpdateRequest publishProduct1 = new UpdateRequest
```

```
                        {
                            Target = retrievedRevisedProduct
                        };
                        _serviceProxy.Execute(publishProduct1);
                        Console.WriteLine("\nPublished '{0}'.",
retrievedRevisedProduct.Name);
                    }

                    DeleteRequiredRecords(promptForDelete);
                }
            }
            catch
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }

        /// <summary>
        /// This method creates any table rows that this sample requires.
        /// Create a unit group and price list.
        /// </summary>
        public void CreateRequiredRecords()
        {
            Console.WriteLine("Creating required rows for the sample");
            Console.WriteLine("***************************************");
            // Create a unit group.
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };

            _unitGroupId = _serviceProxy.Create(newUnitGroup);

            Console.WriteLine("Created {0}", newUnitGroup.Name);

            // retrieve the unit id.
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression(),
                PageInfo = new PagingInfo
                {
                    PageNumber = 1,
                    Count = 1
                }
            };
            unitQuery.Criteria.AddCondition("uomscheduleid",
ConditionOperator.Equal, _unitGroupId);

            // Retrieve the unit.
            _unit =
```

```
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];

            Console.WriteLine("Retrieved {0}", _unit.Name);

            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };
            _priceListId = _serviceProxy.Create(newPriceList);

            Console.WriteLine("Created {0}", newPriceList.Name);
            Console.WriteLine("*****************************************");

            return;
        }

        /// <summary>
        /// Deletes any table rows that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user to
delete the rows created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            bool deleteRecords = true;

            if (prompt)
            {
                Console.WriteLine("\nDo you want these table rows deleted?
(y/n)");
                String answer = Console.ReadLine();
                deleteRecords = (answer.StartsWith("y") ||
answer.StartsWith("Y"));
            }

            if (deleteRecords)
            {
                Console.WriteLine("Deleting table rows... please wait!");

                _serviceProxy.Delete(ProductSubstitute.EntityLogicalName,
_productRelationId);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem1Id);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItem2Id);
                _serviceProxy.Delete(Product.EntityLogicalName,
_productFamilyId);
                _serviceProxy.Delete(PriceLevel.EntityLogicalName,
_priceListId);
                _serviceProxy.Delete(UoMSchedule.EntityLogicalName,
_unitGroupId);

                Console.WriteLine("Entity rows have been deleted.");
            }
        }
```

```
        #endregion How To Sample Code

        #region Main
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
serverConnect.GetServerConfiguration();

                CreateAndPublishProducts app = new
CreateAndPublishProducts();
                app.Run(config, true);
            }

            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
```

```
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                    }
                }
            }
            // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
            // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

            finally
            {
                Console.WriteLine("Press <Enter> to exit.");
                Console.ReadLine();
            }
        }
        #endregion Main
    }
}
```

See also

Create and manage product families, products, and bundles

Publish, revise, revert, retire, and activate products (product lifecycle)

Product catalog tables

Sample: Clone product records

Article • 03/03/2023

This sample code is for Dynamics 365 Sales. Download the Product Catalog samples.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

For more information about the requirements for running the sample code provided here, see Use the sample and helper code.

Demonstrates

This sample shows how to clone a product record. More information: Clone a product family, product, or bundle

Example

C#

```
using System;
using System.ServiceModel;
using System.ServiceModel.Description;

// These namespaces are found in the Microsoft.Xrm.Sdk.dll assembly
// found in the SDK\bin folder.
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Client;
using Microsoft.Xrm.Sdk.Query;
using Microsoft.Xrm.Sdk.Discovery;

// This namespace is found in Microsoft.Crm.Sdk.Proxy.dll assembly
// found in the SDK\bin folder.
using Microsoft.Crm.Sdk.Messages;

namespace Microsoft.Crm.Sdk.Samples
{
```

```
    /// <summary>
    /// This sample shows how to clone a product record.
    /// </summary>
    public class CloneProducts
    {
        #region Class Level Members

        /// <summary>
        /// Stores the organization service proxy.
        /// </summary>
        private OrganizationServiceProxy _serviceProxy;

        // Define the IDs needed for this sample.
        public Guid _unitGroupId;
        public Guid _productId;
        public Guid _productCloneId;
        public Guid _priceListId;
        public Guid _priceListItemId;

        #endregion Class Level Members

        #region How To Sample Code
        /// <summary>
        /// Create and configure the organization service proxy.
        /// Initiate creating all entity records that this sample requires.
        /// Create a product record.
        /// Clone the product record.
        /// Optionally delete any entity records that were created for this
sample.
        /// </summary>
        /// <param name="serverConfig">Contains server connection
information.</param>
        /// <param name="promptforDelete">When True, the user will be
prompted to delete all
        /// created entities.</param>
        public void Run(ServerConnection.Configuration serverConfig, bool
promptForDelete)
        {
            try
            {
                // Connect to the Organization service.
                // The using statement assures that the service proxy will
be properly disposed.
                using (_serviceProxy =
ServerConnection.GetOrganizationProxy(serverConfig))
                {
                    // This statement is required to enable early-bound type
support.
                    _serviceProxy.EnableProxyTypes();

                    // Call the method to create any data that this sample
requires.
                    CreateRequiredRecords();
```

```
                    CloneProductRequest cloneReq = new CloneProductRequest
                    {
                        Source = new
EntityReference(Product.EntityLogicalName, _productId)
                    };

                    CloneProductResponse cloned =
(CloneProductResponse)_serviceProxy.Execute(cloneReq);
                    _productCloneId = cloned.ClonedProduct.Id;

                    // Retrieve the cloned product record
                    Product retrievedProduct =
(Product)_serviceProxy.Retrieve(Product.EntityLogicalName, _productCloneId,
new ColumnSet(true));
                    Console.WriteLine("\nCreated clone product: {0}",
retrievedProduct.Name);


                    DeleteRequiredRecords(promptForDelete);
                }
            }
            catch
            {
                // You can handle an exception here or pass it back to the
calling method.
                throw;
            }
        }

        /// <summary>
        /// This method creates any entity records that this sample
requires.
        /// Create a unit group and price list.
        /// </summary>
        public void CreateRequiredRecords()
        {
            Console.WriteLine("Creating required records for the sample:");
            // Create a unit group.
            UoMSchedule newUnitGroup = new UoMSchedule
            {
                Name = "Example Unit Group",
                BaseUoMName = "Example Primary Unit"
            };

            _unitGroupId = _serviceProxy.Create(newUnitGroup);

            Console.WriteLine("Created {0}", newUnitGroup.Name);

            // retrieve the unit id.
            QueryExpression unitQuery = new QueryExpression
            {
                EntityName = UoM.EntityLogicalName,
                ColumnSet = new ColumnSet("uomid", "name"),
                Criteria = new FilterExpression(),
                PageInfo = new PagingInfo
```

```
                {
                    PageNumber = 1,
                    Count = 1
                }
            };
            unitQuery.Criteria.AddCondition("uomscheduleid",
ConditionOperator.Equal, _unitGroupId);

            // Retrieve the unit.
            UoM unit =
(UoM)_serviceProxy.RetrieveMultiple(unitQuery).Entities[0];

            Console.WriteLine("Retrieved {0}", unit.Name);


            // Create a price list
            PriceLevel newPriceList = new PriceLevel
            {
                Name = "Example Price List"
            };
            _priceListId = _serviceProxy.Create(newPriceList);

            Console.WriteLine("Created {0}", newPriceList.Name);

            // Create a product record to be cloned.
            Product newProduct = new Product
            {
                Name = "Example Product",
                ProductNumber = "P001",
                ProductStructure = new OptionSetValue(1),
                QuantityDecimal = 2,
                DefaultUoMScheduleId = new
EntityReference(UoMSchedule.EntityLogicalName, _unitGroupId),
                DefaultUoMId = new EntityReference(UoM.EntityLogicalName,
unit.Id)
            };
            _productId = _serviceProxy.Create(newProduct);

            Console.WriteLine("\nCreated {0}", newProduct.Name);

            // Create a price list item for the product
            ProductPriceLevel newPriceListItem = new ProductPriceLevel
            {
                PriceLevelId = new
EntityReference(PriceLevel.EntityLogicalName, _priceListId),
                ProductId = new EntityReference(Product.EntityLogicalName,
_productId),
                UoMId = new EntityReference(UoM.EntityLogicalName, unit.Id),
                Amount = new Money(20)
            };
            _priceListItemId = _serviceProxy.Create(newPriceListItem);

            Console.WriteLine("Created price list for {0}",
newProduct.Name);
```

```
            return;
        }

        /// <summary>
        /// Deletes any entity records that were created for this sample.
        /// <param name="prompt">Indicates whether to prompt the user to
delete the records created in this sample.</param>
        /// </summary>
        public void DeleteRequiredRecords(bool prompt)
        {
            bool deleteRecords = true;

            if (prompt)
            {
                Console.WriteLine("\nDo you want these entity records
deleted? (y/n)");
                String answer = Console.ReadLine();
                deleteRecords = (answer.StartsWith("y") ||
answer.StartsWith("Y"));
            }

            if (deleteRecords)
            {
                Console.WriteLine("Deleting entity records... please
wait!");

                _serviceProxy.Delete(Product.EntityLogicalName,
_productCloneId);
                _serviceProxy.Delete(ProductPriceLevel.EntityLogicalName,
_priceListItemId);
                _serviceProxy.Delete(Product.EntityLogicalName, _productId);
                _serviceProxy.Delete(PriceLevel.EntityLogicalName,
_priceListId);
                _serviceProxy.Delete(UoMSchedule.EntityLogicalName,
_unitGroupId);

                Console.WriteLine("Entity records have been deleted.");
            }
        }
        #endregion How To Sample Code

        #region Main
        /// <summary>
        /// Standard Main() method used by most SDK samples.
        /// </summary>
        /// <param name="args"></param>
        static public void Main(string[] args)
        {
            try
            {
                // Obtain the target organization's Web address and client
logon
                // credentials from the user.
                ServerConnection serverConnect = new ServerConnection();
                ServerConnection.Configuration config =
```

```
serverConnect.GetServerConfiguration();

                CloneProducts app = new CloneProducts();
                app.Run(config, true);
            }

            catch
(FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Timestamp: {0}", ex.Detail.Timestamp);
                Console.WriteLine("Code: {0}", ex.Detail.ErrorCode);
                Console.WriteLine("Message: {0}", ex.Detail.Message);
                Console.WriteLine("Plugin Trace: {0}", ex.Detail.TraceText);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.Detail.InnerFault ? "No Inner Fault" : "Has
Inner Fault");
            }
            catch (System.TimeoutException ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine("Message: {0}", ex.Message);
                Console.WriteLine("Stack Trace: {0}", ex.StackTrace);
                Console.WriteLine("Inner Fault: {0}",
                    null == ex.InnerException.Message ? "No Inner Fault" :
ex.InnerException.Message);
            }
            catch (System.Exception ex)
            {
                Console.WriteLine("The application terminated with an
error.");
                Console.WriteLine(ex.Message);

                // Display the details of the inner exception.
                if (ex.InnerException != null)
                {
                    Console.WriteLine(ex.InnerException.Message);


FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault> fe =
ex.InnerException
                        as
FaultException<Microsoft.Xrm.Sdk.OrganizationServiceFault>;
                    if (fe != null)
                    {
                        Console.WriteLine("Timestamp: {0}",
fe.Detail.Timestamp);
                        Console.WriteLine("Code: {0}", fe.Detail.ErrorCode);
                        Console.WriteLine("Message: {0}",
fe.Detail.Message);
                        Console.WriteLine("Plugin Trace: {0}",
fe.Detail.TraceText);
                        Console.WriteLine("Inner Fault: {0}",
```

```
                            null == fe.Detail.InnerFault ? "No Inner Fault"
: "Has Inner Fault");
                        }
                    }
                }
                // Additional exceptions to catch:
SecurityTokenValidationException, ExpiredSecurityTokenException,
                // SecurityAccessDeniedException, MessageSecurityException, and
SecurityNegotiationException.

                finally
                {
                    Console.WriteLine("Press <Enter> to exit.");
                    Console.ReadLine();
                }
            }
            #endregion Main
        }
}
```

See also

Create and manage product families, products and bundles

Product catalog tables

Sample: Add products to a bundle

Article • 04/07/2023

This sample shows how to add products to a bundle. You can download the sample from here.

How to run this sample

1. Download or clone the Dynamics365-Apps-Samples repo so that you have a local copy.
2. (Optional) Edit the dataverse/App.config file to define a connection string specifying the Common Data Service instance you want to connect to.
3. Open the sample solution in Visual Studio and press **F5** to run the sample. After you specify a connection string in dataverse/App.config, any sample you run will use that connection information.

If you don't specify a connection string in dataverse/App.config file, a dialog opens each time you run the sample, and you'll need to enter information about which Dataverse instance you want to connect to and which credentials you want to use. This dialog caches previous connections so that you can choose a previously used connection.

Those samples in this repo that require a connection to a Common Data Service instance to run includes a linked reference to the dataverse/App.config file.

What this sample does

This sample shows how to add products to a bundle.

How this sample works

In order to simulate the scenario described in What this sample does, the sample will do the following:

Setup

1. Checks for the current version of the org.

Demonstrate

- Create a bundle record.
- Create a unit group.
- Retrieve the unit id.
- Create a price list
- Create couple of product records.
- Create price list items for the products.
- Create price list item for the bundle
- Add products to a bundle.

Clean up

Displays an option to delete all the data created in the sample. The deletion is optional in case you want to examine the data created by the sample. You can manually delete the data to achieve same results.

See also

Create and manage product families, products and bundles
Product catalog tables

Sample: Calculate Price plug-in

Article • 10/17/2023

This sample code is for Dynamics 365 Sales. Download the sample: Work with custom price plug-in.

Prerequisites

Internet connection is required to download the sample project and to restore the NuGet packages used in the sample project.

Requirements

Ensure the following:

- Set the value of the `Organization.OOBPriceCalculationEnabled` column to `0` (false).
- Register the plug-in on the **CalculatePrice** message, **Post-operation** event stage, and **Synchronous** execution mode. For more information, see Register a plug-in.

Demonstrates

This sample shows how to write a plug-in that calculates the pricing of the opportunities, quotes, orders, and invoices based on your custom code. The discounts and taxes are calculated based on the total amount of all the product line items in an opportunity, quote, order, or invoice:

- **Discount**: If the total amount is greater than 1000 and less than 5000, discount is 5%; if the total amount is 5000 or greater, discount is 10%.
- **Tax**: Tax is applied on the amount that is effective after the discount is applied (total amount minus discount). If the effective amount is less than 5000, tax is 10%; otherwise, tax is 8%.

  For more information, see Use custom pricing for products.

Example

```
C#
```

```
using System;
using System.ServiceModel;

// Microsoft Dynamics CRM namespace(s)
using Microsoft.Xrm.Sdk;
using Microsoft.Xrm.Sdk.Query;

namespace Microsoft.Crm.Sdk.Samples
{
    public class CalculatePricePlugin : IPlugin
    {
        /// <summary>
        /// A plugin that calculates custom pricing for
        /// opportunities, quotes, orders, and invoices.
        /// </summary>
        /// <remarks>Register this plug-in on the CalculatePrice message,
        /// Post Operation execution stage, and Synchronous execution mode.
        /// </remarks>
        public void Execute(IServiceProvider serviceProvider)
        {
            //Extract the tracing service for use in debugging sandboxed
plug-ins.
            ITracingService tracingService =

(ITracingService)serviceProvider.GetService(typeof(ITracingService));

            // Obtain the execution context from the service provider.
            IPluginExecutionContext context = (IPluginExecutionContext)
                serviceProvider.GetService(typeof(IPluginExecutionContext));

            if (context.ParentContext != null
                && context.ParentContext.ParentContext != null
                && context.ParentContext.ParentContext != null
                &&
context.ParentContext.ParentContext.ParentContext.SharedVariables.ContainsKe
y("CustomPrice")
                &&
(bool)context.ParentContext.ParentContext.ParentContext.SharedVariables["Cus
tomPrice"])
                return;

            // The InputParameters collection contains all the data passed
in the message request.
            if (context.InputParameters.Contains("Target") &&
                context.InputParameters["Target"] is EntityReference)
            {
                // Obtain the target entity from the input parmameters.
                EntityReference entity =
(EntityReference)context.InputParameters["Target"];

                // Verify that the target entity represents an appropriate
entity.
```

```
                if (CheckIfNotValidEntity(entity))
                    return;

                try
                {
                    context.SharedVariables.Add("CustomPrice", true);
                    context.ParentContext.SharedVariables.Add("CustomPrice",
true);
                    IOrganizationServiceFactory serviceFactory =
(IOrganizationServiceFactory)serviceProvider.GetService(typeof(IOrganization
ServiceFactory));
                    IOrganizationService service =
serviceFactory.CreateOrganizationService(context.UserId);

                    // Calculate pricing depending on the target entity
                    switch (entity.LogicalName)
                    {
                        case "opportunity":
                            CalculateOpportunity(entity, service);
                            return;

                        case "quote":
                            CalculateQuote(entity, service);
                            return;

                        case "salesorder":
                            CalculateOrder(entity, service);
                            return;

                        case "invoice":
                            CalculateInvoice(entity, service);
                            return;

                        case "opportunityproduct":
                            CalculateOpportunityProduct(entity, service);
                            return;

                        case "quotedetail":
                            CalculateQuoteProduct(entity, service);
                            return;

                        case "salesorderdetail":
                            CalculateOrderProduct(entity, service);
                            return;

                        case "invoicedetail":
                            CalculateInvoiceProduct(entity, service);
                            return;

                        default:
                            return;
                    }
                }

                catch (FaultException<OrganizationServiceFault> ex)
```

```
                {
                    tracingService.Trace("CalculatePrice: {0}",
ex.ToString());
                    throw new InvalidPluginExecutionException("An error
occurred in the Calculate Price plug-in.", ex);
                }

                catch (Exception ex)
                {
                    tracingService.Trace("CalculatePrice: {0}",
ex.ToString());
                    throw;
                }
            }
        }

        private static bool CheckIfNotValidEntity(EntityReference entity)
        {
            switch (entity.LogicalName)
            {
                case "opportunity":
                case "quote":
                case "salesorder":
                case "invoice":
                case "opportunityproduct":
                case "invoicedetail":
                case "quotedetail":
                case "salesorderdetail":
                    return false;

                default:
                    return true;
            }
        }

        #region Calculate Opportunity Price
        // Method to calculate price in an opportunity
        private static void CalculateOpportunity(EntityReference entity,
IOrganizationService service)
        {
            Entity e = service.Retrieve(entity.LogicalName, entity.Id, new
ColumnSet("statecode"));
            OptionSetValue statecode = (OptionSetValue)e["statecode"];
            if (statecode.Value == 0)
            {
                ColumnSet columns = new ColumnSet();
                columns.AddColumns("totaltax", "totallineitemamount",
"totalamountlessfreight", "discountamount");
                Entity opp = service.Retrieve(entity.LogicalName, entity.Id,
columns);

                QueryExpression query = new
QueryExpression("opportunityproduct");
                query.ColumnSet.AddColumns("quantity", "priceperunit");
                query.Criteria.AddCondition("opportunityid",
```

```
ConditionOperator.Equal, entity.Id);
                EntityCollection ec = service.RetrieveMultiple(query);
                opp["totallineitemamount"] = 0;

                decimal total = 0;
                decimal discount = 0;
                decimal tax = 0;

                for (int i = 0; i < ec.Entities.Count; i++)
                {
                    total = total + ((decimal)ec.Entities[i]["quantity"] *
((Money)ec.Entities[i]["priceperunit"]).Value);
                    (ec.Entities[i])["extendedamount"] = new
Money(((decimal)ec.Entities[i]["quantity"] * ((Money)ec.Entities[i]
["priceperunit"]).Value));
                    service.Update(ec.Entities[i]);
                }

                opp["totallineitemamount"] = new Money(total);

                // Calculate discount based on the total amount
                discount = CalculateDiscount(total);
                total = total - discount;
                opp["discountamount"] = new Money(discount);
                opp["totalamountlessfreight"] = new Money(total);
                service.Update(opp);

                // Calculate tax after the discount is applied
                tax = CalculateTax(total);
                total = total + tax;
                opp["totaltax"] = new Money(tax);
                opp["totalamount"] = new Money(total);
                opp["estimatedvalue"] = new Money(total);
                service.Update(opp);
            }
            return;
        }

        // Method to calculate extended amount in the product line items in
an opportunity
        private static void CalculateOpportunityProduct(EntityReference
entity, IOrganizationService service)
        {
            try
            {
                ColumnSet columns = new ColumnSet();
                Entity e = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "priceperunit"));
                decimal total = 0;
                total = total + ((decimal)e["quantity"] *
((Money)e["priceperunit"]).Value);
                e["extendedamount"] = new Money(total);
                service.Update(e);
            }
            catch (FaultException<OrganizationServiceFault> ex)
```

```
            {
                System.Diagnostics.Debug.Write(ex.Message);
            }
        }

        #endregion

        #region Calculate Quote Price
        // Method to calculate price in a quote
        private static void CalculateQuote(EntityReference entity,
IOrganizationService service)
        {
            Entity e = service.Retrieve(entity.LogicalName, entity.Id, new
ColumnSet("statecode"));
            OptionSetValue statecode = (OptionSetValue)e["statecode"];
            if (statecode.Value == 0)
            {
                ColumnSet columns = new ColumnSet();
                columns.AddColumns("totaltax", "totallineitemamount",
"totalamountlessfreight", "discountamount");
                Entity quote = service.Retrieve(entity.LogicalName,
entity.Id, columns);

                QueryExpression query = new QueryExpression("quotedetail");
                query.ColumnSet.AddColumns("quantity", "priceperunit");
                query.Criteria.AddCondition("quoteid",
ConditionOperator.Equal, entity.Id);
                EntityCollection ec = service.RetrieveMultiple(query);
                quote["totallineitemamount"] = 0;

                decimal total = 0;
                decimal discount = 0;
                decimal tax = 0;

                for (int i = 0; i < ec.Entities.Count; i++)
                {
                    total = total + ((decimal)ec.Entities[i]["quantity"] *
((Money)ec.Entities[i]["priceperunit"]).Value);
                    (ec.Entities[i])["extendedamount"] = new
Money(((decimal)ec.Entities[i]["quantity"] * ((Money)ec.Entities[i]
["priceperunit"]).Value));
                    service.Update(ec.Entities[i]);
                }

                quote["totallineitemamount"] = new Money(total);

                // Calculate discount based on the total amount
                discount = CalculateDiscount(total);
                total = total - discount;
                quote["discountamount"] = new Money(discount);
                quote["totalamountlessfreight"] = new Money(total);
                service.Update(quote);

                // Calculate tax after the discount is applied
                tax = CalculateTax(total);
```

```
                total = total + tax;
                quote["totaltax"] = new Money(tax);
                quote["totalamount"] = new Money(total);
                service.Update(quote);
            }
            return;
        }

        // Method to calculate extended amount in the product line items in
a quote
        private static void CalculateQuoteProduct(EntityReference entity,
IOrganizationService service)
        {
            try
            {
                ColumnSet columns = new ColumnSet();
                Entity e = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "priceperunit"));
                decimal total = 0;
                total = total + ((decimal)e["quantity"] *
((Money)e["priceperunit"]).Value);
                e["extendedamount"] = new Money(total);
                service.Update(e);
            }
            catch (FaultException<OrganizationServiceFault> ex)
            {
                System.Diagnostics.Debug.Write(ex.Message);
            }
        }

        #endregion

        #region Calculate Order Price
        // Method to calculate price in an order
        private static void CalculateOrder(EntityReference entity,
IOrganizationService service)
        {
            Entity e = service.Retrieve(entity.LogicalName, entity.Id, new
ColumnSet("statecode"));
            OptionSetValue statecode = (OptionSetValue)e["statecode"];
            if (statecode.Value == 0)
            {
                ColumnSet columns = new ColumnSet();
                columns.AddColumns("totaltax", "totallineitemamount",
"totalamountlessfreight", "discountamount");
                Entity order = service.Retrieve(entity.LogicalName,
entity.Id, columns);

                QueryExpression query = new
QueryExpression("salesorderdetail");
                query.ColumnSet.AddColumns("quantity",
"salesorderispricelocked", "priceperunit");
                query.Criteria.AddCondition("salesorderid",
ConditionOperator.Equal, entity.Id);
```

```
                QueryExpression query1 = new
QueryExpression("salesorderdetail");
                query1.ColumnSet.AddColumns("salesorderispricelocked");
                query1.Criteria.AddCondition("salesorderid",
ConditionOperator.Equal, entity.Id);

                EntityCollection ec = service.RetrieveMultiple(query);
                EntityCollection ec1 = service.RetrieveMultiple(query1);
                order["totallineitemamount"] = 0;

                decimal total = 0;
                decimal discount = 0;
                decimal tax = 0;

                for (int i = 0; i < ec.Entities.Count; i++)
                {
                    total = total + ((decimal)ec.Entities[i]["quantity"] *
((Money)ec.Entities[i]["priceperunit"]).Value);
                    (ec1.Entities[i])["extendedamount"] = new
Money(((decimal)ec.Entities[i]["quantity"] * ((Money)ec.Entities[i]
["priceperunit"]).Value));
                    service.Update(ec1.Entities[i]);
                }

                order["totallineitemamount"] = new Money(total);

                // Calculate discount based on the total amount
                discount = CalculateDiscount(total);
                total = total - discount;
                order["discountamount"] = new Money(discount);
                order["totalamountlessfreight"] = new Money(total);
                service.Update(order);

                // Calculate tax after the discount is applied
                tax = CalculateTax(total);
                total = total + tax;
                order["totaltax"] = new Money(tax);
                order["totalamount"] = new Money(total);
                service.Update(order);
            }
            return;
        }

        // Method to calculate extended amount in the product line items in
a order
        private static void CalculateOrderProduct(EntityReference entity,
IOrganizationService service)
        {
            try
            {
                ColumnSet columns = new ColumnSet();
                Entity e = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "priceperunit", "salesorderispricelocked"));
                Entity e1 = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "salesorderispricelocked"));
```

```
                decimal total = 0;
                total = total + ((decimal)e["quantity"] *
((Money)e["priceperunit"]).Value);
                e1["extendedamount"] = new Money(total);
                service.Update(e1);
            }
            catch (FaultException<OrganizationServiceFault> ex)
            {
                System.Diagnostics.Debug.Write(ex.Message);
            }
        }

        #endregion

        #region Calculate Invoice Price
        // Method to calculate price in an invoice
        private static void CalculateInvoice(EntityReference entity,
IOrganizationService service)
        {
            Entity e = service.Retrieve(entity.LogicalName, entity.Id, new
ColumnSet("statecode"));
            OptionSetValue statecode = (OptionSetValue)e["statecode"];
            if (statecode.Value == 0)
            {
                ColumnSet columns = new ColumnSet();
                columns.AddColumns("totaltax", "totallineitemamount",
"totalamountlessfreight", "discountamount");

                Entity invoice = service.Retrieve(entity.LogicalName,
entity.Id, columns);

                QueryExpression query = new
QueryExpression("invoicedetail");
                query.ColumnSet.AddColumns("quantity",
"invoiceispricelocked", "priceperunit");
                query.Criteria.AddCondition("invoiceid",
ConditionOperator.Equal, entity.Id);

                QueryExpression query1 = new
QueryExpression("invoicedetail");
                query1.ColumnSet.AddColumns("quantity",
"invoiceispricelocked");
                query1.Criteria.AddCondition("invoiceid",
ConditionOperator.Equal, entity.Id);

                EntityCollection ec = service.RetrieveMultiple(query);
                EntityCollection ec1 = service.RetrieveMultiple(query1);

                invoice["totallineitemamount"] = 0;

                decimal total = 0;
                decimal discount = 0;
                decimal tax = 0;

                for (int i = 0; i < ec.Entities.Count; i++)
```

```
                {
                    total = total + ((decimal)ec.Entities[i]["quantity"] *
((Money)ec.Entities[i]["priceperunit"]).Value);
                    (ec1.Entities[i])["extendedamount"] = new
Money(((decimal)ec.Entities[i]["quantity"] * ((Money)ec.Entities[i]
["priceperunit"]).Value));
                    service.Update(ec1.Entities[i]);
                }

                invoice["totallineitemamount"] = new Money(total);

                // Calculate discount based on the total amount
                discount = CalculateDiscount(total);
                total = total - discount;
                invoice["discountamount"] = new Money(discount);
                invoice["totalamountlessfreight"] = new Money(total);
                service.Update(invoice);

                // Calculate tax after the discount is applied
                tax = CalculateTax(total);
                total = total + tax;
                invoice["totaltax"] = new Money(tax);
                invoice["totalamount"] = new Money(total);
                service.Update(invoice);
            }
            return;
        }

        // Method to calculate extended amount in the product line items in
an invoice
        private static void CalculateInvoiceProduct(EntityReference entity,
IOrganizationService service)
        {
            try
            {
                ColumnSet columns = new ColumnSet();
                Entity e = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "priceperunit", "invoiceispricelocked"));
                Entity e1 = service.Retrieve(entity.LogicalName, entity.Id,
new ColumnSet("quantity", "invoiceispricelocked"));
                decimal total = 0;
                total = total + ((decimal)e["quantity"] *
((Money)e["priceperunit"]).Value);
                e1["extendedamount"] = new Money(total);
                service.Update(e1);
            }
            catch (FaultException<OrganizationServiceFault> ex)
            {
                System.Diagnostics.Debug.Write(ex.Message);
            }
        }

        #endregion
```

```
        // Method to calculate discount.
        private static decimal CalculateDiscount(decimal amount)
        {
            decimal discount = 0;

            if (amount > (decimal)1000.00 && amount < (decimal)5000.00)
            {
                discount = amount * (decimal)0.05;
            }
            else if (amount >= (decimal)5000.00)
            {
                discount = amount * (decimal)0.10;
            }
            return discount;
        }

        // Method to calculate tax.
        private static decimal CalculateTax(decimal amount)
        {
            decimal tax = 0;
            if (amount < (decimal)5000.00)
            {
                tax = amount * (decimal)0.10;
            }
            else
            {
                tax = amount * (decimal)0.08;
            }
            return tax;
        }
    }
}
```

See also

Use custom pricing for products

Create and manage product families, products and bundles

Product catalog tables

Sales literature entities in Dynamics 365 Sales

Article • 10/17/2023

A *sales literature* item is the basic unit of the marketing encyclopedia in Dynamics 365 Sales. For example, a business unit might decide to create an article about a specific product. The article can contain multiple sales literature items (sales attachments) such as a brochure, detailed specifications, and a CAD file, together with appropriate search terms, for example, "bolt" or "stainless steel." Any PC-compatible file format can be uploaded and attached to an article in the marketing encyclopedia. Specific search terms can be specified for each item.

You can use the sales literature management entities to create a central repository for your organization's sales information (in the form of sales literature items (sales attachments)) that provides an easy way to distribute information to users, both online and offline. Sales literature can be organized into categories and types to provide easier management and searching. Dynamics 365 Sales also supports a subject manager and knowledge base.

A sales literature record can have one or more sales literature items (sales attachments) attached to it in various formats, such as .doc, .pub, and .pdf. An item cannot be shared between sales literature records.

Sales literature records can also be attached to competitors and products (both yours and your competitors').

The basic operations supported in the marketing encyclopedia include the following:

- Create a sales literature item
- View a sales literature item
- Edit a sales literature item
- Delete a sales literature item
- Search for a sales literature item
- Upload an attachment and attach it to a sales literature item

  You can create a searchable marketing encyclopedia for storing various sales and marketing literature. As an example, a sales literature library might include the following:

- Product information
- Presentations and brochures
- Policies and procedures
- Sales literature
- White papers
- Competitive information
- Price lists
- Annual reports
- Manuals

In This Section

SalesLiterature Table

SalesLiteratureItem Table

Related Sections

Model your business data with Dataverse)

Sales forecasting APIs

Article • 11/10/2022

As a developer, use this reference documentation to define custom actions for manual forecasting.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Supported custom actions

The following custom action is used for forecasting:

- **msdyn_ForecastApi**: Enables you to perform various actions to retrieve and update forecasting data. More information: msdyn_ForecastApi action

See also

Project accurate revenue with sales forecasting

msdyn_ForecastApi action

Article • 03/30/2022

As a developer, use this reference documentation to use the `msdyn_ForecastApi` custom action to retrieve and update forecasting data.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Parameter name	Required	Description
`WebApiName`	Yes	Contains the name of the API to be executed.
`RequestJson`	Yes	Contains the parameters and the arguments for the API call.

List of APIs

Given below are the set of APIs you can invoke using the `msdyn_ForecastApi` custom action.

GET_ForecastConfigurations

Returns the list of all forecast configurations configured.

Example

```HTTP
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi/ HTTP/1.1
Content-Type: application/json

{
```

```
    "WebApiName": "GET_ForecastConfigurations",
    "RequestJson": "{}"
}
```

Parameter	Type	Description
`WebApiName`	String	Name of the API
`RequestJson`	String	Serialized JSON object

Response

JSON


```
{
   "@odata.context": "[Organization
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": [
      {
         "Columns": [
             {
                         "ForecastConfigurationColumnId": "0ad51075-912b-
4e00-a7a1-91170e437d27",
                         ...
                         "ForecastConfigurationId": "27bd2c40-f868-ea11-a811-
000d3a37bb2c",
                         ...
             },
             {
                         "ForecastConfigurationColumnId": "c3ef8024-6517-
4168-adc7-bb5b520554a0",
                         ...
                         "ForecastConfigurationId": "27bd2c40-f868-ea11-a812-
125d3a37bb2d",
                         ...

             }],
         "PermissionRoles": null,
         "AdditionalFilters": "<fetch version=\"1.0\" mapping=\"logical\">
<entity name=\"opportunity\"><\/entity><\/fetch>",
         "IsSnapshotScheduled": false,
         "SnapshotSchedule": null,
         "SnapshotTimeZone": null,
         "PublishedDateTime": "0001-01-01T00:00:00",
         "DefaultViewIdForUnderlyingRecords": "bf649add-6c30-ea11-a813-
000d3a5475f7"
      }
   ]
}
```

Return value

List of Forecast Configurations.

GET_ForecastConfigurationsByName

Returns all forecast configurations having the name provided as part of request payload.

Example

HTTP

```
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi HTTP/1.1
Content-Type: application/json

{
    "WebApiName": "GET_ForecastConfigurationsByName",
    "RequestJson": "{\"Name\":\"api_test1\"}"
}
```

Parameter	Type	Description
`WebApiName`	String	Name of the API
`RequestJson`	JSON object	Consists of `Name`: name of the forecast configuration

Response

JSON

```
{
   "@odata.context": "[Organization
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": [
      {
         "Columns": [
             {
                 "Name": "api_test1",
                 ...
                 "ForecastConfigurationId": "bcf37937-487e-ea11-a811-
000d3a37bb2c",
                 ...
             }
         ],
         "PermissionRoles": null,
         "AdditionalFilters": "<fetch version=\"1.0\" mapping=\"logical\">
```

```
<entity name=\"opportunity\"><\/entity><\/fetch>",
         "IsSnapshotScheduled": false,
         "SnapshotSchedule": null,
         "SnapshotTimeZone": null,
         "PublishedDateTime": "0001-01-01T00:00:00",
         "DefaultViewIdForUnderlyingRecords": "bf649add-6c30-ea11-a813-
000d3a5475f7"
      }
   ]
}
```

Return value

List of Forecast Configurations.

GET_ForecastPeriodsByForecastConfigurationId

Returns all the forecast periods for the active forecast configuration Id, that is provided as part of the request payload.

Example

HTTP

```
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi HTTP/1.1
Content-Type: application/json

{
  "WebApiName": "GET_ForecastPeriodsByForecastConfigurationId",
  "RequestJson": "{
      \"ForecastConfigurationId\":\"04323a04-da7f-ea11-a811-000d3a37bb2c\"
      }"
}
```

Parameter	Type	Description
`WebApiName`	String	Name of the API
`RequestJson`	JSON Object	Contains `ForecastConfigurationId`: Forecast Configuration Id

Response

JSON

```
{
   "@odata.context": "[Organization
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": [
      {
         "Id": "8b8cadd8-ede3-4b21-97cf-93efc0337089",
         "ForecastConfigurationId": "04323a04-da7f-ea11-a811-000d3a37bb2c",
         "RecurrenceIndex": 0,
         "ValidFrom": "2020-04-01T00:00:00Z",
         "ValidTo": "2020-06-30T23:59:59Z",
         "Name": "FY2020 Q2",
         "RecomputeStatus": 10,
         "LastRecomputedOn": "2020-05-25T08:04:24.817Z",
         "RecomputationStartTime": "2020-06-05T05:04:30.904Z",
         "RecomputeStatusChangedOn": "2020-06-05T06:04:00.363Z",
         "FailureInfo": "Microsoft.Azure.WebJobs.FunctionFailedException:
The activity function 'CreateUpdateForecastHierarchy' failed: \"An item with
the same key has already been added. Key: b1d30f13-ce56-ea11-a812-
000d3a382f93\". See the function execution logs for additional details. --->
System.ArgumentException: An item with the same key has already been added.
Key: b1d30f13-ce56-ea11-a812-000d3a382f93\r\n   at
System.Collections.Generic.Dictionary`2.TryInsert(TKey key, TValue value,
InsertionBehavior behavior)\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.
<>c__DisplayClass23_0.
<GetForecastInstancesByHierarchyEntityId>b__0(ForecastInstance
forecastInstance) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 727\r\n   at
System.Collections.Generic.List`1.ForEach(Action`1 action)\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.GetForecastI
nstancesByHierarchyEntityId(ForecastConfiguration forecastConfiguration,
Guid forecastRecurrenceId) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 727\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.CreateOrUpda
teForecastDataWithLatestHierarchy(ForecastConfiguration
forecastConfiguration, Guid forecastRecurrenceId, Dictionary`2
latestHierarchyEntityList) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 602\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.
<>c__DisplayClass16_0.<CreateOrUpdateForecastHierarchy>b__0() in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 283\r\n   at System.Threading.Tasks.Task.InnerInvoke()\r\n
at System.Threading.Tasks.Task.<>c.<.cctor>b__275_1(Object obj)\r\n   at
System.Threading.ExecutionContext.RunInternal(ExecutionContext
executionContext, ContextCallback callback, Object state)\r\n--- End of
stack trace from previous location where exception was thrown ---\r\n   at
System.Threading.ExecutionContext.RunInternal(ExecutionContext
executionContext, ContextCallback callback, Object state)\r\n   at
System.Threading.Tasks.Task.ExecuteWithThreadLocal(Task&
currentTaskSlot)\r\n--- End of stack trace from previous location where
```

```
exception was thrown ---\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.CreateOrUpda
teForecastHierarchy(ForecastConfiguration forecastConfiguration, Guid
forecastRecurrenceId, Dictionary`2 latestHierarchyEntityList) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 255\r\n   at
Microsoft.Dynamics.Forecasting.RecomputeEngine.HierarchyManager.CreateOrUpda
teForecastHierarchy(Guid orgId, Guid forecastConfigurationId, Guid
forecastRecurrenceId, Dictionary`2 latestHierarchyEntityList) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\RecomputeEngine\\HierarchyManager\\Hierarc
hyManager.cs:line 167\r\n   at
Microsoft.Dynamics.Forecasting.AzureFunctions.CreateUpdateForecastHierarchy.
Run(CreateUpdateForecastHierarchyInput input) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\AzureFunctions\\Recompute\\ActivityFunctio
ns\\CreateUpdateForecastHierarchy.cs:line 43\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.VoidTaskMethodInvoker`2.InvokeAsync(T
Reflected instance, Object[] arguments) in C:\\projects\\azure-webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\VoidTaskMethodInvoker.c
s:line 20\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.FunctionInvoker`2.InvokeAsync(Object
instance, Object[] arguments) in C:\\projects\\azure-webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\FunctionInvoker.cs:line
52\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.FunctionExecutor.InvokeAsync(IFunctio
nInvoker invoker, ParameterHelper parameterHelper, CancellationTokenSource
timeoutTokenSource, CancellationTokenSource functionCancellationTokenSource,
Boolean throwOnTimeout, TimeSpan timerInterval, IFunctionInstance instance)
in C:\\projects\\azure-webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\FunctionExecutor.cs:lin
e 585\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.FunctionExecutor.ExecuteWithWatchersA
sync(IFunctionInstanceEx instance, ParameterHelper parameterHelper, ILogger
logger, CancellationTokenSource functionCancellationTokenSource) in
C:\\projects\\azure-webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\FunctionExecutor.cs:lin
e 532\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.FunctionExecutor.ExecuteWithLoggingAs
ync(IFunctionInstanceEx instance, ParameterHelper parameterHelper,
IFunctionOutputDefinition outputDefinition, ILogger logger,
CancellationTokenSource functionCancellationTokenSource) in
C:\\projects\\azure-webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\FunctionExecutor.cs:lin
e 468\r\n   at
Microsoft.Azure.WebJobs.Host.Executors.FunctionExecutor.ExecuteWithLoggingAs
ync(IFunctionInstanceEx instance, FunctionStartedMessage message,
FunctionInstanceLogEntry instanceLogEntry, ParameterHelper parameterHelper,
ILogger logger, CancellationToken cancellationToken) in C:\\projects\\azure-
webjobs-sdk-
rqm4t\\src\\Microsoft.Azure.WebJobs.Host\\Executors\\FunctionExecutor.cs:lin
e 278\r\n   --- End of inner exception stack trace ---\r\n   at
Microsoft.Azure.WebJobs.DurableOrchestrationContext.CallDurableTaskFunctionA
sync[TResult](String functionName, FunctionType functionType, String
instanceId, RetryOptions retryOptions, Object input) in
E:\\functions\\azure-functions-durable-
extension\\src\\WebJobs.Extensions.DurableTask\\DurableOrchestrationContext.
```

```
cs:line 498\r\n   at
Microsoft.Dynamics.Forecasting.AzureFunctions.OrchestratorFunctionBase.Execu
teActivityAsync(DurableOrchestrationContext context, String functionName,
Object input, Dictionary`2 telemetryProps) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\AzureFunctions\\OrchestratorFunctionBase.c
s:line 252\r\n   at
Microsoft.Dynamics.Forecasting.AzureFunctions.RecomputeOrchestrator.ExecuteR
ecomputeOrchestration(DurableOrchestrationContext context,
RecomputeOrchestratorInput recomputeInput, String correlationId,
Dictionary`2 telemetryProps) in
C:\\src\\cloud_IDEs\\ide5\\Azure\\AzureFunctions\\Recompute\\RecomputeOrches
trator.cs:line 169",
          "RecurrenceState": 0,
          "UpdatedAttribteList": null
      }
    ]
}
```


Return value

List of Forecast Periods.

GET_ForecastInstances

Returns the list of forecast instances that are a single row entity record.

> **Note**
>
> Forecast periods can have many forecast instances. Far more than you would want to pull down in a single request. The API endpoints default to providing a limited number of items per request.
> Note: Large queries can hurt performance, so the number of results per page is capped at 4000 records. If you wish to retrieve more than 4000 records, for example to build a client-side list of all available forecast instances, you can make multiple API requests and combine the results within your application.

Example

HTTP

```
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi HTTP/1.1
Content-Type: application/json

{
    "WebApiName": "GET_ForecastInstances",
```

```
    "RequestJson": "{
        \"ForecastPeriodId\":\"8b8cadd8-ede3-4b21-97cf-93efc0337089\",
        \"ForecastConfigurationId\":\"04323a04-da7f-ea11-a811-
000d3a37bb2c\",
        \"SortingAttribute\":\"HierarchyEntityRecord.RecordId\",
        \"SortingOrder\":\"DSC\",
        \"PageSize\":1,
        \"PageNo\":1
    }"
}
```

Parameter	Type	Description
`WebApiName`	String	Name of the API
`RequestJson`	JSON object	Consists of `ForecastPeriodId`: Unique identifier of the forecast period `ForecastConfigurationId`: Unique identifier of the forecast configuration `SortingAttribute`: The attribute based on which you want to do Sorting in the paging `SortingOrder`: ASC for ascending order DSC for descending order `PageSize`: Number of records you want to retrieve in a single page `PageNo`: Which page records you want to fetch for.

Given below is the sample JSON for `RequestJson` object.

JSON

```
{
    "WebApiName": "GET_ForecastInstances",
    "RequestJson": "{
        \"ForecastPeriodId\":\"{{frid}}\",
        \"ForecastConfigurationId\":\"{{fcid}}\",
        \"SortingAttribute\":\"HierarchyEntityRecord.RecordId\",
        \"SortingOrder\":\"DSC\",
        \"PageSize\":1,
        \"PageNo\":1

    }"
}
```

Response

JSON

```
{
   "@odata.context": "[Organization
```

```
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": {
      "ForecastInstances": [
          "ForecastInstanceId": "95d2305a-a0be-4b34-84ac-b10e67b0771a",
          "ForecastConfigurationId": "04323a04-da7f-ea11-a811-000d3a37bb2c",
            ...],
      "HasMorePages": false,
      "Code": 200,
      "Message": "OK"
   }
}
```

Return value

List of Forecast Periods.

Update_SimpleColumnByEntityId

Updates the specific column values using the values of the passed parameters.

> **Note**
>
> Large number of update requests in a single API call can hurt performance, so the updates per request are capped at 50.

Example

HTTP

```
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi HTTP/1.1
content-type: application/json

{
    "WebApiName": "Update_ SimpleColumnByEntityId",
    "RequestJson": "
    {
      \"ForecastConfigurationId\":\"0461fb6b-8d85-ea11-a811-000d3a37bb2c\",
      \"ForecastRecurranceId\":\"f8b1122c-b913-4e88-9727-368b6134be3e\",
      \"SimpleColumnUpdateRequests\":[{
        \" HierarchyEntityRecordId\":\"d8680b00-fd31-46c2-8136-
7c4df19cf2a8\",
        \"ForecastConfigurationColumnId\":\"65ec7bd1-2de6-49fa-b259-
ba74bc721c78\",
        \"ForecastConfigurationColumnValue\":0.0,
        \"IsRolledUpColumnUpdate\":false},{
        \" HierarchyEntityRecordId\":\"11141300-131b-493a-9857-
```

```
22bd8689b775\",
        \"ForecastConfigurationColumnId\":\"65ec7bd1-2de6-49fa-b259-
ba74bc721c78\",
        \"ForecastConfigurationColumnValue\":0.0,
        \"IsRolledUpColumnUpdate\":false}]}"
}
```

Parameter	Name	Description
WebApiName	String	Name of the API
ForecastConfigurationId	GUID	Forecast Configuration Id
ForecastRecurranceId	GUID	Forecast Recurrance Id or Forecast Period Id A list of `SimpleColumnUpdateRequests` is an array
HierarchyEntityRecordId	GUID	EntityRecordId
ForecastConfigurationColumnId	GUID	Forecast Configuration Column Id
ForecastConfigurationColumnValue	Datatype of ForecastConfigurationColumn	Value which needs to be updated to
IsRolledUpColumnUpdate(optional)	Boolean	`True` if the value is updated for the rolled up column, `False` if the value is update for aggregate column

Response

JSON


```
{
   "@odata.context": "[Organization
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": [
      {
         "Message": "Update Successful",
         "StatusCode": 0,
         "HierarchyEntityRecordId": "d8680b00-fd31-46c2-8136-7c4df19cf2a8",
         "ForecastConfigurationColumnId": "65ec7bd1-2de6-49fa-b259-
ba74bc721c78"
      },
      {
         "Message": "Update Successful",
         "StatusCode": 0,
```

```
            "HierarchyEntityRecordId": "11141300-131b-493a-9857-22bd8689b775",
            "ForecastConfigurationColumnId": "65ec7bd1-2de6-49fa-b259-
ba74bc721c78"
        }
    ]
}
```

Return value

A list of `UpdateSimpleColumnByEntityResponse` records consisting of `HierarchyEntityRecordId`, `ForecastConfigurationColumnId`, `Message`, `StatusCode`.

Update_SimpleColumnByFIId

Updates the specific column value by setting the values of the parameters passed.

> **Note**
>
> Large number of update requests in a single API call can hurt performance, so the updates per request are capped at 50.

Example

HTTP

```
POST [Organization URI]/api/data/v9.1/msdyn_ForecastApi HTTP/1.1
content-type: application/json

{
    "WebApiName": "Update_SimpleColumnByFIId",
    "RequestJson": "
    {
      \"ForecastConfigurationId\":\"0461fb6b-8d85-ea11-a811-000d3a37bb2c\",
      \"ForecastRecurranceId\":\"f8b1122c-b913-4e88-9727-368b6134be3e\",
      \"SimpleColumnUpdateRequests\":[
      {
        \"ForecastInstanceId\":\"d8680b00-fd31-46c2-8136-7c4df19cf2a8\",
        \"ForecastConfigurationColumnId\":\"65ec7bd1-2de6-49fa-b259-
ba74bc721c78\",
        \"ForecastConfigurationColumnValue\":0.0,
        \"IsRolledUpColumnUpdate\":false},
        {
          \"ForecastInstanceId\":\"11141300-131b-493a-9857-22bd8689b775\",
          \"ForecastConfigurationColumnId\":\"65ec7bd1-2de6-49fa-b259-
ba74bc721c78\",
          \"ForecastConfigurationColumnValue\":0.0,
```

```
            \"IsRolledUpColumnUpdate\":false}]}"
}
```

Parameter	Type	Description
WebApiName	String	Name of the API
ForecastConfigurationId	GUID	Forecast Configuration Id
ForecastRecurranceId	Guid	Forecast Recurrance Id or Forecast Period Id
SimpleColumnUpdateRequests	Array	Includes the following
ForecastInstanceId	GUID	Forecast Instance Id
ForecastConfigurationColumnId	GUID	Forecast Configuration Column Id
ForecastConfigurationColumnValue	Datatype of ForecastConfigurationColumn	Value which needs to be updated to
IsRolledUpColumnUpdate(optional)	Boolean	`True` if the value is updated for the rolled up column, `false` if the value is update for aggregate column

Response

JSON


```
{
   "@odata.context": "[Organization
URI]/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_ForecastApiRespons
e",
   "response": [
      {
         "Message": "Update Successful",
         "StatusCode": 0,
         "ForecastInstanceId": "d8680b00-fd31-46c2-8136-7c4df19cf2a8",
         "ForecastConfigurationColumnId": "65ec7bd1-2de6-49fa-b259-
ba74bc721c78"
      },
      {
         "Message": "Update Successful",
         "StatusCode": 0,
         "ForecastInstanceId": "11141300-131b-493a-9857-22bd8689b775",
         "ForecastConfigurationColumnId": "65ec7bd1-2de6-49fa-b259-
ba74bc721c78"
```

```
        }
    ]
}
```

Return value

A list of `UpdateSimpleColumnByEntityResponse` records consisting of `ForecastInstanceId`, `ForecastConfigurationColumnId`, `Message`, `StatusCode`.

See also

Custom actions for forecasting

Customize the underlying records grid in forecasts

Article • 06/05/2023

As a developer, use this reference documentation to learn about the events and context object to customize the underlying records grid in your forecast. You can use the context object to perform customizations such as making the entire grid or specific fields read-only, disabling fields, showing error notifications, and so on.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

> **Note**
>
> The *forecasting context object* that's referred to in this topic is different from the execution context of Microsoft Dataverse. The forecasting context object is specific to forecasting and supports the advanced configurations for the underlying records grid.

Events for the underlying records grid

The following events are supported in forecasting:

- OnRowLoad
- OnSave
- OnChange

The following samples scenarios are created based on the supported event handlers:

- Make a grid read-only by disabling all fields.
- Always enable only a few fields based on entity.
- Disable editing of fields based on logic and entity.
- Show an error notification based on value.

- Block autosave based on the estimated value by using preventDefault, and open a window event.

OnRowLoad event

The `OnRowLoad` event is triggered for every underlying record loaded in the grid. The context object that's passed to the `OnRowLoad` event handler contains APIs that are specific to the underlying record.

The following are the sample scenarios that you can perform using `OnRowLoad` handler:

- Make a grid read-only by disabling all fields.
- Always enable only a few fields based on entity.
- Disable editing of fields based on logic and entity.

> ⓘ **Note**
>
> For forecast configuration, underlying records of different entities are viewed by selecting the **Groupby** attribute in the underlying records grid. To handle logic based on these entities, see the samples **Always enable only a few fields based on entity** and **Disable editing of fields based on logic and entity**.

OnChange event

The `OnChange` event is triggered when the value of a cell in the underlying records grid is updated and the cell is out of focus.

> ⓘ **Note**
>
> - For the underlying records grid, any field change will trigger `OnChange` and `OnSave` event handlers, if they exist.
> - The save won't be triggered if a field is set with an error notifications by using the client API in the `OnChange` handler. For notifications related to forecasting client APIs, go to the `setNotification` API in **context.getFormContext().data.entity.attributes.getByName("Attribute Name").controls.get(0)**.
> - There is no mapping between attributes to the `OnChange` handler, and any field change will trigger the `OnChange` handler with the context object parameter. To identify the attribute that triggered the handler, use the

`getIsDirty` function on the attribute object. More information: **context.getFormContext().data.entity.attributes.getByName("Attribute Name")**

The following is a sample scenario that you can perform by using the `OnChange` handler:

- Show error notification based on value.

OnSave event

The `OnSave` event is triggered when a value is changed in a cell of the underlying records grid and the cell is out of focus. However, if the `OnChange` handler exists for the same forecast configuration, the `OnSave` handler is invoked after the `OnChange` handler.

The `OnSave` handler is invoked before the actual save of the field.

> ⓘ **Note**
>
> - For the underlying records grid, any field change will trigger `OnChange` and `OnSave` event handlers, if they exist.
> - The save won't be triggered if a field is set with an error notifications by using the client API in the `OnSave` handler. For notification related to forecasting client APIs, go to the `setNotification` API in **context.getFormContext().data.entity.attributes.getByName("Attribute Name").controls.get(0)**.
> - There's no mapping between attributes to the `OnSave` handler, and any field change will trigger the `OnSave` handler with the context object parameter. To identify the attribute that triggered the handler, use the `getIsDirty` function on the attribute object. More information: **context.getFormContext().data.entity.attributes.getByName("Attribute Name")**

The following is a sample scenario that you can perform by using the `OnSave` handler:

- Block autosave based on the estimated value using preventDefault, and open a window event.

Context object for event handlers in the underlying records grid

The context object contains a set of APIs to perform operations specific to an underlying record in a forecast. This context object is passed as a parameter to the event handlers in the underlying records grid view.

The following APIs are supported:

- context.getFormContext method
- context.getWebApiContext()
- context.getEventArgs().preventDefault()

context.getFormContext method

Returns a reference to a record on the underlying records grid.

context.getFormContext().data.entity

This returns an entity object and has the following methods:

Method	Return type	Description
`getEntityName()`	String	Returns a string representing the logical name of the entity for the record.
`getId()`	String	Returns a string representing the GUID value for the record.
`attributes`	List	Returns a list of attributes that are related to the view and an entity that's loaded as part of the underlying records grid. You can perform the following operations: - `context.getFormContext().data.entity.attributes.forEach` - `context.getFormContext().data.entity.attributes.getByName(arg)` - `context.getFormContext().data.entity.attributes.get(index)`

context.getFormContext().data.entity.attributes.getByName("Attribute Name")

This returns an attribute object and has the following methods:

Method	Return type	Description

Method	Return type	Description
`getName()`	String	Returns a string that represents the logical name of the attribute.
`getValue()`	--	Retrieves the data value for an attribute.
`getIsDirty()`	Boolean	Returns a Boolean value indicating whether there are any unsaved changes to the attribute value.
`controls`	List	Returns a list of controls for each attribute object. **Note**: The `controls` object list length is always 1, and `get(0)` can be directly used.

context.getFormContext().data.entity.attributes.getByName("AttributeName").controls.get(0)

This returns a control object mapping to the attribute and has the following methods:

Method	Return type	Description
`getDisabled()`	Boolean	Returns whether the control is disabled.
`setDisabled(bool)`	--	Sets the disabled value (true or false) to the control.
`setNotification(message: string, uniqueId?: string)`	Boolean	Displays an error message for the control to indicate that data isn't valid. When this method is used, a red cross icon appears next to the control within the cell. Hovering over the error icon will display the provided message. Selecting the error icon will reload the row and undo any changes. The `uniqueId` is used to clear this message when using the `clearNotification` method.
`clearNotification(uniqueId?: string)`	Boolean	Removes a message that's already displayed for a control. If no unique ID is provided, all notifications for that control are removed.

> ⓘ Note
>
> We recommend that the function names in the JavaScript file must match the event names and must accept the context object parameter.

Example 1:

Let's create JavaScript code to make all the fields in the underlying records grid as READ-ONLY. Also, we'll call the `OnRowLoad` function for each row when the grid is loaded and saved successfully.

JavaScript

```
function OnRowLoad(executionContext) {
    // Iterating through all attributes and disabling it.
    executionContext.getFormContext().data.entity.attributes.forEach(
        attribute => {
            attribute.controls.get(0).setDisabled(true);
        }
    )
}
```

Example 2:

Let's create JavaScript code to disable all fields except a few for the Opportunity entity only. Also, we'll call the `OnRowLoad` function for each row when the grid is loaded and saved successfully.

JavaScript

```
function OnRowLoad(executionContext) {

    // Get the logical name of the loaded entity as part of underlying
records grid.
    var entityName =
executionContext.getFormContext().data.entity.getEntityName();

    if (entityName === "opportunity") {

        // Defining the attributes list from opportunity that has to be
enabled if loaded as part of view.
        var OPTY_ENABLE_ATTRS_LIST = ["name", "msdyn_forecastcategory",
"actualvalue", "actualclosedate", "estimatedvalue", "estimatedclosedate"];

        executionContext.getFormContext().data.entity.attributes.forEach(
            attribute => {
                // Disabling all attributes other than
OPTY_ENABLE_ATTRS_LIST
                if (!OPTY_ENABLE_ATTRS_LIST.includes(attribute.getName())) {
                    attribute.controls.get(0).setDisabled(true);
                }
            }
        )
    }
}
```

Example 3:

Let's create JavaScript code to handle different entities for the loaded forecast configuration.

For an Opportunity entity, the script will disable the following:

- Name column
- `actualRevenue` and `actualCloseData` if the `forecastCategory` value is best case, committed, omitted, or pipeline.
- `estimatedRevenue` and `estimatedCloseDate` if the `forecastCategory` value is won or lost.

Similarly, the script will disable the name column for the Account entity and disable all columns for other entities.

Also, we'll call the `OnRowLoad` function for each row when the grid is loaded and saved successfully.

JavaScript

```
function OnRowLoad(executionContext) {

    // Get the logical name of the loaded entity as part of underlying
records grid.
    var entityName =
executionContext.getFormContext().data.entity.getEntityName();

    // If loaded logical name of entity in underlying records grid is
opportunity.
    if (entityName === "opportunity") {

       var allAttrs =
executionContext.getFormContext().data.entity.attributes;

       // Disable column name for all records if exists in the view.
       var nameAttr = allAttrs.getByName("name");
       if (nameAttr) {
           nameAttr.controls.get(0).setDisabled(true);
       }

       var fcatAttr = allAttrs.getByName("msdyn_forecastcategory");
       if (fcatAttr) {
           // Disable actualRevenue, actualCloseDate for forecastcategory
Bestcase, committed, omitted, or pipeline.
           if (fcatAttr.getValue() <= 100000004 && fcatAttr.getValue() >=
100000001) {
                   var actualRevenueAttr =
allAttrs.getByName("actualvalue");
```

```
                    var actualCloseDateAttr =
allAttrs.getByName("actualclosedate");
                    if (actualRevenueAttr)
actualRevenueAttr.controls.get(0).setDisabled(true);
                    if (actualCloseDateAttr)
actualCloseDateAttr.controls.get(0).setDisabled(true);
            }
            // Disable estimatedRevenue, estimatedCloseDate for
forecastCategory won or lost.
            else if (fcatAttr.getValue() == 100000005 || fcatAttr.getValue()
== 100000006) {
                    var estimatedRevenueAttr =
allAttrs.getByName("estimatedvalue");
                    var estimatedCloseDateAttr =
allAttrs.getByName("estimatedclosedate");
                    if (estimatedRevenueAttr)
estimatedRevenueAttr.controls.get(0).setDisabled(true);
                    if (estimatedCloseDateAttr)
estimatedCloseDateAttr.controls.get(0).setDisabled(true);
            }
        }
    }

    // Else disable name column, if loaded logical name of entity is Account.
    else if (entityName === "account"){
        var attrNameObj =
executionContext.getFormContext().data.entity.attributes.getByName("name");
        if (attrNameObj) {
                attrNameObj.controls.get(0).setDisabled(true);
        }
    }

    // For all other entities
    else {
        executionContext.getFormContext().data.entity.attributes.forEach(
            attribute => {
                attribute.controls.get(0).setDisabled(true);
            }
        )
    }
}
```

Example 4:

Let's create a validation JavaScript file that will block save and show an error notification on the estimated revenue column when the value is less than 10. Also, we'll remove the error notification and allow save when the estimated revenue column value is corrected to be greater than or equal to 10. Here, the `OnChange` function is invoked when any field's value is updated on the underlying records grid of a forecast.

JavaScript

```
// OnChange function is invoked when any field's value is updated on the
underlying records grid of the forecast
function OnChange(executionContext) {

    let entity = executionContext.getFormContext().data.entity;

    // Verify the logical name of the entity and load as part of the
underlying records grid.
    if (entity.getEntityName() === "opportunity") {

        // Verify estimated revenue value
        let estValAttr = entity.attributes.get("estimatedvalue");

        // Verify if this attribute exists within the grid view and changed
        if(estValAttr && estValAttr.getIsDirty())
        {
            if(estValAttr.getValue() < 10){

                // This will show an error icon next to the estimated
revenue field. On hovering over the icon, the below provided message is
displayed.
                // Any save attempts are blocked by the system until all
notifications are cleared from the columns.
                estValAttr.controls.get(0).setNotification("Estimated
revenue cannot be less than 10");
            }
            else{
                // Clearing notifications to save.
                estValAttr.controls.get(0).clearNotification();
            }
        }
    }
}
```

context.getWebApiContext()

This returns a `webApiContext` object and has the following methods:

Method	Description
`retrieveRecord(entityLogicalName, id, options) then (successCallback, errorCallback);`	Retrieves an entity record. More information: retrieveRecord (Client API reference)

Method	Description
`updateRecord(entityLogicalName, id, data) then(successCallback, errorCallback);`	Updates an entity record. More information: updateRecord (Client API reference)
`createRecord(entityLogicalName, data) then(successCallback, errorCallback);`	Creates an entity record. More information: createRecord (Client API reference)
`deleteRecord(entityLogicalName, id) then(successCallback, errorCallback);`	Deletes an entity record. More information: deleteRecord (Client API reference)

context.getEventArgs().preventDefault()

The `preventDefault()` method is available only within the `OnSave` event. Calling this method within `OnSave` prevents the save event from proceeding.

Example:

Let's create sample JavaScript to open the opportunities grid, and block the auto save event and open a window alert if the estimated revenue value is less than 10. Also, we'll allow the auto save event if the estimated revenue value is greater than or equal to 10.

JavaScript

```
// OnSave function will be invoked whenever grid attempts to save changes
made to any field.
function OnSave(executionContext){

    let entity = executionContext.getFormContext().data.entity;

    // Verify the logical name of the entity and load as part of the
underlying records grid.
    if (entity.getEntityName() === "opportunity") {

        // Verify estimated revenue value
        var estValAttr = entity.attributes.get("estimatedvalue");

        if(estValAttr && estValAttr.getIsDirty() && estValAttr.getValue() <
10){

            // This call will prevent the save event from proceeding
            executionContext.getEventArgs().preventDefault();
            alert("Estimated revenue cannot be less than 10");
```

```
        }
    }
}
```

See also

Customize underlying records grid

Customize quick campaign and campaign activity distribution forms

Article • 09/07/2023

As a developer, use this reference documentation for customizing the quick campaign and distribute campaign activity forms.

> **Important**
>
> - To enable users to view custom attributes on the activity distribution page, provide read permissions to the **Marketing Form Display Attributes** table under the **Custom Entities** tab within their assigned security role.
> - Out-of-the-box fields in the form can't be removed using this customization.

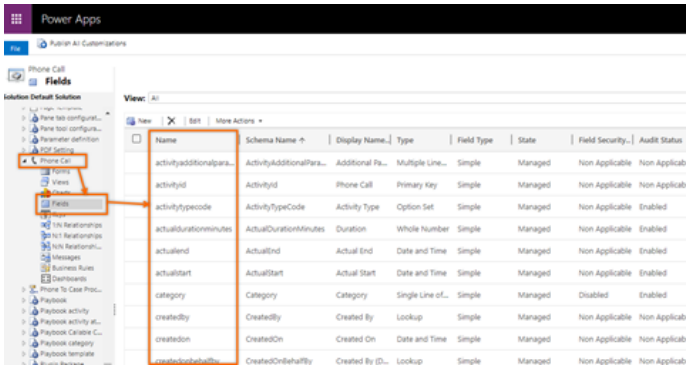
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Action parameters

The **marketingformdisplayattributesset** action expects the following input parameters:

Parameter name	Required?	Type	Description
`entitylogicalname`	Yes	Edm.String	Specifies the name of the table for custom form. **Note:** Each `entitylogicalname` must have only one record in the application. If there is more than one record, the application considers the record based on which it was first created. To view the list of records, make a GET API call: `GET [Organization URI]/api/data/v9.0/marketingformdisplayattributesset HTTP/1.1`

Parameter name	Required?	Type	Description
`displayattributelist`	Yes	Edm.String	Specifies the list of columns to be displayed in custom form. You can get the column names from system customizations. For example, to view the column names of **Phone Call**, go to **Advance settings** > **Customizations** > **Customize the system** > **Tables** > **Phone Call** > **Fields** and the names are listed under **Name** column.  **Note:** Attributes with the following data types are not supported: • Status • Status reason • Image • Owner • Unique identifier • Customer • Multi select option set
`name`	Yes	Edm.String	Specifies the name of **Marketing Form Display Attributes**. To view this table, go to **Advance settings** > **Customizations** > **Customize the system** > **Tables**.

Action example

HTML

```
POST [Organization URI]/api/data/v9.0/marketingformdisplayattributesset
HTTP/1.1
Accept: application/json
Content-Type: application/json; charset=utf-8
OData-MaxVersion: 4.0
OData-Version: 4.0
{
    "entitylogicalname" : "phonecall",
    "displayattributelist" : "[\"lastonholdtime\",
\"transactioncurrencyid\", \"owningbusinessunit\", \"isregularactivity\",
\"actualdurationminutes\", \"subcategory\"]",
```

```
    "name" : "Phone Call"
}
```

Response

JSON

```
HTTP/1.1 204 No Content
OData-Version: 4.0
```

See also

Create a quick campaign using in-app marketing (Sales)
Add an activity to a campaign using in-app marketing (Sales)

DeleteOQOILineWithSkipPricingCalculation custom action

Article • 03/30/2022

As a developer, use this reference documentation to understand the parameters, and web API calls for deleting an opportunity, quote, order, and invoice without triggering price calculation.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Name	Type	Required	Description
entityLogicalName	String	Yes	Name of the entity
entityId	GUID	Yes	Unique identifier of the entity record

Example

This custom action can be used both client-side and server-side. Given below are examples on how you can make server-side and client-side calls to this custom action.

Server-side Web API call

HTML

```
POST [Organization
URI]/api/data/v9.1/DeleteOQOILineWithSkipPricingCalculation
{
    "entityLogicalName": "invoicedetail",
    "entityId":"91F3EDB0-213B-E911-8190-000D3AFD8945"
}
```

Client-side Web API call

JavaScript

```
var deleteOQOILineWithSkipPricingCalculationRequest= new
ODataContract.DeleteOQOILineWithSkipPricingCalculationRequest({guid:
ClientUtility.Guid.create(Xrm.Page.data.entity.getId())},
Xrm.Page.data.entity.getEntityName());

Xrm.WebApi.online.execute(deleteOQOILineWithSkipPricingCalculationRequest).t
hen(() => {
                    Xrm.Page.data.refresh(false);
                }, ClientUtility.ActionFailedHandler.actionFailedCallback);
```

See also

msdyn_ForecastApi

Sales table/entity reference

Article • 03/03/2023

This reference documentation covers properties, columns, and relationships of tables in Dynamics 365 Sales. Use the reference articles to understand the available operations for each table, the default attributes of each table, and the relationship between tables. For more information about the details available for columns, properties, and relationships, see Dataverse table/entity reference.

Account table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Business that represents a customer or potential customer. The company that is billed in business transactions.

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
GrantAccess	GrantAccessRequest
Merge	MergeRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest

Message	SDK Assembly
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Accounts
DisplayCollectionName	Accounts
DisplayName	Account
EntitySetName	accounts
IsBPFEntity	False
LogicalCollectionName	accounts
LogicalName	account
OwnershipType	UserOwned
PrimaryIdAttribute	accountid
PrimaryNameAttribute	name
SchemaName	Account

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AccountCategoryCode
- AccountClassificationCode
- AccountId
- AccountNumber
- AccountRatingCode
- Address1_AddressId
- Address1_AddressTypeCode

- Address1_City
- Address1_Country
- Address1_County
- Address1_Fax
- Address1_FreightTermsCode
- Address1_Latitude
- Address1_Line1
- Address1_Line2
- Address1_Line3
- Address1_Longitude
- Address1_Name
- Address1_PostalCode
- Address1_PostOfficeBox
- Address1_PrimaryContactName
- Address1_ShippingMethodCode
- Address1_StateOrProvince
- Address1_Telephone1
- Address1_Telephone2
- Address1_Telephone3
- Address1_UPSZone
- Address1_UTCOffset
- Address2_AddressId
- Address2_AddressTypeCode
- Address2_City
- Address2_Country
- Address2_County
- Address2_Fax
- Address2_FreightTermsCode
- Address2_Latitude
- Address2_Line1
- Address2_Line2
- Address2_Line3
- Address2_Longitude
- Address2_Name
- Address2_PostalCode
- Address2_PostOfficeBox
- Address2_PrimaryContactName
- Address2_ShippingMethodCode
- Address2_StateOrProvince
- Address2_Telephone1

- Address2_Telephone2
- Address2_Telephone3
- Address2_UPSZone
- Address2_UTCOffset
- BusinessTypeCode
- CreditLimit
- CreditOnHold
- CustomerSizeCode
- CustomerTypeCode
- DefaultPriceLevelId
- Description
- DoNotBulkEMail
- DoNotBulkPostalMail
- DoNotEMail
- DoNotFax
- DoNotPhone
- DoNotPostalMail
- DoNotSendMM
- EMailAddress1
- EMailAddress2
- EMailAddress3
- EntityImage
- Fax
- FollowEmail
- FtpSiteURL
- ImportSequenceNumber
- IndustryCode
- LastOnHoldTime
- LastUsedInCampaign
- MarketCap
- MarketingOnly
- msdyn_salesaccelerationinsightid
- msdyn_segmentid
- Name
- NumberOfEmployees
- OriginatingLeadId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- OwnershipCode

- ParentAccountId
- ParticipatesInWorkflow
- PaymentTermsCode
- PreferredAppointmentDayCode
- PreferredAppointmentTimeCode
- PreferredContactMethodCode
- PreferredEquipmentId
- PreferredServiceId
- PreferredSystemUserId
- PrimaryContactId
- PrimarySatoriId
- PrimaryTwitterId
- ProcessId
- Revenue
- SharesOutstanding
- ShippingMethodCode
- SIC
- SLAId
- StageId
- StateCode
- StatusCode
- StockExchange
- TeamsFollowed
- Telephone1
- Telephone2
- Telephone3
- TerritoryCode
- TerritoryId
- TickerSymbol
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WebSiteURL
- YomiName

AccountCategoryCode

Property	Value

Property	Value
Description	Select a category to indicate whether the customer account is standard or preferred.
DisplayName	Category
IsValidForForm	True
IsValidForRead	True
LogicalName	accountcategorycode
RequiredLevel	None
Type	Picklist

AccountCategoryCode Choices/Options

Value	Label	Description
1	Preferred Customer	
2	Standard	

AccountClassificationCode

Property	Value
Description	Select a classification code to indicate the potential value of the customer account based on the projected return on investment, cooperation level, sales cycle length or other criteria.
DisplayName	Classification
IsValidForForm	True
IsValidForRead	True
LogicalName	accountclassificationcode
RequiredLevel	None
Type	Picklist

AccountClassificationCode Choices/Options

Value	Label	Description
1	Default Value	

AccountId

Property	Value
Description	Unique identifier of the account.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	accountid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

AccountNumber

Property	Value
Description	Type an ID number or code for the account to quickly search and identify the account in system views.
DisplayName	Account Number
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	accountnumber
MaxLength	20
RequiredLevel	None
Type	String

AccountRatingCode

Property	Value
Description	Select a rating to indicate the value of the customer account.
DisplayName	Account Rating
IsValidForForm	True
IsValidForRead	True
LogicalName	accountratingcode
RequiredLevel	None
Type	Picklist

AccountRatingCode Choices/Options

Value	Label	Description
1	Default Value	

Address1_AddressId

Property	Value
Description	Unique identifier for address 1.
DisplayName	Address 1: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address1_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address1_AddressTypeCode

Property	Value
Description	Select the primary address type.

Property	Value
DisplayName	Address 1: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_addresstypecode
RequiredLevel	None
Type	Picklist

Address1_AddressTypeCode Choices/Options

Value	Label	Description
1	Bill To	
2	Ship To	
3	Primary	
4	Other	

Address1_City

Property	Value
Description	Type the city for the primary address.
DisplayName	Address 1: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_city
MaxLength	80
RequiredLevel	None
Type	String

Address1_Country

Property	Value
Description	Type the country or region for the primary address.
DisplayName	Address 1: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_country
MaxLength	80
RequiredLevel	None
Type	String

Address1_County

Property	Value
Description	Type the county for the primary address.
DisplayName	Address 1: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_county
MaxLength	50
RequiredLevel	None
Type	String

Address1_Fax

Property	Value
Description	Type the fax number associated with the primary address.
DisplayName	Address 1: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_fax
MaxLength	50
RequiredLevel	None
Type	String

Address1_FreightTermsCode

Property	Value
Description	Select the freight terms for the primary address to make sure shipping orders are processed correctly.
DisplayName	Address 1: Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_freighttermscode
RequiredLevel	None
Type	Picklist

Address1_FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

Address1_Latitude

Property	Value
Description	Type the latitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address1_Line1

Property	Value
Description	Type the first line of the primary address.
DisplayName	Address 1: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line1
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line2

Property	Value
Description	Type the second line of the primary address.
DisplayName	Address 1: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line2
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line3

Property	Value
Description	Type the third line of the primary address.
DisplayName	Address 1: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line3
MaxLength	250
RequiredLevel	None
Type	String

Address1_Longitude

Property	Value

Property	Value
Description	Type the longitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address1_Name

Property	Value
Description	Type a descriptive name for the primary address, such as Corporate Headquarters.
DisplayName	Address 1: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_name
MaxLength	200
RequiredLevel	None
Type	String

Address1_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the primary address.
DisplayName	Address 1: ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address1_PostOfficeBox

Property	Value
Description	Type the post office box number of the primary address.
DisplayName	Address 1: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address1_PrimaryContactName

Property	Value

Property	Value
Description	Type the name of the main contact at the account's primary address.
DisplayName	Address 1: Primary Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_primarycontactname
MaxLength	100
RequiredLevel	None
Type	String

Address1_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 1: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address1_ShippingMethodCode Choices/Options

Value	Label	Description
1	Airborne	
2	DHL	
3	FedEx	

Value	Label	Description
4	UPS	
5	Postal Mail	
6	Full Load	
7	Will Call	

Address1_StateOrProvince

Property	Value
Description	Type the state or province of the primary address.
DisplayName	Address 1: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone1

Property	Value
Description	Type the main phone number associated with the primary address.
DisplayName	Address Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone2

Property	Value
Description	Type a second phone number associated with the primary address.
DisplayName	Address 1: Telephone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone3

Property	Value
Description	Type a third phone number associated with the primary address.
DisplayName	Address 1: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address1_UPSZone

Property	Value
Description	Type the UPS zone of the primary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 1: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address1_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 1: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Address2_AddressId

Property	Value
Description	Unique identifier for address 2.
DisplayName	Address 2: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address2_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address2_AddressTypeCode

Property	Value
Description	Select the secondary address type.
DisplayName	Address 2: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_addresstypecode
RequiredLevel	None
Type	Picklist

Address2_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_City

Property	Value
Description	Type the city for the secondary address.
DisplayName	Address 2: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_city
MaxLength	80
RequiredLevel	None
Type	String

Address2_Country

Property	Value
Description	Type the country or region for the secondary address.
DisplayName	Address 2: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_country
MaxLength	80

Property	Value
RequiredLevel	None
Type	String

Address2_County

Property	Value
Description	Type the county for the secondary address.
DisplayName	Address 2: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_county
MaxLength	50
RequiredLevel	None
Type	String

Address2_Fax

Property	Value
Description	Type the fax number associated with the secondary address.
DisplayName	Address 2: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_fax
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

Address2_FreightTermsCode

Property	Value
Description	Select the freight terms for the secondary address to make sure shipping orders are processed correctly.
DisplayName	Address 2: Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_freighttermscode
RequiredLevel	None
Type	Picklist

Address2_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_Latitude

Property	Value
Description	Type the latitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_latitude
MaxValue	90

Property	Value
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address2_Line1

Property	Value
Description	Type the first line of the secondary address.
DisplayName	Address 2: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line1
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line2

Property	Value
Description	Type the second line of the secondary address.
DisplayName	Address 2: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address2_line2
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line3

Property	Value
Description	Type the third line of the secondary address.
DisplayName	Address 2: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line3
MaxLength	250
RequiredLevel	None
Type	String

Address2_Longitude

Property	Value
Description	Type the longitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_longitude

Property	Value
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address2_Name

Property	Value
Description	Type a descriptive name for the secondary address, such as Corporate Headquarters.
DisplayName	Address 2: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_name
MaxLength	200
RequiredLevel	None
Type	String

Address2_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the secondary address.
DisplayName	Address 2: ZIP/Postal Code
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address2_PostOfficeBox

Property	Value
Description	Type the post office box number of the secondary address.
DisplayName	Address 2: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address2_PrimaryContactName

Property	Value
Description	Type the name of the main contact at the account's secondary address.
DisplayName	Address 2: Primary Contact Name
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_primarycontactname
MaxLength	100
RequiredLevel	None
Type	String

Address2_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 2: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address2_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_StateOrProvince

Property	Value
Description	Type the state or province of the secondary address.
DisplayName	Address 2: State/Province
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone1

Property	Value
Description	Type the main phone number associated with the secondary address.
DisplayName	Address 2: Telephone 1
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone2

Property	Value
Description	Type a second phone number associated with the secondary address.
DisplayName	Address 2: Telephone 2
FormatName	Phone

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone3

Property	Value
Description	Type a third phone number associated with the secondary address.
DisplayName	Address 2: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address2_UPSZone

Property	Value
Description	Type the UPS zone of the secondary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 2: UPS Zone

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address2_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 2: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

BusinessTypeCode

Property	Value
Description	Select the legal designation or other business type of the account for contracts or reporting purposes.

Property	Value
DisplayName	Business Type
IsValidForForm	True
IsValidForRead	True
LogicalName	businesstypecode
RequiredLevel	None
Type	Picklist

BusinessTypeCode Choices/Options

Value	Label	Description
1	Default Value	

CreditLimit

Property	Value
Description	Type the credit limit of the account. This is a useful reference when you address invoice and accounting issues with the customer.
DisplayName	Credit Limit
IsValidForForm	True
IsValidForRead	True
LogicalName	creditlimit
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

CreditOnHold

Property	Value
Description	Select whether the credit for the account is on hold. This is a useful reference while addressing the invoice and accounting issues with the customer.
DisplayName	Credit Hold
IsValidForForm	True
IsValidForRead	True
LogicalName	creditonhold
RequiredLevel	None
Type	Boolean

CreditOnHold Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

CustomerSizeCode

Property	Value
Description	Select the size category or range of the account for segmentation and reporting purposes.
DisplayName	Customer Size
IsValidForForm	True
IsValidForRead	True
LogicalName	customersizecode
RequiredLevel	None
Type	Picklist

CustomerSizeCode Choices/Options

Value	Label	Description
1	Default Value	

CustomerTypeCode

Property	Value
Description	Select the category that best describes the relationship between the account and your organization.
DisplayName	Relationship Type
IsValidForForm	True
IsValidForRead	True
LogicalName	customertypecode
RequiredLevel	None
Type	Picklist

CustomerTypeCode Choices/Options

Value	Label	Description
1	Competitor	
2	Consultant	
3	Customer	
4	Investor	
5	Partner	
6	Influencer	
7	Press	
8	Prospect	
9	Reseller	
10	Supplier	
11	Vendor	

Value	Label	Description
12	Other	

DefaultPriceLevelId

Added by: Product Management Solution

Property	Value
Description	Choose the default price list associated with the account to make sure the correct product prices for this customer are applied in sales opportunities, quotes, and orders.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	defaultpricelevelid
RequiredLevel	None
Targets	pricelevel
Type	Lookup

Description

Property	Value
Description	Type additional information to describe the account, such as an excerpt from the company's website.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000

Property	Value
RequiredLevel	None
Type	Memo

DoNotBulkEMail

Property	Value
Description	Select whether the account allows bulk email sent through campaigns. If Do Not Allow is selected, the account can be added to marketing lists, but is excluded from email.
DisplayName	Do not allow Bulk Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotbulkemail
RequiredLevel	None
Type	Boolean

DoNotBulkEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotBulkPostalMail

Property	Value
Description	Select whether the account allows bulk postal mail sent through marketing campaigns or quick campaigns. If Do Not Allow is selected, the account can be added to marketing lists, but will be excluded from the postal mail.
DisplayName	Do not allow Bulk Mails
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	donotbulkpostalmail
RequiredLevel	None
Type	Boolean

DoNotBulkPostalMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

DoNotEMail

Property	Value
Description	Select whether the account allows direct email sent from Microsoft Dynamics 365.
DisplayName	Do not allow Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotemail
RequiredLevel	None
Type	Boolean

DoNotEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotFax

Property	Value
Description	Select whether the account allows faxes. If Do Not Allow is selected, the account will be excluded from fax activities distributed in marketing campaigns.
DisplayName	Do not allow Faxes
IsValidForForm	True
IsValidForRead	True
LogicalName	donotfax
RequiredLevel	None
Type	Boolean

DoNotFax Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPhone

Property	Value
Description	Select whether the account allows phone calls. If Do Not Allow is selected, the account will be excluded from phone call activities distributed in marketing campaigns.
DisplayName	Do not allow Phone Calls
IsValidForForm	True
IsValidForRead	True
LogicalName	donotphone

Property	Value
RequiredLevel	None
Type	Boolean

DoNotPhone Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPostalMail

Property	Value
Description	Select whether the account allows direct mail. If Do Not Allow is selected, the account will be excluded from letter activities distributed in marketing campaigns.
DisplayName	Do not allow Mails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotpostalmail
RequiredLevel	None
Type	Boolean

DoNotPostalMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotSendMM

Property	Value
Description	Select whether the account accepts marketing materials, such as brochures or catalogs.
DisplayName	Send Marketing Materials
IsValidForForm	True
IsValidForRead	True
LogicalName	donotsendmm
RequiredLevel	None
Type	Boolean

DoNotSendMM Choices/Options

Value	Label	Description
1	Do Not Send	
0	Send	

DefaultValue: 0

EMailAddress1

Property	Value
Description	Type the primary email address for the account.
DisplayName	Email
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress1
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

EMailAddress2

Property	Value
Description	Type the secondary email address for the account.
DisplayName	Email Address 2
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress2
MaxLength	100
RequiredLevel	None
Type	String

EMailAddress3

Property	Value
Description	Type an alternate email address for the account.
DisplayName	Email Address 3
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress3
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

EntityImage

Property	Value
Description	Shows the default image for the record.
DisplayName	Default Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

Fax

Property	Value
Description	Type the fax number for the account.
DisplayName	Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fax
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

FollowEmail

Property	Value
Description	Information about whether to allow following email activity like opens, attachment views and link clicks for emails sent to the account.
DisplayName	Follow Email Activity
IsValidForForm	True
IsValidForRead	True
LogicalName	followemail
RequiredLevel	None
Type	Boolean

FollowEmail Choices/Options

Value	Label	Description
1	Allow	
0	Do Not Allow	

DefaultValue: 1

FtpSiteURL

Property	Value
Description	Type the URL for the account's FTP site to enable users to access data and share documents.
DisplayName	FTP Site
FormatName	Url
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	ftpsiteurl
MaxLength	200
RequiredLevel	None
Type	String

ImportSequenceNumber

Property	Value
Description	Unique identifier of the data import or data migration that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IndustryCode

Property	Value
Description	Select the account's primary industry for use in marketing segmentation and demographic analysis.
DisplayName	Industry

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	industrycode
RequiredLevel	None
Type	Picklist

IndustryCode Choices/Options

Value	Label	Description
1	Accounting	
2	Agriculture and Non-petrol Natural Resource Extraction	
3	Broadcasting Printing and Publishing	
4	Brokers	
5	Building Supply Retail	
6	Business Services	
7	Consulting	
8	Consumer Services	
9	Design, Direction and Creative Management	
10	Distributors, Dispatchers and Processors	
11	Doctor's Offices and Clinics	
12	Durable Manufacturing	
13	Eating and Drinking Places	
14	Entertainment Retail	
15	Equipment Rental and Leasing	
16	Financial	
17	Food and Tobacco Processing	
18	Inbound Capital Intensive Processing	

Value	Label	Description
19	Inbound Repair and Services	
20	Insurance	
21	Legal Services	
22	Non-Durable Merchandise Retail	
23	Outbound Consumer Service	
24	Petrochemical Extraction and Distribution	
25	Service Retail	
26	SIG Affiliations	
27	Social Services	
28	Special Outbound Trade Contractors	
29	Specialty Realty	
30	Transportation	
31	Utility Creation and Distribution	
32	Vehicle Retail	
33	Wholesale	

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None

Property	Value
Type	DateTime

LastUsedInCampaign

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date when the account was last included in a marketing campaign or quick campaign.
DisplayName	Last Date Included in Campaign
Format	DateOnly
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastusedincampaign
RequiredLevel	None
Type	DateTime

MarketCap

Property	Value
Description	Type the market capitalization of the account to identify the company's equity, used as an indicator in financial performance analysis.
DisplayName	Market Capitalization
IsValidForForm	True
IsValidForRead	True
LogicalName	marketcap
MaxValue	100000000000000
MinValue	0
Precision	2

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

MarketingOnly

Property	Value
Description	Whether is only for marketing
DisplayName	Marketing Only
IsValidForForm	True
IsValidForRead	True
LogicalName	marketingonly
RequiredLevel	None
Type	Boolean

MarketingOnly Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

msdyn_salesaccelerationinsightid

Added by: Sales Acceleration Solution

Property	Value
Description	Sales Acceleration Insights ID
DisplayName	Sales Acceleration Insights ID
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	msdyn_salesaccelerationinsightid
RequiredLevel	None
Targets	msdyn_salesaccelerationinsight
Type	Lookup

msdyn_segmentid

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for Segment associated with account.
DisplayName	Segment Id
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_segmentid
RequiredLevel	None
Targets	msdyn_segment
Type	Lookup

Name

Property	Value
Description	Type the company or business name.
DisplayName	Account Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	name
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

NumberOfEmployees

Property	Value
Description	Type the number of employees that work at the account for use in marketing segmentation and demographic analysis.
DisplayName	Number of Employees
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	numberofemployees
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

OriginatingLeadId

Added by: Lead Management Solution

Property	Value
Description	Shows the lead that the account was created from if the account was created by converting a lead in Microsoft Dynamics 365. This is used to relate the account to data on the originating lead for use in reporting and analytics.
DisplayName	Originating Lead
IsValidForForm	True

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	originatingleadid
RequiredLevel	None
Targets	lead
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Enter the user or team who is assigned to manage the record. This field is updated every time the record is assigned to a different user.
DisplayName	Owner
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

OwnershipCode

Property	Value
Description	Select the account's ownership structure, such as public or private.
DisplayName	Ownership
IsValidForForm	True
IsValidForRead	True
LogicalName	ownershipcode
RequiredLevel	None
Type	Picklist

OwnershipCode Choices/Options

Value	Label	Description
1	Public	
2	Private	
3	Subsidiary	
4	Other	

ParentAccountId

Property	Value
Description	Choose the parent account associated with this account to show parent and child businesses in reporting and analytics.
DisplayName	Parent Account
IsValidForForm	True
IsValidForRead	True
LogicalName	parentaccountid
RequiredLevel	None
Targets	account
Type	Lookup

ParticipatesInWorkflow

Property	Value
Description	For system use only. Legacy Microsoft Dynamics CRM 3.0 workflow data.
DisplayName	Participates in Workflow
IsValidForForm	False
IsValidForRead	True
LogicalName	participatesinworkflow
RequiredLevel	None

Property	Value
Type	Boolean

ParticipatesInWorkflow Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

PaymentTermsCode

Property	Value
Description	Select the payment terms to indicate when the customer needs to pay the total amount.
DisplayName	Payment Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	paymenttermscode
RequiredLevel	None
Type	Picklist

PaymentTermsCode Choices/Options

Value	Label	Description
1	Net 30	
2	2% 10, Net 30	
3	Net 45	
4	Net 60	

PreferredAppointmentDayCode

Property	Value
Description	Select the preferred day of the week for service appointments.
DisplayName	Preferred Day
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredappointmentdaycode
RequiredLevel	None
Type	Picklist

PreferredAppointmentDayCode Choices/Options

Value	Label	Description
0	Sunday	
1	Monday	
2	Tuesday	
3	Wednesday	
4	Thursday	
5	Friday	
6	Saturday	

PreferredAppointmentTimeCode

Property	Value
Description	Select the preferred time of day for service appointments.
DisplayName	Preferred Time
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredappointmenttimecode
RequiredLevel	None

Property	Value
Type	Picklist

PreferredAppointmentTimeCode Choices/Options

Value	Label	Description
1	Morning	
2	Afternoon	
3	Evening	

PreferredContactMethodCode

Property	Value
Description	Select the preferred method of contact.
DisplayName	Preferred Method of Contact
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredcontactmethodcode
RequiredLevel	None
Type	Picklist

PreferredContactMethodCode Choices/Options

Value	Label	Description
1	Any	
2	Email	
3	Phone	
4	Fax	
5	Mail	

PreferredEquipmentId

Added by: Service Solution

Property	Value
Description	Choose the account's preferred service facility or equipment to make sure services are scheduled correctly for the customer.
DisplayName	Preferred Facility/Equipment
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredequipmentid
RequiredLevel	None
Targets	equipment
Type	Lookup

PreferredServiceId

Added by: Service Solution

Property	Value
Description	Choose the account's preferred service for reference when you schedule service activities.
DisplayName	Preferred Service
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredserviceid
RequiredLevel	None
Targets	service
Type	Lookup

PreferredSystemUserId

Property	Value
Description	Choose the preferred service representative for reference when you schedule service activities for the account.
DisplayName	Preferred User
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredsystemuserid
RequiredLevel	None
Targets	systemuser
Type	Lookup

PrimaryContactId

Property	Value
Description	Choose the primary contact for the account to provide quick access to contact details.
DisplayName	Primary Contact
IsValidForForm	True
IsValidForRead	True
LogicalName	primarycontactid
RequiredLevel	None
Targets	contact
Type	Lookup

PrimarySatoriId

Property	Value
Description	Primary Satori ID for Account
DisplayName	Primary Satori ID
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	primarysatoriid
MaxLength	200
RequiredLevel	None
Type	String

PrimaryTwitterId

Property	Value
Description	Primary Twitter ID for Account
DisplayName	Primary Twitter ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	primarytwitterid
MaxLength	128
RequiredLevel	None
Type	String

ProcessId

Property	Value
Description	Shows the ID of the process.
DisplayName	Process
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

Revenue

Property	Value
Description	Type the annual revenue for the account, used as an indicator in financial performance analysis.
DisplayName	Annual Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	revenue
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

SharesOutstanding

Property	Value
Description	Type the number of shares available to the public for the account. This number is used as an indicator in financial performance analysis.
DisplayName	Shares Outstanding
Format	None
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	sharesoutstanding
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to the account's address to designate the preferred carrier or other delivery option.
DisplayName	Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

SIC

Property	Value
Description	Type the Standard Industrial Classification (SIC) code that indicates the account's primary industry of business, for use in marketing segmentation and demographic analysis.

Property	Value
DisplayName	SIC Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	sic
MaxLength	20
RequiredLevel	None
Type	String

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the Account record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

StageId

Property	Value
Description	Shows the ID of the stage.
DisplayName	(Deprecated) Process Stage

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the account is active or inactive. Inactive accounts are read-only and can't be edited unless they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

StatusCode

Property	Value
Description	Select the account's status.

Property	Value
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

StockExchange

Property	Value
Description	Type the stock exchange at which the account is listed to track their stock and financial performance of the company.
DisplayName	Stock Exchange
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	stockexchange
MaxLength	20
RequiredLevel	None
Type	String

TeamsFollowed

Added by: Sales Patch Solution

Property	Value
Description	Number of users or conversations followed the record
DisplayName	TeamsFollowed
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	teamsfollowed
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Telephone1

Property	Value
Description	Type the main phone number for this account.
DisplayName	Main Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone1
MaxLength	50
RequiredLevel	None
Type	String

Telephone2

Property	Value
Description	Type a second phone number for this account.
DisplayName	Other Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone2
MaxLength	50
RequiredLevel	None
Type	String

Telephone3

Property	Value
Description	Type a third phone number for this account.
DisplayName	Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone3
MaxLength	50
RequiredLevel	None
Type	String

TerritoryCode

Property	Value

Property	Value
Description	Select a region or territory for the account for use in segmentation and analysis.
DisplayName	Territory Code
IsValidForForm	True
IsValidForRead	True
LogicalName	territorycode
RequiredLevel	None
Type	Picklist

TerritoryCode Choices/Options

Value	Label	Description
1	Default Value	

TerritoryId

Added by: Sales Solution

Property	Value
Description	Choose the sales region or territory for the account to make sure the account is assigned to the correct representative and for use in segmentation and analysis.
DisplayName	Territory
IsValidForForm	True
IsValidForRead	True
LogicalName	territoryid
RequiredLevel	None
Targets	territory
Type	Lookup

TickerSymbol

Property	Value
Description	Type the stock exchange symbol for the account to track financial performance of the company. You can click the code entered in this field to access the latest trading information from MSN Money.
DisplayName	Ticker Symbol
FormatName	TickerSymbol
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	tickersymbol
MaxLength	10
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.

Property	Value
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WebSiteURL

Property	Value
Description	Type the account's website URL to get quick details about the company profile.
DisplayName	Website
FormatName	Url
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	websiteurl
MaxLength	200
RequiredLevel	None
Type	String

YomiName

Property	Value

Property	Value
Description	Type the phonetic spelling of the company name, if specified in Japanese, to make sure the name is pronounced correctly in phone calls and other communications.
DisplayName	Yomi Account Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yominame
MaxLength	160
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Address1_Composite
- Address2_Composite
- Aging30
- Aging30_Base
- Aging60
- Aging60_Base
- Aging90
- Aging90_Base
- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- CreditLimit_Base
- DefaultPriceLevelIdName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- IsPrivate
- MarketCap_Base
- MasterAccountIdName
- MasterAccountIdYomiName
- MasterId
- Merged
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_salesaccelerationinsightidName
- msdyn_segmentidName
- OnHoldTime
- OpenDeals
- OpenDeals_Date
- OpenDeals_State
- OpenRevenue
- OpenRevenue_Base
- OpenRevenue_Date
- OpenRevenue_State
- OriginatingLeadIdName
- OriginatingLeadIdYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam

- OwningUser
- ParentAccountIdName
- ParentAccountIdYomiName
- PreferredEquipmentIdName
- PreferredServiceIdName
- PreferredSystemUserIdName
- PreferredSystemUserIdYomiName
- PrimaryContactIdName
- PrimaryContactIdYomiName
- Revenue_Base
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TerritoryIdName
- TimeSpentByMeOnEmailAndMeetings
- TransactionCurrencyIdName
- VersionNumber

Address1_Composite

Property	Value
Description	Shows the complete primary address.
DisplayName	Address 1
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Address2_Composite

Property	Value
Description	Shows the complete secondary address.
DisplayName	Address 2
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Aging30

Property	Value
Description	For system use only.
DisplayName	Aging 30
IsValidForForm	True
IsValidForRead	True
LogicalName	aging30
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging30_Base

Property	Value
Description	The base currency equivalent of the aging 30 field.
DisplayName	Aging 30 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging30_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging60

Property	Value
Description	For system use only.
DisplayName	Aging 60
IsValidForForm	True
IsValidForRead	True
LogicalName	aging60
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging60_Base

Property	Value
Description	The base currency equivalent of the aging 60 field.
DisplayName	Aging 60 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging60_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging90

Property	Value
Description	For system use only.
DisplayName	Aging 90
IsValidForForm	True
IsValidForRead	True
LogicalName	aging90
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging90_Base

Property	Value
Description	The base currency equivalent of the aging 90 field.
DisplayName	Aging 90 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging90_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Property	Value

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreditLimit_Base

Property	Value
Description	Shows the credit limit converted to the system's default base currency for reporting purposes.
DisplayName	Credit Limit (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	creditlimit_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

DefaultPriceLevelIdName

Added by: Product Management Solution

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	defaultpricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	For internal use only.
DisplayName	Entity Image Id
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

IsPrivate

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	False
LogicalName	isprivate
RequiredLevel	None
Type	Boolean

IsPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MarketCap_Base

Property	Value

Property	Value
Description	Shows the market capitalization converted to the system's default base currency.
DisplayName	Market Capitalization (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	marketcap_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

MasterAccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	masteraccountidname
MaxLength	100
RequiredLevel	None
Type	String

MasterAccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	masteraccountidyominame
MaxLength	100
RequiredLevel	None
Type	String

MasterId

Property	Value
Description	Shows the master account that the account was merged with.
DisplayName	Master ID
IsValidForForm	False
IsValidForRead	True
LogicalName	masterid
RequiredLevel	None
Targets	account
Type	Lookup

Merged

Property	Value
Description	Shows whether the account has been merged with another account.
DisplayName	Merged

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	merged
RequiredLevel	None
Type	Boolean

Merged Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Property	Value
Description	Shows the external party who modified the record.

Property	Value
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was last updated. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

msdyn_salesaccelerationinsightidName

Added by: Sales Acceleration Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_salesaccelerationinsightidname
MaxLength	100
RequiredLevel	None
Type	String

msdyn_segmentidName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_segmentidname
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpenDeals

Added by: Sales Solution

Property	Value
Description	Number of open opportunities against an account and its child accounts.
DisplayName	Open Deals

Property	Value
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	opendeals
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpenDeals_Date

Added by: Sales Solution

Property	Value
DateTimeBehavior	UserLocal
Description	Last Updated time of rollup field Open Deals.
DisplayName	Open Deals (Last Updated On)
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	opendeals_date
RequiredLevel	None
Type	DateTime

OpenDeals_State

Added by: Sales Solution

Property	Value
Description	State of rollup field Open Deals.

Property	Value
DisplayName	Open Deals (State)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	opendeals_state
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpenRevenue

Added by: Sales Solution

Property	Value
Description	Sum of open revenue against an account and its child accounts.
DisplayName	Open Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	openrevenue
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OpenRevenue_Base

Added by: Sales Solution

Property	Value
Description	Value of the Open Revenue in base currency.
DisplayName	Open Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	openrevenue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OpenRevenue_Date

Added by: Sales Solution

Property	Value
DateTimeBehavior	UserLocal
Description	Last Updated time of rollup field Open Revenue.
DisplayName	Open Revenue (Last Updated On)
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	openrevenue_date
RequiredLevel	None
Type	DateTime

OpenRevenue_State

Added by: Sales Solution

Property	Value
Description	State of rollup field Open Revenue.
DisplayName	Open Revenue (State)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	openrevenue_state
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OriginatingLeadIdName

Added by: Lead Management Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidname
MaxLength	100
RequiredLevel	None
Type	String

OriginatingLeadIdYomiName

Added by: Lead Management Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Shows the business unit that the record owner belongs to.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team who owns the account.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user who owns the account.
DisplayName	Owning User
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

ParentAccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentaccountidname
MaxLength	100
RequiredLevel	None
Type	String

ParentAccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	parentaccountidyominame
MaxLength	100
RequiredLevel	None
Type	String

PreferredEquipmentIdName

Added by: Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredequipmentidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

PreferredServiceIdName

Added by: Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredserviceidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

PreferredSystemUserIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredsystemuseridname
MaxLength	100
RequiredLevel	None
Type	String

PreferredSystemUserIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredsystemuseridyominame
MaxLength	100
RequiredLevel	None
Type	String

PrimaryContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	primarycontactidname
MaxLength	100
RequiredLevel	None
Type	String

PrimaryContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	primarycontactidyominame
MaxLength	100
RequiredLevel	None
Type	String

Revenue_Base

Property	Value
Description	Shows the annual revenue converted to the system's default base currency. The calculations use the exchange rate specified in the Currencies area.
DisplayName	Annual Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	revenue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.

Property	Value
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TerritoryIdName

Added by: Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	territoryidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

TimeSpentByMeOnEmailAndMeetings

Property	Value
Description	Total time spent for emails (read and write) and meetings by me in relation to account record.

Property	Value
DisplayName	Time Spent by me
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	timespentbymeonemailandmeetings
MaxLength	1250
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the account.

Property	Value
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- account_parent_account
- contact_customer_accounts
- account_master_account
- lead_customer_accounts
- lead_parent_account
- account_BulkOperations
- account_CampaignResponses
- CreatedAccount_BulkOperationLogs2
- SourceAccount_BulkOperationLogs
- account_OpportunityCloses
- account_OrderCloses
- account_QuoteCloses
- invoice_customer_accounts
- opportunity_customer_accounts
- order_customer_accounts
- quote_customer_accounts
- opportunity_parent_account
- msdyn_playbookinstance_account

account_parent_account

Same as the account_parent_account many-to-one relationship for the account table/entity.

Property	Value
ReferencingEntity	account
ReferencingAttribute	parentaccountid
IsHierarchical	True
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_parent_account
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 40
CascadeConfiguration	Assign: Cascade Delete: RemoveLink Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

contact_customer_accounts

Same as the contact_customer_accounts many-to-one relationship for the contact table/entity.

Property	Value
ReferencingEntity	contact
ReferencingAttribute	parentcustomerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_customer_accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 50

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

account_master_account

Same as the account_master_account many-to-one relationship for the account table/entity.

Property	Value
ReferencingEntity	account
ReferencingAttribute	masterid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_master_account
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lead_customer_accounts

Added by: Lead Management Solution

Same as the lead_customer_accounts many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead

Property	Value
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_customer_accounts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_parent_account

Added by: Lead Management Solution

Same as the lead_parent_account many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	parentaccountid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_parent_account
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

account_BulkOperations

Added by: Marketing Solution

Same as the account_BulkOperations many-to-one relationship for the bulkoperation table/entity.

Property	Value
ReferencingEntity	bulkoperation
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_BulkOperations
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

account_CampaignResponses

Added by: Marketing Solution

Same as the account_CampaignResponses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_CampaignResponses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

CreatedAccount_BulkOperationLogs2

Added by: Marketing Solution

Same as the CreatedAccount_BulkOperationLogs2 many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	createdobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CreatedAccount_BulkOperationLogs2
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

SourceAccount_BulkOperationLogs

Added by: Marketing Solution

Same as the SourceAccount_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	SourceAccount_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

account_OpportunityCloses

Added by: Sales Solution

Same as the account_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

account_OrderCloses

Added by: Sales Solution

Same as the account_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

account_QuoteCloses

Added by: Sales Solution

Same as the account_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

invoice_customer_accounts

Added by: Sales Solution

Same as the invoice_customer_accounts many-to-one relationship for the invoice table/entity.

Property	Value
ReferencingEntity	invoice
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	invoice_customer_accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 40
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_customer_accounts

Added by: Sales Solution

Same as the opportunity_customer_accounts many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_customer_accounts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Sales Label: Order: 10

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

order_customer_accounts

Added by: Sales Solution

Same as the order_customer_accounts many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	order_customer_accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 30
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

quote_customer_accounts

Added by: Sales Solution

Same as the quote_customer_accounts many-to-one relationship for the quote table/entity.

Property	Value
ReferencingEntity	quote
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_customer_accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 20
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_parent_account

Added by: Sales Solution

Same as the opportunity_parent_account many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	parentaccountid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_parent_account
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 1

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_playbookinstance_account

Added by: Playbook Solution

Same as the msdyn_playbookinstance_account many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_account
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- account_primary_contact
- account_master_account

- account_parent_account
- account_originating_lead
- price_level_accounts

account_primary_contact

See the account_primary_contact one-to-many relationship for the contact table/entity.

account_master_account

See the account_master_account one-to-many relationship for the account table/entity.

account_parent_account

See the account_parent_account one-to-many relationship for the account table/entity.

account_originating_lead

Added by: Lead Management Solution

See the account_originating_lead one-to-many relationship for the lead table/entity.

price_level_accounts

Added by: Product Management Solution

See the price_level_accounts one-to-many relationship for the pricelevel table/entity.

Many-To-Many Relationships

Relationship details provided where the Account table is the first table in the relationship. Listed by **SchemaName**.

- accountleads_association
- listaccount_association
- BulkOperation_Accounts
- CampaignActivity_Accounts

accountleads_association

IntersectEntityName: accountleads

Table 1

Property	Value
IntersectAttribute	leadid
IsCustomizable	False
LogicalName	account
NavigationPropertyName	accountleads_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	lead
IntersectAttribute	accountid
NavigationPropertyName	accountleads_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

listaccount_association

See the listaccount_association many-to-many relationship for the list table/entity.

BulkOperation_Accounts

See the BulkOperation_Accounts many-to-many relationship for the bulkoperation table/entity.

CampaignActivity_Accounts

See the CampaignActivity_Accounts many-to-many relationship for the campaignactivity table/entity.

See also

About the table reference
Web API Reference

Quick Campaign (BulkOperation) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

System operation used to perform lengthy and asynchronous operations on large data sets, such as distributing a campaign activity or quick campaign.

Added by: Marketing Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMembersBulkOperation	RetrieveMembersBulkOperationRequest
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value

Property	Value
CollectionSchemaName	BulkOperations
DisplayCollectionName	Quick Campaigns
DisplayName	Quick Campaign
EntitySetName	bulkoperations
IsBPFEntity	False
LogicalCollectionName	bulkoperations
LogicalName	bulkoperation
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	BulkOperation

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualEnd
- BCC
- CC
- Community
- CreatedRecordTypeCode
- Customers
- DeliveryPriorityCode
- ErrorNumber
- ExchangeItemId
- ExchangeWebLink
- FailureCount
- from
- ImportSequenceNumber
- IsMapiPrivate
- LastOnHoldTime

- LeftVoiceMail
- OperationTypeCode
- OptionalAttendees
- Organizer
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Parameters
- Partners
- PriorityCode
- ProcessId
- RegardingObjectId
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- ServiceId
- SLAId
- SortDate
- StageId
- StatusCode
- Subject
- SuccessCount
- TargetedRecordTypeCode
- TargetMembersCount
- TimeZoneRuleVersionNumber
- To
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WorkflowInfo

ActivityAdditionalParams

Property	Value
Description	Additional information provided by the external application as JSON. For internal use only.
DisplayName	Activity Additional Parameters
Format	TextArea

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value
Description	Unique identifier of the bulk operation.
DisplayName	Activity
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the quick campaign was completed or canceled.
DisplayName	Actual End
Format	DateAndTime

Property	Value
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True
IsValidForRead	True
LogicalName	bcc
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True
LogicalName	cc
RequiredLevel	None

Property	Value
Targets	account,contact,systemuser
Type	PartyList

Community

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	

Value	Label	Description
10	GroupMe	
11	Kik	
12	Telegram	
13	Skype	
14	Slack	
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

CreatedRecordTypeCode

Property	Value
Description	Choose the activity to create that determines how target prospects or customers in this quick campaign are contacted.
DisplayName	Activity Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	createdrecordtypecode
RequiredLevel	None
Type	Picklist

CreatedRecordTypeCode Choices/Options

Value	Label	Description
1	Phone Call	
2	Fax	
3	Letter	

Value	Label	Description
4	Email	
5	Appointment	
6	Send Direct Email	

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ErrorNumber

Property	Value
Description	Shows the error code that is used to troubleshoot issues in the quick campaign.
DisplayName	Error Number
Format	None
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	errornumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200
RequiredLevel	None
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

FailureCount

Property	Value
Description	Number of records which failed in the bulk operation.
DisplayName	No. of Failures
Format	None
IsValidForCreate	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	failurecount
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

from

Property	Value
Description	Person who the activity is from.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	True
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OperationTypeCode

Property	Value
Description	Select the type of bulk operation process, such as quick campaign or campaign activity distribution.
DisplayName	Operation
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	operationtypecode
RequiredLevel	None
Type	Picklist

OperationTypeCode Choices/Options

Value	Label	Description
1	Create Opportunities	
2	Create Activities	
3	Send Direct Mail	
4	Distribute	
5	Execute	
7	Quick Campaign	

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees

Property	Value
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None

Property	Value
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Parameters

Property	Value
Description	XML string that contains the parameters to the bulk operation.
DisplayName	Parameters
Format	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	parameters
MaxLength	100000
RequiredLevel	None
Type	Memo

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None
Targets	account,contact
Type	PartyList

PriorityCode

Property	Value
Description	Priority of the activity.

Property	Value
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

RegardingObjectId

Property	Value

Property	Value
Description	Choose the campaign from which the campaign activities were bulk-distributed.
DisplayName	Import File Name
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjectid
RequiredLevel	None
Targets	campaignactivity,list
Type	Lookup

RegardingObjectTypeCode

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjecttypecode
RequiredLevel	None
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	systemuser
Type	PartyList

ServiceId

Added by: Marketing Service Solution

Property	Value
Description	Unique identifier for an associated service.
DisplayName	Service
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceid

Property	Value
RequiredLevel	None
Targets	
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate
RequiredLevel	None

Property	Value
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StatusCode

Property	Value
Description	Select the quick campaign's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Pending	0

Value	Label	State
2	In Progress	0
3	Aborted	1
4	Completed	1
5	Canceled	2

Subject

Property	Value
Description	Type a short description about the objective or primary topic of the quick campaign.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	subject
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

SuccessCount

Property	Value
Description	Number of records which succeeded in the bulk operation.
DisplayName	No. of Successes
Format	None
IsValidForCreate	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	successcount
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

TargetedRecordTypeCode

Property	Value
Description	Select the type of records targeted in the quick campaign to identify the target audience.
DisplayName	Members Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	targetedrecordtypecode
RequiredLevel	None
Type	Picklist

TargetedRecordTypeCode Choices/Options

Value	Label	Description
1	Account	
2	Contact	
4	Lead	

TargetMembersCount

Property	Value
Description	Number of members to target.
DisplayName	Total Members
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	targetmemberscount
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the activitypointer.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WorkflowInfo

Property	Value
Description	Information for bulk operation workflow.
DisplayName	Workflow information
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForCreate	False
IsValidForForm	False
IsValidForRead	True
LogicalName	workflowinfo
MaxLength	100000
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- ActualDurationMinutes
- ActualStart
- BulkOperationNumber
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- Description
- ExchangeRate
- InstanceTypeCode
- IsBilled
- IsRegularActivity
- IsWorkflowCreated
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy

- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- RegardingObjectIdName
- RegardingObjectIdYomiName
- ScheduledDurationMinutes
- ScheduledEnd
- ScheduledStart
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- StateCode
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True
LogicalName	activitytypecode
RequiredLevel	SystemRequired
Type	EntityName

ActualDurationMinutes

Property	Value
Description	Actual duration of the bulk operation in minutes.
DisplayName	Actual Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the activity was started or created.
DisplayName	Actual Start
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BulkOperationNumber

Property	Value

Property	Value
Description	Shows the number for the quick campaign record, used to identify the quick campaign.
DisplayName	Bulk Operation Number
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	bulkoperationnumber
MaxLength	32
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the bulk operation.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

Description

Property	Value
Description	Type additional information to describe the quick campaign, such as the products or services offered.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExchangeRate

Property	Value
Description	Exchange rate for the currency associated with the activitypointer with respect to the base currency.
DisplayName	Exchange Rate
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsBilled

Property	Value
Description	For internal use only.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsRegularActivity

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Specifies if the bulk operation was created from a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the bulk operation was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the bulk operation.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None

Property	Value
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.

Property	Value
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	100
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	100
RequiredLevel	None
Type	String

ScheduledDurationMinutes

Property	Value
Description	Scheduled duration of the bulk operation, specified in minutes.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	scheduledurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ScheduledEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled end date and time of the bulk operation.
DisplayName	Due Date
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled start date and time of the bulk operation.
DisplayName	Start Date
Format	DateOnly
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was sent.
DisplayName	Date Sent
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

StateCode

Property	Value
Description	Shows whether the quick campaign is open, closed, or canceled. Closed or canceled quick campaigns are read-only and can't be edited.
DisplayName	Status
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Closed	4	Closed
2	Canceled	5	Canceled

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- BulkOperation_CampaignResponse
- BulkOperation_logs
- bulkoperation_OpportunityCloses
- bulkoperation_OrderCloses
- bulkoperation_QuoteCloses

BulkOperation_CampaignResponse

Same as the BulkOperation_CampaignResponse many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	BulkOperation_CampaignResponse
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

BulkOperation_logs

Same as the BulkOperation_logs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	bulkoperationid
IsHierarchical	False

Property	Value
IsCustomizable	False
ReferencedEntityNavigationPropertyName	BulkOperation_logs
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

bulkoperation_OpportunityCloses

Added by: Sales Solution

Same as the bulkoperation_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	bulkoperation_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

bulkoperation_OrderCloses

Added by: Sales Solution

Same as the bulkoperation_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	bulkoperation_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

bulkoperation_QuoteCloses

Added by: Sales Solution

Same as the bulkoperation_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	bulkoperation_QuoteCloses

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_BulkOperations
- account_BulkOperations
- contact_BulkOperations
- CampaignActivity_BulkOperations
- List_BulkOperations

lead_BulkOperations

Added by: Lead Management Solution

See the lead_BulkOperations one-to-many relationship for the lead table/entity.

account_BulkOperations

Added by: System Solution Solution

See the account_BulkOperations one-to-many relationship for the account table/entity.

contact_BulkOperations

Added by: System Solution Solution

See the contact_BulkOperations one-to-many relationship for the contact table/entity.

CampaignActivity_BulkOperations

See the CampaignActivity_BulkOperations one-to-many relationship for the campaignactivity table/entity.

List_BulkOperations

See the List_BulkOperations one-to-many relationship for the list table/entity.

Many-To-Many Relationships

Relationship details provided where the BulkOperation table is the first table in the relationship. Listed by **SchemaName**.

- BulkOperation_Accounts
- BulkOperation_Contacts
- BulkOperation_Leads

BulkOperation_Accounts

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	bulkoperationid
IsCustomizable	False
LogicalName	bulkoperation
NavigationPropertyName	BulkOperation_Accounts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value

Property	Value
LogicalName	account
IntersectAttribute	regardingobjectid
NavigationPropertyName	BulkOperation_Logs_Accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 11

BulkOperation_Contacts

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	bulkoperationid
IsCustomizable	False
LogicalName	bulkoperation
NavigationPropertyName	BulkOperation_Contacts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	regardingobjectid
NavigationPropertyName	BulkOperation_Logs_Contacts

Property	Value
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 12

BulkOperation_Leads

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	bulkoperationid
IsCustomizable	False
LogicalName	bulkoperation
NavigationPropertyName	BulkOperation_Leads
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	lead
IntersectAttribute	regardingobjectid
NavigationPropertyName	BulkOperation_Logs_Leads
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 13

See also

About the table reference
Web API Reference

BulkOperationLog table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Log used to track bulk operation execution, successes, and failures.

Added by: Marketing Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple

Properties

Property	Value
CollectionSchemaName	BulkOperationLogs
DisplayCollectionName	Bulk Operation Logs
DisplayName	Bulk Operation Log
EntitySetName	bulkoperationlogs
IsBPFEntity	False
LogicalCollectionName	bulkoperationlogs
LogicalName	bulkoperationlog
OwnershipType	UserOwned

Property	Value
PrimaryIdAttribute	bulkoperationlogid
PrimaryNameAttribute	name
SchemaName	BulkOperationLog

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AdditionalInfo
- BulkOperationId
- BulkOperationIdType
- BulkOperationLogId
- CampaignActivityId
- CampaignActivityIdType
- CreatedObjectId
- CreatedObjectIdTypeCode
- ErrorDescriptionFormatted
- ErrorNumberFormatted
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- RegardingObjectId
- RegardingObjectIdTypeCode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

AdditionalInfo

Property	Value
Description	Shows the data value at which an error occurred during the quick campaign.
DisplayName	Failed on Line
Format	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	additionalinfo
MaxLength	100000
RequiredLevel	None
Type	Memo

BulkOperationId

Property	Value
Description	Shows the quick campaign record that the log applies to. This information is used to relate log data to the parent quick campaign.
DisplayName	Bulk Operation Number
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	bulkoperationid
RequiredLevel	SystemRequired
Targets	bulkoperation
Type	Lookup

BulkOperationIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	bulkoperationidtype
RequiredLevel	None
Type	EntityName

BulkOperationLogId

Property	Value
Description	Unique identifier of the bulk operation log.
DisplayName	Bulk Operation Log Number
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	bulkoperationlogid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

CampaignActivityId

Added by: Marketing Patch Solution

Property	Value
Description	Shows the campaign activity record that the log applies to. This information is used to relate log data to the parent campaign activity.
DisplayName	Campaign Activity Number
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	campaignactivityid

Property	Value
RequiredLevel	None
Targets	campaignactivity
Type	Lookup

CampaignActivityIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignactivityidtype
RequiredLevel	None
Type	EntityName

CreatedObjectId

Property	Value
Description	Choose the activity or other item created by the bulk operation.
DisplayName	Created Object
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	createdobjectid
RequiredLevel	None
Targets	account,activitypointer,contact,lead,opportunity
Type	Lookup

CreatedObjectIdTypeCode

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	createdobjectidtypecode
RequiredLevel	None
Type	EntityName

ErrorDescriptionFormatted

Added by: Marketing Patch Solution

Property	Value
Description	The error description formatted.
DisplayName	Error description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	errordescriptionformatted
MaxLength	2000
RequiredLevel	None
Type	Memo

ErrorNumberFormatted

Added by: Marketing Patch Solution

Property	Value
Description	The error number formatted.
DisplayName	Error number
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	errornumberformatted
MaxLength	2000
RequiredLevel	None
Type	Memo

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	name
DisplayName	name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

RegardingObjectId

Property	Value
Description	Choose the account, contact, lead, or list that the bulk operation log item applies to.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjectid
RequiredLevel	ApplicationRequired
Targets	account,contact,lead
Type	Lookup

RegardingObjectIdTypeCode

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjectidtypecode
RequiredLevel	None
Type	EntityName

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.

Property	Value
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BulkOperationIdName
- BulkOperationIdYomiName
- CampaignActivityIdName
- CampaignActivityIdYomiName
- CreatedObjectIdName
- CreatedObjectIdYomiName
- ErrorNumber
- OwnerId
- OwnerIdName
- OwnerIdType
- OwnerIdYomiName
- OwningBusinessUnit
- OwningTeam
- OwningUser
- RegardingObjectIdName
- RegardingObjectIdYomiName
- VersionNumber

BulkOperationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	bulkoperationidname
MaxLength	100
RequiredLevel	None
Type	String

BulkOperationIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	bulkoperationidyominame
MaxLength	4000
RequiredLevel	None
Type	String

CampaignActivityIdName

Added by: Marketing Patch Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignactivityidname
MaxLength	4000
RequiredLevel	None
Type	String

CampaignActivityIdYomiName

Added by: Marketing Patch Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignactivityidyominame
MaxLength	4000
RequiredLevel	None
Type	String

CreatedObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdobjectidname
MaxLength	100
RequiredLevel	None
Type	String

CreatedObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdobjectidyominame
MaxLength	4000
RequiredLevel	None
Type	String

ErrorNumber

Property	Value
Description	Shows the error code that is used to troubleshoot issues in the bulk operation.
DisplayName	Reason Id
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	errornumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OwnerId

Property	Value

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team
Type	Owner

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunit

Property	Value
RequiredLevel	None
Targets	
Type	Lookup

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	100
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- CreatedAccount_BulkOperationLogs2
- CreatedContact_BulkOperationLogs
- CreatedLead_BulkOperationLogs
- SourceAccount_BulkOperationLogs
- BulkOperation_logs
- SourceContact_BulkOperationLogs
- SourceLead_BulkOperationLogs
- CampaignActivity_logs
- CreatedOpportunity_BulkOperationLogs

CreatedAccount_BulkOperationLogs2

Added by: System Solution Solution

See the CreatedAccount_BulkOperationLogs2 one-to-many relationship for the account table/entity.

CreatedContact_BulkOperationLogs

Added by: System Solution Solution

See the CreatedContact_BulkOperationLogs one-to-many relationship for the contact table/entity.

CreatedLead_BulkOperationLogs

Added by: Lead Management Solution

See the CreatedLead_BulkOperationLogs one-to-many relationship for the lead table/entity.

SourceAccount_BulkOperationLogs

Added by: System Solution Solution

See the SourceAccount_BulkOperationLogs one-to-many relationship for the account table/entity.

BulkOperation_logs

See the BulkOperation_logs one-to-many relationship for the bulkoperation table/entity.

SourceContact_BulkOperationLogs

Added by: System Solution Solution

See the SourceContact_BulkOperationLogs one-to-many relationship for the contact table/entity.

SourceLead_BulkOperationLogs

Added by: Lead Management Solution

See the SourceLead_BulkOperationLogs one-to-many relationship for the lead table/entity.

CampaignActivity_logs

See the CampaignActivity_logs one-to-many relationship for the campaignactivity table/entity.

CreatedOpportunity_BulkOperationLogs

Added by: Sales Solution

See the CreatedOpportunity_BulkOperationLogs one-to-many relationship for the opportunity table/entity.

Many-To-Many Relationships

Relationship details provided where the BulkOperationLog table is the first table in the relationship. Listed by **SchemaName**.

- BulkOperation_Accounts
- BulkOperation_Contacts
- BulkOperation_Leads
- CampaignActivity_Accounts
- CampaignActivity_Contacts
- CampaignActivity_Leads

BulkOperation_Accounts

See the BulkOperation_Accounts many-to-many relationship for the bulkoperation table/entity.

BulkOperation_Contacts

See the BulkOperation_Contacts many-to-many relationship for the bulkoperation table/entity.

BulkOperation_Leads

See the BulkOperation_Leads many-to-many relationship for the bulkoperation table/entity.

CampaignActivity_Accounts

See the CampaignActivity_Accounts many-to-many relationship for the campaignactivity table/entity.

CampaignActivity_Contacts

See the CampaignActivity_Contacts many-to-many relationship for the campaignactivity table/entity.

CampaignActivity_Leads

See the CampaignActivity_Leads many-to-many relationship for the campaignactivity table/entity.

See also

About the table reference
Web API Reference

Campaign table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Container for campaign activities and responses, sales literature, products, and lists to create, plan, execute, and track the results of a specific marketing campaign through its life.

Added by: Marketing Solution

Messages

Message	SDK Assembly
AddItemCampaign	AddItemCampaignRequest
AddItemCampaignActivity	AddItemCampaignActivityRequest
Assign	AssignRequest
CopyCampaign	CopyCampaignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
RemoveItemCampaign	RemoveItemCampaignRequest
RemoveItemCampaignActivity	RemoveItemCampaignActivityRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple

Message	SDK Assembly
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Campaigns
DisplayCollectionName	Campaigns
DisplayName	Campaign
EntitySetName	campaigns
IsBPFEntity	False
LogicalCollectionName	campaigns
LogicalName	campaign
OwnershipType	UserOwned
PrimaryIdAttribute	campaignid
PrimaryNameAttribute	name
SchemaName	Campaign

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActualEnd
- ActualStart
- BudgetedCost
- CampaignId

- CodeName
- Description
- EmailAddress
- EntityImage
- ExpectedResponse
- ExpectedRevenue
- ImportSequenceNumber
- IsTemplate
- Message
- Name
- Objective
- OtherCost
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- PriceListId
- ProcessId
- PromotionCodeName
- ProposedEnd
- ProposedStart
- StageId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TmpRegardingObjectId
- TransactionCurrencyId
- TraversedPath
- TypeCode
- UTCConversionTimeZoneCode

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the campaign was closed or completed.
DisplayName	Actual End Date
Format	DateOnly

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the actual start date and time for the campaign.
DisplayName	Actual Start Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BudgetedCost

Property	Value
Description	Type the amount budgeted for the campaign to define a limit for how much you can spend.
DisplayName	Budget Allocated
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetedcost

Property	Value
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

CampaignId

Property	Value
Description	Unique identifier of the campaign.
DisplayName	Campaign
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	campaignid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

CodeName

Property	Value
Description	Type a number or other tracking code to identify the campaign. If no value is entered, a code will be generated automatically.
DisplayName	Campaign Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	codename
MaxLength	32
RequiredLevel	None
Type	String

Description

Property	Value
Description	Type additional information to describe the campaign, such as the products or services offered or the targeted audience.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

EmailAddress

Property	Value
Description	The primary email address for the entity.
DisplayName	Email Address
FormatName	Email

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

EntityImage

Added by: Active Solution Solution

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ExpectedResponse

Property	Value
Description	Type the expected response rate for the campaign as a full number between 0 and 100.

Property	Value
DisplayName	Expected Response Percentage
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	expectedresponse
MaxValue	100
MinValue	0
RequiredLevel	None
Type	Integer

ExpectedRevenue

Property	Value
Description	Type the expected revenue for the campaign for return on investment projections and post-campaign reporting.
DisplayName	Estimated Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	expectedrevenue
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsTemplate

Property	Value
Description	Select whether the campaign is a template that can be copied when you create future campaigns.
DisplayName	Template
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	istemplate
RequiredLevel	None
Type	Boolean

IsTemplate Choices/Options

Value	Label	Description

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

Message

Property	Value
Description	Type the promotional message or marketing copy for the campaign.
DisplayName	Message
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	message
MaxLength	256
RequiredLevel	None
Type	String

Name

Property	Value
Description	Type a name for the campaign so that it is identified correctly in lists.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name

Property	Value
MaxLength	128
RequiredLevel	SystemRequired
Type	String

Objective

Property	Value
Description	Type the objective of the campaign, including products, services, discounts, and pricing.
DisplayName	Offer
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	objective
MaxLength	2000
RequiredLevel	None
Type	Memo

OtherCost

Property	Value
Description	Type the sum of any miscellaneous campaign costs not included in the campaign activities to make sure the actual cost of the campaign is calculated correctly.
DisplayName	Miscellaneous Costs
IsValidForForm	True
IsValidForRead	True
LogicalName	othercost

Property	Value
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

PriceListId

Property	Value
Description	Choose the price list associated with this item to make sure the products associated with the campaign are offered at the correct prices.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	pricelistid
RequiredLevel	None
Targets	pricelevel

Property	Value
Type	Lookup

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

PromotionCodeName

Property	Value
Description	Type a promotional code to track sales related to the campaign or allow customers to redeem a discount offer.
DisplayName	Promotion Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	promotioncodename
MaxLength	128
RequiredLevel	None
Type	String

ProposedEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the campaign is scheduled to end.
DisplayName	Proposed End Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	proposedend
RequiredLevel	None
Type	DateTime

ProposedStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the campaign is scheduled to start.
DisplayName	Proposed Start Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	proposedstart
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows the status of the campaign. By default, campaigns are active and can't be deactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	0	Active
1	Inactive	6	Inactive

StatusCode

Property	Value
Description	Select the campaign's status.

Property	Value
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Proposed	0
1	Ready To Launch	0
2	Launched	0
3	Completed	0
4	Canceled	0
5	Suspended	0
6	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647

Property	Value
MinValue	-1
RequiredLevel	None
Type	Integer

TmpRegardingObjectId

Added by: Marketing Patch Solution

Property	Value
Description	
DisplayName	TmpRegardingObjectId
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	tmpregardingobjectid
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

TypeCode

Property	Value
Description	Select the type of the campaign.
DisplayName	Campaign Type
IsValidForForm	True
IsValidForRead	True
LogicalName	typecode

Property	Value
RequiredLevel	None
Type	Picklist

TypeCode Choices/Options

Value	Label	Description
1	Advertisement	
2	Direct Marketing	
3	Event	
4	Co-branding	
5	Other	

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BudgetedCost_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- ExpectedRevenue_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OtherCost_Base
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PriceListName
- TotalActualCost
- TotalActualCost_Base
- TotalCampaignActivityActualCost
- TotalCampaignActivityActualCost_Base
- TransactionCurrencyIdName
- VersionNumber

BudgetedCost_Base

Property	Value
Description	Value of the Budget Allocated in base currency.
DisplayName	Budget Allocated (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetedcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid

Property	Value
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ExpectedRevenue_Base

Property	Value
Description	Value of the Estimated Revenue in base currency.
DisplayName	Estimated Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	expectedrevenue_base
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon

Property	Value
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OtherCost_Base

Property	Value
Description	Value of the Miscellaneous Costs in base currency.
DisplayName	Miscellaneous Costs (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	othercost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PriceListName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	pricelistname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

TotalActualCost

Property	Value
Description	Shows the sum of the amounts entered in the Total Cost of Campaign Activities and Miscellaneous Costs fields.
DisplayName	Total Cost of Campaign
IsValidForForm	True
IsValidForRead	True
LogicalName	totalactualcost
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalActualCost_Base

Property	Value
Description	Value of the Total Cost of Campaign in base currency.
DisplayName	Total Cost of Campaign (Base)
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	totalactualcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalCampaignActivityActualCost

Property	Value
Description	Shows the sum of the values entered in the Actual Cost field on all campaign activities related to the campaign.
DisplayName	Total Cost of Campaign Activities
IsValidForForm	True
IsValidForRead	True
LogicalName	totalcampaignactivityactualcost
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalCampaignActivityActualCost_Base

Property	Value
Description	Value of the Total Cost of Campaign Activities in base currency.

Property	Value
DisplayName	Total Cost of Campaign Activities (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalcampaignactivityactualcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- Campaign_CampaignActivities
- Campaign_CampaignResponses
- campaign_leads
- campaign_OpportunityCloses
- campaign_OrderCloses
- campaign_QuoteCloses
- campaign_opportunities
- campaign_orders
- campaign_quotes

Campaign_CampaignActivities

Same as the Campaign_CampaignActivities many-to-one relationship for the campaignactivity table/entity.

Property	Value
ReferencingEntity	campaignactivity
ReferencingAttribute	regardingobjectid
IsHierarchical	False

Property	Value
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Campaign_CampaignActivities
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Campaign_CampaignResponses

Same as the Campaign_CampaignResponses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Campaign_CampaignResponses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaign_leads

Same as the campaign_leads many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	campaignid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_leads
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Marketing Label: Order: 130
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

campaign_OpportunityCloses

Added by: Sales Solution

Same as the campaign_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaign_OrderCloses

Added by: Sales Solution

Same as the campaign_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaign_QuoteCloses

Added by: Sales Solution

Same as the campaign_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaign_opportunities

Added by: Marketing Sales Solution

Same as the campaign_opportunities many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	campaignid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_opportunities
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 130

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

campaign_orders

Added by: Marketing Sales Solution

Same as the campaign_orders many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	campaignid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_orders
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

campaign_quotes

Added by: Marketing Sales Solution

Same as the campaign_quotes many-to-one relationship for the quote table/entity.

Property	Value

Property	Value
ReferencingEntity	quote
ReferencingAttribute	campaignid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaign_quotes
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

PriceList_Campaigns

Added by: Product Management Solution

See the PriceList_Campaigns one-to-many relationship for the pricelevel table/entity.

Many-To-Many Relationships

Relationship details provided where the Campaign table is the first table in the relationship. Listed by **SchemaName**.

- campaigncampaign_association
- campaignproduct_association
- campaignlist_association
- campaignsalesliterature_association

campaigncampaign_association

IntersectEntityName: campaignitem

Table 1

Property	Value
IntersectAttribute	campaignid
IsCustomizable	False
LogicalName	campaign
NavigationPropertyName	campaigncampaign_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	campaign
IntersectAttribute	entityid
NavigationPropertyName	campaigncampaign_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

campaignproduct_association

IntersectEntityName: campaignitem

Table 1

Property	Value
IntersectAttribute	campaignid

Property	Value
IsCustomizable	False
LogicalName	campaign
NavigationPropertyName	campaignproduct_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	product
IntersectAttribute	entityid
NavigationPropertyName	campaignproduct_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

campaignlist_association

IntersectEntityName: campaignitem

Table 1

Property	Value
IntersectAttribute	campaignid
IsCustomizable	False
LogicalName	campaign
NavigationPropertyName	campaignlist_association

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	list
IntersectAttribute	entityid
NavigationPropertyName	campaignlist_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

campaignsalesliterature_association

IntersectEntityName: campaignitem

Table 1

Property	Value
IntersectAttribute	campaignid
IsCustomizable	False
LogicalName	campaign
NavigationPropertyName	campaignsalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	salesliterature
IntersectAttribute	entityid
NavigationPropertyName	campaignsalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference

Web API Reference

CampaignActivity table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Task performed, or to be performed, by a user for planning or running a campaign.

Added by: Marketing Solution

Messages

Message	SDK Assembly
AddItemCampaign	AddItemCampaignRequest
AddItemCampaignActivity	AddItemCampaignActivityRequest
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
DistributeCampaignActivity	DistributeCampaignActivityRequest
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
RemoveItemCampaign	RemoveItemCampaignRequest
RemoveItemCampaignActivity	RemoveItemCampaignActivityRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest

Message	SDK Assembly
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	CampaignActivities
DisplayCollectionName	Campaign Activities
DisplayName	Campaign Activity
EntitySetName	campaignactivities
IsBPFEntity	False
LogicalCollectionName	campaignactivities
LogicalName	campaignactivity
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	CampaignActivity

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualCost
- ActualDurationMinutes
- ActualEnd

- ActualStart
- BCC
- BudgetedCost
- Category
- CC
- ChannelTypeCode
- Community
- Customers
- DeliveryPriorityCode
- Description
- DoNotSendOnOptOut
- ExchangeItemId
- ExchangeWebLink
- ExcludeIfContactedInXDays
- from
- IgnoreInactiveListMembers
- ImportSequenceNumber
- IsBilled
- IsMapiPrivate
- IsWorkflowCreated
- LastOnHoldTime
- LeftVoiceMail
- OptionalAttendees
- Organizer
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Partners
- PriorityCode
- ProcessId
- RegardingObjectId
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- ScheduledEnd
- ScheduledStart
- ServiceId
- SLAId
- SortDate
- StageId

- StateCode
- StatusCode
- Subcategory
- Subject
- TimeZoneRuleVersionNumber
- To
- TraversedPath
- TypeCode
- UTCConversionTimeZoneCode

ActivityAdditionalParams

Property	Value
Description	Additional information provided by the external application as JSON. For internal use only.
DisplayName	Activity Additional Parameters
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value
Description	Unique identifier of the campaign activity.
DisplayName	Campaign Activity
IsValidForForm	False
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualCost

Property	Value
Description	Type the actual cost of the campaign activity. The value entered is rolled up to the related campaign in the total cost calculations.
DisplayName	Actual Cost
IsValidForForm	True
IsValidForRead	True
LogicalName	actualcost
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ActualDurationMinutes

Property	Value
Description	Shows the value selected in the Duration field on the campaign activity. The duration is used to report the time spent on the activity.
DisplayName	Actual Duration
Format	None
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the campaign activity was actually completed.
DisplayName	Actual End
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the actual start date and time for the campaign activity to determine if the campaign activity started on the scheduled time.
DisplayName	Actual Start
Format	DateOnly

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True
IsValidForRead	True
LogicalName	bcc
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

BudgetedCost

Property	Value
Description	Type the allocated budget of the campaign activity for estimated versus actual cost reporting.
DisplayName	Budget Allocated
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetedcost
MaxValue	1000000000000

Property	Value
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Category

Property	Value
Description	Type a category to identify the campaign activity type, such as new business development or customer retention, to tie the campaign activity to a business group or function.
DisplayName	Category
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	category
MaxLength	250
RequiredLevel	None
Type	String

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	cc
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

ChannelTypeCode

Property	Value
Description	Select how communications for this activity will be sent, such as phone, letter, fax, or email.
DisplayName	Channel
IsValidForForm	True
IsValidForRead	True
LogicalName	channeltypecode
RequiredLevel	None
Type	Picklist

ChannelTypeCode Choices/Options

Value	Label	Description
1	Phone	
2	Appointment	
3	Letter	
4	Letter via Mail Merge(deprecated)	
5	Fax	
6	Fax via Mail Merge(deprecated)	
7	Email	
8	Email via Mail Merge(deprecated)	

Value	Label	Description
9	Other	

Community

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	
10	GroupMe	

Value	Label	Description
11	Kik	
12	Telegram	
13	Skype	
14	Slack	
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

Description

Property	Value
Description	Type additional information to describe the campaign activity, such as key talking points, objectives, or details about the target audience.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DoNotSendOnOptOut

Property	Value

Property	Value
Description	Select whether to override the opt-out settings on leads, contacts, and accounts for the members of the target marketing lists of the campaign activity. If No is selected, marketing materials will be sent to members who have opted out.
DisplayName	Exclude Members Who Opt Out
IsValidForForm	True
IsValidForRead	True
LogicalName	donotsendonoptout
RequiredLevel	None
Type	Boolean

DoNotSendOnOptOut Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 1

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200
RequiredLevel	None

Property	Value
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

ExcludeIfContactedInXDays

Property	Value
Description	Limits the frequency (in days) of marketing activities directed at any contact. Contacts that have been contacted more recently than this will be excluded from new campaign activity distributions. Enter a value of zero to disable the limit.
DisplayName	No. of Days
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	excludeifcontactedinxdays
MaxValue	9999
MinValue	0

Property	Value
RequiredLevel	None
Type	Integer

from

Property	Value
Description	For system use only.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

IgnoreInactiveListMembers

Property	Value
Description	Select whether inactive marketing list members will be excluded from the campaign activity distribution.
DisplayName	Ignore Inactive Marketing List Members
IsValidForForm	True
IsValidForRead	True
LogicalName	ignoreinactivelistmembers
RequiredLevel	None
Type	Boolean

IgnoreInactiveListMembers Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 1

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBilled

Property	Value
Description	Information regarding whether the campaign activity was billed as part of resolving a case.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled

Property	Value
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	True
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Information about whether the campaign activity is created by a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.

Property	Value
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None

Property	Value
Targets	account,contact
Type	PartyList

PriorityCode

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

RegardingObjectId

Property	Value
Description	Choose the parent campaign so that the campaign activity costs reflect in the correct campaign for reporting.
DisplayName	Parent Campaign
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjectid
RequiredLevel	ApplicationRequired
Targets	campaign
Type	Lookup

RegardingObjectTypeCode

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjecttypecode
RequiredLevel	None

Property	Value
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	systemuser
Type	PartyList

ScheduledEnd

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expected due date and time for the activity to be completed to provide details about the timing of the campaign activity.
DisplayName	Scheduled End
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expected start date and time for the activity to provide details about timing of the campaign activity.
DisplayName	Scheduled Start
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

ServiceId

Added by: Marketing Service Solution

Property	Value

Property	Value
Description	Unique identifier of the associated service.
DisplayName	Service
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceid
RequiredLevel	None
Targets	service
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the campaign activity is open, completed, or canceled. Completed and canceled campaign activities are read-only and can't be edited.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode

Property	Value
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Closed	2	Closed
2	Canceled	3	Canceled

StatusCode

Property	Value
Description	Select the campaign activity's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	In Progress	0
1	Proposed	0
2	Closed	1
3	Canceled	2
4	Pending	0

Value	Label	State
5	System Aborted	0
6	Completed	0

Subcategory

Property	Value
Description	Type a subcategory to identify the campaign activity type and relate the activity to a specific product, sales region, business group, or other function.
DisplayName	Sub-Category
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	subcategory
MaxLength	250
RequiredLevel	None
Type	String

Subject

Property	Value
Description	Type a short description about the objective or primary topic of the campaign activity.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	subject

Property	Value
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None
Targets	account,contact,systemuser

Property	Value
Type	PartyList

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

TypeCode

Property	Value
Description	Select the type of campaign activity to indicate the purpose of the activity.
DisplayName	Type
IsValidForForm	True
IsValidForRead	True
LogicalName	typecode
RequiredLevel	None
Type	Picklist

TypeCode Choices/Options

Value	Label	Description
1	Research	
2	Content Preparation	
3	Target Marketing List Creation	
4	Lead Qualification	
5	Content Distribution	
6	Direct Initial Contact	
7	Direct Follow-Up Contact	
8	Reminder Distribution	

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- ActualCost_Base

- BudgetedCost_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- ExchangeRate
- InstanceTypeCode
- IsRegularActivity
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- RegardingObjectIdName
- RegardingObjectIdYomiName
- ScheduledDurationMinutes
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TransactionCurrencyId
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True
LogicalName	activitytypecode
RequiredLevel	SystemRequired
Type	EntityName

ActualCost_Base

Property	Value
Description	Value of the Actual Cost in base currency.
DisplayName	Actual Cost (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	actualcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

BudgetedCost_Base

Property	Value
Description	Value of the Budget Allocated in base currency.

Property	Value
DisplayName	Budget Allocated (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetedcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Unique identifier of the user who created the activity.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was created.

Property	Value
DisplayName	Date Created
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the activitypointer.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted
Format	DateAndTime
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode

Property	Value
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsRegularActivity

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of user who last modified the activity.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when activity was last modified.
DisplayName	Last Updated
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the activitypointer.

Property	Value
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam

Property	Value
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	100
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	100
RequiredLevel	None
Type	String

ScheduledDurationMinutes

Property	Value
Description	Scheduled duration, specified in minutes, of the campaign activity.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was sent.
DisplayName	Date Sent
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None

Property	Value
Targets	transactioncurrency
Type	Lookup

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None

Property	Value
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- campaignactivity_CampaignResponses
- CampaignActivity_BulkOperations
- CampaignActivity_logs
- campaignactivity_OpportunityCloses
- campaignactivity_OrderCloses
- campaignactivity_QuoteCloses

campaignactivity_CampaignResponses

Same as the campaignactivity_CampaignResponses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaignactivity_CampaignResponses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

CampaignActivity_BulkOperations

Same as the CampaignActivity_BulkOperations many-to-one relationship for the bulkoperation table/entity.

Property	Value
ReferencingEntity	bulkoperation
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CampaignActivity_BulkOperations
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

CampaignActivity_logs

Added by: Marketing Patch Solution

Same as the CampaignActivity_logs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	campaignactivityid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CampaignActivity_logs

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

campaignactivity_OpportunityCloses

Added by: Sales Solution

Same as the campaignactivity_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaignactivity_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaignactivity_OrderCloses

Added by: Sales Solution

Same as the campaignactivity_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaignactivity_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

campaignactivity_QuoteCloses

Added by: Sales Solution

Same as the campaignactivity_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	campaignactivity_QuoteCloses

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

Campaign_CampaignActivities

See the Campaign_CampaignActivities one-to-many relationship for the campaign table/entity.

Many-To-Many Relationships

Relationship details provided where the CampaignActivity table is the first table in the relationship. Listed by **SchemaName**.

- campaignactivitylist_association
- CampaignActivity_Accounts
- CampaignActivity_Contacts
- CampaignActivity_Leads
- campaignactivitysalesliterature_association

campaignactivitylist_association

IntersectEntityName: campaignactivityitem

Table 1

Property	Value
IntersectAttribute	campaignactivityid
IsCustomizable	False
LogicalName	campaignactivity
NavigationPropertyName	campaignactivitylist_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	list
IntersectAttribute	itemid
NavigationPropertyName	campaignactivitylist_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

CampaignActivity_Accounts

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	campaignactivityid
IsCustomizable	False
LogicalName	campaignactivity
NavigationPropertyName	CampaignActivity_Accounts

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	account
IntersectAttribute	regardingobjectid
NavigationPropertyName	CampaignActivity_Logs_Accounts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 11

CampaignActivity_Contacts

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	campaignactivityid
IsCustomizable	False
LogicalName	campaignactivity
NavigationPropertyName	CampaignActivity_Contacts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	regardingobjectid
NavigationPropertyName	CampaignActivity_Logs_Contacts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 12

CampaignActivity_Leads

IntersectEntityName: bulkoperationlog

Table 1

Property	Value
IntersectAttribute	campaignactivityid
IsCustomizable	False
LogicalName	campaignactivity
NavigationPropertyName	CampaignActivity_Leads
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	lead
IntersectAttribute	regardingobjectid
NavigationPropertyName	CampaignActivity_Logs_Leads

Property	Value
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 13

campaignactivitysalesliterature_association

IntersectEntityName: campaignactivityitem

Table 1

Property	Value
IntersectAttribute	campaignactivityid
IsCustomizable	False
LogicalName	campaignactivity
NavigationPropertyName	campaignactivitysalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	salesliterature
IntersectAttribute	itemid
NavigationPropertyName	campaignactivitysalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference
Web API Reference

CampaignResponse table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Response from an existing or a potential new customer for a campaign.

Added by: Marketing Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
CopyCampaignResponse	CopyCampaignResponseRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest

Message	SDK Assembly
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	CampaignResponses
DisplayCollectionName	Campaign Responses
DisplayName	Campaign Response
EntitySetName	campaignresponses
IsBPFEntity	False
LogicalCollectionName	campaignresponses
LogicalName	campaignresponse
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	CampaignResponse

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualDurationMinutes
- ActualEnd
- ActualStart
- BCC
- Category
- CC
- ChannelTypeCode

- Community
- CompanyName
- Customer
- Customers
- DeliveryPriorityCode
- Description
- EMailAddress
- ExchangeItemId
- ExchangeWebLink
- Fax
- FirstName
- from
- ImportSequenceNumber
- IsBilled
- IsMapiPrivate
- IsWorkflowCreated
- LastName
- LastOnHoldTime
- LeftVoiceMail
- OptionalAttendees
- Organizer
- OriginatingActivityId
- OriginatingActivityIdTypeCode
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Partner
- Partners
- PriorityCode
- ProcessId
- PromotionCodeName
- ReceivedOn
- RegardingObjectId
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- ResponseCode
- ScheduledEnd
- ScheduledStart
- ServiceId

- SLAId
- SortDate
- StageId
- StateCode
- StatusCode
- Subcategory
- Subject
- Telephone
- TimeZoneRuleVersionNumber
- To
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- YomiCompanyName
- YomiFirstName
- YomiLastName

ActivityAdditionalParams

Property	Value
Description	For internal use only.
DisplayName	Additional Parameters
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value

Property	Value
Description	Unique identifier of the campaign response.
DisplayName	Campaign Response
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualDurationMinutes

Property	Value
Description	Type the number of minutes spent on this activity. The duration is used in reporting.
DisplayName	Actual Duration
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualEnd

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Enter the date when the campaign response was actually completed.
DisplayName	Actual End
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the actual start date and time for the campaign response.
DisplayName	Actual Start
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	bcc
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Category

Property	Value
Description	Type a category to identify the campaign response type, such as new business development or customer retention, to tie the campaign response to a business group or function.
DisplayName	Category
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	category
MaxLength	250
RequiredLevel	None
Type	String

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	cc
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

ChannelTypeCode

Property	Value
Description	Select how the response was received, such as phone, letter, fax, or email.
DisplayName	Channel
IsValidForForm	True
IsValidForRead	True
LogicalName	channeltypecode
RequiredLevel	None
Type	Picklist

ChannelTypeCode Choices/Options

Value	Label	Description
1	Email	
2	Phone	
3	Fax	
4	Letter	
5	Appointment	
6	Others	

Community

Property	Value

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	
10	GroupMe	
11	Kik	
12	Telegram	
13	Skype	
14	Slack	

Value	Label	Description
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

CompanyName

Property	Value
Description	Type the name of the company if the campaign response was received from a new prospect or customer.
DisplayName	Company Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	companyname
MaxLength	100
RequiredLevel	None
Type	String

Customer

Property	Value
Description	Enter the account, contact, or lead that submitted the campaign response, if it was received from an existing prospect or customer.
DisplayName	Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	customer
RequiredLevel	None

Property	Value
Targets	account,contact,lead
Type	PartyList

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

Description

Property	Value
Description	Type additional information to describe the campaign response, such as key discussion points or objectives.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

EMailAddress

Property	Value
Description	Type the responder's email address.
DisplayName	Email
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200
RequiredLevel	None
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

Fax

Property	Value
Description	Type the responder's fax number.
DisplayName	Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fax
MaxLength	50
RequiredLevel	None
Type	String

FirstName

Property	Value
Description	Type the responder's first name if the campaign response was received from a new prospect or customer.
DisplayName	First Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	firstname
MaxLength	50
RequiredLevel	None
Type	String

from

Property	Value
Description	For system use only.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber

Property	Value
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBilled

Property	Value
Description	Specifies whether the campaign response was billed as part of resolving a case.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Specifies whether the campaign response is created by a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastName

Property	Value
Description	Type the responder's last name if the campaign response was received from a new prospect or customer.
DisplayName	Last Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastname
MaxLength	50
RequiredLevel	None
Type	String

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OriginatingActivityId

Property	Value
Description	Choose the phone call, email, fax, letter, or appointment activity that led the prospect or customer to respond to the campaign.
DisplayName	Originating Activity
IsValidForForm	True
IsValidForRead	True
LogicalName	originatingactivityid
RequiredLevel	None
Targets	appointment,email,fax,letter,phonecall
Type	Lookup

OriginatingActivityIdTypeCode

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingactivityidtypecode
RequiredLevel	None
Type	EntityName

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid

Property	Value
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Partner

Property	Value
Description	Enter the vendor account or contact to capture any third-party used to obtain the campaign response.
DisplayName	Outsource Vendor
IsValidForForm	True
IsValidForRead	True
LogicalName	partner
RequiredLevel	None
Targets	account,contact
Type	PartyList

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None
Targets	account,contact
Type	PartyList

PriorityCode

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

PromotionCodeName

Property	Value
Description	Type a promotional code to track sales related to the campaign response or to allow the responder to redeem a discount offer.
DisplayName	Promotion Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	promotioncodename
MaxLength	250
RequiredLevel	None
Type	String

ReceivedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the campaign response was received.

Property	Value
DisplayName	Received On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	receivedon
RequiredLevel	None
Type	DateTime

RegardingObjectId

Property	Value
Description	Choose the parent campaign so that the campaign's response rate is tracked correctly.
DisplayName	Parent Campaign
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjectid
RequiredLevel	ApplicationRequired
Targets	bulkoperation,campaign
Type	Lookup

RegardingObjectTypeCode

Property	Value
Description	
DisplayName	
IsValidForForm	False

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	regardingobjecttypecode
RequiredLevel	None
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	systemuser

Property	Value
Type	PartyList

ResponseCode

Property	Value
Description	Select the type of response from the prospect or customer to indicate their interest in the campaign.
DisplayName	Response Code
IsValidForForm	True
IsValidForRead	True
LogicalName	responsecode
RequiredLevel	None
Type	Picklist

ResponseCode Choices/Options

Value	Label	Description
1	Interested	
2	Not Interested	
3	Do Not Send Marketing Materials	
4	Error	

ScheduledEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expected due date and time for the activity to be completed to provide details about the timing of the campaign response.
DisplayName	Close By
Format	DateOnly

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expected start date and time for the activity to provide details about the timing of the campaign response.
DisplayName	Scheduled Start
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

ServiceId

Added by: Marketing Service Solution

Property	Value
Description	Unique identifier for the associated service.
DisplayName	Service
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	serviceid
RequiredLevel	None
Targets	service
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate

Property	Value
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the campaign response is open, closed, or canceled. Closed and canceled campaign responses are read-only and can't be edited.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Closed	2	Closed
2	Canceled	3	Canceled

StatusCode

Property	Value
Description	Select the campaign response's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Open	0
2	Closed	1
3	Canceled	2

Subcategory

Property	Value
Description	Type a subcategory to identify the campaign response type and relate the activity to a specific product, sales region, business group, or other function.
DisplayName	Sub-Category
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	subcategory
MaxLength	250
RequiredLevel	None
Type	String

Subject

Property	Value
Description	Type a short description about the objective or primary topic of the campaign response.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	subject
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

Telephone

Property	Value
Description	Type the responder's primary phone number.
DisplayName	Phone

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone
MaxLength	50
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None
Targets	account,contact,systemuser
Type	PartyList

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

YomiCompanyName

Property	Value
Description	Type the phonetic spelling of the company name, if specified in Japanese, to make sure the name is pronounced correctly in phone calls and other communications.
DisplayName	Yomi Company Name
FormatName	PhoneticGuide
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	yomicompanyname
MaxLength	100
RequiredLevel	None
Type	String

YomiFirstName

Property	Value
Description	Type the phonetic spelling of the campaign responder's first name, if specified in Japanese, to make sure the name is pronounced correctly in phone calls and other communications.
DisplayName	Yomi First Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomifirstname
MaxLength	150
RequiredLevel	None
Type	String

YomiLastName

Property	Value
Description	Type the phonetic spelling of the campaign responder's last name, if specified in Japanese, to make sure the name is pronounced correctly in phone calls and other communications.
DisplayName	Yomi Last Name

Property	Value
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomilastname
MaxLength	150
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- ExchangeRate
- InstanceTypeCode
- IsRegularActivity
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OriginatingActivityIdYomiName

- OriginatingActivityName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- RegardingObjectIdName
- RegardingObjectIdYomiName
- ScheduledDurationMinutes
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True
LogicalName	activitytypecode
RequiredLevel	SystemRequired
Type	EntityName

CreatedBy

Property	Value

Property	Value
Description	Unique identifier of the user who created the activity.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was created.
DisplayName	Date Created
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the activitypointer.
DisplayName	Created By (Delegate)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate

Property	Value
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsRegularActivity

Property	Value

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of user who last modified the activity.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when activity was last modified.
DisplayName	Last Updated
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the activitypointer.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OriginatingActivityIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingactivityidyominame
MaxLength	4000
RequiredLevel	None
Type	String

OriginatingActivityName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingactivityname
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	100
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	100
RequiredLevel	None
Type	String

ScheduledDurationMinutes

Property	Value
Description	Scheduled duration of the campaign response in minutes.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduleddurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time when the activity was sent.
DisplayName	Date Sent
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid

Property	Value
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808

Property	Value
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

CampaignResponse_Lead

Same as the CampaignResponse_Lead many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	relatedobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	CampaignResponse_Lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_CampaignResponses

- Campaign_CampaignResponses
- campaignactivity_CampaignResponses
- account_CampaignResponses
- contact_CampaignResponses
- BulkOperation_CampaignResponse
- CampaignResponse_OpportunityCloses
- CampaignResponse_OrderCloses
- CampaignResponse_QuoteCloses

lead_CampaignResponses

Added by: Lead Management Solution

See the lead_CampaignResponses one-to-many relationship for the lead table/entity.

Campaign_CampaignResponses

See the Campaign_CampaignResponses one-to-many relationship for the campaign table/entity.

campaignactivity_CampaignResponses

See the campaignactivity_CampaignResponses one-to-many relationship for the campaignactivity table/entity.

account_CampaignResponses

Added by: System Solution Solution

See the account_CampaignResponses one-to-many relationship for the account table/entity.

contact_CampaignResponses

Added by: System Solution Solution

See the contact_CampaignResponses one-to-many relationship for the contact table/entity.

BulkOperation_CampaignResponse

See the BulkOperation_CampaignResponse one-to-many relationship for the bulkoperation table/entity.

CampaignResponse_OpportunityCloses

Added by: Sales Solution

See the CampaignResponse_OpportunityCloses one-to-many relationship for the opportunityclose table/entity.

CampaignResponse_OrderCloses

Added by: Sales Solution

See the CampaignResponse_OrderCloses one-to-many relationship for the orderclose table/entity.

CampaignResponse_QuoteCloses

Added by: Sales Solution

See the CampaignResponse_QuoteCloses one-to-many relationship for the quoteclose table/entity.

See also

About the table reference
Web API Reference

Competitor table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Business competing for the sale represented by a lead or opportunity.

Added by: Sales Solution

Messages

Message	SDK Assembly
Associate	AssociateRequest or Associate
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Competitors
DisplayCollectionName	Competitors

Property	Value
DisplayName	Competitor
EntitySetName	competitors
IsBPFEntity	False
LogicalCollectionName	competitors
LogicalName	competitor
OwnershipType	OrganizationOwned
PrimaryIdAttribute	competitorid
PrimaryNameAttribute	name
SchemaName	Competitor

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Address1_AddressId
- Address1_AddressTypeCode
- Address1_City
- Address1_Country
- Address1_County
- Address1_Fax
- Address1_Latitude
- Address1_Line1
- Address1_Line2
- Address1_Line3
- Address1_Longitude
- Address1_Name
- Address1_PostalCode
- Address1_PostOfficeBox
- Address1_ShippingMethodCode
- Address1_StateOrProvince
- Address1_Telephone1
- Address1_Telephone2
- Address1_Telephone3
- Address1_UPSZone

- Address1_UTCOffset
- Address2_AddressId
- Address2_AddressTypeCode
- Address2_City
- Address2_Country
- Address2_County
- Address2_Fax
- Address2_Latitude
- Address2_Line1
- Address2_Line2
- Address2_Line3
- Address2_Longitude
- Address2_Name
- Address2_PostalCode
- Address2_PostOfficeBox
- Address2_ShippingMethodCode
- Address2_StateOrProvince
- Address2_Telephone1
- Address2_Telephone2
- Address2_Telephone3
- Address2_UPSZone
- Address2_UTCOffset
- CompetitorId
- EntityImage
- ImportSequenceNumber
- KeyProduct
- Name
- Opportunities
- OverriddenCreatedOn
- Overview
- ProcessId
- ReferenceInfoUrl
- ReportedRevenue
- ReportingQuarter
- ReportingYear
- StageId
- StockExchange
- Strengths
- Threats
- TickerSymbol

- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- Weaknesses
- WebSiteUrl
- WinPercentage
- YomiName

Address1_AddressId

Property	Value
Description	Unique identifier for address 1.
DisplayName	Address 1: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address1_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address1_AddressTypeCode

Property	Value
Description	Select the primary address type.
DisplayName	Address 1: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_addresstypecode
RequiredLevel	None
Type	Picklist

Address1_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address1_City

Property	Value
Description	Type the city for the primary address.
DisplayName	City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_city
MaxLength	80
RequiredLevel	None
Type	String

Address1_Country

Property	Value
Description	Type the country or region for the primary address.
DisplayName	Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_country
MaxLength	80
RequiredLevel	None

Property	Value
Type	String

Address1_County

Property	Value
Description	Type the county for the primary address.
DisplayName	Address 1: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_county
MaxLength	50
RequiredLevel	None
Type	String

Address1_Fax

Property	Value
Description	Type the fax number associated with the primary address.
DisplayName	Address 1: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_fax
MaxLength	50
RequiredLevel	None

Property	Value
Type	String

Address1_Latitude

Property	Value
Description	Type the latitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address1_Line1

Property	Value
Description	Type the first line of the primary address.
DisplayName	Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line1
MaxLength	250

Property	Value
RequiredLevel	None
Type	String

Address1_Line2

Property	Value
Description	Type the second line of the primary address.
DisplayName	Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line2
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line3

Property	Value
Description	Type the third line of the primary address.
DisplayName	Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line3
MaxLength	250

Property	Value
RequiredLevel	None
Type	String

Address1_Longitude

Property	Value
Description	Type the longitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address1_Name

Property	Value
Description	Type a descriptive name for the primary address, such as Corporate Headquarters.
DisplayName	Address 1: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_name

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

Address1_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the primary address.
DisplayName	ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address1_PostOfficeBox

Property	Value
Description	Type the post office box number of the primary address.
DisplayName	Address 1: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postofficebox

Property	Value
MaxLength	20
RequiredLevel	None
Type	String

Address1_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 1: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address1_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address1_StateOrProvince

Property	Value
Description	Type the state or province of the primary address.
DisplayName	State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone1

Property	Value
Description	Type the main phone number associated with the primary address.
DisplayName	Address 1: Telephone 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone2

Property	Value
Description	Type a second phone number associated with the primary address.
DisplayName	Address 1: Telephone 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone3

Property	Value
Description	Type a third phone number associated with the primary address.
DisplayName	Address 1: Telephone 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address1_UPSZone

Property	Value
Description	Type the UPS zone of the primary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 1: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address1_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address1_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 1: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Address2_AddressId

Property	Value
Description	Unique identifier for address 2.
DisplayName	Address 2: ID
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	address2_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address2_AddressTypeCode

Property	Value
Description	Select the secondary address type.
DisplayName	Address 2: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_addresstypecode
RequiredLevel	None
Type	Picklist

Address2_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_City

Property	Value
Description	Type the city for the secondary address.
DisplayName	Address 2: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address2_city
MaxLength	80
RequiredLevel	None
Type	String

Address2_Country

Property	Value
Description	Type the country or region for the secondary address.
DisplayName	Address 2: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_country
MaxLength	80
RequiredLevel	None
Type	String

Address2_County

Property	Value
Description	Type the county for the secondary address.
DisplayName	Address 2: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address2_county
MaxLength	50
RequiredLevel	None
Type	String

Address2_Fax

Property	Value
Description	Type the fax number associated with the secondary address.
DisplayName	Address 2: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_fax
MaxLength	50
RequiredLevel	None
Type	String

Address2_Latitude

Property	Value
Description	Type the latitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_latitude

Property	Value
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address2_Line1

Property	Value
Description	Type the first line of the secondary address.
DisplayName	Address 2: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line1
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line2

Property	Value
Description	Type the second line of the secondary address.
DisplayName	Address 2: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_line2
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line3

Property	Value
Description	Type the third line of the secondary address.
DisplayName	Address 2: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line3
MaxLength	250
RequiredLevel	None
Type	String

Address2_Longitude

Property	Value
Description	Type the longitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Longitude
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address2_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address2_Name

Property	Value
Description	Type a descriptive name for the secondary address, such as Corporate Headquarters.
DisplayName	Address 2: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_name
MaxLength	100
RequiredLevel	None
Type	String

Address2_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the secondary address.
DisplayName	Address 2: ZIP/Postal Code
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address2_PostOfficeBox

Property	Value
Description	Type the post office box number of the secondary address.
DisplayName	Address 2: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address2_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 2: Shipping Method
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address2_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_StateOrProvince

Property	Value
Description	Type the state or province of the secondary address.
DisplayName	Address 2: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone1

Property	Value
Description	Type the main phone number associated with the secondary address.
DisplayName	Address 2: Telephone 1

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone2

Property	Value
Description	Type a second phone number associated with the secondary address.
DisplayName	Address 2: Telephone 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone3

Property	Value
Description	Type a third phone number associated with the secondary address.
DisplayName	Address 2: Telephone 3

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address2_UPSZone

Property	Value
Description	Type the UPS zone of the secondary address to make sure shipping charges are calculated correctly and deliveries are made promptly , if shipped by UPS.
DisplayName	Address 2: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address2_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.

Property	Value
DisplayName	Address 2: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

CompetitorId

Property	Value
Description	Unique identifier of the competitor.
DisplayName	Competitor
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	competitorid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

EntityImage

Added by: Active Solution Solution

Property	Value
Description	Shows the default image for the record.
DisplayName	Entity Image

Property	Value
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

KeyProduct

Property	Value
Description	Type the competitor's primary product, service, or specialty.

Property	Value
DisplayName	Key Product
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	keyproduct
MaxLength	200
RequiredLevel	None
Type	String

Name

Property	Value
Description	Type the company or business name used to identify the competitor in data views and related records.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	SystemRequired
Type	String

Opportunities

Property	Value

Property	Value
Description	Type notes or other information about the competitive opportunities or selling points you can make.
DisplayName	Opportunity
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunities
MaxLength	2000
RequiredLevel	None
Type	Memo

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

Overview

Property	Value
Description	Type notes or other information about the competitor's business, such as location, revenue, or distribution channel.
DisplayName	Overview
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	overview
MaxLength	2000
RequiredLevel	None
Type	Memo

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

ReferenceInfoUrl

Property	Value
Description	Type the URL for the website used to obtain reference information about the competitor.
DisplayName	Reference Info URL

Property	Value
FormatName	Url
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	referenceinfourl
MaxLength	200
RequiredLevel	None
Type	String

ReportedRevenue

Property	Value
Description	Type the amount of revenue reported in the competitor's annual report or other source.
DisplayName	Reported Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	reportedrevenue
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ReportingQuarter

Property	Value

Property	Value
Description	Type the quarter number during which the competitor's reported revenue was recorded or announced for use in reporting and analysis.
DisplayName	Reporting Quarter
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	reportingquarter
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ReportingYear

Property	Value
Description	Type the fiscal year during which the competitor's reported revenue was announced for use in reporting and analysis.
DisplayName	Reporting Year
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	reportingyear
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StockExchange

Property	Value
Description	Type the stock exchange at which the competitor is listed to track their stock and financial performance of the company.
DisplayName	Stock Exchange
FormatName	TickerSymbol
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	stockexchange
MaxLength	20
RequiredLevel	None
Type	String

Strengths

Property	Value
Description	Type notes or other information about the competitor's strengths, such as top-selling products and targeted industries or markets.
DisplayName	Strength

Property	Value
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	strengths
MaxLength	2000
RequiredLevel	None
Type	Memo

Threats

Property	Value
Description	Type notes or other information about the competitor's threats to your organization when you sell to the same prospect or customer.
DisplayName	Threat
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	threats
MaxLength	2000
RequiredLevel	None
Type	Memo

TickerSymbol

Property	Value

Property	Value
Description	Type the stock exchange symbol for the competitor to track financial performance of the company. You can click the code entered in this field to access the latest trading information from MSN Money.
DisplayName	Ticker Symbol
FormatName	TickerSymbol
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	tickersymbol
MaxLength	10
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.

Property	Value
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Weaknesses

Property	Value
Description	Type notes or other information about the competitor's weaknesses or areas in which your organization outperforms the competitor.
DisplayName	Weakness
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	weaknesses
MaxLength	2000
RequiredLevel	None
Type	Memo

WebSiteUrl

Property	Value

Property	Value
Description	Type the website URL for the competitor.
DisplayName	Website
FormatName	Url
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	websiteurl
MaxLength	200
RequiredLevel	None
Type	String

WinPercentage

Property	Value
Description	Type the percentage of your organization's lost opportunities that are won by the competitor to identify your strongest competitors.
DisplayName	Win Percentage
IsValidForForm	True
IsValidForRead	True
LogicalName	winpercentage
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Double

YomiName

Property	Value
Description	Type the phonetic spelling of the competitor's name, if specified in Japanese, to make sure the name is pronounced correctly in phone calls and other communications.
DisplayName	Yomi Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yominame
MaxLength	100
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Address1_Composite
- Address2_Composite
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName

- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- ReportedRevenue_Base
- TransactionCurrencyIdName
- VersionNumber

Address1_Composite

Property	Value
Description	Shows the complete primary address.
DisplayName	Address 1
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Address2_Composite

Property	Value
Description	Shows the complete secondary address.
DisplayName	Address 2
Format	TextArea
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon

Property	Value
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.

Property	Value
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired

Property	Value
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ReportedRevenue_Base

Property	Value
Description	Value of the Reported Revenue in base currency.
DisplayName	Reported Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	reportedrevenue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808

Property	Value
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

competitor_opportunity_activities

Same as the competitor_opportunity_activities many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	competitorid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	competitor_opportunity_activities
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-Many Relationships

Relationship details provided where the Competitor table is the first table in the relationship. Listed by **SchemaName**.

- opportunitycompetitors_association

- leadcompetitors_association
- competitorproduct_association
- competitorsalesliterature_association

opportunitycompetitors_association

See the opportunitycompetitors_association many-to-many relationship for the opportunity table/entity.

leadcompetitors_association

See the leadcompetitors_association many-to-many relationship for the lead table/entity.

competitorproduct_association

IntersectEntityName: competitorproduct

Table 1

Property	Value
IntersectAttribute	competitorid
IsCustomizable	False
LogicalName	competitor
NavigationPropertyName	competitorproduct_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order:

Table 2

Property	Value
LogicalName	product
IntersectAttribute	productid
NavigationPropertyName	competitorproduct_association

Property	Value
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

competitorsalesliterature_association

See the competitorsalesliterature_association many-to-many relationship for the salesliterature table/entity.

See also

About the table reference
Web API Reference

Contact table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Person with whom a business unit has a relationship, such as customer, supplier, and colleague.

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
GrantAccess	GrantAccessRequest
Merge	MergeRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest

Message	SDK Assembly
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Contacts
DisplayCollectionName	Contacts
DisplayName	Contact
EntitySetName	contacts
IsBPFEntity	False
LogicalCollectionName	contacts
LogicalName	contact
OwnershipType	UserOwned
PrimaryIdAttribute	contactid
PrimaryNameAttribute	fullname
SchemaName	Contact

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AccountRoleCode
- Address1_AddressId
- Address1_AddressTypeCode
- Address1_City
- Address1_Country
- Address1_County
- Address1_Fax

- Address1_FreightTermsCode
- Address1_Latitude
- Address1_Line1
- Address1_Line2
- Address1_Line3
- Address1_Longitude
- Address1_Name
- Address1_PostalCode
- Address1_PostOfficeBox
- Address1_PrimaryContactName
- Address1_ShippingMethodCode
- Address1_StateOrProvince
- Address1_Telephone1
- Address1_Telephone2
- Address1_Telephone3
- Address1_UPSZone
- Address1_UTCOffset
- Address2_AddressId
- Address2_AddressTypeCode
- Address2_City
- Address2_Country
- Address2_County
- Address2_Fax
- Address2_FreightTermsCode
- Address2_Latitude
- Address2_Line1
- Address2_Line2
- Address2_Line3
- Address2_Longitude
- Address2_Name
- Address2_PostalCode
- Address2_PostOfficeBox
- Address2_PrimaryContactName
- Address2_ShippingMethodCode
- Address2_StateOrProvince
- Address2_Telephone1
- Address2_Telephone2
- Address2_Telephone3
- Address2_UPSZone
- Address2_UTCOffset

- Address3_AddressId
- Address3_AddressTypeCode
- Address3_City
- Address3_Country
- Address3_County
- Address3_Fax
- Address3_FreightTermsCode
- Address3_Latitude
- Address3_Line1
- Address3_Line2
- Address3_Line3
- Address3_Longitude
- Address3_Name
- Address3_PostalCode
- Address3_PostOfficeBox
- Address3_PrimaryContactName
- Address3_ShippingMethodCode
- Address3_StateOrProvince
- Address3_Telephone1
- Address3_Telephone2
- Address3_Telephone3
- Address3_UPSZone
- Address3_UTCOffset
- Anniversary
- AnnualIncome
- AssistantName
- AssistantPhone
- BirthDate
- Business2
- BusinessCard
- BusinessCardAttributes
- Callback
- ChildrensNames
- Company
- ContactId
- CreditLimit
- CreditOnHold
- CustomerSizeCode
- CustomerTypeCode
- DefaultPriceLevelId

- Department
- Description
- DoNotBulkEMail
- DoNotBulkPostalMail
- DoNotEMail
- DoNotFax
- DoNotPhone
- DoNotPostalMail
- DoNotSendMM
- EducationCode
- EMailAddress1
- EMailAddress2
- EMailAddress3
- EmployeeId
- EntityImage
- ExternalUserIdentifier
- FamilyStatusCode
- Fax
- FirstName
- FollowEmail
- FtpSiteUrl
- GenderCode
- GovernmentId
- HasChildrenCode
- Home2
- ImportSequenceNumber
- IsBackofficeCustomer
- JobTitle
- LastName
- LastOnHoldTime
- LastUsedInCampaign
- LeadSourceCode
- ManagerName
- ManagerPhone
- MarketingOnly
- MiddleName
- MobilePhone
- msdyn_orgchangestatus
- msdyn_segmentid
- NickName

- NumberOfChildren
- OriginatingLeadId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Pager
- ParentCustomerId
- ParentCustomerIdType
- ParticipatesInWorkflow
- PaymentTermsCode
- PreferredAppointmentDayCode
- PreferredAppointmentTimeCode
- PreferredContactMethodCode
- PreferredEquipmentId
- PreferredServiceId
- PreferredSystemUserId
- ProcessId
- Salutation
- ShippingMethodCode
- SLAId
- SpousesName
- StageId
- StateCode
- StatusCode
- SubscriptionId
- Suffix
- TeamsFollowed
- Telephone1
- Telephone2
- Telephone3
- TerritoryCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WebSiteUrl
- YomiFirstName
- YomiLastName
- YomiMiddleName

AccountRoleCode

Property	Value
Description	Select the contact's role within the company or sales process, such as decision maker, employee, or influencer.
DisplayName	Role
IsValidForForm	True
IsValidForRead	True
LogicalName	accountrolecode
RequiredLevel	None
Type	Picklist

AccountRoleCode Choices/Options

Value	Label	Description
1	Decision Maker	
2	Employee	
3	Influencer	

Address1_AddressId

Property	Value
Description	Unique identifier for address 1.
DisplayName	Address 1: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address1_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address1_AddressTypeCode

Property	Value
Description	Select the primary address type.
DisplayName	Address 1: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_addresstypecode
RequiredLevel	None
Type	Picklist

Address1_AddressTypeCode Choices/Options

Value	Label	Description
1	Bill To	
2	Ship To	
3	Primary	
4	Other	

Address1_City

Property	Value
Description	Type the city for the primary address.
DisplayName	Address 1: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_city
MaxLength	80

Property	Value
RequiredLevel	None
Type	String

Address1_Country

Property	Value
Description	Type the country or region for the primary address.
DisplayName	Address 1: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_country
MaxLength	80
RequiredLevel	None
Type	String

Address1_County

Property	Value
Description	Type the county for the primary address.
DisplayName	Address 1: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_county
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

Address1_Fax

Property	Value
Description	Type the fax number associated with the primary address.
DisplayName	Address 1: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_fax
MaxLength	50
RequiredLevel	None
Type	String

Address1_FreightTermsCode

Property	Value
Description	Select the freight terms for the primary address to make sure shipping orders are processed correctly.
DisplayName	Address 1: Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_freighttermscode
RequiredLevel	None
Type	Picklist

Address1_FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

Address1_Latitude

Property	Value
Description	Type the latitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address1_Line1

Property	Value
Description	Type the first line of the primary address.
DisplayName	Address 1: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_line1
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line2

Property	Value
Description	Type the second line of the primary address.
DisplayName	Address 1: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line2
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line3

Property	Value
Description	Type the third line of the primary address.
DisplayName	Address 1: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_line3
MaxLength	250
RequiredLevel	None
Type	String

Address1_Longitude

Property	Value
Description	Type the longitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address1_Name

Property	Value
Description	Type a descriptive name for the primary address, such as Corporate Headquarters.
DisplayName	Address 1: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address1_name
MaxLength	200
RequiredLevel	None
Type	String

Address1_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the primary address.
DisplayName	Address 1: ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address1_PostOfficeBox

Property	Value
Description	Type the post office box number of the primary address.
DisplayName	Address 1: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address1_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address1_PrimaryContactName

Property	Value
Description	Type the name of the main contact at the account's primary address.
DisplayName	Address 1: Primary Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_primarycontactname
MaxLength	100
RequiredLevel	None
Type	String

Address1_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 1: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_shippingmethodcode

Property	Value
RequiredLevel	None
Type	Picklist

Address1_ShippingMethodCode Choices/Options

Value	Label	Description
1	Airborne	
2	DHL	
3	FedEx	
4	UPS	
5	Postal Mail	
6	Full Load	
7	Will Call	

Address1_StateOrProvince

Property	Value
Description	Type the state or province of the primary address.
DisplayName	Address 1: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone1

Property	Value
Description	Type the main phone number associated with the primary address.
DisplayName	Address 1: Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone2

Property	Value
Description	Type a second phone number associated with the primary address.
DisplayName	Address 1: Telephone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone3

Property	Value
Description	Type a third phone number associated with the primary address.
DisplayName	Address 1: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address1_UPSZone

Property	Value
Description	Type the UPS zone of the primary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 1: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address1_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 1: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Address2_AddressId

Property	Value
Description	Unique identifier for address 2.
DisplayName	Address 2: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address2_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address2_AddressTypeCode

Property	Value
Description	Select the secondary address type.
DisplayName	Address 2: Address Type

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_addresstypecode
RequiredLevel	None
Type	Picklist

Address2_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_City

Property	Value
Description	Type the city for the secondary address.
DisplayName	Address 2: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_city
MaxLength	80
RequiredLevel	None
Type	String

Address2_Country

Property	Value
Description	Type the country or region for the secondary address.

Property	Value
DisplayName	Address 2: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_country
MaxLength	80
RequiredLevel	None
Type	String

Address2_County

Property	Value
Description	Type the county for the secondary address.
DisplayName	Address 2: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_county
MaxLength	50
RequiredLevel	None
Type	String

Address2_Fax

Property	Value
Description	Type the fax number associated with the secondary address.

Property	Value
DisplayName	Address 2: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_fax
MaxLength	50
RequiredLevel	None
Type	String

Address2_FreightTermsCode

Property	Value
Description	Select the freight terms for the secondary address to make sure shipping orders are processed correctly.
DisplayName	Address 2: Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_freighttermscode
RequiredLevel	None
Type	Picklist

Address2_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_Latitude

Property	Value
Description	Type the latitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address2_Line1

Property	Value
Description	Type the first line of the secondary address.
DisplayName	Address 2: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line1
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line2

Property	Value
Description	Type the second line of the secondary address.
DisplayName	Address 2: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line2
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line3

Property	Value
Description	Type the third line of the secondary address.
DisplayName	Address 2: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line3
MaxLength	250
RequiredLevel	None
Type	String

Address2_Longitude

Property	Value

Property	Value
Description	Type the longitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address2_Name

Property	Value
Description	Type a descriptive name for the secondary address, such as Corporate Headquarters.
DisplayName	Address 2: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_name
MaxLength	100
RequiredLevel	None
Type	String

Address2_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the secondary address.
DisplayName	Address 2: ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address2_PostOfficeBox

Property	Value
Description	Type the post office box number of the secondary address.
DisplayName	Address 2: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address2_PrimaryContactName

Property	Value

Property	Value
Description	Type the name of the main contact at the account's secondary address.
DisplayName	Address 2: Primary Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_primarycontactname
MaxLength	100
RequiredLevel	None
Type	String

Address2_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 2: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address2_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_StateOrProvince

Property	Value
Description	Type the state or province of the secondary address.
DisplayName	Address 2: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone1

Property	Value
Description	Type the main phone number associated with the secondary address.
DisplayName	Address 2: Telephone 1
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone2

Property	Value

Property	Value
Description	Type a second phone number associated with the secondary address.
DisplayName	Address 2: Telephone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone3

Property	Value
Description	Type a third phone number associated with the secondary address.
DisplayName	Address 2: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address2_UPSZone

Property	Value

Property	Value
Description	Type the UPS zone of the secondary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 2: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address2_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 2: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Address3_AddressId

Property	Value
Description	Unique identifier for address 3.
DisplayName	Address 3: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address3_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address3_AddressTypeCode

Property	Value
Description	Select the third address type.
DisplayName	Address 3: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_addresstypecode
RequiredLevel	None
Type	Picklist

Address3_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address3_City

Property	Value
Description	Type the city for the 3rd address.
DisplayName	Address 3: City

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_city
MaxLength	80
RequiredLevel	None
Type	String

Address3_Country

Property	Value
Description	the country or region for the 3rd address.
DisplayName	Address3: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_country
MaxLength	80
RequiredLevel	None
Type	String

Address3_County

Property	Value
Description	Type the county for the third address.
DisplayName	Address 3: County

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_county
MaxLength	50
RequiredLevel	None
Type	String

Address3_Fax

Property	Value
Description	Type the fax number associated with the third address.
DisplayName	Address 3: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_fax
MaxLength	50
RequiredLevel	None
Type	String

Address3_FreightTermsCode

Property	Value
Description	Select the freight terms for the third address to make sure shipping orders are processed correctly.

Property	Value
DisplayName	Address 3: Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_freighttermscode
RequiredLevel	None
Type	Picklist

Address3_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

Address3_Latitude

Property	Value
Description	Type the latitude value for the third address for use in mapping and other applications.
DisplayName	Address 3: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address3_Line1

Property	Value
Description	the first line of the 3rd address.
DisplayName	Address3: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_line1
MaxLength	250
RequiredLevel	None
Type	String

Address3_Line2

Property	Value
Description	the second line of the 3rd address.
DisplayName	Address3: Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_line2
MaxLength	250
RequiredLevel	None
Type	String

Address3_Line3

Property	Value

Property	Value
Description	the third line of the 3rd address.
DisplayName	Address3: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_line3
MaxLength	250
RequiredLevel	None
Type	String

Address3_Longitude

Property	Value
Description	Type the longitude value for the third address for use in mapping and other applications.
DisplayName	Address 3: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address3_Name

Property	Value
Description	Type a descriptive name for the third address, such as Corporate Headquarters.
DisplayName	Address 3: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_name
MaxLength	200
RequiredLevel	None
Type	String

Address3_PostalCode

Property	Value
Description	the ZIP Code or postal code for the 3rd address.
DisplayName	Address3: ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address3_PostOfficeBox

Property	Value

Property	Value
Description	the post office box number of the 3rd address.
DisplayName	Address 3: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address3_PrimaryContactName

Property	Value
Description	Type the name of the main contact at the account's third address.
DisplayName	Address 3: Primary Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_primarycontactname
MaxLength	100
RequiredLevel	None
Type	String

Address3_ShippingMethodCode

Property	Value

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 3: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address3_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address3_StateOrProvince

Property	Value
Description	the state or province of the third address.
DisplayName	Address3: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address3_Telephone1

Property	Value
Description	Type the main phone number associated with the third address.
DisplayName	Address 3: Telephone1
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address3_Telephone2

Property	Value
Description	Type a second phone number associated with the third address.
DisplayName	Address 3: Telephone2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address3_Telephone3

Property	Value

Property	Value
Description	Type a third phone number associated with the primary address.
DisplayName	Address 3: Telephone3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address3_UPSZone

Property	Value
Description	Type the UPS zone of the third address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 3: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address3_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 3: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Anniversary

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the date of the contact's wedding or service anniversary for use in customer gift programs or other communications.
DisplayName	Anniversary
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	anniversary
RequiredLevel	None
Type	DateTime

AnnualIncome

Property	Value

Property	Value
Description	Type the contact's annual income for use in profiling and financial analysis.
DisplayName	Annual Income
IsValidForForm	True
IsValidForRead	True
LogicalName	annualincome
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

AssistantName

Property	Value
Description	Type the name of the contact's assistant.
DisplayName	Assistant
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	assistantname
MaxLength	100
RequiredLevel	None
Type	String

AssistantPhone

Property	Value
Description	Type the phone number for the contact's assistant.
DisplayName	Assistant Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	assistantphone
MaxLength	50
RequiredLevel	None
Type	String

BirthDate

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the contact's birthday for use in customer gift programs or other communications.
DisplayName	Birthday
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	birthdate
RequiredLevel	None
Type	DateTime

Business2

Property	Value

Property	Value
Description	Type a second business phone number for this contact.
DisplayName	Business Phone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	business2
MaxLength	50
RequiredLevel	None
Type	String

BusinessCard

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Stores Image of the Business Card
DisplayName	Business Card
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	businesscard
MaxLength	1073741823
RequiredLevel	None
Type	Memo

BusinessCardAttributes

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Stores Business Card Control Properties.
DisplayName	BusinessCardAttributes
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	businesscardattributes
MaxLength	4000
RequiredLevel	None
Type	String

Callback

Property	Value
Description	Type a callback phone number for this contact.
DisplayName	Callback Number
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	callback
MaxLength	50
RequiredLevel	None
Type	String

ChildrensNames

Property	Value
Description	Type the names of the contact's children for reference in communications and client programs.
DisplayName	Children's Names
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	childrensnames
MaxLength	255
RequiredLevel	None
Type	String

Company

Property	Value
Description	Type the company phone of the contact.
DisplayName	Company Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	company
MaxLength	50
RequiredLevel	None
Type	String

ContactId

Property	Value
Description	Unique identifier of the contact.
DisplayName	Contact
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	contactid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

CreditLimit

Property	Value
Description	Type the credit limit of the contact for reference when you address invoice and accounting issues with the customer.
DisplayName	Credit Limit
IsValidForForm	True
IsValidForRead	True
LogicalName	creditlimit
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

CreditOnHold

Property	Value

Property	Value
Description	Select whether the contact is on a credit hold, for reference when addressing invoice and accounting issues.
DisplayName	Credit Hold
IsValidForForm	True
IsValidForRead	True
LogicalName	creditonhold
RequiredLevel	None
Type	Boolean

CreditOnHold Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

CustomerSizeCode

Property	Value
Description	Select the size of the contact's company for segmentation and reporting purposes.
DisplayName	Customer Size
IsValidForForm	True
IsValidForRead	True
LogicalName	customersizecode
RequiredLevel	None
Type	Picklist

CustomerSizeCode Choices/Options

Value	Label	Description
1	Default Value	

CustomerTypeCode

Property	Value
Description	Select the category that best describes the relationship between the contact and your organization.
DisplayName	Relationship Type
IsValidForForm	True
IsValidForRead	True
LogicalName	customertypecode
RequiredLevel	None
Type	Picklist

CustomerTypeCode Choices/Options

Value	Label	Description
1	Default Value	

DefaultPriceLevelId

Added by: Product Management Solution

Property	Value
Description	Choose the default price list associated with the contact to make sure the correct product prices for this customer are applied in sales opportunities, quotes, and orders.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	defaultpricelevelid

Property	Value
RequiredLevel	None
Targets	pricelevel
Type	Lookup

Department

Property	Value
Description	Type the department or business unit where the contact works in the parent company or business.
DisplayName	Department
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	department
MaxLength	100
RequiredLevel	None
Type	String

Description

Property	Value
Description	Type additional information to describe the contact, such as an excerpt from the company's website.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DoNotBulkEMail

Property	Value
Description	Select whether the contact accepts bulk email sent through marketing campaigns or quick campaigns. If Do Not Allow is selected, the contact can be added to marketing lists, but will be excluded from the email.
DisplayName	Do not allow Bulk Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotbulkemail
RequiredLevel	None
Type	Boolean

DoNotBulkEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotBulkPostalMail

Property	Value

Property	Value
Description	Select whether the contact accepts bulk postal mail sent through marketing campaigns or quick campaigns. If Do Not Allow is selected, the contact can be added to marketing lists, but will be excluded from the letters.
DisplayName	Do not allow Bulk Mails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotbulkpostalmail
RequiredLevel	None
Type	Boolean

DoNotBulkPostalMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

DoNotEMail

Property	Value
Description	Select whether the contact allows direct email sent from Microsoft Dynamics 365. If Do Not Allow is selected, Microsoft Dynamics 365 will not send the email.
DisplayName	Do not allow Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotemail
RequiredLevel	None
Type	Boolean

DoNotEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotFax

Property	Value
Description	Select whether the contact allows faxes. If Do Not Allow is selected, the contact will be excluded from any fax activities distributed in marketing campaigns.
DisplayName	Do not allow Faxes
IsValidForForm	True
IsValidForRead	True
LogicalName	donotfax
RequiredLevel	None
Type	Boolean

DoNotFax Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPhone

Property	Value
Description	Select whether the contact accepts phone calls. If Do Not Allow is selected, the contact will be excluded from any phone call activities distributed in marketing campaigns.

Property	Value
DisplayName	Do not allow Phone Calls
IsValidForForm	True
IsValidForRead	True
LogicalName	donotphone
RequiredLevel	None
Type	Boolean

DoNotPhone Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPostalMail

Property	Value
Description	Select whether the contact allows direct mail. If Do Not Allow is selected, the contact will be excluded from letter activities distributed in marketing campaigns.
DisplayName	Do not allow Mails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotpostalmail
RequiredLevel	None
Type	Boolean

DoNotPostalMail Choices/Options

Value	Label	Description

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotSendMM

Property	Value
Description	Select whether the contact accepts marketing materials, such as brochures or catalogs. Contacts that opt out can be excluded from marketing initiatives.
DisplayName	Send Marketing Materials
IsValidForForm	True
IsValidForRead	True
LogicalName	donotsendmm
RequiredLevel	None
Type	Boolean

DoNotSendMM Choices/Options

Value	Label	Description
1	Do Not Send	
0	Send	

DefaultValue: 0

EducationCode

Property	Value
Description	Select the contact's highest level of education for use in segmentation and analysis.
DisplayName	Education
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	educationcode
RequiredLevel	None
Type	Picklist

EducationCode Choices/Options

Value	Label	Description
1	Default Value	

EMailAddress1

Property	Value
Description	Type the primary email address for the contact.
DisplayName	Email
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress1
MaxLength	100
RequiredLevel	None
Type	String

EMailAddress2

Property	Value
Description	Type the secondary email address for the contact.
DisplayName	Email Address 2

Property	Value
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress2
MaxLength	100
RequiredLevel	None
Type	String

EMailAddress3

Property	Value
Description	Type an alternate email address for the contact.
DisplayName	Email Address 3
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress3
MaxLength	100
RequiredLevel	None
Type	String

EmployeeId

Property	Value
Description	Type the employee ID or number for the contact for reference in orders, service cases, or other communications with the contact's organization.

Property	Value
DisplayName	Employee
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	employeeid
MaxLength	50
RequiredLevel	None
Type	String

EntityImage

Property	Value
Description	Shows the default image for the record.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ExternalUserIdentifier

Property	Value
Description	Identifier for an external user.

Property	Value
DisplayName	External User Identifier
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	externaluseridentifier
MaxLength	50
RequiredLevel	None
Type	String

FamilyStatusCode

Property	Value
Description	Select the marital status of the contact for reference in follow-up phone calls and other communications.
DisplayName	Marital Status
IsValidForForm	True
IsValidForRead	True
LogicalName	familystatuscode
RequiredLevel	None
Type	Picklist

FamilyStatusCode Choices/Options

Value	Label	Description
1	Single	
2	Married	
3	Divorced	

Value	Label	Description
4	Widowed	

Fax

Property	Value
Description	Type the fax number for the contact.
DisplayName	Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fax
MaxLength	50
RequiredLevel	None
Type	String

FirstName

Property	Value
Description	Type the contact's first name to make sure the contact is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	First Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	firstname
MaxLength	50

Property	Value
RequiredLevel	Recommended
Type	String

FollowEmail

Property	Value
Description	Information about whether to allow following email activity like opens, attachment views and link clicks for emails sent to the contact.
DisplayName	Follow Email Activity
IsValidForForm	True
IsValidForRead	True
LogicalName	followemail
RequiredLevel	None
Type	Boolean

FollowEmail Choices/Options

Value	Label	Description
1	Allow	
0	Do Not Allow	

DefaultValue: 1

FtpSiteUrl

Property	Value
Description	Type the URL for the contact's FTP site to enable users to access data and share documents.
DisplayName	FTP Site
FormatName	Url
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	ftpsiteurl
MaxLength	200
RequiredLevel	None
Type	String

GenderCode

Property	Value
Description	Select the contact's gender to make sure the contact is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Gender
IsValidForForm	True
IsValidForRead	True
LogicalName	gendercode
RequiredLevel	None
Type	Picklist

GenderCode Choices/Options

Value	Label	Description
1	Male	
2	Female	

GovernmentId

Property	Value
Description	Type the passport number or other government ID for the contact for use in documents or reports.

Property	Value
DisplayName	Government
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	governmentid
MaxLength	50
RequiredLevel	None
Type	String

HasChildrenCode

Property	Value
Description	Select whether the contact has any children for reference in follow-up phone calls and other communications.
DisplayName	Has Children
IsValidForForm	True
IsValidForRead	True
LogicalName	haschildrencode
RequiredLevel	None
Type	Picklist

HasChildrenCode Choices/Options

Value	Label	Description
1	Default Value	

Home2

Property	Value
Description	Type a second home phone number for this contact.
DisplayName	Home Phone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	home2
MaxLength	50
RequiredLevel	None
Type	String

ImportSequenceNumber

Property	Value
Description	Unique identifier of the data import or data migration that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBackofficeCustomer

Property	Value
Description	Select whether the contact exists in a separate accounting or other system, such as Microsoft Dynamics GP or another ERP database, for use in integration processes.
DisplayName	Back Office Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	isbackofficecustomer
RequiredLevel	None
Type	Boolean

IsBackofficeCustomer Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

JobTitle

Property	Value
Description	Type the job title of the contact to make sure the contact is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Job Title
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	jobtitle
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

LastName

Property	Value
Description	Type the contact's last name to make sure the contact is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Last Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastname
MaxLength	50
RequiredLevel	ApplicationRequired
Type	String

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime

Property	Value
RequiredLevel	None
Type	DateTime

LastUsedInCampaign

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date when the contact was last included in a marketing campaign or quick campaign.
DisplayName	Last Date Included in Campaign
Format	DateOnly
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastusedincampaign
RequiredLevel	None
Type	DateTime

LeadSourceCode

Property	Value
Description	Select the primary marketing source that directed the contact to your organization.
DisplayName	Lead Source
IsValidForForm	True
IsValidForRead	True
LogicalName	leadsourcecode
RequiredLevel	None
Type	Picklist

LeadSourceCode Choices/Options

Value	Label	Description
1	Default Value	

ManagerName

Property	Value
Description	Type the name of the contact's manager for use in escalating issues or other follow-up communications with the contact.
DisplayName	Manager
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	managername
MaxLength	100
RequiredLevel	None
Type	String

ManagerPhone

Property	Value
Description	Type the phone number for the contact's manager.
DisplayName	Manager Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	managerphone

Property	Value
MaxLength	50
RequiredLevel	None
Type	String

MarketingOnly

Property	Value
Description	Whether is only for marketing
DisplayName	Marketing Only
IsValidForForm	True
IsValidForRead	True
LogicalName	marketingonly
RequiredLevel	None
Type	Boolean

MarketingOnly Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MiddleName

Property	Value
Description	Type the contact's middle name or initial to make sure the contact is addressed correctly.
DisplayName	Middle Name
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	middlename
MaxLength	50
RequiredLevel	None
Type	String

MobilePhone

Property	Value
Description	Type the mobile phone number for the contact.
DisplayName	Mobile Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	mobilephone
MaxLength	50
RequiredLevel	None
Type	String

msdyn_orgchangestatus

Added by: LinkedInExtensions Solution

Property	Value
Description	Whether or not the contact belongs to the associated account
DisplayName	Not at Company Flag

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_orgchangestatus
RequiredLevel	None
Type	Picklist

msdyn_orgchangestatus Choices/Options

Value	Label	Description
0	No Feedback	
1	Not at Company	
2	Ignore	

msdyn_segmentid

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for Segment associated with contact.
DisplayName	Segment Id
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_segmentid
RequiredLevel	None
Targets	msdyn_segment
Type	Lookup

NickName

Property	Value

Property	Value
Description	Type the contact's nickname.
DisplayName	Nickname
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	nickname
MaxLength	100
RequiredLevel	None
Type	String

NumberOfChildren

Property	Value
Description	Type the number of children the contact has for reference in follow-up phone calls and other communications.
DisplayName	No. of Children
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	numberofchildren
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

OriginatingLeadId

Added by: Lead Management Solution

Property	Value
Description	Shows the lead that the contact was created if the contact was created by converting a lead in Microsoft Dynamics 365. This is used to relate the contact to the data on the originating lead for use in reporting and analytics.
DisplayName	Originating Lead
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	originatingleadid
RequiredLevel	None
Targets	lead
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value

Property	Value
Description	Enter the user or team who is assigned to manage the record. This field is updated every time the record is assigned to a different user.
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Pager

Property	Value
Description	Type the pager number for the contact.
DisplayName	Pager
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	pager
MaxLength	50
RequiredLevel	None
Type	String

ParentCustomerId

Property	Value
Description	Select the parent account or parent contact for the contact to provide a quick link to additional details, such as financial information, activities, and opportunities.
DisplayName	Company Name
IsValidForForm	True
IsValidForRead	True
LogicalName	parentcustomerid
RequiredLevel	None
Targets	account,contact
Type	Customer

ParentCustomerIdType

Property	Value
Description	
DisplayName	Parent Customer Type
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcustomeridtype

Property	Value
RequiredLevel	None
Type	EntityName

ParticipatesInWorkflow

Property	Value
Description	Shows whether the contact participates in workflow rules.
DisplayName	Participates in Workflow
IsValidForForm	False
IsValidForRead	True
LogicalName	participatesinworkflow
RequiredLevel	None
Type	Boolean

ParticipatesInWorkflow Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

PaymentTermsCode

Property	Value
Description	Select the payment terms to indicate when the customer needs to pay the total amount.
DisplayName	Payment Terms
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	paymenttermscode
RequiredLevel	None
Type	Picklist

PaymentTermsCode Choices/Options

Value	Label	Description
1	Net 30	
2	2% 10, Net 30	
3	Net 45	
4	Net 60	

PreferredAppointmentDayCode

Property	Value
Description	Select the preferred day of the week for service appointments.
DisplayName	Preferred Day
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredappointmentdaycode
RequiredLevel	None
Type	Picklist

PreferredAppointmentDayCode Choices/Options

Value	Label	Description
0	Sunday	
1	Monday	
2	Tuesday	

Value	Label	Description
3	Wednesday	
4	Thursday	
5	Friday	
6	Saturday	

PreferredAppointmentTimeCode

Property	Value
Description	Select the preferred time of day for service appointments.
DisplayName	Preferred Time
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredappointmenttimecode
RequiredLevel	None
Type	Picklist

PreferredAppointmentTimeCode Choices/Options

Value	Label	Description
1	Morning	
2	Afternoon	
3	Evening	

PreferredContactMethodCode

Property	Value
Description	Select the preferred method of contact.
DisplayName	Preferred Method of Contact
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	preferredcontactmethodcode
RequiredLevel	None
Type	Picklist

PreferredContactMethodCode Choices/Options

Value	Label	Description
1	Any	
2	Email	
3	Phone	
4	Fax	
5	Mail	

PreferredEquipmentId

Added by: Service Solution

Property	Value
Description	Choose the contact's preferred service facility or equipment to make sure services are scheduled correctly for the customer.
DisplayName	Preferred Facility/Equipment
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredequipmentid
RequiredLevel	None
Targets	equipment
Type	Lookup

PreferredServiceId

Added by: Service Solution

Property	Value
Description	Choose the contact's preferred service to make sure services are scheduled correctly for the customer.
DisplayName	Preferred Service
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredserviceid
RequiredLevel	None
Targets	service
Type	Lookup

PreferredSystemUserId

Property	Value
Description	Choose the regular or preferred customer service representative for reference when scheduling service activities for the contact.
DisplayName	Preferred User
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredsystemuserid
RequiredLevel	None
Targets	systemuser
Type	Lookup

ProcessId

Property	Value
Description	Shows the ID of the process.
DisplayName	Process

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

Salutation

Property	Value
Description	Type the salutation of the contact to make sure the contact is addressed correctly in sales calls, email messages, and marketing campaigns.
DisplayName	Salutation
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	salutation
MaxLength	100
RequiredLevel	None
Type	String

ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Shipping Method
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the Contact record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SpousesName

Property	Value
Description	Type the name of the contact's spouse or partner for reference during calls, events, or other communications with the contact.
DisplayName	Spouse/Partner Name
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	spousesname
MaxLength	100
RequiredLevel	None
Type	String

StageId

Property	Value
Description	Shows the ID of the stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the contact is active or inactive. Inactive contacts are read-only and can't be edited unless they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode

Property	Value
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

StatusCode

Property	Value
Description	Select the contact's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

SubscriptionId

Property	Value
Description	For internal use only.

Property	Value
DisplayName	Subscription
IsValidForForm	False
IsValidForRead	False
IsValidForUpdate	False
LogicalName	subscriptionid
RequiredLevel	None
Type	Uniqueidentifier

Suffix

Property	Value
Description	Type the suffix used in the contact's name, such as Jr. or Sr. to make sure the contact is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Suffix
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	suffix
MaxLength	10
RequiredLevel	None
Type	String

TeamsFollowed

Added by: Sales Patch Solution

Property	Value
Description	Number of users or conversations followed the record

Property	Value
DisplayName	TeamsFollowed
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	teamsfollowed
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Telephone1

Property	Value
Description	Type the main phone number for this contact.
DisplayName	Business Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone1
MaxLength	50
RequiredLevel	None
Type	String

Telephone2

Property	Value
Description	Type a second phone number for this contact.

Property	Value
DisplayName	Home Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone2
MaxLength	50
RequiredLevel	None
Type	String

Telephone3

Property	Value
Description	Type a third phone number for this contact.
DisplayName	Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone3
MaxLength	50
RequiredLevel	None
Type	String

TerritoryCode

Property	Value
Description	Select a region or territory for the contact for use in segmentation and analysis.

Property	Value
DisplayName	Territory
IsValidForForm	True
IsValidForRead	True
LogicalName	territorycode
RequiredLevel	None
Type	Picklist

TerritoryCode Choices/Options

Value	Label	Description
1	Default Value	

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.

Property	Value
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WebSiteUrl

Property	Value
Description	Type the contact's professional or personal website or blog URL.
DisplayName	Website
FormatName	Url
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	websiteurl
MaxLength	200
RequiredLevel	None
Type	String

YomiFirstName

Property	Value

Property	Value
Description	Type the phonetic spelling of the contact's first name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the contact.
DisplayName	Yomi First Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomifirstname
MaxLength	150
RequiredLevel	None
Type	String

YomiLastName

Property	Value
Description	Type the phonetic spelling of the contact's last name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the contact.
DisplayName	Yomi Last Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomilastname
MaxLength	150
RequiredLevel	None
Type	String

YomiMiddleName

Property	Value
Description	Type the phonetic spelling of the contact's middle name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the contact.
DisplayName	Yomi Middle Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomimiddlename
MaxLength	150
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- Address1_Composite
- Address2_Composite
- Address3_Composite
- Aging30
- Aging30_Base
- Aging60
- Aging60_Base
- Aging90
- Aging90_Base
- AnnualIncome_Base
- CreatedBy
- CreatedByExternalParty

- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CreditLimit_Base
- DefaultPriceLevelIdName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- FullName
- IsAutoCreate
- IsPrivate
- MasterContactIdName
- MasterContactIdYomiName
- MasterId
- Merged
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_segmentidName
- OnHoldTime
- OriginatingLeadIdName
- OriginatingLeadIdYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam

- OwningUser
- ParentContactId
- ParentContactIdName
- ParentContactIdYomiName
- ParentCustomerIdName
- ParentCustomerIdYomiName
- PreferredEquipmentIdName
- PreferredServiceIdName
- PreferredSystemUserIdName
- PreferredSystemUserIdYomiName
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TimeSpentByMeOnEmailAndMeetings
- TransactionCurrencyIdName
- VersionNumber
- YomiFullName

AccountId

Property	Value
Description	Unique identifier of the account with which the contact is associated.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

Address1_Composite

Property	Value
Description	Shows the complete primary address.

Property	Value
DisplayName	Address 1
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Address2_Composite

Property	Value
Description	Shows the complete secondary address.
DisplayName	Address 2
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Address3_Composite

Property	Value
Description	Shows the complete third address.

Property	Value
DisplayName	Address 3
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address3_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Aging30

Property	Value
Description	For system use only.
DisplayName	Aging 30
IsValidForForm	True
IsValidForRead	True
LogicalName	aging30
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging30_Base

Property	Value

Property	Value
Description	Shows the Aging 30 field converted to the system's default base currency. The calculations use the exchange rate specified in the Currencies area.
DisplayName	Aging 30 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging30_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging60

Property	Value
Description	For system use only.
DisplayName	Aging 60
IsValidForForm	True
IsValidForRead	True
LogicalName	aging60
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging60_Base

Property	Value
Description	Shows the Aging 60 field converted to the system's default base currency. The calculations use the exchange rate specified in the Currencies area.
DisplayName	Aging 60 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging60_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

Aging90

Property	Value
Description	For system use only.
DisplayName	Aging 90
IsValidForForm	True
IsValidForRead	True
LogicalName	aging90
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None

Property	Value
Type	Money

Aging90_Base

Property	Value
Description	Shows the Aging 90 field converted to the system's default base currency. The calculations use the exchange rate specified in the Currencies area.
DisplayName	Aging 90 (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	aging90_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

AnnualIncome_Base

Property	Value
Description	Shows the Annual Income field converted to the system's default base currency. The calculations use the exchange rate specified in the Currencies area.
DisplayName	Annual Income (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	annualincome_base
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreditLimit_Base

Property	Value
Description	Shows the Credit Limit field converted to the system's default base currency for reporting purposes. The calculations use the exchange rate specified in the Currencies area.

Property	Value
DisplayName	Credit Limit (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	creditlimit_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

DefaultPriceLevelIdName

Added by: Product Management Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	defaultpricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	For internal use only.

Property	Value
DisplayName	Entity Image Id
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

FullName

Property	Value
Description	Combines and shows the contact's first and last names so that the full name can be displayed in views and reports.
DisplayName	Full Name

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fullname
MaxLength	160
RequiredLevel	None
Type	String

IsAutoCreate

Property	Value
Description	Information about whether the contact was auto-created when promoting an email or an appointment.
DisplayName	Auto-created
IsValidForForm	False
IsValidForRead	False
LogicalName	isautocreate
RequiredLevel	None
Type	Boolean

IsAutoCreate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsPrivate

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	False
LogicalName	isprivate
RequiredLevel	None
Type	Boolean

IsPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MasterContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	mastercontactidname
MaxLength	100
RequiredLevel	None
Type	String

MasterContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	mastercontactidyominame
MaxLength	100
RequiredLevel	None
Type	String

MasterId

Property	Value
Description	Unique identifier of the master contact for merge.
DisplayName	Master ID
IsValidForForm	False
IsValidForRead	True
LogicalName	masterid
RequiredLevel	None
Targets	contact
Type	Lookup

Merged

Property	Value
Description	Shows whether the account has been merged with a master contact.

Property	Value
DisplayName	Merged
IsValidForForm	False
IsValidForRead	True
LogicalName	merged
RequiredLevel	None
Type	Boolean

Merged Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Property	Value

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was last updated. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

msdyn_segmentidName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_segmentidname
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OriginatingLeadIdName

Added by: Lead Management Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidname
MaxLength	100
RequiredLevel	None
Type	String

OriginatingLeadIdYomiName

Added by: Lead Management Solution

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the contact.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team who owns the contact.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user who owns the contact.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

ParentContactId

Property	Value
Description	Unique identifier of the parent contact.
DisplayName	Parent Contact
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactid
RequiredLevel	None
Targets	contact
Type	Lookup

ParentContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

ParentContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidyominame
MaxLength	100
RequiredLevel	None
Type	String

ParentCustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcustomeridname
MaxLength	160
RequiredLevel	ApplicationRequired

Property	Value
Type	String

ParentCustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcustomeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

PreferredEquipmentIdName

Added by: Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredequipmentidname
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

PreferredServiceIdName

Added by: Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredserviceidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

PreferredSystemUserIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredsystemuseridname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

PreferredSystemUserIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	preferredsystemuseridyominame
MaxLength	100
RequiredLevel	None
Type	String

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla

Property	Value
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

TimeSpentByMeOnEmailAndMeetings

Property	Value
Description	Total time spent for emails (read and write) and meetings by me in relation to the contact record.
DisplayName	Time Spent by me
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	timespentbymeonemailandmeetings
MaxLength	1250
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the contact.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

YomiFullName

Property	Value
Description	Shows the combined Yomi first and last names of the contact so that the full phonetic name can be displayed in views and reports.
DisplayName	Yomi Full Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomifullname
MaxLength	450

Property	Value
RequiredLevel	None
Type	String

One-To-Many Relationships

Listed by **SchemaName**.

- contact_master_contact
- account_primary_contact
- contact_customer_contacts
- lead_customer_contacts
- lead_parent_contact
- contact_BulkOperations
- contact_CampaignResponses
- CreatedContact_BulkOperationLogs
- SourceContact_BulkOperationLogs
- invoice_customer_contacts
- opportunity_customer_contacts
- order_customer_contacts
- quote_customer_contacts
- opportunity_parent_contact
- msdyn_playbookinstance_contact

contact_master_contact

Same as the contact_master_contact many-to-one relationship for the contact table/entity.

Property	Value
ReferencingEntity	contact
ReferencingAttribute	masterid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_master_contact

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

account_primary_contact

Same as the account_primary_contact many-to-one relationship for the account table/entity.

Property	Value
ReferencingEntity	account
ReferencingAttribute	primarycontactid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_primary_contact
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

contact_customer_contacts

Same as the contact_customer_contacts many-to-one relationship for the contact table/entity.

Property	Value
ReferencingEntity	contact
ReferencingAttribute	parentcustomerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_customer_contacts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 40
CascadeConfiguration	Assign: Cascade Delete: RemoveLink Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_customer_contacts

Added by: Lead Management Solution

Same as the lead_customer_contacts many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_customer_contacts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_parent_contact

Added by: Lead Management Solution

Same as the lead_parent_contact many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	parentcontactid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_parent_contact
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

contact_BulkOperations

Added by: Marketing Solution

Same as the contact_BulkOperations many-to-one relationship for the bulkoperation table/entity.

Property	Value

Property	Value
ReferencingEntity	bulkoperation
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_BulkOperations
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

contact_CampaignResponses

Added by: Marketing Solution

Same as the contact_CampaignResponses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_CampaignResponses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

CreatedContact_BulkOperationLogs

Added by: Marketing Solution

Same as the CreatedContact_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	createdobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CreatedContact_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

SourceContact_BulkOperationLogs

Added by: Marketing Solution

Same as the SourceContact_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	SourceContact_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

invoice_customer_contacts

Added by: Sales Solution

Same as the invoice_customer_contacts many-to-one relationship for the invoice table/entity.

Property	Value
ReferencingEntity	invoice
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	invoice_customer_contacts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 40

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_customer_contacts

Added by: Sales Solution

Same as the opportunity_customer_contacts many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_customer_contacts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Sales Label: Order: 10
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

order_customer_contacts

Added by: Sales Solution

Same as the order_customer_contacts many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	order_customer_contacts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 30
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

quote_customer_contacts

Added by: Sales Solution

Same as the quote_customer_contacts many-to-one relationship for the quote table/entity.

Property	Value
ReferencingEntity	quote
ReferencingAttribute	customerid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_customer_contacts
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 20

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_parent_contact

Added by: Sales Solution

Same as the opportunity_parent_contact many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	parentcontactid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_parent_contact
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_playbookinstance_contact

Added by: Playbook Solution

Same as the msdyn_playbookinstance_contact many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_contact
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- contact_master_contact
- contact_customer_accounts
- contact_customer_contacts
- contact_originating_lead
- price_level_contacts

contact_master_contact

See the contact_master_contact one-to-many relationship for the contact table/entity.

contact_customer_accounts

See the contact_customer_accounts one-to-many relationship for the account table/entity.

contact_customer_contacts

See the contact_customer_contacts one-to-many relationship for the contact table/entity.

contact_originating_lead

Added by: Lead Management Solution

See the contact_originating_lead one-to-many relationship for the lead table/entity.

price_level_contacts

Added by: Product Management Solution

See the price_level_contacts one-to-many relationship for the pricelevel table/entity.

Many-To-Many Relationships

Relationship details provided where the Contact table is the first table in the relationship. Listed by **SchemaName**.

- contactleads_association
- listcontact_association
- BulkOperation_Contacts
- CampaignActivity_Contacts
- contactinvoices_association
- contactorders_association
- contactquotes_association

contactleads_association

IntersectEntityName: contactleads

Table 1

Property	Value
IntersectAttribute	contactid
IsCustomizable	False

Property	Value
LogicalName	contact
NavigationPropertyName	contactleads_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	lead
IntersectAttribute	leadid
NavigationPropertyName	contactleads_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

listcontact_association

See the listcontact_association many-to-many relationship for the list table/entity.

BulkOperation_Contacts

See the BulkOperation_Contacts many-to-many relationship for the bulkoperation table/entity.

CampaignActivity_Contacts

See the CampaignActivity_Contacts many-to-many relationship for the campaignactivity table/entity.

contactinvoices_association

See the contactinvoices_association many-to-many relationship for the invoice table/entity.

contactorders_association

See the contactorders_association many-to-many relationship for the salesorder table/entity.

contactquotes_association

See the contactquotes_association many-to-many relationship for the quote table/entity.

See also

About the table reference
Web API Reference

Discount table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Price reduction made from the list price of a product or service based on the quantity purchased.

Added by: Sales Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Discounts
DisplayCollectionName	Discounts
DisplayName	Discount
EntitySetName	discounts

Property	Value
IsBPFEntity	False
LogicalCollectionName	discounts
LogicalName	discount
OwnershipType	None
PrimaryIdAttribute	discountid
PrimaryNameAttribute	name
SchemaName	Discount

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Amount
- DiscountId
- DiscountTypeId
- HighQuantity
- ImportSequenceNumber
- LowQuantity
- Name
- OverriddenCreatedOn
- Percentage
- StatusCode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

Amount

Property	Value
Description	Amount of the discount, specified either as a percentage or as a monetary amount.
DisplayName	Amount
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	amount
MaxValue	1000000000000
MinValue	0
Precision	4
PrecisionSource	2
RequiredLevel	ApplicationRequired
Type	Money

DiscountId

Property	Value
Description	Unique identifier of the discount.
DisplayName	Discount
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	discountid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

DiscountTypeId

Property	Value
Description	Unique identifier of the discount list associated with the discount.
DisplayName	Discount Type
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	discounttypeid
RequiredLevel	SystemRequired
Targets	discounttype
Type	Lookup

HighQuantity

Property	Value
Description	Upper boundary for the quantity range to which a particular discount can be applied.
DisplayName	End Quantity
IsValidForForm	False
IsValidForRead	True
LogicalName	highquantity
MaxValue	100000000000
MinValue	0.00001
Precision	5
RequiredLevel	SystemRequired
Type	Decimal

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

LowQuantity

Property	Value
Description	Lower boundary for the quantity range to which a particular discount is applied.
DisplayName	Begin Quantity
IsValidForForm	False
IsValidForRead	True
LogicalName	lowquantity
MaxValue	100000000000
MinValue	0.00001
Precision	5
RequiredLevel	SystemRequired
Type	Decimal

Name

Property	Value
Description	name
DisplayName	name
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

Percentage

Property	Value
Description	Percentage discount value.
DisplayName	Percentage
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	percentage
MaxValue	1000000000
MinValue	0
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

StatusCode

Property	Value
Description	Select the discount's status.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Amount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn

- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DiscountTypeIdName
- ExchangeRate
- IsAmountType
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- TransactionCurrencyId
- TransactionCurrencyIdName
- VersionNumber

Amount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	amount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Unique identifier of the user who created the discount.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the discount was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the discount.
DisplayName	Created By (Delegate)
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DiscountTypeIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	discounttypeidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

IsAmountType

Property	Value
Description	Specifies whether the discount is specified as a monetary amount or a percentage.
DisplayName	Amount Type
IsValidForForm	False
IsValidForRead	True
LogicalName	isamounttype
RequiredLevel	ApplicationRequired
Type	Boolean

IsAmountType Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the discount.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the discount was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the discount.
DisplayName	Modified By (Delegate)
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier of the organization associated with the discount.
DisplayName	Organization
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency

Property	Value
Type	Lookup

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

discount_type_discounts

See the discount_type_discounts one-to-many relationship for the discounttype table/entity.

See also

About the table reference
Web API Reference

Discount List (DiscountType) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Type of discount specified as either a percentage or an amount.

Added by: Sales Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	DiscountTypes
DisplayCollectionName	Discount Lists

Property	Value
DisplayName	Discount List
EntitySetName	discounttypes
IsBPFEntity	False
LogicalCollectionName	discounttypes
LogicalName	discounttype
OwnershipType	OrganizationOwned
PrimaryIdAttribute	discounttypeid
PrimaryNameAttribute	name
SchemaName	DiscountType

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Description
- DiscountTypeId
- ImportSequenceNumber
- IsAmountType
- Name
- OverriddenCreatedOn
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UTCConversionTimeZoneCode

Description

Property	Value
Description	Description of the discount list.
DisplayName	Description
Format	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DiscountTypeId

Property	Value
Description	Unique identifier of the discount list.
DisplayName	Discount List
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	discounttypeid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsAmountType

Property	Value
Description	Information about whether the discount list amounts are specified as monetary amounts or percentages.
DisplayName	Type
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isamounttype
RequiredLevel	None
Type	Boolean

IsAmountType Choices/Options

Value	Label	Description
1	Amount	
0	Percentage	

DefaultValue: 0

Name

Property	Value
Description	Name of the discount list.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

StateCode

Property	Value

Property	Value
Description	Status of the discount list.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	100001	Active
1	Inactive	100002	Inactive

StatusCode

Property	Value
Description	Reason for the status of the discount list.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State

Value	Label	State
100001	Active	0
100002	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the discount type.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency

Property	Value
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy

- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the discount list.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the discount list was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the discounttype.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the discount list.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the discount list was last modified.
DisplayName	Modified On

Property	Value
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the discounttype.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired

Property	Value
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- discount_type_discounts
- discount_type_product_price_levels

discount_type_discounts

Same as the discount_type_discounts many-to-one relationship for the discount table/entity.

Property	Value
ReferencingEntity	discount
ReferencingAttribute	discounttypeid

Property	Value
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	discount_type_discounts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

discount_type_product_price_levels

Same as the discount_type_product_price_levels many-to-one relationship for the productpricelevel table/entity.

Property	Value
ReferencingEntity	productpricelevel
ReferencingAttribute	discounttypeid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	discount_type_product_price_levels
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

About the table reference
Web API Reference

Property Instance (DynamicPropertyInstance) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Instance of a property with its value.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrieveProductProperties	RetrieveProductPropertiesRequest
Update	UpdateRequest or Update
UpdateProductProperties	UpdateProductPropertiesRequest

Properties

Property	Value

Property	Value
CollectionSchemaName	DynamicPropertyInstances
DisplayCollectionName	Property Instances
DisplayName	Property Instance
EntitySetName	dynamicpropertyinstances
IsBPFEntity	False
LogicalCollectionName	dynamicpropertyinstances
LogicalName	dynamicpropertyinstance
OwnershipType	UserOwned
PrimaryIdAttribute	dynamicpropertyinstanceid
PrimaryNameAttribute	name
SchemaName	DynamicPropertyInstance

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- DMTImportState
- DynamicPropertyId
- DynamicPropertyInstanceid
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- RegardingObjectId
- RegardingObjectIdType
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UTCConversionTimeZoneCode
- validationstatus
- ValueDecimal
- ValueDouble
- ValueInteger

- ValueString

DMTImportState

Property	Value
Description	Internal Use Only
DisplayName	Internal Use Only
Format	None
IsValidForForm	False
IsValidForRead	False
LogicalName	dmtimportstate
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

DynamicPropertyId

Property	Value
Description	Shows the property that this record is associated with.
DisplayName	Property ID
IsValidForForm	False
IsValidForRead	True
LogicalName	dynamicpropertyid
RequiredLevel	SystemRequired
Targets	dynamicproperty
Type	Lookup

DynamicPropertyInstanceid

Property	Value
Description	Shows the unique identifier of the property instance.
DisplayName	Property Instance ID
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	dynamicpropertyinstanceid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	name

Property	Value
DisplayName	name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id

Property	Value
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

RegardingObjectId

Added by: Sales Solution

Property	Value
Description	Shows the object that the property is associated with.
DisplayName	Regarding

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectid
RequiredLevel	None
Targets	invoicedetail,opportunityproduct,quotedetail,salesorderdetail
Type	Lookup

RegardingObjectIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidtype
RequiredLevel	None
Type	EntityName

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber

Property	Value
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Shows the currency associated with the record.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1

Property	Value
RequiredLevel	None
Type	Integer

validationstatus

Property	Value
Description	Shows whether the property value is valid.
DisplayName	Is Valid
IsValidForForm	True
IsValidForRead	True
LogicalName	validationstatus
RequiredLevel	None
Type	Boolean

validationstatus Choices/Options

Value	Label	Description
1	Valid	
0	Invalid	

DefaultValue: 0

ValueDecimal

Property	Value
Description	Shows the decimal value of the property.
DisplayName	Decimal Value
IsValidForForm	False
IsValidForRead	True
LogicalName	valuedecimal

Property	Value
MaxValue	100000000000
MinValue	-100000000000
Precision	2
RequiredLevel	None
Type	Decimal

ValueDouble

Property	Value
Description	Shows the double value of the property.
DisplayName	Double Value
IsValidForForm	False
IsValidForRead	True
LogicalName	valuedouble
MaxValue	100000000000
MinValue	-100000000000
Precision	5
RequiredLevel	None
Type	Double

ValueInteger

Property	Value
Description	Shows the integer value of the property.
DisplayName	Integer Value
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	valueinteger
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ValueString

Property	Value
Description	Shows the string value of the property.
DisplayName	String Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	valuestring
MaxLength	1024
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- DynamicPropertyIdName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- RegardingObjectIdName
- RegardingObjectIdYomiName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DynamicPropertyIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	dynamicpropertyidname
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame

Property	Value
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	
Type	Lookup

RegardingObjectIdName

Added by: Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	4000
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Added by: Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	4000
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- InvoiceDetail_Dynamicpropertyinstance
- OpportunityProduct_Dynamicpropertyinstance
- QuoteDetail_Dynamicpropertyinstance
- SalesOrderDetail_Dynamicpropertyinstance

InvoiceDetail_Dynamicpropertyinstance

Added by: Sales Solution

See the InvoiceDetail_Dynamicpropertyinstance one-to-many relationship for the invoicedetail table/entity.

OpportunityProduct_Dynamicpropertyinstance

Added by: Sales Solution

See the OpportunityProduct_Dynamicpropertyinstance one-to-many relationship for the opportunityproduct table/entity.

QuoteDetail_Dynamicpropertyinstance

Added by: Sales Solution

See the QuoteDetail_Dynamicpropertyinstance one-to-many relationship for the quotedetail table/entity.

SalesOrderDetail_Dynamicpropertyinstance

Added by: Sales Solution

See the SalesOrderDetail_Dynamicpropertyinstance one-to-many relationship for the salesorderdetail table/entity.

See also

About the table reference
Web API Reference

Goal table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Target objective for a user or a team for a specified time period.

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Recalculate	RecalculateRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Goals
DisplayCollectionName	Goals
DisplayName	Goal
EntitySetName	goals
IsBPFEntity	False
LogicalCollectionName	goals
LogicalName	goal
OwnershipType	UserOwned
PrimaryIdAttribute	goalid
PrimaryNameAttribute	title
SchemaName	Goal

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActualDecimal
- ActualInteger
- ActualMoney
- AmountDataType
- ConsiderOnlyGoalOwnersRecords
- CustomRollupFieldDecimal
- CustomRollupFieldInteger
- CustomRollupFieldMoney
- EntityImage
- FiscalPeriod
- FiscalYear
- GoalEndDate
- GoalId
- GoalOwnerId
- GoalOwnerIdType

- GoalStartDate
- GoalWithErrorId
- ImportSequenceNumber
- InProgressDecimal
- InProgressInteger
- InProgressMoney
- IsAmount
- IsFiscalPeriodGoal
- IsOverridden
- IsOverride
- LastRolledupDate
- MetricId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- ParentGoalId
- Percentage
- RollupErrorCode
- RollupOnlyFromChildGoals
- RollUpQueryActualDecimalId
- RollupQueryActualIntegerId
- RollUpQueryActualMoneyId
- RollUpQueryCustomDecimalId
- RollUpQueryCustomIntegerId
- RollUpQueryCustomMoneyId
- RollUpQueryInprogressDecimalId
- RollUpQueryInprogressIntegerId
- RollUpQueryInprogressMoneyId
- StateCode
- StatusCode
- StretchTargetDecimal
- StretchTargetInteger
- StretchTargetMoney
- TargetDecimal
- TargetInteger
- TargetMoney
- TimeZoneRuleVersionNumber
- Title
- UTCConversionTimeZoneCode

ActualDecimal

Property	Value
Description	Shows the actual value (Decimal type) achieved towards the target as of the last rolled-up date. This field appears when the metric type of the goal is Amount and the amount data type is Decimal.
DisplayName	Actual (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	actualdecimal
MaxValue	100000000000
MinValue	-100000000000
Precision	10
RequiredLevel	None
Type	Decimal

ActualInteger

Property	Value
Description	Shows the actual value (integer) achieved towards the target as of the last rolled-up date. This field appears when the metric type of the goal is Amount or Count and the amount data type is Integer.
DisplayName	Actual (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	actualinteger
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ActualMoney

Property	Value
Description	Shows the actual value (Money type) achieved towards the target as of the last rolled-up date. This field appears when the metric type of the goal is Amount and the amount data type is Money.
DisplayName	Actual (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	actualmoney
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

AmountDataType

Property	Value
Description	Data type of the amount.
DisplayName	Amount Data Type
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	amountdatatype
RequiredLevel	None
Type	Picklist

AmountDataType Choices/Options

Value	Label	Description
0	Money	
1	Decimal	
2	Integer	

ConsiderOnlyGoalOwnersRecords

Property	Value
Description	Select whether only the goal owner's records, or all records, should be rolled up for goal results.
DisplayName	Record Set for Rollup
IsValidForForm	True
IsValidForRead	True
LogicalName	consideronlygoalownersrecords
RequiredLevel	SystemRequired
Type	Boolean

ConsiderOnlyGoalOwnersRecords Choices/Options

Value	Label	Description
1	Owned by goal owner	
0	All	

DefaultValue: 1

CustomRollupFieldDecimal

Property	Value
Description	Indicates a placeholder rollup field for a decimal value to track a third category of results other than actuals and in-progress results.

Property	Value
DisplayName	Custom Rollup Field (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	customrollupfielddecimal
MaxValue	100000000000
MinValue	-100000000000
Precision	10
RequiredLevel	None
Type	Decimal

CustomRollupFieldInteger

Property	Value
Description	Indicates a placeholder rollup field for an integer value to track a third category of results other than actuals and in-progress results.
DisplayName	Custom Rollup Field (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	customrollupfieldinteger
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

CustomRollupFieldMoney

Property	Value

Property	Value
Description	Indicates a placeholder rollup field for a money value to track a third category of results other than actuals and in-progress results.
DisplayName	Custom Rollup Field (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	customrollupfieldmoney
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

EntityImage

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

FiscalPeriod

Property	Value
Description	Select the fiscal period for the goal.
DisplayName	Fiscal Period
IsValidForForm	True
IsValidForRead	True
LogicalName	fiscalperiod
RequiredLevel	None
Type	Picklist

FiscalPeriod Choices/Options

Value	Label	Description
1	Quarter 1	
2	Quarter 2	
3	Quarter 3	
4	Quarter 4	
101	January	
102	February	
103	March	
104	April	
105	May	
106	June	
107	July	
108	August	
109	September	
110	October	
111	November	
112	December	

Value	Label	Description
201	Semester 1	
202	Semester 2	
301	Annual	
401	P1	
402	P2	
403	P3	
404	P4	
405	P5	
406	P6	
407	P7	
408	P8	
409	P9	
410	P10	
411	P11	
412	P12	
413	P13	

FiscalYear

Property	Value
Description	Select the fiscal year for the goal that's being tracked.
DisplayName	Fiscal Year
IsValidForForm	True
IsValidForRead	True
LogicalName	fiscalyear
RequiredLevel	None
Type	Picklist

FiscalYear Choices/Options

Value	Label	Description
1970	FY1970	
1971	FY1971	
1972	FY1972	
1973	FY1973	
1974	FY1974	
1975	FY1975	
1976	FY1976	
1977	FY1977	
1978	FY1978	
1979	FY1979	
1980	FY1980	
1981	FY1981	
1982	FY1982	
1983	FY1983	
1984	FY1984	
1985	FY1985	
1986	FY1986	
1987	FY1987	
1988	FY1988	
1989	FY1989	
1990	FY1990	
1991	FY1991	
1992	FY1992	
1993	FY1993	
1994	FY1994	

Value	Label	Description
1995	FY1995	
1996	FY1996	
1997	FY1997	
1998	FY1998	
1999	FY1999	
2000	FY2000	
2001	FY2001	
2002	FY2002	
2003	FY2003	
2004	FY2004	
2005	FY2005	
2006	FY2006	
2007	FY2007	
2008	FY2008	
2009	FY2009	
2010	FY2010	
2011	FY2011	
2012	FY2012	
2013	FY2013	
2014	FY2014	
2015	FY2015	
2016	FY2016	
2017	FY2017	
2018	FY2018	
2019	FY2019	
2020	FY2020	

Value	Label	Description
2021	FY2021	
2022	FY2022	
2023	FY2023	
2024	FY2024	
2025	FY2025	
2026	FY2026	
2027	FY2027	
2028	FY2028	
2029	FY2029	
2030	FY2030	
2031	FY2031	
2032	FY2032	
2033	FY2033	
2034	FY2034	
2035	FY2035	
2036	FY2036	
2037	FY2037	
2038	FY2038	

GoalEndDate

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the goal ends.
DisplayName	To
Format	DateOnly
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	goalenddate
RequiredLevel	None
Type	DateTime

GoalId

Property	Value
Description	Unique identifier of the goal.
DisplayName	Goal
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	goalid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

GoalOwnerId

Property	Value
Description	Choose the user or team responsible for meeting the goal.
DisplayName	Goal Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	goalownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team
Type	Lookup

GoalOwnerIdType

Property	Value
Description	
DisplayName	Goal Owner Type
IsValidForForm	False
IsValidForRead	True
LogicalName	goalowneridtype
RequiredLevel	ApplicationRequired
Type	EntityName

GoalStartDate

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time when the period for tracking the goal begins.
DisplayName	From
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	goalstartdate
RequiredLevel	None
Type	DateTime

GoalWithErrorId

Property	Value
Description	Unique identifier of the goal that caused an error in the rollup of the goal hierarchy.
DisplayName	Goal With Error

Property	Value
IsValidForCreate	False
IsValidForForm	False
IsValidForRead	True
LogicalName	goalwitherrorid
RequiredLevel	None
Targets	goal
Type	Lookup

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

InProgressDecimal

Property	Value
Description	Shows the in-progress value (decimal) against the target. This value could contribute to a goal, but is not counted yet as actual.

Property	Value
DisplayName	In-progress (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	inprogressdecimal
MaxValue	100000000000
MinValue	-100000000000
Precision	10
RequiredLevel	None
Type	Decimal

InProgressInteger

Property	Value
Description	Shows the in-progress value (integer) against the target. This value could contribute to a goal, but is not counted yet as actual.
DisplayName	In-progress (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	inprogressinteger
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

InProgressMoney

Property	Value

Property	Value
Description	Shows the in-progress value (money) against the target. This value could contribute to a goal, but is not counted yet as actual.
DisplayName	In-progress (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	inprogressmoney
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

IsAmount

Property	Value
Description	Indicates whether the metric type is Count or Amount.
DisplayName	Metric Type
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isamount
RequiredLevel	ApplicationRequired
Type	Boolean

IsAmount Choices/Options

Value	Label	Description

Value	Label	Description
1	Amount	
0	Count	

DefaultValue: 1

IsFiscalPeriodGoal

Property	Value
Description	Select whether the goal period is a fiscal period or custom period.
DisplayName	Goal Period Type
IsValidForForm	True
IsValidForRead	True
LogicalName	isfiscalperiodgoal
RequiredLevel	None
Type	Boolean

IsFiscalPeriodGoal Choices/Options

Value	Label	Description
1	Fiscal Period	
0	Custom Period	

DefaultValue: 1

IsOverridden

Property	Value
Description	Select whether the system rollup fields are updated. If set to Yes, the next system rollup will not update the values of the rollup fields with the system calculated values.
DisplayName	Overridden
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	isoverridden
RequiredLevel	None
Type	Boolean

IsOverridden Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsOverride

Property	Value
Description	Indicates whether the values of system rollup fields can be updated.
DisplayName	Override
IsValidForForm	False
IsValidForRead	True
LogicalName	isoverride
RequiredLevel	None
Type	Boolean

IsOverride Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastRolledupDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the goal was last rolled up. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Last Rolled Up Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastrolledupdate
RequiredLevel	None
Type	DateTime

MetricId

Property	Value
Description	Choose the metric for the goal. This metric determines how the goal is tracked.
DisplayName	Goal Metric
IsValidForForm	True
IsValidForRead	True
LogicalName	metricid
RequiredLevel	ApplicationRequired
Targets	metric
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Enter the user or team who is assigned to manage the record. This field is updated every time the record is assigned to a different user.
DisplayName	Manager
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser
Type	Owner

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

ParentGoalId

Property	Value
Description	Choose a parent goal if the current goal is a child goal. This sets up a parent-child relationship for reporting and analytics.
DisplayName	Parent Goal
IsValidForForm	True
IsValidForRead	True
LogicalName	parentgoalid
RequiredLevel	None
Targets	goal
Type	Lookup

Percentage

Property	Value
Description	Shows the percentage achieved against the target goal.
DisplayName	Percentage Achieved
IsValidForForm	True
IsValidForRead	True
LogicalName	percentage
MaxValue	100000000000

Property	Value
MinValue	-100000000000
Precision	0
RequiredLevel	None
Type	Decimal

RollupErrorCode

Property	Value
Description	Error code associated with rollup.
DisplayName	Rollup Error Code
Format	None
IsValidForCreate	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rolluperrorcode
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

RollupOnlyFromChildGoals

Property	Value
Description	Select whether the data should be rolled up only from the child goals.
DisplayName	Roll Up Only from Child Goals
IsValidForForm	True
IsValidForRead	True
LogicalName	rolluponlyfromchildgoals

Property	Value
RequiredLevel	SystemRequired
Type	Boolean

RollupOnlyFromChildGoals Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

RollUpQueryActualDecimalId

Property	Value
Description	Choose the query that will be used to calculate the actual data for the goal (decimal).
DisplayName	Rollup Query - Actual(Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupqueryactualdecimalid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollupQueryActualIntegerId

Property	Value
Description	Choose the query that will be used to calculate the actual data for the goal (integer).
DisplayName	Rollup Query - Actual(Integer)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	rollupqueryactualintegerid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryActualMoneyId

Property	Value
Description	Choose the query that will be used to calculate the actual data for the goal (money).
DisplayName	Rollup Query - Actual(Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupqueryactualmoneyid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryCustomDecimalId

Property	Value
Description	Choose the query that will be used to calculate data for the custom rollup field (decimal).
DisplayName	Rollup Query - Custom Rollup Field (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupquerycustomdecimalid
RequiredLevel	None

Property	Value
Targets	goalrollupquery
Type	Lookup

RollUpQueryCustomIntegerId

Property	Value
Description	Choose the query that will be used to calculate data for the custom rollup field (integer).
DisplayName	Rollup Query - Custom Rollup Field (Integer)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupquerycustomintegerid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryCustomMoneyId

Property	Value
Description	Choose the query that will be used to calculate data for the custom rollup field (money).
DisplayName	Rollup Query - Custom Rollup Field (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupquerycustommoneyid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryInprogressDecimalId

Property	Value
Description	Choose the query that will be used to calculate data for the in-progress rollup field (decimal).
DisplayName	Rollup Query - In-progress(Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupqueryinprogressdecimalid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryInprogressIntegerId

Property	Value
Description	Choose the query that will be used to calculate data for the in-progress rollup field (integer).
DisplayName	Rollup Query - In-progress(Integer)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupqueryinprogressintegerid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

RollUpQueryInprogressMoneyId

Property	Value
Description	Choose the query that will be used to calculate data for the in-progress rollup field (money).

Property	Value
DisplayName	Rollup Query - In-progress(Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	rollupqueryinprogressmoneyid
RequiredLevel	None
Targets	goalrollupquery
Type	Lookup

StateCode

Property	Value
Description	Shows whether the goal is open, completed, or canceled. Completed and canceled goals are read-only and can't be edited.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	0	Active
1	Inactive	1	Inactive

StatusCode

Property	Value
Description	Select the goal's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Open	0
1	Closed	1
2	Discarded	1

StretchTargetDecimal

Property	Value
Description	Select a stretch target (decimal) of the goal to define a higher or difficult level of goal than the usual ones.
DisplayName	Stretch Target (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	stretchtargetdecimal
MaxValue	100000000000
MinValue	0
Precision	2
RequiredLevel	None

Property	Value
Type	Decimal

StretchTargetInteger

Property	Value
Description	Select the stretch target (integer) of the goal to define a higher or difficult level of goal than the usual ones.
DisplayName	Stretch Target (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	stretchtargetinteger
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

StretchTargetMoney

Property	Value
Description	Select stretch target (money) of the goal to define a higher or difficult level of goal than the usual ones.
DisplayName	Stretch Target (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	stretchtargetmoney
MaxValue	922337203685477
MinValue	0
Precision	4

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

TargetDecimal

Property	Value
Description	Select a goal target of the decimal type to use for tracking data that include partial numbers, such as pounds sold of a product sold by weight.
DisplayName	Target (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	targetdecimal
MaxValue	100000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

TargetInteger

Property	Value
Description	Select a goal target of the integer type to use for tracking anything countable in whole numbers, such as units sold.
DisplayName	Target (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	targetinteger

Property	Value
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

TargetMoney

Property	Value
Description	Select a goal target (money) to track a monetary amount such as revenue from a product.
DisplayName	Target (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	targetmoney
MaxValue	922337203685477
MinValue	0
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Title

Property	Value
Description	Type a title or name that describes the goal.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	title
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActualMoney_Base
- ActualString
- ComputedTargetAsOfTodayDecimal
- ComputedTargetAsOfTodayInteger
- ComputedTargetAsOfTodayMoney
- ComputedTargetAsOfTodayMoney_Base
- ComputedTargetAsOfTodayPercentageAchieved
- CreatedBy
- CreatedByName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomRollupFieldMoney_Base
- CustomRollupFieldString
- Depth
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- GoalOwnerIdName
- GoalOwnerIdYomiName
- GoalWithErrorIdName
- InProgressMoney_Base

- InProgressString
- MetricIdName
- ModifiedBy
- ModifiedByName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- ParentGoalIdName
- RollUpQueryActualDecimalIdName
- RollupQueryActualIntegerIdName
- RollUpQueryActualMoneyIdName
- RollUpQueryCustomDecimalIdName
- RollUpQueryCustomIntegerIdName
- RollUpQueryCustomMoneyIdName
- RollUpQueryInprogressDecimalIdName
- RollUpQueryInprogressIntegerIdName
- RollUpQueryInprogressMoneyIdName
- StretchTargetMoney_Base
- StretchTargetString
- TargetMoney_Base
- TargetString
- TransactionCurrencyId
- TransactionCurrencyIdName
- TreeId
- VersionNumber

ActualMoney_Base

Property	Value
Description	Shows the actual value (money type) in base currency to track goal results against the target.
DisplayName	Actual (Money) (Base)

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	actualmoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ActualString

Property	Value
Description	Actual Value of the goal.
DisplayName	Actual
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	actualstring
MaxLength	100
RequiredLevel	None
Type	String

ComputedTargetAsOfTodayDecimal

Property	Value

Property	Value
Description	Shows the expected amount for actual value (decimal type) against the target goal.
DisplayName	Today's Target (Decimal)
IsValidForForm	True
IsValidForRead	True
LogicalName	computedtargetasoftodaydecimal
MaxValue	100000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

ComputedTargetAsOfTodayInteger

Property	Value
Description	Shows the expected amount for actual value (integer type) against the target goal as of the current date.
DisplayName	Today's Target (Integer)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	computedtargetasoftodayinteger
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ComputedTargetAsOfTodayMoney

Property	Value
Description	Shows the expected amount for actual value (money type) against the target goal as of the current date.
DisplayName	Today's Target (Money)
IsValidForForm	True
IsValidForRead	True
LogicalName	computedtargetasoftodaymoney
MaxValue	922337203685477
MinValue	0
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ComputedTargetAsOfTodayMoney_Base

Property	Value
Description	Shows the expected amount in base currency for actual value (money type) against the target goal as of the current date.
DisplayName	Today's Target (Money) (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	computedtargetasoftodaymoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ComputedTargetAsOfTodayPercentageAchieved

Property	Value
Description	Shows the expected value for percentage achieved against the target goal as of the current date.
DisplayName	Today's Target (Percentage Achieved)
IsValidForForm	True
IsValidForRead	True
LogicalName	computedtargetasoftodaypercentageachieved
MaxValue	100000000000
MinValue	0
Precision	0
RequiredLevel	None
Type	Decimal

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomRollupFieldMoney_Base

Property	Value
Description	Indicates a placeholder rollup field for a money value in base currency to track a third category of results other than actuals and in-progress results.
DisplayName	Custom Rollup Field (Money) (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	customrollupfieldmoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CustomRollupFieldString

Property	Value

Property	Value
Description	Placeholder rollup field for the goal.
DisplayName	Custom Rollup Field
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customrollupfieldstring
MaxLength	100
RequiredLevel	None
Type	String

Depth

Property	Value
Description	Depth of the goal in the tree.
DisplayName	Depth
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	depth
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

EntityImage_Timestamp

Property	Value

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	For internal use only.

Property	Value
DisplayName	Entity Image Id
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

GoalOwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	goalowneridname
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

GoalOwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	goalowneridyominame
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

GoalWithErrorIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	goalwitherroridname
MaxLength	100
RequiredLevel	None
Type	String

InProgressMoney_Base

Property	Value
Description	Shows the in-progress value (money) in base currency to track goal results against the target.
DisplayName	In-progress (Money) (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	inprogressmoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

InProgressString

Property	Value
Description	In-progress value of the goal.

Property	Value
DisplayName	In-Progress
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	inprogressstring
MaxLength	100
RequiredLevel	None
Type	String

MetricIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	metricidname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Shows who last updated the record.

Property	Value
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was last updated. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.

Property	Value
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the manager
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit

Property	Value
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team who owns the goal.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team

Property	Value
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user who owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

ParentGoalIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentgoalidname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryActualDecimalIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryactualdecimalidname
MaxLength	100
RequiredLevel	None
Type	String

RollupQueryActualIntegerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryactualintegeridname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryActualMoneyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryactualmoneyidname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryCustomDecimalIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupquerycustomdecimalidname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryCustomIntegerIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupquerycustomintegeridname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryCustomMoneyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupquerycustommoneyidname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryInprogressDecimalIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryinprogressdecimalidname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryInprogressIntegerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryinprogressintegeridname
MaxLength	100
RequiredLevel	None
Type	String

RollUpQueryInprogressMoneyIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	rollupqueryinprogressmoneyidname
MaxLength	100
RequiredLevel	None
Type	String

StretchTargetMoney_Base

Property	Value
Description	Shows the stretch target (money) in base currency to indicate a higher or difficult level of goal than the usual ones.
DisplayName	Stretch Target (Money) (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	stretchtargetmoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

StretchTargetString

Property	Value
Description	Stretch target value for all data types.
DisplayName	Stretched Target
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	stretchtargetstring
MaxLength	100
RequiredLevel	None
Type	String

TargetMoney_Base

Property	Value
Description	Shows the goal target of the money type in base currency.
DisplayName	Target (Money) (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	targetmoney_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TargetString

Property	Value
Description	Target value of the goal.
DisplayName	Target
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	targetstring
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TransactionCurrencyIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

TreeId

Property	Value
Description	Unique identifier of the goal tree.
DisplayName	Tree ID
IsValidForForm	False
IsValidForRead	True
LogicalName	treeid
RequiredLevel	None
Type	Uniqueidentifier

VersionNumber

Property	Value
Description	Version number of the goal.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- goal_parent_goal
- Goal_RollupError_Goal
- msdyn_goal_msdyn_forecastinstance

goal_parent_goal

Same as the goal_parent_goal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	parentgoalid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	goal_parent_goal
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 140
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Goal_RollupError_Goal

Same as the Goal_RollupError_Goal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	goalwitherrorid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Goal_RollupError_Goal
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_goal_msdyn_forecastinstance

Added by: Forecasting Solution

Same as the msdyn_goal_msdyn_forecastinstance many-to-one relationship for the msdyn_forecastinstance table/entity.

Property	Value
ReferencingEntity	msdyn_forecastinstance
ReferencingAttribute	msdyn_matchinggoalid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_goal_msdyn_forecastinstance

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- goalrollupquery_actualint
- goal_rollupquery_actualmoney
- goal_rollupquery_actualdecimal
- goal_rollupquery_customint
- goal_rollupquery_custommoney
- goal_rollupquery_customdecimal
- goal_rollupquery_inprogressint
- goal_rollupquery_inprogressmoney
- goal_rollupquery_inprogressdecimal
- goal_parent_goal
- metric_goal
- Goal_RollupError_Goal

goalrollupquery_actualint

See the goalrollupquery_actualint one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_actualmoney

See the goal_rollupquery_actualmoney one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_actualdecimal

See the goal_rollupquery_actualdecimal one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_customint

See the goal_rollupquery_customint one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_custommoney

See the goal_rollupquery_custommoney one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_customdecimal

See the goal_rollupquery_customdecimal one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_inprogressint

See the goal_rollupquery_inprogressint one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_inprogressmoney

See the goal_rollupquery_inprogressmoney one-to-many relationship for the goalrollupquery table/entity.

goal_rollupquery_inprogressdecimal

See the goal_rollupquery_inprogressdecimal one-to-many relationship for the goalrollupquery table/entity.

goal_parent_goal

See the goal_parent_goal one-to-many relationship for the goal table/entity.

metric_goal

See the metric_goal one-to-many relationship for the metric table/entity.

Goal_RollupError_Goal

See the Goal_RollupError_Goal one-to-many relationship for the goal table/entity.

See also

About the table reference
Web API Reference

Rollup Query (GoalRollupQuery) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Query that is used to filter the results of the goal rollup.

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	goalrollupqueries
DisplayCollectionName	Rollup Queries
DisplayName	Rollup Query
EntitySetName	goalrollupqueries
IsBPFEntity	False
LogicalCollectionName	goalrollupqueries
LogicalName	goalrollupquery
OwnershipType	UserOwned
PrimaryIdAttribute	goalrollupqueryid
PrimaryNameAttribute	name
SchemaName	GoalRollupQuery

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- FetchXml
- GoalRollupQueryId
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- QueryEntityType
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

FetchXml

Property	Value
Description	String that specifies the condition criteria in FetchXML.
DisplayName	Condition Criteria
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	fetchxml
MaxLength	1073741823
RequiredLevel	ApplicationRequired
Type	String

GoalRollupQueryId

Property	Value
Description	Unique identifier of the rollup query.
DisplayName	Goal Rollup Query
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	goalrollupqueryid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	Type a descriptive name for the goal rollup query.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Enter the user or team who is assigned to manage the record. This field is updated every time the record is assigned to a different user.
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

QueryEntityType

Property	Value
Description	Enter the record type of the rollup query.
DisplayName	Entity Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	queryentitytype
RequiredLevel	ApplicationRequired
Type	EntityName

StateCode

Property	Value
Description	Shows whether the goal rollup query is active or inactive.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	0	Active
1	Inactive	1	Inactive

StatusCode

Property	Value
Description	Select the goal rollup query's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Open	0
1	Closed	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName

- ModifiedBy
- ModifiedByName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- VersionNumber

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was last updated. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value

Property	Value
Description	Unique identifier of the business unit that owns the record.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team who owns the record.
DisplayName	Owning Team

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user who owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	
Type	Lookup

VersionNumber

Property	Value
Description	Version number of the goal rollup query.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807

Property	Value
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- goalrollupquery_actualint
- goal_rollupquery_actualmoney
- goal_rollupquery_actualdecimal
- goal_rollupquery_customint
- goal_rollupquery_custommoney
- goal_rollupquery_customdecimal
- goal_rollupquery_inprogressint
- goal_rollupquery_inprogressmoney
- goal_rollupquery_inprogressdecimal
- msdyn_goalrollupquery_msdyn_forecastdefinition_rollupquery

goalrollupquery_actualint

Same as the goalrollupquery_actualint many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupqueryactualintegerid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goalrollupquery_actualint
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_actualmoney

Same as the goal_rollupquery_actualmoney many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupqueryactualmoneyid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_actualmoney
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_actualdecimal

Same as the goal_rollupquery_actualdecimal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal

Property	Value
ReferencingAttribute	rollupqueryactualdecimalid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_actualdecimal
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_customint

Same as the goal_rollupquery_customint many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupquerycustomintegerid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_customint
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_custommoney

Same as the goal_rollupquery_custommoney many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupquerycustommoneyid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_custommoney
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_customdecimal

Same as the goal_rollupquery_customdecimal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupquerycustomdecimalid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_customdecimal

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_inprogressint

Same as the goal_rollupquery_inprogressint many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupqueryinprogressintegerid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_inprogressint
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_inprogressmoney

Same as the goal_rollupquery_inprogressmoney many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupqueryinprogressmoneyid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_inprogressmoney
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

goal_rollupquery_inprogressdecimal

Same as the goal_rollupquery_inprogressdecimal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	rollupqueryinprogressdecimalid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	goal_rollupquery_inprogressdecimal
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_goalrollupquery_msdyn_forecastdefinition_rollupquery

Added by: Forecasting Solution

Same as the msdyn_goalrollupquery_msdyn_forecastdefinition_rollupquery many-to-one relationship for the msdyn_forecastdefinition table/entity.

Property	Value
ReferencingEntity	msdyn_forecastdefinition
ReferencingAttribute	msdyn_rollupquery
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_goalrollupquery_msdyn_forecastdefinition_rollupquery
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

About the table reference
Web API Reference

Invoice table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Order that has been billed.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
GenerateInvoiceFromOpportunity	GenerateInvoiceFromOpportunityRequest
GetQuantityDecimal	GetQuantityDecimalRequest
GrantAccess	GrantAccessRequest
LockInvoicePricing	LockInvoicePricingRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve

Message	SDK Assembly
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Invoices
DisplayCollectionName	Invoices
DisplayName	Invoice
EntitySetName	invoices
IsBPFEntity	False
LogicalCollectionName	invoices
LogicalName	invoice
OwnershipType	UserOwned
PrimaryIdAttribute	invoiceid
PrimaryNameAttribute	name
SchemaName	Invoice

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BillTo_City
- BillTo_Country
- BillTo_Fax
- BillTo_Line1
- BillTo_Line2
- BillTo_Line3
- BillTo_Name
- BillTo_PostalCode
- BillTo_StateOrProvince
- BillTo_Telephone
- CustomerId
- CustomerIdType
- DateDelivered
- Description
- DiscountAmount
- DiscountPercentage
- DueDate
- EmailAddress
- EntityImage
- FreightAmount
- ImportSequenceNumber
- InvoiceId
- InvoiceNumber
- IsPriceLocked
- LastBackofficeSubmit
- LastOnHoldTime
- Name
- OpportunityId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- PaymentTermsCode
- PriceLevelId
- PricingErrorCode
- PriorityCode
- ProcessId
- SalesOrderId
- ShippingMethodCode
- ShipTo_City
- ShipTo_Country

- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- SLAId
- StageId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TotalAmount
- TotalAmountLessFreight
- TotalDiscountAmount
- TotalLineItemAmount
- TotalLineItemDiscountAmount
- TotalTax
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WillCall

BillTo_City

Property	Value
Description	Type the city for the customer's billing address.
DisplayName	Bill To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_city

Property	Value
MaxLength	80
RequiredLevel	None
Type	String

BillTo_Country

Property	Value
Description	Type the country or region for the customer's billing address.
DisplayName	Bill To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_country
MaxLength	80
RequiredLevel	None
Type	String

BillTo_Fax

Property	Value
Description	Type the fax number for the customer's billing address.
DisplayName	Bill To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_fax

Property	Value
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Line1

Property	Value
Description	Type the first line of the customer's billing address.
DisplayName	Bill To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line1
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Line2

Property	Value
Description	Type the second line of the customer's billing address.
DisplayName	Bill To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line2

Property	Value
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Line3

Property	Value
Description	Type the third line of the billing address.
DisplayName	Bill To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line3
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Name

Property	Value
Description	Type a name for the customer's billing address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Bill To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	billto_name
MaxLength	200
RequiredLevel	None
Type	String

BillTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the billing address.
DisplayName	Bill To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

BillTo_StateOrProvince

Property	Value
Description	Type the state or province for the billing address.
DisplayName	Bill To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	billto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Telephone

Property	Value
Description	Type the phone number for the customer's billing address.
DisplayName	Bill To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_telephone
MaxLength	50
RequiredLevel	None
Type	String

CustomerId

Property	Value
Description	Select the customer account or contact to provide a quick link to additional customer details, such as account information, activities, and opportunities.
DisplayName	Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	customerid

Property	Value
RequiredLevel	ApplicationRequired
Targets	account,contact
Type	Customer

CustomerIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	Customer Type
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridtype
RequiredLevel	ApplicationRequired
Type	EntityName

DateDelivered

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the products included in the invoice were delivered.
DisplayName	Date Delivered
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	datedelivered
RequiredLevel	None
Type	DateTime

Description

Property	Value
Description	Type additional information to describe the invoice, such as shipping details or product substitutions.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DiscountAmount

Property	Value
Description	Type the discount amount for the invoice if the customer is eligible for special savings.
DisplayName	Invoice Discount Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

DiscountPercentage

Property	Value
Description	Type the discount rate that should be applied to the Detail Amount field, for use in calculating the Pre-Freight Amount and Total Amount values for the invoice.
DisplayName	Invoice Discount (%)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountpercentage
MaxValue	100
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

DueDate

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the date by which the invoice should be paid by the customer.
DisplayName	Due Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	duedate
RequiredLevel	None
Type	DateTime

EmailAddress

Property	Value
Description	The primary email address for the entity.
DisplayName	Email Address
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

EntityImage

Added by: Active Solution Solution

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

FreightAmount

Property	Value
Description	Type the cost of freight or shipping for the products included in the invoice for use in calculating the total amount due.
DisplayName	Freight Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

InvoiceId

Property	Value
Description	Unique identifier of the invoice.
DisplayName	Invoice
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	invoiceid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

InvoiceNumber

Property	Value
Description	Shows the identifying number or code of the invoice.
DisplayName	Invoice ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	invoicenumber
MaxLength	100
RequiredLevel	SystemRequired
Type	String

IsPriceLocked

Property	Value

Property	Value
Description	Select whether prices specified on the invoice are locked from any further updates.
DisplayName	Prices Locked
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	ispricelocked
RequiredLevel	ApplicationRequired
Type	Boolean

IsPriceLocked Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastBackofficeSubmit

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time when the invoice was last submitted to an accounting or ERP system for processing.
DisplayName	Last Submitted to Back Office
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	lastbackofficesubmit
RequiredLevel	None

Property	Value
Type	DateTime

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

Name

Property	Value
Description	Type a descriptive name for the invoice.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	300
RequiredLevel	ApplicationRequired
Type	String

OpportunityId

Property	Value
Description	Choose the opportunity that the invoice is related to for reporting and analytics.
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id

Property	Value
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

PaymentTermsCode

Property	Value
Description	Select the payment terms to indicate when the customer needs to pay the total amount.
DisplayName	Payment Terms
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	paymenttermscode
RequiredLevel	None
Type	Picklist

PaymentTermsCode Choices/Options

Value	Label	Description
1	Net 30	
2	2% 10, Net 30	
3	Net 45	
4	Net 60	

PriceLevelId

Property	Value
Description	Choose the price list associated with this record to make sure the products associated with the campaign are offered at the correct prices.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	pricelevelid
RequiredLevel	ApplicationRequired
Targets	pricelevel
Type	Lookup

PricingErrorCode

Property	Value
Description	Type of pricing error for the invoice.

Property	Value
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	

Value	Label	Description
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

PriorityCode

Property	Value

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
1	Default Value	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

SalesOrderId

Property	Value
Description	Choose the order related to the invoice to make sure the order is fulfilled and invoiced correctly.

Property	Value
DisplayName	Order
IsValidForForm	True
IsValidForRead	True
LogicalName	salesorderid
RequiredLevel	None
Targets	salesorder
Type	Lookup

ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Airborne	
2	DHL	
3	FedEx	
4	UPS	
5	Postal Mail	
6	Full Load	

Value	Label	Description
7	Will Call	

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80
RequiredLevel	None

Property	Value
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Ship To Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2
MaxLength	250
RequiredLevel	None

Property	Value
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_name
MaxLength	200

Property	Value
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_stateorprovince
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip Price Calculation (For Internal Use)
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnRetrieve	

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the invoice record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the invoice is active, paid, or canceled. Paid and canceled invoices are read-only and can't be edited unless they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Closed (deprecated)	100003	Closed
2	Paid	100001	Paid
3	Canceled	100003	Canceled

StatusCode

Property	Value
Description	Select the invoice's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	New	0
2	Partially Shipped	0
3	Canceled (deprecated)	1
4	Billed	0
5	Booked (applies to services)	0
6	Installed (applies to services)	0
7	Paid in Full (deprecated)	1
100001	Complete	2
100002	Partial	2
100003	Canceled	3

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TotalAmount

Property	Value
Description	Shows the total amount due, calculated as the sum of the products, discount, freight, and taxes for the invoice.
DisplayName	Total Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight

Property	Value
Description	Shows the total product amount due, minus any discounts. This value is added to freight and tax amounts in the calculation for the total amount due for the invoice.
DisplayName	Total Pre-Freight Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount

Property	Value
Description	Shows the total discount amount, based on the discount price and rate entered on the invoice.
DisplayName	Total Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount

Property	Value
Description	Shows the sum of all existing and write-in products included on the invoice, based on the specified price list and quantities.
DisplayName	Total Detail Amount
IsValidForCreate	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	totallineitemamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount

Property	Value
Description	Shows the Manual Discount amounts specified on all products included in the invoice. This value is reflected in the Detail Amount field on the invoice and is added to any discount amount or rate specified on the invoice.
DisplayName	Total Line Item Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax

Property	Value
Description	Shows the total of the Tax amounts specified on all products included in the invoice, included in the Total Amount due calculation for the invoice.
DisplayName	Total Tax
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WillCall

Property	Value
Description	Select whether the products included in the invoice should be shipped to the specified address or held until the customer calls with further pick up or delivery instructions.
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- BillTo_Composite
- ContactId
- ContactIdName
- ContactIdYomiName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy

- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomerIdName
- CustomerIdYomiName
- DiscountAmount_Base
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- FreightAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OpportunityIdName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PriceLevelIdName
- SalesOrderIdName
- ShipTo_Composite
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TotalAmount_Base
- TotalAmountLessFreight_Base
- TotalDiscountAmount_Base
- TotalLineItemAmount_Base
- TotalLineItemDiscountAmount_Base
- TotalTax_Base
- TransactionCurrencyIdName
- VersionNumber

AccountId

Property	Value
Description	Unique identifier of the account with which the invoice is associated.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

BillTo_Composite

Property	Value
Description	Shows the complete Bill To address.
DisplayName	Bill To Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

ContactId

Property	Value
Description	Unique identifier of the contact associated with the invoice.

Property	Value
DisplayName	Contact
IsValidForForm	False
IsValidForRead	True
LogicalName	contactid
RequiredLevel	None
Targets	contact
Type	Lookup

ContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidname
MaxLength	100
RequiredLevel	None
Type	String

ContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridname
MaxLength	160

Property	Value
RequiredLevel	ApplicationRequired
Type	String

CustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

DiscountAmount_Base

Property	Value
Description	Value of the Invoice Discount Amount in base currency.
DisplayName	Invoice Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200

Property	Value
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None

Property	Value
Type	Decimal

FreightAmount_Base

Property	Value
Description	Value of the Freight Amount in base currency.
DisplayName	Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows the duration in minutes for which the invoice was on hold.
DisplayName	On Hold Time (Minutes)
Format	None

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam

Property	Value
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

SalesOrderIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderidname
MaxLength	100
RequiredLevel	None
Type	String

ShipTo_Composite

Property	Value
Description	Shows the complete Ship To address.
DisplayName	Ship To Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_composite
MaxLength	1000
RequiredLevel	None

Property	Value
Type	Memo

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this invoice. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TotalAmount_Base

Property	Value
Description	Value of the Total Amount in base currency.
DisplayName	Total Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight_Base

Property	Value
Description	Value of the Total Pre-Freight Amount in base currency.
DisplayName	Total Pre-Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount_Base

Property	Value
Description	Value of the Total Discount Amount in base currency.
DisplayName	Total Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount_Base

Property	Value
Description	Value of the Total Detail Amount in base currency.
DisplayName	Total Detail Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount_Base

Property	Value
Description	Value of the Total Line Item Discount Amount in base currency.
DisplayName	Total Line Item Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax_Base

Property	Value
Description	Value of the Total Tax in base currency.
DisplayName	Total Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- invoice_details
- msdyn_playbookinstance_invoice

invoice_details

Same as the invoice_details many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	invoiceid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	invoice_details

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_playbookinstance_invoice

Added by: Playbook Solution

Same as the msdyn_playbookinstance_invoice many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_invoice
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- invoice_customer_accounts
- invoice_customer_contacts
- opportunity_invoices
- price_level_invoices
- order_invoices

invoice_customer_accounts

Added by: System Solution Solution

See the invoice_customer_accounts one-to-many relationship for the account table/entity.

invoice_customer_contacts

Added by: System Solution Solution

See the invoice_customer_contacts one-to-many relationship for the contact table/entity.

opportunity_invoices

See the opportunity_invoices one-to-many relationship for the opportunity table/entity.

price_level_invoices

Added by: Product Management Solution

See the price_level_invoices one-to-many relationship for the pricelevel table/entity.

order_invoices

See the order_invoices one-to-many relationship for the salesorder table/entity.

Many-To-Many Relationships

Relationship details provided where the Invoice table is the first table in the relationship. Listed by **SchemaName**.

contactinvoices_association

IntersectEntityName: contactinvoices

Table 1

Property	Value
IntersectAttribute	invoiceid
IsCustomizable	False
LogicalName	invoice
NavigationPropertyName	contactinvoices_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	contactid
NavigationPropertyName	contactinvoices_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference

Web API Reference

Invoice Product (InvoiceDetail) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Line item in an invoice containing detailed billing information for a product.

Added by: Sales Solution

Messages

Message	SDK Assembly
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	InvoiceDetails
DisplayCollectionName	Invoice Products

Property	Value
DisplayName	Invoice Product
EntitySetName	invoicedetails
IsBPFEntity	False
LogicalCollectionName	invoicedetails
LogicalName	invoicedetail
OwnershipType	UserOwned
PrimaryIdAttribute	invoicedetailid
PrimaryNameAttribute	invoicedetailname
SchemaName	InvoiceDetail

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActualDeliveryOn
- BaseAmount
- Description
- ExtendedAmount
- ImportSequenceNumber
- InvoiceDetailId
- InvoiceDetailName
- InvoiceId
- IsCopied
- IsPriceOverridden
- IsProductOverridden
- LineItemNumber
- ManualDiscountAmount
- OverriddenCreatedOn
- ParentBundleId
- ParentBundleIdRef
- PricePerUnit
- PricingErrorCode
- ProductAssociationId
- ProductDescription

- ProductId
- ProductName
- ProductTypeCode
- PropertyConfigurationStatus
- Quantity
- QuantityBackordered
- QuantityCancelled
- QuantityShipped
- SalesOrderDetailId
- SalesRepId
- SequenceNumber
- ShippingTrackingNumber
- ShipTo_City
- ShipTo_Country
- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- Tax
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UoMId
- UTCConversionTimeZoneCode
- WillCall

ActualDeliveryOn

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the invoiced product was delivered to the customer.
DisplayName	Delivered On
Format	DateOnly

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	actualdeliveryon
RequiredLevel	None
Type	DateTime

BaseAmount

Property	Value
Description	Shows the total price of the invoice product, based on the price per unit, volume discount, and quantity.
DisplayName	Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Description

Property	Value
Description	Type additional information to describe the product line item of the invoice.
DisplayName	Description

Property	Value
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExtendedAmount

Property	Value
Description	Shows the total amount due for the invoice product, based on the sum of the unit price, quantity, discounts, and tax.
DisplayName	Extended Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

InvoiceDetailId

Property	Value
Description	Unique identifier of the invoice product line item.
DisplayName	Invoice Product
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	invoicedetailid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

InvoiceDetailName

Added by: Sales Patch Solution

Property	Value

Property	Value
Description	Invoice Detail Name. Added for 1:n referential relationship (internal purposes only)
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	invoicedetailname
MaxLength	4000
RequiredLevel	ApplicationRequired
Type	String

InvoiceId

Property	Value
Description	Unique identifier of the invoice associated with the invoice product line item.
DisplayName	Invoice ID
IsValidForForm	True
IsValidForRead	True
LogicalName	invoiceid
RequiredLevel	SystemRequired
Targets	invoice
Type	Lookup

IsCopied

Property	Value
Description	Select whether the invoice product is copied from another item or data source.

Property	Value
DisplayName	Copied
IsValidForForm	True
IsValidForRead	True
LogicalName	iscopied
RequiredLevel	None
Type	Boolean

IsCopied Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsPriceOverridden

Property	Value
Description	Select whether the price per unit is fixed at the value in the specified price list or can be overridden by users who have edit rights to the invoice product.
DisplayName	Pricing
IsValidForForm	True
IsValidForRead	True
LogicalName	ispriceoverridden
RequiredLevel	None
Type	Boolean

IsPriceOverridden Choices/Options

Value	Label	Description

Value	Label	Description
1	Override Price	
0	Use Default	

DefaultValue: 0

IsProductOverridden

Property	Value
Description	Select whether the product exists in the Microsoft Dynamics 365 product catalog or is a write-in product specific to the parent invoice.
DisplayName	Select Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isproductoverridden
RequiredLevel	None
Type	Boolean

IsProductOverridden Choices/Options

Value	Label	Description
1	Write In	
0	Existing	

DefaultValue: 0

LineItemNumber

Property	Value
Description	Type the line item number for the invoice product to easily identify the product in the invoice and make sure it's listed in the correct order.

Property	Value
DisplayName	Line Item Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	lineitemnumber
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ManualDiscountAmount

Property	Value
Description	Type the manual discount amount for the invoice product to deduct any negotiated or other savings from the product total.
DisplayName	Manual Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentBundleId

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent Bundle
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	parentbundleid
RequiredLevel	None
Type	Uniqueidentifier

ParentBundleIdRef

Added by: Sales Patch Solution

Property	Value
Description	Choose the parent bundle associated with this product

Property	Value
DisplayName	Parent bundle product
IsValidForForm	True
IsValidForRead	True
LogicalName	parentbundleidref
RequiredLevel	None
Targets	invoicedetail
Type	Lookup

PricePerUnit

Property	Value
Description	Type the price per unit of the invoice product. The default is the value in the price list specified on the parent invoice for existing products.
DisplayName	Price Per Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

PricingErrorCode

Property	Value
Description	Pricing error for the invoice product line item.

Property	Value
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	

Value	Label	Description
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

ProductAssociationId

Property	Value

Property	Value
Description	Unique identifier of the product line item association with bundle in the invoice
DisplayName	Bundle Item Association
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productassociationid
RequiredLevel	None
Type	Uniqueidentifier

ProductDescription

Property	Value
Description	Type a name or description to identify the type of write-in product included in the invoice.
DisplayName	Write-In Product
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productdescription
MaxLength	4000
RequiredLevel	None
Type	String

ProductId

Property	Value
Description	Choose the product to include on the invoice.

Property	Value
DisplayName	Existing Product
IsValidForForm	True
IsValidForRead	True
LogicalName	productid
RequiredLevel	None
Targets	product
Type	Lookup

ProductName

Property	Value
Description	Calculated field that will be populated by name and description of the product.
DisplayName	Product Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productname
MaxLength	4000
RequiredLevel	None
Type	String

ProductTypeCode

Property	Value
Description	Product Type
DisplayName	Product type
IsValidForForm	True

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	producttypecode
RequiredLevel	SystemRequired
Type	Picklist

ProductTypeCode Choices/Options

Value	Label	Description
1	Product	
2	Bundle	
3	Required Bundle Product	
4	Optional Bundle Product	
5	Project-based Service	

PropertyConfigurationStatus

Property	Value
Description	Status of the property configuration.
DisplayName	Property Configuration
IsValidForForm	True
IsValidForRead	True
LogicalName	propertyconfigurationstatus
RequiredLevel	SystemRequired
Type	Picklist

PropertyConfigurationStatus Choices/Options

Value	Label	Description

Value	Label	Description
0	Edit	
1	Rectify	
2	Not Configured	

Quantity

Property	Value
Description	Type the amount or quantity of the product included in the invoice's total amount due.
DisplayName	Quantity
IsValidForForm	True
IsValidForRead	True
LogicalName	quantity
MaxValue	100000000000
MinValue	-100000000000
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

QuantityBackordered

Property	Value
Description	Type the amount or quantity of the product that is back ordered for the invoice.
DisplayName	Quantity Back Ordered
IsValidForForm	True
IsValidForRead	True
LogicalName	quantitybackordered
MaxValue	1000000000

Property	Value
MinValue	0
Precision	5
RequiredLevel	None
Type	Decimal

QuantityCancelled

Property	Value
Description	Type the amount or quantity of the product that was canceled for the invoice line item.
DisplayName	Quantity Canceled
IsValidForForm	True
IsValidForRead	True
LogicalName	quantitycancelled
MaxValue	1000000000
MinValue	0
Precision	5
RequiredLevel	None
Type	Decimal

QuantityShipped

Property	Value
Description	Type the amount or quantity of the product that was shipped.
DisplayName	Quantity Shipped
IsValidForForm	True
IsValidForRead	True
LogicalName	quantityshipped

Property	Value
MaxValue	1000000000
MinValue	-1000000000
Precision	5
RequiredLevel	None
Type	Decimal

SalesOrderDetailId

Added by: Sales Patch Solution

Property	Value
Description	Unique identifier for Order Line associated with Invoice Line.
DisplayName	Order Product Id
IsValidForForm	True
IsValidForRead	True
LogicalName	salesorderdetailid
RequiredLevel	None
Targets	salesorderdetail
Type	Lookup

SalesRepId

Property	Value
Description	Choose the user responsible for the sale of the invoice product.
DisplayName	Salesperson
IsValidForForm	True
IsValidForRead	True
LogicalName	salesrepid
RequiredLevel	None

Property	Value
Targets	systemuser
Type	Lookup

SequenceNumber

Property	Value
Description	Shows the ID of the data that maintains the sequence.
DisplayName	Sequence Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	sequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ShippingTrackingNumber

Property	Value
Description	Type a tracking number for shipment of the invoiced product.
DisplayName	Shipment Tracking Number
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shippingtrackingnumber
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80

Property	Value
RequiredLevel	None
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2

Property	Value
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shipto_name
MaxLength	200
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shipto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip Price Calculation
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation

Property	Value
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnCreate	
2	SkipPriceCalcOnUpdate	
3	SkipPriceCalcOnUpSert	

Tax

Property	Value
Description	Type the tax amount for the invoice product.
DisplayName	Tax
IsValidForForm	True
IsValidForRead	True
LogicalName	tax
MaxValue	1000000000000
MinValue	-1000000000000
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TimeZoneRuleVersionNumber

Property	Value

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UoMId

Property	Value

Property	Value
Description	Choose the unit of measurement for the base unit quantity for this purchase, such as each or dozen.
DisplayName	Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	uomid
RequiredLevel	None
Targets	uom
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WillCall

Property	Value
Description	Select whether the invoice product should be shipped to the specified address or held until the customer calls with further pick up or delivery instructions.

Property	Value
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BaseAmount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ExtendedAmount_Base
- InvoiceIdName
- InvoiceIsPriceLocked
- InvoiceStateCode
- ManualDiscountAmount_Base
- ModifiedBy

- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerId
- OwnerIdName
- OwnerIdType
- OwnerIdYomiName
- OwningBusinessUnit
- OwningTeam
- OwningUser
- PricePerUnit_Base
- ProductIdName
- ProductNumber
- SalesOrderDetailIdName
- SalesRepIdName
- SalesRepIdYomiName
- Tax_Base
- TransactionCurrencyIdName
- UoMIdName
- VersionNumber
- VolumeDiscountAmount
- VolumeDiscountAmount_Base

BaseAmount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount_base
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None

Property	Value
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ExtendedAmount_Base

Property	Value
Description	Value of the Extended Amount in base currency.
DisplayName	Extended Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

InvoiceIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	invoiceidname
MaxLength	100
RequiredLevel	None
Type	String

InvoiceIsPriceLocked

Property	Value
Description	Information about whether invoice product pricing is locked.
DisplayName	Invoice Is Price Locked
IsValidForForm	False
IsValidForRead	True
LogicalName	invoiceispricelocked
RequiredLevel	ApplicationRequired
Type	Boolean

InvoiceIsPriceLocked Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

InvoiceStateCode

Property	Value
Description	Status of the invoice product.
DisplayName	Invoice Status
IsValidForForm	False
IsValidForRead	True
LogicalName	invoicestatecode
RequiredLevel	SystemRequired
Type	Picklist

InvoiceStateCode Choices/Options

Value	Label	Description

ManualDiscountAmount_Base

Property	Value
Description	Value of the Manual Discount in base currency.
DisplayName	Manual Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team
Type	Owner

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype

Property	Value
RequiredLevel	SystemRequired
Type	EntityName

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

PricePerUnit_Base

Property	Value
Description	Value of the Price Per Unit in base currency.
DisplayName	Price Per Unit (Base)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	priceperunit_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

ProductNumber

Added by: Sales Patch Version 3 Solution

Property	Value
Description	User-defined product ID.

Property	Value
DisplayName	Product Number
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productnumber
MaxLength	100
RequiredLevel	None
Type	String

SalesOrderDetailIdName

Added by: Sales Patch Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderdetailidname
MaxLength	500
RequiredLevel	None
Type	String

SalesRepIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidname
MaxLength	100
RequiredLevel	None
Type	String

SalesRepIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidyominame
MaxLength	100
RequiredLevel	None
Type	String

Tax_Base

Property	Value

Property	Value
Description	Value of the Tax in base currency.
DisplayName	Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	tax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

VolumeDiscountAmount

Property	Value

Property	Value
Description	Shows the discount amount per unit if a specified volume is purchased. Configure volume discounts in the Product Catalog in the Settings area.
DisplayName	Volume Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount
MaxValue	922337203685477
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

VolumeDiscountAmount_Base

Property	Value
Description	Value of the Volume Discount in base currency.
DisplayName	Volume Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

One-To-Many Relationships

Listed by **SchemaName**.

- InvoiceDetail_Dynamicpropertyinstance
- invoicedetail_parent_invoicedetail
- invoicedetail_parentref_invoicedetail

InvoiceDetail_Dynamicpropertyinstance

Same as the InvoiceDetail_Dynamicpropertyinstance many-to-one relationship for the dynamicpropertyinstance table/entity.

Property	Value
ReferencingEntity	dynamicpropertyinstance
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	InvoiceDetail_Dynamicpropertyinstance
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: Cascade Unshare: NoCascade

invoicedetail_parent_invoicedetail

Same as the invoicedetail_parent_invoicedetail many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail

Property	Value
ReferencingAttribute	parentbundleid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	invoicedetail_parent_invoicedetail
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

invoicedetail_parentref_invoicedetail

Added by: Sales Patch Solution

Same as the invoicedetail_parentref_invoicedetail many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	parentbundleidref
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	invoicedetail_parentref_invoicedetail
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- invoice_details
- invoicedetail_parent_invoicedetail
- product_invoice_details
- unit_of_measurement_invoice_details
- productAssociation_invoice_details
- msdyn_salesorderdetail_invoicedetail
- invoicedetail_parentref_invoicedetail

invoice_details

See the invoice_details one-to-many relationship for the invoice table/entity.

invoicedetail_parent_invoicedetail

See the invoicedetail_parent_invoicedetail one-to-many relationship for the invoicedetail table/entity.

product_invoice_details

Added by: Product Management Solution

See the product_invoice_details one-to-many relationship for the product table/entity.

unit_of_measurement_invoice_details

Added by: Product Management Solution

See the unit_of_measurement_invoice_details one-to-many relationship for the uom table/entity.

productAssociation_invoice_details

Added by: Product Management Solution

See the productAssociation_invoice_details one-to-many relationship for the productassociation table/entity.

msdyn_salesorderdetail_invoicedetail

See the msdyn_salesorderdetail_invoicedetail one-to-many relationship for the salesorderdetail table/entity.

invoicedetail_parentref_invoicedetail

See the invoicedetail_parentref_invoicedetail one-to-many relationship for the invoicedetail table/entity.

See also

About the table reference
Web API Reference

Lead table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Prospect or potential sales opportunity. Leads are converted into accounts, contacts, or opportunities when they are qualified. Otherwise, they are deleted or archived.

Added by: Lead Management Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
GrantAccess	GrantAccessRequest
Merge	MergeRequest
ModifyAccess	ModifyAccessRequest
QualifyLead	QualifyLeadRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest

Message	SDK Assembly
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Leads
DisplayCollectionName	Leads
DisplayName	Lead
EntitySetName	leads
IsBPFEntity	False
LogicalCollectionName	leads
LogicalName	lead
OwnershipType	UserOwned
PrimaryIdAttribute	leadid
PrimaryNameAttribute	fullname
SchemaName	Lead

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Address1_AddressId
- Address1_AddressTypeCode
- Address1_City
- Address1_Country

- Address1_County
- Address1_Fax
- Address1_Latitude
- Address1_Line1
- Address1_Line2
- Address1_Line3
- Address1_Longitude
- Address1_Name
- Address1_PostalCode
- Address1_PostOfficeBox
- Address1_ShippingMethodCode
- Address1_StateOrProvince
- Address1_Telephone1
- Address1_Telephone2
- Address1_Telephone3
- Address1_UPSZone
- Address1_UTCOffset
- Address2_AddressId
- Address2_AddressTypeCode
- Address2_City
- Address2_Country
- Address2_County
- Address2_Fax
- Address2_Latitude
- Address2_Line1
- Address2_Line2
- Address2_Line3
- Address2_Longitude
- Address2_Name
- Address2_PostalCode
- Address2_PostOfficeBox
- Address2_ShippingMethodCode
- Address2_StateOrProvince
- Address2_Telephone1
- Address2_Telephone2
- Address2_Telephone3
- Address2_UPSZone
- Address2_UTCOffset
- BudgetAmount
- BudgetStatus

- BusinessCard
- BusinessCardAttributes
- CampaignId
- CompanyName
- ConfirmInterest
- CustomerId
- CustomerIdType
- DecisionMaker
- Description
- DoNotBulkEMail
- DoNotEMail
- DoNotFax
- DoNotPhone
- DoNotPostalMail
- DoNotSendMM
- EMailAddress1
- EMailAddress2
- EMailAddress3
- EntityImage
- EstimatedAmount
- EstimatedCloseDate
- EstimatedValue
- EvaluateFit
- Fax
- FirstName
- FollowEmail
- ImportSequenceNumber
- IndustryCode
- InitialCommunication
- JobTitle
- LastName
- LastOnHoldTime
- LastUsedInCampaign
- LeadId
- LeadQualityCode
- LeadSourceCode
- MiddleName
- MobilePhone
- msdyn_LeadGrade
- msdyn_LeadScore

- msdyn_LeadScoreTrend
- msdyn_PredictiveScoreId
- msdyn_salesassignmentresult
- msdyn_ScoreHistory
- msdyn_ScoreReasons
- msdyn_segmentid
- Need
- NumberOfEmployees
- OriginatingCaseId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Pager
- ParentAccountId
- ParentContactId
- ParticipatesInWorkflow
- PreferredContactMethodCode
- PriorityCode
- ProcessId
- PurchaseProcess
- PurchaseTimeFrame
- QualificationComments
- QualifyingOpportunityId
- RelatedObjectId
- Revenue
- SalesStage
- SalesStageCode
- Salutation
- ScheduleFollowUp_Prospect
- ScheduleFollowUp_Qualify
- SIC
- SLAId
- StageId
- StateCode
- StatusCode
- Subject
- TeamsFollowed
- Telephone1
- Telephone2
- Telephone3

- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WebSiteUrl
- YomiCompanyName
- YomiFirstName
- YomiLastName
- YomiMiddleName

Address1_AddressId

Property	Value
Description	Unique identifier for address 1.
DisplayName	Address 1: ID
IsValidForForm	False
IsValidForRead	True
LogicalName	address1_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address1_AddressTypeCode

Property	Value
Description	Select the primary address type.
DisplayName	Address 1: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_addresstypecode
RequiredLevel	None
Type	Picklist

Address1_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address1_City

Property	Value
Description	Type the city for the primary address.
DisplayName	City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_city
MaxLength	80
RequiredLevel	None
Type	String

Address1_Country

Property	Value
Description	Type the country or region for the primary address.
DisplayName	Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_country
MaxLength	80

Property	Value
RequiredLevel	None
Type	String

Address1_County

Property	Value
Description	Type the county for the primary address.
DisplayName	Address 1: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_county
MaxLength	50
RequiredLevel	None
Type	String

Address1_Fax

Property	Value
Description	Type the fax number associated with the primary address.
DisplayName	Address 1: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_fax
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

Address1_Latitude

Property	Value
Description	Type the latitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address1_Line1

Property	Value
Description	Type the first line of the primary address.
DisplayName	Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line1

Property	Value
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line2

Property	Value
Description	Type the second line of the primary address.
DisplayName	Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line2
MaxLength	250
RequiredLevel	None
Type	String

Address1_Line3

Property	Value
Description	Type the third line of the primary address.
DisplayName	Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_line3

Property	Value
MaxLength	250
RequiredLevel	None
Type	String

Address1_Longitude

Property	Value
Description	Type the longitude value for the primary address for use in mapping and other applications.
DisplayName	Address 1: Longitude
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address1_Name

Property	Value
Description	Type a descriptive name for the primary address, such as Corporate Headquarters.
DisplayName	Address 1: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_name
MaxLength	100
RequiredLevel	None
Type	String

Address1_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the primary address.
DisplayName	ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address1_PostOfficeBox

Property	Value
Description	Type the post office box number of the primary address.
DisplayName	Address 1: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address1_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address1_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 1: Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address1_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address1_StateOrProvince

Property	Value
Description	Type the state or province of the primary address.
DisplayName	State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address1_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone1

Property	Value
Description	Type the main phone number associated with the primary address.
DisplayName	Address 1: Telephone 1
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone2

Property	Value
Description	Type a second phone number associated with the primary address.
DisplayName	Address 1: Telephone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address1_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address1_Telephone3

Property	Value
Description	Type a third phone number associated with the primary address.
DisplayName	Address 1: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address1_UPSZone

Property	Value
Description	Type the UPS zone of the primary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 1: UPS Zone
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address1_UTCOffset

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 1: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

Address2_AddressId

Property	Value
Description	Unique identifier for address 2.
DisplayName	Address 2: ID
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	address2_addressid
RequiredLevel	None
Type	Uniqueidentifier

Address2_AddressTypeCode

Property	Value
Description	Select the secondary address type.
DisplayName	Address 2: Address Type
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_addresstypecode
RequiredLevel	None
Type	Picklist

Address2_AddressTypeCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_City

Property	Value
Description	Type the city for the secondary address.
DisplayName	Address 2: City
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_city
MaxLength	80
RequiredLevel	None
Type	String

Address2_Country

Property	Value
Description	Type the country or region for the secondary address.
DisplayName	Address 2: Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_country
MaxLength	80
RequiredLevel	None
Type	String

Address2_County

Property	Value
Description	Type the county for the secondary address.
DisplayName	Address 2: County
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_county
MaxLength	50
RequiredLevel	None
Type	String

Address2_Fax

Property	Value
Description	Type the fax number associated with the secondary address.
DisplayName	Address 2: Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_fax
MaxLength	50
RequiredLevel	None
Type	String

Address2_Latitude

Property	Value
Description	Type the latitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Latitude
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	address2_latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

Address2_Line1

Property	Value
Description	Type the first line of the secondary address.
DisplayName	Address 2: Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line1
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line2

Property	Value
Description	Type the second line of the secondary address.
DisplayName	Address 2: Street 2
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line2
MaxLength	250
RequiredLevel	None
Type	String

Address2_Line3

Property	Value
Description	Type the third line of the secondary address.
DisplayName	Address 2: Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_line3
MaxLength	250
RequiredLevel	None
Type	String

Address2_Longitude

Property	Value
Description	Type the longitude value for the secondary address for use in mapping and other applications.
DisplayName	Address 2: Longitude
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	address2_longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Address2_Name

Property	Value
Description	Type a descriptive name for the secondary address, such as Corporate Headquarters.
DisplayName	Address 2: Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_name
MaxLength	100
RequiredLevel	None
Type	String

Address2_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the secondary address.
DisplayName	Address 2: ZIP/Postal Code

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postalcode
MaxLength	20
RequiredLevel	None
Type	String

Address2_PostOfficeBox

Property	Value
Description	Type the post office box number of the secondary address.
DisplayName	Address 2: Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_postofficebox
MaxLength	20
RequiredLevel	None
Type	String

Address2_ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Address 2: Shipping Method

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_shippingmethodcode
RequiredLevel	None
Type	Picklist

Address2_ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

Address2_StateOrProvince

Property	Value
Description	Type the state or province of the secondary address.
DisplayName	Address 2: State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone1

Property	Value
Description	Type the main phone number associated with the secondary address.

Property	Value
DisplayName	Address 2: Telephone 1
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone1
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone2

Property	Value
Description	Type a second phone number associated with the secondary address.
DisplayName	Address 2: Telephone 2
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone2
MaxLength	50
RequiredLevel	None
Type	String

Address2_Telephone3

Property	Value
Description	Type a third phone number associated with the secondary address.

Property	Value
DisplayName	Address 2: Telephone 3
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_telephone3
MaxLength	50
RequiredLevel	None
Type	String

Address2_UPSZone

Property	Value
Description	Type the UPS zone of the secondary address to make sure shipping charges are calculated correctly and deliveries are made promptly, if shipped by UPS.
DisplayName	Address 2: UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_upszone
MaxLength	4
RequiredLevel	None
Type	String

Address2_UTCOffset

Property	Value

Property	Value
Description	Select the time zone, or UTC offset, for this address so that other people can reference it when they contact someone at this address.
DisplayName	Address 2: UTC Offset
Format	TimeZone
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_utcoffset
MaxValue	1500
MinValue	-1500
RequiredLevel	None
Type	Integer

BudgetAmount

Property	Value
Description	Information about the budget amount of the lead's company or organization.
DisplayName	Budget Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

BudgetStatus

Property	Value
Description	Information about the budget status of the lead's company or organization.
DisplayName	Budget
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetstatus
RequiredLevel	None
Type	Picklist

BudgetStatus Choices/Options

Value	Label	Description
0	No Committed Budget	
1	May Buy	
2	Can Buy	
3	Will Buy	

BusinessCard

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Stores Image of the Business Card
DisplayName	Business Card
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	businesscard
MaxLength	1073741823

Property	Value
RequiredLevel	None
Type	Memo

BusinessCardAttributes

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Stores Business Card Control Properties.
DisplayName	BusinessCardAttributes
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	businesscardattributes
MaxLength	4000
RequiredLevel	None
Type	String

CampaignId

Added by: Marketing Solution

Property	Value
Description	Choose the campaign that the lead was generated from to track the effectiveness of marketing campaigns and identify communications received by the lead.
DisplayName	Source Campaign
IsValidForForm	True
IsValidForRead	True
LogicalName	campaignid

Property	Value
RequiredLevel	None
Targets	campaign
Type	Lookup

CompanyName

Property	Value
Description	Type the name of the company associated with the lead. This becomes the account name when the lead is qualified and converted to a customer account.
DisplayName	Company Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	companyname
MaxLength	100
RequiredLevel	Recommended
Type	String

ConfirmInterest

Property	Value
Description	Select whether the lead confirmed interest in your offerings. This helps in determining the lead quality.
DisplayName	Confirm Interest
IsValidForForm	True
IsValidForRead	True
LogicalName	confirminterest
RequiredLevel	None

Property	Value
Type	Boolean

ConfirmInterest Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

CustomerId

Property	Value
Description	Select the customer account or contact to provide a quick link to additional customer details, such as account information, activities, and opportunities.
DisplayName	Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	customerid
RequiredLevel	None
Targets	account,contact
Type	Customer

CustomerIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	Customer Type
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	customeridtype
RequiredLevel	None
Type	EntityName

DecisionMaker

Property	Value
Description	Select whether your notes include information about who makes the purchase decisions at the lead's company.
DisplayName	Decision Maker?
IsValidForForm	True
IsValidForRead	True
LogicalName	decisionmaker
RequiredLevel	None
Type	Boolean

DecisionMaker Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

Description

Property	Value
Description	Type additional information to describe the lead, such as an excerpt from the company's website.
DisplayName	Description

Property	Value
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DoNotBulkEMail

Property	Value
Description	Select whether the lead accepts bulk email sent through marketing campaigns or quick campaigns. If Do Not Allow is selected, the lead can be added to marketing lists, but will be excluded from the email.
DisplayName	Do not allow Bulk Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotbulkemail
RequiredLevel	None
Type	Boolean

DoNotBulkEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotEMail

Property	Value
Description	Select whether the lead allows direct email sent from Microsoft Dynamics 365.
DisplayName	Do not allow Emails
IsValidForForm	True
IsValidForRead	True
LogicalName	donotemail
RequiredLevel	None
Type	Boolean

DoNotEMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotFax

Property	Value
Description	Select whether the lead allows faxes.
DisplayName	Do not allow Faxes
IsValidForForm	True
IsValidForRead	True
LogicalName	donotfax
RequiredLevel	None
Type	Boolean

DoNotFax Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPhone

Property	Value
Description	Select whether the lead allows phone calls.
DisplayName	Do not allow Phone Calls
IsValidForForm	True
IsValidForRead	True
LogicalName	donotphone
RequiredLevel	None
Type	Boolean

DoNotPhone Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotPostalMail

Property	Value
Description	Select whether the lead allows direct mail.
DisplayName	Do not allow Mails
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	donotpostalmail
RequiredLevel	None
Type	Boolean

DoNotPostalMail Choices/Options

Value	Label	Description
1	Do Not Allow	
0	Allow	

DefaultValue: 0

DoNotSendMM

Property	Value
Description	Select whether the lead accepts marketing materials, such as brochures or catalogs. Leads that opt out can be excluded from marketing initiatives.
DisplayName	Marketing Material
IsValidForForm	True
IsValidForRead	True
LogicalName	donotsendmm
RequiredLevel	None
Type	Boolean

DoNotSendMM Choices/Options

Value	Label	Description
1	Do Not Send	
0	Send	

DefaultValue: 0

EMailAddress1

Property	Value
Description	Type the primary email address for the lead.
DisplayName	Email
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress1
MaxLength	100
RequiredLevel	None
Type	String

EMailAddress2

Property	Value
Description	Type the secondary email address for the lead.
DisplayName	Email Address 2
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress2
MaxLength	100
RequiredLevel	None
Type	String

EMailAddress3

Property	Value
Description	Type a third email address for the lead.
DisplayName	Email Address 3
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress3
MaxLength	100
RequiredLevel	None
Type	String

EntityImage

Added by: Active Solution Solution

Property	Value
Description	Shows the default image for the record.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

EstimatedAmount

Property	Value
Description	Type the estimated revenue value that this lead will generate to assist in sales forecasting and planning.
DisplayName	Est. Value
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

EstimatedCloseDate

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the expected close date for the lead, so that the sales team can schedule timely follow-up meetings to move the prospect to the next sales stage.
DisplayName	Est. Close Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedclosedate
RequiredLevel	None
Type	DateTime

EstimatedValue

Property	Value
Description	Type a numeric value of the lead's estimated value, such as a product quantity, if no revenue amount can be specified in the Est. Value field. This can be used for sales forecasting and planning.
DisplayName	Est. Value (deprecated)
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedvalue
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Double

EvaluateFit

Property	Value
Description	Select whether the fit between the lead's requirements and your offerings was evaluated.
DisplayName	Evaluate Fit
IsValidForForm	True
IsValidForRead	True
LogicalName	evaluatefit
RequiredLevel	None
Type	Boolean

EvaluateFit Choices/Options

Value	Label	Description
1	No	

Value	Label	Description
0	Yes	

DefaultValue: 0

Fax

Property	Value
Description	Type the fax number for the primary contact for the lead.
DisplayName	Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fax
MaxLength	50
RequiredLevel	None
Type	String

FirstName

Property	Value
Description	Type the first name of the primary contact for the lead to make sure the prospect is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	First Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	firstname

Property	Value
MaxLength	50
RequiredLevel	Recommended
Type	String

FollowEmail

Property	Value
Description	Information about whether to allow following email activity like opens, attachment views and link clicks for emails sent to the lead.
DisplayName	Follow Email Activity
IsValidForForm	True
IsValidForRead	True
LogicalName	followemail
RequiredLevel	None
Type	Boolean

FollowEmail Choices/Options

Value	Label	Description
1	Allow	
0	Do Not Allow	

DefaultValue: 1

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None

Property	Value
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IndustryCode

Property	Value
Description	Select the primary industry in which the lead's business is focused, for use in marketing segmentation and demographic analysis.
DisplayName	Industry
IsValidForForm	True
IsValidForRead	True
LogicalName	industrycode
RequiredLevel	None
Type	Picklist

IndustryCode Choices/Options

Value	Label	Description
1	Accounting	
2	Agriculture and Non-petrol Natural Resource Extraction	
3	Broadcasting Printing and Publishing	
4	Brokers	

Value	Label	Description
5	Building Supply Retail	
6	Business Services	
7	Consulting	
8	Consumer Services	
9	Design, Direction and Creative Management	
10	Distributors, Dispatchers and Processors	
11	Doctor's Offices and Clinics	
12	Durable Manufacturing	
13	Eating and Drinking Places	
14	Entertainment Retail	
15	Equipment Rental and Leasing	
16	Financial	
17	Food and Tobacco Processing	
18	Inbound Capital Intensive Processing	
19	Inbound Repair and Services	
20	Insurance	
21	Legal Services	
22	Non-Durable Merchandise Retail	
23	Outbound Consumer Service	
24	Petrochemical Extraction and Distribution	
25	Service Retail	
26	SIG Affiliations	
27	Social Services	
28	Special Outbound Trade Contractors	
29	Specialty Realty	
30	Transportation	

Value	Label	Description
31	Utility Creation and Distribution	
32	Vehicle Retail	
33	Wholesale	

InitialCommunication

Property	Value
Description	Choose whether someone from the sales team contacted this lead earlier.
DisplayName	Initial Communication
IsValidForForm	True
IsValidForRead	True
LogicalName	initialcommunication
RequiredLevel	None
Type	Picklist

InitialCommunication Choices/Options

Value	Label	Description
0	Contacted	
1	Not Contacted	

JobTitle

Property	Value
Description	Type the job title of the primary contact for this lead to make sure the prospect is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Job Title
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	jobtitle
MaxLength	100
RequiredLevel	None
Type	String

LastName

Property	Value
Description	Type the last name of the primary contact for the lead to make sure the prospect is addressed correctly in sales calls, email, and marketing campaigns.
DisplayName	Last Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastname
MaxLength	50
RequiredLevel	ApplicationRequired
Type	String

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LastUsedInCampaign

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date when the lead was last included in a marketing campaign or quick campaign.
DisplayName	Last Campaign Date
Format	DateOnly
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastusedincampaign
RequiredLevel	None
Type	DateTime

LeadId

Property	Value
Description	Unique identifier of the lead.
DisplayName	Lead
IsValidForForm	False

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	leadid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

LeadQualityCode

Property	Value
Description	Select a rating value to indicate the lead's potential to become a customer.
DisplayName	Rating
IsValidForForm	True
IsValidForRead	True
LogicalName	leadqualitycode
RequiredLevel	None
Type	Picklist

LeadQualityCode Choices/Options

Value	Label	Description
1	Hot	
2	Warm	
3	Cold	

LeadSourceCode

Property	Value
Description	Select the primary marketing source that prompted the lead to contact you.
DisplayName	Lead Source

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	leadsourcecode
RequiredLevel	None
Type	Picklist

LeadSourceCode Choices/Options

Value	Label	Description
1	Advertisement	
2	Employee Referral	
3	External Referral	
4	Partner	
5	Public Relations	
6	Seminar	
7	Trade Show	
8	Web	
9	Word of Mouth	
10	Other	

MiddleName

Property	Value
Description	Type the middle name or initial of the primary contact for the lead to make sure the prospect is addressed correctly.
DisplayName	Middle Name
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	middlename
MaxLength	50
RequiredLevel	None
Type	String

MobilePhone

Property	Value
Description	Type the mobile phone number for the primary contact for the lead.
DisplayName	Mobile Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	mobilephone
MaxLength	20
RequiredLevel	None
Type	String

msdyn_LeadGrade

Added by: Predictive Lead Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Lead Grade
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	msdyn_leadgrade
RequiredLevel	None
Type	Picklist

msdyn_LeadGrade Choices/Options

Value	Label	Description
0	Grade A	
1	Grade B	
2	Grade C	
3	Grade D	

msdyn_LeadScore

Added by: Predictive Lead Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Lead Score
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_leadscore
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_LeadScoreTrend

Added by: Predictive Lead Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Lead Score Trend
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_leadscoretrend
RequiredLevel	None
Type	Picklist

msdyn_LeadScoreTrend Choices/Options

Value	Label	Description
0	Improving	
1	Steady	
2	Declining	
3	Not enough info	

msdyn_PredictiveScoreId

Added by: Predictive Scoring Common Solution

Property	Value
Description	Predictive score
DisplayName	Predictive Score
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_predictivescoreid

Property	Value
RequiredLevel	None
Targets	msdyn_predictivescore
Type	Lookup

msdyn_salesassignmentresult

Added by: Assignment Rules Solution

Property	Value
Description	Result of the assignment rule process
DisplayName	Assignment Rule Result
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_salesassignmentresult
RequiredLevel	None
Type	Picklist

msdyn_salesassignmentresult Choices/Options

Value	Label	Description
0	Succeeded	
1	Failed	

msdyn_ScoreHistory

Added by: Predictive Lead Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Score History
Format	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorehistory
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_ScoreReasons

Added by: Predictive Lead Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Score Reasons
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorereasons
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_segmentid

Added by: Segment solution Solution

Property	Value
Description	Unique identifier for Segment associated with Lead.

Property	Value
DisplayName	Segment Id
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_segmentid
RequiredLevel	None
Targets	msdyn_segment
Type	Lookup

Need

Property	Value
Description	Choose how high the level of need is for the lead's company.
DisplayName	Need
IsValidForForm	True
IsValidForRead	True
LogicalName	need
RequiredLevel	None
Type	Picklist

Need Choices/Options

Value	Label	Description
0	Must have	
1	Should have	
2	Good to have	
3	No need	

NumberOfEmployees

Property	Value
Description	Type the number of employees that work at the company associated with the lead, for use in marketing segmentation and demographic analysis.
DisplayName	No. of Employees
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	numberofemployees
MaxValue	1000000
MinValue	0
RequiredLevel	None
Type	Integer

OriginatingCaseId

Added by: Service Solution

Property	Value
Description	This attribute is used for Sample Service Business Processes.
DisplayName	Originating Case
IsValidForForm	True
IsValidForRead	True
LogicalName	originatingcaseid
RequiredLevel	None
Targets	incident
Type	Lookup

OverriddenCreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type

Property	Value
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Pager

Property	Value
Description	Type the pager number for the primary contact for the lead.
DisplayName	Pager
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	pager
MaxLength	20
RequiredLevel	None
Type	String

ParentAccountId

Property	Value
Description	Choose an account to connect this lead to, so that the relationship is visible in reports and analytics.
DisplayName	Parent Account for lead
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	parentaccountid
RequiredLevel	None
Targets	account
Type	Lookup

ParentContactId

Property	Value
Description	Choose a contact to connect this lead to, so that the relationship is visible in reports and analytics.
DisplayName	Parent Contact for lead
IsValidForForm	True
IsValidForRead	True
LogicalName	parentcontactid
RequiredLevel	None
Targets	contact
Type	Lookup

ParticipatesInWorkflow

Property	Value
Description	Shows whether the lead participates in workflow rules.
DisplayName	Participates in Workflow
IsValidForForm	False
IsValidForRead	True
LogicalName	participatesinworkflow
RequiredLevel	None

Property	Value
Type	Boolean

ParticipatesInWorkflow Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

PreferredContactMethodCode

Property	Value
Description	Select the preferred method of contact.
DisplayName	Preferred Method of Contact
IsValidForForm	True
IsValidForRead	True
LogicalName	preferredcontactmethodcode
RequiredLevel	None
Type	Picklist

PreferredContactMethodCode Choices/Options

Value	Label	Description
1	Any	
2	Email	
3	Phone	
4	Fax	
5	Mail	

PriorityCode

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
1	Default Value	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

PurchaseProcess

Property	Value

Property	Value
Description	Choose whether an individual or a committee will be involved in the purchase process for the lead.
DisplayName	Purchase Process
IsValidForForm	True
IsValidForRead	True
LogicalName	purchaseprocess
RequiredLevel	None
Type	Picklist

PurchaseProcess Choices/Options

Value	Label	Description
0	Individual	
1	Committee	
2	Unknown	

PurchaseTimeFrame

Property	Value
Description	Choose how long the lead will likely take to make the purchase, so the sales team will be aware.
DisplayName	Purchase Timeframe
IsValidForForm	True
IsValidForRead	True
LogicalName	purchasetimeframe
RequiredLevel	None
Type	Picklist

PurchaseTimeFrame Choices/Options

Value	Label	Description
0	Immediate	
1	This Quarter	
2	Next Quarter	
3	This Year	
4	Unknown	

QualificationComments

Property	Value
Description	Type comments about the qualification or scoring of the lead.
DisplayName	Qualification Comments
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	qualificationcomments
MaxLength	2000
RequiredLevel	None
Type	Memo

QualifyingOpportunityId

Added by: Sales Solution

Property	Value
Description	Choose the opportunity that the lead was qualified on and then converted to.
DisplayName	Qualifying Opportunity
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	qualifyingopportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

RelatedObjectId

Added by: Marketing Solution

Property	Value
Description	Related Campaign Response.
DisplayName	Related Campaign Response
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	relatedobjectid
RequiredLevel	None
Targets	campaignresponse
Type	Lookup

Revenue

Property	Value
Description	Type the annual revenue of the company associated with the lead to provide an understanding of the prospect's business.
DisplayName	Annual Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	revenue

Property	Value
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

SalesStage

Property	Value
Description	Select the sales stage of this lead to aid the sales team in their efforts to convert this lead to an opportunity.
DisplayName	Sales Stage
IsValidForForm	True
IsValidForRead	True
LogicalName	salesstage
RequiredLevel	None
Type	Picklist

SalesStage Choices/Options

Value	Label	Description
0	Qualify	

SalesStageCode

Property	Value
Description	Select the sales process stage for the lead to help determine the probability of the lead converting to an opportunity.
DisplayName	Sales Stage Code

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	salesstagecode
RequiredLevel	None
Type	Picklist

SalesStageCode Choices/Options

Value	Label	Description
1	Default Value	

Salutation

Property	Value
Description	Type the salutation of the primary contact for this lead to make sure the prospect is addressed correctly in sales calls, email messages, and marketing campaigns.
DisplayName	Salutation
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	salutation
MaxLength	100
RequiredLevel	None
Type	String

ScheduleFollowUp_Prospect

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time of the prospecting follow-up meeting with the lead.
DisplayName	Schedule Follow Up (Prospect)
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	schedulefollowup_prospect
RequiredLevel	None
Type	DateTime

ScheduleFollowUp_Qualify

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time of the qualifying follow-up meeting with the lead.
DisplayName	Schedule Follow Up (Qualify)
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	schedulefollowup_qualify
RequiredLevel	None
Type	DateTime

SIC

Property	Value
Description	Type the Standard Industrial Classification (SIC) code that indicates the lead's primary industry of business for use in marketing segmentation and demographic analysis.

Property	Value
DisplayName	SIC Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	sic
MaxLength	20
RequiredLevel	None
Type	String

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the Lead record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the lead is open, qualified, or disqualified. Qualified and disqualified leads are read-only and can't be edited unless they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Qualified	3	Qualified
2	Disqualified	4	Disqualified

StatusCode

Property	Value

Property	Value
Description	Select the lead's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	New	0
2	Contacted	0
3	Qualified	1
4	Lost	2
5	Cannot Contact	2
6	No Longer Interested	2
7	Canceled	2

Subject

Property	Value
Description	Type a subject or descriptive name, such as the expected order, company name, or marketing source list, to identify the lead.
DisplayName	Topic
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	subject
MaxLength	300
RequiredLevel	ApplicationRequired
Type	String

TeamsFollowed

Added by: Sales Patch Solution

Property	Value
Description	Number of users or conversations followed the record
DisplayName	TeamsFollowed
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	teamsfollowed
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Telephone1

Property	Value
Description	Type the work phone number for the primary contact for the lead.
DisplayName	Business Phone
FormatName	Phone
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone1
MaxLength	50
RequiredLevel	None
Type	String

Telephone2

Property	Value
Description	Type the home phone number for the primary contact for the lead.
DisplayName	Home Phone
FormatName	Phone
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone2
MaxLength	50
RequiredLevel	None
Type	String

Telephone3

Property	Value
Description	Type an alternate phone number for the primary contact for the lead.
DisplayName	Other Phone
FormatName	Phone
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone3
MaxLength	50
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WebSiteUrl

Property	Value
Description	Type the website URL for the company associated with this lead.
DisplayName	Website
FormatName	Url
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	websiteurl
MaxLength	200
RequiredLevel	None
Type	String

YomiCompanyName

Property	Value
Description	Type the phonetic spelling of the lead's company name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the prospect.
DisplayName	Yomi Company Name
FormatName	PhoneticGuide

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomicompanyname
MaxLength	100
RequiredLevel	None
Type	String

YomiFirstName

Property	Value
Description	Type the phonetic spelling of the lead's first name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the prospect.
DisplayName	Yomi First Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomifirstname
MaxLength	150
RequiredLevel	None
Type	String

YomiLastName

Property	Value
Description	Type the phonetic spelling of the lead's last name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the prospect.

Property	Value
DisplayName	Yomi Last Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomilastname
MaxLength	150
RequiredLevel	None
Type	String

YomiMiddleName

Property	Value
Description	Type the phonetic spelling of the lead's middle name, if the name is specified in Japanese, to make sure the name is pronounced correctly in phone calls with the prospect.
DisplayName	Yomi Middle Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomimiddlename
MaxLength	150
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- Address1_Composite
- Address2_Composite
- BudgetAmount_Base
- CampaignIdName
- ContactId
- ContactIdName
- ContactIdYomiName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomerIdName
- CustomerIdYomiName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- EstimatedAmount_Base
- ExchangeRate
- FullName
- IsAutoCreate
- IsPrivate
- MasterId
- MasterLeadIdName
- MasterLeadIdYomiName
- Merged
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName

- msdyn_PredictiveScoreIdName
- msdyn_segmentidName
- OnHoldTime
- OriginatingCaseIdName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- ParentAccountIdName
- ParentAccountIdYomiName
- ParentContactIdName
- ParentContactIdYomiName
- QualifyingOpportunityIdName
- RelatedObjectIdName
- Revenue_Base
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TimeSpentByMeOnEmailAndMeetings
- TransactionCurrencyIdName
- VersionNumber
- YomiFullName

AccountId

Property	Value
Description	Unique identifier of the account with which the lead is associated.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

Address1_Composite

Property	Value
Description	Shows the complete primary address.
DisplayName	Address 1
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address1_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

Address2_Composite

Property	Value
Description	Shows the complete secondary address.
DisplayName	Address 2
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	address2_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

BudgetAmount_Base

Property	Value

Property	Value
Description	Value of the Budget Amount in base currency.
DisplayName	Budget Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CampaignIdName

Added by: Marketing Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignidname
MaxLength	100
RequiredLevel	None
Type	String

ContactId

Property	Value
Description	Unique identifier of the contact with which the lead is associated.
DisplayName	Contact
IsValidForForm	False
IsValidForRead	True
LogicalName	contactid
RequiredLevel	None
Targets	contact
Type	Lookup

ContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidname
MaxLength	100
RequiredLevel	None
Type	String

ContactIdYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	customeridname
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

CustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807

Property	Value
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

EstimatedAmount_Base

Property	Value
Description	Value of the Est. Value in base currency.
DisplayName	Est. Value (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None

Property	Value
Type	Decimal

FullName

Property	Value
Description	Combines and shows the lead's first and last names so the full name can be displayed in views and reports.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fullname
MaxLength	160
RequiredLevel	None
Type	String

IsAutoCreate

Property	Value
Description	Information about whether the contact was auto-created when promoting an email or an appointment.
DisplayName	Auto-created
IsValidForForm	False
IsValidForRead	False
LogicalName	isautocreate
RequiredLevel	None
Type	Boolean

IsAutoCreate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsPrivate

Property	Value
Description	Indicates whether the lead is private or visible to the entire organization.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	False
LogicalName	isprivate
RequiredLevel	None
Type	Boolean

IsPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MasterId

Property	Value
Description	Unique identifier of the master lead for merge.
DisplayName	Master ID
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	masterid
RequiredLevel	None
Targets	lead
Type	Lookup

MasterLeadIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	masterleadidname
MaxLength	100
RequiredLevel	None
Type	String

MasterLeadIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	masterleadidyominame
MaxLength	100
RequiredLevel	None
Type	String

Merged

Property	Value
Description	Tells whether the lead has been merged with another lead.
DisplayName	Merged
IsValidForForm	True
IsValidForRead	True
LogicalName	merged
RequiredLevel	None
Type	Boolean

Merged Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

msdyn_PredictiveScoreIdName

Added by: Predictive Scoring Common Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_predictivescoreidname
MaxLength	128
RequiredLevel	None
Type	String

msdyn_segmentidName

Added by: Segment solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	msdyn_segmentidname
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OriginatingCaseIdName

Added by: Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingcaseidname
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

ParentAccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentaccountidname
MaxLength	100
RequiredLevel	None
Type	String

ParentAccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentaccountidyominame
MaxLength	100
RequiredLevel	None
Type	String

ParentContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidname
MaxLength	100
RequiredLevel	None
Type	String

ParentContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidyominame
MaxLength	100
RequiredLevel	None
Type	String

QualifyingOpportunityIdName

Added by: Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	qualifyingopportunityidname
MaxLength	100
RequiredLevel	None
Type	String

RelatedObjectIdName

Added by: Marketing Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	relatedobjectidname
MaxLength	200
RequiredLevel	None
Type	String

Revenue_Base

Property	Value
Description	Value of the Annual Revenue in base currency.
DisplayName	Annual Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	revenue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TimeSpentByMeOnEmailAndMeetings

Property	Value

Property	Value
Description	Total time spent for emails (read and write) and meetings by me in relation to the lead record.
DisplayName	Time Spent by me
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	timespentbymeonemailandmeetings
MaxLength	1250
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

YomiFullName

Property	Value
Description	Combines and shows the lead's Yomi first and last names so the full phonetic name can be displayed in views and reports.
DisplayName	Yomi Full Name
FormatName	PhoneticGuide
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	yomifullname
MaxLength	450
RequiredLevel	None
Type	String

One-To-Many Relationships

Listed by **SchemaName**.

- lead_addresses
- lead_master_lead
- account_originating_lead
- contact_originating_lead
- lead_BulkOperations
- lead_CampaignResponses
- CreatedLead_BulkOperationLogs
- SourceLead_BulkOperationLogs
- lead_OpportunityCloses
- lead_OrderCloses
- lead_QuoteCloses
- opportunity_originating_lead
- lk_leadtoopportunitysalesprocess_leadid
- msdyn_playbookinstance_lead

lead_addresses

Same as the lead_addresses many-to-one relationship for the leadaddress table/entity.

Property	Value
ReferencingEntity	leadaddress
ReferencingAttribute	parentid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_addresses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lead_master_lead

Same as the lead_master_lead many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	masterid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_master_lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

account_originating_lead

Same as the account_originating_lead many-to-one relationship for the account table/entity.

Property	Value
ReferencingEntity	account
ReferencingAttribute	originatingleadid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	account_originating_lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

contact_originating_lead

Same as the contact_originating_lead many-to-one relationship for the contact table/entity.

Property	Value
ReferencingEntity	contact
ReferencingAttribute	originatingleadid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	contact_originating_lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lead_BulkOperations

Added by: Marketing Solution

Same as the lead_BulkOperations many-to-one relationship for the bulkoperation table/entity.

Property	Value

Property	Value
ReferencingEntity	bulkoperation
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_BulkOperations
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_CampaignResponses

Added by: Marketing Solution

Same as the lead_CampaignResponses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_CampaignResponses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

CreatedLead_BulkOperationLogs

Added by: Marketing Solution

Same as the CreatedLead_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	createdobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CreatedLead_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

SourceLead_BulkOperationLogs

Added by: Marketing Solution

Same as the SourceLead_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	SourceLead_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lead_OpportunityCloses

Added by: Sales Solution

Same as the lead_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_OrderCloses

Added by: Sales Solution

Same as the lead_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

lead_QuoteCloses

Added by: Sales Solution

Same as the lead_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: Cascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_originating_lead

Added by: Sales Solution

Same as the opportunity_originating_lead many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	originatingleadid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_originating_lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lk_leadtoopportunitysalesprocess_leadid

Added by: Sales Solution

Same as the lk_leadtoopportunitysalesprocess_leadid many-to-one relationship for the leadtoopportunitysalesprocess table/entity.

Property	Value
ReferencingEntity	leadtoopportunitysalesprocess
ReferencingAttribute	leadid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_leadtoopportunitysalesprocess
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_playbookinstance_lead

Added by: Playbook Solution

Same as the msdyn_playbookinstance_lead many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_lead
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_customer_accounts
- lead_customer_contacts
- lead_master_lead
- lead_parent_account
- lead_parent_contact
- CampaignResponse_Lead
- campaign_leads
- lead_qualifying_opportunity

lead_customer_accounts

Added by: System Solution Solution

See the lead_customer_accounts one-to-many relationship for the account table/entity.

lead_customer_contacts

Added by: System Solution Solution

See the lead_customer_contacts one-to-many relationship for the contact table/entity.

lead_master_lead

See the lead_master_lead one-to-many relationship for the lead table/entity.

lead_parent_account

Added by: System Solution Solution

See the lead_parent_account one-to-many relationship for the account table/entity.

lead_parent_contact

Added by: System Solution Solution

See the lead_parent_contact one-to-many relationship for the contact table/entity.

CampaignResponse_Lead

Added by: Marketing Solution

See the CampaignResponse_Lead one-to-many relationship for the campaignresponse table/entity.

campaign_leads

Added by: Marketing Solution

See the campaign_leads one-to-many relationship for the campaign table/entity.

lead_qualifying_opportunity

Added by: Sales Solution

See the lead_qualifying_opportunity one-to-many relationship for the opportunity table/entity.

Many-To-Many Relationships

Relationship details provided where the Lead table is the first table in the relationship. Listed by **SchemaName**.

- accountleads_association
- contactleads_association
- listlead_association
- BulkOperation_Leads
- CampaignActivity_Leads
- leadproduct_association
- leadcompetitors_association

accountleads_association

See the accountleads_association many-to-many relationship for the account table/entity.

contactleads_association

See the contactleads_association many-to-many relationship for the contact table/entity.

listlead_association

See the listlead_association many-to-many relationship for the list table/entity.

BulkOperation_Leads

See the BulkOperation_Leads many-to-many relationship for the bulkoperation table/entity.

CampaignActivity_Leads

See the CampaignActivity_Leads many-to-many relationship for the campaignactivity table/entity.

leadproduct_association

IntersectEntityName: leadproduct

Table 1

Property	Value
IntersectAttribute	leadid
IsCustomizable	False
LogicalName	lead
NavigationPropertyName	leadproduct_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	product
IntersectAttribute	productid
NavigationPropertyName	leadproduct_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

leadcompetitors_association

IntersectEntityName: leadcompetitors

Table 1

Property	Value
IntersectAttribute	leadid
IsCustomizable	False
LogicalName	lead
NavigationPropertyName	leadcompetitors_association

Property	Value
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 40

Table 2

Property	Value
LogicalName	competitor
IntersectAttribute	competitorid
NavigationPropertyName	leadcompetitors_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 40

See also

About the table reference
Web API Reference

LeadAddress table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Address information for a lead.

Added by: Lead Management Solution

Messages

Message	SDK Assembly
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple

Properties

Property	Value
CollectionSchemaName	LeadAddresses
DisplayCollectionName	Lead Addresses
DisplayName	Lead Address
EntitySetName	leadaddresses
IsBPFEntity	False
LogicalCollectionName	leadaddresses
LogicalName	leadaddress
OwnershipType	None
PrimaryIdAttribute	leadaddressid

Property	Value
PrimaryNameAttribute	name
SchemaName	LeadAddress

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AddressNumber
- AddressTypeCode
- City
- Country
- County
- Fax
- ImportSequenceNumber
- Latitude
- LeadAddressId
- Line1
- Line2
- Line3
- Longitude
- Name
- OverriddenCreatedOn
- ParentId
- PostalCode
- PostOfficeBox
- ShippingMethodCode
- StateOrProvince
- Telephone1
- Telephone2
- Telephone3
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UPSZone
- UTCConversionTimeZoneCode
- UTCOffset

AddressNumber

Property	Value
Description	Information about the address for the lead.
DisplayName	Address Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	addressnumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

AddressTypeCode

Property	Value
Description	Type of address for the lead address.
DisplayName	Address Type
IsValidForForm	False
IsValidForRead	True
LogicalName	addresstypecode
RequiredLevel	None
Type	Picklist

AddressTypeCode Choices/Options

Value	Label	Description

City

Property	Value

Property	Value
Description	City name in the address for the lead.
DisplayName	City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	city
MaxLength	80
RequiredLevel	None
Type	String

Country

Property	Value
Description	Country/region name in the address for the lead.
DisplayName	Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	country
MaxLength	80
RequiredLevel	None
Type	String

County

Property	Value

Property	Value
Description	County name in the address for the lead.
DisplayName	County
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	county
MaxLength	50
RequiredLevel	None
Type	String

Fax

Property	Value
Description	Fax number for the address for the lead.
DisplayName	Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	fax
MaxLength	50
RequiredLevel	None
Type	String

ImportSequenceNumber

Property	Value

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Latitude

Property	Value
Description	Latitude for the address for the lead.
DisplayName	Latitude
IsValidForForm	True
IsValidForRead	True
LogicalName	latitude
MaxValue	90
MinValue	-90
Precision	5
RequiredLevel	None
Type	Double

LeadAddressId

Property	Value
Description	Unique identifier of the lead address.
DisplayName	Address
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	leadaddressid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

Line1

Property	Value
Description	First line for entering address information.
DisplayName	Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	line1
MaxLength	250
RequiredLevel	None
Type	String

Line2

Property	Value
Description	Second line for entering address information.
DisplayName	Street 2

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	line2
MaxLength	250
RequiredLevel	None
Type	String

Line3

Property	Value
Description	Third line for entering address information.
DisplayName	Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	line3
MaxLength	250
RequiredLevel	None
Type	String

Longitude

Property	Value
Description	Longitude for the address for the lead.
DisplayName	Longitude

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	longitude
MaxValue	180
MinValue	-180
Precision	5
RequiredLevel	None
Type	Double

Name

Property	Value
Description	Name used to identify the lead address.
DisplayName	Address Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	200
RequiredLevel	None
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.

Property	Value
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentId

Property	Value
Description	Unique identifier of the parent object with which the lead address is associated.
DisplayName	Parent
IsValidForForm	False
IsValidForRead	True
LogicalName	parentid
RequiredLevel	SystemRequired
Targets	lead
Type	Lookup

PostalCode

Property	Value
Description	ZIP Code or postal code in the address for the lead.
DisplayName	ZIP/Postal Code
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	postalcode
MaxLength	20
RequiredLevel	None
Type	String

PostOfficeBox

Property	Value
Description	Post office box number in the address for the lead.
DisplayName	Post Office Box
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	postofficebox
MaxLength	20
RequiredLevel	None
Type	String

ShippingMethodCode

Property	Value
Description	Method of shipment for the lead.
DisplayName	Shipping Method
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description

StateOrProvince

Property	Value
Description	State or province in the address for the lead.
DisplayName	State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

Telephone1

Property	Value
Description	First telephone number for the lead address.
DisplayName	Main Phone
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone1
MaxLength	50
RequiredLevel	None
Type	String

Telephone2

Property	Value
Description	Second telephone number for the lead address.
DisplayName	Phone 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone2
MaxLength	50
RequiredLevel	None
Type	String

Telephone3

Property	Value
Description	Third telephone number for the lead address.
DisplayName	Telephone 3
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	telephone3
MaxLength	50
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the leadaddress.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UPSZone

Property	Value
Description	United Parcel Service (UPS) zone for the address of the lead.
DisplayName	UPS Zone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	upszone
MaxLength	4
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode

Property	Value
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCOffset

Property	Value
Description	UTC offset for the lead address. This is the difference between local time and standard Coordinated Universal Time.
DisplayName	UTC Offset
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	utcoffset
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Composite
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerId
- OwningBusinessUnit
- ParentIdName
- ParentIdYomiName
- TransactionCurrencyIdName
- VersionNumber

Composite

Property	Value
Description	Shows the complete address.
DisplayName	Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	composite
MaxLength	1000
RequiredLevel	None
Type	Memo

CreatedBy

Property	Value
Description	Unique identifier of the user who created the lead address.

Property	Value
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the lead address was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the leadaddress.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Property	Value
Description	Exchange rate for the currency associated with the leadaddress with respect to the base currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the lead address.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the lead address was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the leadaddress.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	False
LogicalName	ownerid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

OwningBusinessUnit

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	False
LogicalName	owningbusinessunit
RequiredLevel	None
Type	Uniqueidentifier

ParentIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	parentidname
MaxLength	100
RequiredLevel	None
Type	String

ParentIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentidyominame
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

lead_addresses

See the lead_addresses one-to-many relationship for the lead table/entity.

See also

About the table reference
Web API Reference

LeadToOpportunitySalesProcess table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Lead To Opportunity Sales Process Business Process Flow

Added by: Sales Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	LeadToOpportunitySalesProcesses
DisplayCollectionName	Lead To Opportunity Sales Process

Property	Value
DisplayName	Lead To Opportunity Sales Process
EntitySetName	leadtoopportunitysalesprocesses
IsBPFEntity	True
LogicalCollectionName	leadtoopportunitysalesprocesses
LogicalName	leadtoopportunitysalesprocess
OwnershipType	OrganizationOwned
PrimaryIdAttribute	businessprocessflowinstanceid
PrimaryNameAttribute	name
SchemaName	LeadToOpportunitySalesProcess

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActiveStageId
- ActiveStageStartedOn
- BusinessProcessFlowInstanceId
- CompletedOn
- ImportSequenceNumber
- LeadId
- Name
- OpportunityId
- OverriddenCreatedOn
- ProcessId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActiveStageId

Property	Value
Description	Unique identifier of the active stage for the Business Process Flow instance.
DisplayName	Active Stage
IsValidForForm	True
IsValidForRead	True
LogicalName	activestageid
RequiredLevel	None
Targets	processstage
Type	Lookup

ActiveStageStartedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when current active stage is started.
DisplayName	Active Stage Started On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	activestagestartedon
RequiredLevel	None
Type	DateTime

BusinessProcessFlowInstanceId

Property	Value
Description	Unique identifier for Lead To Opportunity Sales Process bpf entity instances
DisplayName	Lead To Opportunity Sales Process Instance Id
IsValidForForm	False

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	businessprocessflowinstanceid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

CompletedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when Business Process Flow instance is completed
DisplayName	Completed On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	completedon
RequiredLevel	None
Type	DateTime

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

LeadId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Lead
IsValidForForm	True
IsValidForRead	True
LogicalName	leadid
RequiredLevel	None
Targets	lead
Type	Lookup

Name

Property	Value
Description	Process Name.
DisplayName	Process Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	name
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

OpportunityId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Opportunity Id
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ProcessId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Process
IsValidForForm	True
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Targets	workflow
Type	Lookup

StateCode

Property	Value
Description	Shows whether the Delve action record is pending, completed, or tracking.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

StatusCode

Property	Value
Description	Select the delve action record status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Active	0
2	Finished	1
3	Aborted	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	Comma delimited string of process stage ids that represent visited stages of the Business Process Flow instance.
DisplayName	Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActiveStageIdName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy

- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- Duration
- ExchangeRate
- LeadIdName
- LeadIdYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OpportunityIdName
- OrganizationId
- OrganizationIdName
- ProcessIdName
- TransactionCurrencyIdName
- VersionNumber

ActiveStageIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	activestageidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedBy

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

Duration

Property	Value
Description	Duration between completed on and started on, used by business process flow.
DisplayName	Duration
Format	Duration
IsValidForForm	True
IsValidForRead	True
LogicalName	duration
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

LeadIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	leadidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

LeadIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	leadidyominame
MaxLength	450
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ProcessIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	processidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lk_leadtoopportunitysalesprocess_opportunityid
- lk_leadtoopportunitysalesprocess_leadid

lk_leadtoopportunitysalesprocess_opportunityid

See the lk_leadtoopportunitysalesprocess_opportunityid one-to-many relationship for the opportunity table/entity.

lk_leadtoopportunitysalesprocess_leadid

Added by: Lead Management Solution

See the lk_leadtoopportunitysalesprocess_leadid one-to-many relationship for the lead table/entity.

See also

About the table reference
Web API Reference

Marketing List (List) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Group of existing or potential customers created for a marketing campaign or other sales purposes.

Added by: Marketing Solution

Messages

Message	SDK Assembly
AddListMembersList	AddListMembersListRequest
AddMemberList	AddMemberListRequest
AddMembersBatchList	Type generated by CrmSvcUtil.exe or use OrganizationRequest setting the required parameters for the message.
Assign	AssignRequest
CopyDynamicListToStatic	CopyDynamicListToStaticRequest
CopyMembersList	CopyMembersListRequest
Create	CreateRequest or Create
CreateActivitiesList	CreateActivitiesListRequest
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
QualifyMemberList	QualifyMemberListRequest

Message	SDK Assembly
RemoveListMembersList	
RemoveMemberList	RemoveMemberListRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Lists
DisplayCollectionName	Marketing Lists
DisplayName	Marketing List
EntitySetName	lists
IsBPFEntity	False
LogicalCollectionName	lists
LogicalName	list
OwnershipType	UserOwned
PrimaryIdAttribute	listid
PrimaryNameAttribute	listname
SchemaName	List

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Cost
- CreatedFromCode
- Description
- DoNotSendOnOptOut
- IgnoreInactiveListMembers
- ImportSequenceNumber
- LastUsedOn
- ListId
- ListName
- LockStatus
- MemberCount
- MemberType
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- processedMemberCount
- processFetchXML
- ProcessId
- Purpose
- Query
- Source
- StageId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- Type
- UTCConversionTimeZoneCode

Cost

Property	Value
Description	Type the cost of obtaining the marketing list.

Property	Value
DisplayName	Cost
IsValidForForm	True
IsValidForRead	True
LogicalName	cost
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedFromCode

Property	Value
Description	Select the type of members that this marketing list will contain: accounts, contacts, or leads. Each list can have only one member type and this value can't be changed after the marketing list is created.
DisplayName	Marketing List Member Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	createdfromcode
RequiredLevel	SystemRequired
Type	Picklist

CreatedFromCode Choices/Options

Value	Label	Description
1	Account	

Value	Label	Description
2	Contact	
4	Lead	

Description

Property	Value
Description	Type additional information to describe the marketing list, such as the intended use or date of the last update.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DoNotSendOnOptOut

Property	Value
Description	Select whether to override the opt-out settings on leads, contacts, and accounts for the members of the target marketing lists of the campaign activity. If No is selected, those who have chosen to opt out won't be excluded from the list. This means they will receive marketing materials.
DisplayName	Exclude Members Who Opt Out
IsValidForForm	True
IsValidForRead	True
LogicalName	donotsendonoptout
RequiredLevel	None

Property	Value
Type	Boolean

DoNotSendOnOptOut Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 1

IgnoreInactiveListMembers

Property	Value
Description	Select whether inactive accounts, contacts, or leads should be excluded from the campaign activity distribution when the marketing list is included in a campaign.
DisplayName	Ignore Inactive List Members
IsValidForForm	True
IsValidForRead	True
LogicalName	ignoreinactivelistmembers
RequiredLevel	None
Type	Boolean

IgnoreInactiveListMembers Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 1

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

LastUsedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the marketing list was last used in a campaign or in the creation of activities or opportunities.
DisplayName	Last Used On
Format	DateOnly
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	lastusedon
RequiredLevel	None
Type	DateTime

ListId

Property	Value
Description	Unique identifier of the marketing list.
DisplayName	Marketing List
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	listid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ListName

Property	Value
Description	Type a name for the marketing list so that it is identified correctly in lists.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	listname
MaxLength	128
RequiredLevel	SystemRequired
Type	String

LockStatus

Property	Value
Description	Select whether the marketing list is locked. If Yes is selected, no additional members can be added to the marketing list.

Property	Value
DisplayName	Locked
IsValidForForm	True
IsValidForRead	True
LogicalName	lockstatus
RequiredLevel	None
Type	Boolean

LockStatus Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MemberCount

Property	Value
Description	Shows the sum of all members in the marketing list.
DisplayName	Members Count
Format	None
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	membercount
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

MemberType

Property	Value
Description	Type of the members that can be stored in the marketing list. Please do not remove from form!
DisplayName	Member Type
Format	None
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	membertype
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

processedMemberCount

Added by: Marketing Patch 05/2019 Solution

Property	Value
Description	

Property	Value
DisplayName	processedMemberCount
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	processedmembercount
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

processFetchXML

Added by: Marketing Patch 05/2019 Solution

Property	Value
Description	
DisplayName	processFetchXML
Format	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	processfetchxml
MaxLength	10000
RequiredLevel	None
Type	Memo

ProcessId

Property	Value

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

Purpose

Property	Value
Description	Type the intended use of the marketing list to identify its key segments, target offers, or business group.
DisplayName	Purpose
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	purpose
MaxLength	512
RequiredLevel	None
Type	String

Query

Property	Value
Description	Query used for retrieving members of marketing list.
DisplayName	Query

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	query
MaxLength	1073741823
RequiredLevel	None
Type	String

Source

Property	Value
Description	Type the source of the marketing list, such as a third-party supplier or internal database.
DisplayName	Source
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	source
MaxLength	128
RequiredLevel	None
Type	String

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.

Property	Value
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the marketing list is active or inactive. Inactive marketing lists are read-only and can't be edited unless they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	0	Active
1	Inactive	1	Inactive

StatusCode

Property	Value

Property	Value
Description	Select the marketing list's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Active	0
1	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

Type

Property	Value

Property	Value
Description	Select whether you want the marketing list to be static or dynamic. The members in a static marketing list are unchanging. A dynamic marketing list is based on a dynamic query that retrieves the updated list of members
DisplayName	Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	type
RequiredLevel	SystemRequired
Type	Boolean

Type Choices/Options

Value	Label	Description
1	Dynamic	
0	Static	

DefaultValue: 0

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1

Property	Value
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Cost_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- TransactionCurrencyIdName
- VersionNumber

Cost_Base

Property	Value
Description	Value of the Cost in base currency.

Property	Value
DisplayName	Cost (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	cost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.

Property	Value
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.

Property	Value
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

List_BulkOperations

Same as the List_BulkOperations many-to-one relationship for the bulkoperation table/entity.

Property	Value
ReferencingEntity	bulkoperation
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	List_BulkOperations
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-Many Relationships

Relationship details provided where the List table is the first table in the relationship. Listed by **SchemaName**.

- campaignactivitylist_association
- campaignlist_association
- listcontact_association
- listlead_association
- listaccount_association

campaignactivitylist_association

See the campaignactivitylist_association many-to-many relationship for the campaignactivity table/entity.

campaignlist_association

See the campaignlist_association many-to-many relationship for the campaign table/entity.

listcontact_association

IntersectEntityName: listmember

Table 1

Property	Value
IntersectAttribute	listid
IsCustomizable	False
LogicalName	list
NavigationPropertyName	listcontact_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Marketing Label: Order: 10

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	entityid
NavigationPropertyName	listcontact_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

listlead_association

IntersectEntityName: listmember

Table 1

Property	Value
IntersectAttribute	listid
IsCustomizable	False
LogicalName	list
NavigationPropertyName	listlead_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Marketing Label: Order: 10

Table 2

Property	Value
LogicalName	lead
IntersectAttribute	entityid
NavigationPropertyName	listlead_association

Property	Value
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

listaccount_association

IntersectEntityName: listmember

Table 1

Property	Value
IntersectAttribute	listid
IsCustomizable	False
LogicalName	list
NavigationPropertyName	listaccount_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Marketing Label: Order: 10

Table 2

Property	Value
LogicalName	account
IntersectAttribute	entityid
NavigationPropertyName	listaccount_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

See also

About the table reference
Web API Reference

Goal Metric (Metric) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Type of measurement for a goal, such as money amount or count.

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Metrics
DisplayCollectionName	Goal Metrics
DisplayName	Goal Metric
EntitySetName	metrics

Property	Value
IsBPFEntity	False
LogicalCollectionName	metrics
LogicalName	metric
OwnershipType	OrganizationOwned
PrimaryIdAttribute	metricid
PrimaryNameAttribute	name
SchemaName	Metric

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AmountDataType
- Description
- ImportSequenceNumber
- IsAmount
- IsStretchTracked
- MetricId
- Name
- OverriddenCreatedOn
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

AmountDataType

Property	Value
Description	Data type of the amount.
DisplayName	Amount Data Type
IsValidForForm	True
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	amountdatatype
RequiredLevel	None
Type	Picklist

AmountDataType Choices/Options

Value	Label	Description
0	Money	
1	Decimal	
2	Integer	

Description

Property	Value
Description	Description of the goal metric.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ImportSequenceNumber

Property	Value

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsAmount

Property	Value
Description	Information that indicates whether the metric type is Count or Amount.
DisplayName	Metric Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isamount
RequiredLevel	ApplicationRequired
Type	Boolean

IsAmount Choices/Options

Value	Label	Description
1	Amount	

Value	Label	Description
0	Count	

DefaultValue: 1

IsStretchTracked

Property	Value
Description	Indicates whether the goal metric tracks stretch targets.
DisplayName	Track Stretch Target
IsValidForForm	True
IsValidForRead	True
LogicalName	isstretchtracked
RequiredLevel	None
Type	Boolean

IsStretchTracked Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MetricId

Property	Value
Description	Unique identifier of the goal metric.
DisplayName	Goal Metric
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	metricid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

Name

Property	Value
Description	Name of the goal metric.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

StateCode

Property	Value
Description	Status of the goal metric.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	0	Active
1	Inactive	1	Inactive

StatusCode

Property	Value
Description	Reason for the status of the goal metric.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Open	0
1	Closed	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the record.

Property	Value
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None

Property	Value
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None

Property	Value
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier of the organization.
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value
Description	Version number of the goal metric.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- metric_goal
- metric_rollupfield
- msdyn_metric_msdyn_forecastdefinition_metricid

metric_goal

Same as the metric_goal many-to-one relationship for the goal table/entity.

Property	Value
ReferencingEntity	goal
ReferencingAttribute	metricid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	metric_goal
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 110
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

metric_rollupfield

Same as the metric_rollupfield many-to-one relationship for the rollupfield table/entity.

Property	Value
ReferencingEntity	rollupfield
ReferencingAttribute	metricid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	metric_rollupfield
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 120

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_metric_msdyn_forecastdefinition_metricid

Added by: Forecasting Solution

Same as the msdyn_metric_msdyn_forecastdefinition_metricid many-to-one relationship for the msdyn_forecastdefinition table/entity.

Property	Value
ReferencingEntity	msdyn_forecastdefinition
ReferencingAttribute	msdyn_metricid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_metric_msdyn_forecastdefinition_metricid
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

About the table reference
Web API Reference

msdyn_callablecontext table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Added by: Playbook Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
CreateMultiple	CreateMultipleRequest
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
IsValidStateTransition	IsValidStateTransitionRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest

Message	SDK Assembly
Update	UpdateRequest or Update
UpdateMultiple	UpdateMultipleRequest

Properties

Property	Value
CollectionSchemaName	msdyn_callablecontexts
DisplayCollectionName	Playbook Callable Contexts
DisplayName	Playbook Callable Context
EntitySetName	msdyn_callablecontexts
IsBPFEntity	False
LogicalCollectionName	msdyn_callablecontexts
LogicalName	msdyn_callablecontext
OwnershipType	UserOwned
PrimaryIdAttribute	msdyn_callablecontextid
PrimaryNameAttribute	msdyn_EntityLogicalName
SchemaName	msdyn_callablecontext

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ImportSequenceNumber
- msdyn_callablecontextId
- msdyn_EntityLogicalName
- msdyn_EntityOTC
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- statecode

- statuscode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_callablecontextId

Property	Value
Description	Unique identifier for entity instances
DisplayName	Playbook calling record type
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_callablecontextid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

msdyn_EntityLogicalName

Property	Value
Description	The name of the custom entity.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_EntityLogicalName
MaxLength	128
RequiredLevel	ApplicationRequired
Type	String

msdyn_EntityOTC

Property	Value
Description	Internal Use Only
DisplayName	Record type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_EntityOTC
RequiredLevel	SystemRequired
Type	Picklist

msdyn_EntityOTC Choices/Options

Value	Label	Description
1	Account	Business that represents a customer or potential customer. The company that is billed in business transactions.
2	Contact	Person with whom a business unit has a relationship, such as customer, supplier, and colleague.
3	Opportunity	Potential revenue-generating event, or sale to an account, which needs to be tracked through a sales process to completion.
4	Lead	Prospect or potential sales opportunity. Leads are converted into accounts, contacts, or opportunities when they are qualified. Otherwise, they are deleted or archived.
5	Note	Note that is attached to one or more objects, including other notes.
6	Business Unit Map	Stores mapping attributes for business units.
7	Owner	Group of undeleted system users and undeleted teams. Owners can be used to control access to specific objects.
8	User	Person with access to the Microsoft CRM system and who owns objects in the Microsoft CRM database.
9	Team	Collection of system users that routinely collaborate. Teams can be used to simplify record sharing and provide team members with common access to organization data when team members belong to different Business Units.
10	Business Unit	Business, division, or department in the Microsoft Dynamics 365 database.

Value	Label	Description
14	System User Principal	For internal use only.
16	AccountLeads	description.
17	ContactInvoices	
18	ContactQuotes	
19	ContactOrders	
20	Service Contract Contact	Item in a Service contract.
21	ProductSalesLiterature	
22	ContactLeads	
24	LeadCompetitors	
25	OpportunityCompetitors	
26	CompetitorSalesLiterature	
27	LeadProduct	
29	Subscription	For internal use only.
30	Filter Template	Template for a filter.
31	Privilege Object Type Code	For internal use only.
32	Sales Process Instance	Instance of a sales process.
33	Subscription Synchronization Information	For internal use only.
35	Tracking information for deleted entities	For internal use only.
36	Client update	Microsoft Dynamics 365 client for Outlook offline database update.
37	Subscription Manually Tracked Object	For internal use only.
42	SystemUser BusinessUnit Entity Map	Stores mapping attributes for business units.
44	Field Sharing	Defines CRM security principals (users and teams) access rights to secured field for an entity instance.
45	Subscription Statistic Offline	Subscription Statistic Offline
46	Subscription Statistic Outlook	Subscription Statistic Outlook

Value	Label	Description
47	Subscription Sync Entry Offline	Used for offline sync, internal use only.
48	Subscription Sync Entry Outlook	Used for outlook sync, internal use only.
50	Position	Position of a user in the hierarchy
51	System User Manager Map	For internal use only.
52	User Search Facet	
54	Global Search Configuration	
55	FileAttachment	File Attachment
60	SystemUserAuthorizationChangeTracker	Internal authorization table to track user authorization changes
61	PrincipalEntityBusinessUnitMap	Internal authorization table to track user authorization changes
72	Record Filter	Record Access Filter
73	EntityRecordFilter	RecordFilter Object Type Codes
78	Virtual Entity Data Provider	Developers can register plug-ins on a data provider to enable data access for virtual entities in the system.
85	Virtual Entity Data Source	Internal entity that stores data source information for all installed providers.
92	Team template	Team template for an entity enabled for automatically created access teams.
99	Social Profile	This entity is used to store social profile information of its associated account and contacts on different social channels.
101	Service Plan	Service Plan
103	Privileges Removal Setting	Privileges Removal Setting
112	Case	Service request case associated with a contract.

Value	Label	Description
113	Child Incident Count	For internal use only.
123	Competitor	Business competing for the sale represented by a lead or opportunity.
126	Indexed Article	Article indexed for search purposes.
127	Article	Structured content that is part of the knowledge base.
129	Subject	Information regarding subjects available in the system.
132	Announcement	Announcement associated with an organization.
135	Activity Party	Person or group associated with an activity. An activity can have multiple activity parties.
150	User Settings	User's preferred settings.
300	Canvas App	An application built through a canvas-based editing experience.
301	Callback Registration	Callback Registration that stores configuration.
372	Connector	Connector Entity to support Solutioning Integration
373	Connection Instance	
380	Environment Variable Definition	Contains information about the settable variable: its type, default value, and etc.
381	Environment Variable Value	Holds the value for the associated EnvironmentVariableDefinition entity.
400	AI Template	
401	AI Model	
402	AI Configuration	
418	Dataflow	

Value	Label	Description
430	Entity Analytics Config	This entity contains information about which entities are enabled for Azure Data Lake Services integration
431	Image Attribute Configuration	Store configuration for each image attribute
432	Entity Image Configuration	Store image configuration for each entity
950	New Process	New Process Business Process Flow
951	Translation Process	Translation Process Business Process Flow
952	Phone To Case Process	Phone To Case Process Business Process Flow
953	Opportunity Sales Process	Opportunity Sales Process Business Process Flow
954	Lead To Opportunity Sales Process	Lead To Opportunity Sales Process Business Process Flow
955	Expired Process	Expired Process Business Process Flow
1001	Attachment	MIME attachment for an activity.
1002	Attachment	Attachment for an email activity.
1003	Internal Address	Storage of addresses for a user, business unit, or site.
1004	Competitor Address	Additional addresses for a competitor. The first two addresses are stored in the competitor object.
1006	Competitor Product	Association between a competitor and a product offered by the competitor.
1007	Image Descriptor	For internal use only.
1010	Contract	Agreement to provide customer service during a specified amount of time or number of cases.

Value	Label	Description
1011	Contract Line	Line item in a contract that specifies the type of service a customer is entitled to.
1013	Discount	Price reduction made from the list price of a product or service based on the quantity purchased.
1016	Article Template	Template for a knowledge base article that contains the standard attributes of an article.
1017	Lead Address	Address information for a lead.
1019	Organization	Top level of the Microsoft Dynamics 365 business hierarchy. The organization can be a specific business, holding company, or corporation.
1021	Organization UI	Entity customizations including form layout and icons. Includes current and past versions.
1022	Price List	Entity that defines pricing levels.
1023	Privilege	Permission to perform an action in Microsoft CRM. The platform checks for the privilege and rejects the attempt if the user does not hold the privilege.
1024	Product	Information about products and their pricing information.
1025	Product Association	Instance of a product added to a bundle or kit.
1026	Price List Item	Information about how to price a product in the specified price level, including pricing method, rounding option, and discount type based on a specified product unit.
1028	Product Relationship	Information about the selling relationship between two products, including the relationship type,

Value	Label	Description
		such as up-sell, cross-sell, substitute, or accessory.
1030	System Form	Organization-owned entity customizations including form layout and dashboards.
1031	User Dashboard	User-owned dashboards.
1036	Security Role	Grouping of security privileges. Users are assigned roles that authorize their access to the Microsoft CRM system.
1037	Role Template	Template for a role. Defines initial attributes that will be used when creating a new role.
1038	Sales Literature	Storage of sales literature, which may contain one or more documents.
1039	View	Saved query against the database.
1043	String Map	Mapping between strings.
1048	Property	Information about a product property.
1049	Property Option Set Item	Item with a name and value in a property option set type.
1055	Unit	Unit of measure.
1056	Unit Group	Grouping of units.
1070	Sales Attachment	Item in the sales literature collection.
1071	Address	Address and shipping information. Used to store additional addresses for an account or contact.
1072	Subscription Clients	For internal use only.
1075	Status Map	Mapping between statuses.
1080	Discount List	Type of discount specified as either a percentage or an amount.

Value	Label	Description
1082	Article Comment	Comment on a knowledge base article.
1083	Opportunity Product	Association between an opportunity and a product.
1084	Quote	Formal offer for products and/or services, proposed at specific prices and related payment terms, which is sent to a prospective customer.
1085	Quote Product	Product line item in a quote. The details include such information as product ID, description, quantity, and cost.
1086	User Fiscal Calendar	Custom fiscal calendar used for tracking sales quotas.
1088	Order	Quote that has been accepted.
1089	Order Product	Line item in a sales order.
1090	Invoice	Order that has been billed.
1091	Invoice Product	Line item in an invoice containing detailed billing information for a product.
1094	Authorization Server	Authorization servers that trust this organization
1095	Partner Application	Partner applications registered for this organization
1111	System Chart	System chart attached to an entity.
1112	User Chart	Chart attached to an entity.
1113	Ribbon Tab To Command Mapping	A mapping between Tab Ids, and the Commands within those tabs.
1115	Ribbon Context Group	Groupings of contextual tabs.
1116	Ribbon Command	Ribbon Commands - the command definition, rules, etc.
1117	Ribbon Rule	Ribbon rule definitions, used to enable and disable, show and hide

Value	Label	Description
		ribbon elements.
1120	Application Ribbons	Ribbon customizations for the application ribbon and entity ribbon templates.
1130	Ribbon Difference	All layout customizations to be applied to the ribbons, which contain only the differences from the base ribbon.
1140	Replication Backlog	Entity to hold replication backlog tasks. For internal use only.
1141	Characteristic	Skills, education and certifications of resources.
1142	Rating Value	A unique value associated with a rating model that allows providing a user friendly rating value.
1144	Rating Model	Represents a model to evaluate skills or other related entities.
1145	Bookable Resource Booking	Represents the line details of a resource booking.
1146	Bookable Resource Booking Header	Reservation entity representing the summary of the associated resource bookings.
1147	Bookable Resource Category	Categorize resources that have capacity into categories such as roles.
1148	Bookable Resource Characteristic	Associates resources with their characteristics and specifies the proficiency level of a resource for that characteristic.
1149	Bookable Resource Category Assn	Association entity to model the categorization of resources.
1150	Bookable Resource	Resource that has capacity which can be allocated to work.
1151	Bookable Resource Group	Associates resources with resource groups that they are a member of.

Value	Label	Description
1152	Booking Status	Allows creation of multiple sub statuses mapped to a booking status option.
1189	Document Suggestions	Document Suggestions
1190	SuggestionCardTemplate	Templates for Suggestion Card in Grid
1200	Field Security Profile	Profile which defines access level for secured attributes
1201	Field Permission	Group of privileges used to categorize users to provide appropriate access to secured columns.
1203	Team Profiles	Team Profiles
1234	Channel Property Group	Group or collection of channel properties provided by the external channel for a Microsoft Dynamics 365 activity.
1235	Property Association	Association of a property definition with another entity in the system.
1236	Channel Property	Instance of a channel property containing its name and corresponding data type.
1300	SocialInsightsConfiguration	Configuration for the social insights.
1309	Saved Organization Insights Configuration	Saved configuration for the organization insights
1333	Property Instance	Instance of a property with its value.
1400	Sync Attribute Mapping Profile	Profile which defines sync attribute mapping
1401	Sync Attribute Mapping	Group of Sync-Attribute Mappings used to provide Attribute mappings during sync for a particular user
1403	Team Sync-Attribute Mapping Profiles	Team Sync-Attribute Mapping

Value	Label	Description
		Profiles
1404	Principal Sync Attribute Map	Maps security principals (users and teams) to sync attribute mappings.
2000	Annual Fiscal Calendar	Year long fiscal calendar of an organization. A span of time during which the financial activities of an organization are calculated.
2001	Semiannual Fiscal Calendar	Calendar representing the semi-annual span of time during which the financial activities of an organization are calculated.
2002	Quarterly Fiscal Calendar	Quarterly fiscal calendar of an organization. A span of time during which the financial activities of an organization are calculated.
2003	Monthly Fiscal Calendar	Monthly fiscal calendar of an organization. A span of time during which the financial activities of an organization are calculated.
2004	Fixed Monthly Fiscal Calendar	Fixed monthly fiscal calendar of an organization. A span of time during which the financial activities of an organization are calculated.
2010	Email Template	Template for an email message that contains the standard attributes of an email message.
2011	Contract Template	Template for a contract containing the standard attributes of a contract.
2012	Unresolved Address	For internal use only.
2013	Territory	Territory represents sales regions.
2015	Theme	Information that's used to set custom visual theme options for client applications.
2016	User Mapping	User Mapping
2020	Queue	A list of records that require action, such as accounts, activities, and

Value	Label	Description
		cases.
2023	QueueItemCount	For internal use only.
2024	QueueMemberCount	For internal use only.
2027	License	Stores information about a Microsoft CRM license.
2029	Queue Item	A specific item in a queue, such as a case record or an activity record.
2500	User Entity UI Settings	Stores user settings for entity views.
2501	User Entity Instance Data	Per User item instance data
3000	Integration Status	Contains integration status information.
3005	Channel Access Profile	Information about permissions needed to access Dynamics 365 through external channels.For internal use only
3008	External Party	Information about external parties that need to access Dynamics 365 from external channels.For internal use only
3231	Connection Role	Role describing a relationship between a two records.
3233	Connection Role Object Type Code	Specifies the entity type that can play specific role in a connection.
3234	Connection	Relationship between two entities.
4000	Facility/Equipment	Resource that can be scheduled.
4001	Service	Activity that represents work done to satisfy a customer's need.
4002	Resource	User or facility/equipment that can be scheduled for a service.
4003	Calendar	Calendar used by the scheduling system to define when an appointment or activity is to occur.

Value	Label	Description
4004	Calendar Rule	Defines free/busy times for a service and for resources or resource groups, such as working, non-working, vacation, and blocked.
4005	Scheduling Group	Resource group or team whose members can be scheduled for a service.
4006	Resource Specification	Selection rule that allows the scheduling engine to select a number of resources from a pool of resources. The rules can be associated with a service.
4007	Resource Group	Group or collection of people, equipment, and/or facilities that can be scheduled.
4009	Site	Location or branch office where an organization does business. An organization can have multiple sites.
4010	Resource Expansion	Resource Expansions.
4011	Inter Process Lock	Inter Process Locks.
4023	Email Hash	Email activity hashes used for correlation purposes.
4101	Display String Map	Maps customized display strings to entities.
4102	Display String	Customized messages for an entity that has been renamed.
4110	Notification	For internal use only.
4120	Exchange Sync Id Mapping	The mapping used to keep track of the IDs for items synced between CRM and Exchange.
4200	Activity	Task performed, or to be performed, by a user. An activity is any action for which an entry can be made on a calendar.

Value	Label	Description
4201	Appointment	Commitment representing a time interval with start/end times and duration.
4202	Email	Activity that is delivered using email protocols.
4204	Fax	Activity that tracks call outcome and number of pages for a fax and optionally stores an electronic copy of the document.
4206	Case Resolution	Special type of activity that includes description of the resolution, billing status, and the duration of the case.
4207	Letter	Activity that tracks the delivery of a letter. The activity can contain the electronic copy of the letter.
4208	Opportunity Close	Activity that is created automatically when an opportunity is closed, containing information such as the description of the closing and actual revenue.
4209	Order Close	Activity generated automatically when an order is closed.
4210	Phone Call	Activity to track a telephone call.
4211	Quote Close	Activity generated when a quote is closed.
4212	Task	Generic activity representing work needed to be done.
4214	Service Activity	Activity offered by the organization to satisfy its customer's needs. Each service activity includes date, time, duration, and required resources.
4215	Commitment	For internal use only.
4216	Social Activity	For internal use only.
4220	UntrackedEmail	Activity that is delivered using

Value	Label	Description
		UntrackedEmail protocols.
4230	Saved View	Saved database query that is owned by a user.
4231	Metadata Difference	Metadata Difference
4232	Business Data Localized Label	Business Data Localized Label
4250	Recurrence Rule	Recurrence Rule represents the pattern of incidence of recurring entities.
4251	Recurring Appointment	The Master appointment of a recurring appointment series.
4299	Email Search	Email Address Search Table.
4300	Marketing List	Group of existing or potential customers created for a marketing campaign or other sales purposes.
4301	Marketing List Member	Item in a marketing list.
4400	Campaign	Container for campaign activities and responses, sales literature, products, and lists to create, plan, execute, and track the results of a specific marketing campaign through its life.
4401	Campaign Response	Response from an existing or a potential new customer for a campaign.
4402	Campaign Activity	Task performed, or to be performed, by a user for planning or running a campaign.
4403	Campaign Item	Work item in a campaign, a list or sales literature.
4404	Campaign Activity Item	Work item of a campaign activity, such as a list or sales literature.
4405	Bulk Operation Log	Log used to track bulk operation execution, successes, and failures.
4406	Quick Campaign	System operation used to perform lengthy and asynchronous

Value	Label	Description
		operations on large data sets, such as distributing a campaign activity or quick campaign.
4410	Data Import	Status and ownership information for an import job.
4411	Data Map	Data map used in import.
4412	Import Source File	File name of file used for import.
4413	Import Data	Unprocessed data from imported files.
4414	Duplicate Detection Rule	Rule used to identify potential duplicates.
4415	Duplicate Record	Potential duplicate record.
4416	Duplicate Rule Condition	Condition of a duplicate detection rule.
4417	Column Mapping	Mapping for columns in a data map.
4418	List Value Mapping	In a data map, maps list values from the source file to Microsoft Dynamics 365.
4419	Lookup Mapping	In a data map, maps a lookup attribute in a source file to Microsoft Dynamics 365.
4420	Owner Mapping	In a data map, maps ownership data from the source file to Microsoft Dynamics 365.
4421	Bookable Resource Booking to Exchange Id Mapping	The mapping used to keep track of the IDs for items synced between Dynamics 365 Bookable Resource Booking and Exchange.
4423	Import Log	Failure reason and other detailed information for a record that failed to import.
4424	Bulk Delete Operation	User-submitted bulk deletion job.
4425	Bulk Delete Failure	Record that was not deleted during a bulk deletion job.

Value	Label	Description
4426	Transformation Mapping	In a data map, maps the transformation of source attributes to Microsoft Dynamics 365 attributes.
4427	Transformation Parameter Mapping	In a data map, defines parameters for a transformation.
4428	Import Entity Mapping	Mapping for entities in a data map.
4450	Data Performance Dashboard	Data Performance Dashboard.
4490	Office Document	Used to store Office Documents in database in binary format.
4500	Relationship Role	Relationship between an account or contact and an opportunity.
4501	Relationship Role Map	Mapping of the primary associated objects between which the relationship role is valid.
4502	Customer Relationship	Relationship between a customer and a partner in which either can be an account or contact.
4503	Opportunity Relationship	Relationship between an account or contact and an opportunity.
4545	Entitlement Template Product	
4567	Auditing	Track changes to records for analysis, record keeping, and compliance.
4579	Ribbon Client Metadata.	A ribbon client metadata.
4600	Entity Map	Represents a mapping between two related entities so that data from one record can be copied into the form of a new related record.
4601	Attribute Map	Represents a mapping between attributes where the attribute values should be copied from a record into the form of a new related record.

Value	Label	Description
4602	Plug-in Type	Type that inherits from the IPlugin interface and is contained within a plug-in assembly.
4603	Plug-in Type Statistic	Plug-in type statistic.
4605	Plug-in Assembly	Assembly that contains one or more plug-in types.
4606	Sdk Message	Message that is supported by the SDK.
4607	Sdk Message Filter	Filter that defines which SDK messages are valid for each type of entity.
4608	Sdk Message Processing Step	Stage in the execution pipeline that a plug-in is to execute.
4609	Sdk Message Request	For internal use only.
4610	Sdk Message Response	For internal use only.
4611	Sdk Message Response Field	For internal use only.
4613	Sdk Message Pair	For internal use only.
4614	Sdk Message Request Field	For internal use only.
4615	Sdk Message Processing Step Image	Copy of an entity's attributes before or after the core system operation.
4616	Sdk Message Processing Step Secure Configuration	Non-public custom configuration that is passed to a plug-in's constructor.
4618	Service Endpoint	Service endpoint that can be contacted.
4619	Plug-in Trace Log	Trace and exception information generated by plug-ins and custom workflow activities.
4700	System Job	Process whose execution can proceed independently or in the background.
4702	Workflow Wait Subscription	For internal use only.

Value	Label	Description
4703	Process	Set of logical rules that define the steps necessary to automate a specific business process, task, or set of actions to be performed.
4704	Process Dependency	Dependencies for a process.
4705	ISV Config	An XML document used to configure client extension controls.
4706	Process Log	Log used to track process execution.
4707	Application File	Files used by the application
4708	Organization Statistic	Statistics measuring the organization's usage of the Microsoft Dynamics 365 system over the past 24 hours.
4709	Site Map	XML data used to control the application navigation pane.
4710	Process Session	Information that is generated when a dialog is run. Every time that you run a dialog, a dialog session is created.
4711	Expander Event	For internal use only. An event that will be expanded into jobs whose executions can proceed in the background.
4712	Process Trigger	Trigger that invoke a rule.
4720	Flow Session	Entity to store the information that is generated when a Power Automate Desktop flow runs.
4724	Process Stage	Stage associated with a process.
4725	Business Process Flow Instance	Active path associated with every Business Process Flow instance
4800	Web Wizard	Definition for a Web-based wizard.
4802	Wizard Page	Page in a Web-based wizard.
4803	Web Wizard Access Privilege	Privilege needed to access a Web-based wizard.

Value	Label	Description
4810	Time Zone Definition	Time zone definition, including name and time zone code.
4811	Time Zone Rule	Definition for time conversion between local time and Coordinated Universal Time (UTC) for a particular time zone at a particular time period.
4812	Time Zone Localized Name	Localized name of the time zone.
6363	Entitlement Product	
7000	System Application Metadata	For internal use only.
7001	User Application Metadata	For internal use only.
7100	Solution	A solution which contains CRM customizations.
7101	Publisher	A publisher of a CRM solution.
7102	Publisher Address	Address and shipping information. Used to store additional addresses for a publisher.
7103	Solution Component	A component of a CRM solution.
7104	Solution Component Definition	Contains all the information required to process a solution aware entity
7105	Dependency	A component dependency in CRM.
7106	Dependency Node	The representation of a component dependency node in CRM.
7107	Invalid Dependency	An invalid dependency in the CRM system.
7108	Dependency Feature	A dependency feature.
7200	RuntimeDependency	Form Level dependencies in CRM.
7272	Entitlement Contact	
8000	Post	An activity feed post.
8001	Post Role	Represents the objects with which an activity feed post is associated.

Value	Label	Description
		For internal use only.
8002	Post Regarding	Represents which object an activity feed post is regarding. For internal use only.
8003	Follow	Represents a user following the activity feed of an object.
8005	Comment	A comment on an activity feed post.
8006	Like	A like on an activity feed post.
8040	ACIViewMapper	Customized messages for an entity that has been renamed.
8050	Trace	A trace log.
8051	Trace Association	Represents the objects with which a trace record is associated. For internal use only.
8052	Trace Regarding	Represents which object a trace record is regarding. For internal use only.
8181	Routing Rule Set	Define Routing Rule to route cases to right people at the right time
8199	Rule Item	Please provide the description for entity
8700	AppModule Metadata	For internal use only.
8701	AppModule Metadata Dependency	For internal use only.
8702	AppModule Metadata Async Operation	For internal use only.
8840	Hierarchy Rule	Organization-owned entity customizations including mapping Quick view form with Relationship Id
9006	Model-driven App	A role-based, modular business app that provides task-based functionality for a particular area of work.
9007	App Module Component	A component available in a business app such as entity,

Value	Label	Description
		dashboard, form, view, chart, and business process.
9009	App Module Roles	Security roles that have access to a business app.
9011	App Config Master	Contains the master list of all properties that can be customized for apps in Dynamics 365. For internal use only.
9012	App Configuration	Contains a mapping between an app configuration instance and an app, which defines the properties that can be customized for the app. Optionally, also contains navigation setting for an app. For internal use only.
9013	App Configuration Instance	Contains a property or a list of properties from the app configuration master list that can be customized for any app in Dynamics 365. For internal use only.
9100	Report	Data summary in an easy-to-read layout.
9101	Report Related Entity	Entities related to a report. A report can be related to multiple entities.
9102	Report Related Category	Categories related to a report. A report can be related to multiple categories.
9103	Report Visibility	Area in which to show a report. A report can be shown in multiple areas.
9104	Report Link	Links and dependencies between reports. A report may drill through to another report, or it may have another report as a sub-report.
9105	Currency	Currency in which a financial transaction is carried out.

Value	Label	Description
9106	Mail Merge Template	Template for a mail merge document that contains the standard attributes of that document.
9107	Import Job	For internal use only.
9201	LocalConfigStore	
9300	Record Creation and Update Rule	Defines the settings for automatic record creation.
9301	Record Creation and Update Rule Item	Defines the individual conditions required for creating records automatically.
9333	Web Resource	Data equivalent to files used in Web development. Web resources provide client-side components that are used to provide custom user interface elements.
9400	Channel Access Profile Rule	Defines the rules for automatically associating channel access profiles to external party records.For internal use only
9401	Channel Access Profile Rule Item	Defines the rule items of a profile rule set for the automated profile association.For internal use only
9502	SharePoint Site	SharePoint site from where documents can be managed in Microsoft Dynamics 365.
9507	Sharepoint Document	Document libraries or folders on a SharePoint server from where documents can be managed in Microsoft Dynamics 365.
9508	Document Location	Document libraries or folders on a SharePoint server from where documents can be managed in Microsoft Dynamics 365.
9509	SharePoint Data	SharePoint's Data Corresponding to a user , Record , Location and Page

Value	Label	Description
9510	Rollup Properties	Stores properties related to rollup fields.
9511	Rollup Job	Stores rollup jobs.
9600	Goal	Target objective for a user or a team for a specified time period.
9602	Rollup Query	Query that is used to filter the results of the goal rollup.
9603	Goal Metric	Type of measurement for a goal, such as money amount or count.
9604	Rollup Field	Field to be rolled up to calculate the actual and in-progress values against the goal.
9605	Email Server Profile	Holds the Email Server Profiles of an organization
9606	Mailbox	
9607	Mailbox Statistics	Stores data regarding Mailbox processing cycles
9608	Mailbox Auto Tracking Folder	Stores data about what folders for a mailbox are auto tracked
9609	Mailbox Tracking Category	Stores data about what categories for a mailbox are tracked
9650	Process Configuration	For internal use only.
9690	Organization Insights Notification	Stores data regarding organization insights notification
9699	Organization Insights Metric	Stores data regarding organization insights metric
9700	Entitlement	Defines the amount and type of support a customer should receive.
9701	Entitlement Channel	Defines the amount and type of support for a channel.
9702	Entitlement Template	Contains predefined customer support terms that can be used to created entitlements for customers.

Value	Label	Description
9703	Entitlement Template Channel	Contains predefined support terms for a channel to create entitlements for customers.
9704	Entitlement Entity Allocation Type Mapping	Mapping to define which Allocation Types are available for Entity Type to be used on Entitlement
9750	SLA	Contains information about the tracked service-level KPIs for cases that belong to different customers.
9751	SLA Item	Contains information about a tracked support KPI for a specific customer.
9752	SLA KPI Instance	Service level agreement (SLA) key performance indicator (KPI) instance that is tracked for an individual case
9753	Custom Control	For internal use only.
9754	Custom Control Resource	Custom Control Resource Id
9755	Custom Control Default Config	For internal use only.
9800	Entity	
9808	Attribute	
9809	OptionSet	
9810	Entity Key	
9811	Entity Relationship	
9812	Managed Property	
9813	Relationship Entity	
9814	Relationship Attribute	Stores relationship attributes mapping for Multi-predicate relationship
9815	Entity Index	Metadata describing index of an entity
9816	Index Attribute	Stores index attributes

Value	Label	Description
9866	Mobile Offline Profile	Information to administer and manage the data available to mobile devices in offline mode.
9867	Mobile Offline Profile Item	Information on entity availability to mobile devices in offline mode for a mobile offline profile item.
9868	Mobile Offline Profile Item Association	Information on relationships to be used to follow related entity's records for mobile offline profile item.
9869	Sync Error	Failure reason and other detailed information for a record that failed to sync.
9870	Offline Command Definition	For internal use only.
9875	Language Provisioning State	Container for language provisioning checkpoint states
9880	Ribbon Metadata To Process	Container for Ribbon Metadata To Process
9890	SolutionHistoryData	solution history data
9900	Navigation Setting	Navigation Setting: A setting page or group of pages available for configuration within an app. A record representing a group of pages is regarded as the parent navigation setting of one or more other records. For internal use only.
9910	MultiEntitySearch	Multi Entity Search.
9912	Multi Select Option Value	Multi Select Option Value
9919	Hierarchy Security Configuration	
9930	Knowledge Base Record	Metadata of knowledge base (KB) articles associated with Microsoft Dynamics 365 entities.
9931	Incident KnowledgeBaseRecord	
9932	Time Stamp Date Mapping	For internal use only.`

Value	Label	Description
9936	Azure Service Connection	Stores connection information for an Azure service
9940	Document Template	Used to store Document Templates in database in binary format.
9941	Personal Document Template	Used to store Personal Document Templates in database in binary format.
9942	Topic Model Configuration	Configuration settings for identification of topics using text analytics.
9943	Topic Model Execution History	Entity for Topic Model Execution History
9944	Topic Model	The model for automatic identification of topics using text analytics.
9945	Text Analytics Entity Mapping	
9946	Topic History	Entity for Topic History
9947	Knowledge Search Model	Configuration for automatic suggestion of knowledge articles using text analytics and search
9948	Text Analytics Topic	Text Analytics Topics
9949	Advanced Similarity Rule	A text match rule identifies similar records using keywords and key phrases determined with text analytics
9950	Office Graph Document	Office Graph Documents Description
9951	Similarity Rule	
9953	Knowledge Article	Organizational knowledge for internal and external use.
9954	Knowledge Article Incident	Association between an knowledge article and incident.
9955	Knowledge Article Views	No of times an article is viewed per day

Value	Label	Description
9957	Language	Language
9958	Feedback	Container for feedback and ratings for knowledge articles.
9959	Category	Entity for categorizing records to make it easier for your customers to find them on portals and through search.
9960	Knowledge Article Category	Category for a Knowledge Article.
9961	DelveActionHub	Delve Action Hubs Description
9962	Action Card	Action card entity to show action cards.
9968	ActionCardUserState	
9973	Action Card User Settings	Stores user settings for action cards
9983	Action Card Type	To provide master data for the card types list. For internal use only
9986	Interaction for Email	
9987	External Party Item	Information about external party items that need to access Dynamics 365 from external channels.For internal use only
9996	HolidayWrapper	
9997	Email Signature	Signature for email message
10000	Solution Component Attribute Configuration	
10001	Solution Component Batch Configuration	
10002	Solution Component Configuration	
10003	Solution Component Relationship Configuration	
10004	Solution History	
10005	Solution History Data Source	
10006	Component Layer	

Value	Label	Description
10007	Component Layer Data Source	
10008	Package	
10010	StageSolutionUpload	
10011	ExportSolutionUpload	
10012	FeatureControlSetting	featurecontrolsetting
10013	Solution Component Summary	
10014	Solution Component Count Summary	
10015	Solution Component Data Source	
10016	Solution Component Count Data Source	
10017	AAD User	Virtual entity that represents AAD user
10018	Catalog	Entity for cataloging records to make it easier for your customers to find them on portals and through search.
10019	Catalog Assignment	Entity for assigning records to a specific catalog
10020	Internal Catalog Assignment	
10021	Custom API	Entity that defines a custom API
10022	Custom API Request Parameter	Entity that defines a request parameter for a custom API
10023	Custom API Response Property	Entity that defines a response property for a custom API
10024	ProvisionLanguageForUser	
10025	Shared Object	A record that is being shared in a real time collaboration session.
10026	Shared Workspace	References a container that stores real-time collaboration data.
10027	Data Lake Folder	A folder is a place to store data in Azure Data Lake.
10028	Data Lake Folder Permission	

Value	Label	Description
10029	Data Lake Workspace	A workspace is a place to store data in Azure Data Lake.
10030	Data Lake Workspace Permission	
10031	Data Processing configuration	
10032	Synapse Database	This entity represents an external Synapse database and its associated datalake folder link.
10033	Synapse Link External Table State	Synapse Link external table states
10034	Synapse Link Profile	Synapse Link Profile
10035	Synapse Link Profile Entity	Entities associated with the Synapse Link profile
10036	Synapse Link Profile Entity State	Runtime state of the Synapse Link entity
10037	Synapse Link Schedule	Synapse link schedules
10038	DataflowRefreshHistory	
10039	EntityRefreshHistory	
10040	Shared Link Setting	Shared Link Setting
10041	CascadeGrantRevokeAccessRecordsTracker	
10042	CascadeGrantRevokeAccessVersionTracker	
10043	RevokeInheritedAccessRecordsTracker	
10044	TdsMetadata	
10045	Model-Driven App Element	Associates a model-driven app with its components.
10046	Model-Driven App Component Node's Edge	Contains Model-Driven App Component Node's Edge Information.
10047	Model-Driven App Component Node	Contains Model-Driven App Component Node Information
10048	Model-Driven App Setting	Holds the value for the associated App Setting Definition.

Value	Label	Description
10049	Model-Driven App User Setting	Holds the value for the associated App User Setting Definition.
10050	Organization Setting	Holds the value for the associated Organization Setting Definition.
10051	Setting Definition	Contains Setting Definitions
10052	CanvasApp Extended Metadata	Holds extended metadata values for canvas apps that are not solution aware
10053	Service Plan Mapping	Service Plan Mapping
10055	ApplicationUser	Application User that has non-interactive access to the CDS system
10058	OData v4 Data Source	Data sources used by the OData v4 data provider to access data from an external web service.
10059	Workflow Binary	
10060	Desktop Flow Module	
10061	Flow Machine	
10062	Flow Machine Group	
10063	Flow Machine Image	
10064	Flow Machine Image Version	
10065	Flow Machine Network	
10066	ProcessStageParameter	
10067	Desktop Flow Binary	
10068	Connection Reference	
10069	Help Page	
10070	Tour	
10071	BotContent	
10072	ConversationTranscript	Contains the transcripts of conversations between participants

Value	Label	Description
		such as customers, Virtual Agents or Human agents.
10073	Chatbot	Represents a Power Virtual Agents Chatbot. https://powerva.microsoft.com/|
10074	Chatbot subcomponent	Holds key authoring components of a Chatbot such a topics, entities, variables, etc.
10081	Comment	A collaborative comment on a maker artifact
10082	PDF Setting	PDF Settings to save enabled pdf entities
10083	Activity File Attachment	Attachment entity with data stored in file type attribute
10084	Teams chat	For internal use only. Entity which stores association data of Dynamics 365 records with Microsoft Teams chat
10085	Service Configuration	
10086	SLA KPI	
10087	Knowledge Management Setting	Setup knowledge management for your organization.
10088	Knowledge Federated Article	
10089	Knowledge Federated Article Incident	
10090	Integrated search provider	Ingest and search files, documents, or articles from data sources outside of your current Dynamics 365 organization with a unified ranking.
10091	Search provider	
10092	Knowledge Article Image	
10093	Knowledge Interaction Insight	Knowledge Interaction Insight
10094	Knowledge Search Insight	Knowledge Search Insight

Value	Label	Description
10095	Knowledge article language setting	Allows you to select default language for knowledge authoring.
10096	Knowledge Article Attachment	
10097	Knowledge personalization	Allows users to personalize their knowledge search filters and knowledge authoring language.
10098	Knowledge Article Template	Organizational Knowledge Article Template for Internal and external creation of Knowledge Articles.
10099	Knowledge search personal filter config	Allows you to configure and manage personal filter settings.
10100	Knowledge search filter	Allows you to configure and manage filter settings.
10102	Plugin Package	
10103	PowerfxRule	
10104	SupportUserTable	
10105	Key Vault Reference	Contains data that refers to an Azure Key Vault containing credentials used to connect to secure web-hosted resources.
10106	Managed Identity	Contains data to represent a Microsoft Entra ID Application used to connect to secure web-hosted resources.
10107	Ms Graph Resource To Subscription	For internal use only. The mapping between Ms Graph Resources and Subscriptions.
10108	Virtual Entity Metadata	Holds metadata values for virtual entities
10109	MobileOfflineProfileExtension	
10110	MobileOfflineProfileItemFilter	
10111	TeamMobileOfflineProfileMembership	
10112	UserMobileOfflineProfileMembership	

Value	Label	Description
10113	OrganizationDataSyncSubscription	
10114	OrganizationDataSyncSubscriptionEntity	
10115	OrganizationDataSyncState	Information regarding data synchronization state
10116	App Insights Metadata	Metadata for App Insights Platform components
10117	Workflow Action Status	PA Workflows action processing status
10118	NonRelational Data Source	
10119	Notification	Notification to be provided to a user.
10120	User Rating	
10121	Insights Store Data Source	
10122	Insights Store Virtual Entity	Insights Store Virtual Entity
10123	RoleEditorLayout	
10124	App Action	Contains Modern Command Information
10125	App Action Migration	
10126	App Action Rule	
10129	Card	Card
10130	Entity link chat configuration	
10131	Rich Text Attachment	Image or file attached to a rich text field
10132	Custom Control Extended Setting	
10133	SearchRelationshipSettings	
10134	Search Telemetry	Entity to log telemetry that used to improve search quality
10135	Virtual Connector Data Source	
10136	Virtual Table Column Candidate	

Value	Label	Description
10137	AI Builder Feedback Loop	
10138	AI Form Processing Document	
10139	AI Object Detection Image	
10140	AI Object Detection Label	
10141	AI Object Detection Bounding Box	
10142	AI Object Detection Image Mapping	
10144	AI Builder Dataset	
10145	AI Builder Dataset File	
10146	AI Builder Dataset Record	
10147	AI Builder Datasets Container	
10148	AI Builder File	
10149	AI Builder File Attached Data	
10150	PM Analysis History	
10151	PM Calendar	
10152	PM Calendar Version	
10153	PM Inferred Task	
10154	PM Process Extended Metadata Version	
10155	PM Process Template	
10156	PM Process User Settings	
10157	PM Process Version	
10158	PM Recording	
10159	PM Template	
10160	PM View	
10161	Analysis Component	
10162	Analysis Job	
10163	Analysis Result	

Value	Label	Description
10164	Analysis Result Detail	
10165	Solution Health Rule	
10166	Solution Health Rule Argument	
10167	Solution Health Rule Set	Represents a set that owns a number of solution health rules.
10168	Power BI Dataset	
10169	Power BI Mashup Parameter	
10170	Power BI Report	
10171	List Operation	System operation used to perform lengthy and asynchronous list operations on large data sets, such as adding members to a list.
10172	Marketing Form Display Attributes	Setting to allow customized form for In-app Marketing Form
10173	Database Version	Stores the latest database version for a solution, for internal use only.
10174	Upgrade Run	Contains logging information about a run of a Package Deployer package that upgrades a solution
10175	Upgrade Step	One step during an upgrade, such as a single method or stored procedure.
10176	Upgrade Version	Information about upgrading from one release to the next release
10177	Activity monitor	Entity that tracks ARC runtime information.
10178	Unified Routing Setup Tracker	Unified Routing Setup Trackers
10179	Available Times	
10180	Available Times Data Source	
10181	resource group data source	
10182	Virtual Resource Group Resource	

Value	Label	Description
10183	Migration tracker	Entity that tracks the migration process of legacy to modern SLA/ARC items
10184	Asset Category Template Association	
10185	Asset Template Association	
10186	Customer Asset	Specify Customer Asset.
10189	Customer Asset Attachment	Attachments for Customer Asset
10190	Customer Asset Category	The Category of Customer Asset.
10191	Functional Location	
10192	Property Definition	
10193	Property Asset Association	
10194	Property Log	
10195	Property Template Association	
10196	Template For Properties	
10200	IoT Alert	
10201	IoT Device	Represents a connected device that can be registered with an IoT provider.
10202	IoT Device Category	Used to categorize IoT devices.
10203	IoT Device Command	Represents an outgoing message to a device connected to an IoT provider.
10204	IoT Device Command Definition	Metadata for commands that a device or a device category supports.
10205	IoT Device Data History	The name of the entity that holds the device data every time a device data pull occurs between Dynamics 365 and an IoT provider
10206	IoT Device Property	Link entity between IoT Device Category and IoT Property

Value	Label	Description
		Definition. This is used to model properties and tags for devices.
10207	IoT Device Registration History	Tracks registration activities on an IoT device.
10208	IoT Device Visualization Configuration	IoT Device Visualization Configuration
10209	IoT Field Mapping	
10210	IoT Property Definition	Defines a device property or a parameter that can be used for one or more command definitions.
10211	IoT Provider	The IoT Provider where a device is registered and through which all interactions with the device take place
10212	IoT Provider Instance	An instance of an IoT Provider.
10213	IoT Settings	
10216	IoT Alert to Case Process	Base entity for process IoT to Case Process
10218	Playbook Callable Context	
10219	Playbook activity	Stores the details of the activities to be created when a playbook is launched.
10220	Playbook activity attribute	Stores attribute names and values of the playbook activity.
10221	Playbook category	List of categories for which a playbook can be created.
10222	Playbook	Actual instance of a playbook template once it is launched.
10223	Playbook template	Playbook templates contains the definition of the Playbook that helps to standardize a set of best practices or next best actions.
10225	admin_settings_entity	
10226	Collab Space Team Association	Collab Space Team Association

Value	Label	Description
10227	CRM Connection	
10228	Tagged Record	Tagged Record - Microsoft Sales Copilot
10229	Microsoft Sales Copilot customer list	
10230	msdyn_vivaentitysetting	Entity level settings for Microsoft Sales Copilot
10231	msdyn_vivaorgsetting	Org level settings for Viva apps
10232	msdyn_vivausersetting	User level settings for Microsoft Sales Copilot
10233	App profile	
10234	Application Extension	
10235	Application Tab Template	
10236	App profile role mapping	
10237	Notification Field	
10238	Notification Template	
10239	Session Template	
10240	Template Parameter	
10246	Channel Integration Framework v2.0 Provider	Entity that holds the configuration data for a third-party voice channel provider based on Channel Integration Framework v2.0
10248	Channel Integration Framework v1.0 Provider	Entity that holds the configuration data for a channel provider based on Channel Integration Framework v1.0
10249	Notification Field (Deprecated)	Defines a field (key, templateValue) that needs to be populated in the notification body.
10250	Notification Template (Deprecated)	Template for a notification
10251	App Parameter Definition (Deprecated)	
10252	Session Templates (Deprecated)	

Value	Label	Description
10253	Application Tab Template (Deprecated)	An application tab template with various template parameters defined.
10254	Parameter (Deprecated)	Template parameter values for a given application template
10255	Template Tag (Deprecated)	Tags associated with templates. Templates are discovered via tags
10256	Application Type (Deprecated)	Define a UCI pagetype. For each pagetype, define the parameters that need to be a part of the template for this application type
10265	Conversation Data (Deprecated)	Primary entity for a conversation
10266	KPI Event Data	Primary entity for a kpi event
10267	KPI Event Definition	Primary entity for defining a KPI event
10268	Session Data (Deprecated)	Primary entity for session data
10269	Session Participant Data (Deprecated)	
10270	Channel Definition	Stores details about a channel definition.
10271	Channel Definition Consent	
10272	Channel Definition Locale	
10273	Channel Instance	
10274	Channel Instance Account	
10275	Channel Message Part	
10276	Consuming Application	Consuming Application that use Unified Channel
10277	msdyn_DefExtendedChannelInstance	
10278	msdyn_DefExtendedChannelInstanceAccount	
10279	Productivity pane configuration	
10280	Pane tab configuration	
10281	Pane tool configuration	

Value	Label	Description
10283	Agent script	Agent script v2
10284	Agent script step	
10286	Action Input Parameter	Attributes of action input parameters
10287	Action Output Parameter	Attributes of action output parameters
10288	Macro Action Template	Attributes for macro action template
10289	Macro Solution Configuration	Macro solution related configurations
10290	Macro Connector	Attributes for macro connectors
10291	Macro Run History	Stores history of macro runs
10292	Parameter definition	Macro parameter definitions
10295	Adaptive Card Configuration	Adaptive Card Configuration
10296	Smartassist configuration	Stores Smartassist configurations
10298	Microsoft Teams Graph resource Entity	Entity which stores collaboration data of Dynamics 365 with Microsoft Teams
10299	msdyn_msteamssetting	
10300	msdyn_msteamssettingsv2	
10301	Microsoft Teams Collaboration entity	Entity which stores collaboration data of Dynamics 365 with Microsoft Teams
10302	Teams Dialer Admin settings	
10303	Teams Contact Suggestion by AI	
10304	Contact suggestion rule	
10305	Contact suggestion ruleset	
10306	Microsoft Teams chat association entity	For internal use only. Entity which stores association data of Dynamics 365 records with Microsoft Teams chat

Value	Label	Description
10307	Microsoft Teams chat suggestion	For internal use only
10308	Forecast Manual Adjustment History	Forecast Manual Adjustment History
10309	Distributed Lock	Distributed Locks
10310	Entity Delta Change	Entity Delta Changes
10311	File Upload Status Tracker	File Upload Status Tracker
10312	Forecast	Forecast
10313	Forecast Configuration	
10314	Forecast definition	Defines the parameters used for forecasting.
10315	Forecasting Cache	Forecasting Cache
10316	Forecast Insights	Forecast Insights
10317	Forecast	Stores sales predictions for your team or organization. For internal use.
10318	Forecast Prediction Data	Forecast Prediction Data
10319	Forecast Prediction Status	Forecast Prediction Status
10320	Forecast recurrence	Stores recalculation information for each recurrence of the forecast hierarchy. For internal use.
10321	Recompute Tracker	
10322	Forecast Recurrence	Forecast Recurrence
10323	ShareAs Configuration	ShareAs Configuration
10324	Customer email communication	
10326	Recurring Sales Action	
10327	msdyn_relationshipinsightsunifiedconfig	
10328	siconfig	
10329	SI Key Value Config	
10330	Usage Metric	

Value	Label	Description
10331	Action Card Regarding	
10332	Action Card Role Setting	
10333	EntityRankingRule	
10334	flowcardtype	
10335	salesinsightssettings	Storing settings for studio feature
10336	Auto Capture Rule	
10337	Auto Capture Settings	
10338	UntrackedAppointment	
10339	Suggested Activity	
10340	Suggested Activity Data Source	
10341	Suggested Contact	
10342	Suggested contacts data source	
10343	Notes analysis Config	
10344	icebreakersconfig	
10345	dealmanageraccess	
10346	Deal manager settings	Deal manager settings
10347	Recording	
10348	Attribute Influence Statistics	
10349	Predictive Model Score	
10350	Predictive Score	
10351	Real Time Scoring	Stores meta data information for real time scoring.
10352	Time spent in BPF	
10353	OpportunityModelConfig	
10354	LeadModelConfig	
10355	ModelPreviewStatus	

Value	Label	Description
10356	Profile Album	Contains user profile images that are stored as attachments and displayed in posts.
10357	Post Configuration	Enable or disable entities for Activity Feeds and Yammer collaboration.
10358	Post Rule Configuration	Enable or disable system post rules for an entity for Activity Feeds and Yammer.
10359	Wall View	Contains information regarding which views are available for users to display on their personal walls. Only an administrator can specify the views that users can choose from to display on their personal walls.
10360	Filter	Contains user personalization information regarding which of the administrator's selected views to display on a user's personal wall.
10361	Customer Voice alert	
10362	Customer Voice alert rule	
10363	Customer Voice survey email template	Template for an email message that contains the survey invitation link.
10364	Customer Voice file response	Response to a file upload question.
10365	Customer Voice localized survey email template	Stores localized data for email templates.
10366	Customer Voice project	Set of surveys to collect feedback.
10367	Customer Voice survey question	Question in a survey to collect feedback.
10368	Customer Voice survey question response	Response to a question in a survey.
10369	Customer Voice satisfaction metric	Satisfaction metric defined for a project.
10370	Customer Voice survey	Set of questions to collect

Value	Label	Description
		feedback.
10371	Customer Voice survey invite	Activity that tracks a survey invitation sent to a person.
10372	Customer Voice survey reminder	Email reminders for surveys created in Customer Voice.
10373	Customer Voice survey response	Response to a survey.
10374	Customer Voice unsubscribed recipient	Email address of an unsubscribed respondent.
10375	AddToCalendar style	
10376	basestyle	
10377	Button style	
10378	Code style	
10379	Column style	
10380	Content Block	
10381	Divider style	
10382	General styles	
10383	imagestyle	
10384	Layout Style	
10385	QR code style	
10386	Text style	
10387	Video style	
10388	CSAdminConfig	
10389	Custom API Ruleset Configuration	Configuration table for setting up custom APIs for usage inside the Unified routing system
10390	Decision contract	Stores information about contract that will be required for ruleset definition
10391	Decision rule set	Contains list of rules to define demand and assignment behavior

Value	Label	Description
10392	Rulesetentitymapping	For internal use only entity used to store an implicit mapping between a ruleset and polymorphic entity
10393	Routing diagnostic item	The entity used to store unified routing diagnostic data.
10394	Routing diagnostic	
10395	Inbox Configuration	
10396	Case Enrichment	
10397	Case Suggestion	
10398	Case Suggestion Request Payload	
10399	Case Suggestions Data Souce	
10400	KB Enrichment	
10401	Knowledge Article Suggestion	
10402	Knowledge Article Suggestion Data Source	
10403	Suggestion Interaction	
10404	Suggestion request payload	
10405	Suggestions Model Summary	Suggestions Model Summary entity
10406	Suggestions Setting	Suggestions settings entity
10407	Data Analytics Admin Settings (Deprecated)	Data Analytics Admin Settings (Deprecated)
10408	Data Analytics User Customized Report	Data Analytics User Customized Report
10409	Data Analytics Dataset	Data Analytics Power BI Datasets
10410	Data Analytics Report	Data Analytics Reports
10411	Data Analytics Workspace	Data Analytics Power BI Workspaces
10412	Insights	Analytics and insights feature entity
10413	Report Bookmark	

Value	Label	Description
10414	Agent Resource Forecasting	Agent Resource Forecasting
10415	[Deprecated] Dynamics Customer Service Analytics	[Deprecated] Controls access to Analytics Reporting Sitemap in Dynamics Customer Service App
10416	Case Topic	
10417	Case Topic Setting	Case Topic Setting Entity
10418	Case Topic Summary	Case Topic Summary Entity
10419	Case topic Incident mapping	Cases mapping with the case topics
10420	Customer Service historical analytics	Customer Service historical analytics
10421	Forecast (preview)	Case, Conversation Volume Forecast analytics
10422	Knowledge analytics	Knowledge analytics
10423	Forecast Summary and Setting	
10424	Keywords Description Suggestion Setting	Keywords Description Suggestion settings entity
10425	Swarm	Tracks the list of swarms created by agents to resolve the customer issues
10426	Swarm participant	Stores the participants information of swarm
10427	Swarm participant rule	Rules to fetch participants based on their role
10428	Swarm role	Stores the different participant roles and associated role type defined
10429	Swarm skill	Stores the skills required for the swarm
10430	Swarm template	Entity which stores different templates for the swarm
10431	Master Entity Routing Configuration	Defines master routing details for the entity.

Value	Label	Description
10432	Routing Rule Set Setting	
10433	Assignment Configuration	
10434	Assignment Configuration Step	
10435	Capacity Profile	Capacity Profiles
10436	Overflow Action Config	Overflow action configurations.
10437	Preferred Agent	Preferred Agent Table, table used to store the mapping between the system user and contact/account
10438	Preferred Agent Customer Identity	Used for storing the table used to identify customer and the corresponding associated table
10439	Preferred Agent Routed Entity	Preferred Agent Routed table used to store information for routed table name and customer identifying column on the table
10440	Routing configuration	Defines routing details for the workstream
10441	Routing configuration step	Links the routing configuration with ruleset
10442	Bot Channel Registration	Bot channel registration used for channel integration
10443	Channel Configuration	Channel Configuration
10444	Channel State Configuration	Channel State Configuration
10445	Provisioning State	Provisioning state
10446	AdminAppState	State for each user in Admin App
10447	Agent Status history	Agent status history entity records any changes to agent's presence or available capacity.
10448	Power BI Configuration	Stores the Power BI configurations for supervisor experience
10449	Authentication Settings	Stores the settings for user authentication
10450	Auth Settings Entry	

Value	Label	Description
10451	Quick reply	Stores the quick replies that agents can use in the conversation control while interacting with the customers
10452	Entity Routing Context	Entity Routing Contexts
10453	Channel Capability	The capability that a channel can enable, such as co-browse, screen sharing.
10454	Conversation Action	The action that can be performed in the conversation.
10455	Conversation Action Locale	Localization information associated with the Conversation action.
10456	Conversation Message Block	A Message Block would constitute a block of messages up till an agent responds (including the messages sent by the agent). A follow up message, after an agent responds, will create another message block, this block again ends with the messages from the agent
10457	DeletedConversation	Holds id of deleted conversation
10458	Deprecated Workstream Entity Configuration	Stores entity routing configuration per workstream
10459	Entity	Entity Routing Configuration
10460	Ongoing conversation (Deprecated)	Tracks the interactions between the agents and customer
10461	Live work item event	This entity captures all events corresponding to a live work item.
10462	Work Stream	Stores information about the properties of work items that are generated by a unique channel endpoint
10463	Masking Rule	Masking Rules to apply to chat messages.
10464	Auto block rule	
10465	Bot Channel Registration Secret	

Value	Label	Description
10466	Omnichannel channel api conversation privilege	Entity for creating privilege for custom apis. The privileges for this entity will be used to restrict custom api access.
10467	Omnichannel channel api message privilege	Entity for creating privilege for custom apis. The privileges for this entity will be used to restrict custom api access.
10468	Channel api method mapping	OC channel api method mapping entity.
10469	External context	
10470	Flagged spam	
10471	Language	
10472	Conversation	Tracks the interaction between the agents and customer
10475	Context item value	Stores context item values for an engagement.
10476	Live Work Item Participant (Deprecated)	
10477	Conversation Sentiment	Stores the machine learning generated customer sentiment of the communication between the user and the customer
10478	Context variable	Stores the context variables for a work stream.
10479	Localization	Entity used for data localization on CRM.
10480	OC Payment Profile	
10481	Recording	Records the audio/video session
10482	Omnichannel Request	Entity to store Requests across Omnichannel.
10483	Rich message	Rich messages for Omnichannel integration
10484	Rich message map	Rich messages map for Omnichannel integration

Value	Label	Description
10485	Rule Item	Stores the condition and destination including Omnichannel queues or agents
10486	Sentiment daily topic	1. store properties regarding each topic cluster
2. used for dashboard visualization (like topic example) and calculation for topic mapping		
10487	Sentiment daily topic keyword	1. Store the keyword and frequency for topic clusters
2. Used for word cloud in the dashboard		
10488	Sentiment daily topic trending	1. Store the day to day topic mapping information
2. Used for dashboard visualization		
10489	Session	Session for interacting with a customer
10490	Session Participant Event	Session participant events
10491	Session Sentiment	Stores the session level sentiment for customer interactions calculated using AI.
10492	Message	Stores the system messages sent to the message receiver for various events.
10493	Tag	Tags for quick categorization
10494	Geo Location Provider	Geo Location Providers

Value	Label	Description
10495	Omnichannel Configuration	Configuration for Omnichannel
10496	Omnichannel Personalization	Stores personalization information of Omnichannel Agent/Supervisor dashboards
10497	Omnichannel Queue (Deprecated)	Stores omni-channel work items of a specific issue type or a specific team
10498	Omnichannel Sync Config	Config for entities to be synced to Omnichannel
10499	Operating Hour	Stores all the operating hours that are configured for an organization.
10500	Personal quick reply	Omnichannel agents's personal quick replies
10501	Personal sound setting	Entity to store personalized sound records for the users.
10502	Persona Security Role Mapping	
10503	Presence	Stores presence status information
10504	Provider	A list of third-party providers that bring capabilities into the application.
10505	RoutingRequest	Routing request definition entity
10506	Search Configuration	Configuration entity for agent search screen
10507	Sentiment analysis	Sentiment analysis configuration
10508	Session event	Stores the session events for a session
10509	Session participant	Users in a session interacting with the customer
10510	Audio File	Entity to store all audio files for Omnichannel
10511	Sound notification setting	Entity to store the sound notification setting records for channels and other scenarios.

Value	Label	Description
10512	Transcript	Stores the transcript of the communication between the user and the customer
10513	UR notification template	The entity stores all the templates used for UR notification.
10514	UR Notification Template Mapping	This entity stores the mapping for notification template and workstream.
10515	User settings	Parent entity for Omnichannel personalizations
10516	Self service	Stores each customer action as a record. The actions tracked are before an interaction is initiated. Agents will see the actions for an interaction in the Self Service section of the Customer Summary page, when enabled.
10523	Agent capacity update history	Agent capacity update history entity records any changes to agent capacity against a capacity profile
10524	Bookable Resource Capacity Profile	Bookable Resource Capacity Profile
10525	Work stream capacity profile	Work stream capacity profile
10526	Conversation Capacity profile	Conversation Capacity profile
10527	Conversation Characteristic	Characteristic associated to Omnichannel conversation
10528	Session Characteristic	Characteristic associated to Omnichannel session
10529	Skill Attachment Rule	
10530	Attach Skill	
10531	Model training details	Indicates model's training details
10532	Training data import configuration	Indicates the training data import configuration
10533	Characteristic mapping	Indicates the mapping of skills from training data to

Value	Label	Description
		characteristics
10534	Training record	Indicates individual training record to be used for model training
10535	Skill finder model	Indicates the OmniChannel Model for the corresponding AI model
10536	Effort estimate	Entity to persist effort model prediction results
10537	Effort estimation model	Indicates the OmniChannel Model for the corresponding AI model
10538	Effort model training details	Indicates model's training details
10539	ConversationInsight	
10540	CatalogEventStatusConfiguration	Status configuration for events in a catalog.
10541	Configuration	
10542	Trigger	Metadata for Cxp Events
10543	Triggers To Sdk Message Processing Steps	Mapping between CJO Marketing Triggers and Sdk Message Processing Steps
10544	EventParameterMetadata	Metadata for Cxp Event Parameters
10545	TrackingContext	
10546	Marketing feature configuration	
10547	Infobip channel instance	
10548	Infobip channel instance account	
10549	Link mobility channel instance	
10550	Link mobility channel instance account	
10551	TeleSign channel instance	
10552	TeleSign channel instance account	
10553	Twilio channel instance	
10554	Twilio channel instance account	
10555	Predefined Placeholder	

Value	Label	Description
10556	Metadata Entity Relationship	
10557	Metadata Item	
10558	Metadata Store State	
10559	Sales Tag	
10560	Sequence	
10561	Sequence Stat	
10562	Sequence Target	
10563	Sequence Target Step	
10564	Sequence Template	
10566	sabackupdiagnostic	
10567	SABatchRunInstance	
10568	salesroutingdiagnostic	
10569	SARunInstance	
10570	Segment	
10571	segmentsetting	
10572	segmentattribute	
10573	SegmentsUtil	
10574	Assignment Rule	Defines criteria based on which Entities are routed to Users or Sales Team
10575	Attribute	Sales Attribute
10576	Attribute Value	Attribute Value of sales person or sales team
10577	Assignment Map	
10578	Sales Assignment Setting	
10579	Sales routing run	
10581	Extended User Setting	
10582	Sales acceleration insights	Sales acceleration insights

Value	Label	Description
10583	Sales Acceleration settings	
10584	Suggestion	
10585	Work List Suggestion	
10586	Work list suggestion source	
10587	Work List View Configuration	Entity to store work list view configurations on filter, icons, sort etc
10588	Work Queue Record	Entity created to store WorkQueue Data Model Records
10589	Work Queue Record State	Entity created to store WorkQueue Records state
10590	Work list user setting	Entity created to store work list user setting
10591	WQDataSource	
10592	Suggestion Assignment Rule	
10593	Suggestion Principal Object Access	
10594	Suggestion Seller Priority	
10595	Data Hygiene Setting Info	Data Hygiene Setting Info
10596	Duplicate Detection Plugin Run	Duplicate Detection Plugin Run used to track successful and failure state of the Duplicate Detection Plugin
10597	Duplicate Lead Mapping	This enity is used to connect base lead to duplicate leads
10598	Lead Hygiene Setting	Lead Hygiene Setting
10599	Linked Entity Attribute Validity	
10600	ServiceOne provisioning request	
10601	SalesOmnichannel Message	
10602	Text message template	
10604	Bot Session	Bot specific sessions

Value	Label	Description
10605	conversationsuggestionrequestpayload	Conversation Suggestion Request Payload
10662	Sales usage telemetry reports	Sales usage telemetry reports
10663	Sales usage reporting	Sales usage reporting

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Added by: Active Solution Solution

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid

Property	Value
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

statecode

Property	Value
Description	Status of the Playbook Callable Context
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

statuscode

Property	Value
Description	Reason for the status of the Playbook Callable Context
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- VersionNumber

CreatedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Added by: Active Solution Solution

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdName

Added by: Active Solution Solution

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Added by: Active Solution Solution

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

VersionNumber

Added by: Active Solution Solution

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-Many Relationships

Relationship details provided where the msdyn_callablecontext table is the first table in the relationship. Listed by **SchemaName**.

msdyn_callablecontext_msdyn_playbooktemplate

IntersectEntityName: msdyn_callablecontext_msdyn_playbooktemplate

Table 1

Property	Value
IntersectAttribute	msdyn_callablecontextid
IsCustomizable	False
LogicalName	msdyn_callablecontext
NavigationPropertyName	msdyn_callablecontext_msdyn_playbooktemplate
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	msdyn_playbooktemplate
IntersectAttribute	msdyn_playbooktemplateid
NavigationPropertyName	msdyn_callablecontext_msdyn_playbooktemplate
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference
Web API Reference

Opportunity table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Potential revenue-generating event, or sale to an account, which needs to be tracked through a sales process to completion.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
CalculateActualValueOpportunity	CalculateActualValueOpportunityRequest
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GetQuantityDecimal	GetQuantityDecimalRequest
GrantAccess	GrantAccessRequest
IsValidStateTransition	IsValidStateTransitionRequest
LoseOpportunity	LoseOpportunityRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest

Message	SDK Assembly
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update
WinOpportunity	WinOpportunityRequest
WinQuote	WinQuoteRequest

Properties

Property	Value
CollectionSchemaName	Opportunities
DisplayCollectionName	Opportunities
DisplayName	Opportunity
EntitySetName	opportunities
IsBPFEntity	False
LogicalCollectionName	opportunities
LogicalName	opportunity
OwnershipType	UserOwned
PrimaryIdAttribute	opportunityid
PrimaryNameAttribute	name
SchemaName	Opportunity

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActualCloseDate

- ActualValue
- BudgetAmount
- BudgetStatus
- CampaignId
- CaptureProposalFeedback
- CloseProbability
- CompleteFinalProposal
- CompleteInternalReview
- ConfirmInterest
- CurrentSituation
- CustomerId
- CustomerIdType
- CustomerNeed
- CustomerPainPoints
- DecisionMaker
- Description
- DevelopProposal
- DiscountAmount
- DiscountPercentage
- EmailAddress
- EstimatedCloseDate
- EstimatedValue
- EvaluateFit
- FileDebrief
- FinalDecisionDate
- FreightAmount
- IdentifyCompetitors
- IdentifyCustomerContacts
- IdentifyPursuitTeam
- ImportSequenceNumber
- InitialCommunication
- IsRevenueSystemCalculated
- LastOnHoldTime
- msdyn_forecastcategory
- msdyn_OpportunityGrade
- msdyn_OpportunityScore
- msdyn_OpportunityScoreTrend
- msdyn_PredictiveScoreId
- msdyn_ScoreHistory
- msdyn_ScoreReasons

- msdyn_segmentid
- Name
- Need
- OpportunityId
- OpportunityRatingCode
- OriginatingLeadId
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- ParentAccountId
- ParentContactId
- ParticipatesInWorkflow
- PresentFinalProposal
- PresentProposal
- PriceLevelId
- PricingErrorCode
- PriorityCode
- ProcessId
- ProposedSolution
- PurchaseProcess
- PurchaseTimeframe
- PursuitDecision
- QualificationComments
- QuoteComments
- ResolveFeedback
- SalesStage
- SalesStageCode
- ScheduleFollowup_Prospect
- ScheduleFollowup_Qualify
- ScheduleProposalMeeting
- SendThankYouNote
- SkipPriceCalculation
- SLAId
- StageId
- StateCode
- StatusCode
- StepId
- StepName
- TeamsFollowed
- TimeLine

- TimeZoneRuleVersionNumber
- TotalAmount
- TotalAmountLessFreight
- TotalDiscountAmount
- TotalLineItemAmount
- TotalLineItemDiscountAmount
- TotalTax
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActualCloseDate

Property	Value
DateTimeBehavior	DateOnly
Description	Shows the date and time when the opportunity was closed or canceled.
DisplayName	Actual Close Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualclosedate
RequiredLevel	None
Type	DateTime

ActualValue

Property	Value
Description	Type the actual revenue amount for the opportunity for reporting and analysis of estimated versus actual sales. Field defaults to the Est. Revenue value when an opportunity is won.
DisplayName	Actual Revenue
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	actualvalue
MaxValue	1000000000000
MinValue	-1000000000000
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

BudgetAmount

Property	Value
Description	Type a value between 0 and 1,000,000,000,000 to indicate the lead's potential available budget.
DisplayName	Budget Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

BudgetStatus

Property	Value
Description	Select the likely budget status for the lead's company. This may help determine the lead rating or your sales approach.

Property	Value
DisplayName	Budget
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetstatus
RequiredLevel	None
Type	Picklist

BudgetStatus Choices/Options

Value	Label	Description
0	No Committed Budget	
1	May Buy	
2	Can Buy	
3	Will Buy	

CampaignId

Added by: Marketing Sales Solution

Property	Value
Description	Shows the campaign that the opportunity was created from. The ID is used for tracking the success of the campaign.
DisplayName	Source Campaign
IsValidForForm	True
IsValidForRead	True
LogicalName	campaignid
RequiredLevel	None
Targets	campaign
Type	Lookup

CaptureProposalFeedback

Property	Value
Description	Choose whether the proposal feedback has been captured for the opportunity.
DisplayName	Proposal Feedback Captured
IsValidForForm	True
IsValidForRead	True
LogicalName	captureproposalfeedback
RequiredLevel	None
Type	Boolean

CaptureProposalFeedback Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

CloseProbability

Property	Value
Description	Type a number from 0 to 100 that represents the likelihood of closing the opportunity. This can aid the sales team in their efforts to convert the opportunity in a sale.
DisplayName	Probability
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	closeprobability
MaxValue	100

Property	Value
MinValue	0
RequiredLevel	None
Type	Integer

CompleteFinalProposal

Property	Value
Description	Select whether a final proposal has been completed for the opportunity.
DisplayName	Final Proposal Ready
IsValidForForm	True
IsValidForRead	True
LogicalName	completefinalproposal
RequiredLevel	None
Type	Boolean

CompleteFinalProposal Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

CompleteInternalReview

Property	Value
Description	Select whether an internal review has been completed for this opportunity.
DisplayName	Complete Internal Review
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	completeinternalreview
RequiredLevel	None
Type	Boolean

CompleteInternalReview Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

ConfirmInterest

Property	Value
Description	Select whether the lead confirmed interest in your offerings. This helps in determining the lead quality and the probability of it turning into an opportunity.
DisplayName	Confirm Interest
IsValidForForm	True
IsValidForRead	True
LogicalName	confirminterest
RequiredLevel	None
Type	Boolean

ConfirmInterest Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

CurrentSituation

Property	Value
Description	Type notes about the company or organization associated with the opportunity.
DisplayName	Current Situation
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	currentsituation
MaxLength	2000
RequiredLevel	None
Type	Memo

CustomerId

Property	Value
Description	Select the customer account or contact to provide a quick link to additional customer details, such as address, phone number, activities, and orders.
DisplayName	Potential Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	customerid
RequiredLevel	ApplicationRequired
Targets	account,contact
Type	Customer

CustomerIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	Potential Customer Type
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridtype
RequiredLevel	ApplicationRequired
Type	EntityName

CustomerNeed

Property	Value
Description	Type some notes about the customer's requirements, to help the sales team identify products and services that could meet their requirements.
DisplayName	Customer Need
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	customerneed
MaxLength	2000
RequiredLevel	None
Type	Memo

CustomerPainPoints

Property	Value
Description	Type notes about the customer's pain points to help the sales team identify products and services that could address these pain points.

Property	Value
DisplayName	Customer Pain Points
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	customerpainpoints
MaxLength	2000
RequiredLevel	None
Type	Memo

DecisionMaker

Property	Value
Description	Select whether your notes include information about who makes the purchase decisions at the lead's company.
DisplayName	Decision Maker?
IsValidForForm	True
IsValidForRead	True
LogicalName	decisionmaker
RequiredLevel	None
Type	Boolean

DecisionMaker Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

Description

Property	Value
Description	Type additional information to describe the opportunity, such as possible products to sell or past purchases from the customer.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DevelopProposal

Property	Value
Description	Select whether a proposal has been developed for the opportunity.
DisplayName	Develop Proposal
IsValidForForm	True
IsValidForRead	True
LogicalName	developproposal
RequiredLevel	None
Type	Boolean

DevelopProposal Choices/Options

Value	Label	Description
1	completed	

Value	Label	Description
0	mark complete	

DefaultValue: 0

DiscountAmount

Property	Value
Description	Type the discount amount for the opportunity if the customer is eligible for special savings.
DisplayName	Opportunity Discount Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

DiscountPercentage

Property	Value
Description	Type the discount rate that should be applied to the Product Totals field to include additional savings for the customer in the opportunity.
DisplayName	Opportunity Discount (%)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountpercentage
MaxValue	100

Property	Value
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

EmailAddress

Property	Value
Description	The primary email address for the entity.
DisplayName	Email Address
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

EstimatedCloseDate

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the expected closing date of the opportunity to help make accurate revenue forecasts.
DisplayName	Est. Close Date
Format	DateOnly
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	estimatedclosedate
RequiredLevel	None
Type	DateTime

EstimatedValue

Property	Value
Description	Type the estimated revenue amount to indicate the potential sale or value of the opportunity for revenue forecasting. This field can be either system-populated or editable based on the selection in the Revenue field.
DisplayName	Est. Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedvalue
MaxValue	1000000000000
MinValue	-1000000000000
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

EvaluateFit

Property	Value
Description	Select whether the fit between the lead's requirements and your offerings was evaluated.
DisplayName	Evaluate Fit
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	evaluatefit
RequiredLevel	None
Type	Boolean

EvaluateFit Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

FileDebrief

Property	Value
Description	Choose whether the sales team has recorded detailed notes on the proposals and the account's responses.
DisplayName	File Debrief
IsValidForForm	True
IsValidForRead	True
LogicalName	filedebrief
RequiredLevel	None
Type	Boolean

FileDebrief Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

FinalDecisionDate

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the date and time when the final decision of the opportunity was made.
DisplayName	Final Decision Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	finaldecisiondate
RequiredLevel	None
Type	DateTime

FreightAmount

Property	Value
Description	Type the cost of freight or shipping for the products included in the opportunity for use in calculating the Total Amount field.
DisplayName	Freight Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None

Property	Value
Type	Money

IdentifyCompetitors

Property	Value
Description	Select whether information about competitors is included.
DisplayName	Identify Competitors
IsValidForForm	True
IsValidForRead	True
LogicalName	identifycompetitors
RequiredLevel	None
Type	Boolean

IdentifyCompetitors Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

IdentifyCustomerContacts

Property	Value
Description	Select whether the customer contacts for this opportunity have been identified.
DisplayName	Identify Customer Contacts
IsValidForForm	True
IsValidForRead	True
LogicalName	identifycustomercontacts
RequiredLevel	None

Property	Value
Type	Boolean

IdentifyCustomerContacts Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

IdentifyPursuitTeam

Property	Value
Description	Choose whether you have recorded who will pursue the opportunity.
DisplayName	Identify Sales Team
IsValidForForm	True
IsValidForRead	True
LogicalName	identifypursuitteam
RequiredLevel	None
Type	Boolean

IdentifyPursuitTeam Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

ImportSequenceNumber

Property	Value

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

InitialCommunication

Property	Value
Description	Choose whether someone from the sales team contacted this lead earlier.
DisplayName	Initial Communication
IsValidForForm	True
IsValidForRead	True
LogicalName	initialcommunication
RequiredLevel	None
Type	Picklist

InitialCommunication Choices/Options

Value	Label	Description
0	Contacted	
1	Not Contacted	

IsRevenueSystemCalculated

Property	Value
Description	Select whether the estimated revenue for the opportunity is calculated automatically based on the products entered or entered manually by a user.
DisplayName	Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	isrevenuesystemcalculated
RequiredLevel	None
Type	Boolean

IsRevenueSystemCalculated Choices/Options

Value	Label	Description
1	System Calculated	
0	User Provided	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None

Property	Value
Type	DateTime

msdyn_forecastcategory

Added by: Forecasting Solution

Property	Value
Description	Categories used for forecasting.
DisplayName	Forecast category
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_forecastcategory
RequiredLevel	None
Type	Picklist

msdyn_forecastcategory Choices/Options

Value	Label	Description
100000001	Pipeline	
100000002	Best case	
100000003	Committed	
100000004	Omitted	
100000005	Won	
100000006	Lost	

msdyn_OpportunityGrade

Added by: Predictive Opportunity Scoring Solution

Property	Value
Description	

Property	Value
DisplayName	(Deprecated) Opportunity Grade
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_opportunitygrade
RequiredLevel	None
Type	Picklist

msdyn_OpportunityGrade Choices/Options

Value	Label	Description
0	Grade A	
1	Grade B	
2	Grade C	
3	Grade D	

msdyn_OpportunityScore

Added by: Predictive Opportunity Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Opportunity Score
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_opportunityscore
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None

Property	Value
Type	Integer

msdyn_OpportunityScoreTrend

Added by: Predictive Opportunity Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Opportunity Score Trend
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_opportunityscoretrend
RequiredLevel	None
Type	Picklist

msdyn_OpportunityScoreTrend Choices/Options

Value	Label	Description
0	Improving	
1	Steady	
2	Declining	
3	Not enough info	

msdyn_PredictiveScoreId

Added by: Predictive Scoring Common Solution

Property	Value
Description	Predictive score
DisplayName	Predictive Score
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	msdyn_predictivescoreid
RequiredLevel	None
Targets	msdyn_predictivescore
Type	Lookup

msdyn_ScoreHistory

Added by: Predictive Opportunity Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Score History
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorehistory
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_ScoreReasons

Added by: Predictive Opportunity Scoring Solution

Property	Value
Description	
DisplayName	(Deprecated) Score Reasons
Format	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorereasons
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_segmentid

Added by: Segment solution Solution

Property	Value
Description	Unique identifier for Segment associated with Opportunity.
DisplayName	Segment Id
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_segmentid
RequiredLevel	None
Targets	msdyn_segment
Type	Lookup

Name

Property	Value
Description	Type a subject or descriptive name, such as the expected order or company name, for the opportunity.
DisplayName	Topic
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	300
RequiredLevel	ApplicationRequired
Type	String

Need

Property	Value
Description	Choose how high the level of need is for the lead's company.
DisplayName	Need
IsValidForForm	True
IsValidForRead	True
LogicalName	need
RequiredLevel	None
Type	Picklist

Need Choices/Options

Value	Label	Description
0	Must have	
1	Should have	
2	Good to have	
3	No need	

OpportunityId

Property	Value
Description	Unique identifier of the opportunity.
DisplayName	Opportunity
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	opportunityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

OpportunityRatingCode

Property	Value
Description	Select the expected value or priority of the opportunity based on revenue, customer status, or closing probability.
DisplayName	Rating
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityratingcode
RequiredLevel	None
Type	Picklist

OpportunityRatingCode Choices/Options

Value	Label	Description
1	Hot	
2	Warm	
3	Cold	

OriginatingLeadId

Property	Value
Description	Choose the lead that the opportunity was created from for reporting and analytics. The field is read-only after the opportunity is created and defaults to the correct lead when an opportunity is created from a converted lead.
DisplayName	Originating Lead
IsValidForForm	True
IsValidForRead	True
LogicalName	originatingleadid
RequiredLevel	None
Targets	lead
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id

Property	Value
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

ParentAccountId

Property	Value
Description	Choose an account to connect this opportunity to, so that the relationship is visible in reports and analytics, and to provide a quick link to additional details, such as financial information and activities.
DisplayName	Account
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	parentaccountid
RequiredLevel	None
Targets	account
Type	Lookup

ParentContactId

Property	Value
Description	Choose a contact to connect this opportunity to, so that the relationship is visible in reports and analytics.
DisplayName	Contact
IsValidForForm	True
IsValidForRead	True
LogicalName	parentcontactid
RequiredLevel	None
Targets	contact
Type	Lookup

ParticipatesInWorkflow

Property	Value
Description	Information about whether the opportunity participates in workflow rules.
DisplayName	Participates in Workflow
IsValidForForm	False
IsValidForRead	True
LogicalName	participatesinworkflow
RequiredLevel	None
Type	Boolean

ParticipatesInWorkflow Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

PresentFinalProposal

Property	Value
Description	Select whether the final proposal has been presented to the account.
DisplayName	Present Final Proposal
IsValidForForm	True
IsValidForRead	True
LogicalName	presentfinalproposal
RequiredLevel	None
Type	Boolean

PresentFinalProposal Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

PresentProposal

Property	Value
Description	Select whether a proposal for the opportunity has been presented to the account.
DisplayName	Presented Proposal

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	presentproposal
RequiredLevel	None
Type	Boolean

PresentProposal Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

PriceLevelId

Property	Value
Description	Choose the price list associated with this record to make sure the products associated with the campaign are offered at the correct prices.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	pricelevelid
RequiredLevel	None
Targets	pricelevel
Type	Lookup

PricingErrorCode

Property	Value

Property	Value
Description	Pricing error for the opportunity.
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	

Value	Label	Description
16	Missing Standard Cost	
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

PriorityCode

Property	Value

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
1	Default Value	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

ProposedSolution

Property	Value
Description	Type notes about the proposed solution for the opportunity.

Property	Value
DisplayName	Proposed Solution
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	proposedsolution
MaxLength	2000
RequiredLevel	None
Type	Memo

PurchaseProcess

Property	Value
Description	Choose whether an individual or a committee will be involved in the purchase process for the lead.
DisplayName	Purchase Process
IsValidForForm	True
IsValidForRead	True
LogicalName	purchaseprocess
RequiredLevel	None
Type	Picklist

PurchaseProcess Choices/Options

Value	Label	Description
0	Individual	
1	Committee	
2	Unknown	

PurchaseTimeframe

Property	Value
Description	Choose how long the lead will likely take to make the purchase.
DisplayName	Purchase Timeframe
IsValidForForm	True
IsValidForRead	True
LogicalName	purchasetimeframe
RequiredLevel	None
Type	Picklist

PurchaseTimeframe Choices/Options

Value	Label	Description
0	Immediate	
1	This Quarter	
2	Next Quarter	
3	This Year	
4	Unknown	

PursuitDecision

Property	Value
Description	Select whether the decision about pursuing the opportunity has been made.
DisplayName	Decide Go/No-Go
IsValidForForm	True
IsValidForRead	True
LogicalName	pursuitdecision
RequiredLevel	None
Type	Boolean

PursuitDecision Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

QualificationComments

Property	Value
Description	Type comments about the qualification or scoring of the lead.
DisplayName	Qualification Comments
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	qualificationcomments
MaxLength	2000
RequiredLevel	None
Type	Memo

QuoteComments

Property	Value
Description	Type comments about the quotes associated with the opportunity.
DisplayName	Quote Comments
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	quotecomments
MaxLength	2000
RequiredLevel	None
Type	Memo

ResolveFeedback

Property	Value
Description	Choose whether the proposal feedback has been captured and resolved for the opportunity.
DisplayName	Feedback Resolved
IsValidForForm	True
IsValidForRead	True
LogicalName	resolvefeedback
RequiredLevel	None
Type	Boolean

ResolveFeedback Choices/Options

Value	Label	Description
1	No	
0	Yes	

DefaultValue: 0

SalesStage

Property	Value
Description	Select the sales stage of this opportunity to aid the sales team in their efforts to win this opportunity.
DisplayName	Sales Stage

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	salesstage
RequiredLevel	None
Type	Picklist

SalesStage Choices/Options

Value	Label	Description
0	Qualify	
1	Develop	
2	Propose	
3	Close	

SalesStageCode

Property	Value
Description	Select the sales process stage for the opportunity to indicate the probability of closing the opportunity.
DisplayName	Process Code
IsValidForForm	True
IsValidForRead	True
LogicalName	salesstagecode
RequiredLevel	None
Type	Picklist

SalesStageCode Choices/Options

Value	Label	Description

Value	Label	Description
1	Default Value	

ScheduleFollowup_Prospect

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time of the prospecting follow-up meeting with the lead.
DisplayName	Scheduled Follow up (Prospect)
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	schedulefollowup_prospect
RequiredLevel	None
Type	DateTime

ScheduleFollowup_Qualify

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time of the qualifying follow-up meeting with the lead.
DisplayName	Scheduled Follow up (Qualify)
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	schedulefollowup_qualify
RequiredLevel	None
Type	DateTime

ScheduleProposalMeeting

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time of the proposal meeting for the opportunity.
DisplayName	Schedule Proposal Meeting
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	scheduleproposalmeeting
RequiredLevel	None
Type	DateTime

SendThankYouNote

Property	Value
Description	Select whether a thank you note has been sent to the account for considering the proposal.
DisplayName	Send Thank You Note
IsValidForForm	True
IsValidForRead	True
LogicalName	sendthankyounote
RequiredLevel	None
Type	Boolean

SendThankYouNote Choices/Options

Value	Label	Description
1	completed	
0	mark complete	

DefaultValue: 0

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip Price Calculation (For Internal Use)
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnRetrieve	

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the opportunity record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla

Property	Value
Type	Lookup

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the opportunity is open, won, or lost. Won and lost opportunities are read-only and can't be edited until they are reactivated.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Won	3	Won
2	Lost	4	Lost

StatusCode

Property	Value
Description	Select the opportunity's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	In Progress	0
2	On Hold	0
3	Won	1
4	Canceled	2
5	Out-Sold	2

StepId

Property	Value
Description	Shows the ID of the workflow step.
DisplayName	Step

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	stepid
RequiredLevel	None
Type	Uniqueidentifier

StepName

Property	Value
Description	Shows the current phase in the sales pipeline for the opportunity.
DisplayName	Pipeline Phase
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	stepname
MaxLength	200
RequiredLevel	None
Type	String

TeamsFollowed

Added by: Sales Patch Solution

Property	Value
Description	Number of users or conversations followed the record
DisplayName	TeamsFollowed
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	teamsfollowed
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

TimeLine

Property	Value
Description	Select when the opportunity is likely to be closed.
DisplayName	Timeline
IsValidForForm	True
IsValidForRead	True
LogicalName	timeline
RequiredLevel	None
Type	Picklist

TimeLine Choices/Options

Value	Label	Description
0	Immediate	
1	This Quarter	
2	Next Quarter	
3	This Year	
4	Not known	

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TotalAmount

Property	Value
Description	Shows the total amount due, calculated as the sum of the products, discounts, freight, and taxes for the opportunity.
DisplayName	Total Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight

Property	Value
Description	Shows the total product amount for the opportunity, minus any discounts. This value is added to freight and tax amounts in the calculation for the total amount of the opportunity.
DisplayName	Total Pre-Freight Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount

Property	Value
Description	Shows the total discount amount, based on the discount price and rate entered on the opportunity.
DisplayName	Total Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount

Property	Value
Description	Shows the sum of all existing and write-in products included on the opportunity, based on the specified price list and quantities.
DisplayName	Total Detail Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount

Property	Value
Description	Shows the total of the Manual Discount amounts specified on all products included in the opportunity. This value is reflected in the Total Detail Amount field on the opportunity and is added to any discount amount or rate specified on the opportunity.
DisplayName	Total Line Item Discount Amount

Property	Value
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	0
RequiredLevel	None
Type	Money

TotalTax

Property	Value
Description	Shows the total of the Tax amounts specified on all products included in the opportunity, included in the Total Amount field calculation for the opportunity.
DisplayName	Total Tax
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- ActualValue_Base
- BudgetAmount_Base
- CampaignIdName
- ContactId
- ContactIdName
- ContactIdYomiName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomerIdName
- CustomerIdYomiName

- DiscountAmount_Base
- EstimatedValue_Base
- ExchangeRate
- FreightAmount_Base
- IsPrivate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_PredictiveScoreIdName
- msdyn_segmentidName
- OnHoldTime
- OriginatingLeadIdName
- OriginatingLeadIdYomiName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- ParentAccountIdName
- ParentAccountIdYomiName
- ParentContactIdName
- ParentContactIdYomiName
- PriceLevelIdName
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TimeSpentByMeOnEmailAndMeetings
- TotalAmount_Base
- TotalAmountLessFreight_Base
- TotalDiscountAmount_Base
- TotalLineItemAmount_Base
- TotalLineItemDiscountAmount_Base
- TotalTax_Base
- TransactionCurrencyIdName
- VersionNumber

AccountId

Property	Value
Description	Internal attribute for storing customerid. Do not use this attribute directly; use parentaccountid instead.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

ActualValue_Base

Property	Value
Description	Value of the Actual Revenue in base currency.
DisplayName	Actual Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	actualvalue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

BudgetAmount_Base

Property	Value
Description	Value of the Budget Amount in base currency.
DisplayName	Budget Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	budgetamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CampaignIdName

Added by: Marketing Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignidname
MaxLength	100
RequiredLevel	None
Type	String

ContactId

Property	Value
Description	Internal attribute for storing customerid. Do not use this attribute directly; use parentcontactid instead.
DisplayName	Contact
IsValidForForm	False
IsValidForRead	True
LogicalName	contactid
RequiredLevel	None
Targets	contact
Type	Lookup

ContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidname
MaxLength	100
RequiredLevel	None
Type	String

ContactIdYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.

Property	Value
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	customeridname
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

CustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

DiscountAmount_Base

Property	Value
Description	Value of the Opportunity Discount Amount in base currency.
DisplayName	Opportunity Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount_base

Property	Value
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

EstimatedValue_Base

Property	Value
Description	Value of the Est. Revenue in base currency.
DisplayName	Est. Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	estimatedvalue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.

Property	Value
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

FreightAmount_Base

Property	Value
Description	Value of the Freight Amount in base currency.
DisplayName	Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

IsPrivate

Property	Value

Property	Value
Description	Indicates whether the opportunity is private or visible to the entire organization.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	False
LogicalName	isprivate
RequiredLevel	None
Type	Boolean

IsPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

msdyn_PredictiveScoreIdName

Added by: Predictive Scoring Common Solution

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_predictivescoreidname
MaxLength	128
RequiredLevel	None
Type	String

msdyn_segmentidName

Added by: Segment solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_segmentidname
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows the duration in minutes for which the opportunity was on hold.

Property	Value
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OriginatingLeadIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidname
MaxLength	100
RequiredLevel	None
Type	String

OriginatingLeadIdYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	originatingleadidyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser

Property	Value
RequiredLevel	None
Targets	systemuser
Type	Lookup

ParentAccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentaccountidname
MaxLength	100
RequiredLevel	None
Type	String

ParentAccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentaccountidyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ParentContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidname
MaxLength	100
RequiredLevel	None
Type	String

ParentContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentcontactidyominame

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this opportunity. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla

Property	Value
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

TimeSpentByMeOnEmailAndMeetings

Property	Value
Description	Total time spent for emails (read and write) and meetings by me in relation to the opportunity record.
DisplayName	Time Spent by me
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	timespentbymeonemailandmeetings
MaxLength	1250
RequiredLevel	None
Type	String

TotalAmount_Base

Property	Value
Description	Value of the Total Amount in base currency.
DisplayName	Total Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight_Base

Property	Value
Description	Value of the Total Pre-Freight Amount in base currency.
DisplayName	Total Pre-Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount_Base

Property	Value
Description	Value of the Total Discount Amount in base currency.
DisplayName	Total Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount_base
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount_Base

Property	Value
Description	Value of the Total Detail Amount in base currency.
DisplayName	Total Detail Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount_Base

Property	Value
Description	Value of the Total Line Item Discount Amount in base currency.
DisplayName	Total Line Item Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	totallineitemdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax_Base

Property	Value
Description	Value of the Total Tax in base currency.
DisplayName	Total Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- opportunity_OpportunityCloses
- opportunity_OrderCloses
- opportunity_QuoteCloses
- lk_leadtoopportunitysalesprocess_opportunityid

- opportunity_invoices
- Opportunity_OpportunityClose
- opportunity_quotes
- opportunity_sales_orders
- product_opportunities
- lead_qualifying_opportunity
- lk_opportunitysalesprocess_opportunityid
- msdyn_playbookinstance_opportunity
- CreatedOpportunity_BulkOperationLogs

opportunity_OpportunityCloses

Same as the opportunity_OpportunityCloses many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_OrderCloses

Same as the opportunity_OrderCloses many-to-one relationship for the orderclose table/entity.

Property	Value

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_QuoteCloses

Same as the opportunity_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

lk_leadtoopportunitysalesprocess_opportunityid

Same as the lk_leadtoopportunitysalesprocess_opportunityid many-to-one relationship for the leadtoopportunitysalesprocess table/entity.

Property	Value
ReferencingEntity	leadtoopportunitysalesprocess
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_leadtoopportunitysalesprocess
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: NoCascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

opportunity_invoices

Same as the opportunity_invoices many-to-one relationship for the invoice table/entity.

Property	Value
ReferencingEntity	invoice
ReferencingAttribute	opportunityid

Property	Value
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_invoices
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 30
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Opportunity_OpportunityClose

Same as the Opportunity_OpportunityClose many-to-one relationship for the opportunityclose table/entity.

Property	Value
ReferencingEntity	opportunityclose
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Opportunity_OpportunityClose
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

opportunity_quotes

Same as the opportunity_quotes many-to-one relationship for the quote table/entity.

Property	Value
ReferencingEntity	quote
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_quotes
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Sales Label: Order: 10
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

opportunity_sales_orders

Same as the opportunity_sales_orders many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_sales_orders
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 20

Property	Value
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_opportunities

Same as the product_opportunities many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_opportunities
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lead_qualifying_opportunity

Same as the lead_qualifying_opportunity many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead

Property	Value
ReferencingAttribute	qualifyingopportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	lead_qualifying_opportunity
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: Cascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

lk_opportunitysalesprocess_opportunityid

Same as the lk_opportunitysalesprocess_opportunityid many-to-one relationship for the opportunitysalesprocess table/entity.

Property	Value
ReferencingEntity	opportunitysalesprocess
ReferencingAttribute	opportunityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_opportunitysalesprocess
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: NoCascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_playbookinstance_opportunity

Added by: Playbook Solution

Same as the msdyn_playbookinstance_opportunity many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_opportunity
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

CreatedOpportunity_BulkOperationLogs

Added by: Marketing Solution

Same as the CreatedOpportunity_BulkOperationLogs many-to-one relationship for the bulkoperationlog table/entity.

Property	Value
ReferencingEntity	bulkoperationlog
ReferencingAttribute	createdobjectid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	CreatedOpportunity_BulkOperationLogs
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- opportunity_originating_lead
- opportunity_parent_account
- price_level_opportunties
- opportunity_parent_contact
- opportunity_customer_accounts
- opportunity_customer_contacts
- campaign_opportunities

opportunity_originating_lead

Added by: Lead Management Solution

See the opportunity_originating_lead one-to-many relationship for the lead table/entity.

opportunity_parent_account

Added by: System Solution Solution

See the opportunity_parent_account one-to-many relationship for the account table/entity.

price_level_opportunties

Added by: Product Management Solution

See the price_level_opportunties one-to-many relationship for the pricelevel table/entity.

opportunity_parent_contact

Added by: System Solution Solution

See the opportunity_parent_contact one-to-many relationship for the contact table/entity.

opportunity_customer_accounts

Added by: System Solution Solution

See the opportunity_customer_accounts one-to-many relationship for the account table/entity.

opportunity_customer_contacts

Added by: System Solution Solution

See the opportunity_customer_contacts one-to-many relationship for the contact table/entity.

campaign_opportunities

Added by: Marketing Solution

See the campaign_opportunities one-to-many relationship for the campaign table/entity.

Many-To-Many Relationships

Relationship details provided where the Opportunity table is the first table in the relationship. Listed by **SchemaName**.

opportunitycompetitors_association

IntersectEntityName: opportunitycompetitors

Table 1

Property	Value
IntersectAttribute	opportunityid
IsCustomizable	False
LogicalName	opportunity
NavigationPropertyName	opportunitycompetitors_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	competitor
IntersectAttribute	competitorid
NavigationPropertyName	opportunitycompetitors_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order: 40

See also

About the table reference
Web API Reference

OpportunityClose table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Activity that is created automatically when an opportunity is closed, containing information such as the description of the closing and actual revenue.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	OpportunityCloses
DisplayCollectionName	Opportunity Close Activities
DisplayName	Opportunity Close
EntitySetName	opportunitycloses
IsBPFEntity	False
LogicalCollectionName	opportunitycloses
LogicalName	opportunityclose
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	OpportunityClose

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualDurationMinutes
- ActualEnd
- ActualRevenue
- ActualStart
- BCC
- Category
- CC
- Community
- CompetitorId
- Customers
- DeliveryPriorityCode
- Description
- ExchangeItemId
- ExchangeWebLink
- From
- ImportSequenceNumber
- IsBilled
- IsMapiPrivate
- IsWorkflowCreated
- LastOnHoldTime
- LeftVoiceMail
- OpportunityId
- OpportunityStateCode
- OpportunityStatusCode
- OptionalAttendees
- Organizer
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Partners
- PriorityCode
- ProcessId
- RegardingObjectId
- RegardingObjectIdName
- RegardingObjectIdYomiName
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- ScheduledEnd
- ScheduledStart
- ServiceId
- SLAId
- SortDate
- StageId
- StateCode
- StatusCode
- Subcategory
- Subject
- TimeZoneRuleVersionNumber
- To
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActivityAdditionalParams

Property	Value
Description	Additional information provided by the external application as JSON. For internal use only.
DisplayName	Activity Additional Parameters
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value
Description	Unique identifier of the opportunity close activity.
DisplayName	Opportunity Close
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualDurationMinutes

Property	Value
Description	Actual duration of the opportunity close activity in minutes.
DisplayName	Actual Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Actual end time of the opportunity close activity.
DisplayName	Closed On

Property	Value
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualRevenue

Property	Value
Description	Actual revenue generated for the opportunity.
DisplayName	Actual Revenue
IsValidForForm	True
IsValidForRead	True
LogicalName	actualrevenue
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Actual start time of the opportunity close activity.
DisplayName	Actual Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True
IsValidForRead	True
LogicalName	bcc

Property	Value
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Category

Property	Value
Description	Category of the opportunity close activity.
DisplayName	Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	category
MaxLength	250
RequiredLevel	None
Type	String

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True
LogicalName	cc
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Community

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	
10	GroupMe	
11	Kik	
12	Telegram	
13	Skype	
14	Slack	
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

CompetitorId

Property	Value
Description	Unique identifier of the competitor with which the opportunity close activity is associated.
DisplayName	Competitor
IsValidForForm	True
IsValidForRead	True
LogicalName	competitorid
RequiredLevel	None
Targets	competitor
Type	Lookup

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

Description

Property	Value
Description	Activity that is created automatically when an opportunity is closed, containing information such as the description of the closing and actual revenue.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200

Property	Value
RequiredLevel	None
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

From

Property	Value
Description	Person who the activity is from.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBilled

Property	Value
Description	Information about whether the opportunity close activity was billed as part of resolving a case.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	True
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Information that specifies if the opportunity close activity was created from a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None

Property	Value
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OpportunityId

Property	Value
Description	Unique identifier of the opportunity closed.

Property	Value
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	ApplicationRequired
Targets	opportunity
Type	Lookup

OpportunityStateCode

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Status of the opportunity.
DisplayName	Status
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunitystatecode
RequiredLevel	None
Type	Picklist

OpportunityStateCode Choices/Options

Value	Label	Description
0	Open	
1	Won	
2	Lost	

OpportunityStatusCode

Added by: Sales Patch Version 2 Solution

Property	Value
Description	Status reason of the opportunity.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunitystatuscode
RequiredLevel	None
Type	Picklist

OpportunityStatusCode Choices/Options

Value	Label	Description
1	In Progress	

Value	Label	Description
2	On Hold	
3	Won	
4	Canceled	
5	Out-Sold	

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None
Targets	account,contact
Type	PartyList

PriorityCode

Property	Value
Description	Priority of the activity.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None

Property	Value
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

RegardingObjectId

Property	Value
Description	Unique identifier of the object with which the activity is associated.
DisplayName	Regarding
IsValidForForm	True
IsValidForRead	True
LogicalName	regardingobjectid
RequiredLevel	None
Targets	account,bookableresourcebooking,bookableresourcebookingheader,bulkoperation,campaign,campaignactivity,entitlement,entitlementtemplate,incid
Type	Lookup

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	400
RequiredLevel	None

Property	Value
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	400
RequiredLevel	None
Type	String

RegardingObjectTypeCode

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjecttypecode
RequiredLevel	None
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.

Property	Value
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	equipment,systemuser
Type	PartyList

ScheduledEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled end time of the opportunity close activity.
DisplayName	Scheduled End
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled start time of the opportunity close activity.
DisplayName	Scheduled Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

ServiceId

Property	Value
Description	Unique identifier of the service with which the opportunity close activity is associated.
DisplayName	Service
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceid
RequiredLevel	None

Property	Value
Targets	service
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the opportunity close activity is open, completed, or canceled. By default, opportunity close activities are completed unless the opportunity is reactivated, which updates them to canceled.

Property	Value
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Completed	2	Completed
2	Canceled	3	Canceled

StatusCode

Property	Value
Description	Reason for the status of the opportunity close activity.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Open	0
2	Completed	1
3	Canceled	2

Subcategory

Property	Value
Description	Subcategory of the opportunity close activity.
DisplayName	Sub-Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subcategory
MaxLength	250

Property	Value
RequiredLevel	None
Type	String

Subject

Property	Value
Description	Subject associated with the opportunity close activity.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subject
MaxLength	200
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- ActualRevenue_Base

- CompetitorIdName
- CompetitorIdYomiName
- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- ExchangeRate
- InstanceTypeCode
- IsRegularActivity
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OpportunityIdName
- OpportunityIdType
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- ScheduledDurationMinutes
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- ServiceIdName
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True
LogicalName	activitytypecode
RequiredLevel	SystemRequired

Property	Value
Type	EntityName

ActualRevenue_Base

Property	Value
Description	Value of the Actual Revenue in base currency.
DisplayName	Actual Revenue (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	actualrevenue_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CompetitorIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	competitoridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CompetitorIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	competitoridyominame
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

CreatedBy

Property	Value
Description	Unique identifier of the user who created the opportunity close activity.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the opportunity close activity was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the opportunityclose.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode

Property	Value
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsRegularActivity

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the opportunity close activity.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the opportunity close activity was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the opportunityclose.
DisplayName	Modified By (Delegate)

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	None
Type	String

OpportunityIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidtype
RequiredLevel	None
Type	EntityName

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

ScheduledDurationMinutes

Property	Value
Description	Scheduled duration of the opportunity close activity, specified in minutes.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledurationminutes

Property	Value
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was sent.
DisplayName	Date Sent
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

ServiceIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber

Property	Value
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

CampaignResponse_OpportunityCloses

Added by: Marketing Solution

Same as the CampaignResponse_OpportunityCloses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	originatingactivityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	CampaignResponse_OpportunityCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_OpportunityCloses
- bulkoperation_OpportunityCloses
- campaign_OpportunityCloses
- campaignactivity_OpportunityCloses
- msdyn_playbookinstance_OpportunityCloses
- opportunity_OpportunityCloses
- account_OpportunityCloses
- Opportunity_OpportunityClose
- competitor_opportunity_activities

lead_OpportunityCloses

Added by: Lead Management Solution

See the lead_OpportunityCloses one-to-many relationship for the lead table/entity.

bulkoperation_OpportunityCloses

Added by: Marketing Solution

See the bulkoperation_OpportunityCloses one-to-many relationship for the bulkoperation table/entity.

campaign_OpportunityCloses

Added by: Marketing Solution

See the campaign_OpportunityCloses one-to-many relationship for the campaign table/entity.

campaignactivity_OpportunityCloses

Added by: Marketing Solution

See the campaignactivity_OpportunityCloses one-to-many relationship for the campaignactivity table/entity.

msdyn_playbookinstance_OpportunityCloses

Added by: Playbook Solution

See the msdyn_playbookinstance_OpportunityCloses one-to-many relationship for the msdyn_playbookinstance table/entity.

opportunity_OpportunityCloses

See the opportunity_OpportunityCloses one-to-many relationship for the opportunity table/entity.

account_OpportunityCloses

Added by: System Solution Solution

See the account_OpportunityCloses one-to-many relationship for the account table/entity.

Opportunity_OpportunityClose

See the Opportunity_OpportunityClose one-to-many relationship for the opportunity table/entity.

competitor_opportunity_activities

See the competitor_opportunity_activities one-to-many relationship for the competitor table/entity.

See also

About the table reference
Web API Reference

OpportunityProduct table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Association between an opportunity and a product.

Added by: Sales Solution

Messages

Message	SDK Assembly
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	OpportunityProducts
DisplayCollectionName	Opportunity Products

Property	Value
DisplayName	Opportunity Product
EntitySetName	opportunityproducts
IsBPFEntity	False
LogicalCollectionName	opportunityproducts
LogicalName	opportunityproduct
OwnershipType	UserOwned
PrimaryIdAttribute	opportunityproductid
PrimaryNameAttribute	opportunityproductname
SchemaName	OpportunityProduct

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BaseAmount
- Description
- EntityImage
- ExtendedAmount
- ImportSequenceNumber
- IsPriceOverridden
- IsProductOverridden
- LineItemNumber
- ManualDiscountAmount
- OpportunityId
- OpportunityProductId
- OpportunityProductName
- OverriddenCreatedOn
- ParentBundleId
- ParentBundleIdRef
- PricePerUnit
- PricingErrorCode
- ProductAssociationId
- ProductDescription
- ProductId

- ProductName
- ProductTypeCode
- PropertyConfigurationStatus
- Quantity
- SequenceNumber
- SkipPriceCalculation
- Tax
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UoMId
- UTCConversionTimeZoneCode

BaseAmount

Property	Value
Description	Shows the total price of the opportunity product, based on the price per unit, volume discount, and quantity.
DisplayName	Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Description

Property	Value

Property	Value
Description	Type additional information to describe the opportunity product, such as manufacturing details.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

EntityImage

Added by: Active Solution Solution

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ExtendedAmount

Property	Value
Description	Shows the total amount due for the opportunity product, calculated on the Amount value minus the Manual Discount amount.
DisplayName	Extended Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None

Property	Value
Type	Integer

IsPriceOverridden

Property	Value
Description	Select whether the pricing on the opportunity product reflects an override of the product catalog pricing.
DisplayName	Price Overridden
IsValidForForm	True
IsValidForRead	True
LogicalName	ispriceoverridden
RequiredLevel	None
Type	Boolean

IsPriceOverridden Choices/Options

Value	Label	Description
1	Override Price	
0	Use Default	

DefaultValue: 0

IsProductOverridden

Property	Value
Description	For system use only.
DisplayName	Select Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	isproductoverridden
RequiredLevel	None
Type	Boolean

IsProductOverridden Choices/Options

Value	Label	Description
1	Write-In	
0	Existing	

DefaultValue: 0

LineItemNumber

Property	Value
Description	Type the line item number for the opportunity product to easily identify the product in the opportunity documents and make sure it's listed in the correct order.
DisplayName	Line Item Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	lineitemnumber
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ManualDiscountAmount

Property	Value

Property	Value
Description	Type the manual discount amount for the opportunity product to deduct any negotiated or other savings from the product total.
DisplayName	Manual Discount Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OpportunityId

Property	Value
Description	Unique identifier of the opportunity with which the opportunity product is associated.
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	SystemRequired
Targets	opportunity
Type	Lookup

OpportunityProductId

Property	Value

Property	Value
Description	Unique identifier of the opportunity product.
DisplayName	Opportunity Product
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	opportunityproductid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

OpportunityProductName

Added by: Sales Patch Solution

Property	Value
Description	Opportunity Product Name. Added for 1:n referential relationship (internal purposes only)
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityproductname
MaxLength	500
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentBundleId

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent Bundle
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	parentbundleid
RequiredLevel	None
Type	Uniqueidentifier

ParentBundleIdRef

Added by: Sales Patch Solution

Property	Value
Description	Choose the parent bundle associated with this product

Property	Value
DisplayName	Parent bundle product
IsValidForForm	True
IsValidForRead	True
LogicalName	parentbundleidref
RequiredLevel	None
Targets	opportunityproduct
Type	Lookup

PricePerUnit

Property	Value
Description	Shows the price per unit of the opportunity product, based on the price list specified on the parent opportunity.
DisplayName	Price Per Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

PricingErrorCode

Property	Value
Description	Select the pricing error for the opportunity product.

Property	Value
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	

Value	Label	Description
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

ProductAssociationId

Property	Value

Property	Value
Description	Unique identifier of the product line item association with bundle in the opportunity
DisplayName	Bundle Item Association
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productassociationid
RequiredLevel	None
Type	Uniqueidentifier

ProductDescription

Property	Value
Description	Type a detailed product description or additional notes about the opportunity product, such as talking points or product updates, that will assist the sales team when they discuss the product with the customer.
DisplayName	Write-In Product
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productdescription
MaxLength	500
RequiredLevel	None
Type	String

ProductId

Property	Value

Property	Value
Description	Choose the product to include on the opportunity to link the product's pricing and other information to the opportunity.
DisplayName	Existing Product
IsValidForForm	True
IsValidForRead	True
LogicalName	productid
RequiredLevel	None
Targets	product
Type	Lookup

ProductName

Property	Value
Description	Calculated field that will be populated by name and description of the product.
DisplayName	Product Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productname
MaxLength	500
RequiredLevel	None
Type	String

ProductTypeCode

Property	Value
Description	Product Type

Property	Value
DisplayName	Product type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	producttypecode
RequiredLevel	SystemRequired
Type	Picklist

ProductTypeCode Choices/Options

Value	Label	Description
1	Product	
2	Bundle	
3	Required Bundle Product	
4	Optional Bundle Product	
5	Project-based Service	

PropertyConfigurationStatus

Property	Value
Description	Status of the property configuration.
DisplayName	Property Configuration
IsValidForForm	True
IsValidForRead	True
LogicalName	propertyconfigurationstatus
RequiredLevel	SystemRequired
Type	Picklist

PropertyConfigurationStatus Choices/Options

Value	Label	Description
0	Edit	
1	Rectify	
2	Not Configured	

Quantity

Property	Value
Description	Type the amount or quantity of the product the customer would like to purchase.
DisplayName	Quantity
IsValidForForm	True
IsValidForRead	True
LogicalName	quantity
MaxValue	100000000000
MinValue	-100000000000
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

SequenceNumber

Property	Value
Description	Shows the ID of the data that maintains the sequence.
DisplayName	Sequence Number
Format	None
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	sequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip price calculation
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnCreate	
2	SkipPriceCalcOnUpdate	
3	SkipPriceCalcOnUpSert	

Tax

Property	Value

Property	Value
Description	Type the tax amount to be applied on the opportunity product.
DisplayName	Tax
IsValidForForm	True
IsValidForRead	True
LogicalName	tax
MaxValue	100000000000000
MinValue	-100000000000000
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UoMId

Property	Value
Description	Choose the unit of measurement for the base unit quantity for this purchase, such as each or dozen.
DisplayName	Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	uomid
RequiredLevel	None
Targets	uom
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BaseAmount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- ExtendedAmount_Base
- ManualDiscountAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName

- OpportunityIdName
- OpportunityStateCode
- OwnerId
- OwnerIdName
- OwnerIdType
- OwnerIdYomiName
- OwningBusinessUnit
- OwningTeam
- OwningUser
- PricePerUnit_Base
- ProductIdName
- Tax_Base
- TransactionCurrencyIdName
- UoMIdName
- VersionNumber
- VolumeDiscountAmount
- VolumeDiscountAmount_Base

BaseAmount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001

Property	Value
Precision	12
RequiredLevel	None
Type	Decimal

ExtendedAmount_Base

Property	Value
Description	Value of the Extended Amount in base currency.
DisplayName	Extended Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ManualDiscountAmount_Base

Property	Value
Description	Value of the Manual Discount Amount in base currency.
DisplayName	Manual Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount_base
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon

Property	Value
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the opportunityproduct.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	None
Type	String

OpportunityStateCode

Property	Value
Description	Select the status of the opportunity product.
DisplayName	Opportunity Status
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunitystatecode
RequiredLevel	SystemRequired
Type	Picklist

OpportunityStateCode Choices/Options

Value	Label	Description

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team
Type	Owner

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team

Property	Value
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

PricePerUnit_Base

Property	Value
Description	Value of the Price Per Unit in base currency.
DisplayName	Price Per Unit (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

Tax_Base

Property	Value
Description	Value of the Tax in base currency.
DisplayName	Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	tax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

VolumeDiscountAmount

Property	Value
Description	Shows the discount amount per unit if a specified volume is purchased. Configure volume discounts in the Product Catalog in the Settings area.
DisplayName	Volume Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount
MaxValue	922337203685477
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

VolumeDiscountAmount_Base

Property	Value
Description	Value of the Volume Discount in base currency.
DisplayName	Volume Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

One-To-Many Relationships

Listed by **SchemaName**.

- opportunityproduct_parent_opportunityproduct
- OpportunityProduct_Dynamicpropertyinstance
- opportunityproduct_parentref_opportunityproduct

opportunityproduct_parent_opportunityproduct

Same as the opportunityproduct_parent_opportunityproduct many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	parentbundleid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunityproduct_parent_opportunityproduct

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

OpportunityProduct_Dynamicpropertyinstance

Same as the OpportunityProduct_Dynamicpropertyinstance many-to-one relationship for the dynamicpropertyinstance table/entity.

Property	Value
ReferencingEntity	dynamicpropertyinstance
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	OpportunityProduct_Dynamicpropertyinstance
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: Cascade Unshare: NoCascade

opportunityproduct_parentref_opportunityproduct

Added by: Sales Patch Solution

Same as the opportunityproduct_parentref_opportunityproduct many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	parentbundleidref
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunityproduct_parentref_opportunityproduct
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- product_opportunities
- opportunityproduct_parent_opportunityproduct
- opportunity_products
- productAssociation_opportunity_product
- unit_of_measurement_opportunity_products
- opportunityproduct_parentref_opportunityproduct

product_opportunities

See the product_opportunities one-to-many relationship for the opportunity table/entity.

opportunityproduct_parent_opportunityproduct

See the opportunityproduct_parent_opportunityproduct one-to-many relationship for the opportunityproduct table/entity.

opportunity_products

Added by: Product Management Solution

See the opportunity_products one-to-many relationship for the product table/entity.

productAssociation_opportunity_product

Added by: Product Management Solution

See the productAssociation_opportunity_product one-to-many relationship for the productassociation table/entity.

unit_of_measurement_opportunity_products

Added by: Product Management Solution

See the unit_of_measurement_opportunity_products one-to-many relationship for the uom table/entity.

opportunityproduct_parentref_opportunityproduct

See the opportunityproduct_parentref_opportunityproduct one-to-many relationship for the opportunityproduct table/entity.

See also

About the table reference
Web API Reference

OpportunitySalesProcess table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Opportunity Sales Process Business Process Flow

Added by: Sales Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	OpportunitySalesProcesses
DisplayCollectionName	Opportunity Sales Process

Property	Value
DisplayName	Opportunity Sales Process
EntitySetName	opportunitysalesprocesses
IsBPFEntity	True
LogicalCollectionName	opportunitysalesprocesses
LogicalName	opportunitysalesprocess
OwnershipType	OrganizationOwned
PrimaryIdAttribute	businessprocessflowinstanceid
PrimaryNameAttribute	name
SchemaName	OpportunitySalesProcess

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActiveStageId
- ActiveStageStartedOn
- BusinessProcessFlowInstanceId
- CompletedOn
- ImportSequenceNumber
- Name
- OpportunityId
- OverriddenCreatedOn
- ProcessId
- QuoteId
- SalesOrderId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActiveStageId

Property	Value
Description	Unique identifier of the active stage for the Business Process Flow instance.
DisplayName	Active Stage
IsValidForForm	True
IsValidForRead	True
LogicalName	activestageid
RequiredLevel	None
Targets	processstage
Type	Lookup

ActiveStageStartedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when current active stage is started.
DisplayName	Active Stage Started On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	activestagestartedon
RequiredLevel	None
Type	DateTime

BusinessProcessFlowInstanceId

Property	Value
Description	Unique identifier for Opportunity Sales Process bpf entity instances
DisplayName	Opportunity Sales Process Instance Id
IsValidForForm	False

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	businessprocessflowinstanceid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

CompletedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when Business Process Flow instance is completed.
DisplayName	Completed On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	completedon
RequiredLevel	None
Type	DateTime

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	Process Name.
DisplayName	Process Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

OpportunityId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	opportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ProcessId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Process
IsValidForForm	True
IsValidForRead	True
LogicalName	processid

Property	Value
RequiredLevel	None
Targets	workflow
Type	Lookup

QuoteId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Related Quote
IsValidForForm	True
IsValidForRead	True
LogicalName	quoteid
RequiredLevel	None
Targets	quote
Type	Lookup

SalesOrderId

Property	Value
Description	Unique identifier of the workflow associated to the Business Process Flow instance.
DisplayName	Related Sales Order
IsValidForForm	True
IsValidForRead	True
LogicalName	salesorderid
RequiredLevel	None
Targets	salesorder
Type	Lookup

StateCode

Property	Value
Description	Shows whether the Delve action record is pending, completed, or tracking.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

StatusCode

Property	Value
Description	Select the delve action record status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Active	0
2	Finished	1
3	Aborted	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None

Property	Value
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	Comma delimited string of process stage ids that represent visited stages of the Business Process Flow instance.
DisplayName	Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647

Property	Value
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActiveStageIdName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- Duration
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OpportunityIdName
- OrganizationId
- OrganizationIdName
- ProcessIdName
- QuoteIdName
- SalesOrderIdName
- TransactionCurrencyIdName
- VersionNumber

ActiveStageIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	activestageidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedBy

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.

Property	Value
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

Duration

Property	Value
Description	Duration the business process flow was active.
DisplayName	Duration
Format	Duration
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	duration
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ProcessIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	processidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

QuoteIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	quoteidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SalesOrderIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

TransactionCurrencyIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lk_opportunitysalesprocess_opportunityid
- lk_opportunitysalesprocess_quoteid
- lk_opportunitysalesprocess_salesorderid

lk_opportunitysalesprocess_opportunityid

See the lk_opportunitysalesprocess_opportunityid one-to-many relationship for the opportunity table/entity.

lk_opportunitysalesprocess_quoteid

See the lk_opportunitysalesprocess_quoteid one-to-many relationship for the quote table/entity.

lk_opportunitysalesprocess_salesorderid

See the lk_opportunitysalesprocess_salesorderid one-to-many relationship for the salesorder table/entity.

See also

About the table reference
Web API Reference

OrderClose table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Activity generated automatically when an order is closed.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	OrderCloses
DisplayCollectionName	Order Close Activities
DisplayName	Order Close
EntitySetName	ordercloses
IsBPFEntity	False
LogicalCollectionName	ordercloses
LogicalName	orderclose
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	OrderClose

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualDurationMinutes
- ActualEnd
- ActualStart
- BCC
- Category
- CC
- Community
- Customers
- DeliveryPriorityCode
- Description
- ExchangeItemId
- ExchangeWebLink
- From
- ImportSequenceNumber
- IsBilled
- IsMapiPrivate
- IsWorkflowCreated
- LastOnHoldTime
- LeftVoiceMail
- OptionalAttendees
- OrderNumber
- Organizer
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Partners
- PriorityCode
- ProcessId
- RegardingObjectId
- RegardingObjectIdName
- RegardingObjectIdYomiName
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- Revision
- SalesOrderId
- ScheduledEnd
- ScheduledStart
- ServiceId
- SLAId
- SortDate
- StageId
- StateCode
- StatusCode
- Subcategory
- Subject
- TimeZoneRuleVersionNumber
- To
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActivityAdditionalParams

Property	Value

Property	Value
Description	Additional information provided by the external application as JSON. For internal use only.
DisplayName	Activity Additional Parameters
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value
Description	Unique identifier of the order close activity.
DisplayName	Order Close
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualDurationMinutes

Property	Value
Description	Actual duration of the order close activity in minutes.
DisplayName	Actual Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Actual end time of the order close activity.
DisplayName	Closed Date

Property	Value
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Actual start time of the order close activity.
DisplayName	Actual Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True
IsValidForRead	True
LogicalName	bcc
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Category

Property	Value
Description	Category of the order close activity.
DisplayName	Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	category
MaxLength	250

Property	Value
RequiredLevel	None
Type	String

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True
LogicalName	cc
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Community

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	
10	GroupMe	
11	Kik	
12	Telegram	
13	Skype	

Value	Label	Description
14	Slack	
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

Description

Property	Value
Description	Activity generated automatically when an order is closed.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200
RequiredLevel	None
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

From

Property	Value
Description	Person who the activity is from.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None

Property	Value
Targets	account,contact,lead,systemuser
Type	PartyList

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBilled

Property	Value
Description	Information about whether the order close activity was billed as part of resolving a case.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Information that specifies if the order close activity was created from a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

OrderNumber

Property	Value
Description	Order number.
DisplayName	Order Number
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	ordernumber
MaxLength	100
RequiredLevel	None
Type	String

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype

Property	Value
RequiredLevel	SystemRequired
Type	EntityName

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None
Targets	account,contact
Type	PartyList

PriorityCode

Property	Value
Description	Priority of the activity.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

RegardingObjectId

Property	Value
Description	Unique identifier of the object with which the activity is associated.
DisplayName	Regarding
IsValidForForm	True
IsValidForRead	True
LogicalName	regardingobjectid
RequiredLevel	None
Targets	account,bookableresourcebooking,bookableresourcebookingheader,bulkoperation,campaign,campaignactivity,entitlement,entitlementtemplate,incid
Type	Lookup

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	400
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	400
RequiredLevel	None
Type	String

RegardingObjectTypeCode

Property	Value
Description	

Property	Value
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjecttypecode
RequiredLevel	None
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	equipment,systemuser
Type	PartyList

Revision

Property	Value
Description	Order revision number.
DisplayName	Revision
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	revision
MaxValue	1000000000
MinValue	0
RequiredLevel	None

Property	Value
Type	Integer

SalesOrderId

Property	Value
Description	Unique identifier of the order with which the order close activity is associated.
DisplayName	Order
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderid
RequiredLevel	None
Targets	salesorder
Type	Lookup

ScheduledEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled end time of the order close activity.
DisplayName	Scheduled End
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled start time of the order close activity.
DisplayName	Scheduled Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

ServiceId

Property	Value
Description	Unique identifier of the service with which the order close activity is associated.

Property	Value
DisplayName	Service
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceid
RequiredLevel	None
Targets	service
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the order close activity is open, completed, or canceled. By default, order close activities are completed.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Completed	2	Completed
2	Canceled	3	Canceled

StatusCode

Property	Value
Description	Reason for the status of the order close activity.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Open	0
2	Completed	1
3	Canceled	2

Subcategory

Property	Value
Description	Subcategory of the order close activity.
DisplayName	Sub-Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	subcategory
MaxLength	250
RequiredLevel	None
Type	String

Subject

Property	Value
Description	Subject associated with the order close activity.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subject
MaxLength	200
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None

Property	Value
Targets	account,contact,lead,systemuser
Type	PartyList

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the activitypointer.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- ExchangeRate
- InstanceTypeCode
- IsRegularActivity
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- SalesOrderIdName
- SalesOrderIdType
- ScheduledDurationMinutes
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- ServiceIdName
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	activitytypecode
RequiredLevel	SystemRequired
Type	EntityName

CreatedBy

Property	Value
Description	Unique identifier of the user who created the order close activity.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the order close activity was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the orderclose.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

ExchangeRate

Property	Value
Description	Exchange rate for the currency associated with the activitypointer with respect to the base currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsRegularActivity

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the order close activity.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

ModifiedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the order close activity was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the orderclose.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.

Property	Value
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

SalesOrderIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderidname
MaxLength	100
RequiredLevel	None
Type	String

SalesOrderIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderidtype
RequiredLevel	None
Type	EntityName

ScheduledDurationMinutes

Property	Value

Property	Value
Description	Scheduled duration of the order close activity, specified in minutes.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was sent.
DisplayName	Date Sent

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

ServiceIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

CampaignResponse_OrderCloses

Added by: Marketing Solution

Same as the CampaignResponse_OrderCloses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	originatingactivityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	CampaignResponse_OrderCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_OrderCloses
- bulkoperation_OrderCloses
- campaign_OrderCloses
- campaignactivity_OrderCloses
- msdyn_playbookinstance_OrderCloses
- opportunity_OrderCloses
- account_OrderCloses
- SalesOrder_OrderClose

lead_OrderCloses

Added by: Lead Management Solution

See the lead_OrderCloses one-to-many relationship for the lead table/entity.

bulkoperation_OrderCloses

Added by: Marketing Solution

See the bulkoperation_OrderCloses one-to-many relationship for the bulkoperation table/entity.

campaign_OrderCloses

Added by: Marketing Solution

See the campaign_OrderCloses one-to-many relationship for the campaign table/entity.

campaignactivity_OrderCloses

Added by: Marketing Solution

See the campaignactivity_OrderCloses one-to-many relationship for the campaignactivity table/entity.

msdyn_playbookinstance_OrderCloses

Added by: Playbook Solution

See the msdyn_playbookinstance_OrderCloses one-to-many relationship for the msdyn_playbookinstance table/entity.

opportunity_OrderCloses

See the opportunity_OrderCloses one-to-many relationship for the opportunity table/entity.

account_OrderCloses

Added by: System Solution Solution

See the account_OrderCloses one-to-many relationship for the account table/entity.

SalesOrder_OrderClose

See the SalesOrder_OrderClose one-to-many relationship for the salesorder table/entity.

See also

About the table reference
Web API Reference

Price List (PriceLevel) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Entity that defines pricing levels.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	PriceLevels
DisplayCollectionName	Price Lists

Property	Value
DisplayName	Price List
EntitySetName	pricelevels
IsBPFEntity	False
LogicalCollectionName	pricelevels
LogicalName	pricelevel
OwnershipType	OrganizationOwned
PrimaryIdAttribute	pricelevelid
PrimaryNameAttribute	name
SchemaName	PriceLevel

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BeginDate
- Description
- EndDate
- FreightTermsCode
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- PaymentMethodCode
- PriceLevelId
- ShippingMethodCode
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UTCConversionTimeZoneCode

BeginDate

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date on which the price list becomes effective.
DisplayName	Start Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	begindate
RequiredLevel	None
Type	DateTime

Description

Property	Value
Description	Description of the price list.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

EndDate

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date that is the last day the price list is valid.
DisplayName	End Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	enddate
RequiredLevel	None
Type	DateTime

FreightTermsCode

Property	Value
Description	Freight terms for the price list.
DisplayName	Freight Terms
IsValidForForm	False
IsValidForRead	True
LogicalName	freighttermscode
RequiredLevel	None
Type	Picklist

FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.

Property	Value
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	Name of the price list.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OverriddenCreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

PaymentMethodCode

Property	Value
Description	Payment terms to use with the price list.
DisplayName	Payment Method
IsValidForForm	False
IsValidForRead	True
LogicalName	paymentmethodcode
RequiredLevel	None
Type	Picklist

PaymentMethodCode Choices/Options

Value	Label	Description
1	Default Value	

PriceLevelId

Property	Value
Description	Unique identifier of the price list.
DisplayName	Price List
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	pricelevelid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ShippingMethodCode

Property	Value
Description	Method of shipment for products in the price list.
DisplayName	Shipping Method
IsValidForForm	False
IsValidForRead	True
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Default Value	

StateCode

Property	Value
Description	Status of the price list.

Property	Value
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	100001	Active
1	Inactive	100002	Inactive

StatusCode

Property	Value
Description	Reason for the status of the price list.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
100001	Active	0

Value	Label	State
100002	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the price level.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId

- OrganizationIdName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the price list.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value

Property	Value
Description	Unique identifier of the delegate user who created the pricelevel.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the price list.

Property	Value
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the pricelevel.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None

Property	Value
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- price_level_product_price_levels
- price_level_accounts
- price_level_contacts
- price_level_products
- PriceList_Campaigns
- price_level_invoices
- price_level_opportunties
- price_level_orders
- price_level_quotes

price_level_product_price_levels

Same as the price_level_product_price_levels many-to-one relationship for the productpricelevel table/entity.

Property	Value
ReferencingEntity	productpricelevel
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	price_level_product_price_levels
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_accounts

Same as the price_level_accounts many-to-one relationship for the account table/entity.

Property	Value
ReferencingEntity	account
ReferencingAttribute	defaultpricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_accounts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_contacts

Same as the price_level_contacts many-to-one relationship for the contact table/entity.

Property	Value
ReferencingEntity	contact
ReferencingAttribute	defaultpricelevelid
IsHierarchical	False

Property	Value
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_contacts
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_products

Same as the price_level_products many-to-one relationship for the product table/entity.

Property	Value
ReferencingEntity	product
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_products
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

PriceList_Campaigns

Added by: Marketing Solution

Same as the PriceList_Campaigns many-to-one relationship for the campaign table/entity.

Property	Value
ReferencingEntity	campaign
ReferencingAttribute	pricelistid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	PriceList_Campaigns
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_invoices

Added by: Sales Solution

Same as the price_level_invoices many-to-one relationship for the invoice table/entity.

Property	Value
ReferencingEntity	invoice
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_invoices

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_opportunties

Added by: Sales Solution

Same as the price_level_opportunties many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_opportunties
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_orders

Added by: Sales Solution

Same as the price_level_orders many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_orders
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

price_level_quotes

Added by: Sales Solution

Same as the price_level_quotes many-to-one relationship for the quote table/entity.

Property	Value
ReferencingEntity	quote
ReferencingAttribute	pricelevelid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	price_level_quotes
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

About the table reference
Web API Reference

Product table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Information about products and their pricing information.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Associate	AssociateRequest or Associate
CloneProduct	CloneProductRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
PublishProductHierarchy	PublishProductHierarchyRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RevertProduct	RevertProductRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	Products
DisplayCollectionName	Products
DisplayName	Product
EntitySetName	products
IsBPFEntity	False
LogicalCollectionName	products
LogicalName	product
OwnershipType	OrganizationOwned
PrimaryIdAttribute	productid
PrimaryNameAttribute	name
SchemaName	Product

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- CurrentCost
- DefaultUoMId
- DefaultUoMScheduleId
- Description
- DMTImportState
- EntityImage
- ImportSequenceNumber
- IsKit
- IsReparented
- IsStockItem
- Name
- OverriddenCreatedOn
- ParentProductId
- Price
- PriceLevelId

- ProcessId
- ProductId
- ProductNumber
- ProductStructure
- ProductTypeCode
- ProductUrl
- QuantityDecimal
- QuantityOnHand
- Size
- StageId
- StandardCost
- StateCode
- StatusCode
- StockVolume
- StockWeight
- SubjectId
- SupplierName
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- ValidFromDate
- ValidToDate
- VendorID
- VendorName
- VendorPartNumber

CurrentCost

Property	Value
Description	Current cost for the product item. Used in price calculations.
DisplayName	Current Cost
IsValidForForm	True
IsValidForRead	True
LogicalName	currentcost
MaxValue	1000000000000
MinValue	0

Property	Value
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

DefaultUoMId

Property	Value
Description	Default unit for the product.
DisplayName	Default Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	defaultuomid
RequiredLevel	ApplicationRequired
Targets	uom
Type	Lookup

DefaultUoMScheduleId

Property	Value
Description	Default unit group for the product.
DisplayName	Unit Group
IsValidForForm	True
IsValidForRead	True
LogicalName	defaultuomscheduleid
RequiredLevel	ApplicationRequired
Targets	uomschedule
Type	Lookup

Description

Property	Value
Description	Description of the product.
DisplayName	Description
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DMTImportState

Property	Value
Description	Internal Use Only
DisplayName	Internal Use Only
Format	None
IsValidForForm	False
IsValidForRead	False
LogicalName	dmtimportstate
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

EntityImage

Added by: Active Solution Solution

Property	Value
Description	Shows the default image for the record.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsKit

Property	Value
Description	Information that specifies whether the product is a kit.
DisplayName	Is Kit
IsValidForForm	True
IsValidForRead	True
LogicalName	iskit
RequiredLevel	None
Type	Boolean

IsKit Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsReparented

Added by: Product Management Patch Solution

Property	Value
Description	
DisplayName	Is Reparented
IsValidForForm	True
IsValidForRead	True
LogicalName	isreparented
RequiredLevel	None
Type	Boolean

IsReparented Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsStockItem

Property	Value
Description	Information about whether the product is a stock item.
DisplayName	Stock Item
IsValidForForm	True
IsValidForRead	True
LogicalName	isstockitem
RequiredLevel	None
Type	Boolean

IsStockItem Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

Name

Property	Value
Description	Name of the product.
DisplayName	Name
FormatName	Text

Property	Value
IsLocalizable	True
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentProductId

Property	Value
Description	Specifies the parent product family hierarchy.
DisplayName	Parent
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	parentproductid
RequiredLevel	None
Targets	product
Type	Lookup

Price

Property	Value
Description	List price for the product item. Used in price calculations.
DisplayName	List Price
IsValidForForm	True
IsValidForRead	True
LogicalName	price
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

PriceLevelId

Property	Value
Description	Select the default price list for the product.
DisplayName	Default Price List
IsValidForCreate	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	pricelevelid
RequiredLevel	Recommended
Targets	pricelevel
Type	Lookup

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

ProductId

Property	Value
Description	Unique identifier of the product.
DisplayName	Product
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ProductNumber

Property	Value
Description	User-defined product ID.
DisplayName	Product ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productnumber
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ProductStructure

Property	Value
Description	Product Structure.
DisplayName	Product Structure
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productstructure
RequiredLevel	SystemRequired
Type	Picklist

ProductStructure Choices/Options

Value	Label	Description
1	Product	

Value	Label	Description
2	Product Family	
3	Product Bundle	

ProductTypeCode

Property	Value
Description	Type of product.
DisplayName	Product Type
IsValidForForm	True
IsValidForRead	True
LogicalName	producttypecode
RequiredLevel	None
Type	Picklist

ProductTypeCode Choices/Options

Value	Label	Description
1	Sales Inventory	
2	Miscellaneous Charges	
3	Services	
4	Flat Fees	

ProductUrl

Property	Value
Description	URL for the Website associated with the product.
DisplayName	URL
FormatName	Url
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	producturl
MaxLength	255
RequiredLevel	None
Type	String

QuantityDecimal

Property	Value
Description	Number of decimal places that can be used in monetary amounts for the product.
DisplayName	Decimals Supported
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	quantitydecimal
MaxValue	5
MinValue	0
RequiredLevel	ApplicationRequired
Type	Integer

QuantityOnHand

Property	Value
Description	Quantity of the product in stock.
DisplayName	Quantity On Hand
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	quantityonhand
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

Size

Property	Value
Description	Product size.
DisplayName	Size
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	size
MaxLength	200
RequiredLevel	None
Type	String

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StandardCost

Property	Value
Description	Standard cost for the product item. Used in price calculations.
DisplayName	Standard Cost
IsValidForForm	True
IsValidForRead	True
LogicalName	standardcost
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

StateCode

Property	Value
Description	Status of the product.
DisplayName	Status
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode

Property	Value
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Retired	2	Inactive
2	Draft	0	Draft
3	Under Revision	3	Under Revision

StatusCode

Property	Value
Description	Reason for the status of the product.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
0	Draft	2
1	Active	0
2	Retired	1
3	Under Revision	3

StockVolume

Property	Value
Description	Stock volume of the product.
DisplayName	Stock Volume
IsValidForForm	True
IsValidForRead	True
LogicalName	stockvolume
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

StockWeight

Property	Value
Description	Stock weight of the product.
DisplayName	Stock Weight
IsValidForForm	True
IsValidForRead	True
LogicalName	stockweight
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

SubjectId

Property	Value
Description	Select a category for the product.
DisplayName	Subject
IsValidForForm	True
IsValidForRead	True
LogicalName	subjectid
RequiredLevel	None
Targets	subject
Type	Lookup

SupplierName

Property	Value
Description	Name of the product's supplier.
DisplayName	Supplier Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	suppliername
MaxLength	100
RequiredLevel	None
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the product.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

ValidFromDate

Property	Value
DateTimeBehavior	DateOnly
Description	Date from which this product is valid.
DisplayName	Valid From

Property	Value
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	validfromdate
RequiredLevel	None
Type	DateTime

ValidToDate

Property	Value
DateTimeBehavior	DateOnly
Description	Date to which this product is valid.
DisplayName	Valid To
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	validtodate
RequiredLevel	None
Type	DateTime

VendorID

Property	Value
Description	Unique identifier of vendor supplying the product.
DisplayName	Vendor ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	vendorid
MaxLength	100
RequiredLevel	None
Type	String

VendorName

Property	Value
Description	Name of the product vendor.
DisplayName	Vendor
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	vendorname
MaxLength	100
RequiredLevel	None
Type	String

VendorPartNumber

Property	Value
Description	Unique part identifier in vendor catalog of this product.
DisplayName	Vendor Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	vendorpartnumber
MaxLength	100
RequiredLevel	None
Type	String

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CurrentCost_Base
- DefaultUoMIdName
- DefaultUoMScheduleIdName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- HierarchyPath
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy

- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- ParentProductIdName
- Price_Base
- PriceLevelIdName
- StandardCost_Base
- SubjectIdName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the product.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None

Property	Value
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the product.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CurrentCost_Base

Property	Value
Description	Value of the Current Cost in base currency.
DisplayName	Current Cost (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	currentcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

DefaultUoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	defaultuomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

DefaultUoMScheduleIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	defaultuomscheduleidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Exchange rate for the currency associated with the product with respect to the base currency.
DisplayName	Exchange Rate

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

HierarchyPath

Property	Value
Description	Hierarchy path of the product.
DisplayName	Hierarchy Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	hierarchypath
MaxLength	450
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the product.
DisplayName	Modified By

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the product.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ParentProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	parentproductidname
MaxLength	100
RequiredLevel	None
Type	String

Price_Base

Property	Value
Description	Value of the List Price in base currency.
DisplayName	List Price (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	price_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

StandardCost_Base

Property	Value
Description	Value of the Standard Cost in base currency.
DisplayName	Standard Cost (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	standardcost_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

SubjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subjectidname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- product_parent_product

- Product_ProductAssociation_AssocProd
- Product_ProductAssociation_Prod
- product_ProductSubstitute_substitutedproductid
- product_ProductSubstitute_productid
- product_price_levels
- opportunity_products
- product_invoice_details
- product_order_details
- product_quote_details

product_parent_product

Same as the product_parent_product many-to-one relationship for the product table/entity.

Property	Value
ReferencingEntity	product
ReferencingAttribute	parentproductid
IsHierarchical	True
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_parent_product
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Product_ProductAssociation_AssocProd

Same as the Product_ProductAssociation_AssocProd many-to-one relationship for the productassociation table/entity.

Property	Value

Property	Value
ReferencingEntity	productassociation
ReferencingAttribute	associatedproduct
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Product_ProductAssociation_AssocProd
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Product_ProductAssociation_Prod

Same as the Product_ProductAssociation_Prod many-to-one relationship for the productassociation table/entity.

Property	Value
ReferencingEntity	productassociation
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Product_ProductAssociation_Prod
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_ProductSubstitute_substitutedproductid

Same as the product_ProductSubstitute_substitutedproductid many-to-one relationship for the productsubstitute table/entity.

Property	Value
ReferencingEntity	productsubstitute
ReferencingAttribute	substitutedproductid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_ProductSubstitute_substitutedproductid
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_ProductSubstitute_productid

Same as the product_ProductSubstitute_productid many-to-one relationship for the productsubstitute table/entity.

Property	Value
ReferencingEntity	productsubstitute

Property	Value
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_ProductSubstitute_productid
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_price_levels

Same as the product_price_levels many-to-one relationship for the productpricelevel table/entity.

Property	Value
ReferencingEntity	productpricelevel
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	product_price_levels
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

opportunity_products

Added by: Sales Solution

Same as the opportunity_products many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	opportunity_products
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_invoice_details

Added by: Sales Solution

Same as the product_invoice_details many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_invoice_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_order_details

Added by: Sales Solution

Same as the product_order_details many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_order_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

product_quote_details

Added by: Sales Solution

Same as the product_quote_details many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	productid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	product_quote_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- price_level_products
- product_parent_product

- unit_of_measurement_products
- unit_of_measurement_schedule_products

price_level_products

See the price_level_products one-to-many relationship for the pricelevel table/entity.

product_parent_product

See the product_parent_product one-to-many relationship for the product table/entity.

unit_of_measurement_products

See the unit_of_measurement_products one-to-many relationship for the uom table/entity.

unit_of_measurement_schedule_products

See the unit_of_measurement_schedule_products one-to-many relationship for the uomschedule table/entity.

Many-To-Many Relationships

Relationship details provided where the Product table is the first table in the relationship. Listed by **SchemaName**.

- campaignproduct_association
- leadproduct_association
- productsalesliterature_association
- competitorproduct_association

campaignproduct_association

See the campaignproduct_association many-to-many relationship for the campaign table/entity.

leadproduct_association

See the leadproduct_association many-to-many relationship for the lead table/entity.

productsalesliterature_association

IntersectEntityName: productsalesliterature

Table 1

Property	Value
IntersectAttribute	productid
IsCustomizable	False
LogicalName	product
NavigationPropertyName	productsalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	salesliterature
IntersectAttribute	salesliteratureid
NavigationPropertyName	productsalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

competitorproduct_association

See the competitorproduct_association many-to-many relationship for the competitor table/entity.

See also

About the table reference

Web API Reference

ProductAssociation table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Instance of a product added to a bundle or kit.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	ProductAssociations
DisplayCollectionName	Product Associations

Property	Value
DisplayName	Product Association
EntitySetName	productassociations
IsBPFEntity	False
LogicalCollectionName	productassociations
LogicalName	productassociation
OwnershipType	OrganizationOwned
PrimaryIdAttribute	productassociationid
PrimaryNameAttribute	productidname
SchemaName	ProductAssociation

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- AssociatedProduct
- DMTImportState
- ImportSequenceNumber
- OverriddenCreatedOn
- ProductAssociationId
- ProductId
- ProductIsRequired
- PropertyCustomizationStatus
- Quantity
- statecode
- statuscode
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UoMId
- UTCConversionTimeZoneCode

AssociatedProduct

Property	Value

Property	Value
Description	Select a product to add to the bundle or kit.
DisplayName	Associated Product
IsValidForForm	True
IsValidForRead	True
LogicalName	associatedproduct
RequiredLevel	SystemRequired
Targets	product
Type	Lookup

DMTImportState

Property	Value
Description	Internal Use Only
DisplayName	Internal Use Only
Format	None
IsValidForForm	False
IsValidForRead	False
LogicalName	dmtimportstate
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ProductAssociationId

Property	Value
Description	Shows the unique identifier of the product association.

Property	Value
DisplayName	Product Association ID
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productassociationid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ProductId

Property	Value
Description	Select a bundle or a kit.
DisplayName	Product
IsValidForForm	True
IsValidForRead	True
LogicalName	productid
RequiredLevel	SystemRequired
Targets	product
Type	Lookup

ProductIsRequired

Property	Value
Description	Select whether the associated product is required or optional.
DisplayName	Required
IsValidForForm	True
IsValidForRead	True
LogicalName	productisrequired

Property	Value
RequiredLevel	ApplicationRequired
Type	Picklist

ProductIsRequired Choices/Options

Value	Label	Description
0	Optional	
1	Required	

PropertyCustomizationStatus

Property	Value
Description	Shows whether the item has properties that can be customized.
DisplayName	Property Customization
IsValidForForm	True
IsValidForRead	True
LogicalName	propertycustomizationstatus
RequiredLevel	SystemRequired
Type	Picklist

PropertyCustomizationStatus Choices/Options

Value	Label	Description
0	Not Available	
1	Available	

Quantity

Property	Value
Description	Type the quantity of the products added to the bundle or kit.

Property	Value
DisplayName	Quantity
IsValidForForm	True
IsValidForRead	True
LogicalName	quantity
MaxValue	100000000000
MinValue	0
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

statecode

Property	Value
Description	Shows whether the associated product is active or inactive.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive
2	Draft	0	Draft

Value	Label	DefaultStatus	InvariantName
3	Under Revision	3	Under Revision

statuscode

Property	Value
Description	Select the associated product's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
0	Draft	2
1	Active	0
2	Inactive	1
3	DraftActive	3

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Shows the currency associated with the record.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UoMId

Property	Value
Description	Shows the unit of the product association.
DisplayName	Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	uomid
RequiredLevel	ApplicationRequired
Targets	uom

Property	Value
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AssociatedProductIdName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName

- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- ProductIdName
- TransactionCurrencyIdName
- UoMIdName
- VersionNumber

AssociatedProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	associatedproductidname
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired

Property	Value
Type	String

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- productAssociation_quote_details
- productAssociation_opportunity_product
- productAssociation_invoice_details
- productAssociation_salesorder_details

productAssociation_quote_details

Added by: Sales Solution

Same as the productAssociation_quote_details many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	productassociationid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	productAssociation_quote_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

productAssociation_opportunity_product

Added by: Sales Solution

Same as the productAssociation_opportunity_product many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	productassociationid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	productAssociation_opportunity_product

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

productAssociation_invoice_details

Added by: Sales Solution

Same as the productAssociation_invoice_details many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	productassociationid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	productAssociation_invoice_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

productAssociation_salesorder_details

Added by: Sales Solution

Same as the productAssociation_salesorder_details many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	productassociationid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	productAssociation_salesorder_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- Product_ProductAssociation_AssocProd
- Product_ProductAssociation_Prod
- unit_of_measurement_productassociation

Product_ProductAssociation_AssocProd

See the Product_ProductAssociation_AssocProd one-to-many relationship for the product table/entity.

Product_ProductAssociation_Prod

See the Product_ProductAssociation_Prod one-to-many relationship for the product table/entity.

unit_of_measurement_productassociation

See the unit_of_measurement_productassociation one-to-many relationship for the uom table/entity.

See also

About the table reference
Web API Reference

Price List Item (ProductPriceLevel) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Information about how to price a product in the specified price level, including pricing method, rounding option, and discount type based on a specified product unit.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	ProductPriceLevels
DisplayCollectionName	Price List Items
DisplayName	Price List Item

Property	Value
EntitySetName	productpricelevels
IsBPFEntity	False
LogicalCollectionName	productpricelevels
LogicalName	productpricelevel
OwnershipType	None
PrimaryIdAttribute	productpricelevelid
PrimaryNameAttribute	productidname
SchemaName	ProductPriceLevel

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Amount
- DiscountTypeId
- ImportSequenceNumber
- OverriddenCreatedOn
- Percentage
- PriceLevelId
- PricingMethodCode
- ProcessId
- ProductId
- ProductPriceLevelId
- QuantitySellingCode
- RoundingOptionAmount
- RoundingOptionCode
- RoundingPolicyCode
- StageId
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UoMId
- UoMScheduleId
- UTCConversionTimeZoneCode

Amount

Property	Value
Description	Monetary amount for the price list.
DisplayName	Amount
IsValidForForm	False
IsValidForRead	True
LogicalName	amount
MaxValue	100000000000000
MinValue	0
Precision	2
PrecisionSource	1
RequiredLevel	ApplicationRequired
Type	Money

DiscountTypeId

Added by: Sales Solution

Property	Value
Description	Unique identifier of the discount list associated with the price list.
DisplayName	Discount List
IsValidForForm	False
IsValidForRead	True
LogicalName	discounttypeid
RequiredLevel	None
Targets	discounttype
Type	Lookup

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

Percentage

Property	Value
Description	Percentage for the price list.
DisplayName	Percentage
IsValidForForm	False
IsValidForRead	True
LogicalName	percentage
MaxValue	1000000000
MinValue	0
Precision	2
RequiredLevel	ApplicationRequired
Type	Decimal

PriceLevelId

Property	Value
Description	Unique identifier of the price level associated with this price list.
DisplayName	Price List
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	pricelevelid
RequiredLevel	SystemRequired
Targets	pricelevel
Type	Lookup

PricingMethodCode

Property	Value
Description	Pricing method applied to the price list.

Property	Value
DisplayName	Pricing Method
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingmethodcode
RequiredLevel	ApplicationRequired
Type	Picklist

PricingMethodCode Choices/Options

Value	Label	Description
1	Currency Amount	
2	Percent of List	
3	Percent Markup - Current Cost	
4	Percent Margin - Current Cost	
5	Percent Markup - Standard Cost	
6	Percent Margin - Standard Cost	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

ProductId

Property	Value
Description	Product associated with the price list.
DisplayName	Product
IsValidForForm	False
IsValidForRead	True
LogicalName	productid
RequiredLevel	SystemRequired
Targets	product
Type	Lookup

ProductPriceLevelId

Property	Value
Description	Unique identifier of the price list.
DisplayName	Product Price List
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productpricelevelid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

QuantitySellingCode

Property	Value
Description	Quantity of the product that must be sold for a given price level.
DisplayName	Quantity Selling Option
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	quantitysellingcode
RequiredLevel	ApplicationRequired
Type	Picklist

QuantitySellingCode Choices/Options

Value	Label	Description
1	No Control	
2	Whole	
3	Whole and Fractional	

RoundingOptionAmount

Property	Value
Description	Rounding option amount for the price list.
DisplayName	Rounding Amount
IsValidForForm	False
IsValidForRead	True
LogicalName	roundingoptionamount
MaxValue	100000000000000
MinValue	-100000000000000
Precision	2
PrecisionSource	1
RequiredLevel	ApplicationRequired
Type	Money

RoundingOptionCode

Property	Value
Description	Option for rounding the price list.
DisplayName	Rounding Option
IsValidForForm	False
IsValidForRead	True
LogicalName	roundingoptioncode
RequiredLevel	ApplicationRequired
Type	Picklist

RoundingOptionCode Choices/Options

Value	Label	Description
1	Ends in	
2	Multiple of	

RoundingPolicyCode

Property	Value
Description	Policy for rounding the price list.
DisplayName	Rounding Policy
IsValidForForm	False
IsValidForRead	True
LogicalName	roundingpolicycode
RequiredLevel	ApplicationRequired
Type	Picklist

RoundingPolicyCode Choices/Options

Value	Label	Description
1	None	

Value	Label	Description
2	Up	
3	Down	
4	To Nearest	

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UoMId

Property	Value
Description	Unique identifier of the unit for the price list.
DisplayName	Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	uomid
RequiredLevel	ApplicationRequired
Targets	uom
Type	Lookup

UoMScheduleId

Property	Value
Description	Unique identifier of the unit schedule for the price list.
DisplayName	Unit Schedule ID
IsValidForForm	False
IsValidForRead	True
LogicalName	uomscheduleid
RequiredLevel	None
Targets	uomschedule
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- Amount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DiscountTypeIdName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- PriceLevelIdName
- ProductIdName
- ProductNumber
- RoundingOptionAmount_Base
- TransactionCurrencyIdName
- UoMIdName

- UoMScheduleIdName
- VersionNumber

Amount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	amount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Unique identifier of the user who created the price list.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the price list was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DiscountTypeIdName

Added by: Sales Solution

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	discounttypeidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value

Property	Value
Description	Unique identifier of the user who last modified the price list.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the price list was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier of the organization associated with the price list.
DisplayName	Organization
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

ProductNumber

Property	Value
Description	User-defined product number.
DisplayName	Product ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productnumber
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

RoundingOptionAmount_Base

Property	Value
Description	Value of the Rounding Amount in base currency.
DisplayName	Rounding Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	roundingoptionamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

UoMScheduleIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomscheduleidname

Property	Value
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- price_level_product_price_levels
- product_price_levels
- unit_of_measurement_product_price_levels
- unit_of_measure_schedule_product_price_level
- discount_type_product_price_levels

price_level_product_price_levels

See the price_level_product_price_levels one-to-many relationship for the pricelevel table/entity.

product_price_levels

See the product_price_levels one-to-many relationship for the product table/entity.

unit_of_measurement_product_price_levels

See the unit_of_measurement_product_price_levels one-to-many relationship for the uom table/entity.

unit_of_measure_schedule_product_price_level

See the unit_of_measure_schedule_product_price_level one-to-many relationship for the uomschedule table/entity.

discount_type_product_price_levels

Added by: Sales Solution

See the discount_type_product_price_levels one-to-many relationship for the discounttype table/entity.

See also

About the table reference
Web API Reference

Product Relationship (ProductSubstitute) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Information about the selling relationship between two products, including the relationship type, such as up-sell, cross-sell, substitute, or accessory.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	ProductSubstitutes
DisplayCollectionName	Product Relationships

Property	Value
DisplayName	Product Relationship
EntitySetName	productsubstitutes
IsBPFEntity	False
LogicalCollectionName	productsubstitutes
LogicalName	productsubstitute
OwnershipType	OrganizationOwned
PrimaryIdAttribute	productsubstituteid
PrimaryNameAttribute	name
SchemaName	ProductSubstitute

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Direction
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- ProductId
- ProductSubstituteId
- SalesRelationshipType
- statuscode
- SubstitutedProductId
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UTCConversionTimeZoneCode

Direction

Property	Value
Description	Select whether the relationship is unidirectional or bidirectional.
DisplayName	Direction

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	direction
RequiredLevel	SystemRequired
Type	Picklist

Direction Choices/Options

Value	Label	Description
0	Uni-Directional	
1	Bi-Directional	

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	name
DisplayName	name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ProductId

Property	Value

Property	Value
Description	Shows the product that the relationship is defined for.
DisplayName	Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productid
RequiredLevel	SystemRequired
Targets	product
Type	Lookup

ProductSubstituteId

Property	Value
Description	Shows the unique identifier of the product relationship.
DisplayName	Product Relationship ID
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productsubstituteid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

SalesRelationshipType

Property	Value
Description	Select the type of the product relationship.
DisplayName	Sales Relationship Type
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	salesrelationshiptype
RequiredLevel	SystemRequired
Type	Picklist

SalesRelationshipType Choices/Options

Value	Label	Description
0	Up-sell	
1	Cross-sell	
2	Accessory	
3	Substitute	

statuscode

Property	Value
Description	Shows whether the product relationship is active or inactive.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

SubstitutedProductId

Property	Value
Description	Select the related product that the relationship needs to be defined for.
DisplayName	Related Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	substitutedproductid
RequiredLevel	SystemRequired
Targets	product
Type	Lookup

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value

Property	Value
Description	Shows the currency associated with the record.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName

- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- ProductIdName
- statecode
- SubstitutedProductIdName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization

Property	Value
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	None
Type	String

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

statecode

Property	Value
Description	Select the product relationship's status.
DisplayName	Status
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

SubstitutedProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	substitutedproductidname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808

Property	Value
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- product_ProductSubstitute_substitutedproductid
- product_ProductSubstitute_productid

product_ProductSubstitute_substitutedproductid

See the product_ProductSubstitute_substitutedproductid one-to-many relationship for the product table/entity.

product_ProductSubstitute_productid

See the product_ProductSubstitute_productid one-to-many relationship for the product table/entity.

See also

About the table reference
Web API Reference

Quote table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Formal offer for products and/or services, proposed at specific prices and related payment terms, which is sent to a prospective customer.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
CalculatePrice	CalculatePriceRequest
CloseIncident	CloseIncidentRequest
CloseQuote	CloseQuoteRequest
ConvertQuoteToSalesOrder	ConvertQuoteToSalesOrderRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
GenerateQuoteFromOpportunity	GenerateQuoteFromOpportunityRequest
GetQuantityDecimal	GetQuantityDecimalRequest
GetQuoteProductsFromOpportunity	GetQuoteProductsFromOpportunityRequest
GrantAccess	GrantAccessRequest

Message	SDK Assembly
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
ReviseQuote	ReviseQuoteRequest
RevokeAccess	RevokeAccessRequest
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update
WinOpportunity	WinOpportunityRequest
WinQuote	WinQuoteRequest

Properties

Property	Value
CollectionSchemaName	Quotes
DisplayCollectionName	Quotes
DisplayName	Quote
EntitySetName	quotes
IsBPFEntity	False
LogicalCollectionName	quotes
LogicalName	quote
OwnershipType	UserOwned
PrimaryIdAttribute	quoteid

Property	Value
PrimaryNameAttribute	name
SchemaName	Quote

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BillTo_AddressId
- BillTo_City
- BillTo_ContactName
- BillTo_Country
- BillTo_Fax
- BillTo_Line1
- BillTo_Line2
- BillTo_Line3
- BillTo_Name
- BillTo_PostalCode
- BillTo_StateOrProvince
- BillTo_Telephone
- CampaignId
- ClosedOn
- CustomerId
- CustomerIdType
- Description
- DiscountAmount
- DiscountPercentage
- EffectiveFrom
- EffectiveTo
- EmailAddress
- ExpiresOn
- FreightAmount
- FreightTermsCode
- ImportSequenceNumber
- LastOnHoldTime
- Name
- OpportunityId
- OverriddenCreatedOn

- OwnerId
- OwnerIdType
- PaymentTermsCode
- PriceLevelId
- PricingErrorCode
- ProcessId
- QuoteId
- QuoteNumber
- RequestDeliveryBy
- ShippingMethodCode
- ShipTo_AddressId
- ShipTo_City
- ShipTo_ContactName
- ShipTo_Country
- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- SLAId
- StageId
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- TotalAmount
- TotalAmountLessFreight
- TotalDiscountAmount
- TotalLineItemAmount
- TotalLineItemDiscountAmount
- TotalTax
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WillCall

BillTo_AddressId

Property	Value
Description	Unique identifier of the billing address.
DisplayName	Bill To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	billto_addressid
RequiredLevel	None
Type	Uniqueidentifier

BillTo_City

Property	Value
Description	Type the city for the customer's billing address.
DisplayName	Bill To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_city
MaxLength	80
RequiredLevel	None
Type	String

BillTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's billing address.
DisplayName	Bill To Contact Name

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_contactname
MaxLength	150
RequiredLevel	None
Type	String

BillTo_Country

Property	Value
Description	Type the country or region for the customer's billing address.
DisplayName	Bill To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_country
MaxLength	80
RequiredLevel	None
Type	String

BillTo_Fax

Property	Value
Description	Type the fax number for the customer's billing address.
DisplayName	Bill To Fax

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_fax
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Line1

Property	Value
Description	Type the first line of the customer's billing address.
DisplayName	Bill To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line1
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Line2

Property	Value
Description	Type the second line of the customer's billing address.
DisplayName	Bill To Street 2

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line2
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Line3

Property	Value
Description	Type the third line of the billing address.
DisplayName	Bill To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line3
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Name

Property	Value
Description	Type a name for the customer's billing address, such as "Headquarters" or "Field office", to identify the address.

Property	Value
DisplayName	Bill To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_name
MaxLength	200
RequiredLevel	None
Type	String

BillTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the billing address.
DisplayName	Bill To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

BillTo_StateOrProvince

Property	Value
Description	Type the state or province for the billing address.

Property	Value
DisplayName	Bill To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Telephone

Property	Value
Description	Type the phone number for the customer's billing address.
DisplayName	Bill To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_telephone
MaxLength	50
RequiredLevel	None
Type	String

CampaignId

Added by: Marketing Sales Solution

Property	Value

Property	Value
Description	Shows the campaign that the order was created from.
DisplayName	Source Campaign
IsValidForForm	True
IsValidForRead	True
LogicalName	campaignid
RequiredLevel	None
Targets	campaign
Type	Lookup

ClosedOn

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the date when the quote was closed to indicate the expiration, revision, or cancellation date.
DisplayName	Closed On
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	closedon
RequiredLevel	None
Type	DateTime

CustomerId

Property	Value
Description	Select the customer account or contact to provide a quick link to additional customer details, such as account information, activities, and opportunities.
DisplayName	Potential Customer

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	customerid
RequiredLevel	ApplicationRequired
Targets	account,contact
Type	Customer

CustomerIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	Potential Customer Type
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridtype
RequiredLevel	ApplicationRequired
Type	EntityName

Description

Property	Value
Description	Type additional information to describe the quote, such as the products or services offered or details about the customer's product preferences.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DiscountAmount

Property	Value
Description	Type the discount amount for the quote if the customer is eligible for special savings.
DisplayName	Quote Discount Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

DiscountPercentage

Property	Value
Description	Type the discount rate that should be applied to the Detail Amount field to include additional savings for the customer in the quote.
DisplayName	Quote Discount (%)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	discountpercentage
MaxValue	100
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

EffectiveFrom

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date when the quote pricing is effective or was first communicated to the customer.
DisplayName	Effective From
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	effectivefrom
RequiredLevel	None
Type	DateTime

EffectiveTo

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expiration date or last day the quote pricing is effective for the customer.
DisplayName	Effective To

Property	Value
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	effectiveto
RequiredLevel	None
Type	DateTime

EmailAddress

Property	Value
Description	The primary email address for the entity.
DisplayName	Email Address
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

ExpiresOn

Property	Value
DateTimeBehavior	DateOnly
Description	Enter the date a decision or order is due from the customer to indicate the expiration date of the quote.
DisplayName	Due By

Property	Value
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	expireson
RequiredLevel	None
Type	DateTime

FreightAmount

Property	Value
Description	Type the cost of freight or shipping for the products included in the quote for use in calculating the Total Amount field.
DisplayName	Freight Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping charges are processed correctly.
DisplayName	Freight Terms

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	freighttermscode
RequiredLevel	None
Type	Picklist

FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

Name

Property	Value
Description	Type a descriptive name for the quote.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	300
RequiredLevel	ApplicationRequired
Type	String

OpportunityId

Property	Value
Description	Choose the opportunity that the quote is related to for reporting and analytics.

Property	Value
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

PaymentTermsCode

Property	Value
Description	Select the payment terms to indicate when the customer needs to pay the total amount.
DisplayName	Payment Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	paymenttermscode
RequiredLevel	None

Property	Value
Type	Picklist

PaymentTermsCode Choices/Options

Value	Label	Description
1	Net 30	
2	2% 10, Net 30	
3	Net 45	
4	Net 60	

PriceLevelId

Property	Value
Description	Choose the price list associated with this record to make sure the products associated with the campaign are offered at the correct prices.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	pricelevelid
RequiredLevel	ApplicationRequired
Targets	pricelevel
Type	Lookup

PricingErrorCode

Property	Value
Description	Pricing error for the quote.
DisplayName	Pricing Error
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	

Value	Label	Description
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

QuoteId

Property	Value
Description	Unique identifier of the quote.
DisplayName	Quote
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	quoteid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

QuoteNumber

Property	Value
Description	Shows the quote number for customer reference and searching capabilities. The number cannot be modified.
DisplayName	Quote ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False

Property	Value
LogicalName	quotenumber
MaxLength	100
RequiredLevel	SystemRequired
Type	String

RequestDeliveryBy

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the delivery date requested by the customer for all products in the quote.
DisplayName	Requested Delivery Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	requestdeliveryby
RequiredLevel	None
Type	DateTime

ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Shipping Method
IsValidForForm	True
IsValidForRead	True
LogicalName	shippingmethodcode
RequiredLevel	None

Property	Value
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Airborne	
2	DHL	
3	FedEx	
4	UPS	
5	Postal Mail	
6	Full Load	
7	Will Call	

ShipTo_AddressId

Property	Value
Description	Unique identifier of the shipping address.
DisplayName	Ship To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	shipto_addressid
RequiredLevel	None
Type	Uniqueidentifier

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's shipping address.
DisplayName	Ship To Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_contactname
MaxLength	150
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Ship To Freight Terms

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.

Property	Value
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_name
MaxLength	200
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip Price Calculation (For Internal use)
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnRetrieve	

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the quote record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the quote is draft, active, won, or closed. Only draft quotes can be edited.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Draft	1	Draft
1	Active	2	Active
2	Won	4	Won
3	Closed	7	Closed

StatusCode

Property	Value
Description	Select the quote's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	In Progress	0
2	In Progress	1
3	Open	1
4	Won	2
5	Lost	3
6	Canceled	3
7	Revised	3

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TotalAmount

Property	Value
Description	Shows the total amount due, calculated as the sum of the products, discounts, freight, and taxes for the quote.
DisplayName	Total Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight

Property	Value
Description	Shows the total product amount for the quote, minus any discounts. This value is added to freight and tax amounts in the calculation for the total amount due for the quote.

Property	Value
DisplayName	Total Pre-Freight Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount

Property	Value
Description	Shows the total discount amount, based on the discount price and rate entered on the quote.
DisplayName	Total Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None

Property	Value
Type	Money

TotalLineItemAmount

Property	Value
Description	Shows the sum of all existing and write-in products included on the quote, based on the specified price list and quantities.
DisplayName	Total Detail Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount

Property	Value
Description	Shows the total of the Manual Discount amounts specified on all products included in the quote. This value is reflected in the Detail Amount field on the quote and is added to any discount amount or rate specified on the quote
DisplayName	Total Line Item Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	totallineitemdiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax

Property	Value
Description	Shows the total of the Tax amounts specified on all products included in the quote, included in the Total Amount due calculation for the quote.
DisplayName	Total Tax
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyId

Property	Value

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.

Property	Value
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WillCall

Property	Value
Description	Select whether the products included in the quote should be shipped to the specified address or held until the customer calls with further pick up or delivery instructions.
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- BillTo_Composite
- CampaignIdName
- ContactId
- ContactIdName
- ContactIdYomiName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomerIdName
- CustomerIdYomiName
- DiscountAmount_Base
- ExchangeRate
- FreightAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OpportunityIdName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PriceLevelIdName

- RevisionNumber
- ShipTo_Composite
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TotalAmount_Base
- TotalAmountLessFreight_Base
- TotalDiscountAmount_Base
- TotalLineItemAmount_Base
- TotalLineItemDiscountAmount_Base
- TotalTax_Base
- TransactionCurrencyIdName
- UniqueDscId
- VersionNumber

AccountId

Property	Value
Description	Unique identifier of the account with which the quote is associated.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

BillTo_Composite

Property	Value
Description	Shows the complete Bill To address.
DisplayName	Bill To Address
Format	TextArea

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

CampaignIdName

Added by: Marketing Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignidname
MaxLength	100
RequiredLevel	None
Type	String

ContactId

Property	Value
Description	Unique identifier of the contact associated with the quote.
DisplayName	Contact

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	contactid
RequiredLevel	None
Targets	contact
Type	Lookup

ContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidname
MaxLength	100
RequiredLevel	None
Type	String

ContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridname
MaxLength	160
RequiredLevel	ApplicationRequired

Property	Value
Type	String

CustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

DiscountAmount_Base

Property	Value
Description	Value of the Quote Discount Amount in base currency.
DisplayName	Quote Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2

Property	Value
RequiredLevel	None
Type	Money

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

FreightAmount_Base

Property	Value
Description	Value of the Freight Amount in base currency.
DisplayName	Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount_base
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon

Property	Value
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows the duration in minutes for which the quote was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

RevisionNumber

Property	Value
Description	Shows the version number of the quote for revision history tracking.
DisplayName	Revision ID
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	revisionnumber

Property	Value
MaxValue	2147483647
MinValue	0
RequiredLevel	SystemRequired
Type	Integer

ShipTo_Composite

Property	Value
Description	Shows the complete Ship To address.
DisplayName	Ship To Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this quote. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None

Property	Value
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

TotalAmount_Base

Property	Value
Description	Value of the Total Amount in base currency.
DisplayName	Total Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight_Base

Property	Value
Description	Value of the Total Pre-Freight Amount in base currency.
DisplayName	Total Pre-Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight_base
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount_Base

Property	Value
Description	Value of the Total Discount Amount in base currency.
DisplayName	Total Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount_Base

Property	Value
Description	Value of the Total Detail Amount in base currency.
DisplayName	Total Detail Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount_base

Property	Value
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount_Base

Property	Value
Description	Value of the Total Line Item Discount Amount in base currency.
DisplayName	Total Line Item Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax_Base

Property	Value
Description	Value of the Total Tax in base currency.
DisplayName	Total Tax (Base)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	totaltax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UniqueDscId

Property	Value
Description	For internal use only.
DisplayName	Unique Dsc ID

Property	Value
IsValidForForm	False
IsValidForRead	False
LogicalName	uniquedscid
RequiredLevel	None
Type	Uniqueidentifier

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- quote_QuoteCloses
- lk_opportunitysalesprocess_quoteid
- quote_details
- quote_orders
- Quote_QuoteClose
- msdyn_playbookinstance_quote

quote_QuoteCloses

Same as the quote_QuoteCloses many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

lk_opportunitysalesprocess_quoteid

Same as the lk_opportunitysalesprocess_quoteid many-to-one relationship for the opportunitysalesprocess table/entity.

Property	Value
ReferencingEntity	opportunitysalesprocess
ReferencingAttribute	quoteid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_opportunitysalesprocess
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: NoCascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

quote_details

Same as the quote_details many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	quoteid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

quote_orders

Same as the quote_orders many-to-one relationship for the salesorder table/entity.

Property	Value
ReferencingEntity	salesorder
ReferencingAttribute	quoteid
IsHierarchical	False

Property	Value
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quote_orders
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Quote_QuoteClose

Same as the Quote_QuoteClose many-to-one relationship for the quoteclose table/entity.

Property	Value
ReferencingEntity	quoteclose
ReferencingAttribute	quoteid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	Quote_QuoteClose
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

msdyn_playbookinstance_quote

Added by: Playbook Solution

Same as the msdyn_playbookinstance_quote many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_quote
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- quote_customer_accounts
- quote_customer_contacts
- opportunity_quotes
- price_level_quotes
- campaign_quotes

quote_customer_accounts

Added by: System Solution Solution

See the quote_customer_accounts one-to-many relationship for the account table/entity.

quote_customer_contacts

Added by: System Solution Solution

See the quote_customer_contacts one-to-many relationship for the contact table/entity.

opportunity_quotes

See the opportunity_quotes one-to-many relationship for the opportunity table/entity.

price_level_quotes

Added by: Product Management Solution

See the price_level_quotes one-to-many relationship for the pricelevel table/entity.

campaign_quotes

Added by: Marketing Solution

See the campaign_quotes one-to-many relationship for the campaign table/entity.

Many-To-Many Relationships

Relationship details provided where the Quote table is the first table in the relationship. Listed by **SchemaName**.

contactquotes_association

IntersectEntityName: contactquotes

Table 1

Property	Value
IntersectAttribute	quoteid
IsCustomizable	False
LogicalName	quote
NavigationPropertyName	contactquotes_association

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	contactid
NavigationPropertyName	contactquotes_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference
Web API Reference

QuoteClose table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Activity generated when a quote is closed.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
GrantAccess	GrantAccessRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	QuoteCloses
DisplayCollectionName	Quote Close Activities
DisplayName	Quote Close
EntitySetName	quotecloses
IsBPFEntity	False
LogicalCollectionName	quotecloses
LogicalName	quoteclose
OwnershipType	UserOwned
PrimaryIdAttribute	activityid
PrimaryNameAttribute	subject
SchemaName	QuoteClose

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ActivityAdditionalParams
- ActivityId
- ActualDurationMinutes
- ActualEnd
- ActualStart
- BCC
- Category
- CC
- Community
- Customers
- DeliveryPriorityCode
- Description
- ExchangeItemId
- ExchangeWebLink
- From
- ImportSequenceNumber
- IsBilled
- IsMapiPrivate
- IsWorkflowCreated
- LastOnHoldTime
- LeftVoiceMail
- OptionalAttendees
- Organizer
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- Partners
- PriorityCode
- ProcessId
- QuoteId
- QuoteNumber
- RegardingObjectId
- RegardingObjectIdName
- RegardingObjectIdYomiName
- RegardingObjectTypeCode
- RequiredAttendees
- Resources
- Revision
- ScheduledEnd
- ScheduledStart
- ServiceId
- SLAId
- SortDate
- StageId
- StateCode
- StatusCode
- Subcategory
- Subject
- TimeZoneRuleVersionNumber
- To
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

ActivityAdditionalParams

Property	Value

Property	Value
Description	Additional information provided by the external application as JSON. For internal use only.
DisplayName	Activity Additional Parameters
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	activityadditionalparams
MaxLength	8192
RequiredLevel	None
Type	Memo

ActivityId

Property	Value
Description	Unique identifier of the quote close activity.
DisplayName	Quote Close
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	activityid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ActualDurationMinutes

Property	Value
Description	Actual duration of the quote close activity in minutes.
DisplayName	Actual Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	actualdurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

ActualEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Actual end time of the quote close activity.
DisplayName	Closed Date

Property	Value
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	actualend
RequiredLevel	None
Type	DateTime

ActualStart

Property	Value
DateTimeBehavior	UserLocal
Description	Actual start time of the quote close activity.
DisplayName	Actual Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	actualstart
RequiredLevel	None
Type	DateTime

BCC

Property	Value
Description	Blind Carbon-copy (bcc) recipients of the activity.
DisplayName	BCC
IsValidForForm	True
IsValidForRead	True
LogicalName	bcc
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Category

Property	Value
Description	Category of the quote close activity.
DisplayName	Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	category
MaxLength	250

Property	Value
RequiredLevel	None
Type	String

CC

Property	Value
Description	Carbon-copy (cc) recipients of the activity.
DisplayName	CC
IsValidForForm	True
IsValidForRead	True
LogicalName	cc
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Community

Property	Value
Description	Shows how contact about the social activity originated, such as from Twitter or Facebook. This field is read-only.
DisplayName	Social Channel
IsValidForForm	False
IsValidForRead	True
LogicalName	community
RequiredLevel	None
Type	Picklist

Community Choices/Options

Value	Label	Description
0	Other	Other default
1	Facebook	Facebook item.
2	Twitter	Twitter.
3	Line	
4	Wechat	
5	Cortana	
6	Direct Line	
7	Microsoft Teams	
8	Direct Line Speech	
9	Email	
10	GroupMe	
11	Kik	
12	Telegram	
13	Skype	

Value	Label	Description
14	Slack	
15	WhatsApp	
16	Apple Messages For Business	
17	Google's Business Messages	

Customers

Property	Value
Description	Customer with which the activity is associated.
DisplayName	Customers
IsValidForForm	True
IsValidForRead	True
LogicalName	customers
RequiredLevel	None
Targets	account,contact
Type	PartyList

DeliveryPriorityCode

Property	Value
Description	Priority of delivery of the activity to the email server.
DisplayName	Delivery Priority
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	deliveryprioritycode
RequiredLevel	None
Type	Picklist

DeliveryPriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

Description

Property	Value
Description	Activity generated when a quote is closed.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExchangeItemId

Property	Value
Description	The message id of activity which is returned from Exchange Server.
DisplayName	Exchange Item ID
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeitemid
MaxLength	200
RequiredLevel	None
Type	String

ExchangeWebLink

Property	Value
Description	Shows the web link of Activity of type email.
DisplayName	Exchange WebLink
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	exchangeweblink
MaxLength	1250
RequiredLevel	None
Type	String

From

Property	Value
Description	Person who the activity is from.
DisplayName	From
IsValidForForm	True
IsValidForRead	True
LogicalName	from
RequiredLevel	None

Property	Value
Targets	account,contact,lead,systemuser
Type	PartyList

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsBilled

Property	Value
Description	Information about whether the quote close activity was billed as part of resolving a case.
DisplayName	Is Billed
IsValidForForm	False
IsValidForRead	True
LogicalName	isbilled
RequiredLevel	None
Type	Boolean

IsBilled Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsMapiPrivate

Property	Value
Description	For internal use only.
DisplayName	Is Private
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	ismapiprivate
RequiredLevel	None
Type	Boolean

IsMapiPrivate Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsWorkflowCreated

Property	Value
Description	Information that specifies if the quote close activity was created from a workflow rule.
DisplayName	Is Workflow Created
IsValidForForm	False
IsValidForRead	True
LogicalName	isworkflowcreated
RequiredLevel	None
Type	Boolean

IsWorkflowCreated Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date and time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

LeftVoiceMail

Property	Value
Description	Left the voice mail
DisplayName	Left Voice Mail
IsValidForForm	True
IsValidForRead	True
LogicalName	leftvoicemail
RequiredLevel	None
Type	Boolean

LeftVoiceMail Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

OptionalAttendees

Property	Value
Description	List of optional attendees for the activity.
DisplayName	Optional Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	optionalattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Organizer

Property	Value
Description	Person who organized the activity.
DisplayName	Organizer
IsValidForForm	True
IsValidForRead	True
LogicalName	organizer
RequiredLevel	None
Targets	systemuser
Type	PartyList

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Unique identifier of the user or team who owns the activity.
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

Partners

Property	Value
Description	Outsource vendor with which activity is associated.
DisplayName	Outsource Vendors
IsValidForForm	True
IsValidForRead	True
LogicalName	partners
RequiredLevel	None
Targets	account,contact

Property	Value
Type	PartyList

PriorityCode

Property	Value
Description	Priority of the activity.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
0	Low	
1	Normal	
2	High	

ProcessId

Property	Value
Description	Unique identifier of the Process.
DisplayName	Process
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

QuoteId

Property	Value
Description	Unique identifier of the quote with which the quote close activity is associated.
DisplayName	Quote
IsValidForForm	False
IsValidForRead	True
LogicalName	quoteid
RequiredLevel	None
Targets	quote
Type	Lookup

QuoteNumber

Property	Value
Description	Quote number.
DisplayName	Quote Number
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	quotenumber
MaxLength	100
RequiredLevel	None
Type	String

RegardingObjectId

Property	Value
Description	Unique identifier of the object with which the activity is associated.
DisplayName	Regarding
IsValidForForm	True
IsValidForRead	True
LogicalName	regardingobjectid
RequiredLevel	None
Targets	account,bookableresourcebooking,bookableresourcebookingheader,bulkoperation,campaign,campaignactivity,entitlement,entitlementtemplate,incid
Type	Lookup

RegardingObjectIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidname
MaxLength	400
RequiredLevel	None
Type	String

RegardingObjectIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjectidyominame
MaxLength	400
RequiredLevel	None
Type	String

RegardingObjectTypeCode

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	regardingobjecttypecode
RequiredLevel	None
Type	EntityName

RequiredAttendees

Property	Value
Description	List of required attendees for the activity.
DisplayName	Required Attendees
IsValidForForm	True
IsValidForRead	True
LogicalName	requiredattendees
RequiredLevel	None
Targets	account,contact,lead,systemuser
Type	PartyList

Resources

Property	Value
Description	Users or facility/equipment that are required for the activity.
DisplayName	Resources
IsValidForForm	True
IsValidForRead	True
LogicalName	resources
RequiredLevel	None
Targets	equipment,systemuser
Type	PartyList

Revision

Property	Value
Description	Quote revision number.
DisplayName	Revision
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	revision
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ScheduledEnd

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled end time of the quote close activity.
DisplayName	Scheduled End
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledend
RequiredLevel	None
Type	DateTime

ScheduledStart

Property	Value
DateTimeBehavior	UserLocal
Description	Scheduled start time of the quote close activity.
DisplayName	Scheduled Start
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledstart
RequiredLevel	None
Type	DateTime

ServiceId

Property	Value
Description	Unique identifier of the service with which the quote close activity is associated.

Property	Value
DisplayName	Service
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceid
RequiredLevel	None
Targets	service
Type	Lookup

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the case record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

SortDate

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time by which the activities are sorted.
DisplayName	Sort Date
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	sortdate
RequiredLevel	None
Type	DateTime

StageId

Property	Value
Description	Unique identifier of the Stage.
DisplayName	(Deprecated) Process Stage
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the quote close activity is open, completed, or canceled. By default, quote close activities are completed.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Open	1	Open
1	Completed	2	Completed
2	Canceled	3	Canceled

StatusCode

Property	Value
Description	Reason for the status of the quote close activity.
DisplayName	Status Reason
IsValidForForm	False
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Open	0
2	Completed	1
3	Canceled	2

Subcategory

Property	Value
Description	Subcategory of the quote close activity.
DisplayName	Sub-Category
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	subcategory
MaxLength	250
RequiredLevel	None
Type	String

Subject

Property	Value
Description	Subject associated with the quote close activity.
DisplayName	Subject
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subject
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

To

Property	Value
Description	Person who is the receiver of the activity.
DisplayName	To
IsValidForForm	True
IsValidForRead	True
LogicalName	to
RequiredLevel	None

Property	Value
Targets	account,contact,lead,systemuser
Type	PartyList

TransactionCurrencyId

Property	Value
Description	Unique identifier of the currency associated with the activitypointer.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	For internal use only.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- ActivityTypeCode
- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- DeliveryLastAttemptedOn
- ExchangeRate
- InstanceTypeCode
- IsRegularActivity
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PostponeActivityProcessingUntil
- QuoteIdName
- QuoteIdType
- ScheduledDurationMinutes
- SenderMailboxId
- SenderMailboxIdName
- SentOn
- SeriesId
- ServiceIdName
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TransactionCurrencyIdName
- VersionNumber

ActivityTypeCode

Property	Value
Description	Type of activity.
DisplayName	Activity Type
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	activitytypecode
RequiredLevel	SystemRequired
Type	EntityName

CreatedBy

Property	Value
Description	Unique identifier of the user who created the quote close activity.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the quote close activity was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the quoteclose.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

DeliveryLastAttemptedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the delivery of the activity was last attempted.
DisplayName	Date Delivery Last Attempted
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	deliverylastattemptedon
RequiredLevel	None
Type	DateTime

ExchangeRate

Property	Value
Description	Exchange rate for the currency associated with the activitypointer with respect to the base currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

InstanceTypeCode

Property	Value
Description	Type of instance of a recurring series.
DisplayName	Recurring Instance Type

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	instancetypecode
RequiredLevel	SystemRequired
Type	Picklist

InstanceTypeCode Choices/Options

Value	Label	Description
0	Not Recurring	
1	Recurring Master	
2	Recurring Instance	
3	Recurring Exception	
4	Recurring Future Exception	

IsRegularActivity

Property	Value
Description	Information regarding whether the activity is a regular activity type or event type.
DisplayName	Is Regular Activity
IsValidForForm	False
IsValidForRead	True
LogicalName	isregularactivity
RequiredLevel	SystemRequired
Type	Boolean

IsRegularActivity Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the quote close activity.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

ModifiedByExternalParty

Added by: Sales Service Solution

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Added by: Sales Service Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the quote close activity was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the quoteclose.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows how long, in minutes, that the record was on hold.

Property	Value
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OwnerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier of the business unit that owns the activity.
DisplayName	Owning Business Unit

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	160
RequiredLevel	None
Type	String

OwningTeam

Property	Value
Description	Unique identifier of the team that owns the activity.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier of the user that owns the activity.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

PostponeActivityProcessingUntil

Property	Value
DateTimeBehavior	UserLocal
Description	For internal use only.
DisplayName	Delay activity processing until
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	postponeactivityprocessinguntil
RequiredLevel	None
Type	DateTime

QuoteIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	quoteidname
MaxLength	100
RequiredLevel	None
Type	String

QuoteIdType

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	quoteidtype
RequiredLevel	None
Type	EntityName

ScheduledDurationMinutes

Property	Value

Property	Value
Description	Scheduled duration of the quote close activity, specified in minutes.
DisplayName	Scheduled Duration
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	scheduledurationminutes
MaxValue	2147483647
MinValue	0
RequiredLevel	None
Type	Integer

SenderMailboxId

Property	Value
Description	Unique identifier of the mailbox associated with the sender of the email message.
DisplayName	Sender's Mailbox
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxid
RequiredLevel	None
Targets	mailbox
Type	Lookup

SenderMailboxIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	sendermailboxidname
MaxLength	100
RequiredLevel	None
Type	String

SentOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the activity was sent.
DisplayName	Date Sent

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	senton
RequiredLevel	None
Type	DateTime

SeriesId

Property	Value
Description	Uniqueidentifier specifying the id of recurring series of an instance.
DisplayName	Series Id
IsValidForForm	False
IsValidForRead	True
LogicalName	seriesid
RequiredLevel	None
Type	Uniqueidentifier

ServiceIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	serviceidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this case. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version number of the activity.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

CampaignResponse_QuoteCloses

Added by: Marketing Solution

Same as the CampaignResponse_QuoteCloses many-to-one relationship for the campaignresponse table/entity.

Property	Value
ReferencingEntity	campaignresponse
ReferencingAttribute	originatingactivityid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	CampaignResponse_QuoteCloses
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- lead_QuoteCloses
- bulkoperation_QuoteCloses
- campaign_QuoteCloses
- campaignactivity_QuoteCloses
- msdyn_playbookinstance_QuoteCloses
- opportunity_QuoteCloses
- quote_QuoteCloses
- account_QuoteCloses
- Quote_QuoteClose

lead_QuoteCloses

Added by: Lead Management Solution

See the lead_QuoteCloses one-to-many relationship for the lead table/entity.

bulkoperation_QuoteCloses

Added by: Marketing Solution

See the bulkoperation_QuoteCloses one-to-many relationship for the bulkoperation table/entity.

campaign_QuoteCloses

Added by: Marketing Solution

See the campaign_QuoteCloses one-to-many relationship for the campaign table/entity.

campaignactivity_QuoteCloses

Added by: Marketing Solution

See the campaignactivity_QuoteCloses one-to-many relationship for the campaignactivity table/entity.

msdyn_playbookinstance_QuoteCloses

Added by: Playbook Solution

See the msdyn_playbookinstance_QuoteCloses one-to-many relationship for the msdyn_playbookinstance table/entity.

opportunity_QuoteCloses

See the opportunity_QuoteCloses one-to-many relationship for the opportunity table/entity.

quote_QuoteCloses

See the quote_QuoteCloses one-to-many relationship for the quote table/entity.

account_QuoteCloses

Added by: System Solution Solution

See the account_QuoteCloses one-to-many relationship for the account table/entity.

Quote_QuoteClose

See the Quote_QuoteClose one-to-many relationship for the quote table/entity.

See also

About the table reference
Web API Reference

Quote Product (QuoteDetail) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Product line item in a quote. The details include such information as product ID, description, quantity, and cost.

Added by: Sales Solution

Messages

Message	SDK Assembly
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	QuoteDetails
DisplayCollectionName	Quote Products

Property	Value
DisplayName	Quote Product
EntitySetName	quotedetails
IsBPFEntity	False
LogicalCollectionName	quotedetails
LogicalName	quotedetail
OwnershipType	UserOwned
PrimaryIdAttribute	quotedetailid
PrimaryNameAttribute	quotedetailname
SchemaName	QuoteDetail

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BaseAmount
- Description
- ExtendedAmount
- ImportSequenceNumber
- IsPriceOverridden
- IsProductOverridden
- LineItemNumber
- ManualDiscountAmount
- OverriddenCreatedOn
- ParentBundleId
- ParentBundleIdRef
- PricePerUnit
- PricingErrorCode
- ProductAssociationId
- ProductDescription
- ProductId
- ProductName
- ProductTypeCode
- PropertyConfigurationStatus
- Quantity

- QuoteDetailId
- QuoteDetailName
- QuoteId
- RequestDeliveryBy
- SalesRepId
- SequenceNumber
- ShipTo_AddressId
- ShipTo_City
- ShipTo_ContactName
- ShipTo_Country
- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- Tax
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UoMId
- UTCConversionTimeZoneCode
- WillCall

BaseAmount

Property	Value
Description	Shows the total price of the quote product, based on the price per unit, volume discount, and quantity.
DisplayName	Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount

Property	Value
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Description

Property	Value
Description	Type additional information to describe the quote product, such as manufacturing details or acceptable substitutions.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExtendedAmount

Property	Value
Description	Shows the total amount due for the quote product, based on the sum of the unit price, quantity, discounts ,and tax.
DisplayName	Extended Amount
IsValidForCreate	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsPriceOverridden

Property	Value

Property	Value
Description	Select whether the price per unit is fixed at the value in the specified price list or can be overridden by users who have edit rights to the quote product.
DisplayName	Price Overridden
IsValidForForm	True
IsValidForRead	True
LogicalName	ispriceoverridden
RequiredLevel	None
Type	Boolean

IsPriceOverridden Choices/Options

Value	Label	Description
1	Override Price	
0	Use Default	

DefaultValue: 0

IsProductOverridden

Property	Value
Description	Select whether the product exists in the Microsoft Dynamics 365 product catalog or is a write-in product specific to the quote.
DisplayName	Select Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isproductoverridden
RequiredLevel	None
Type	Boolean

IsProductOverridden Choices/Options

Value	Label	Description
1	Write In	
0	Existing	

DefaultValue: 0

LineItemNumber

Property	Value
Description	Type the line item number for the quote product to easily identify the product in the quote and make sure it's listed in the correct order.
DisplayName	Line Item Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	lineitemnumber
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ManualDiscountAmount

Property	Value
Description	Type the manual discount amount for the quote product to deduct any negotiated or other savings from the product total on the quote.
DisplayName	Manual Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount

Property	Value
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentBundleId

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent Bundle
IsValidForForm	True
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	parentbundleid
RequiredLevel	None
Type	Uniqueidentifier

ParentBundleIdRef

Added by: Sales Patch Solution

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent bundle product
IsValidForForm	True
IsValidForRead	True
LogicalName	parentbundleidref
RequiredLevel	None
Targets	quotedetail
Type	Lookup

PricePerUnit

Property	Value
Description	Type the price per unit of the quote product. The default is to the value in the price list specified on the quote for existing products.
DisplayName	Price Per Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

PricingErrorCode

Property	Value
Description	Select the type of pricing error, such as a missing or invalid product, or missing quantity.
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	

Value	Label	Description
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	

Value	Label	Description
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

ProductAssociationId

Property	Value
Description	Unique identifier of the product line item association with bundle in the quote
DisplayName	Bundle Item Association
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productassociationid
RequiredLevel	None
Type	Uniqueidentifier

ProductDescription

Property	Value
Description	Type a name or description to identify the type of write-in product included in the quote.
DisplayName	Write-In Product
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	productdescription
MaxLength	500
RequiredLevel	None
Type	String

ProductId

Property	Value
Description	Choose the product to include on the quote to link the product's pricing and other information to the quote.
DisplayName	Existing Product
IsValidForForm	True
IsValidForRead	True
LogicalName	productid
RequiredLevel	None
Targets	product
Type	Lookup

ProductName

Property	Value
Description	Calculated field that will be populated by name and description of the product.
DisplayName	Product Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	productname
MaxLength	500
RequiredLevel	None
Type	String

ProductTypeCode

Property	Value
Description	Product Type
DisplayName	Product type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	producttypecode
RequiredLevel	SystemRequired
Type	Picklist

ProductTypeCode Choices/Options

Value	Label	Description
1	Product	
2	Bundle	
3	Required Bundle Product	
4	Optional Bundle Product	
5	Project-based Service	

PropertyConfigurationStatus

Property	Value

Property	Value
Description	Status of the property configuration.
DisplayName	Property Configuration
IsValidForForm	True
IsValidForRead	True
LogicalName	propertyconfigurationstatus
RequiredLevel	SystemRequired
Type	Picklist

PropertyConfigurationStatus Choices/Options

Value	Label	Description
0	Edit	
1	Rectify	
2	Not Configured	

Quantity

Property	Value
Description	Type the amount or quantity of the product requested by the customer.
DisplayName	Quantity
IsValidForForm	True
IsValidForRead	True
LogicalName	quantity
MaxValue	100000000000
MinValue	-100000000000
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

QuoteDetailId

Property	Value
Description	Unique identifier of the product line item in the quote.
DisplayName	Quote Product
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	quotedetailid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

QuoteDetailName

Added by: Sales Patch Solution

Property	Value
Description	Quote Detail Name. Added for 1:n referential relationship (internal purposes only)
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	quotedetailname
MaxLength	500
RequiredLevel	ApplicationRequired
Type	String

QuoteId

Property	Value
Description	Unique identifier of the quote for the quote product.
DisplayName	Quote
IsValidForForm	True
IsValidForRead	True
LogicalName	quoteid
RequiredLevel	SystemRequired
Targets	quote
Type	Lookup

RequestDeliveryBy

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the delivery date requested by the customer for the quote product.
DisplayName	Requested Delivery Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	requestdeliveryby
RequiredLevel	None
Type	DateTime

SalesRepId

Property	Value
Description	Choose the user responsible for the sale of the quote product.
DisplayName	Salesperson
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	salesrepid
RequiredLevel	None
Targets	systemuser
Type	Lookup

SequenceNumber

Property	Value
Description	Unique identifier of the data that maintains the sequence.
DisplayName	Sequence Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	sequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ShipTo_AddressId

Property	Value
Description	Unique identifier of the shipping address.
DisplayName	Ship To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	shipto_addressid

Property	Value
RequiredLevel	None
Type	Uniqueidentifier

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's shipping address.
DisplayName	Ship To Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_contactname
MaxLength	150

Property	Value
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_name
MaxLength	200
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip the price
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnCreate	
2	SkipPriceCalcOnUpdate	
3	SkipPriceCalcOnUpSert	

Tax

Property	Value

Property	Value
Description	Type the tax amount for the quote product.
DisplayName	Tax
IsValidForForm	True
IsValidForRead	True
LogicalName	tax
MaxValue	1000000000000
MinValue	-1000000000000
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

UoMId

Property	Value
Description	Choose the unit of measurement for the base unit quantity for this purchase, such as each or dozen.
DisplayName	Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	uomid
RequiredLevel	None
Targets	uom
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WillCall

Property	Value
Description	Select whether the quote product should be shipped to the specified address or held until the customer calls with further pick up or delivery instructions.
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BaseAmount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ExchangeRate
- ExtendedAmount_Base
- ManualDiscountAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerId
- OwnerIdName
- OwnerIdType
- OwnerIdYomiName
- OwningBusinessUnit
- OwningTeam
- OwningUser
- PricePerUnit_Base
- ProductIdName
- ProductNumber
- QuoteIdName
- QuoteStateCode
- SalesRepIdName
- SalesRepIdYomiName
- Tax_Base
- TransactionCurrencyIdName
- UoMIdName
- VersionNumber

- VolumeDiscountAmount
- VolumeDiscountAmount_Base

BaseAmount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Added by: Sales Patch Version 3 Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.

Property	Value
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ExtendedAmount_Base

Property	Value
Description	Value of the Extended Amount in base currency.
DisplayName	Extended Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ManualDiscountAmount_Base

Property	Value

Property	Value
Description	Value of the Manual Discount in base currency.
DisplayName	Manual Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	ownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team
Type	Owner

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired

Property	Value
Type	EntityName

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

PricePerUnit_Base

Property	Value
Description	Value of the Price Per Unit in base currency.
DisplayName	Price Per Unit (Base)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	priceperunit_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

ProductNumber

Added by: Sales Patch Version 3 Solution

Property	Value
Description	User-defined product ID.

Property	Value
DisplayName	Product Number
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productnumber
MaxLength	100
RequiredLevel	None
Type	String

QuoteIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	quoteidname
MaxLength	100
RequiredLevel	None
Type	String

QuoteStateCode

Property	Value
Description	Status of the quote product.

Property	Value
DisplayName	Quote Status
IsValidForForm	False
IsValidForRead	True
LogicalName	quotestatecode
RequiredLevel	SystemRequired
Type	Picklist

QuoteStateCode Choices/Options

Value	Label	Description

SalesRepIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidname
MaxLength	100
RequiredLevel	None
Type	String

SalesRepIdYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidyominame
MaxLength	100
RequiredLevel	None
Type	String

Tax_Base

Property	Value
Description	Value of the Tax in base currency.
DisplayName	Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	tax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

VolumeDiscountAmount

Property	Value
Description	Shows the discount amount per unit if a specified volume is purchased. Configure volume discounts in the Product Catalog in the Settings area.
DisplayName	Volume Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount
MaxValue	922337203685477
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

VolumeDiscountAmount_Base

Property	Value
Description	Value of the Volume Discount in base currency.
DisplayName	Volume Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

One-To-Many Relationships

Listed by **SchemaName**.

- QuoteDetail_Dynamicpropertyinstance
- quotedetail_parent_quotedetail
- msdyn_quotedetail_salesorderdetail
- quotedetail_parentref_quotedetail

QuoteDetail_Dynamicpropertyinstance

Same as the QuoteDetail_Dynamicpropertyinstance many-to-one relationship for the dynamicpropertyinstance table/entity.

Property	Value
ReferencingEntity	dynamicpropertyinstance
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True

Property	Value
ReferencedEntityNavigationPropertyName	QuoteDetail_Dynamicpropertyinstance
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: Cascade Unshare: NoCascade

quotedetail_parent_quotedetail

Same as the quotedetail_parent_quotedetail many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	parentbundleid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quotedetail_parent_quotedetail
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_quotedetail_salesorderdetail

Added by: Sales Patch Solution

Same as the msdyn_quotedetail_salesorderdetail many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	quotedetailid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_quotedetail_salesorderdetail
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

quotedetail_parentref_quotedetail

Added by: Sales Patch Solution

Same as the quotedetail_parentref_quotedetail many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	parentbundleidref
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	quotedetail_parentref_quotedetail

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- product_quote_details
- productAssociation_quote_details
- quote_details
- quotedetail_parent_quotedetail
- unit_of_measurement_quote_details
- quotedetail_parentref_quotedetail

product_quote_details

Added by: Product Management Solution

See the product_quote_details one-to-many relationship for the product table/entity.

productAssociation_quote_details

Added by: Product Management Solution

See the productAssociation_quote_details one-to-many relationship for the productassociation table/entity.

quote_details

See the quote_details one-to-many relationship for the quote table/entity.

quotedetail_parent_quotedetail

See the quotedetail_parent_quotedetail one-to-many relationship for the quotedetail table/entity.

unit_of_measurement_quote_details

Added by: Product Management Solution

See the unit_of_measurement_quote_details one-to-many relationship for the uom table/entity.

quotedetail_parentref_quotedetail

See the quotedetail_parentref_quotedetail one-to-many relationship for the quotedetail table/entity.

See also

About the table reference
Web API Reference

RollupField table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Field to be rolled up to calculate the actual and in-progress values against the goal.

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	RollupFields
DisplayCollectionName	Rollup Fields
DisplayName	Rollup Field
EntitySetName	rollupfields
IsBPFEntity	False
LogicalCollectionName	rollupfields

Property	Value
LogicalName	rollupfield
OwnershipType	None
PrimaryIdAttribute	rollupfieldid
PrimaryNameAttribute	
SchemaName	RollupField

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- DateAttribute
- EntityForDateAttribute
- GoalAttribute
- ImportSequenceNumber
- IsStateParentEntityAttribute
- MetricId
- RollupFieldId
- SourceAttribute
- SourceEntity
- SourceState
- SourceStatus
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

DateAttribute

Property	Value
Description	Select a date field for the selected record type, such as Actual Closed Date for the Opportunity record type. A record participates in the goal rollup, if the selected date falls between the start date and the end date for the goal.
DisplayName	Date Field
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	dateattribute
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

EntityForDateAttribute

Property	Value
Description	Select the record type that contains the date field that will be considered while rolling up data to the goal.
DisplayName	Record Type
IsValidForForm	True
IsValidForRead	True
LogicalName	entityfordateattribute
RequiredLevel	ApplicationRequired
Type	EntityName

GoalAttribute

Property	Value
Description	Select a rollup field where the metric rollup data will be displayed in the goal. The options are an integer or money, depending on the Metric Type you chose for the goal metric.
DisplayName	Rollup Field
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	goalattribute
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsStateParentEntityAttribute

Property	Value
Description	Tells whether the state or status belongs to the parent entity.
DisplayName	Is State/Status From Parent Entity
IsValidForForm	False

Property	Value
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isstateparententityattribute
RequiredLevel	None
Type	Boolean

IsStateParentEntityAttribute Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

MetricId

Property	Value
Description	Unique identifier of the goal metric associated with the rollup field.
DisplayName	Goal Metric
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	metricid
RequiredLevel	ApplicationRequired
Targets	metric
Type	Lookup

RollupFieldId

Property	Value

Property	Value
Description	Unique identifier of the rollup field.
DisplayName	Rollup Field
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	rollupfieldid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

SourceAttribute

Property	Value
Description	Type the name of the field that the data for the goal rolls up from.
DisplayName	Source Field
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	sourceattribute
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

SourceEntity

Property	Value
Description	Type the name of the record type (entity) that the data for the goal must roll up from.

Property	Value
DisplayName	Source Record Type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	sourceentity
RequiredLevel	ApplicationRequired
Type	EntityName

SourceState

Property	Value
Description	Select the state of the records you want to use as the source of the rollup data for the metric.
DisplayName	Source Record Type State
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	sourcestate
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

SourceStatus

Property	Value
Description	Select the status of the records you want to use as the source of the rollup data for the metric.
DisplayName	Source Record Type Status

Property	Value
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	sourcestatus
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- MetricIdName
- ModifiedBy
- ModifiedByName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- VersionNumber

CreatedBy

Property	Value
Description	Shows who created the record.

Property	Value
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was created. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.

Property	Value
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

MetricIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	metricidname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Shows the date and time when the record was last updated. The date and time are displayed in the time zone selected in Microsoft Dynamics 365 options.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

OrganizationId

Property	Value
Description	Choose the ID of the organization that the record is associated with.
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None
Targets	
Type	Lookup

VersionNumber

Property	Value
Description	Version number of the rollup field.
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

metric_rollupfield

See the metric_rollupfield one-to-many relationship for the metric table/entity.

See also

About the table reference
Web API Reference

SalesLiterature table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Storage of sales literature, which may contain one or more documents.

Added by: Sales Solution

Messages

Message	SDK Assembly
Associate	AssociateRequest or Associate
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	SalesLiteratures
DisplayCollectionName	Sales Literature

Property	Value
DisplayName	Sales Literature
EntitySetName	salesliteratures
IsBPFEntity	False
LogicalCollectionName	salesliteratures
LogicalName	salesliterature
OwnershipType	OrganizationOwned
PrimaryIdAttribute	salesliteratureid
PrimaryNameAttribute	name
SchemaName	SalesLiterature

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Description
- EmployeeContactId
- EntityImage
- ExpirationDate
- HasAttachments
- ImportSequenceNumber
- IsCustomerViewable
- KeyWords
- LiteratureTypeCode
- Name
- OverriddenCreatedOn
- ProcessId
- SalesLiteratureId
- StageId
- SubjectId
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode

Description

Property	Value
Description	Type additional information to describe the sales literature, such as the intended audience or primary messages.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

EmployeeContactId

Property	Value
Description	Choose the user who is responsible for maintaining or updating the sales literature.
DisplayName	Employee Contact
IsValidForForm	True
IsValidForRead	True
LogicalName	employeecontactid
RequiredLevel	None
Targets	systemuser
Type	Lookup

EntityImage

Added by: Active Solution Solution

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

ExpirationDate

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the expiration date or last day the sales literature can be distributed.
DisplayName	Expiration Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	expirationdate
RequiredLevel	None
Type	DateTime

HasAttachments

Property	Value
Description	Tells whether the sales literature has one or more attachments.

Property	Value
DisplayName	Has Attachments
IsValidForForm	False
IsValidForRead	True
LogicalName	hasattachments
RequiredLevel	None
Type	Boolean

HasAttachments Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsCustomerViewable

Property	Value
Description	Select whether the sales literature can be distributed to prospects and customers or is for internal use only.
DisplayName	Customer Viewable
IsValidForForm	True
IsValidForRead	True
LogicalName	iscustomerviewable
RequiredLevel	None
Type	Boolean

IsCustomerViewable Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

KeyWords

Property	Value
Description	Type one or more topics or keywords that can be used to search for the sales literature.
DisplayName	Key Words
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	keywords

Property	Value
MaxLength	100000
RequiredLevel	None
Type	Memo

LiteratureTypeCode

Property	Value
Description	Select a category or type to help others identify the intended use of the sales literature.
DisplayName	Type
IsValidForForm	True
IsValidForRead	True
LogicalName	literaturetypecode
RequiredLevel	None
Type	Picklist

LiteratureTypeCode Choices/Options

Value	Label	Description
0	Presentation	
1	Product Sheet	
2	Policies And Procedures	
3	Sales Literature	
4	Spreadsheets	
5	News	
6	Bulletins	
7	Price Sheets	
8	Manuals	

Value	Label	Description
9	Company Background	
100001	Marketing Collateral	

Name

Property	Value
Description	Type a descriptive title for the sales literature.
DisplayName	Title
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon

Property	Value
RequiredLevel	None
Type	DateTime

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

SalesLiteratureId

Property	Value
Description	Unique identifier of the sales literature.
DisplayName	Sales Literature
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	salesliteratureid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

StageId

Property	Value

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

SubjectId

Property	Value
Description	Choose the subject for the sales literature to relate the item to a product or business group. Administrators can configure subjects under Business Management in the Settings area.
DisplayName	Subject
IsValidForForm	True
IsValidForRead	True
LogicalName	subjectid
RequiredLevel	ApplicationRequired
Targets	subject
Type	Lookup

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
LogicalName	transactioncurrencyid
RequiredLevel	None
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- EmployeeContactIdName
- EmployeeContactIdYomiName
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- SubjectIdName
- TransactionCurrencyIdName
- VersionNumber

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

EmployeeContactIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	employeecontactidname
MaxLength	100
RequiredLevel	None
Type	String

EmployeeContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	employeecontactidyominame
MaxLength	100
RequiredLevel	None
Type	String

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	entityimage_timestamp
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	entityimageid
RequiredLevel	None
Type	Uniqueidentifier

ExchangeRate

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None

Property	Value
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

SubjectIdName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	subjectidname
MaxLength	100
RequiredLevel	None
Type	String

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

sales_literature_items

Same as the sales_literature_items many-to-one relationship for the salesliteratureitem table/entity.

Property	Value
ReferencingEntity	salesliteratureitem
ReferencingAttribute	salesliteratureid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	sales_literature_items
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-Many Relationships

Relationship details provided where the SalesLiterature table is the first table in the relationship. Listed by **SchemaName**.

- productsalesliterature_association
- competitorsalesliterature_association
- campaignactivitysalesliterature_association
- campaignsalesliterature_association

productsalesliterature_association

See the productsalesliterature_association many-to-many relationship for the product table/entity.

competitorsalesliterature_association

IntersectEntityName: competitorsalesliterature

Table 1

Property	Value
IntersectAttribute	salesliteratureid
IsCustomizable	False
LogicalName	salesliterature
NavigationPropertyName	competitorsalesliterature_association
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Sales Label: Order:

Table 2

Property	Value
LogicalName	competitor
IntersectAttribute	competitorid

Property	Value
NavigationPropertyName	competitorsalesliterature_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

campaignactivitysalesliterature_association

See the campaignactivitysalesliterature_association many-to-many relationship for the campaignactivity table/entity.

campaignsalesliterature_association

See the campaignsalesliterature_association many-to-many relationship for the campaign table/entity.

See also

About the table reference
Web API Reference

Sales Attachment (SalesLiteratureItem) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Item in the sales literature collection.

Added by: Sales Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	SalesLiteratureItems
DisplayCollectionName	Sales Attachments
DisplayName	Sales Attachment

Property	Value
EntitySetName	salesliteratureitems
IsBPFEntity	False
LogicalCollectionName	salesliteratureitems
LogicalName	salesliteratureitem
OwnershipType	None
PrimaryIdAttribute	salesliteratureitemid
PrimaryNameAttribute	title
SchemaName	SalesLiteratureItem

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- Abstract
- AttachedDocumentUrl
- AuthorName
- DocumentBody
- FileName
- FileSize
- FileTypeCode
- ImportSequenceNumber
- IsCustomerViewable
- KeyWords
- MimeType
- Mode
- OverriddenCreatedOn
- SalesLiteratureId
- SalesLiteratureItemId
- TimeZoneRuleVersionNumber
- Title
- UTCConversionTimeZoneCode

Abstract

Property	Value
Description	Abstract of the document.
DisplayName	Abstract
Format	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	abstract
MaxLength	100000
RequiredLevel	None
Type	Memo

AttachedDocumentUrl

Property	Value
Description	URL of the Website on which the document is located.
DisplayName	Attached Document URL
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	attacheddocumenturl
MaxLength	500
RequiredLevel	None
Type	String

AuthorName

Property	Value

Property	Value
Description	Author name for the document.
DisplayName	Author Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	authorname
MaxLength	500
RequiredLevel	None
Type	String

DocumentBody

Property	Value
Description	Shows the encoded contents of the sales literature document attachment.
DisplayName	
FormatName	TextArea
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	documentbody
MaxLength	1073741823
RequiredLevel	None
Type	String

FileName

Property	Value

Property	Value
Description	File name of the document.
DisplayName	File Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	filename
MaxLength	255
RequiredLevel	None
Type	String

FileSize

Property	Value
Description	File size of the document.
DisplayName	File Size (Bytes)
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	filesize
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

FileTypeCode

Property	Value

Property	Value
Description	Select the file type of the document.
DisplayName	File Type
IsValidForForm	False
IsValidForRead	True
LogicalName	filetypecode
RequiredLevel	None
Type	Picklist

FileTypeCode Choices/Options

Value	Label	Description
1	Default Value	

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsCustomerViewable

Property	Value
Description	Tells whether the document can be shared with customers or is for internal use only.
DisplayName	Customer Viewable
IsValidForForm	False
IsValidForRead	True
LogicalName	iscustomerviewable
RequiredLevel	None
Type	Boolean

IsCustomerViewable Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

KeyWords

Property	Value
Description	Keywords to use for searches in documents.
DisplayName	Key Words
Format	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	keywords
MaxLength	100000

Property	Value
RequiredLevel	None
Type	Memo

MimeType

Property	Value
Description	Shows the file type of the sales literature document attachment, such as text or document.
DisplayName	Mime Type
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	mimetype
MaxLength	256
RequiredLevel	None
Type	String

Mode

Property	Value
Description	Defines the mode of the sales literature document attachment.
DisplayName	Mode
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	mode

Property	Value
MaxLength	256
RequiredLevel	None
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

SalesLiteratureId

Property	Value
Description	Unique identifier of the sales literature that is associated with the individual item.
DisplayName	Sales Literature
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	salesliteratureid

Property	Value
RequiredLevel	SystemRequired
Targets	salesliterature
Type	Lookup

SalesLiteratureItemId

Property	Value
Description	Unique identifier for the document.
DisplayName	Sales Literature Item
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	salesliteratureitemid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None

Property	Value
Type	Integer

Title

Property	Value
Description	Type the title or name that describes the document.
DisplayName	Title
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	title
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None

Property	Value
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- FileType
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- SalesLiteratureIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the document.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None

Property	Value
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the document was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the salesliteratureitem.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

FileType

Property	Value
Description	
DisplayName	
Format	None
IsValidForForm	False
IsValidForRead	False
LogicalName	filetype
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the document.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the document was last modified.

Property	Value
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the salesliteratureitem.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier of the organization associated with the document.
DisplayName	Organization
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid

Property	Value
RequiredLevel	SystemRequired
Type	Uniqueidentifier

SalesLiteratureIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesliteratureidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None

Property	Value
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

sales_literature_items

See the sales_literature_items one-to-many relationship for the salesliterature table/entity.

See also

About the table reference
Web API Reference

Order (SalesOrder) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Quote that has been accepted.

Added by: Sales Solution

Messages

Message	SDK Assembly
Assign	AssignRequest
Associate	AssociateRequest or Associate
CalculatePrice	CalculatePriceRequest
CancelContract	CancelContractRequest
CancelSalesOrder	CancelSalesOrderRequest
ConvertSalesOrderToInvoice	ConvertSalesOrderToInvoiceRequest
Create	CreateRequest or Create
CreateMultiple	CreateMultipleRequest
Delete	DeleteRequest or Delete
Disassociate	DisassociateRequest or Disassociate
FulfillSalesOrder	FulfillSalesOrderRequest
GenerateSalesOrderFromOpportunity	GenerateSalesOrderFromOpportunityRequest

Message	SDK Assembly
GetQuantityDecimal	GetQuantityDecimalRequest
GetSalesOrderProductsFromOpportunity	GetSalesOrderProductsFromOpportunityRequest
GrantAccess	GrantAccessRequest
LockSalesOrderPricing	LockSalesOrderPricingRequest
ModifyAccess	ModifyAccessRequest
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
RetrievePrincipalAccess	RetrievePrincipalAccessRequest
RetrieveSharedPrincipalsAndAccess	RetrieveSharedPrincipalsAndAccessRequest
RevokeAccess	RevokeAccessRequest
Rollup	RollupRequest
SetState	SetStateRequest
Update	UpdateRequest or Update
UpdateMultiple	UpdateMultipleRequest

Properties

Property	Value
CollectionSchemaName	SalesOrders
DisplayCollectionName	Orders
DisplayName	Order
EntitySetName	salesorders
IsBPFEntity	False
LogicalCollectionName	salesorders
LogicalName	salesorder

Property	Value
OwnershipType	UserOwned
PrimaryIdAttribute	salesorderid
PrimaryNameAttribute	name
SchemaName	SalesOrder

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BillTo_AddressId
- BillTo_City
- BillTo_ContactName
- BillTo_Country
- BillTo_Fax
- BillTo_Line1
- BillTo_Line2
- BillTo_Line3
- BillTo_Name
- BillTo_PostalCode
- BillTo_StateOrProvince
- BillTo_Telephone
- CampaignId
- CustomerId
- CustomerIdType
- DateFulfilled
- Description
- DiscountAmount
- DiscountPercentage
- EmailAddress
- EntityImage
- FreightAmount
- FreightTermsCode
- ImportSequenceNumber
- IsPriceLocked
- LastBackofficeSubmit
- LastOnHoldTime

- Name
- OpportunityId
- OrderNumber
- OverriddenCreatedOn
- OwnerId
- OwnerIdType
- PaymentTermsCode
- PriceLevelId
- PricingErrorCode
- PriorityCode
- ProcessId
- QuoteId
- RequestDeliveryBy
- SalesOrderId
- ShippingMethodCode
- ShipTo_AddressId
- ShipTo_City
- ShipTo_ContactName
- ShipTo_Country
- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- SLAId
- StageId
- StateCode
- StatusCode
- SubmitDate
- SubmitStatus
- SubmitStatusDescription
- TimeZoneRuleVersionNumber
- TotalAmount
- TotalAmountLessFreight
- TotalDiscountAmount

- TotalLineItemAmount
- TotalLineItemDiscountAmount
- TotalTax
- TransactionCurrencyId
- TraversedPath
- UTCConversionTimeZoneCode
- WillCall

BillTo_AddressId

Property	Value
Description	Unique identifier of the billing address.
DisplayName	Bill To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	billto_addressid
RequiredLevel	None
Type	Uniqueidentifier

BillTo_City

Property	Value
Description	Type the city for the customer's billing address.
DisplayName	Bill To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_city
MaxLength	80
RequiredLevel	None

Property	Value
Type	String

BillTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's billing address.
DisplayName	Bill To Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_contactname
MaxLength	150
RequiredLevel	None
Type	String

BillTo_Country

Property	Value
Description	Type the country or region for the customer's billing address.
DisplayName	Bill To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_country
MaxLength	80
RequiredLevel	None

Property	Value
Type	String

BillTo_Fax

Property	Value
Description	Type the fax number for the customer's billing address.
DisplayName	Bill To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_fax
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Line1

Property	Value
Description	Type the first line of the customer's billing address.
DisplayName	Bill To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line1
MaxLength	250
RequiredLevel	None

Property	Value
Type	String

BillTo_Line2

Property	Value
Description	Type the second line of the customer's billing address.
DisplayName	Bill To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line2
MaxLength	250
RequiredLevel	None
Type	String

BillTo_Line3

Property	Value
Description	Type the third line of the billing address.
DisplayName	Bill To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_line3
MaxLength	250
RequiredLevel	None

Property	Value
Type	String

BillTo_Name

Property	Value
Description	Type a name for the customer's billing address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Bill To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_name
MaxLength	200
RequiredLevel	None
Type	String

BillTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the billing address.
DisplayName	Bill To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_postalcode
MaxLength	20

Property	Value
RequiredLevel	None
Type	String

BillTo_StateOrProvince

Property	Value
Description	Type the state or province for the billing address.
DisplayName	Bill To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

BillTo_Telephone

Property	Value
Description	Type the phone number for the customer's billing address.
DisplayName	Bill To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_telephone
MaxLength	50

Property	Value
RequiredLevel	None
Type	String

CampaignId

Added by: Marketing Sales Solution

Property	Value
Description	Shows the campaign that the order was created from.
DisplayName	Source Campaign
IsValidForForm	True
IsValidForRead	True
LogicalName	campaignid
RequiredLevel	None
Targets	campaign
Type	Lookup

CustomerId

Property	Value
Description	Select the customer account or contact to provide a quick link to additional customer details, such as account information, activities, and opportunities.
DisplayName	Customer
IsValidForForm	True
IsValidForRead	True
LogicalName	customerid
RequiredLevel	ApplicationRequired
Targets	account,contact
Type	Customer

CustomerIdType

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	Customer Type
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridtype
RequiredLevel	ApplicationRequired
Type	EntityName

DateFulfilled

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date that all or part of the order was shipped to the customer.
DisplayName	Date Fulfilled
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	datefulfilled
RequiredLevel	None
Type	DateTime

Description

Property	Value
Description	Type additional information to describe the order, such as the products or services offered or details about the customer's product preferences.

Property	Value
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

DiscountAmount

Property	Value
Description	Type the discount amount for the order if the customer is eligible for special savings.
DisplayName	Order Discount Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

DiscountPercentage

Property	Value
Description	Type the discount rate that should be applied to the Detail Amount field to include additional savings for the customer in the order.
DisplayName	Order Discount (%)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountpercentage
MaxValue	100
MinValue	0
Precision	2
RequiredLevel	None
Type	Decimal

EmailAddress

Property	Value
Description	The primary email address for the entity.
DisplayName	Email Address
FormatName	Email
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	emailaddress
MaxLength	100
RequiredLevel	None
Type	String

EntityImage

Added by: Active Solution Solution

Property	Value
Description	The default image for the entity.
DisplayName	Entity Image
IsPrimaryImage	True
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage
MaxHeight	144
MaxWidth	144
RequiredLevel	None
Type	Image

FreightAmount

Property	Value
Description	Type the cost of freight or shipping for the products included in the order for use in calculating the Total Amount field.
DisplayName	Freight Amount
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping charges are processed correctly.
DisplayName	Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	freighttermscode
RequiredLevel	None
Type	Picklist

FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

IsPriceLocked

Property	Value
Description	Select whether prices specified on the invoice are locked from any further updates.
DisplayName	Prices Locked
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	ispricelocked
RequiredLevel	ApplicationRequired
Type	Boolean

IsPriceLocked Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

LastBackofficeSubmit

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the date and time when the order was last submitted to an accounting or ERP system for processing.
DisplayName	Last Submitted to Back Office
Format	DateOnly
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	lastbackofficesubmit
RequiredLevel	None
Type	DateTime

LastOnHoldTime

Property	Value
DateTimeBehavior	UserLocal
Description	Contains the date time stamp of the last on hold time.
DisplayName	Last On Hold Time
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	lastonholdtime
RequiredLevel	None
Type	DateTime

Name

Property	Value
Description	Type a descriptive name for the order.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	name
MaxLength	300

Property	Value
RequiredLevel	ApplicationRequired
Type	String

OpportunityId

Property	Value
Description	Choose the related opportunity so that the data for the order and opportunity are linked for reporting and analytics.
DisplayName	Opportunity
IsValidForForm	True
IsValidForRead	True
LogicalName	opportunityid
RequiredLevel	None
Targets	opportunity
Type	Lookup

OrderNumber

Property	Value
Description	Shows the order number for customer reference and to use in search. The number cannot be modified.
DisplayName	Order ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	ordernumber
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	True
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	SystemRequired
Targets	systemuser,team
Type	Owner

OwnerIdType

Added by: Active Solution Solution

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

PaymentTermsCode

Property	Value
Description	Select the payment terms to indicate when the customer needs to pay the total amount.
DisplayName	Payment Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	paymenttermscode
RequiredLevel	None
Type	Picklist

PaymentTermsCode Choices/Options

Value	Label	Description
1	Net 30	
2	2% 10, Net 30	
3	Net 45	

Value	Label	Description
4	Net 60	

PriceLevelId

Property	Value
Description	Choose the price list associated with this record to make sure the products associated with the campaign are offered at the correct prices.
DisplayName	Price List
IsValidForForm	True
IsValidForRead	True
LogicalName	pricelevelid
RequiredLevel	ApplicationRequired
Targets	pricelevel
Type	Lookup

PricingErrorCode

Property	Value
Description	Select the type of pricing error, such as a missing or invalid product, or missing quantity.
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	
15	Missing Current Cost	
16	Missing Standard Cost	
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	

Value	Label	Description
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

PriorityCode

Property	Value
Description	Select the priority so that preferred customers or critical issues are handled quickly.
DisplayName	Priority
IsValidForForm	True
IsValidForRead	True
LogicalName	prioritycode
RequiredLevel	None
Type	Picklist

PriorityCode Choices/Options

Value	Label	Description
1	Default Value	

ProcessId

Property	Value
Description	Contains the id of the process associated with the entity.
DisplayName	Process Id
IsValidForForm	False
IsValidForRead	True
LogicalName	processid
RequiredLevel	None
Type	Uniqueidentifier

QuoteId

Property	Value
Description	Choose the related quote so that order data and quote data are linked for reporting and analytics.
DisplayName	Quote
IsValidForForm	True
IsValidForRead	True
LogicalName	quoteid
RequiredLevel	None
Targets	quote
Type	Lookup

RequestDeliveryBy

Property	Value

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the delivery date requested by the customer for all products in the order.
DisplayName	Requested Delivery Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	requestdeliveryby
RequiredLevel	None
Type	DateTime

SalesOrderId

Property	Value
Description	Unique identifier of the order.
DisplayName	Order
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	salesorderid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

ShippingMethodCode

Property	Value
Description	Select a shipping method for deliveries sent to this address.
DisplayName	Shipping Method

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	shippingmethodcode
RequiredLevel	None
Type	Picklist

ShippingMethodCode Choices/Options

Value	Label	Description
1	Airborne	
2	DHL	
3	FedEx	
4	UPS	
5	Postal Mail	
6	Full Load	
7	Will Call	

ShipTo_AddressId

Property	Value
Description	Unique identifier of the shipping address.
DisplayName	Ship To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	shipto_addressid
RequiredLevel	None
Type	Uniqueidentifier

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's shipping address.
DisplayName	Ship To Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_contactname
MaxLength	150
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship to Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Ship To Freight Terms
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	Default Value	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_name
MaxLength	200
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip Price Calculation
DisplayName	Skip Price Calculation (For Internal Use)
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnRetrieve	

SLAId

Property	Value
Description	Choose the service level agreement (SLA) that you want to apply to the sales order record.
DisplayName	SLA
IsValidForForm	True
IsValidForRead	True
LogicalName	slaid
RequiredLevel	None
Targets	sla
Type	Lookup

StageId

Property	Value
Description	Contains the id of the stage where the entity is located.
DisplayName	(Deprecated) Stage Id
IsValidForForm	False
IsValidForRead	True
LogicalName	stageid
RequiredLevel	None
Type	Uniqueidentifier

StateCode

Property	Value
Description	Shows whether the order is active, submitted, fulfilled, canceled, or invoiced. Only active orders can be edited.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Submitted	3	Submitted
2	Canceled	4	Canceled
3	Fulfilled	100001	Fulfilled

Value	Label	DefaultStatus	InvariantName
4	Invoiced	100003	Invoiced

StatusCode

Property	Value
Description	Select the order's status.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	New	0
2	Pending	0
3	In Progress	1
4	No Money	2
100001	Complete	3
100002	Partial	3
100003	Invoiced	4

SubmitDate

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Enter the date when the order was submitted to the fulfillment or shipping center.
DisplayName	Date Submitted
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	submitdate
RequiredLevel	None
Type	DateTime

SubmitStatus

Property	Value
Description	Type the code for the submitted status in the fulfillment or shipping center system.
DisplayName	Submitted Status
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	submitstatus
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

SubmitStatusDescription

Property	Value

Property	Value
Description	Type additional details or notes about the order for the fulfillment or shipping center.
DisplayName	Submitted Status Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	submitstatusdescription
MaxLength	2000
RequiredLevel	None
Type	Memo

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TotalAmount

Property	Value
Description	Shows the total amount due, calculated as the sum of the products, discounts, freight, and taxes for the order.
DisplayName	Total Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight

Property	Value
Description	Shows the total product amount for the order, minus any discounts. This value is added to freight and tax amounts in the calculation for the total amount due for the order.
DisplayName	Total Pre-Freight Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2

Property	Value
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount

Property	Value
Description	Shows the total discount amount, based on the discount price and rate entered on the order.
DisplayName	Total Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount

Property	Value
Description	Shows the sum of all existing and write-in products included on the order, based on the specified price list and quantities.
DisplayName	Total Detail Amount
IsValidForCreate	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	totallineitemamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount

Property	Value
Description	Shows the total of the Manual Discount amounts specified on all products included in the order. This value is reflected in the Detail Amount field on the order and is added to any discount amount or rate specified on the order.
DisplayName	Total Line Item Discount Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax

Property	Value
Description	Shows the Tax amounts specified on all products included in the order, included in the Total Amount due calculation for the order.
DisplayName	Total Tax
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	totaltax
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	ApplicationRequired
Targets	transactioncurrency
Type	Lookup

TraversedPath

Property	Value
Description	A comma separated list of string values representing the unique identifiers of stages in a Business Process Flow Instance in the order that they occur.
DisplayName	(Deprecated) Traversed Path
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	traversedpath
MaxLength	1250
RequiredLevel	None
Type	String

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

WillCall

Property	Value
Description	Select whether the products included in the order should be shipped to the specified address or held until the customer calls with further pick-up or delivery instructions.
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- AccountId
- AccountIdName
- AccountIdYomiName
- BillTo_Composite
- CampaignIdName
- ContactId
- ContactIdName
- ContactIdYomiName
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn

- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- CustomerIdName
- CustomerIdYomiName
- DiscountAmount_Base
- EntityImage_Timestamp
- EntityImage_URL
- EntityImageId
- ExchangeRate
- FreightAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OnHoldTime
- OpportunityIdName
- OwnerIdName
- OwnerIdYomiName
- OwningBusinessUnit
- OwningBusinessUnitName
- OwningTeam
- OwningUser
- PriceLevelIdName
- QuoteIdName
- ShipTo_Composite
- SLAInvokedId
- SLAInvokedIdName
- SLAName
- TotalAmount_Base
- TotalAmountLessFreight_Base
- TotalDiscountAmount_Base
- TotalLineItemAmount_Base
- TotalLineItemDiscountAmount_Base
- TotalTax_Base
- TransactionCurrencyIdName
- VersionNumber

AccountId

Property	Value
Description	Shows the parent account related to the record. This information is used to link the sales order to the account selected in the Customer field for reporting and analytics.
DisplayName	Account
IsValidForForm	False
IsValidForRead	True
LogicalName	accountid
RequiredLevel	None
Targets	account
Type	Lookup

AccountIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidname
MaxLength	100
RequiredLevel	None
Type	String

AccountIdYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	accountidyominame
MaxLength	100
RequiredLevel	None
Type	String

BillTo_Composite

Property	Value
Description	Shows the complete Bill To address.
DisplayName	Bill To Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	billto_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

CampaignIdName

Added by: Marketing Sales Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	campaignidname
MaxLength	100
RequiredLevel	None
Type	String

ContactId

Property	Value
Description	Shows the parent contact related to the record. This information is used to link the contract to the contact selected in the Customer field for reporting and analytics.
DisplayName	Contact
IsValidForForm	False
IsValidForRead	True
LogicalName	contactid
RequiredLevel	None
Targets	contact
Type	Lookup

ContactIdName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidname
MaxLength	100
RequiredLevel	None
Type	String

ContactIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	contactidyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedBy

Property	Value
Description	Shows who created the record.

Property	Value
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CustomerIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	customeridname
MaxLength	160
RequiredLevel	ApplicationRequired
Type	String

CustomerIdYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	customeridyominame
MaxLength	450
RequiredLevel	ApplicationRequired
Type	String

DiscountAmount_Base

Property	Value
Description	Value of the Order Discount Amount in base currency.
DisplayName	Order Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	discountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

EntityImage_Timestamp

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_timestamp

Property	Value
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

EntityImage_URL

Property	Value
Description	
DisplayName	
FormatName	Url
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimage_url
MaxLength	200
RequiredLevel	None
Type	String

EntityImageId

Property	Value
Description	
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	entityimageid
RequiredLevel	None

Property	Value
Type	Uniqueidentifier

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

FreightAmount_Base

Property	Value
Description	Value of the Freight Amount in base currency.
DisplayName	Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	freightamount_base
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None

Property	Value
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OnHoldTime

Property	Value
Description	Shows the duration in minutes for which the order was on hold.
DisplayName	On Hold Time (Minutes)
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	onholdtime
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

OpportunityIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	opportunityidname
MaxLength	100
RequiredLevel	None
Type	String

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdYomiName

Property	Value

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	None
Targets	businessunit
Type	Lookup

OwningBusinessUnitName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunitname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	owninguser
RequiredLevel	None
Targets	systemuser
Type	Lookup

PriceLevelIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	pricelevelidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

QuoteIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	quoteidname
MaxLength	100
RequiredLevel	None
Type	String

ShipTo_Composite

Property	Value
Description	Shows the complete Ship To address.
DisplayName	Ship To Address
Format	TextArea
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_composite
MaxLength	1000
RequiredLevel	None
Type	Memo

SLAInvokedId

Property	Value
Description	Last SLA that was applied to this sales order. This field is for internal use only.
DisplayName	Last SLA applied
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedid
RequiredLevel	None

Property	Value
Targets	sla
Type	Lookup

SLAInvokedIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slainvokedidname
MaxLength	100
RequiredLevel	None
Type	String

SLAName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	slaname
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

TotalAmount_Base

Property	Value
Description	Value of the Total Amount in base currency.
DisplayName	Total Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalAmountLessFreight_Base

Property	Value
Description	Value of the Total Pre-Freight Amount in base currency.
DisplayName	Total Pre-Freight Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totalamountlessfreight_base
MaxValue	922337203685477
MinValue	-922337203685477

Property	Value
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalDiscountAmount_Base

Property	Value
Description	Value of the Total Discount Amount in base currency.
DisplayName	Total Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totaldiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemAmount_Base

Property	Value
Description	Value of the Total Detail Amount in base currency.
DisplayName	Total Detail Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemamount_base

Property	Value
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalLineItemDiscountAmount_Base

Property	Value
Description	Value of the Total Line Item Discount Amount in base currency.
DisplayName	Total Line Item Discount Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	totallineitemdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TotalTax_Base

Property	Value
Description	Value of the Total Tax in base currency.
DisplayName	Total Tax (Base)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	totaltax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- lk_opportunitysalesprocess_salesorderid
- order_details
- order_invoices
- SalesOrder_OrderClose
- msdyn_playbookinstance_salesorder

lk_opportunitysalesprocess_salesorderid

Same as the lk_opportunitysalesprocess_salesorderid many-to-one relationship for the opportunitysalesprocess table/entity.

Property	Value
ReferencingEntity	opportunitysalesprocess
ReferencingAttribute	salesorderid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	salesorder_opportunitysalesprocess
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: NoCascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

order_details

Same as the order_details many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	salesorderid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	order_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

order_invoices

Same as the order_invoices many-to-one relationship for the invoice table/entity.

Property	Value
ReferencingEntity	invoice
ReferencingAttribute	salesorderid
IsHierarchical	False

Property	Value
IsCustomizable	True
ReferencedEntityNavigationPropertyName	order_invoices
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

SalesOrder_OrderClose

Same as the SalesOrder_OrderClose many-to-one relationship for the orderclose table/entity.

Property	Value
ReferencingEntity	orderclose
ReferencingAttribute	salesorderid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	SalesOrder_OrderClose
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

msdyn_playbookinstance_salesorder

Added by: Playbook Solution

Same as the msdyn_playbookinstance_salesorder many-to-one relationship for the msdyn_playbookinstance table/entity.

Property	Value
ReferencingEntity	msdyn_playbookinstance
ReferencingAttribute	regarding
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_playbookinstance_salesorder
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: Cascade Share: Cascade Unshare: Cascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- order_customer_accounts
- order_customer_contacts
- opportunity_sales_orders
- price_level_orders
- quote_orders
- campaign_orders

order_customer_accounts

Added by: System Solution Solution

See the order_customer_accounts one-to-many relationship for the account table/entity.

order_customer_contacts

Added by: System Solution Solution

See the order_customer_contacts one-to-many relationship for the contact table/entity.

opportunity_sales_orders

See the opportunity_sales_orders one-to-many relationship for the opportunity table/entity.

price_level_orders

Added by: Product Management Solution

See the price_level_orders one-to-many relationship for the pricelevel table/entity.

quote_orders

See the quote_orders one-to-many relationship for the quote table/entity.

campaign_orders

Added by: Marketing Solution

See the campaign_orders one-to-many relationship for the campaign table/entity.

Many-To-Many Relationships

Relationship details provided where the SalesOrder table is the first table in the relationship. Listed by **SchemaName**.

contactorders_association

IntersectEntityName: contactorders

Table 1

Property	Value
IntersectAttribute	salesorderid

Property	Value
IsCustomizable	False
LogicalName	salesorder
NavigationPropertyName	contactorders_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Table 2

Property	Value
LogicalName	contact
IntersectAttribute	contactid
NavigationPropertyName	contactorders_association
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

See also

About the table reference
Web API Reference

Order Product (SalesOrderDetail) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Line item in a sales order.

Added by: Sales Solution

Messages

Message	SDK Assembly
CalculatePrice	CalculatePriceRequest
Create	CreateRequest or Create
CreateMultiple	CreateMultipleRequest
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update
UpdateMultiple	UpdateMultipleRequest

Properties

Property	Value

Property	Value
CollectionSchemaName	SalesOrderDetails
DisplayCollectionName	Order Products
DisplayName	Order Product
EntitySetName	salesorderdetails
IsBPFEntity	False
LogicalCollectionName	salesorderdetails
LogicalName	salesorderdetail
OwnershipType	UserOwned
PrimaryIdAttribute	salesorderdetailid
PrimaryNameAttribute	salesorderdetailname
SchemaName	SalesOrderDetail

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BaseAmount
- Description
- ExtendedAmount
- ImportSequenceNumber
- IsCopied
- IsPriceOverridden
- IsProductOverridden
- LineItemNumber
- ManualDiscountAmount
- OverriddenCreatedOn
- ParentBundleId
- ParentBundleIdRef
- PricePerUnit
- PricingErrorCode
- ProductAssociationId
- ProductDescription
- ProductId

- ProductName
- ProductTypeCode
- PropertyConfigurationStatus
- Quantity
- QuantityBackordered
- QuantityCancelled
- QuantityShipped
- QuoteDetailId
- RequestDeliveryBy
- SalesOrderDetailId
- SalesOrderDetailName
- SalesOrderId
- SalesRepId
- SequenceNumber
- ShipTo_AddressId
- ShipTo_City
- ShipTo_ContactName
- ShipTo_Country
- ShipTo_Fax
- ShipTo_FreightTermsCode
- ShipTo_Line1
- ShipTo_Line2
- ShipTo_Line3
- ShipTo_Name
- ShipTo_PostalCode
- ShipTo_StateOrProvince
- ShipTo_Telephone
- SkipPriceCalculation
- Tax
- TimeZoneRuleVersionNumber
- TransactionCurrencyId
- UoMId
- UTCConversionTimeZoneCode
- WillCall

BaseAmount

Property	Value
Description	Shows the total price of the order product, based on the price per unit, volume discount, and quantity.

Property	Value
DisplayName	Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

Description

Property	Value
Description	Type additional information to describe the order product, such as manufacturing details or acceptable substitutions.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ExtendedAmount

Property	Value
Description	Shows the total amount due for the order product, based on the sum of the unit price, quantity, discounts, and tax.
DisplayName	Extended Amount
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None

Property	Value
Type	Integer

IsCopied

Property	Value
Description	Select whether the invoice line item is copied from another item or data source.
DisplayName	Copied
IsValidForForm	True
IsValidForRead	True
LogicalName	iscopied
RequiredLevel	None
Type	Boolean

IsCopied Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

IsPriceOverridden

Property	Value
Description	Select whether the price per unit is fixed at the value in the specified price list or can be overridden by users who have edit rights to the order product.
DisplayName	Pricing
IsValidForForm	True
IsValidForRead	True
LogicalName	ispriceoverridden

Property	Value
RequiredLevel	None
Type	Boolean

IsPriceOverridden Choices/Options

Value	Label	Description
1	Override Price	
0	Use Default	

DefaultValue: 0

IsProductOverridden

Property	Value
Description	Select whether the product exists in the Microsoft Dynamics 365 product catalog or is a write-in product specific to the order.
DisplayName	Select Product
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	isproductoverridden
RequiredLevel	None
Type	Boolean

IsProductOverridden Choices/Options

Value	Label	Description
1	Write In	
0	Existing	

DefaultValue: 0

LineItemNumber

Property	Value
Description	Type the line item number for the order product to easily identify the product in the order and make sure it's listed in the correct sequence.
DisplayName	Line Item Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	lineitemnumber
MaxValue	1000000000
MinValue	0
RequiredLevel	None
Type	Integer

ManualDiscountAmount

Property	Value
Description	Type the manual discount amount for the order product to deduct any negotiated or other savings from the product total on the order.
DisplayName	Manual Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	manualdiscountamount
MaxValue	1000000000000
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

ParentBundleId

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent Bundle
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	parentbundleid
RequiredLevel	None
Type	Uniqueidentifier

ParentBundleIdRef

Added by: Sales Patch Solution

Property	Value

Property	Value
Description	Choose the parent bundle associated with this product
DisplayName	Parent bundle product
IsValidForForm	True
IsValidForRead	True
LogicalName	parentbundleidref
RequiredLevel	None
Targets	salesorderdetail
Type	Lookup

PricePerUnit

Property	Value
Description	Type the price per unit of the order product. The default is the value in the price list specified on the order for existing products.
DisplayName	Price Per Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit
MaxValue	922337203685477
MinValue	-922337203685477
Precision	2
PrecisionSource	1
RequiredLevel	None
Type	Money

PricingErrorCode

Property	Value

Property	Value
Description	Select the type of pricing error, such as a missing or invalid product, or missing quantity.
DisplayName	Pricing Error
IsValidForForm	False
IsValidForRead	True
LogicalName	pricingerrorcode
RequiredLevel	None
Type	Picklist

PricingErrorCode Choices/Options

Value	Label	Description
0	None	
1	Detail Error	
2	Missing Price Level	
3	Inactive Price Level	
4	Missing Quantity	
5	Missing Unit Price	
6	Missing Product	
7	Invalid Product	
8	Missing Pricing Code	
9	Invalid Pricing Code	
10	Missing UOM	
11	Product Not In Price Level	
12	Missing Price Level Amount	
13	Missing Price Level Percentage	
14	Missing Price	

Value	Label	Description
15	Missing Current Cost	
16	Missing Standard Cost	
17	Invalid Price Level Amount	
18	Invalid Price Level Percentage	
19	Invalid Price	
20	Invalid Current Cost	
21	Invalid Standard Cost	
22	Invalid Rounding Policy	
23	Invalid Rounding Option	
24	Invalid Rounding Amount	
25	Price Calculation Error	
26	Invalid Discount Type	
27	Discount Type Invalid State	
28	Invalid Discount	
29	Invalid Quantity	
30	Invalid Pricing Precision	
31	Missing Product Default UOM	
32	Missing Product UOM Schedule	
33	Inactive Discount Type	
34	Invalid Price Level Currency	
35	Price Attribute Out Of Range	
36	Base Currency Attribute Overflow	
37	Base Currency Attribute Underflow	
38	Transaction currency is not set for the product price list item	

ProductAssociationId

Property	Value
Description	Unique identifier of the product line item association with bundle in the sales order
DisplayName	Bundle Item Association
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	productassociationid
RequiredLevel	None
Type	Uniqueidentifier

ProductDescription

Property	Value
Description	Type a name or description to identify the type of write-in product included in the order.
DisplayName	Write-In Product
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productdescription
MaxLength	500
RequiredLevel	None
Type	String

ProductId

Property	Value

Property	Value
Description	Choose the product to include on the order to link the product's pricing and other information to the parent order.
DisplayName	Existing Product
IsValidForForm	True
IsValidForRead	True
LogicalName	productid
RequiredLevel	None
Targets	product
Type	Lookup

ProductName

Property	Value
Description	Calculated field that will be populated by name and description of the product.
DisplayName	Product Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	productname
MaxLength	500
RequiredLevel	None
Type	String

ProductTypeCode

Property	Value
Description	Product Type

Property	Value
DisplayName	Product type
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	producttypecode
RequiredLevel	SystemRequired
Type	Picklist

ProductTypeCode Choices/Options

Value	Label	Description
1	Product	
2	Bundle	
3	Required Bundle Product	
4	Optional Bundle Product	
5	Project-based Service	

PropertyConfigurationStatus

Property	Value
Description	Status of the property configuration.
DisplayName	Property Configuration
IsValidForForm	True
IsValidForRead	True
LogicalName	propertyconfigurationstatus
RequiredLevel	SystemRequired
Type	Picklist

PropertyConfigurationStatus Choices/Options

Value	Label	Description
0	Edit	
1	Rectify	
2	Not Configured	

Quantity

Property	Value
Description	Type the amount or quantity of the product ordered by the customer.
DisplayName	Quantity
IsValidForForm	True
IsValidForRead	True
LogicalName	quantity
MaxValue	100000000000
MinValue	-100000000000
Precision	5
RequiredLevel	ApplicationRequired
Type	Decimal

QuantityBackordered

Property	Value
Description	Type the amount or quantity of the product that is back ordered for the order.
DisplayName	Quantity Back Ordered
IsValidForForm	True
IsValidForRead	True
LogicalName	quantitybackordered
MaxValue	1000000000

Property	Value
MinValue	0
Precision	5
RequiredLevel	None
Type	Decimal

QuantityCancelled

Property	Value
Description	Type the amount or quantity of the product that was canceled.
DisplayName	Quantity Canceled
IsValidForForm	True
IsValidForRead	True
LogicalName	quantitycancelled
MaxValue	1000000000
MinValue	0
Precision	5
RequiredLevel	None
Type	Decimal

QuantityShipped

Property	Value
Description	Type the amount or quantity of the product that was shipped for the order.
DisplayName	Quantity Shipped
IsValidForForm	True
IsValidForRead	True
LogicalName	quantityshipped
MaxValue	1000000000

Property	Value
MinValue	-1000000000
Precision	5
RequiredLevel	None
Type	Decimal

QuoteDetailId

Added by: Sales Patch Solution

Property	Value
Description	Unique identifier for Quote Line associated with Order Line.
DisplayName	Quote Product Id
IsValidForForm	True
IsValidForRead	True
LogicalName	quotedetailid
RequiredLevel	None
Targets	quotedetail
Type	Lookup

RequestDeliveryBy

Property	Value
DateTimeBehavior	UserLocal
Description	Enter the delivery date requested by the customer for the order product.
DisplayName	Requested Delivery Date
Format	DateOnly
IsValidForForm	True
IsValidForRead	True
LogicalName	requestdeliveryby

Property	Value
RequiredLevel	None
Type	DateTime

SalesOrderDetailId

Property	Value
Description	Unique identifier of the product specified in the order.
DisplayName	Order Product
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	salesorderdetailid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

SalesOrderDetailName

Added by: Sales Patch Solution

Property	Value
Description	Sales Order Detail Name. Added for 1:n referential relationship (internal purposes only)
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	salesorderdetailname
MaxLength	500

Property	Value
RequiredLevel	ApplicationRequired
Type	String

SalesOrderId

Property	Value
Description	Shows the order for the product. The ID is used to link product pricing and other details to the total amounts and other information on the order.
DisplayName	Order
IsValidForForm	True
IsValidForRead	True
LogicalName	salesorderid
RequiredLevel	SystemRequired
Targets	salesorder
Type	Lookup

SalesRepId

Property	Value
Description	Choose the user responsible for the sale of the order product.
DisplayName	Salesperson
IsValidForForm	True
IsValidForRead	True
LogicalName	salesrepid
RequiredLevel	None
Targets	systemuser
Type	Lookup

SequenceNumber

Property	Value
Description	Shows the ID of the data that maintains the sequence.
DisplayName	Sequence Number
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	sequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

ShipTo_AddressId

Property	Value
Description	Unique identifier of the shipping address.
DisplayName	Ship To Address ID
IsValidForForm	False
IsValidForRead	True
LogicalName	shipto_addressid
RequiredLevel	None
Type	Uniqueidentifier

ShipTo_City

Property	Value
Description	Type the city for the customer's shipping address.
DisplayName	Ship To City
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_city
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_ContactName

Property	Value
Description	Type the primary contact name at the customer's shipping address.
DisplayName	Ship To Contact Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_contactname
MaxLength	150
RequiredLevel	None
Type	String

ShipTo_Country

Property	Value
Description	Type the country or region for the customer's shipping address.
DisplayName	Ship To Country/Region
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_country
MaxLength	80
RequiredLevel	None
Type	String

ShipTo_Fax

Property	Value
Description	Type the fax number for the customer's shipping address.
DisplayName	Ship To Fax
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_fax
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_FreightTermsCode

Property	Value
Description	Select the freight terms to make sure shipping orders are processed correctly.
DisplayName	Freight Terms
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	shipto_freighttermscode
RequiredLevel	None
Type	Picklist

ShipTo_FreightTermsCode Choices/Options

Value	Label	Description
1	FOB	
2	No Charge	

ShipTo_Line1

Property	Value
Description	Type the first line of the customer's shipping address.
DisplayName	Ship To Street 1
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line1
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line2

Property	Value
Description	Type the second line of the customer's shipping address.

Property	Value
DisplayName	Ship To Street 2
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line2
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Line3

Property	Value
Description	Type the third line of the shipping address.
DisplayName	Ship To Street 3
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_line3
MaxLength	250
RequiredLevel	None
Type	String

ShipTo_Name

Property	Value

Property	Value
Description	Type a name for the customer's shipping address, such as "Headquarters" or "Field office", to identify the address.
DisplayName	Ship To Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_name
MaxLength	200
RequiredLevel	None
Type	String

ShipTo_PostalCode

Property	Value
Description	Type the ZIP Code or postal code for the shipping address.
DisplayName	Ship To ZIP/Postal Code
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_postalcode
MaxLength	20
RequiredLevel	None
Type	String

ShipTo_StateOrProvince

Property	Value
Description	Type the state or province for the shipping address.
DisplayName	Ship To State/Province
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_stateorprovince
MaxLength	50
RequiredLevel	None
Type	String

ShipTo_Telephone

Property	Value
Description	Type the phone number for the customer's shipping address.
DisplayName	Ship To Phone
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	shipto_telephone
MaxLength	50
RequiredLevel	None
Type	String

SkipPriceCalculation

Added by: Sales Patch Solution

Property	Value
Description	Skip the price calculation
DisplayName	Skip Price Calculation
IsValidForForm	False
IsValidForRead	True
LogicalName	skippricecalculation
RequiredLevel	None
Type	Picklist

SkipPriceCalculation Choices/Options

Value	Label	Description
0	DoPriceCalcAlways	
1	SkipPriceCalcOnCreate	
2	SkipPriceCalcOnUpdate	
3	SkipPriceCalcOnUpSert	

Tax

Property	Value
Description	Type the tax amount for the order product.
DisplayName	Tax
IsValidForForm	True
IsValidForRead	True
LogicalName	tax
MaxValue	1000000000000
MinValue	-1000000000000
Precision	2
PrecisionSource	2

Property	Value
RequiredLevel	None
Type	Money

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

TransactionCurrencyId

Property	Value
Description	Choose the local currency for the record to make sure budgets are reported in the correct currency.
DisplayName	Currency
IsValidForForm	True
IsValidForRead	True
IsValidForUpdate	False
LogicalName	transactioncurrencyid
RequiredLevel	None

Property	Value
Targets	transactioncurrency
Type	Lookup

UoMId

Property	Value
Description	Choose the unit of measurement for the base unit quantity for this purchase, such as each or dozen.
DisplayName	Unit
IsValidForForm	True
IsValidForRead	True
LogicalName	uomid
RequiredLevel	None
Targets	uom
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None

Property	Value
Type	Integer

WillCall

Property	Value
Description	Select whether the order product should be shipped to the specified address or held until the customer calls with further pick up or delivery instructions.
DisplayName	Ship To
IsValidForForm	True
IsValidForRead	True
LogicalName	willcall
RequiredLevel	None
Type	Boolean

WillCall Choices/Options

Value	Label	Description
1	Will Call	
0	Address	

DefaultValue: 0

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BaseAmount_Base
- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName

- CreatedOnBehalfByYomiName
- ExchangeRate
- ExtendedAmount_Base
- ManualDiscountAmount_Base
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OwnerId
- OwnerIdName
- OwnerIdType
- OwnerIdYomiName
- OwningBusinessUnit
- OwningTeam
- OwningUser
- PricePerUnit_Base
- ProductIdName
- ProductNumber
- QuoteDetailIdName
- SalesOrderIdName
- SalesOrderIsPriceLocked
- SalesOrderStateCode
- SalesRepIdName
- SalesRepIdYomiName
- Tax_Base
- TransactionCurrencyIdName
- UoMIdName
- VersionNumber
- VolumeDiscountAmount
- VolumeDiscountAmount_Base

BaseAmount_Base

Property	Value
Description	Value of the Amount in base currency.
DisplayName	Amount (Base)

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	baseamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

CreatedBy

Property	Value
Description	Shows who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On

Property	Value
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Shows who created the record on behalf of another user.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ExchangeRate

Added by: Active Solution Solution

Property	Value
Description	Shows the conversion rate of the record's currency. The exchange rate is used to convert all money fields in the record from the local currency to the system's default currency.
DisplayName	Exchange Rate
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	exchangerate
MaxValue	100000000000
MinValue	0.000000000001
Precision	12
RequiredLevel	None
Type	Decimal

ExtendedAmount_Base

Property	Value
Description	Value of the Extended Amount in base currency.
DisplayName	Extended Amount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	extendedamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ManualDiscountAmount_Base

Property	Value
Description	Value of the Manual Discount in base currency.
DisplayName	Manual Discount (Base)
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	manualdiscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

ModifiedBy

Property	Value
Description	Shows who last updated the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Shows who last updated the record on behalf of another user.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OwnerId

Property	Value
Description	Owner Id
DisplayName	Owner
IsValidForForm	False
IsValidForRead	True
LogicalName	ownerid
RequiredLevel	ApplicationRequired
Targets	systemuser,team

Property	Value
Type	Owner

OwnerIdName

Property	Value
Description	Name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwnerIdType

Property	Value
Description	Owner Id Type
DisplayName	
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridtype
RequiredLevel	SystemRequired
Type	EntityName

OwnerIdYomiName

Property	Value
Description	Yomi name of the owner
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	owneridyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OwningBusinessUnit

Property	Value
Description	Unique identifier for the business unit that owns the record
DisplayName	Owning Business Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	owningbusinessunit
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

OwningTeam

Property	Value
Description	Unique identifier for the team that owns the record.
DisplayName	Owning Team

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	owningteam
RequiredLevel	None
Targets	team
Type	Lookup

OwningUser

Property	Value
Description	Unique identifier for the user that owns the record.
DisplayName	Owning User
IsValidForForm	False
IsValidForRead	True
LogicalName	owninguser
RequiredLevel	ApplicationRequired
Targets	
Type	Lookup

PricePerUnit_Base

Property	Value
Description	Value of the Price Per Unit in base currency.
DisplayName	Price Per Unit (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	priceperunit_base
MaxValue	922337203685477

Property	Value
MinValue	-922337203685477
Precision	4
PrecisionSource	1
RequiredLevel	None
Type	Money

ProductIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	productidname
MaxLength	100
RequiredLevel	None
Type	String

ProductNumber

Added by: Sales Patch Version 3 Solution

Property	Value
Description	User-defined product ID.
DisplayName	Product Number
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	productnumber
MaxLength	100
RequiredLevel	None
Type	String

QuoteDetailIdName

Added by: Sales Patch Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	quotedetailidname
MaxLength	500
RequiredLevel	None
Type	String

SalesOrderIdName

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderidname
MaxLength	100
RequiredLevel	None
Type	String

SalesOrderIsPriceLocked

Property	Value
Description	Tells whether product pricing is locked for the order.
DisplayName	Order Is Price Locked
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderispricelocked
RequiredLevel	ApplicationRequired
Type	Boolean

SalesOrderIsPriceLocked Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

SalesOrderStateCode

Property	Value

Property	Value
Description	Shows the status of the order that the order detail is associated with.
DisplayName	Order Status
IsValidForForm	False
IsValidForRead	True
LogicalName	salesorderstatecode
RequiredLevel	SystemRequired
Type	Picklist

SalesOrderStateCode Choices/Options

Value	Label	Description

SalesRepIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidname
MaxLength	100
RequiredLevel	None
Type	String

SalesRepIdYomiName

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	salesrepidyominame
MaxLength	100
RequiredLevel	None
Type	String

Tax_Base

Property	Value
Description	Value of the Tax in base currency.
DisplayName	Tax (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	tax_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

TransactionCurrencyIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	transactioncurrencyidname
MaxLength	100
RequiredLevel	None
Type	String

UoMIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

VolumeDiscountAmount

Property	Value
Description	Shows the discount amount per unit if a specified volume is purchased. Configure volume discounts in the Product Catalog in the Settings area.
DisplayName	Volume Discount
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount
MaxValue	922337203685477
MinValue	0
Precision	2
PrecisionSource	2
RequiredLevel	None
Type	Money

VolumeDiscountAmount_Base

Property	Value
Description	Value of the Volume Discount in base currency.
DisplayName	Volume Discount (Base)
IsValidForForm	True
IsValidForRead	True
LogicalName	volumediscountamount_base
MaxValue	922337203685477
MinValue	-922337203685477
Precision	4
PrecisionSource	2
RequiredLevel	None
Type	Money

One-To-Many Relationships

Listed by **SchemaName**.

- SalesOrderDetail_Dynamicpropertyinstance
- salesorderdetail_parent_salesorderdetail
- msdyn_salesorderdetail_invoicedetail
- salesorderdetail_parentref_salesorderdetail

SalesOrderDetail_Dynamicpropertyinstance

Same as the SalesOrderDetail_Dynamicpropertyinstance many-to-one relationship for the dynamicpropertyinstance table/entity.

Property	Value
ReferencingEntity	dynamicpropertyinstance
ReferencingAttribute	regardingobjectid
IsHierarchical	False
IsCustomizable	True

Property	Value
ReferencedEntityNavigationPropertyName	SalesOrderDetail_Dynamicpropertyinstance
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: Cascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: Cascade Unshare: NoCascade

salesorderdetail_parent_salesorderdetail

Same as the salesorderdetail_parent_salesorderdetail many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	parentbundleid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	salesorderdetail_parent_salesorderdetail
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_salesorderdetail_invoicedetail

Added by: Sales Patch Solution

Same as the msdyn_salesorderdetail_invoicedetail many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	salesorderdetailid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_salesorderdetail_invoicedetail
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

salesorderdetail_parentref_salesorderdetail

Added by: Sales Patch Solution

Same as the salesorderdetail_parentref_salesorderdetail many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	parentbundleidref
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	salesorderdetail_parentref_salesorderdetail

Property	Value
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- product_order_details
- order_details
- salesorderdetail_parent_salesorderdetail
- unit_of_measurement_order_details
- productAssociation_salesorder_details
- msdyn_quotedetail_salesorderdetail
- salesorderdetail_parentref_salesorderdetail

product_order_details

Added by: Product Management Solution

See the product_order_details one-to-many relationship for the product table/entity.

order_details

See the order_details one-to-many relationship for the salesorder table/entity.

salesorderdetail_parent_salesorderdetail

See the salesorderdetail_parent_salesorderdetail one-to-many relationship for the salesorderdetail table/entity.

unit_of_measurement_order_details

Added by: Product Management Solution

See the unit_of_measurement_order_details one-to-many relationship for the uom table/entity.

productAssociation_salesorder_details

Added by: Product Management Solution

See the productAssociation_salesorder_details one-to-many relationship for the productassociation table/entity.

msdyn_quotedetail_salesorderdetail

See the msdyn_quotedetail_salesorderdetail one-to-many relationship for the quotedetail table/entity.

salesorderdetail_parentref_salesorderdetail

See the salesorderdetail_parentref_salesorderdetail one-to-many relationship for the salesorderdetail table/entity.

See also

About the table reference
Web API Reference

Unit (UoM) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Unit of measure.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	UoMs
DisplayCollectionName	Units
DisplayName	Unit
EntitySetName	uoms
IsBPFEntity	False

Property	Value
LogicalCollectionName	uoms
LogicalName	uom
OwnershipType	None
PrimaryIdAttribute	uomid
PrimaryNameAttribute	name
SchemaName	UoM

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BaseUoM
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- Quantity
- TimeZoneRuleVersionNumber
- UoMId
- UoMScheduleId
- UTCConversionTimeZoneCode

BaseUoM

Property	Value
Description	Choose the base or primary unit on which the unit is based.
DisplayName	Base Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	baseuom
RequiredLevel	ApplicationRequired
Targets	uom

Property	Value
Type	Lookup

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	Type a descriptive title or name for the unit of measure.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	name
MaxLength	100

Property	Value
RequiredLevel	SystemRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

Quantity

Property	Value
Description	Unit quantity for the product.
DisplayName	Quantity
IsValidForForm	False
IsValidForRead	True
LogicalName	quantity
MaxValue	10000000000
MinValue	0
Precision	5

Property	Value
RequiredLevel	ApplicationRequired
Type	Decimal

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UoMId

Property	Value
Description	Unique identifier of the unit.
DisplayName	Unit
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	uomid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

UoMScheduleId

Property	Value
Description	Choose the ID of the unit group that the unit is associated with.
DisplayName	Unit Schedule
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	uomscheduleid
RequiredLevel	SystemRequired
Targets	uomschedule
Type	Lookup

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- BaseUoMName
- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- IsScheduleBaseUoM
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- UoMScheduleIdName
- VersionNumber

BaseUoMName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	baseuomname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedBy

Property	Value
Description	Unique identifier of the user who created the unit.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty

Property	Value
Type	Lookup

CreatedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None

Property	Value
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the unit was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the uom.
DisplayName	Created By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

IsScheduleBaseUoM

Property	Value

Property	Value
Description	Tells whether the unit is the base unit for the associated unit group.
DisplayName	Is Schedule Base Unit
IsValidForForm	False
IsValidForRead	True
LogicalName	isschedulebaseuom
RequiredLevel	None
Type	Boolean

IsScheduleBaseUoM Choices/Options

Value	Label	Description
1	Yes	
0	No	

DefaultValue: 0

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the unit.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the unit was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the uom.
DisplayName	Modified By (Delegate)
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False

Property	Value
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier of the organization associated with the unit of measure.
DisplayName	Organization
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

UoMScheduleIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	uomscheduleidname
MaxLength	200

Property	Value
RequiredLevel	None
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- unit_of_measurement_base_unit
- unit_of_measurement_products
- unit_of_measurement_productassociation
- unit_of_measurement_product_price_levels
- unit_of_measurement_invoice_details
- unit_of_measurement_opportunity_products
- unit_of_measurement_order_details
- unit_of_measurement_quote_details

unit_of_measurement_base_unit

Same as the unit_of_measurement_base_unit many-to-one relationship for the uom table/entity.

Property	Value
ReferencingEntity	uom
ReferencingAttribute	baseuom
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_base_unit
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_products

Same as the unit_of_measurement_products many-to-one relationship for the product table/entity.

Property	Value
ReferencingEntity	product
ReferencingAttribute	defaultuomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_products
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_productassociation

Same as the unit_of_measurement_productassociation many-to-one relationship for the productassociation table/entity.

Property	Value
ReferencingEntity	productassociation
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_productassociation
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: NoCascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_product_price_levels

Same as the unit_of_measurement_product_price_levels many-to-one relationship for the productpricelevel table/entity.

Property	Value
ReferencingEntity	productpricelevel

Property	Value
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_product_price_levels
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_invoice_details

Added by: Sales Solution

Same as the unit_of_measurement_invoice_details many-to-one relationship for the invoicedetail table/entity.

Property	Value
ReferencingEntity	invoicedetail
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_invoice_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_opportunity_products

Added by: Sales Solution

Same as the unit_of_measurement_opportunity_products many-to-one relationship for the opportunityproduct table/entity.

Property	Value
ReferencingEntity	opportunityproduct
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_opportunity_products
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_order_details

Added by: Sales Solution

Same as the unit_of_measurement_order_details many-to-one relationship for the salesorderdetail table/entity.

Property	Value
ReferencingEntity	salesorderdetail
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_order_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measurement_quote_details

Added by: Sales Solution

Same as the unit_of_measurement_quote_details many-to-one relationship for the quotedetail table/entity.

Property	Value
ReferencingEntity	quotedetail
ReferencingAttribute	uomid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_quote_details
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

- unit_of_measurement_base_unit
- unit_of_measure_schedule_conversions

unit_of_measurement_base_unit

See the unit_of_measurement_base_unit one-to-many relationship for the uom table/entity.

unit_of_measure_schedule_conversions

See the unit_of_measure_schedule_conversions one-to-many relationship for the uomschedule table/entity.

See also

About the table reference
Web API Reference

Unit Group (UoMSchedule) table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Grouping of units.

Added by: Product Management Solution

Messages

Message	SDK Assembly
Create	CreateRequest or Create
Delete	DeleteRequest or Delete
Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	RetrieveMultipleRequest or RetrieveMultiple
SetState	SetStateRequest
Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	UoMSchedules
DisplayCollectionName	Unit Groups

Property	Value
DisplayName	Unit Group
EntitySetName	uomschedules
IsBPFEntity	False
LogicalCollectionName	uomschedules
LogicalName	uomschedule
OwnershipType	OrganizationOwned
PrimaryIdAttribute	uomscheduleid
PrimaryNameAttribute	name
SchemaName	UoMSchedule

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- BaseUoMName
- Description
- ImportSequenceNumber
- Name
- OverriddenCreatedOn
- StateCode
- StatusCode
- TimeZoneRuleVersionNumber
- UoMScheduleId
- UTCConversionTimeZoneCode

BaseUoMName

Property	Value
Description	Name of the base unit.
DisplayName	Base Unit name
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	baseuomname
MaxLength	100
RequiredLevel	None
Type	String

Description

Property	Value
Description	Description of the unit group.
DisplayName	Description
Format	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	description
MaxLength	2000
RequiredLevel	None
Type	Memo

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

Name

Property	Value
Description	Name of the unit group.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	name
MaxLength	200
RequiredLevel	SystemRequired
Type	String

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal

Property	Value
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

StateCode

Property	Value
Description	Status of the Unit Group.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

StateCode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

StatusCode

Property	Value
Description	Reason for the status of the Unit Group.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

StatusCode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UoMScheduleId

Property	Value
Description	Unique identifier for the unit group.
DisplayName	Unit Group
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	uomscheduleid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByExternalParty
- CreatedByExternalPartyName
- CreatedByExternalPartyYomiName
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByExternalParty
- ModifiedByExternalPartyName
- ModifiedByExternalPartyYomiName
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Property	Value
Description	Unique identifier of the user who created the unit group.
DisplayName	Created By
IsValidForForm	False
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByExternalParty

Property	Value
Description	Shows the external party who created the record.
DisplayName	Created By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdbyexternalparty
RequiredLevel	None
Targets	externalparty
Type	Lookup

CreatedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByExternalPartyYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyexternalpartyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Property	Value
Description	

Property	Value
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	None
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the unit group was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who created the uomschedule.
DisplayName	Created By (Delegate)

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

ModifiedBy

Property	Value
Description	Unique identifier of the user who last modified the unit group.
DisplayName	Modified By
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByExternalParty

Property	Value
Description	Shows the external party who modified the record.
DisplayName	Modified By (External Party)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedbyexternalparty
RequiredLevel	None

Property	Value
Targets	externalparty
Type	Lookup

ModifiedByExternalPartyName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByExternalPartyYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyexternalpartyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100

Property	Value
RequiredLevel	None
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the unit group was last modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Property	Value
Description	Unique identifier of the delegate user who last modified the uomschedule.
DisplayName	Modified By (Delegate)
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	None
Type	String

OrganizationId

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	SystemRequired
Targets	organization
Type	Lookup

OrganizationIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Property	Value
Description	Version Number
DisplayName	Version Number

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- unit_of_measurement_schedule_products
- unit_of_measure_schedule_conversions
- unit_of_measure_schedule_product_price_level

unit_of_measurement_schedule_products

Same as the unit_of_measurement_schedule_products many-to-one relationship for the product table/entity.

Property	Value
ReferencingEntity	product
ReferencingAttribute	defaultuomscheduleid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measurement_schedule_products
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:

Property	Value
CascadeConfiguration	Assign: NoCascade Delete: Restrict Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measure_schedule_conversions

Same as the unit_of_measure_schedule_conversions many-to-one relationship for the uom table/entity.

Property	Value
ReferencingEntity	uom
ReferencingAttribute	uomscheduleid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measure_schedule_conversions
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

unit_of_measure_schedule_product_price_level

Same as the unit_of_measure_schedule_product_price_level many-to-one relationship for the productpricelevel table/entity.

Property	Value
ReferencingEntity	productpricelevel

Property	Value
ReferencingAttribute	uomscheduleid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	unit_of_measure_schedule_product_price_level
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

About the table reference

Web API Reference

RecalculatePrice Action

Article • 08/09/2023

This action is used to trigger out of the box price calculation for Opportunity, Quote, Sales Order or Invoice entities. This action is applicable for both server and client invocations.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Name	Type	Required	Description
entityLogicalName	String	Yes	Entity logical name
entityId	GUID	Yes	Entity GUID

Examples

Server Invocation

Request

HTTP

```
POST [Organization URI]/api/data/v9.1/RecalculatePrice
{
    "entityLogicalName": "quote",
    "entityId":"91F3EDB0-213B-E911-8190-000D3AFD8945"
}
```

Response

```
HTTP/1.1 204 No Content
OData-Version: 4.0
```

Client Invocation

JavaScript

```
function RecalculatePrice(formContext) {
    var recalculatePriceRequest = {
        entityId: formContext.data.entity.getId(),
        entityLogicalName: formContext.data.entity.getEntityName(),
        Target: parameters.Target,
        getMetadata: function () {
            return {
                boundParameter: null,
                parameterTypes: {
                    "entityId": {
                        "typeName": "Edm.Guid",
                        "structuralProperty": 5,
                    },
                    "entityLogicalName": {
                        "typeName": "Edm.String",
                        "structuralProperty": 1,
                    },
                },
                operationType: 0,
                operationName: "RecalculatePrice"
            };
        }
    };
    Xrm.WebApi.online.execute(recalculatePriceRequest).then(
        function success(result) {
            if (result.ok) {
                //Success
            }
        },
        function (error) {
            Xrm.Utility.alertDialog(error.message);
        }
    );
}
```

msdyn_ConnectSequence Action

Article • 03/30/2022

This action is used to assign a lead and opportunity entity record to a sequence.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Name	Description
`RegardingEntityId`	Unique identifier of the entity record that is to be connected to the sequence.
`RegardingEntityName`	Logical name of the entity
`SequenceId`	Unique identifier of the sequence

Example

JSON

```
POST [Organization URI]/api/data/v9.1/msdyn_ConnectSequence

{
    "RegardingEntityId":"03468c60-6d5b-ea11-a811-000d3a54419d",
    "RegardingEntityName":"lead",
    "SequenceId":"BCEC0282-7A58-EA11-A811-000D3A54419D"
}
```

See also

Enable and configure the Sales accelerator

WKWDeleteGDPRData custom action

Article • 05/12/2023

To comply with the privacy law requirements, you may need to delete a user's data after they leave the organization or for other reasons. This includes data that Dynamics 365 collects from Microsoft 365 to provide business insights.

As a developer, use WKWDeleteGDPRData API to delete a user's Microsoft 365 data that's stored in Dynamics 365.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Name	Type	Required	Description
UserIds	list	Yes	Comma-separated list of system user IDs of users whose data you want to delete.

Request

Request type: POST
Request URL: {orgUrl}/api/data/v9.1/msdyn_WKWDeleteGDPRData
Body: {"UserIds": List of system userid's}

Sample Request

The following snippet includes a sample request to delete users.

HTML

```
POST {orgUrl}/api/data/v9.1/msdyn_WKWDeleteGDPRData
    {
```

```
        "UserIds": ["3671fb10-d6d0-ec11-a7b6-000d3a5bc91c", "5571fb10-d6d0-
ec11-a7b6-000d3a5bc91c"]}
    }
```

Response

If the request is submitted successfully, the following response is returned:

HTTP 204

See also

msdyn_WKWGDPRDeleteStatus custom action

msdyn_WKWGDPRDeleteStatus custom action

Article • 05/12/2023

To comply with the GDPR requirements, you may need to delete a user's data after they leave the organization or for other reasons. This includes data that Dynamics 365 collects from Microsoft 365 to provide business insights.

After you request the deletion of user data using the msdyn_WKWDeleteGDPRData API, use the msdyn_WKWGDPRDeleteStatus API to get the status of the request.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium or Dynamics 365 Sales Enterprise More information: Dynamics 365 Sales pricing
Security roles	System customizer More information: Predefined security roles for Sales

Parameters

Name	Type	Required	Description
UserIds	list	Yes	Comma-separated list of system user IDs of users whose data deletion status you want to check.

Request

Request type: POST
Request URL: {orgUrl}/api/data/v9.1/msdyn_WKWGDPRDeleteStatus
Body: {"UserIds": List of system userid's}

Sample request: Check deletion status

The following snippet includes a sample request to check the deletion status.

```
HTML
```

```
POST {orgUrl}/api/data/v9.1/msdyn_WKWGDPRDeleteStatus
    {
        UsersWithRequest:[{"SystemUserId" : Systemuser id, "Status": can be
PROCESSING, COMPLETED or FAILED}],
    }
```

Response

The API returns the following response:

HTML

```
{
    UsersWithRequest:[{“SystemUserId” : Systemuser id, “Status”: can be
PROCESSING, COMPLETED or FAILED}],
    UsersWithNoRequest: List of Systemuser ids provided for status check,
but have no GDPR delete request for them
}
```

Sample response

HTML

```
{
    "@odata.context":
{orgUrl}/api/data/v9.1/$metadata#Microsoft.Dynamics.CRM.msdyn_WKWGDPRDeleteS
tatusResponse,
    "Response": "{\"UsersWithRequest\":[{\"SystemUserId\":\"3671fb10-d6d0-
ec11-a7b6-000d3a5bc91c\",\"Status\":\"PROCESSING\"},
{\"SystemUserId\":\"5571fb10-d6d0-ec11-a7b6-
000d3a5bc91c\",\"Status\":\"PROCESSING\"}],\"UsersWithNoRequest\":
[\"7771fb10-d6d0-ec11-a7b6-000d3a5bc91c\"]}"
}
```

Sales insights table/entity reference

Article • 08/19/2022

Understand the operations you can perform for specific entities, each entity's default attributes, and the relationships between entities.

Entity name	Description
msdyn_PredictiveScore	This custom entity contains attributes such as, score, trend, grade, and score reasons. Use it to view information on views and forms, which has a relationship with lead and opportunity entities.
msdyn_PredictiveModelScore	This custom entity is used to generate scores for each model. For internal use only.
msdyn_PredictiveScoringCommon	The solution contains relationships from lead and opportunity to **msdyn_predictivescore**, and information on **msdyn_PredictiveScore** and **msdyn_PredictiveModelScore** entities. This is a common solution that holds information related to lead and opportunity scoring.
msdyn_wkwcolleaguesforcontacts	This custom entity contains interactions between your organization's users and contacts in Dynamics 365, through emails, calls, and so on. Dynamics 365 Sales uses this data to surface the who knows whom connection.
msdyn_wkwcolleaguesforcompanies	This custom entity contains interactions between your organization's users and accounts in Dynamics 365, through emails, calls, and so on. For example, when a seller receives an email from a domain that's associated with an account, a connection record will be created in this entity.

See also

- Predictive lead scoring
- Predictive opportunity scoring
- WKWDeleteGDPRData custom action
- msdyn_WKWGDPRDeleteStatus custom action

msdyn_predictivescore table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Added by: Predictive Scoring Common Solution

Messages

Message	Web API Operation	SDK Assembly
Create	POST [*org URI*]/api/data/v9.2/msdyn_predictivescores See Create	CreateRequest or Create
CreateMultiple		CreateMultipleRequest
Delete	DELETE [*org URI*]/api/data/v9.2/msdyn_predictivescores(*msdyn_predictivescoreid*) See Delete	DeleteRequest or Delete
IsValidStateTransition	IsValidStateTransition Function	IsValidStateTransitionRequest
Retrieve	GET [*org URI*]/api/data/v9.2/msdyn_predictivescores(*msdyn_predictivescoreid*) See Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	GET [*org URI*]/api/data/v9.2/msdyn_predictivescores See Query Data	RetrieveMultipleRequest or RetrieveMultiple
SetState	PATCH [*org URI*]/api/data/v9.2/msdyn_predictivescores(*msdyn_predictivescoreid*) Update `statecode` and `statuscode` properties.	SetStateRequest
Update	PATCH [*org URI*]/api/data/v9.2/msdyn_predictivescores(*msdyn_predictivescoreid*) See Update	UpdateRequest or Update
UpdateMultiple		UpdateMultipleRequest

Properties

Property	Value
CollectionSchemaName	msdyn_predictivescores
DisplayCollectionName	Predictive Score
DisplayName	Predictive Score
EntitySetName	msdyn_predictivescores

Property	Value
IsBPFEntity	False
LogicalCollectionName	msdyn_predictivescores
LogicalName	msdyn_predictivescore
OwnershipType	OrganizationOwned
PrimaryIdAttribute	msdyn_predictivescoreid
PrimaryNameAttribute	msdyn_name
SchemaName	msdyn_predictivescore

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ImportSequenceNumber
- msdyn_ContributingPredictionIDs
- msdyn_EntityId
- msdyn_EntityType
- msdyn_Grade
- msdyn_name
- msdyn_predictivescoreId
- msdyn_Score
- msdyn_ScoredOn
- msdyn_ScoreReasons
- msdyn_ScoreTrend
- msdyn_similaropportunities
- OverriddenCreatedOn
- statecode
- statuscode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True

Property	Value
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_ContributingPredictionIDs

Property	Value
Description	Contributing prediction IDs.
DisplayName	Contributing prediction IDs
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_contributingpredictionids
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_EntityId

Property	Value
Description	Entity ID of primary entity.
DisplayName	Entity ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_entityid
MaxLength	256

Property	Value
RequiredLevel	ApplicationRequired
Type	String

msdyn_EntityType

Property	Value
Description	Entity type of primary entity.
DisplayName	Entity type
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_entitytype
MaxLength	128
RequiredLevel	ApplicationRequired
Type	String

msdyn_Grade

Property	Value
Description	Grade of prediction score.
DisplayName	Grade
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_grade
RequiredLevel	None
Type	Picklist

msdyn_Grade Choices/Options

Value	Label	Description
0	Grade A	
1	Grade B	

Value	Label	Description
2	Grade C	
3	Grade D	

msdyn_name

Property	Value
Description	The name of the custom entity.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_name
MaxLength	128
RequiredLevel	None
Type	String

msdyn_predictivescoreId

Property	Value
Description	Unique identifier for entity instances.
DisplayName	Predictive score
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_predictivescoreid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

msdyn_Score

Property	Value
Description	Prediction score.

Property	Value
DisplayName	Score
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_score
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_ScoredOn

Property	Value
DateTimeBehavior	UserLocal
Description	Scored on.
DisplayName	Scored on
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_scoredon
RequiredLevel	None
Type	DateTime

msdyn_ScoreReasons

Property	Value
Description	Score reasons.
DisplayName	Score reasons
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	msdyn_scorereasons
MaxLength	10000
RequiredLevel	None
Type	Memo

msdyn_ScoreTrend

Property	Value
Description	Score trend.
DisplayName	Score trend
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scoretrend
RequiredLevel	None
Type	Picklist

msdyn_ScoreTrend Choices/Options

Value	Label	Description
0	Improving	
1	Steady	
2	Declining	
3	Not enough info	

msdyn_similaropportunities

Property	Value
Description	Similar Opportunities data
DisplayName	Similar Opportunities data
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	msdyn_similaropportunities
MaxLength	65536
RequiredLevel	None
Type	Memo

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

statecode

Property	Value
Description	Status of the Predictive Score.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

statuscode

Property	Value
Description	Reason for the status of the Predictive Score.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

OrganizationId

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the organization.
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None
Targets	organization
Type	Lookup

OrganizationIdName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Added by: Active Solution Solution

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True

Property	Value
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

One-To-Many Relationships

Listed by **SchemaName**.

- msdyn_msdyn_predictivescore_lead
- msdyn_msdyn_predictivescore_opportunity
- msdyn_PS_PMS

msdyn_msdyn_predictivescore_lead

Same as the msdyn_msdyn_predictivescore_lead many-to-one relationship for the lead table/entity.

Property	Value
ReferencingEntity	lead
ReferencingAttribute	msdyn_predictivescoreid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	msdyn_msdyn_predictivescore_lead
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_msdyn_predictivescore_opportunity

Same as the msdyn_msdyn_predictivescore_opportunity many-to-one relationship for the opportunity table/entity.

Property	Value
ReferencingEntity	opportunity
ReferencingAttribute	msdyn_predictivescoreid
IsHierarchical	False
IsCustomizable	True
ReferencedEntityNavigationPropertyName	msdyn_msdyn_predictivescore_opportunity
AssociatedMenuConfiguration	Behavior: DoNotDisplay Group: Details Label: Order:
CascadeConfiguration	Assign: NoCascade Delete: RemoveLink Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

msdyn_PS_PMS

Same as the msdyn_PS_PMS many-to-one relationship for the msdyn_predictivemodelscore table/entity.

Property	Value
ReferencingEntity	msdyn_predictivemodelscore
ReferencingAttribute	msdyn_predictivescoreid
IsHierarchical	False
IsCustomizable	False
ReferencedEntityNavigationPropertyName	msdyn_PS_PMS
AssociatedMenuConfiguration	Behavior: UseCollectionName Group: Details Label: Order: 10000
CascadeConfiguration	Assign: NoCascade Delete: Cascade Merge: NoCascade Reparent: NoCascade Share: NoCascade Unshare: NoCascade

See also

Dynamics 365 Sales table/entity reference
Web API Reference

msdyn_predictivemodelscore table/entity reference

Article • 03/03/2023

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Added by: Predictive Scoring Common Solution

Messages

Message	Web API Operation	SDK Assembly
Create	POST [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores See Create	CreateRequest or Create
CreateMultiple		CreateMultipleRequest
Delete	DELETE [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores(*msdyn_predictivemodelscoreid*) See Delete	DeleteRequest or Delete
IsValidStateTransition	IsValidStateTransition Function	IsValidStateTransitionRequest
Retrieve	GET [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores(*msdyn_predictivemodelscoreid*) See Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	GET [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores See Query Data	RetrieveMultipleRequest or RetrieveMultiple
SetState	PATCH [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores(*msdyn_predictivemodelscoreid*) Update `statecode` and `statuscode` properties.	SetStateRequest
Update	PATCH [*org URI*]/api/data/v9.2/msdyn_predictivemodelscores(*msdyn_predictivemodelscoreid*) See Update	UpdateRequest or Update
UpdateMultiple		UpdateMultipleRequest

Properties

Property	Value
CollectionSchemaName	msdyn_predictivemodelscores
DisplayCollectionName	Predictive Model Score
DisplayName	Predictive Model Score
EntitySetName	msdyn_predictivemodelscores
IsBPFEntity	False
LogicalCollectionName	msdyn_predictivemodelscores
LogicalName	msdyn_predictivemodelscore

Property	Value
OwnershipType	OrganizationOwned
PrimaryIdAttribute	msdyn_predictivemodelscoreid
PrimaryNameAttribute	msdyn_name
SchemaName	msdyn_predictivemodelscore

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ImportSequenceNumber
- msdyn_EntityId
- msdyn_EntityType
- msdyn_Grade
- msdyn_ModelName
- msdyn_name
- msdyn_PredictionID
- msdyn_predictivemodelscoreId
- msdyn_PredictiveScoreId
- msdyn_Score
- msdyn_ScoredOn
- msdyn_ScoreHistory
- msdyn_ScoreReasons
- msdyn_ScoreTrend
- OverriddenCreatedOn
- statecode
- statuscode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648

Property	Value
RequiredLevel	None
Type	Integer

msdyn_EntityId

Property	Value
Description	Entity ID of primary entity.
DisplayName	Entity ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_entityid
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

msdyn_EntityType

Property	Value
Description	Entity type of primary entity.
DisplayName	Entity type
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_entitytype
MaxLength	128
RequiredLevel	ApplicationRequired
Type	String

msdyn_Grade

Property	Value
Description	Grade of prediction score.
DisplayName	Grade

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_grade
RequiredLevel	None
Type	Picklist

msdyn_Grade Choices/Options

Value	Label	Description
0	Grade A	
1	Grade B	
2	Grade C	
3	Grade D	

msdyn_ModelName

Property	Value
Description	Prediction model name.
DisplayName	Model name
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_modelname
MaxLength	128
RequiredLevel	None
Type	String

msdyn_name

Property	Value
Description	The name of the custom entity.
DisplayName	Name
FormatName	Text
IsLocalizable	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	msdyn_name
MaxLength	128
RequiredLevel	None
Type	String

msdyn_PredictionID

Property	Value
Description	Prediction model definition ID.
DisplayName	Prediction ID
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_predictionid
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

msdyn_predictivemodelscoreId

Property	Value
Description	Unique identifier for entity instances.
DisplayName	Predictive model score
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_predictivemodelscoreid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

msdyn_PredictiveScoreId

Property	Value
Description	Unique identifier for Predictive Score associated with Predictive Model Score.

Property	Value
DisplayName	Predictive score
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_predictivescoreid
RequiredLevel	None
Targets	msdyn_predictivescore
Type	Lookup

msdyn_Score

Property	Value
Description	Prediction score.
DisplayName	Score
Format	None
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_score
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_ScoredOn

Property	Value
DateTimeBehavior	UserLocal
Description	Scored on.
DisplayName	Scored on
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_scoredon
RequiredLevel	None
Type	DateTime

msdyn_ScoreHistory

Property	Value
Description	Score history.
DisplayName	Score history
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorehistory
MaxLength	2000
RequiredLevel	None
Type	Memo

msdyn_ScoreReasons

Property	Value
Description	Score reasons.
DisplayName	Score reasons
Format	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scorereasons
MaxLength	10000
RequiredLevel	None
Type	Memo

msdyn_ScoreTrend

Property	Value
Description	Score trend.
DisplayName	Score trend
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_scoretrend
RequiredLevel	None

Property	Value
Type	Picklist

msdyn_ScoreTrend Choices/Options

Value	Label	Description
0	Improving	
1	Steady	
2	Declining	
3	Not enough info	

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

statecode

Property	Value
Description	Status of the Predictive Model Score.
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

statuscode

Property	Value
Description	Reason for the status of the Predictive Model Score.
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_PredictiveScoreIdName
- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Date and time when the record was created.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Added by: Active Solution Solution

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True

Property	Value
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

msdyn_PredictiveScoreIdName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_predictivescoreidname
MaxLength	128
RequiredLevel	None
Type	String

OrganizationId

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the organization.
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None

Property	Value
Targets	organization
Type	Lookup

OrganizationIdName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Added by: Active Solution Solution

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Many-To-One Relationships

Each Many-To-One relationship is defined by a corresponding One-To-Many relationship with the related table. Listed by **SchemaName**.

msdyn_PS_PMS

See the msdyn_PS_PMS one-to-many relationship for the msdyn_predictivescore table/entity.

See also

Dynamics 365 Sales table/entity reference
Web API Reference

msdyn_wkwcolleaguesforcontact table/entity reference

Article • 08/19/2022

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Entity for storing contact introducer

Added by: Connection Graph Solution

Messages

Message	Web API Operation	SDK Assembly
Create	POST [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts See Create	CreateRequest or Create
Delete	DELETE [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts(*msdyn_wkwcolleaguesforcontactid*) See Delete	DeleteRequest or Delete
IsValidStateTransition	IsValidStateTransition Function	IsValidStateTransitionRequest
Retrieve	GET [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts(*msdyn_wkwcolleaguesforcontactid*) See Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	GET [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts See Query Data	RetrieveMultipleRequest or RetrieveMultiple
SetState	PATCH [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts(*msdyn_wkwcolleaguesforcontactid*) Update `statecode` and `statuscode` properties.	SetStateRequest
Update	PATCH [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcontacts(*msdyn_wkwcolleaguesforcontactid*) See Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	msdyn_wkwcolleaguesforcontacts
DisplayCollectionName	wkwcolleaguesforcontacts
DisplayName	wkwcolleaguesforcontact
EntitySetName	msdyn_wkwcolleaguesforcontacts
IsBPFEntity	False
LogicalCollectionName	msdyn_wkwcolleaguesforcontacts
LogicalName	msdyn_wkwcolleaguesforcontact
OwnershipType	OrganizationOwned
PrimaryIdAttribute	msdyn_wkwcolleaguesforcontactid

Property	Value
PrimaryNameAttribute	msdyn_introducer_emailaddress
SchemaName	msdyn_wkwcolleaguesforcontact

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ImportSequenceNumber
- msdyn_introduced_entity_id
- msdyn_introducer_emailaddress
- msdyn_introducer_systemuserid
- msdyn_last_interaction_dataflow
- msdyn_last_interaction_datetime
- msdyn_last_interaction_type
- msdyn_score
- msdyn_wkwcolleaguesforcontactId
- OverriddenCreatedOn
- statecode
- statuscode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_introduced_entity_id

Property	Value
Description	
DisplayName	Introduced Entity Id

Property	Value
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introduced_entity_id
MaxLength	100
RequiredLevel	ApplicationRequired
Type	String

msdyn_introducer_emailaddress

Property	Value
Description	The name of the custom entity.
DisplayName	Introducer Email Address
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introducer_emailaddress
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

msdyn_introducer_systemuserid

Property	Value
Description	
DisplayName	Introducer systemuserid
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introducer_systemuserid
RequiredLevel	None
Targets	systemuser
Type	Lookup

msdyn_last_interaction_dataflow

Property	Value

Property	Value
Description	
DisplayName	Last Interaction Data flow
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_dataflow
MaxLength	100
RequiredLevel	None
Type	String

msdyn_last_interaction_datetime

Property	Value
DateTimeBehavior	UserLocal
Description	
DisplayName	Last Interaction datetime
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_datetime
RequiredLevel	None
Type	DateTime

msdyn_last_interaction_type

Property	Value
Description	
DisplayName	Last Interaction type
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_type
MaxLength	100
RequiredLevel	None
Type	String

msdyn_score

Property	Value
Description	
DisplayName	score
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_score
MaxValue	100000000000
MinValue	-100000000000
Precision	2
RequiredLevel	ApplicationRequired
Type	Decimal

msdyn_wkwcolleaguesforcontactId

Property	Value
Description	Unique identifier for entity instances
DisplayName	msdyn_wkwcolleaguesforcontact
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_wkwcolleaguesforcontactid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

statecode

Property	Value
Description	Status of the msdyn_wkwcolleaguesforcontact
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

statuscode

Property	Value
Description	Reason for the status of the msdyn_wkwcolleaguesforcontact
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number

Property	Value
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_introducer_systemuseridName
- msdyn_introducer_systemuseridYomiName

- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text

Property	Value
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Added by: Active Solution Solution

Property	Value

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser

Property	Value
Type	Lookup

ModifiedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.

Property	Value
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

msdyn_introducer_systemuseridName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_introducer_systemuseridname
MaxLength	200
RequiredLevel	None
Type	String

msdyn_introducer_systemuseridYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_introducer_systemuseridyominame
MaxLength	200

Property	Value
RequiredLevel	None
Type	String

OrganizationId

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None
Targets	organization
Type	Lookup

OrganizationIdName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Added by: Active Solution Solution

Property	Value
Description	Version Number
DisplayName	Version Number

Property	Value
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

msdyn_wkwcolleaguesforcompany table/entity reference

Article • 08/19/2022

> **Note**
>
> Unsure about table vs. entity? See **Developers: Understand terminology in Microsoft Dataverse**.

Added by: Connection Graph Solution

Messages

Message	Web API Operation	SDK Assembly
Create	POST [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies See Create	CreateRequest or Create
Delete	DELETE [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies(*msdyn_wkwcolleaguesforcompanyid*) See Delete	DeleteRequest or Delete
IsValidStateTransition	IsValidStateTransition Function	IsValidStateTransitionRequest
Retrieve	GET [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies(*msdyn_wkwcolleaguesforcompanyid*) See Retrieve	RetrieveRequest or Retrieve
RetrieveMultiple	GET [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies See Query Data	RetrieveMultipleRequest or RetrieveMultiple
SetState	PATCH [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies(*msdyn_wkwcolleaguesforcompanyid*) Update `statecode` and `statuscode` properties.	SetStateRequest
Update	PATCH [*org URI*]/api/data/v9.0/msdyn_wkwcolleaguesforcompanies(*msdyn_wkwcolleaguesforcompanyid*) See Update	UpdateRequest or Update

Properties

Property	Value
CollectionSchemaName	msdyn_wkwcolleaguesforcompanies
DisplayCollectionName	wkwcolleaguesforcompanies
DisplayName	wkwcolleaguesforcompany
EntitySetName	msdyn_wkwcolleaguesforcompanies
IsBPFEntity	False
LogicalCollectionName	msdyn_wkwcolleaguesforcompanies
LogicalName	msdyn_wkwcolleaguesforcompany
OwnershipType	OrganizationOwned
PrimaryIdAttribute	msdyn_wkwcolleaguesforcompanyid
PrimaryNameAttribute	msdyn_introducer_emailaddress
SchemaName	msdyn_wkwcolleaguesforcompany

Writable columns/attributes

These columns/attributes return true for either **IsValidForCreate** or **IsValidForUpdate** (usually both). Listed by **SchemaName**.

- ImportSequenceNumber
- msdyn_introduced_entity_id
- msdyn_introducer_emailaddress
- msdyn_introducer_systemuserid
- msdyn_last_interaction_dataflow
- msdyn_last_interaction_datetime
- msdyn_last_interaction_type
- msdyn_score
- msdyn_wkwcolleaguesforcompanyId
- OverriddenCreatedOn
- statecode
- statuscode
- TimeZoneRuleVersionNumber
- UTCConversionTimeZoneCode

ImportSequenceNumber

Property	Value
Description	Sequence number of the import that created this record.
DisplayName	Import Sequence Number
Format	None
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	importsequencenumber
MaxValue	2147483647
MinValue	-2147483648
RequiredLevel	None
Type	Integer

msdyn_introduced_entity_id

Property	Value
Description	
DisplayName	Introduced Entity Id
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introduced_entity_id
MaxLength	100

Property	Value
RequiredLevel	ApplicationRequired
Type	String

msdyn_introducer_emailaddress

Property	Value
Description	The name of the custom entity.
DisplayName	Introducer Email Address
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introducer_emailaddress
MaxLength	200
RequiredLevel	ApplicationRequired
Type	String

msdyn_introducer_systemuserid

Property	Value
Description	
DisplayName	Introducer systemuserid
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_introducer_systemuserid
RequiredLevel	None
Targets	systemuser
Type	Lookup

msdyn_last_interaction_dataflow

Property	Value
Description	
DisplayName	Last Interaction Data flow
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_dataflow

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

msdyn_last_interaction_datetime

Property	Value
DateTimeBehavior	UserLocal
Description	
DisplayName	Last Interaction datetime
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_datetime
RequiredLevel	None
Type	DateTime

msdyn_last_interaction_type

Property	Value
Description	
DisplayName	Last Interaction type
FormatName	Text
IsLocalizable	False
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_last_interaction_type
MaxLength	100
RequiredLevel	None
Type	String

msdyn_score

Property	Value
Description	
DisplayName	score
IsValidForForm	True
IsValidForRead	True
LogicalName	msdyn_score

Property	Value
MaxValue	100000000000
MinValue	-100000000000
Precision	2
RequiredLevel	ApplicationRequired
Type	Decimal

msdyn_wkwcolleaguesforcompanyId

Property	Value
Description	Unique identifier for entity instances
DisplayName	wkwcolleaguesforcompany
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	msdyn_wkwcolleaguesforcompanyid
RequiredLevel	SystemRequired
Type	Uniqueidentifier

OverriddenCreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time that the record was migrated.
DisplayName	Record Created On
Format	DateOnly
IsValidForForm	False
IsValidForRead	True
IsValidForUpdate	False
LogicalName	overriddencreatedon
RequiredLevel	None
Type	DateTime

statecode

Property	Value
Description	Status of the wkwcolleaguesforcompany
DisplayName	Status
IsValidForCreate	False
IsValidForForm	True

Property	Value
IsValidForRead	True
LogicalName	statecode
RequiredLevel	SystemRequired
Type	State

statecode Choices/Options

Value	Label	DefaultStatus	InvariantName
0	Active	1	Active
1	Inactive	2	Inactive

statuscode

Property	Value
Description	Reason for the status of the wkwcolleaguesforcompany
DisplayName	Status Reason
IsValidForForm	True
IsValidForRead	True
LogicalName	statuscode
RequiredLevel	None
Type	Status

statuscode Choices/Options

Value	Label	State
1	Active	0
2	Inactive	1

TimeZoneRuleVersionNumber

Property	Value
Description	For internal use only.
DisplayName	Time Zone Rule Version Number
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	timezoneruleversionnumber
MaxValue	2147483647
MinValue	-1
RequiredLevel	None

Property	Value
Type	Integer

UTCConversionTimeZoneCode

Property	Value
Description	Time zone code that was in use when the record was created.
DisplayName	UTC Conversion Time Zone Code
Format	None
IsValidForForm	False
IsValidForRead	True
LogicalName	utcconversiontimezonecode
MaxValue	2147483647
MinValue	-1
RequiredLevel	None
Type	Integer

Read-only columns/attributes

These columns/attributes return false for both **IsValidForCreate** or **IsValidForUpdate**. Listed by **SchemaName**.

- CreatedBy
- CreatedByName
- CreatedByYomiName
- CreatedOn
- CreatedOnBehalfBy
- CreatedOnBehalfByName
- CreatedOnBehalfByYomiName
- ModifiedBy
- ModifiedByName
- ModifiedByYomiName
- ModifiedOn
- ModifiedOnBehalfBy
- ModifiedOnBehalfByName
- ModifiedOnBehalfByYomiName
- msdyn_introducer_systemuseridName
- msdyn_introducer_systemuseridYomiName
- OrganizationId
- OrganizationIdName
- VersionNumber

CreatedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who created the record.
DisplayName	Created By

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	createdby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

CreatedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was created.
DisplayName	Created On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	createdon
RequiredLevel	None
Type	DateTime

CreatedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who created the record.
DisplayName	Created By (Delegate)
IsValidForForm	True
IsValidForRead	True
LogicalName	createdonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

CreatedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

CreatedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	createdonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the user who modified the record.
DisplayName	Modified By
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyname

Property	Value
MaxLength	100
RequiredLevel	None
Type	String

ModifiedByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

ModifiedOn

Property	Value
DateTimeBehavior	UserLocal
Description	Date and time when the record was modified.
DisplayName	Modified On
Format	DateAndTime
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedon
RequiredLevel	None
Type	DateTime

ModifiedOnBehalfBy

Added by: Active Solution Solution

Property	Value
Description	Unique identifier of the delegate user who modified the record.
DisplayName	Modified By (Delegate)

Property	Value
IsValidForForm	True
IsValidForRead	True
LogicalName	modifiedonbehalfby
RequiredLevel	None
Targets	systemuser
Type	Lookup

ModifiedOnBehalfByName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyname
MaxLength	100
RequiredLevel	None
Type	String

ModifiedOnBehalfByYomiName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	modifiedonbehalfbyyominame
MaxLength	100
RequiredLevel	SystemRequired
Type	String

msdyn_introducer_systemuseridName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_introducer_systemuseridname
MaxLength	200
RequiredLevel	None
Type	String

msdyn_introducer_systemuseridYomiName

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	msdyn_introducer_systemuseridyominame
MaxLength	200
RequiredLevel	None
Type	String

OrganizationId

Added by: Active Solution Solution

Property	Value
Description	Unique identifier for the organization
DisplayName	Organization Id
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationid
RequiredLevel	None
Targets	organization
Type	Lookup

OrganizationIdName

Added by: Active Solution Solution

Property	Value
Description	
DisplayName	
FormatName	Text
IsLocalizable	False
IsValidForForm	False
IsValidForRead	True
LogicalName	organizationidname
MaxLength	100
RequiredLevel	SystemRequired
Type	String

VersionNumber

Added by: Active Solution Solution

Property	Value
Description	Version Number
DisplayName	Version Number
IsValidForForm	False
IsValidForRead	True
LogicalName	versionnumber
MaxValue	9223372036854775807
MinValue	-9223372036854775808
RequiredLevel	None
Type	BigInt

Create custom cards in Assistant

Article • 03/30/2022

Use the assistant to create custom action cards that help in displaying insight cards that are specific to your organization.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or System Customizer More information: Predefined security roles for Sales

What are action or insight cards?

Action cards provides you up to date information on email, meeting, and much more in Dynamics 365 for Customer Engagement. These cards reminds you of upcoming activities; it evaluates your communications, and suggests when it might be time to reach out to a contact that's been inactive for a while; it identifies email messages that may be waiting for a reply from you; it alerts you when an opportunity is nearing its close date; and much more. These cards are displayed on forms, dashboards, and throughout the application to provide relevant information for the context you are working in at the moment. More information: Action cards reference

The action cards contain the following basic elements:

1. **Generics actions:** The more options consist of the following actionable buttons:

    - **Snooze button:** Hides card temporarily. Snooze time varies by card type. Once the snooze time expires the card will again be visible.

- **Dismiss button:** Dismisses card permanently, regardless of whether you have completed the action.

2. **Actions area:** Provides convenient links that will help you complete whatever type of action the card is recommending. The number (up to two) and types of links provided here vary by card type.
3. **Main content area:** Shows the title of the record the card refers to, its summary, the card type, and other basic information. Click anywhere in this area (except for on the two buttons) to open the related item, which might be a Dynamics 365 for Customer Engagement record or an email message.

Create a custom card

You can generate these custom cards in two ways:

- As a sales manager or administrator, you can generate custom insight cards (known as action cards) by using the **Assistant** which is based on Microsoft Flow. This provides you a graphical user interface to generate custom cards. To learn more, see Preview: Manage insight cards

  > ⓘ Note
  >
  > We recommend you to use the **Assistant** to generate the custom insight cards.

- As a developer, you can create card types according to your organizational requirements and make them available for users. To learn more, see Sample: Create custom insight cards type

  > ⓘ Note
  >
  > To use this feature, you must purchase a **Dynamics 365 Sales Insights** license, or start a trial to use Sales Insights features.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.

- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Manage insight cards

Sample: Extend assistant card type (custom card)

Configure Assistant

Guide customer communications with assistant

Sample: Extend assistant card type (custom card)

Article • 03/30/2022

Learn how to download and what resources are present to create a custom actions or learn about extending the assistant action card.

License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Customizer More information: Predefined security roles for Sales

Create custom action card

The following process explains how to create a custom card:

- **Step 1:** Download the extend Assistant card type sample solution
- **Step 2:** Build the solution (ExtPkgDeployer.sln)
- **Step 3:** Import the package using the package deployer tool
- **Step 4:** Verify the new card type
- **Step 5:** Create Action card for the new card type using the Web API.
- **Step 6:** Verify the new custom card

Prerequisites

Review the prerequisites before you create the custom cards in your organization:

- You must have the Package Deployer tool (packagedeployer.exe) to deploy packages. To download the package deployer, see Download tools from NuGet
- To use this feature, you must purchase a **Dynamics 365 Sales Insights** license, or start a trial to use Sales Insights features.

Step 1: Download the extend Assistant card type sample solution

Download the sample custom card solution.

The samples show how to create a custom card in Assistant programmatically.

Go to the path `ExtPkgDeployer\PkgFolder\extensibility_example_sol\WebResources`. Under the **WebResources** folder, you can see three files that are required to create a custom card.

- **Schema Definition (new_cardtype_schemaxml9dd7e039-33a1-4778-9972-66536dc5e829)**
- **Command (new_commands8db43275-0291-401d-923a-90a6c373cc18)**
- **Icon (new_msicon6aa7c568-4830-4da6-89f9-18a8fd9c2285)**

Schema Definition (new_cardtype_schemaxml9dd7e039-33a1-4778-9972-66536dc5e829)

The contains schema definition for new card type.

> **Note**
>
> Ensure that card type ID value is greater than 10000.

XML

```xml
<?xml version="1.0" encoding="utf-8" ?>
<entity name="cardtype" displayname="Action Card Type">
  <cardname>Extensibility Example</cardname>
  <cardtypeid>2183dfc0-3c1c-45b7-a331-1943880c25c6</cardtypeid>
  <cardtype>11000</cardtype>
  <cardtypeicon>webresources/new_msicon</cardtypeicon>
  <softtitle>Extensibility Example</softtitle>
  <summarytext>RA Card Extensibility Example</summarytext>
  <actions>{"WebClient":{"Actions":
{"Open":"Mscrm.HomepageGrid.actioncard.CardCommand"},"Default":
{"Open":"Mscrm.HomepageGrid.actioncard.CardCommand"}}, "Mobile":{"Actions":
{"Open":"Mscrm.HomepageGrid.actioncard.CardCommand"}}}</actions>
</entity>
```

Command (new_commands8db43275-0291-401d-923a-90a6c373cc18)

The file contains the command for action card.

JavaScript

```
function CardCommand() {
    window.open("https://aka.ms/salesai-raext");
}
```

When you execute the command, the command is invoked through the `RibbonDiff` defined in the **customization.xml** of the **ActionCard** entity.

XML

```
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Entities>
    <Entity>
      <Name LocalizedName="ActionCard"
OriginalName="ActionCard">ActionCard</Name>
      <ObjectTypeCode>9962</ObjectTypeCode>
      <RibbonDiffXml>
        <CustomActions>
          <CustomAction
Id="Mscrm.HomepageGrid.actioncard.CardCommand.CustomAction"
Location="Mscrm.HomepageGrid.actioncard.MainTab.Actions.Controls._children"
Sequence="12">
            <CommandUIDefinition>
              <Button Id="Mscrm.HomepageGrid.actioncard.CardCommand"
ToolTipTitle="Open" ToolTipDescription="Open"
Command="Mscrm.HomepageGrid.actioncard.CardCommand" Sequence="12"
LabelText="Open" Alt="Open" Image16by16="/WebResources/new_msicon"
Image32by32="/WebResources/new_msicon" TemplateAlias="o1"
ModernImage="new_msicon" />
            </CommandUIDefinition>
          </CustomAction>
          <CustomAction
Id="Mscrm.SubGrid.actioncard.CardCommand.CustomAction"
Location="Mscrm.SubGrid.actioncard.MainTab.Actions.Controls._children"
Sequence="57">
            <CommandUIDefinition>
              <Button Id="Mscrm.HomepageGrid.actioncard.CardCommand"
ToolTipTitle="Open" ToolTipDescription="Open"
Command="Mscrm.HomepageGrid.actioncard.CardCommand" Sequence="29"
LabelText="Open" Alt="Open" Image16by16="/WebResources/new_msicon"
Image32by32="/WebResources/new_msicon" TemplateAlias="o1"
ModernImage="new_msicon" />
            </CommandUIDefinition>
          </CustomAction>
        </CustomActions>
```

```
        <CommandDefinitions>
          <CommandDefinition Id="Mscrm.HomepageGrid.actioncard.CardCommand">
            <EnableRules >
              <EnableRule Id="Mscrm.SelectionCountExactlyOne" />
              <EnableRule Id="Mscrm.NotOffline" />
            </EnableRules>
            <DisplayRules>
            </DisplayRules>
            <Actions>
              <JavaScriptFunction FunctionName="CardCommand"
Library="$webresource:new_commands">
                <CrmParameter Value="SelectedControl" />
                <CrmParameter Value="SelectedControlSelectedItemReferences"
/>
              </JavaScriptFunction>
            </Actions>
          </CommandDefinition>
        </CommandDefinitions>
        <RuleDefinitions>
          <TabDisplayRules />
          <DisplayRules>
          </DisplayRules>
          <EnableRules/>
        </RuleDefinitions>
      </RibbonDiffXml>
    </Entity>
  </Entities>
  <Roles></Roles>
  <Workflows></Workflows>
  <FieldSecurityProfiles></FieldSecurityProfiles>
  <Templates />
  <EntityMaps />
  <EntityRelationships />
  <OrganizationSettings />
  <optionsets />
  <WebResources>
    <WebResource>
      <WebResourceId>{6aa7c568-4830-4da6-89f9-18a8fd9c2285}</WebResourceId>
      <Name>new_msicon</Name>
      <DisplayName>new_msicon</DisplayName>
      <WebResourceType>5</WebResourceType>
      <IntroducedVersion>1.0</IntroducedVersion>
      <IsEnabledForMobileClient>0</IsEnabledForMobileClient>
      <IsAvailableForMobileOffline>0</IsAvailableForMobileOffline>
      <DependencyXml>&lt;Dependencies&gt;&lt;Dependency
componentType="WebResource"/&gt;&lt;/Dependencies&gt;</DependencyXml>
      <IsCustomizable>1</IsCustomizable>
      <CanBeDeleted>1</CanBeDeleted>
      <IsHidden>0</IsHidden>
      <FileName>/WebResources/new_msicon6aa7c568-4830-4da6-89f9-
18a8fd9c2285</FileName>
    </WebResource>
    <WebResource>
      <WebResourceId>{8db43275-0291-401d-923a-90a6c373cc18}</WebResourceId>
      <Name>new_commands</Name>
```

```
      <DisplayName>new_commands</DisplayName>
      <WebResourceType>3</WebResourceType>
      <IntroducedVersion>1.0</IntroducedVersion>
      <IsEnabledForMobileClient>0</IsEnabledForMobileClient>
      <IsAvailableForMobileOffline>0</IsAvailableForMobileOffline>
      <DependencyXml>&lt;Dependencies&gt;&lt;Dependency
componentType="WebResource"/&gt;&lt;/Dependencies&gt;</DependencyXml>
      <IsCustomizable>1</IsCustomizable>
      <CanBeDeleted>1</CanBeDeleted>
      <IsHidden>0</IsHidden>
      <FileName>/WebResources/new_commands8db43275-0291-401d-923a-
90a6c373cc18</FileName>
    </WebResource>
    <WebResource>
      <WebResourceId>{9dd7e039-33a1-4778-9972-66536dc5e829}</WebResourceId>
      <Name>new_cardtype_schema</Name>
      <DisplayName>cardtype_schema</DisplayName>
      <WebResourceType>4</WebResourceType>
      <IntroducedVersion>1.0</IntroducedVersion>
      <IsEnabledForMobileClient>0</IsEnabledForMobileClient>
      <IsAvailableForMobileOffline>0</IsAvailableForMobileOffline>
      <DependencyXml>&lt;Dependencies&gt;&lt;Dependency
componentType="WebResource"/&gt;&lt;/Dependencies&gt;</DependencyXml>
      <IsCustomizable>1</IsCustomizable>
      <CanBeDeleted>1</CanBeDeleted>
      <IsHidden>0</IsHidden>
      <FileName>/WebResources/new_cardtype_schemaxml9dd7e039-33a1-4778-9972-
66536dc5e829</FileName>
    </WebResource>
  </WebResources>
  <Languages>
    <Language>1033</Language>
  </Languages>
</ImportExportXml>
```

Icon (new_msicon6aa7c568-4830-4da6-89f9-18a8fd9c2285)

The file contains the icon that is used for the card.

Step 2: Build the solution (ExtPkgDeployer.sln)

1. Open command prompt (cmd).
2. Go to the root folder. `C:\<directory>\RACards Extensibility Example\RACards Extensibility Example\ExtPkgDeployer\PkgFolder`
3. Execute the command to build the solution. `msbuild ExtPkgDeployer.sln`

The build is successful, and you can see that under the `<folder>\ExtPkgDeployer\bin\Debug`, the `PkgFolder` and the `ExtPkgDeployer.dll` are generated.

Step 3: Import the package using the package deployer tool

1. Copy the `PkgFolder` and the `ExtPkgDeployer.dll` from the `<folder>\ExtPkgDeployer\bin\Debug` folder and paste it in the `<PackageDeployerToolLocation>\tools` location.

2. Run the tool by double-clicking the `PackageDeployer.exe` from the folder where you have saved the package deployer tool.

3. In the introduction screen of the Package Deployer tool, choose **Continue**.

4. In the authentication screen, provide authentication details to connect to the Dynamics 365 Sales instance where you want to deploy the package. If you have multiple organizations and want to select the organization where you want to deploy the Unified Service Desk package, select the Display list of available organizations check box. Choose **Login**.

5. The next screen displays detailed information about the selected package and the things that will be installed on your Dynamics 365 Sales instance. Review the information and choose **Next**.

6. The **Ready to Install** screen displays the package selected for deployment and name of the Dynamics 365 Sales organization where it will be deployed to. Review the information and choose **Next**.

7. The next screen displays the validation status of the package selected to be deployed. After the validation completes successfully, choose **Next**.

8. The next page displays the package deployment status. Click **Next**.

9. The next screen displays the name and information about the package that you just deployed. Review the information and choose **Finish** to exit the Package Deployer tool.

After you deploy the package, a new card type is created with an ID - `2183dfc0-3c1c-45b7-a331-1943880c25c6`, which is defined in the schema (new_cardtype_schemaxml9dd7e039-33a1-4778-9972-66536dc5e829).

Step 4: Verify the new card type

Verify the card type with an ID '2183dfc0-3c1c-45b7-a331-1943880c25c6'. Send a GET method request.

Request

HTTP

```
GET [Organization URI]/api/data/v9.0/cardtype(2183dfc0-3c1c-45b7-a331-1943880c25c6) HTTP/1.1
Accept: application/json
OData-MaxVersion: 4.0
OData-Version: 4.0
```

Response

HTTP


```
{
"@odata.context":"https://[Organization URI]/api/data/v9.0/$metadata#cardtype/$entity",
"@odata.etag":"W/"662120\"",
"boolcardoption":false,
"clientavailability":3,
"ispreviewcard":true,
"cardname":"ExtExample",
"cardtypeid":"2183dfc0-3c1c-45b7-a331-943880c25c6",
"cardtypeicon":"webresources/new_msicon",
"intcardoption":0,
"isenabled":true,
"hassnoozedismiss":true,
"softtitle":"Extensibility Example",
"cardtype":11000,
"isliveonly":false,
"_modifiedby_value":"50673658-c5d6-e811-a98c-000d3a1df431",
"versionnumber":662120,
"isbasecard":false,
"actions":"{\"WebClient\":{\"Actions\":
{\"Open\":\"Mscrm.HomepageGrid.actioncard.CardCommand\"},\"Default\":
{\"Open\":\"Mscrm.HomepageGrid.actioncard.CardCommand\"}}, \"Mobile\":
{\"Actions\":{\"Open\":\"Mscrm.HomepageGrid.actioncard.CardCommand\"}}}",
"publishername":"adminsocial",
"modifiedon":"2018-10-26T12:26:14Z",
"summarytext":"RA Card Extensibility Example",
"_transactioncurrencyid_value":null,
"importsequencenumber":null,
"createdon":null,
"overriddencreatedon":null,
```

```
"_modifiedonbehalfby_value":null,
"_createdonbehalfby_value":null,
"_createdby_value":null,
"scheduletime":null,
"exchangerate":null,
"grouptype":null,
"stringcardoption":null,
"lastsynctime":null
}
```

Step 5: Create Action card for the new card type using the Web API

Create an Action Card for the new card type created using the package deployer. Send a POST method request.

Request

HTTP

```
POST http://[Organization URI]/api/data/v9.0/actioncards HTTP/1.1
Content-Type: application/json
OData-MaxVersion: 4.0
OData-Version: 4.0
{
"cardtypeid@odata.bind": "/cardtype(2183dfc0-3c1c-45
b7-a331-1943880c25c6)",
"startdate": "2018-10-20T01:01:01Z",
"expirydate": "2018-10-25T01:01:01Z",
"visibility": true,
"priority": 2000,
"description": "This card should be visible between
start and end date mentioned above",
"title" : "Extensibility Example",
"cardtype": 11000,
"ownerid@odata.bind" : "/systemusers({USER_ID})"
}
```

Response

HTTP

```
HTTP/1.1 204 No Content
OData-Version: 4.0
OData-EntityId: http://[Organization URI]/api/data/v9.0/actioncard(2183dfc0-
3c1c-45b7-a331-1943880c25c6)
```

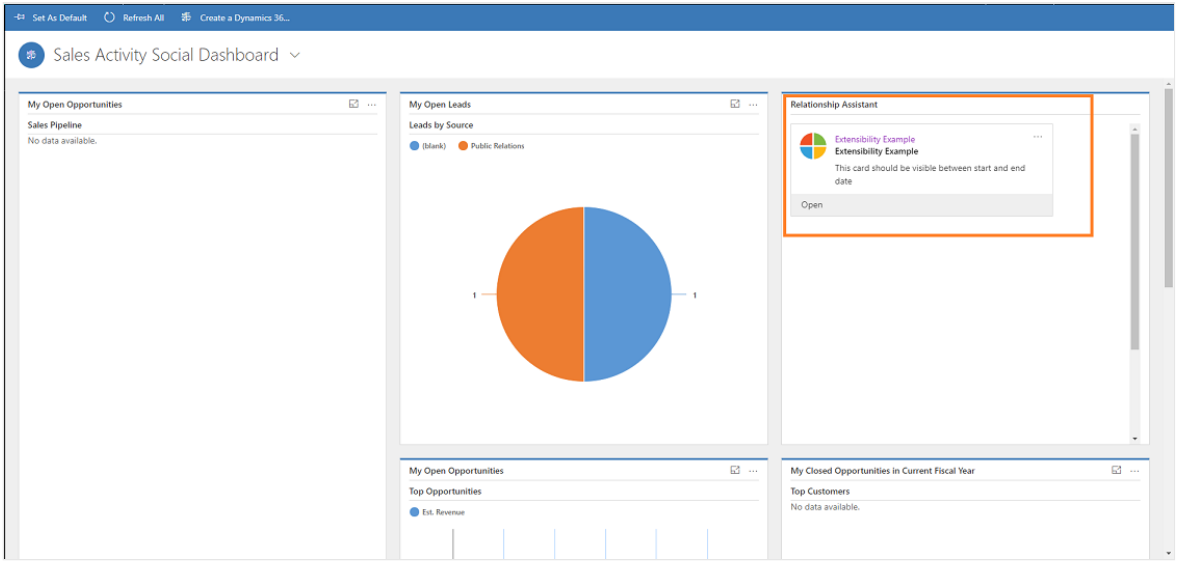
> **Note**
>
> Open the browser console and run the command, `sessionStorage.clear();` to clear the session cache.

Step 6: Verify the new custom card

You can verify the custom cards are created in your organization as end user and as administrator.

As end user

1. Log in to **Dynamics 365 Sales**.
2. Under **Assistant** section, you can see your created action card.



As administrator

1. Log in to **Dynamics 365 Sales** and go to **Sales Hub app**.
2. Go to **Change area** and select **Sales Insights settings**.
3. On the sitemap, select **Insights cards** under **Assistant** to go to **Manage insight cards** page.
4. On the **Manage insight cards** page, you see an option to enable created custom actions cards in your organization.

To learn more on how to enable cards, see Turn on or off insights cards.

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Create custom cards in Assistant

Configure Assistant

Guide customer communications with assistant

Dynamics 365 Sales and privacy laws and regulations

Article • 05/12/2023

The European Union (EU) General Data Protection Regulation (GDPR) gives significant rights to individuals regarding their data. Refer to the Microsoft Learn General Data Protection Regulation Summary for an overview of GDPR, including terminology, an action plan, and readiness checklists to help you meet your obligations under GDPR when using Microsoft products and services.

You can learn more about GDPR and how Microsoft helps support it and our customers who are affected by it.

- The Microsoft Trust Center provides general information, compliance best practices, and documentation helpful to GDPR accountability, such as Data Protection Impact Assessments, Data Subject Requests, and data breach notification.
- The Service Trust portal provides information about how Microsoft services help support compliance with GDPR.

To help comply with privacy laws and regulations, we've made it possible to edit read-only records in Dynamics 365 Sales.

The following table shows the states in which the Dynamics 365 Sales records become read-only.

Entity	State
Quote	Active/Closed
Order	Fulfilled/Canceled/Submitted/Invoiced
Invoice	Paid/Canceled/Closed

A system administrator can export read-only quote, order, and invoice records, update them, and import the updated records back to Dynamics 365 Sales.

It's also possible to update the read-only records programmatically with the SDK for Dynamics 365 Sales.

Update read-only records through export or import

> **Important**
>
> Only an administrator or an impersonating user with administrative privileges can perform this action. Other users will get the following error message if they try to import records: `Business Process Error: Cannot perform the action because the record is read only`

> **Note**
>
> This article provides instructions for exporting personal data from the device or service and can help you meet your obligations under GDPR. For general information about GDPR, see the **GDPR section of the Microsoft Trust Center** and the **GDPR section of the Service Trust portal**.

1. In your sales app, go to the list of records. For example, go to **Sales** > **Quotes**.
2. Open the view that shows all the records regardless of their state. For example, open the **All Quotes** view.
3. Select the records that you want to export, and on the command bar, select **Export to Excel** > **Static Worksheet**. More information: Export data to Excel
4. In the file that you exported, make the necessary changes.
5. To import the updated records back into Dynamics 365 Sales, in your sales app, in the list of records, select **Import Data**. More information: Import data into Dynamics 365 Sales

Important points

- As a system administrator, you can edit any read-only field but changes won't reflect for the locked fields.
- Non-admin users can't edit an active quote. However, an admin user can edit and save an active quote, although it's read-only for non-admin users.
- If configured, Plugins, Business processes and workflows run on fields getting updated or becoming editable.

- If there is Dynamics 365 Sales integration with any third-party system, there's a chance that the privacy-related changes are overwritten if the correct sequence of updates isn't followed. It's the responsibility of the system administrator of Dynamics 365 Sales to follow the correct order.

Sales Insights and privacy laws

Article • 05/12/2023

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Prepare sales insights features for privacy compliance

You can perform the following tasks in the relationship analytics and conversation intelligence features to help comply with privacy laws and regulations.

> **Note**
>
> This article provides instructions for exporting personal data from the device or service and can help you meet your obligations under GDPR. For general information about GDPR, see the **GDPR section of the Microsoft Trust Center** and the **GDPR section of the Service Trust portal**.

Task	Supported Feature	Topic
View KPI data stored for a contact, lead, and opportunity by using system views, and export it to Excel.	Relationship Analytics	View and export KPI data

Task	Supported Feature	Topic
Retrieve data for an contact, lead, opportunity, and system user from Azure service that is used to compute and store data by using a custom action.	Relationship Analytics and Conversation Intelligence	Retrieve insights data using msdyn_RetrieveKPIValuesForGDPR action

See also

Overview of Dynamics 365 Sales Insights

View and export KPI data

Article • 05/17/2023

View KPI data for contact, lead, and opportunity using system views, and export the data to an Excel file. The KPI data is stored in the following entities:

- **Contact KPI Items**
- **Lead KPI Items**
- **Opportunity KPI Items**

> ⓘ Note
>
> This topic is applicable only for the **Relationship Analytics** feature.

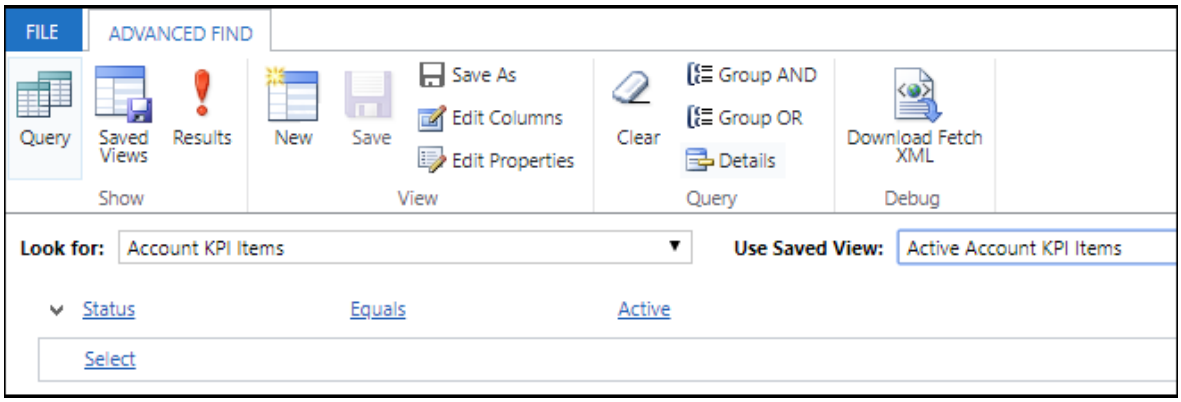
License and role requirements

Requirement type	You must have
License	Dynamics 365 Sales Premium More information: Dynamics 365 Sales pricing
Security roles	System Administrator or Sales Manager More information: Predefined security roles for Sales

View KPI data

You can use the system views for these entities or create your own views to view the data.

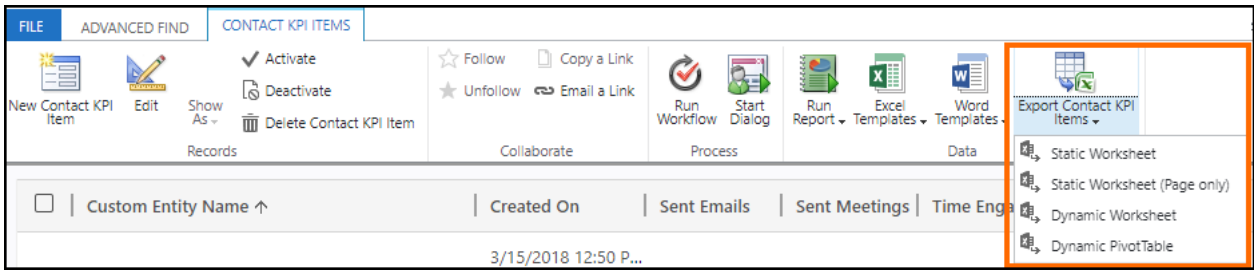
1. Go to **Advanced Find**.
2. In the **Look for** list, select the record type as one of the entities mentioned earlier.
3. Select a system view from the **Use Saved View** list or create a new view.



4. Specify the columns to include in the view by selecting **Edit Columns**, and then selecting the columns to display.
5. Select **Results** to view the data.

For detailed information about using Advanced Find, see Create, edit, or save an Advanced Find search

After viewing the results, you can export data to Microsoft Excel, if required. You can do so by selecting the export to Excel option from the command bar.



For more information about exporting data from Dynamics 365 Sales to excel, see Export data to Excel

Can't find the options in your app?

There are three possibilities:

- You don't have the necessary license or role.
- Your administrator hasn't turned on the feature.
- Your organization is using a custom app. Check with your administrator for exact steps. The steps described in this article are specific to the out-of-the-box apps such as, the Sales Hub or Sales Professional app.

See also

Privacy and personal data for Microsoft Dynamics 365

Retrieve insights data using msdyn_RetrieveKPIValuesForGDPR action

Article • 05/17/2023

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Use the **msdyn_RetrieveKPIValuesForGDPR** action to programmatically retrieve profiles, interactions, and KPIs stored in Azure service that is used to compute and store data for an contact, lead, opportunity, or systemuser. This action is useful for responding to data requests to fulfill your data privacy compliance obligations in Dynamics 365 Sales Insights.

> **Note**
>
> - You can also generate request and response classes for this action to include in your application code. More information: **Generate early-bound types for an action**
> - This topic is applicable only for the **Relationship Analytics** and **Introduction to Sales Insights application** features.

Action parameters

The **msdyn_RetrieveKPIValuesForGDPR** action expects the following input parameters:

Name	Type	Description
`CRMRecord`	mscrm.crmbaseentity	Entity type for which you want to retrieve the data. Required. You can specify one of the following values: • `Microsoft.Dynamics.CRM.contact` • `Microsoft.Dynamics.CRM.lead` • `Microsoft.Dynamics.CRM.opportunity` • `Microsoft.Dynamics.CRM.systemuser` Depending on the specified entity type, you must specify `contactid`, `leadid`, `opportunityid`, or `systemuserid` as the second key to identify the entity record you want to retrieve data for. See Example later in this topic.

Action return type

The **msdyn_RetrieveKPIValuesForGDPR** action returns the following value:

Name	Type	Description
`msdyn_RetrieveKPIValuesForGDPRResponse`	ComplexType	Contains the response from the **msdyn_RetrieveKPIValuesForGDPR** action. It contains the following property that contain the structured data of the type: • **Name:** `Response` • **Type:** Edm.String • **Description:** List of data as an escaped JSON array.

Example

Request

```
HTTP
```

```
POST [Organization URI]/api/data/v9.0/msdyn_RetrieveKPIValuesForGDPR
HTTP/1.1
Accept: application/json
Content-Type: application/json; charset=utf-8
OData-MaxVersion: 4.0
OData-Version: 4.0
```

```
{
  "CRMRecord": {
    "@odata.type": "Microsoft.Dynamics.CRM.contact",
    "contactid": "bf1b1e9a-6e28-e811-a94e-000d3a365e68"
  }
}
```

Response

The response contains a JSON object with a `Response` property containing the list of data stored in Azure service that is used to compute and store data.

HTTP

```
HTTP/1.1 200 OK
Content-Type: application/json; odata.metadata=minimal
OData-Version: 4.0

{
  "@odata.context": "[Organization
URI]/api/data/v9.0/$metadata#Microsoft.Dynamics.CRM.msdyn_RetrieveKPIValuesF
orGDPRResponse",
   "Response": {\"EntityId\": \"bf1b1e9a-6e28-e811-a94e-
000d3a365e68\",\"Daily UI KPIs\": \"Some Values\",\"Lifetime UI KPIs\":
\"Some Values\",\"Most Contacted KPIs\": \"Some Values\",\"Health KPIs\":
\"Some Values\"}]"
}
```

See also

Use Web API actions

Sales Insights and privacy

Privacy and security FAQs

Article • 07/31/2023

The European Union (EU) General Data Protection Regulation (GDPR) gives significant rights to individuals regarding their data. Refer to the Microsoft Learn General Data Protection Regulation Summary for an overview of GDPR, including terminology, an action plan, and readiness checklists to help you meet your obligations under GDPR when using Microsoft products and services.

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- The Service Trust portal provides information about how Microsoft services help support compliance with GDPR.

Where is the Dynamics 365 Sales data stored?

Dynamics 365 Sales data is stored in Dataverse and in Azure resources (for certain features). Both Dataverse and the Azure resources are colocated with their respective Power Platform environment locations. For more information about Power Platform environment locations, see Data Location.

Can the Dynamics 365 Sales data be protected with Customer Lockbox?

Yes, the Dynamics 365 Sales data is stored in the Power Platform environment and is protected with Power Platform Customer Lockbox. For more information, see Securely access customer data using Customer Lockbox.

Most of the Dynamics 365 Sales features fully support Customer Lockbox, except for the following features:

- **Conversation intelligence** doesn't support Customer Lockbox.
- **Forecasting** partially supports Customer Lockbox. Customer approval workflow is enabled for forecasting. However, as conversation intelligence and forecasting

share the same infrastructure, the forecasting data isn't completely restricted for access until conversation intelligence supports lockbox.

> **Important**
>
> Microsoft support's access to the forecasting and conversation intelligence data will continue to be managed by our internal customer data access approval process.

Can the Dynamics 365 Sales data be encrypted using customer-managed encryption key (CMK)?

Yes, the Dynamics 365 Sales data can be encrypted using CMK. For more information, see Manage your customer-managed encryption key.

Most of the Dynamics 365 Sales features fully support Customer Lockbox, except for conversation intelligence.

See also

Dynamics 365 Sales and privacy laws and regulations
Sales Insights and privacy laws

Sales Insights privacy notice

Article • 05/12/2023

This article covers privacy notices for Sales Insights capabilities. Your privacy is important to us. For Microsoft Online Services, read the Microsoft Online Services privacy Statement .

Sales Insights standard features

For specific privacy information about Sales insights standard features, refer to the paragraphs below.

By enabling the Relationship Assistant feature, limited exchange data, which includes a sender's name and email address as well as excerpts of the email body, are retrieved (but are not stored in Dynamics 365 for Customer Engagement), for the purpose of showing relevant insights of your email. Further, the Relationship Assistant feature can be configured to retrieve information with regards to news, financials, and flight information, by sending out requests to external components such as MSN Money and Bing (which are not considered Microsoft Dynamics 365 Core Services). An administrator can enable and disable the Relationship Assistant feature by navigating to **Settings** > **Intelligence Configuration**, clicking the **Relationship Assistant** tab, and then making the appropriate selection.

The external components involved with Relationship Assistant functionality are detailed in the following sections.

Bing

Relationship Assistant uses Bing to search for relevant news to display to a user by using the account names from that user's Dynamics 365 for Customer Engagement data.

MSN Money

Relationship Assistant uses MSN Money to show relevant stock information to a user by using the account ticker symbol from that user's Dynamics 365 for Customer Engagement data.

By enabling Email Engagement, a Embedded intelligence feature, when an email marked with the **Follow** setting is sent from Dynamics 365 for Customer Engagement, information about interactions with the email by recipients will be collected and stored in Azure for the purposes of computing recipient activity KPIs and interactions on "followed" emails.

A system administrator enables Email Engagement by provisioning the feature from the **Email Engagement** tab within Embedded intelligence. Administrators can subsequently disable Email Engagement in the organization from the **Intelligence Configuration** node, under **Settings**.

When the feature has been disabled, emails sent from Dynamics 365 for Customer Engagement cannot be followed, either from the user interface or programmatically. Also, recipient interaction data will no longer be collected on sent emails that were marked with the **Follow** setting. Any data previously collected will remain in Azure and will be available again if the feature is re-enabled in the organization. Data is retained for 90 days after customers terminate their subscription with Microsoft. Dynamics 365 for Customer Engagement users can also disable the Embedded intelligence - Email Engagement functionality on a per Contact or per Lead basis by changing the **Follow Email** setting under **Contact Preferences**.

Azure components and services that are involved with Email Engagement functionality are detailed below.

Note: For more information about additional Azure service offerings, see the Microsoft Azure Trust Center.

Azure Storage Account

The Email Engagement feature uses Azure Storage Account to temporarily store email interaction blobs.

By enabling the Auto Capture feature, Exchange data is retrieved by Dynamics 365 for Customer Engagement, but not stored, to show email activity to the signed-in user. Users can explicitly 'track' these emails to copy Exchange emails into Dynamics 365 for Customer Engagement as an Email Activity, to be shared with the appropriate users as configured by Dynamics 365 for Customer Engagement permissions.

An administrator enables and disables the Auto Capture feature by navigating to **Settings** > **Intelligence Configuration**, clicking the **Auto Capture** tab, and then making the appropriate selection. A user can also disable the Auto Capture feature on the Email tab within **Personal Options**, by changing **Show email not tracked in Dynamics 365 in the Activities list** to **No**.

Sales Insights premium features

For specific privacy information about Dynamics 365 Sales Insights premium features, refer to the paragraphs below.
By enabling Dynamics 365 Sales Insights capabilities, Dynamics 365 for Customer

Engagement Customer Data will be sent to and used by (1) Azure Data Factory for the purpose of data movement and transformation for KPI computation, and (2) Azure Container Instance for the purpose of predictive model training and scoring. By installing this solution, you agree for this limited set of data to be sent to Azure Data Factory service and Azure Container Instance. The data that is sent include contacts, opportunities, leads, accounts, activities, and additional metadata information.
Azure components and services that are involved with Dynamics 365 Sales Insights are detailed in the following sections.

Note: For more information about additional Azure service offerings, see the Microsoft Azure Trust Center.

Azure Data Factory
Dynamics 365 Sales Insights uses Azure Data Factory, a cloud data integration service, to orchestrate and automate the movement and transformation of data (including Customer Data) between services.

Azure batch services
Dynamics 365 Sales Insights uses Azure batch service, a cloud-based batch service, to create predictive model training and scoring pipelines dynamically.

Installation and Removal of Dynamics 365 Sales Insights
An administrator can enable Dynamics 365 Sales Insights capabilities by installing it as a solution in the Dynamics 365 for Customer Engagement organization. In addition, an administrator can subsequently disable the feature by uninstalling this solution from the Dynamics 365 for Customer Engagement organization.

Conversation intelligence

For specific privacy information about conversation intelligence of Dynamics 365 Sales, refer to the paragraphs below.

Azure Services
Azure components and services that are involved with conversation intelligence are detailed in the following sections.

Note: For more information about additional Azure service offerings, see the Microsoft Azure Trust Center.

Azure Data Factory
Dynamics 365 Sales Insights Preview uses Azure Data Factory, a cloud data integration service, to orchestrate and automate the movement and transformation of data (including Customer Data) between services.

Installation and removal of conversation intelligence

Dynamics 365 for Customer Engagement users and administrators who are allowed to register new applications in Microsoft Entra ID, can enable conversation intelligence by signing in to the app and consenting to the required permissions. Administrators can change these permissions, which can include removing access to the app, at https://myapps.microsoft.com

Handling privacy laws for conversation intelligence data

It is the enterprise customer's responsibility to comply with the privacy laws and regulations. If you choose to honor and execute a data subject rights (DSR) request for delete or edit, review the information in the following note:

> **Note**
>
> For information about viewing, deleting, and exporting personal data, see **Azure Data Subject Requests for GDPR**. For general information about GDPR, see the **GDPR section of the Microsoft Trust Center** and the **GDPR section of the Service Trust portal**.

Data protection

Data as it is in transit between user devices and the Microsoft datacenters are secured. Connections established between customers and Microsoft datacenters are encrypted, and all public endpoints are secured using industry-standard TLS. TLS effectively establishes a security-enhanced browser to server connection to help ensure data confidentiality and integrity between desktops and datacenters. API access from the customer endpoint to the server is also similarly protected. Currently, TLS 1.2 (or higher) is required for accessing the server endpoints.

All the data stored as part of sales insights are encrypted using Microsoft encryption keys.

Learning Catalog for sales

Article • 09/08/2022

Find the right online training, in person workshops, and events for your role in Dynamics 365 Sales.

Business and technical decision makers

Do you decide whether to invest in new technologies?

Business and Technical Decision Makers Learning Catalog

Get started

Core Platform Knowledge

Exam

Business users

Did you just get a new application to use?

Business Users Learning Catalog

Get started

Exam

Implementation project managers

Are you in charge of making sure your company's implementation goes smoothly?

Project Managers Learning Catalog

Get started

Core Platform Knowlege

Exams

Administrators

Do you need to keep systems and data flowing, provisioned,and secure round-the-clock?

Administrators learning catalog

Developers

Do you need to write code to integrate with other data sources, extend core system functionality, or build a complex application?

Developers Learning Catalog

Build

Extend

Functional consultants

Are you an implementation expert for a business domain?

Functional Consultants Learning Catalog

Get started

Core Platform Knowlege

Exams

Partner sales and marketing

Are you responsible for helping your customers purchase the right solution?

Sales Learning Catalog

Getting started

Exam

Business and Technical Decision Makers Learning Catalog for sales

Article • 09/21/2022

Do you decide whether to invest in new technologies?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Getting started

Content	Description	Format	Length
Learn the fundamentals of Microsoft Dynamics 365 Sales	This learning path introduces learners to Dynamics 365 Sales. You will learn about the core product capabilities and other tools that you can use to successfully and effectively manage the sales process. This learning path helps prepare you for Exam MB-910: Microsoft Dynamics 365 Fundamentals (CRM).	Free, self-paced online learning path	1.5 hours

Core platform knowledge

Content	Description	Format	Length
Work with Dynamics 365 for Sales Professional	Generate leads, create opportunities, realize easy setup and integration, and streamline your sales processes with Microsoft Dynamics 365 for Sales Professional.		4.5 hours
Working with Dynamics 365 for Sales	Generate leads, create opportunities, and utilize embedded intelligence with Microsoft Dynamics 365 Sales. This learning path covers the key elements of the Sales app.		1 hour 5 minutes

Exam

Content	Description	Format	Length

Content	Description	Format	Length
Dynamics 365 Fundamentals	Prove that you understand Microsoft Dynamics 365: the Power Platform; cloud concepts; licensing options; and deployment and release options.	Exam, cost varies by region	

Business Users Learning Catalog for sales

Article • 09/21/2022

Did you just get a new application to use?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Getting started

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Exam

Content	Description	Format	Length
Dynamics 365 Fundamentals	Prove that you understand Microsoft Dynamics 365: the Power Platform; cloud concepts; licensing options; and deployment and release options.	Exam: cost varies by region	

Implementation Project Managers Learning Catalog for sales

Article • 09/21/2022

Are you in charge of making sure your company's implementation goes smoothly?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Getting started

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Core platform knowledge

Content	Description	Format	Length
Work with Dynamics 365 for Sales Professional	Generate leads, create opportunities, realize easy setup and integration, and streamline your sales processes with Microsoft Dynamics 365 for Sales Professional.	Free, self-paced online learning path	4.5 hours
Working with Dynamics 365 for Sales	Generate leads, create opportunities, and utilize embedded intelligence with Microsoft Dynamics 365 for Sales. This learning path covers the key elements of the Sales app.	Free, self-paced online learning path	6.5 hours

Exam

Content	Description	Format

Content	Description	Format
Microsoft Certified: Dynamics 365 Fundamentals	Prove that you understand Microsoft Dynamics 365 including the Power Platform, cloud concepts, licensing options, and deployment and release options.	Exam, cost varies by region
Exam MB-200: Microsoft Power Platform + Dynamics 365 Core	This exam measures your ability to accomplish the following technical tasks: perform discovery, planning, and analysis; manage user experience design; manage entities and data; implement security; implement integration; and perform solutions deployment and testing.	Exam, cost varies by region
Exam MB-210: Microsoft Dynamics 365 Sales	This exam measures your ability to accomplish the following technical tasks perform configuration, manage core sales entities, and manage sales entities.	Exam, cost varies by region

Administrators Learning Catalog for sales

Article • 09/21/2022

Do you need to keep systems and data flowing, provisioned, and secure round-the-clock?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Getting Started

Content	Description	Format	Length
Administer and configure Dynamics 365 for Sales Professional	Connect with SharePoint, import data, manage users, and work with other activities in Dynamics 365 for Sales Professional.	Free, self-paced online learning path	1.5 hours
Implementing Dynamics 365 Customer Engagement Online	Create, design, and administer Microsoft Dynamics 365 Customer Engagement tenants and instances including planning for multi-instance deployments, managing authentication methods, managing updates, managing backup and restore instances, install and manage Microsoft Dynamics 365 clients for end-users, and authorizing access to different features for all users in the organization.	Free, self-paced online learning path	5 hours 5 minutes
Manage permissions and administration for Microsoft Dataverse	Do you need to manage user access rights? In this learning path, you'll learn how to manage permissions associated with environments and entities. You'll also learn about different administrative portals and how to access each.	Free, self-paced online learning path	1 hour 23 minutes

Developers Learning Catalog for sales

Article • 09/21/2022

Do you need to write code to integrate with other data sources, extend core system functionality, or build a complex application?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Build

Content	Description	Format	Length
Introduction to developing with the Power Platform	So, you want to be a Power Platform developer! This learning path is the first step in learning about the platform, tools, and the ecosystem of the Power Platform.	Free, self-paced	2.5 hours

Extend

Content	Description	Format	Length
Extending the Power Platform user experience Model Driven apps	Create client scripting, perform common actions with client script, and automate business process flow with client script is covered in this learning path. Learn about what client script can do, rules, and maintaining scripts. Discover when to use client script as well as when not to use client script.	Free, self-paced	3.5 hours
Extending the Power Platform Microsoft Dataverse	Getting started with extending the Power Platform Microsoft Dataverse can be overwhelming. This learning path looks at the tools and resources needed for extending the Power Platform. We'll start with looking at the SDKs, the extensibility model, and event framework. This learning path also covers when to use plug-ins. Configuration of plug-ins as well as registering and deploying plug-ins.	Free, self-paced	2 hours

Content	Description	Format	Length
Extend Dynamics 365 portals	The ability to easily surface and interact with Microsoft Dataverse data on an externally facing web site is the core benefit for implementing a Dynamics 365 portal. This learning path describes how to transform a content portal into a full web app interacting with Microsoft Dataverse. We will explain how to secure data access based on the authenticated user role and relationship to the data. We will also cover the options available to customizers and developers to extend the portal functionality and integrate with Microsoft 365 and Power Platform components.	Free, self-paced	2.5 hours

Functional Consultants Learning Catalog for sales

Article • 09/21/2022

Are you an implementation expert for a business domain?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

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Content	Description	Format	Length
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Exam MB-210: Microsoft Dynamics 365 Sales	This exam measures your ability to accomplish the following technical tasks perform configuration, manage core sales entities, and manage sales entities.	Exam, cost varies by region	

Microsoft Partner Sales and Marketing Learning Catalog in sales

Article • 09/21/2022

Are you responsible for helping your customers purchase the right solution?

The following catalog is organized from core knowledge to specific domains, and from most basic to most advanced. If content exists in multiple formats, we'll let you know, so that you can choose the training format that best meets your needs.

Getting started

Content	Description	Format	Length
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Dynamics 365 Sales troubleshooting guide

Article • 05/10/2022

Leads

- I can't qualify a lead
- Insufficient permissions or Access denied error when a user is trying to qualify a lead
- The Qualify lead command is not available on the Lead record
- Account or contact-related fields aren't populating on the Lead form

Opportunities

- I can't close an opportunity
- Insufficient permissions or Access denied error when a user is trying to close an opportunity
- I can't edit an opportunity
- I can't add products to an opportunity
- I can't see the connection records added from the Stakeholders subgrid

Orders

- I don't see the Create invoice button on my order forms

Products

- Re-parenting isn't working, or the Parent field isn't visible
- List Price, Standard Cost, or Current Cost fields don't honor Decimal Supported field precision value.
- I get an error when setting the Quantity field to a decimal value in the Order Product, Quote Product, Invoice Product records.
- I get an error while opening or saving a Product record when the Decimal Supported field has value > 2.

Forecasting

- Territory-based forecast issues and resolution
- Unable to hide forecast category field in Opportunity form
- Unable to view forecasts
- Unable to load forecast grid and an error is displayed
- Unable to view drill down data in a forecast grid

Views

- I can't see data in certain columns in table views
- I can't see some records in the table views
- I can't see some records in opportunity, quote, order, or invoice subgrids
- I can't update nested bundle items on the Product tab
- I can't see opportunity records in the legacy web client while I can see them in Unified Interface

- Forecast category fields are not getting updated

Unified Interface

- Out-of-the-box or custom entities appear as read-only in Unified Interface apps

Common issues across entities

- In Context Form may appear in the form selector
- Error or unexpected behavior while working on tables

Currency and price list

- I can't update the currency or price list for an opportunity, quote, order, or invoice

Developer

- Price calculation service gets triggered upon retrieving details from OQOI entities

In-app marketing

- When I open Marketing List form, the Members view is not available
- I'm unable to associate a campaign created from marketing list form with marketing list record in Unified Interface
- Unable to find related account field for a member account using advanced find in Unified Interface
- Unable to send emails using email quick campaign distribution list
- Unable to change the Form field in the email within the quick campaign wizard
- Unable to see Email templates in the distribute dialog box

Sales pipeline chart

- I see multiple pipeline phases with different sequences, such as 6-Close and 7-Close
- I see pipeline phase values from multiple business process flow definitions
- The sales pipeline chart ordering is displayed differently in Unified Interface vs. the legacy web client

LinkedIn Integrations

- Error in enabling LinkedIn updates
- Unable to upgrade the LinkedInSalesNavigatorForUnifiedClient

Sales Premium

- I'm unable to install or Sales Insights features aren't working as defined

solution

Troubleshoot issues with automatic generation of contact or company-related fields

Article • 09/09/2022

When you select an existing account or contact at the time of creating a new lead, the fields related to the account or contact are automatically populated.

- For the contact-related fields to be automatically populated, the default fields such as Name, Job title, Business phone, Mobile phone, and Email must be empty.
- For the company-related fields to be automatically populated, the default fields such as Address, Website, and Company Name must be empty.

Issue 1 - Account or contact-related fields aren't populated on the Lead form

Resolution

Verify that the On-load script in the Lead form has reference to *LeadManagement/Lead/Lead_main_system_library.js* web resource. This web resource contains the script that automatically populates fields. If you've customized the Lead form and used a web resource other than the out-of-the-box web resource, then this feature won't work. Contact your system administrator.

Even if you have a custom lead form, the automatic generation of fields works if the Lead form has reference to *LeadManagement/Lead/Lead_main_system_library.js* web resource.

Issue 2 - Website and Address fields aren't populated on the Lead form

Resolution

This is by design. In the lead form, after selecting the existing account, only Company Name is autopopulated.

Feedback

Was this page helpful? Yes No

Provide product feedback | Get help at Microsoft Q&A

Troubleshoot issues with opportunities

Article • 09/09/2022

Follow the instructions in this article to troubleshoot the issues you might face when you work with opportunities.

Opportunity issues and resolution for salespeople

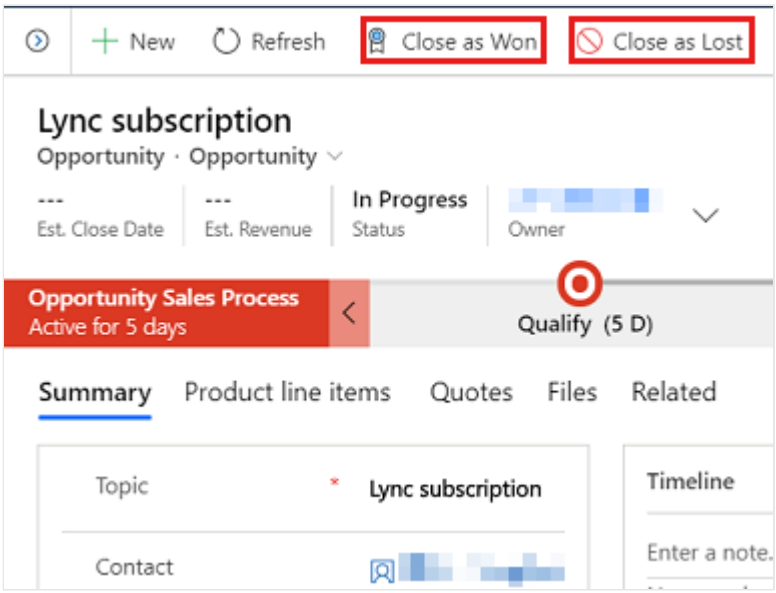
How do I close an opportunity?

Whether your customer has accepted or rejected your proposal, it's a good practice to close the opportunity as won or lost.

When you close an opportunity, the opportunity is marked as complete, and can't be changed. To make further changes to an opportunity, you can reopen it.

> **Note**
>
> At the time of closing the opportunity, enter the Actual Revenue and Actual Close Date. The Actual Revenue is used for reporting purposes in charts and reports in Dynamics 365 Sales.

To close an opportunity, open the opportunity record, and on the command bar, select **Close as Won** or **Close as Lost**.



Issue 1 - Can't close an opportunity

Here are some errors you might see when you close an opportunity:

1. Error 1 - The opportunity can't be closed
2. Error 2 - Access denied or Insufficient permissions
3. Error 3 - The opportunity has already been closed

The following sections describe each of these errors and how you can resolve them.

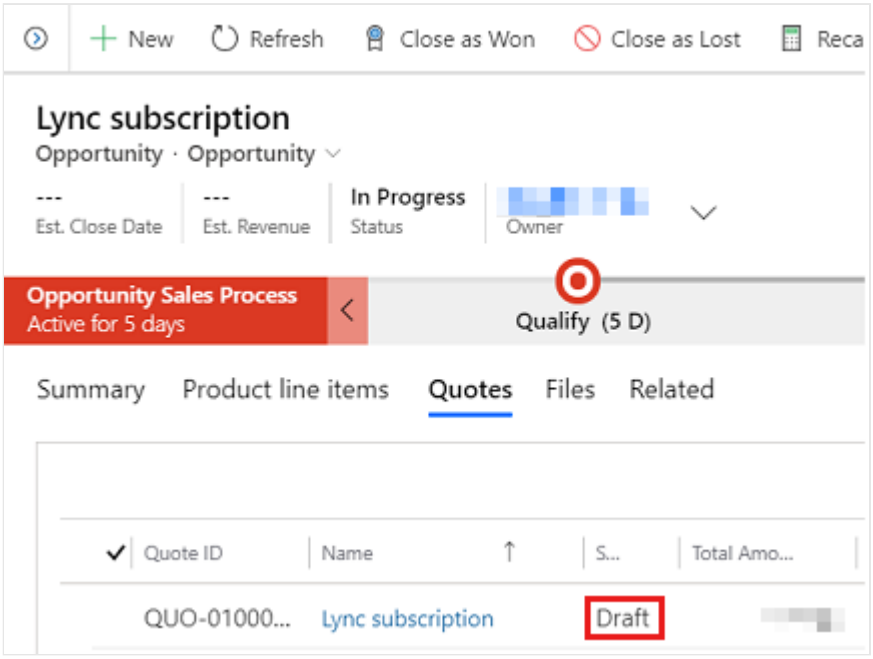
Error 1 - The opportunity can't be closed

Cause

There might be active or draft quotes associated with the opportunity.

Resolution

1. In the opportunity record, go to the **Quotes** tab (or **Quotes line item** tab).
2. Make sure none of the quotes is in the Draft or Active status.



Error 2 - Access denied or Insufficient permissions

Cause

You don't have sufficient permissions on the opportunity you're trying to close.

Resolution

Ask your system administrator to grant you the necessary permissions.

Error 3 - The opportunity has already been closed

Cause

The opportunity that you're trying to close is already marked as Won or Lost.

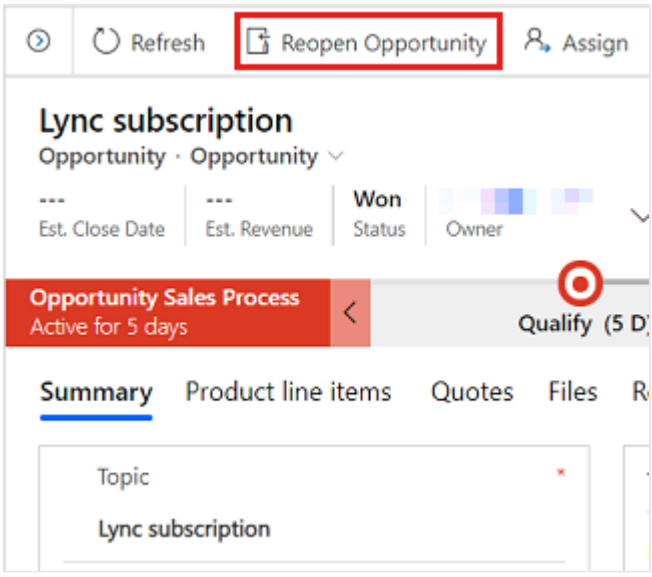
Resolution

If you want to make changes to the already closed opportunity, reopen the opportunity, make changes, and close it again.

Issue 2 - Can't edit an opportunity

If you've already closed an opportunity as Won or Lost, it becomes read-only and you can't change it. To make any changes to a closed opportunity, reopen it.

To reopen, open the opportunity, and on the command bar, select **Reopen Opportunity**.



Issue 3 - Can't add products to an opportunity

Here are some errors you might see when you add products to an opportunity:

1. Error 1 - You must select a price list before attempting to add a product
2. Error 2 - You must provide a value for product description
3. Error 3 - You can only add active products

Error 1 - You must select a price list before attempting to add a product

Cause

You haven't selected a price list for the opportunity. Selecting a price list is required to add products to an opportunity.

Resolution

1. In the opportunity record, go to the **Product Line Item** tab.
2. In the **Price List** field, select a price list for the opportunity.

Error 2 - You must provide a value for product description

Cause

When creating a write-in product, you haven't entered the product name.

Resolution

Enter the product name.

Error 3 - You can only add active products

Cause

When adding an existing product, you selected a product in the **Draft** status.

Resolution

Make sure the product you want to add is in the Active state, and then add the product.

Opportunity close issues and resolution for system administrators

Issue: Insufficient permissions or Access denied error when a user is trying to close an opportunity

Cause

The user trying to close the opportunity doesn't have sufficient permissions on the opportunity they're working on.

Resolution

1. Go to **Settings** > **Security Role**.
2. Open the security role of the user.
3. Assign **Read**, **Create**, **Append**, **Append To** permissions to the user's Security Role at User level on the Opportunity entity and custom entity.

Stakeholder and Sales team subgrids

Issue: Can't see the connection records added from the Stakeholders subgrid

Cause

The out-of-the-box **Stakeholders** subgrid only shows connections that have a connection role category of **Stakeholder**. For more information, see How are stakeholders and sales team members tracked for opportunities?.

Resolution

1. In the opportunity record, select the **Related** tab, and then select **Connections**.
2. In the **Connections** subgrid, select the connection record you added.
3. Open the connection role selected in the **As this role** field.
4. Make sure that **Connection Role Category** is set to **Stakeholder**. If it isn't, select **Stakeholder** in the **Connection Role Category** drop-down list.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with orders

Article • 09/09/2022

Follow the instructions in this article to troubleshoot the issues you might face when working with orders.

Issue: Can't see the Create invoice button on order forms

Sales order processing integration connects Dynamics 365 Sales with an external, back-office order-processing application. When enabled, it allows a sales order created in Dynamics 365 Sales to be submitted and then synchronized with an external order processing application, where the lifecycle of the order continues.

Cause

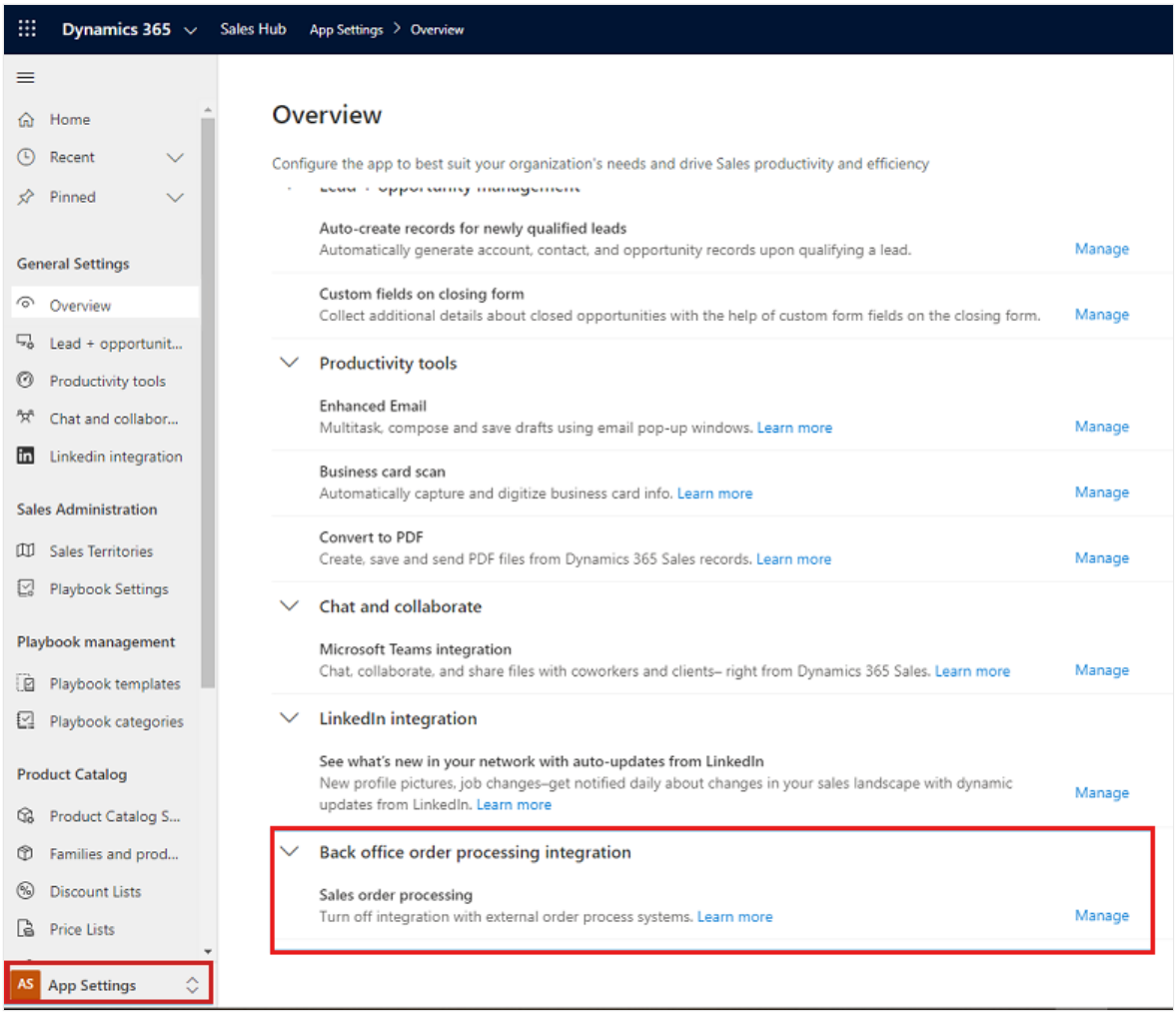
When the sales order processing integration is enabled, users don't see the **Create Invoice** button on order records.

Resolution

To resolve this issue, you must disable sales order processing integration. If the integration is enabled unintentionally, you can disable it by taking the following steps:

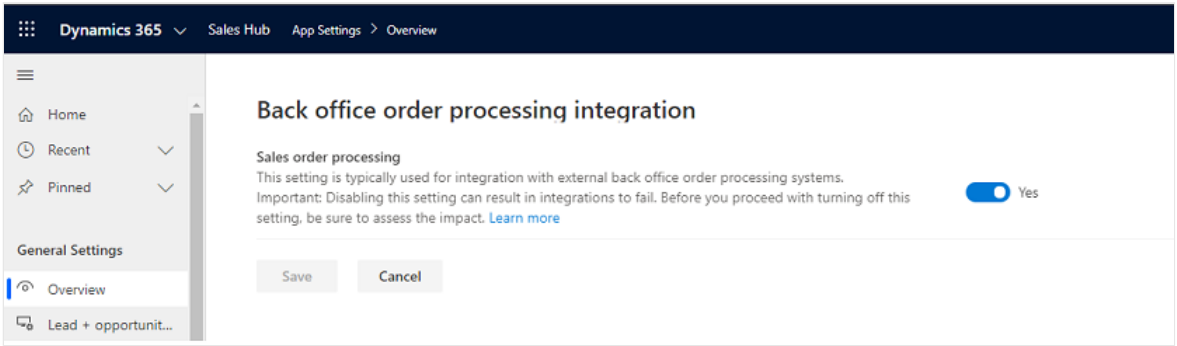
1. In the Sales Hub app, at the bottom of the site map, select **Change area** , and then select **App Settings**.
2. Under **General Settings**, select **Overview**.

   When sales order processing is already enabled, users with the System Administrator role or equivalent permissions will see the **Back office order processing integration** setting on the **Overview** page.



3. Select **Manage**.

4. To disable the integration, switch **Sales order processing** to **Off**, and then select **Save**.



> **ⓘ Important**
>
> - The **Back office order processing integration** setting is visible only when sales order processing is already enabled.
> - After the setting is disabled, users will no longer see this setting.
> - This setting can be used only to disable sales order processing in case it was turned on unintentionally through some solution installation. This

setting can't be used to turn *on* sales order processing. To learn about turning on sales order processing, see **Enable sales order processing integration**.

Feedback

Was this page helpful? Yes No

Provide product feedback | Get help at Microsoft Q&A

Troubleshoot issues with products

Article • 09/09/2022

Follow the instructions in this article to troubleshoot the issues you might face when working with products in Dynamics 365 Sales.

Issue 1 - Reparenting isn't working or the Parent field isn't visible

Product reparenting allows you to change the parent of an existing product record so the child products will inherit the appropriate product properties. For more information, see Change the parent of a product.

Cause

If you don't see the **Parent** field on the Product form, it could be because you've customized the **Product Main** form by using the unmanaged solution. For more information, see Solutions overview.

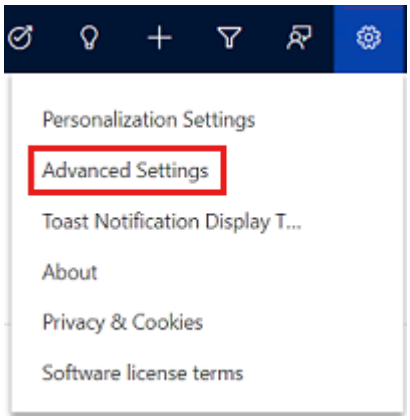
In some cases, **Product** forms aren't merged properly and because of this, the required **Parent** field isn't added to the form.

Resolution

To resolve this, you must add the **Parent** field back to the form. You can do this through customization or by using the solution import/export wizard. For more information, see Export solutions and Import solutions.

To add the Parent field through customization

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



The **Business Management** page opens.

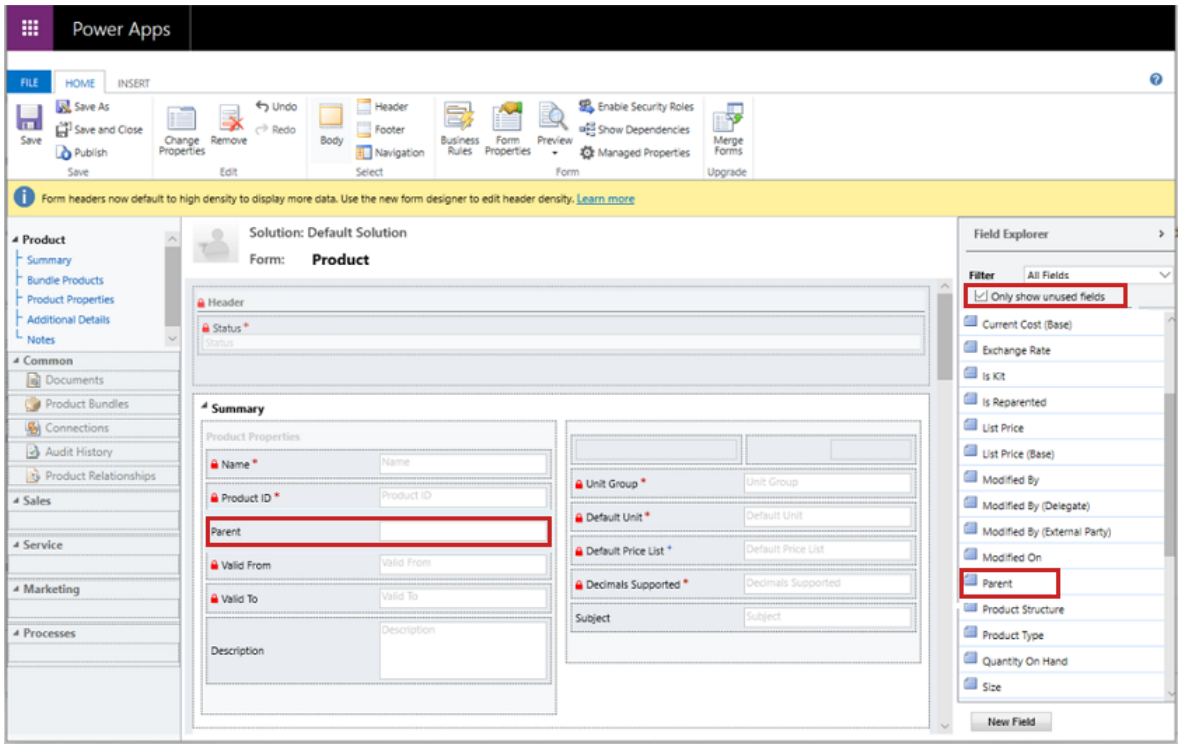
2. On the navigation bar, select **Settings**, and then under **Customization**, select **Customizations**.

3. Select **Customize the System**.

4. Under **Components** in Solution Explorer, expand **Entities**, and then expand the **Product** table.

5. Select **Forms**, and then open the **Product** form of type **Main** that's in the **Active** state.

6. In the form editor, select the **Parent** field from Field Explorer and drag it to the **Summary** section on the left side of the form editor.



7. Select **Save**, and then **Publish**.

To add the Parent field through the solution import/export wizard

In the unmanaged solution, add the following row in the Product main form:

XML

```
<row>
    <cell id="{faaa2942-4737-4721-9a19-7dcbf4eb2911}" showlabel="true"
locklevel="0" colspan="2">
        <control id="editableParentControl" classid="{270BD3DB-D9AF-4782-
9025-509E298DEC0A}" datafieldname="parentproductid" disabled="false">
            <parameters>
                <DefaultViewId>{19d7f2e0-e427-40fb-85e8-53e7cef2b166}
</DefaultViewId>
                <IsInlineNewEnabled>false</IsInlineNewEnabled>
                <DisableMru>true</DisableMru>
            </parameters>
        </control>
    </cell>
</row>
```

Issue 2 - List Price, Standard Cost, or Current Cost fields don't honor Decimal Supported field precision value

Resolution

There's no relation between the **Decimal Supported** and the **List Price** field. The value defined in the **Decimal Supported** field doesn't impact the precision value of the **List Price** field. The decimal precision value on the **List Price**, **Standard Cost**, or **Current Cost** field is controlled by the **Pricing Decimal Precision** setting. By default, "**Pricing Decimal Precision**" is set to **2**. For more information about this setting, see System Settings General tab. For more information about decimal precision, see Decimal precision in currency and pricing.

Issue 3 - Error occurs when setting the Quantity field to a decimal value in the Order Product, Quote Product, Invoice Product records

Resolution

The **Quantity Selling Option** field of the price list item record decides whether the product or service can be ordered in whole, partial, or both types of quantities. To be able to enter decimal values in the **Quantity** field, make sure the **Quantity Selling Option** field isn't set to **Whole**. For more information, see Define product pricing with price lists and price list items.

Issue 4 - Error occurs when opening or saving a Product record when the Decimal Supported field has value > 2

Resolution

If the **Quantity On Hand** field is used on the form, the value for the **Decimal Supported** field must not be greater than the precision of **Quantity On Hand**.

To fix this issue, go to **Settings** > **Customizations** > **Entities** > **Fields** > **Quantity On Hand**. Make sure the **Precision** value is the same as the **Decimal Supported** value.

Feedback

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Troubleshoot common issues with multiple tables

Article • 09/26/2023

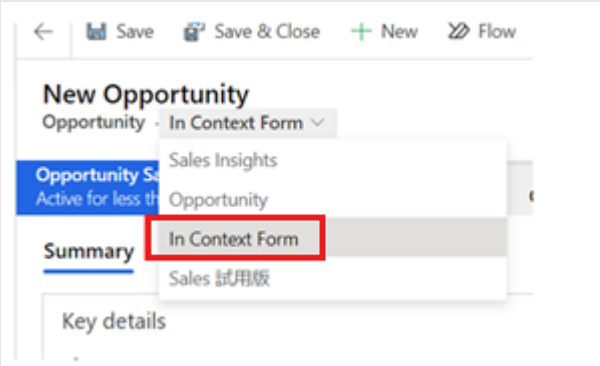
This article helps you troubleshoot and resolve common issues across multiple tables like opportunity, quote, order, or invoice in Microsoft Dynamics 365 Sales.

Issue 1 - In Context Form may appear in the form selector

The **In Context Form** is used for displaying and customizing the side panel in deal manager, and in the new interface for contacts, opportunities, leads, and accounts.

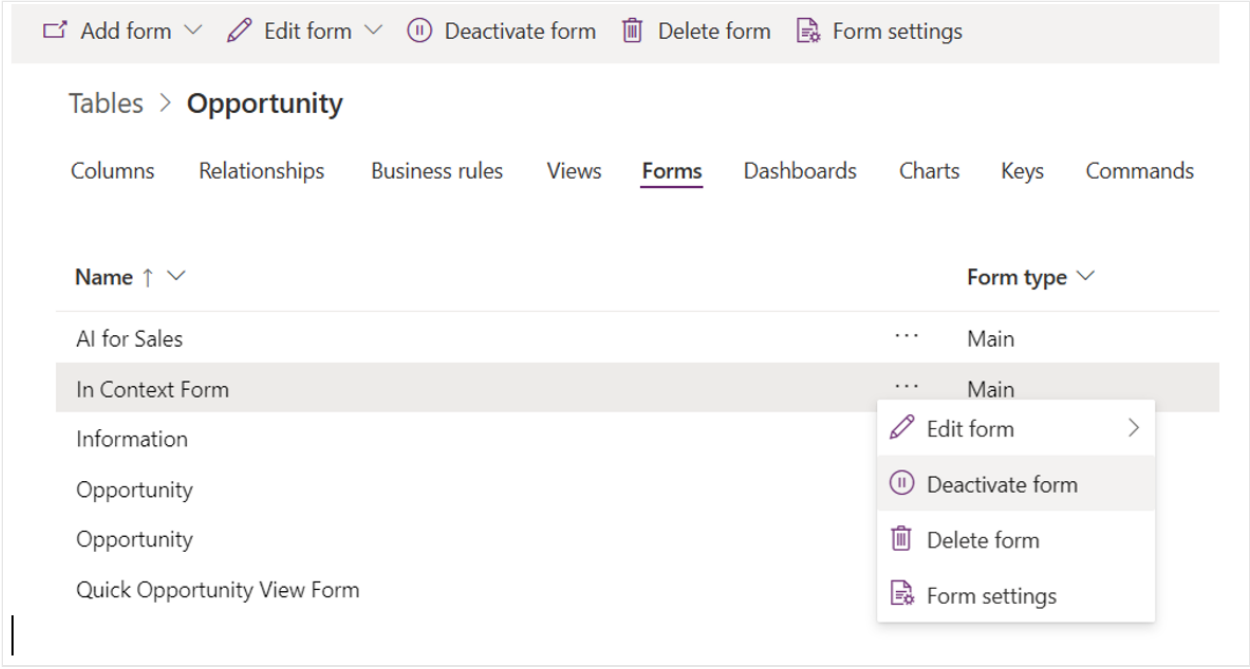
Cause

If your environment has any customization that sets the **formActivationState** to **Active** for these tables, the **In Context Form** appears in the form selector dropdown and lets users select this form for viewing the record details.



Resolution

If the appearance of **In Context Form** leads to confusion, you can deactivate the **In Context Form** as shown in the following screenshot.



Issue 2 - Error or unexpected behavior while working on tables

Symptoms

While working on tables (such as opportunities, quote, order, invoice, quote product, and order product), you observe unexpected behavior or an error in Dynamics 365 for Sales. The following are some of the errors that you might encounter while working on opportunities, and they might apply to other tables:

- "Extended Amount is wrong after revising quote"- this error might occur due to a custom plug-in.
- "Error while saving the opportunity" - this error might occur due to custom JavaScript.
- "Error while close opportunity" - this error might occur due to a custom workflow.

Cause

These issues might occur due to improper customization of the application.

Resolution

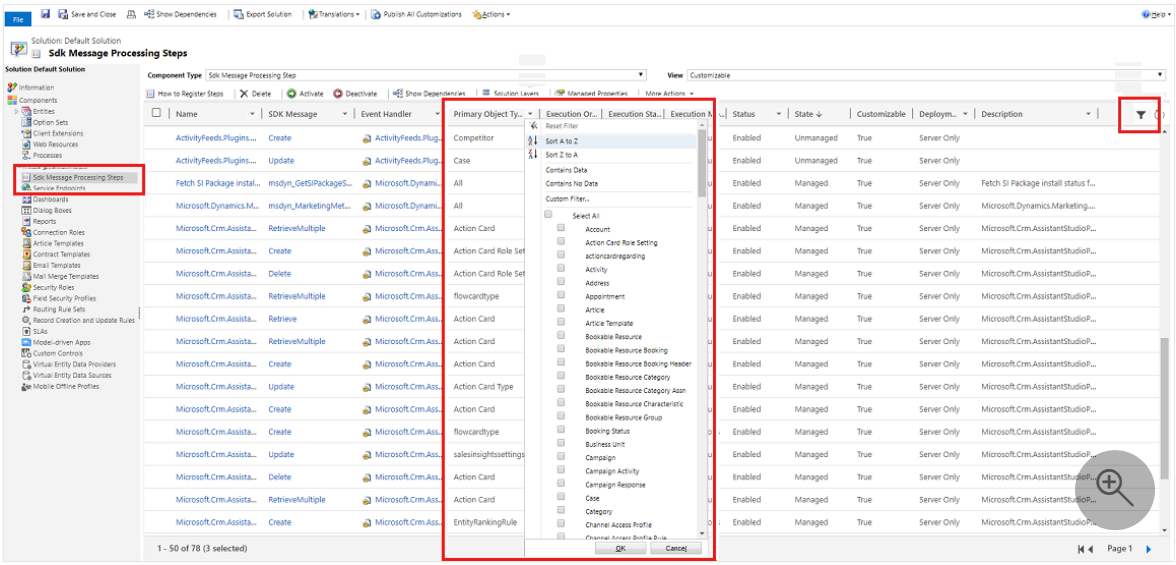
You must verify the improper customizations and resolve them. Perform the following verification methods to identify which customization is causing the issue, and then resolve:

- Deactivate a custom plug-in
- Disable custom JavaScript
- Deactivate a custom workflow process

Deactivate a custom plug-in

1. Go to **Settings** > **Customizations** > **Customize the System**.
2. Select **Sdk Message Processing Steps**.

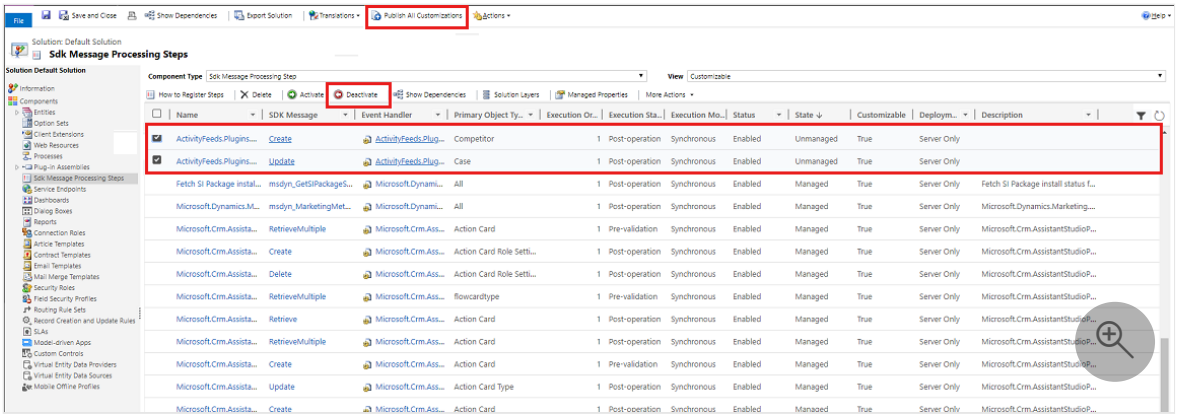
   A list of available SDK message processing steps is displayed.
3. Select the **Filter** icon, select the column **Primary Object Type Code (Sdk Message Filter)**, and then select the table for which the error is occurring.



4. Select the SDK message processing steps that are coming from the solutions owned by you.

> ⓘ **Note**
>
> To view your custom SDK message processing steps:
>
> a. Go to **Settings** > **Solutions**, and then open the solution.
>
> b. Select **SDK Message Processing Steps**. Verify that the values are selected as follows: **Component Type** to **SDK Message Processing Step**, and **View** to **All**.

5. Select **Deactivate**.
6. Publish the customizations.

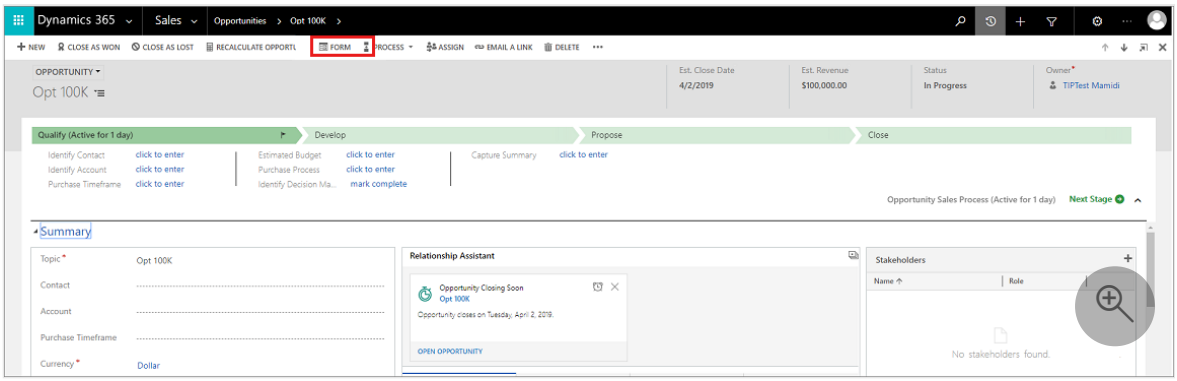


7. Verify the issue and if it doesn't occur, the issue is with the custom SDK message processing steps. Resolve the issue.

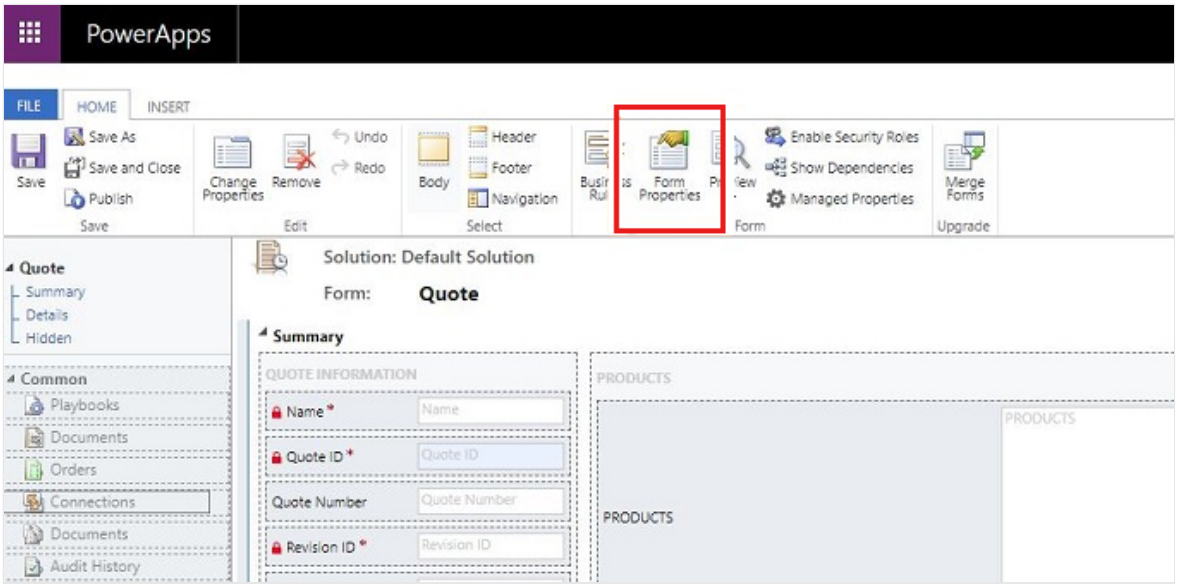
> **Note**
>
> If the issue occurs, activate the **SDK Message Processing Steps** that you deactivated now and try to **disable custom JavaScript** or **deactivate a custom workflow process**.

Disable custom JavaScript

1. Open the form editor of the table in which the error is occurring. In this example, we're selecting the table as Opportunities and the default solution form.

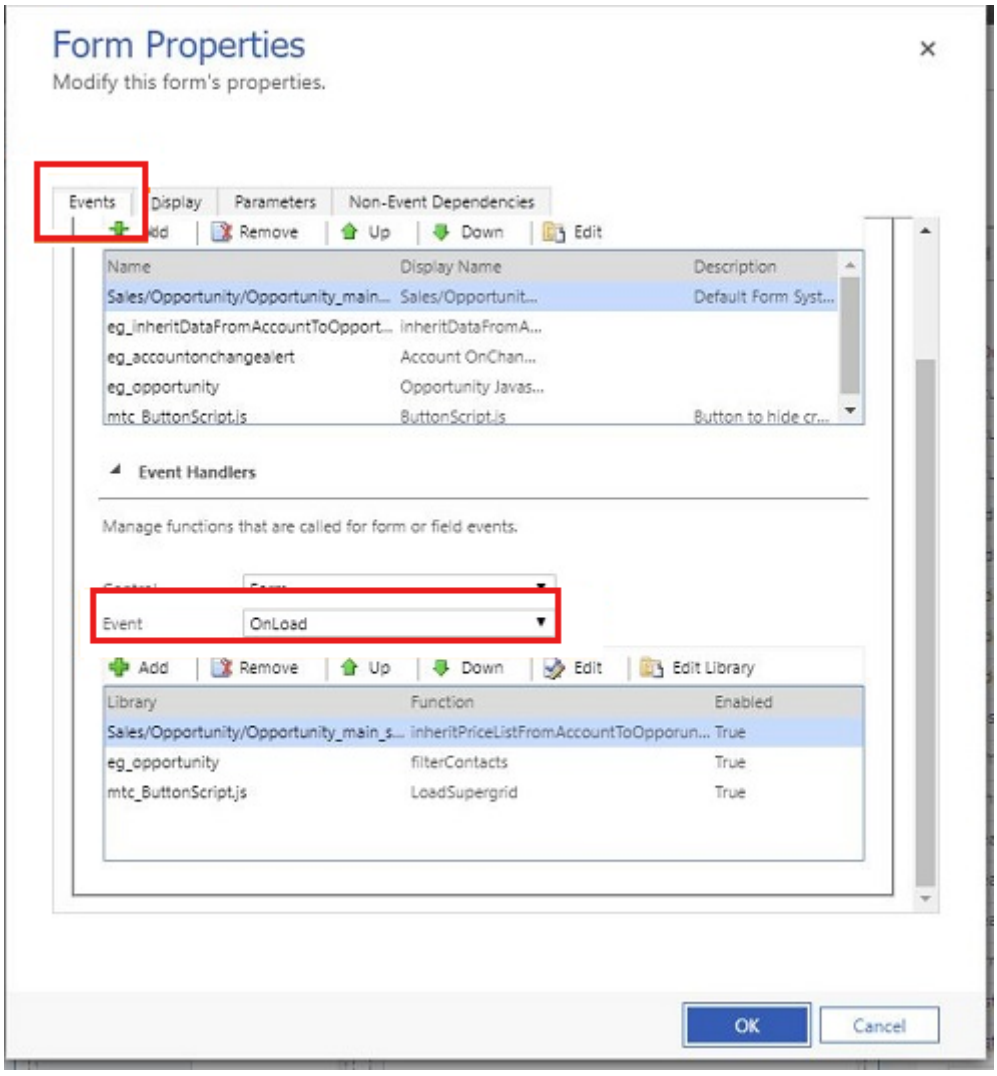


2. Select **Form Properties** on the form editor.



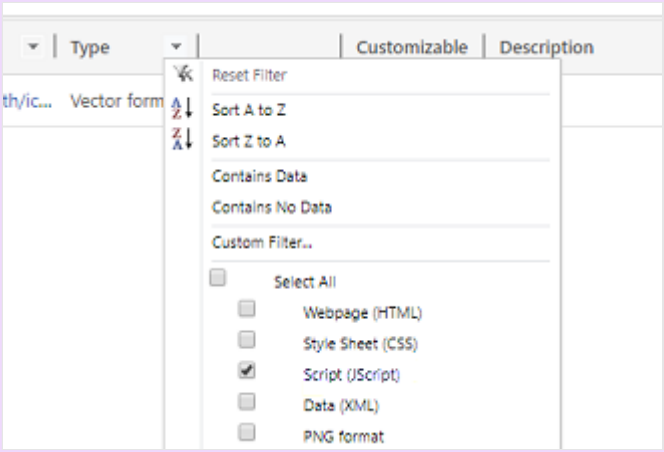
The **Form Properties** dialog box opens.

3. On the **Events** tab, select the control **OnLoad** from the **Events** drop-down list.

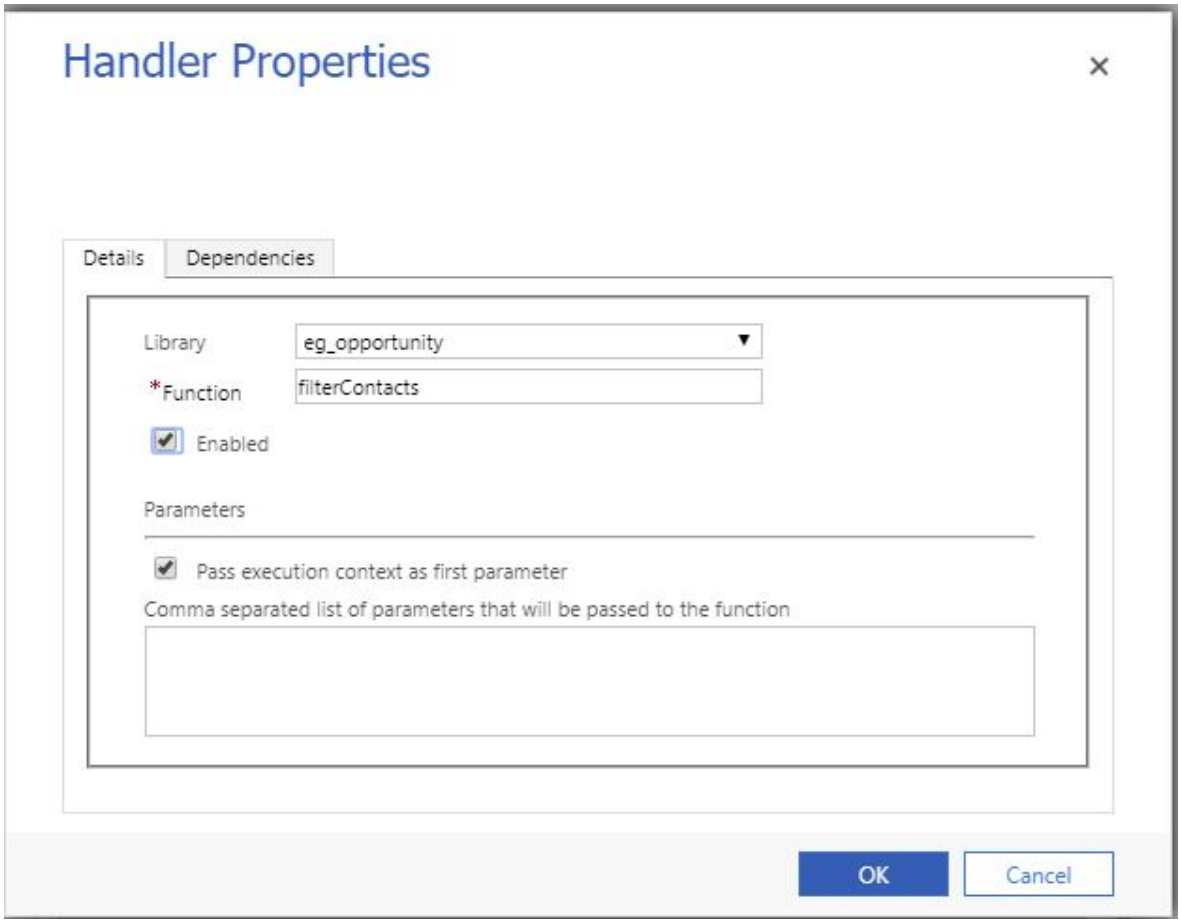


4. Choose the custom **JavaScript** files that are coming from the solution owned by you.

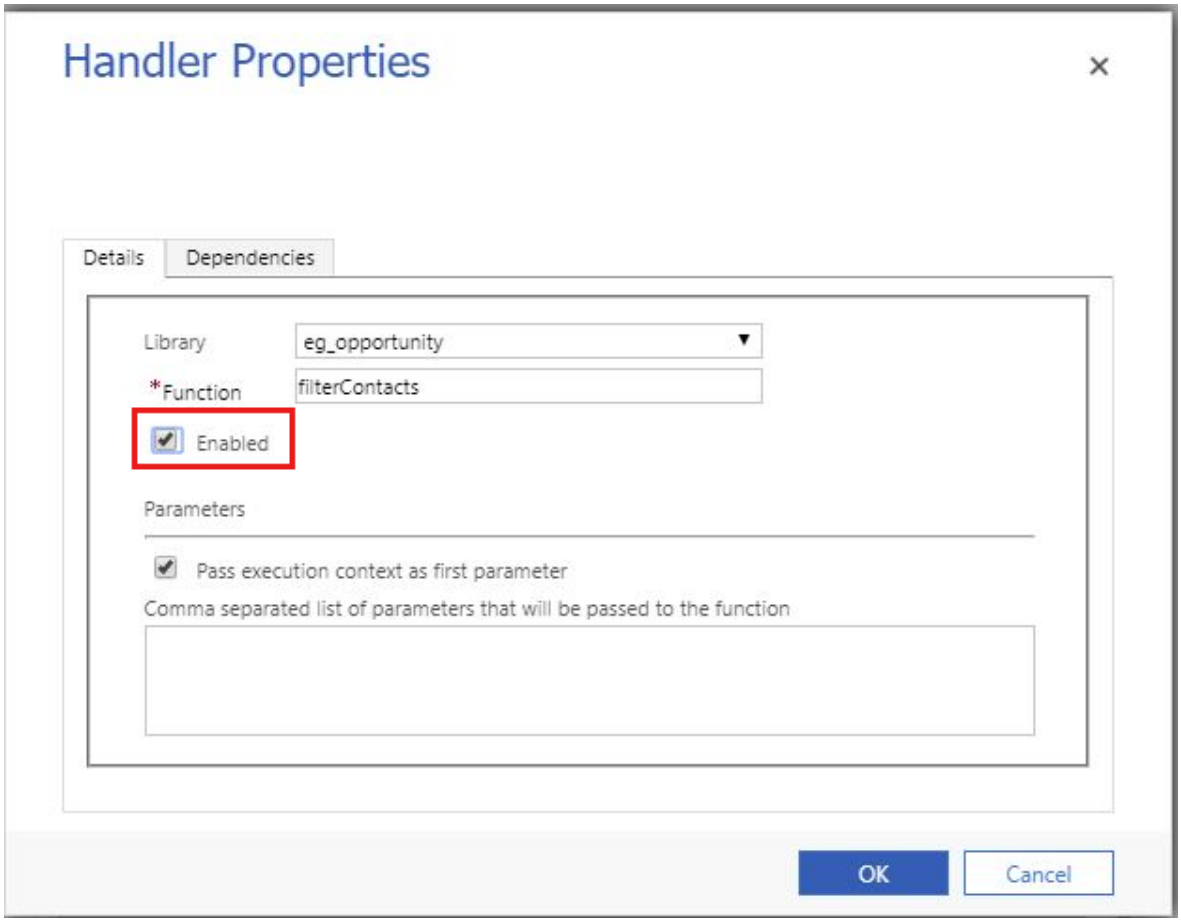
> **Note**
>
> To view your custom JavaScript:
>
> a. Go to **Settings** > **Solutions**, and then open the solution.
>
> b. Select **WebResources**. Verify the values are selected as: **Component Type** to **WebResources** and **View** to **All**.
>
> c. Select **Filter** icon to enable filter options for columns. Select **Type** and set the filter as **Script (JScript)**.



5. Select **Edit**. In this example, we have selected the custom JavaScript file **eg_opportunity** to edit.



6. Clear the **Enabled** option and select **OK**.



7. Publish the customizations.

8. Verify the issue and if it doesn't occur, the issue is with the custom JavaScript. Resolve the issue.

> ⓘ **Note**
>
> If the issue occurs, enable the JavaScript that you disabled now and try to **Deactivate a custom plug-in** or **Deactivate a custom workflow process**.

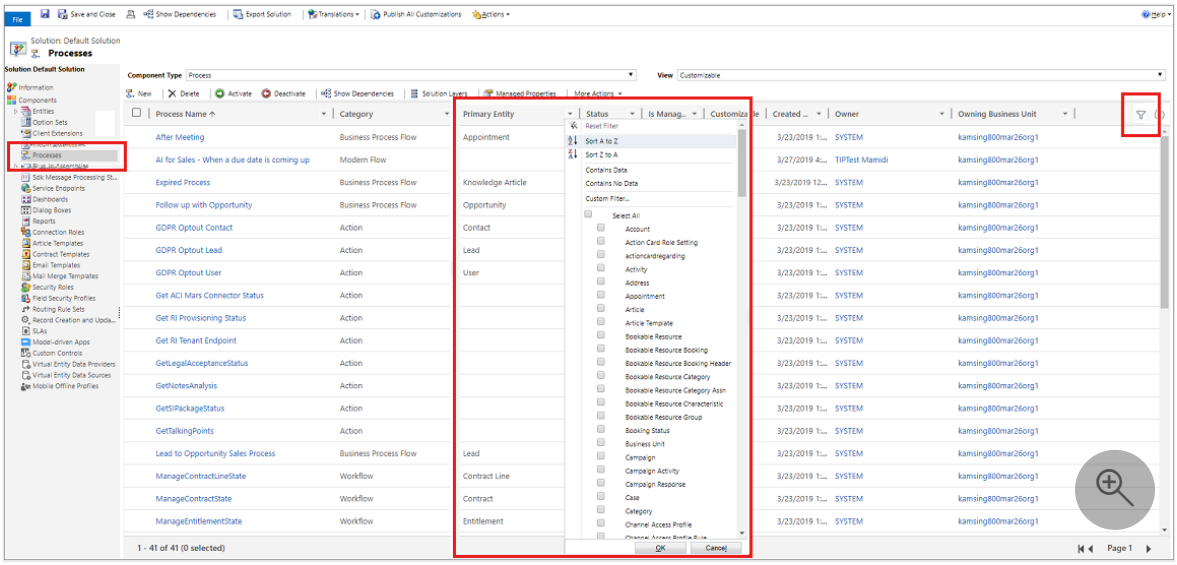
Deactivate a custom workflow process

1. Go to **Settings** > **Customizations** > **Customize the System**.

2. Select **Processes**. These processes include Workflow, Business Process Flow, and Business Rule.

   A list of available processes is displayed.

3. Select the **Filter** icon, select the column **Primary Entity**, and then select the table for which the error is occurring.

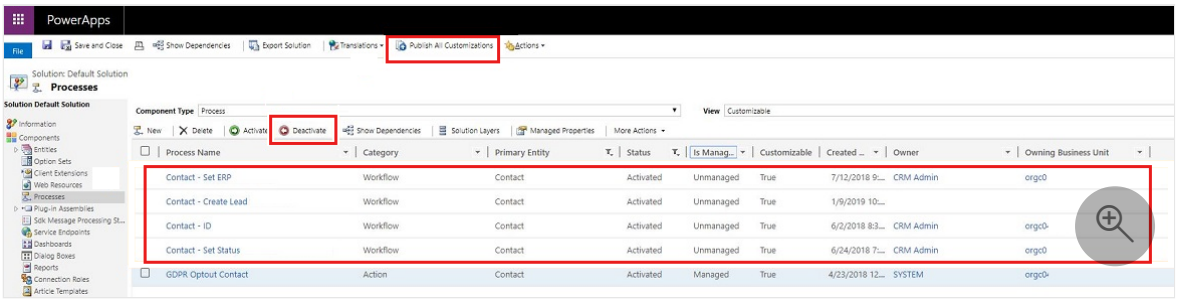


4. Choose the processes that are coming from the solutions owned by you.

> **Note**
>
> To view your custom processes:
>
> a. Go to **Settings** > **Solutions**, and then open the solution.
>
> b. Select **Processes**. Verify the values are selected as: **Component Type** to **Processes** and **View** to **All**.

5. Select **Deactivate**.

6. Publish the customizations.



7. Verify the issue and if it doesn't occur, the issue is with the custom processes. Resolve the issue.

> **Note**
>
> If the issue occurs, activate the **Processes** that you deactivated now and try to **Deactivate a custom plug-in** or **Disable custom JavaScript**.

Issue 3 - Custom plug-in handling by using a shared variable

Symptoms

- Create and update operations on Opportunity, Quote, Order, and Invoice tables trigger updates on their parent tables.
- Retrieving details about Opportunity, Quote, Order, and Invoice tables internally triggers the Price Calculation service, which subsequently triggers custom plug-ins created by customers.

Resolution

Custom plug-ins execute create, update, and save operations on Opportunity, Quote, Order, and Invoice tables. The create and update operations on these tables internally trigger the Price Calculation service, which then updates the associated price-related fields or attributes of their parent tables.

You can identify or differentiate any updates in Opportunity, Quote, Order, or Invoice tables or parent Opportunity, Quote, Order, or Invoice tables by using the internal Price Calculation service or by using your own custom plug-in. The Boolean shared variable `InternalSystemPriceCalculationEvent`, which is accessible through `IPluginExecutionContext`, is available within the plug-in code. Any create or update event processed by using the Price Calculation service will set the value of the variable `InternalSystemPriceCalculationEvent` to `true`. The default value of `InternalSystemPriceCalculationEvent` is `false`. You can access this variable from your custom plug-in code to control the flow of your existing business logic.

> ⓘ **Note**
>
> To perform custom plug-in operations by using a shared variable, make sure that the out-of-the-box Price Calculation service is disabled.

Sample code

C#

```
public void Execute(IServiceProvider serviceProvider)
{
    // Obtain the tracing service
```

```
   ITracingService tracingService =
(ITracingService)serviceProvider.GetService(typeof(ITracingService));

   // Obtain the execution context from the service provider.
    IPluginExecutionContext executionContext = (IPluginExecutionContext)
    serviceProvider.GetService(typeof(IPluginExecutionContext))
    bool isInternalSystemPriceCalculationEvent = false;

    //Check existence of shared variable and fetch the value from
executionContext
    if (executionContext.ParentContext != null &&
executionContext.ParentContext.SharedVariables.ContainsKey("InternalSystemPr
iceCalculationEvent"))

    {
        isInternalSystemPriceCalculationEvent =
(bool)executionContext.ParentContext.SharedVariables["InternalSystemPriceCal
culationEvent"];
    }

    if (isInternalSystemPriceCalculationEvent)
    {
            //TO DO - Add or skip custom business logic
    }

}
```

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with currency and price lists

Article • 10/17/2022

This article helps you troubleshoot and resolve issues related to currency and price lists.

Issue: Can't update the currency or price list for an opportunity, quote, order, or invoice

Cause

When I change and try to save the currency or price list for an existing opportunity, quote, order, or invoice that's already associated with a product record or quote record, an error message is displayed.

The error occurs because the associated product record or quote record is already linked with a price list that was created by using a different transaction currency.

The following are the few error messages that will be displayed depending on the entity:

- For an opportunity, the error message is:

  > The currency cannot be changed because the opportunity has opportunity products, quotes, orders, or invoices associated with it. Remove the associated records and then change the currency.

- For a quote, the error message is:

  > The currency cannot be changed because the quote has quote products associated with it. Remove the associated records and then change the currency.

Resolution

To resolve this issue, you must remove the product records or quote records, change the currency, and then add back the product records or quote records.

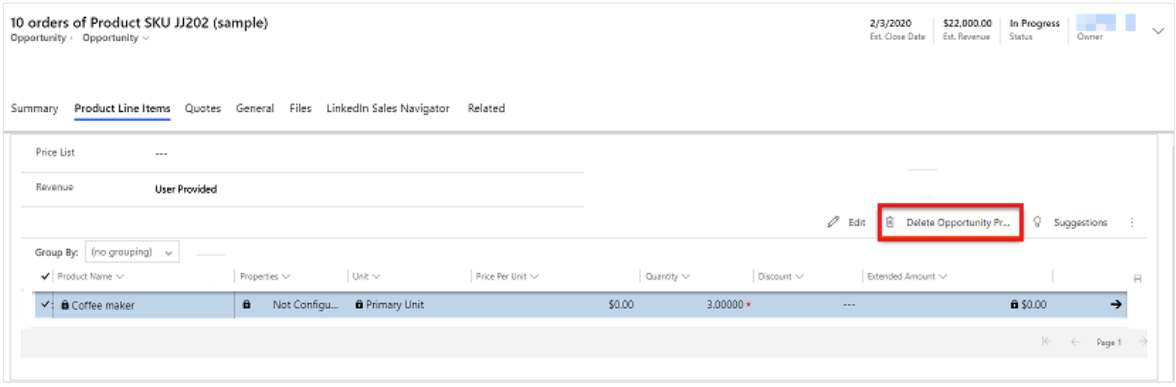
You can change the currency and price list for the entities in the following states only.

Entity	Status	Change currency value?	Change price list value?
Opportunity	Open	Yes, but only if there are no associated Opportunity Product, Order, Quote, or Invoice records.	Yes, but this can cause an error with the Opportunity record if the associated Opportunity Product records aren't part of the selected price list.
	Won	No	No
	Lost	No	No
Quote	Draft	Yes, but only if there are no associated Quote Product records.	Yes, but this can cause an error with the Quote record if the associated Quote Product records aren't part of the selected price list.
	Active	No	No
	Won	No	No
	Close	No	No
Order	Active	No	Yes, but this can cause an error with the Order record if the associated Order Product records aren't part of the selected price list.
	Submitted	No	No
	Canceled	No	No
	Fulfilled	No	No
	Invoiced	No	No
Invoice	Active	No	Yes, but this can cause an error if the associated Invoice Product records aren't part of the selected price list.
	Paid	No	No
	Canceled	No	No

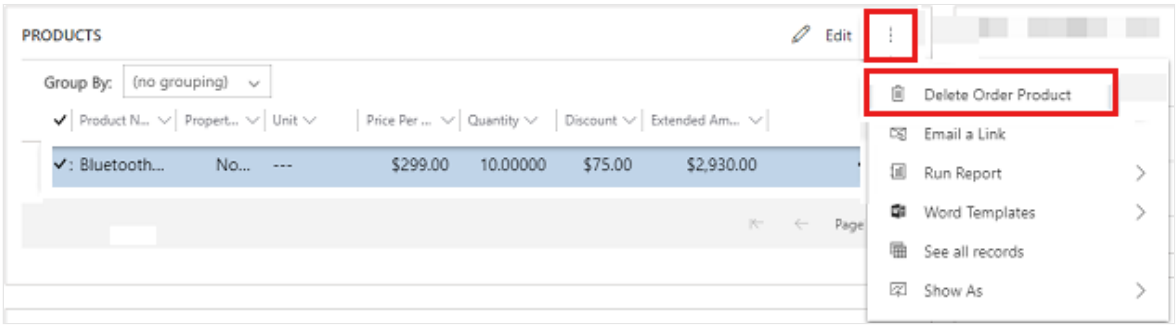
To update the currency or price list

1. Open the opportunity, quote, order, or invoice for which you want to change the currency or price list.

2. For an opportunity: go to the **Product Line Items** tab, and then delete the products from the list.



For a quote, order, or invoice: On the **Summary** tab, go to the **PRODUCTS** section, and delete the products from the list.



3. On the **Summary** tab, change the currency to the value you want, and then save the form.

4. Add back the product records or quote records, and then save the form.

> **Note**
>
> You can change currency by using the entity attribute. To learn more, see **Transaction Currency (currency) entity**.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with table views

Article • 09/09/2022

This article helps you troubleshoot and resolve issues related to table views.

Issue 1 - Can't see data in certain columns in table views

Cause

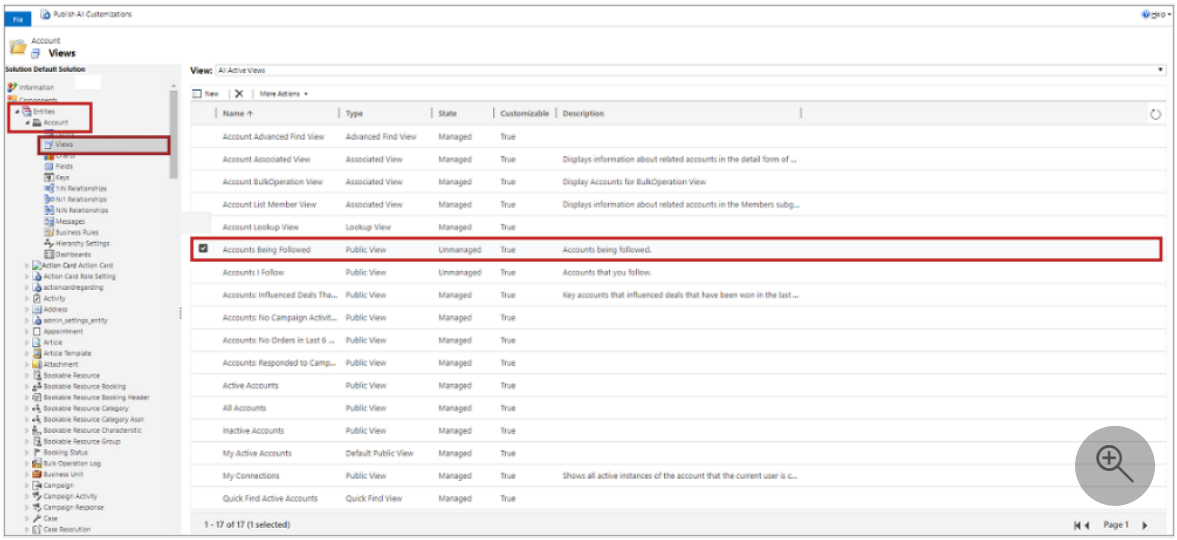
This issue is occurring due to mismatch of column names between the `layoutxml` and `fetchxml` in the view ODATA file (*OrgUrl*/api/data/*Dynamics 365 version*/savedqueries(*ViewId*)).

Resolution

To resolve this issue, you must remove and add back the column that is causing this issue. This will ensure that the column names in `layoutxml` and `fetchxml` are matched.

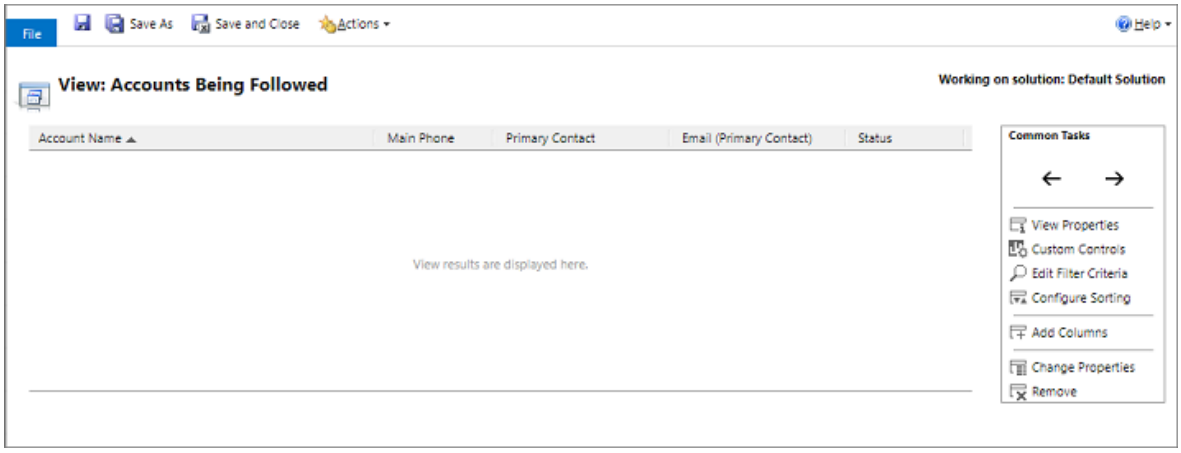
> ⓘ **Note**
>
> Before you start resolving the issue, take note of the view for which this issue is occurring.

1. Go to **Settings** > **Customizations** > **Customize the System**.
2. Select the **Entity** > **Views** and select the view that has this issue. In this example, we're selecting the table **Account** and view as **Accounts Being Followed**.

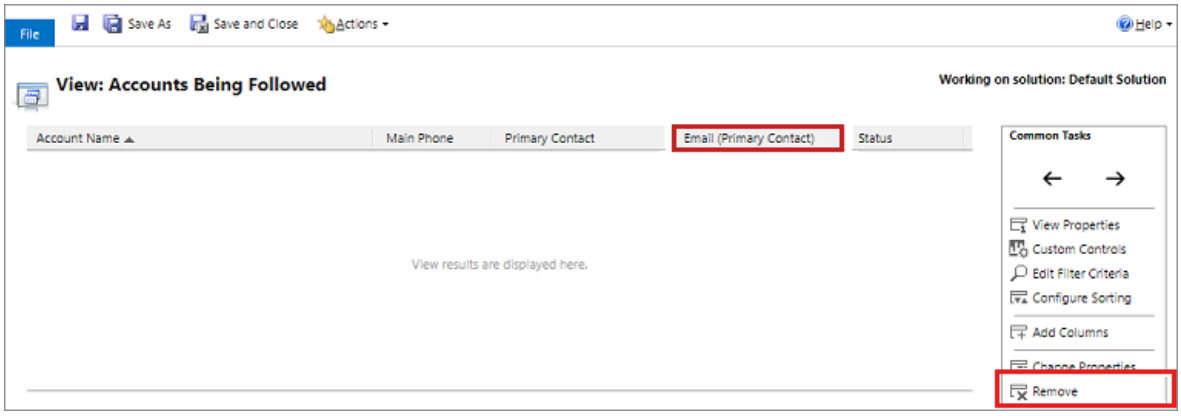


3. Select **More Actions** > **Edit**.

   The view edit page opens.

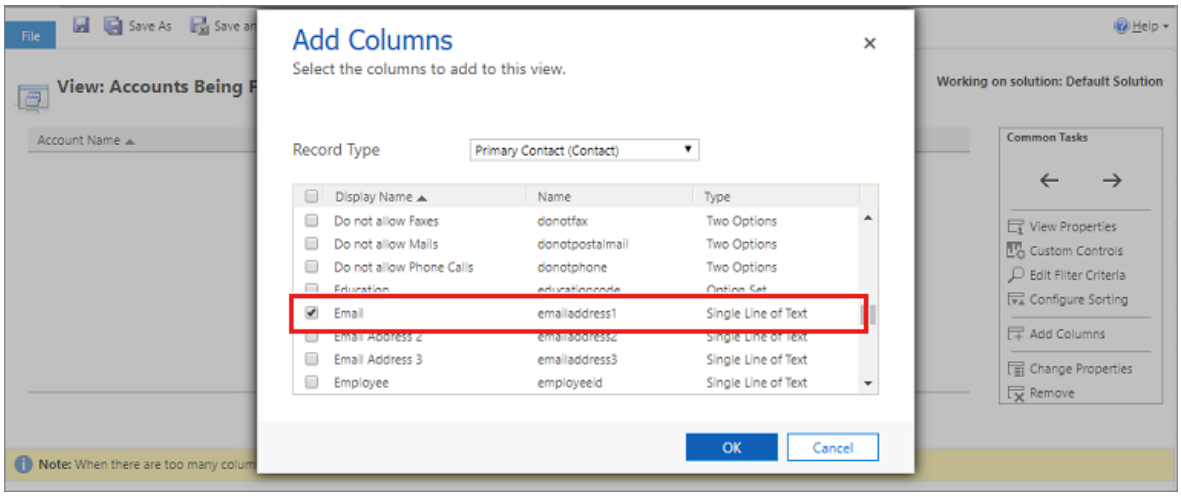


4. Select the column that is causing the issue and select **Remove**. In this example, we select the column **Email (Primary Contact)** to remove.



   The column is removed from the view.

5. Add back the column that you've deleted. Select **Add Columns** and readd the column that you removed. In this example, we're adding the column **Email (Primary Contact)** that was removed.



The data in the columns is displayed properly.

Issue 2 - Can't see some records in the table views

Cause

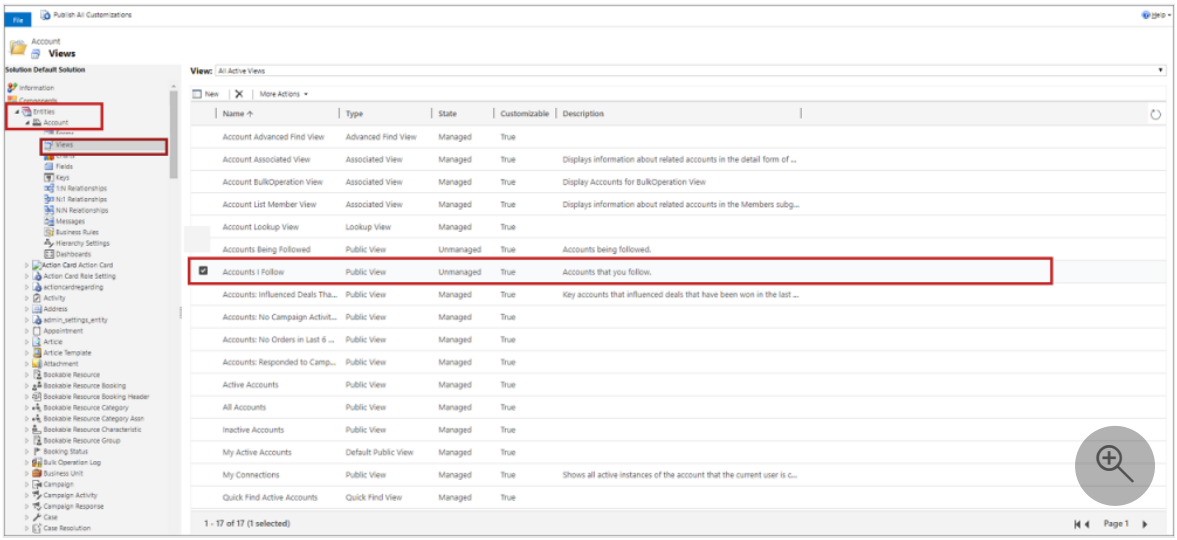
This issue is occurring due to the filtering of data on a view.

Resolution

To resolve this issue, you must edit or remove filters for the view. This will ensure that filters are applied properly for the view.

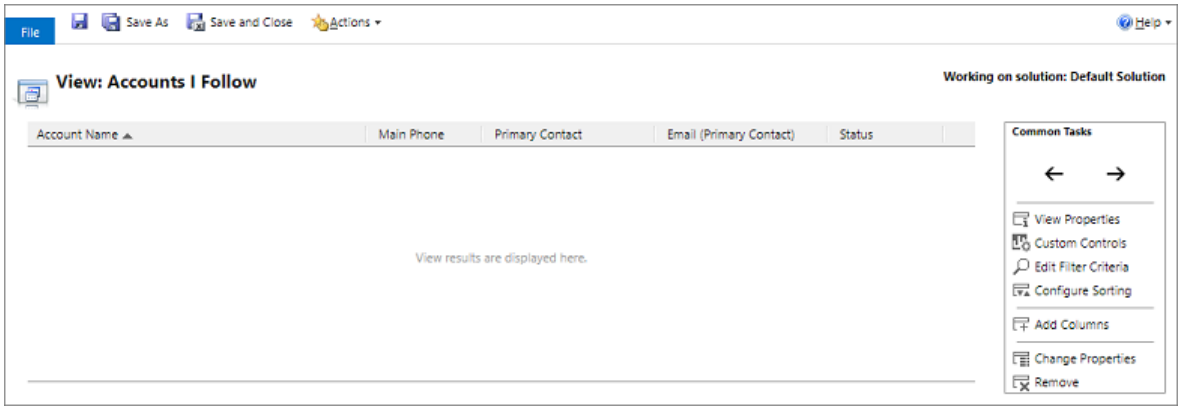
> ⓘ **Note**
>
> Before you start resolving the issue, take note of the view for which this issue is occurring.

1. Go to **Settings** > **Customizations** > **Customize the System**.
2. Select the **Entity** > **Views** and select the view that has this issue. In this example, we're selecting the table **Account** and view as **Accounts I Follow**.

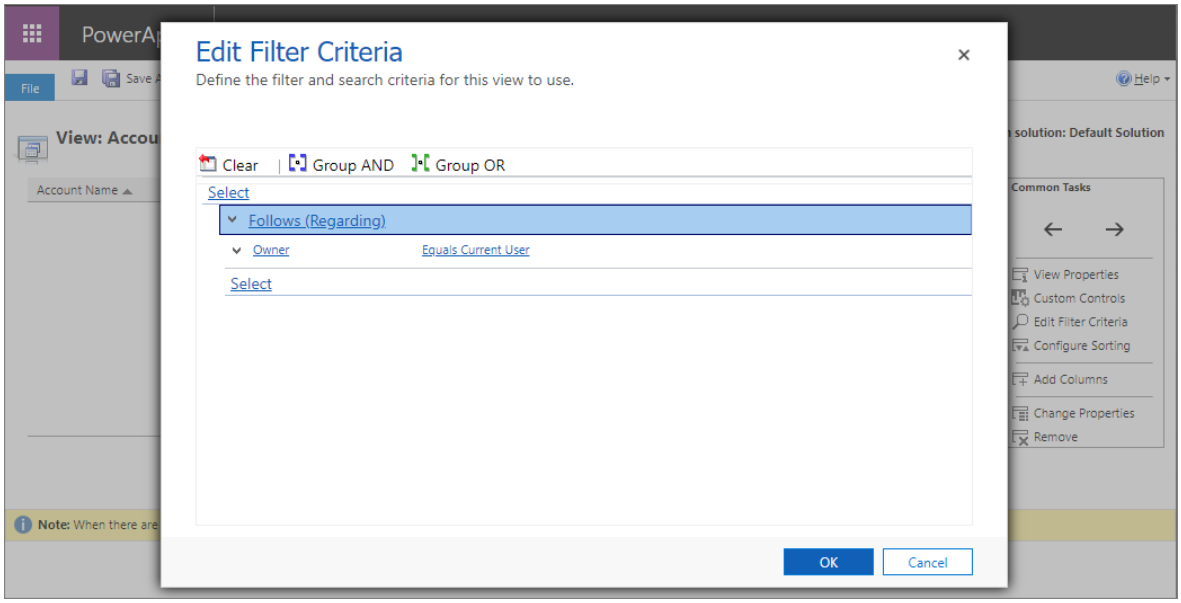


3. Select **More Actions** > **Edit**.

   The view edit page opens.



4. Select **Edit Filter Criteria** and recheck the filter condition either by updating or deleting.



   The records in the views are displayed properly.

Issue 3 - Can't see some records in opportunity, quote, order, or invoice subgrids

While working on opportunity, quote, order, or invoice records, you might observe that some records are missing.

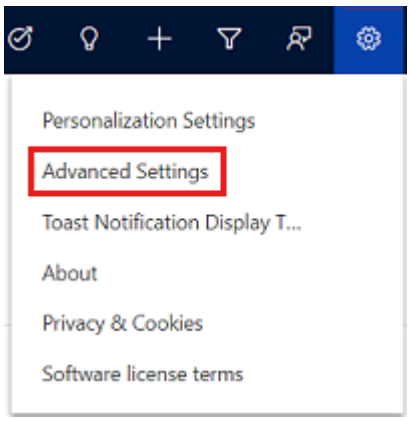
Cause

You might not see some records because of an error that occurred due to customization done to the subgrid.

Resolution

To fix the issue of incorrect customization, follow these steps to make sure your subgrid is configured correctly:

1. In your app, on the nav bar, select the **Settings** icon, and then select **Advanced Settings**.

   The **Business Management** settings page opens in a new browser tab.

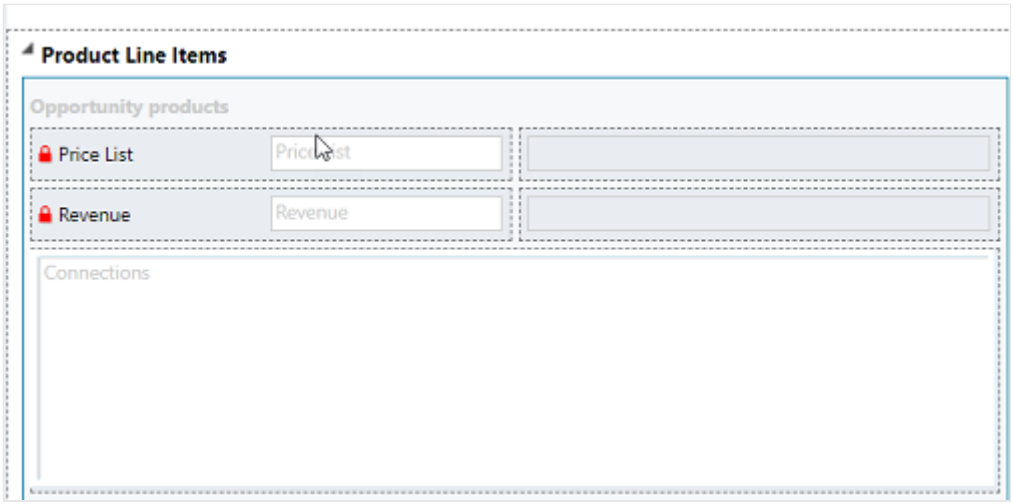
2. On the navigation bar, select **Settings**, and then under **Customization**, select **Customizations**.

3. Select **Customize the System**.

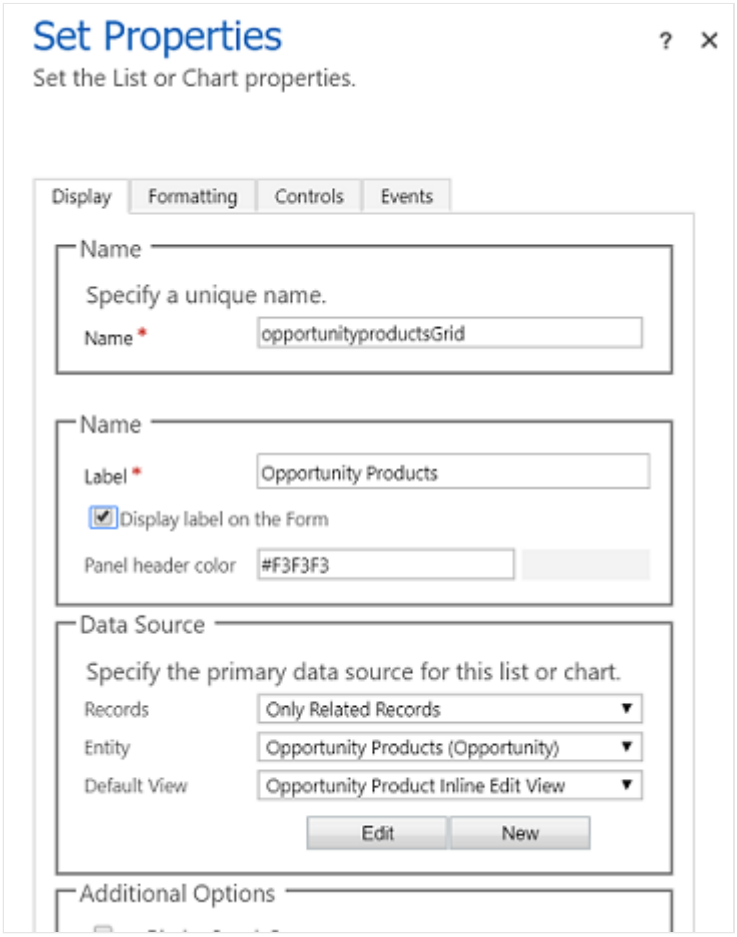
4. Under **Components** in the solution explorer, expand **Entities**, expand **Opportunity**, and then select **Forms**.

5. Open the Opportunity form of type **Main**.

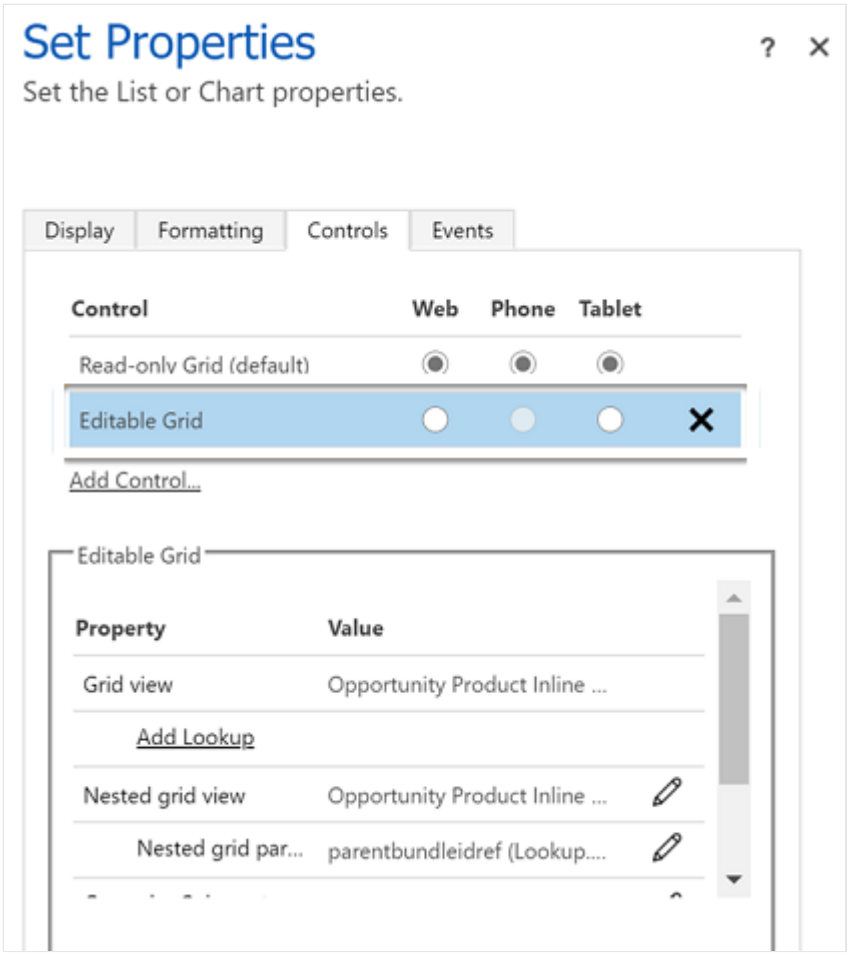
6. Double-click to select the **Connections** section in the **Product Line Items** section.



The **Set Properties** dialog box opens.

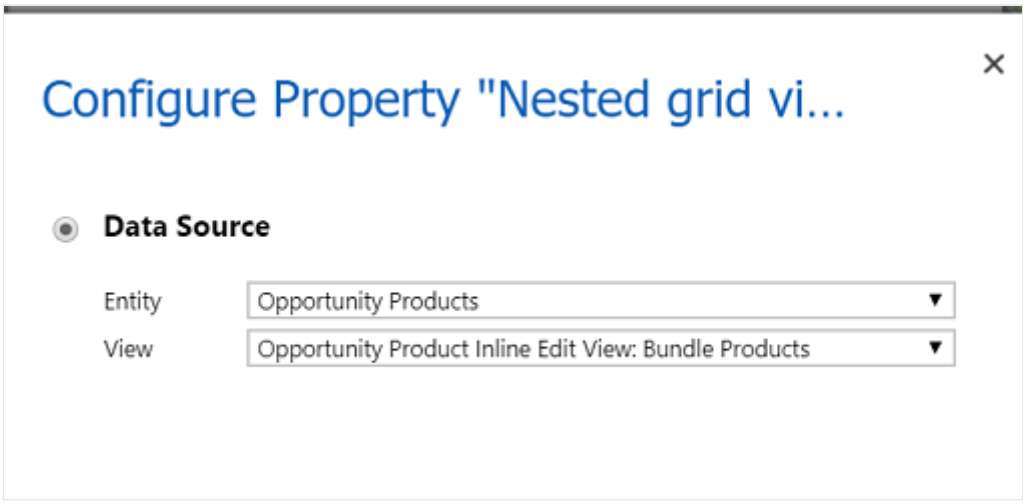


7. On the **Controls** tab, double-click to select **Editable Grid**.



8. Make sure that all values are set correctly:

- Grid View: Opportunity Product Inline Edit View
- Nested Grid View: Select the pencil icon and fill in the following details:



  - Table: Opportunity Products
  - View: Opportunity Product Inline Edit View: Bundle Products
- Nested grid parent ID: parentbundleidref
- Group by Column: Enabled (Enum)

- Allow filtering: Enabled (Enum)
- Hide nested grid column header: Hide Column

> ⓘ **Note**
>
> If you're using product bundles and edit these bundled line items in the product grid, select **Hide nested grid column header** as **Show Column**.

Issue 4 - Can't set a custom view as the default view for the Existing products field in Add products dialog

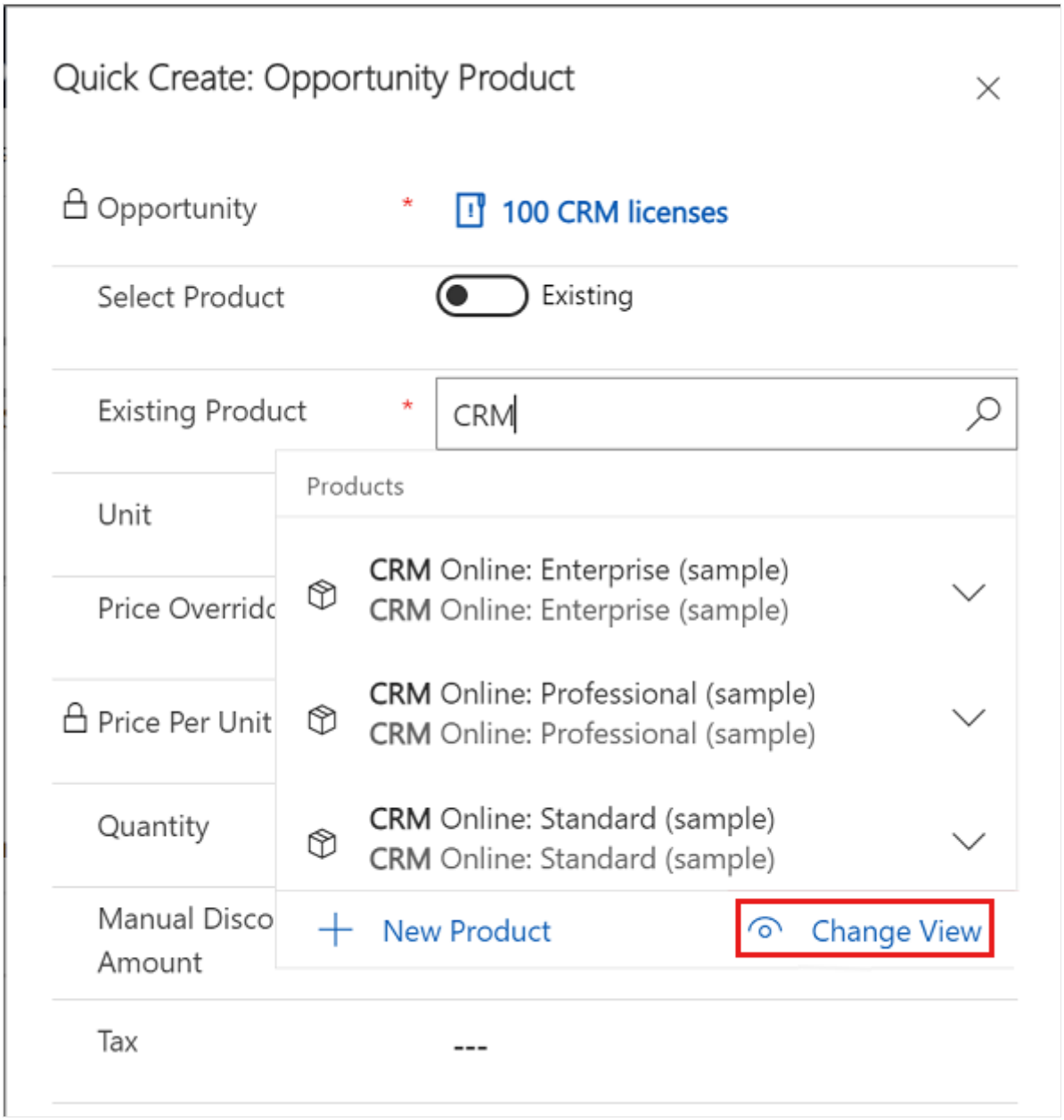
To add products to an opportunity, quote, order, or invoice, you select the products from the **Existing product** lookup field in the **Add products** dialog. If you change the default view of the lookup field to a custom view, the field doesn't display products from the custom view.

Cause

To be able to display products from the selected price list, the lookup always defaults to a system view named **Products in Parent Price List**. So, even if you change the default, the lookup field will set the default back to the **Products in Parent Price List** view.

Resolution

This behavior is working as designed. Though you can't set a default view, you can manually switch to the view in the **Existing products** lookup field.



Issue 5 - Can't update nested bundle items on the Product tab

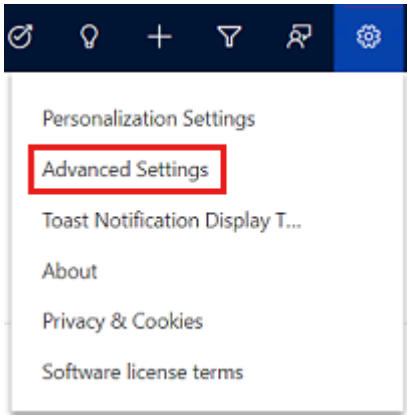
Cause

For an opportunity, when you update nested bundle items on the **Product** tab, the save icon is disabled. This issue occurs because the header of the nested grid column is hidden under **Opportunity Product Inline Edit View** in customizations.

Resolution

To resolve this issue, follow these steps to show the header of the nested grid columns for products on the opportunity form.

1. In your app, on the nav bar, select the **Settings** icon, and then select **Advanced Settings**.



   The **Business Management** settings page opens in a new browser tab.

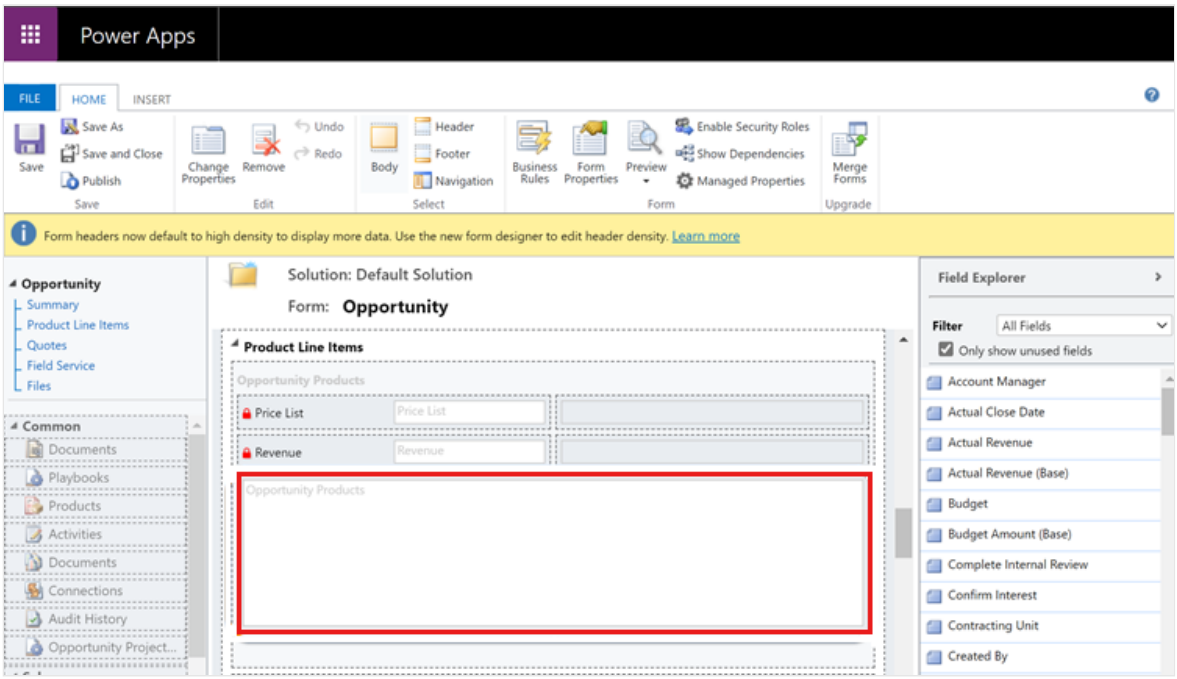
2. On the navigation bar, select **Settings**, and then under **Customization**, select **Customizations**.

3. Select **Customize the System**.

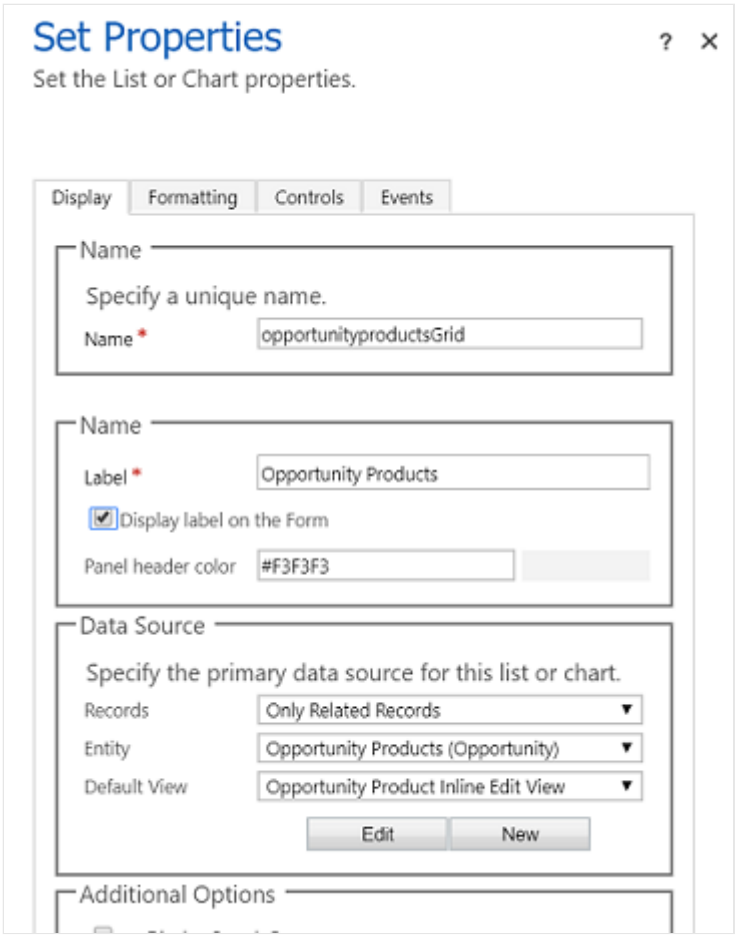
4. Under **Components** in the solution explorer, expand **Entities**, expand **Opportunity**, and then select **Forms**.

5. Open the **Opportunity** form of form type **Main**.

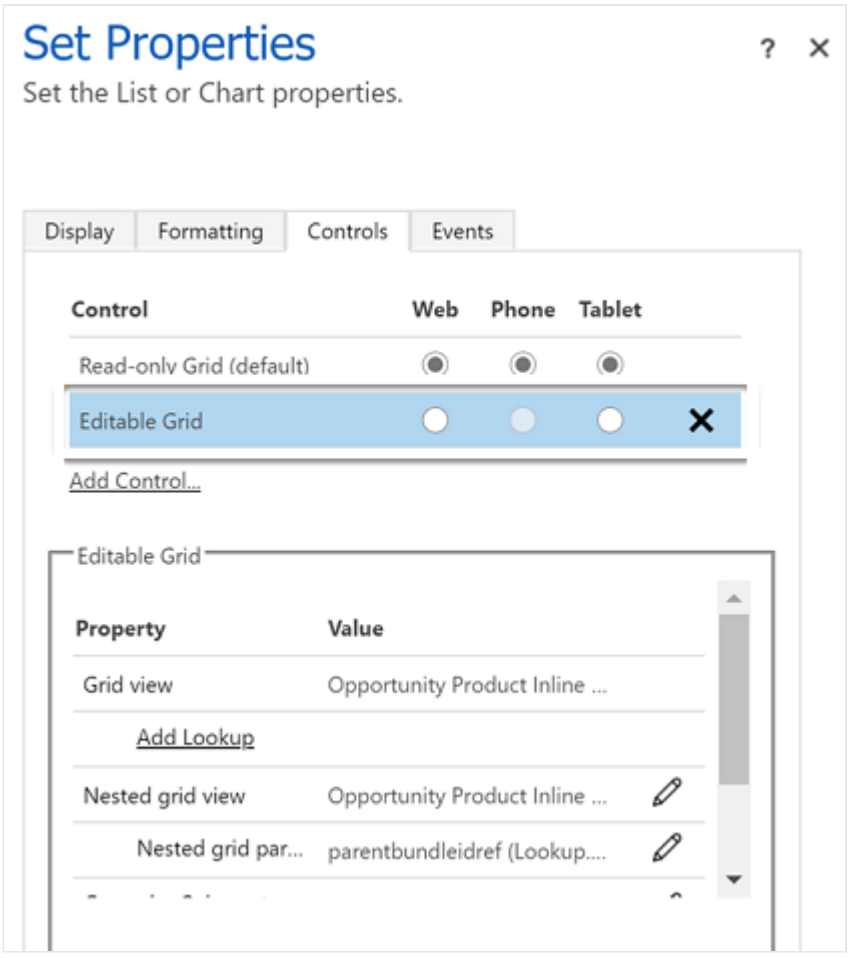
6. In the **Product Line Items** section, double-click to select the **Opportunity products** section.



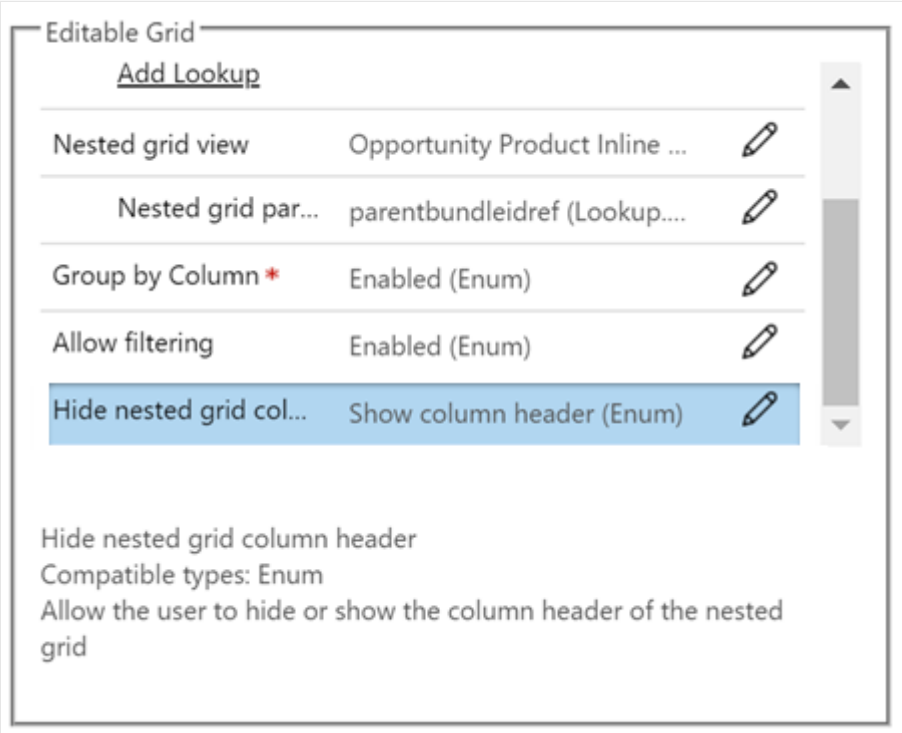
   The **Set Properties** dialog box opens.



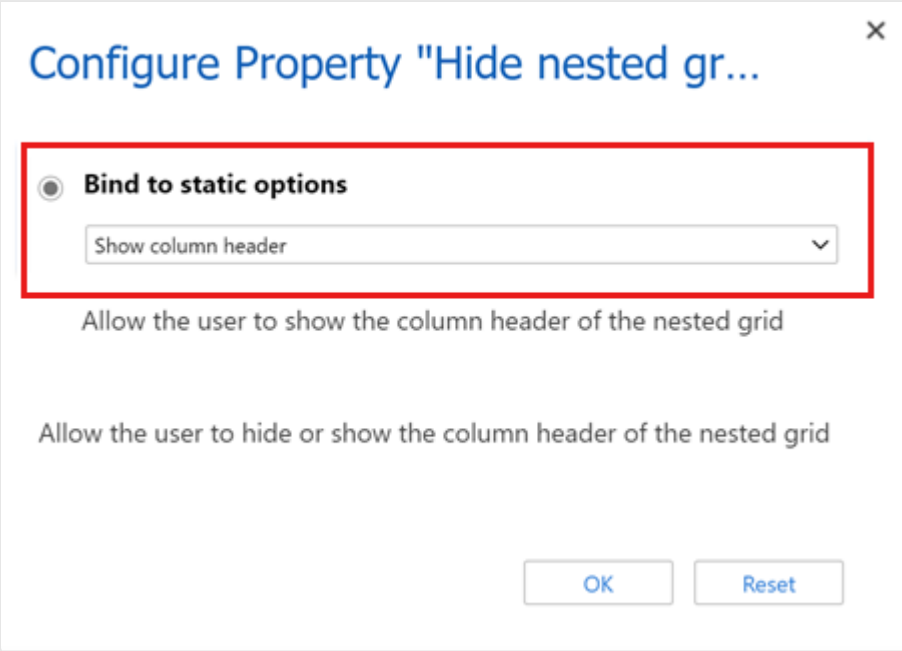
7. On the **Controls** tab, double-click to select **Editable Grid**.



8. In the **Editable Grid** section, select the pencil icon next to **Hide nested grid column header**.



9. In the **Configure Property** dialog box, under **Bind to static options**, select **Show column header**.



10. Save and publish the configuration.

Issue 6 - Can't see opportunity records in the legacy web client when you select

Opportunities from the site map but you can see them in Unified Interface

Cause

Records are shown in the list based on table views. The issue might occur when there's no public view marked as the default view for a table.

Resolution

Select one of the public views of the table as default. This ensures the views are displayed as expected. To learn how to make a view as your default view, see Specify a model-driven app default view

> **Note**
>
> If you still can't see the records, clear the browser cache and try again.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with forecasting

Article • 09/07/2023

This article helps you troubleshoot and resolve issues related to forecasting in Microsoft Dynamics 365 Sales.

Issue 1 - An error is displayed when you try to create a territory-based forecast

Symptoms

When you try to create a territory-based forecast, an error is displayed. Also, the data in a territory-based forecast might not be refreshed.

Cause

When system updates are performed, the territory entity's hierarchy is disabled (though you've enabled it earlier), which causes this error.

Resolution

To resolve this issue, you must enable hierarchy in the **territory_parent_territory** relationship definition from **Relationships**. Follow these steps:

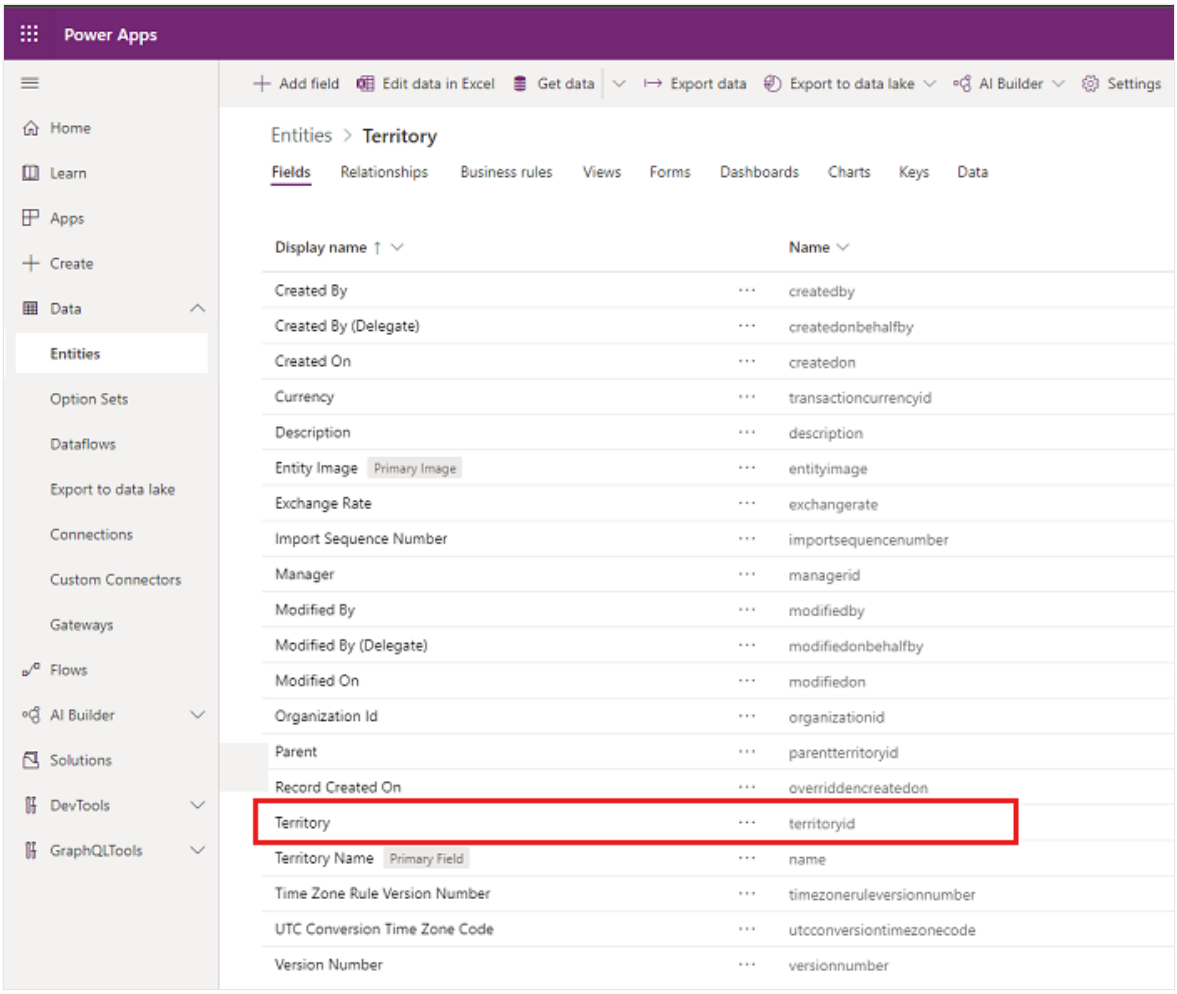
1. Go to **Advance settings**.

   The advance settings page opens in a tab.

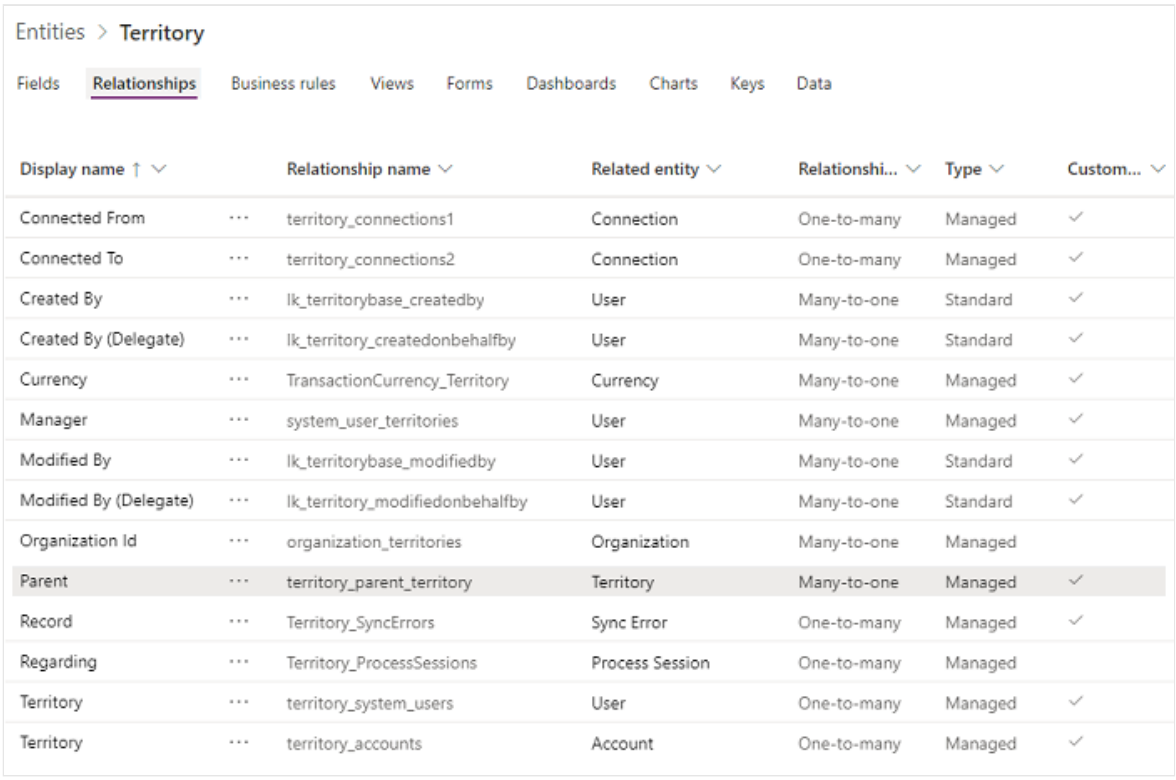
2. Select **Settings** > **Customization** > **Customizations**.

   The **Power Apps** settings page opens.

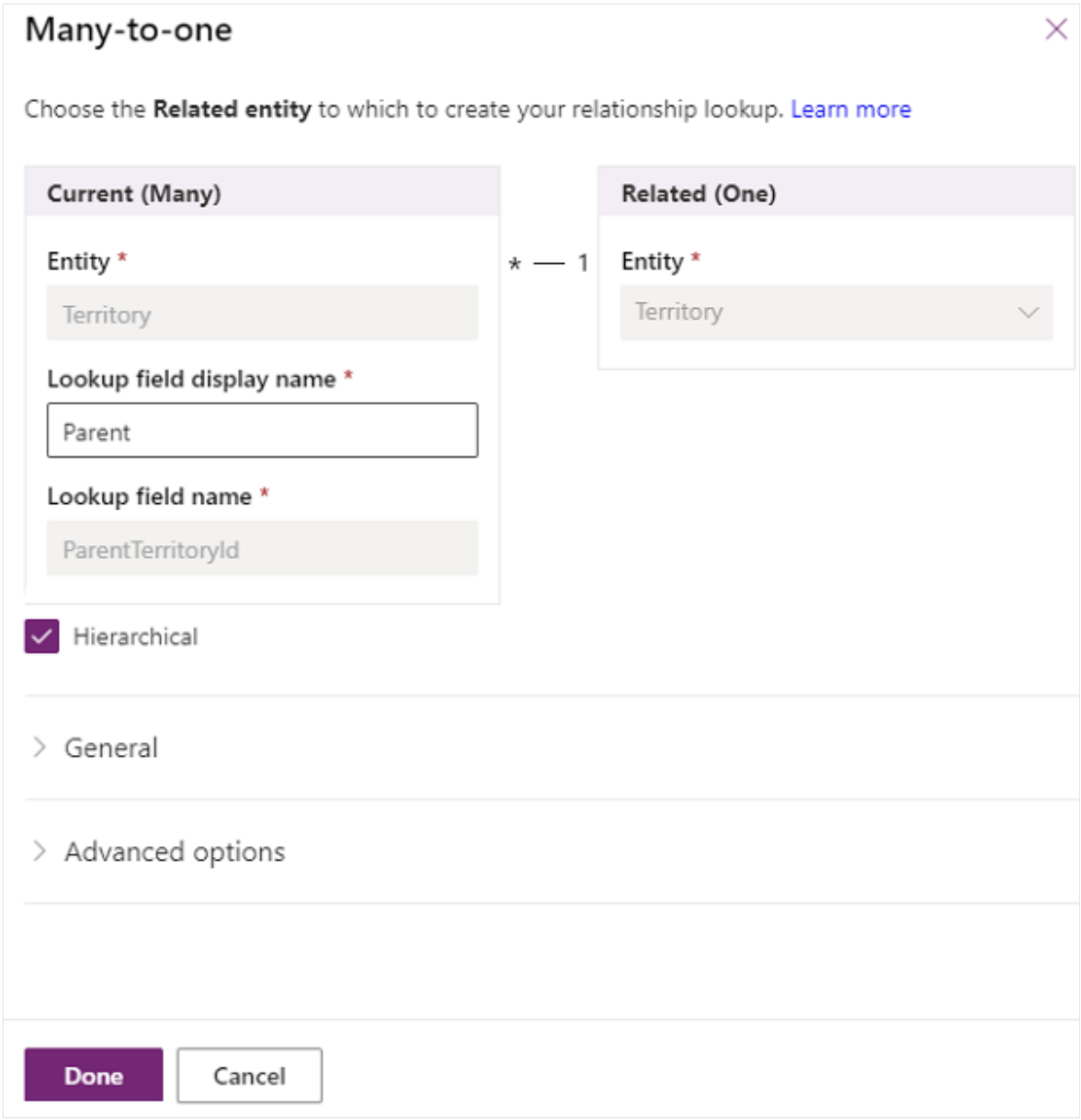
3. Select **Data** > **Entities**, and then select **Territory**.



4. On the **Territory** page, select the **Relationships** tab, and then select **Parent**.



5. In the **Many-to-one** dialog box, select the **Hierarchical** check box, and then select **Done**.



6. Save and close the entity.

Issue 2 - Can't hide the forecast category field in opportunity forms

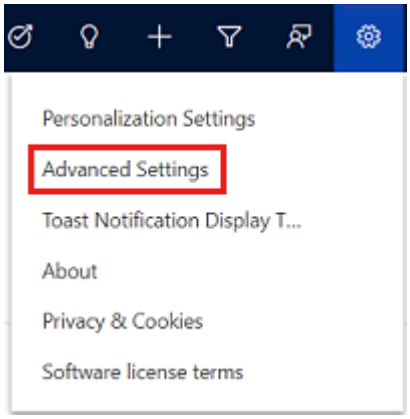
Cause

Sometimes, the app displays the **Forecast category** field in opportunity forms, even after it has been configured as invisible by default through form customizations.

Resolution

To resolve this error, you must delete the **Forecast category** field from the form. Follow these steps:

1. In your app, on the nav bar, select the **Settings** icon, and then select **Advanced Settings**.



   The **Business Management** settings page opens in a new browser tab.

2. On the nav bar, select **Settings**, and then under **Customization**, select **Customizations**.

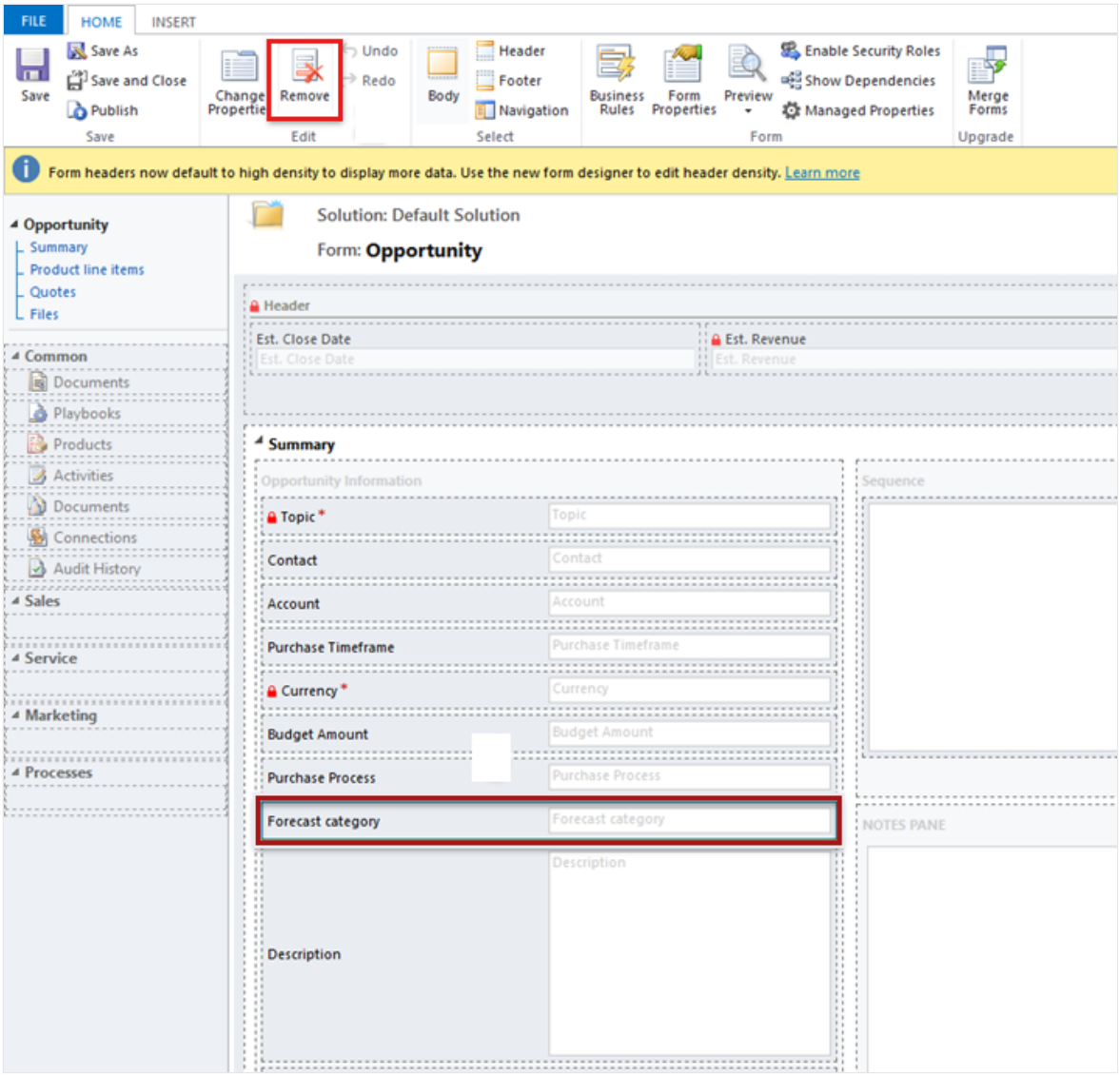
3. Select **Customize the System**.

4. Under **Components** in the solution explorer, expand **Entities**, expand **Opportunity**, and then select **Forms**.

5. Open the **Opportunity** form of form type **Main**.

   The opportunity form opens in a new window.

6. In the **Summary** section, select the **Forecast category** field, and then select **Remove**.



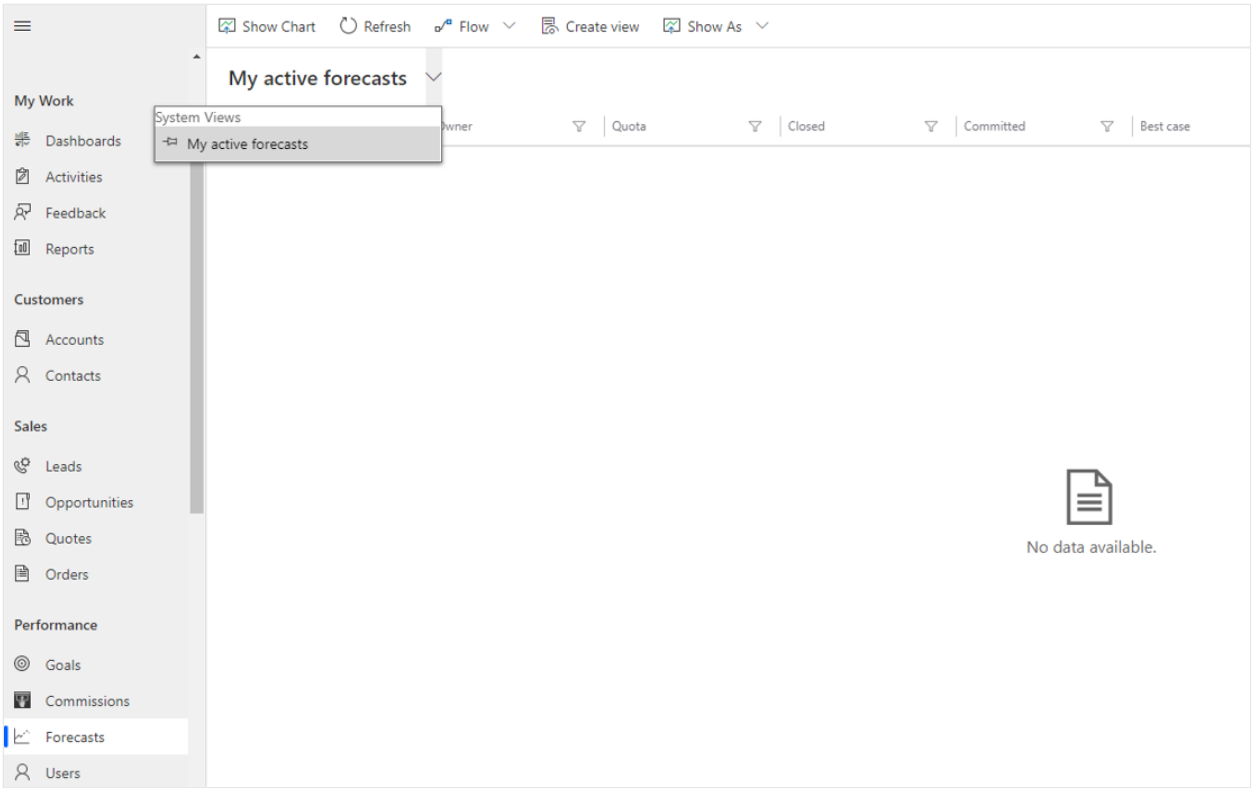
7. Save and publish the configuration.

Issue 3 - Can't view forecasts

Cause

If you were using the previous version of forecasting and updated to the latest, the forecasting site map might not be updated. This can be caused by the presence of an unmanaged layer of the Sales Hub app, which would allow the forecasting site map to open the previous version of forecasting.

The following image is an example of the previous version of forecasting home page.



Resolution

To resolve this issue, update the forecasting site map entry to the latest forecast entry grid. For more information, see Add forecast grid and configuration options in site map.

Issue 4 - Can't load the forecast grid and an error is displayed

Cause

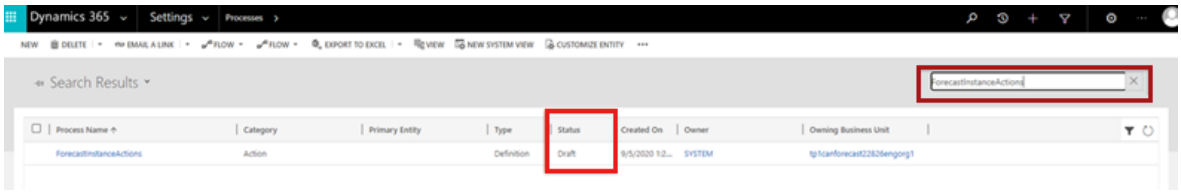
The **ForecastInstanceActions** process is deactivated. The reason might be that the owner of an organization has changed, which is causing the failure to load the forecast grid. The error shown in the following image is displayed.

> Action (ForecastInstanceActions) for fetching forecasts has been disabled.

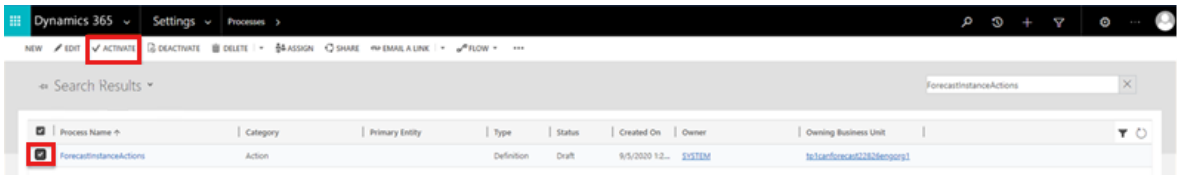
Resolution

To resolve this error, activate the **ForecastInstanceActions** process. Follow these steps:

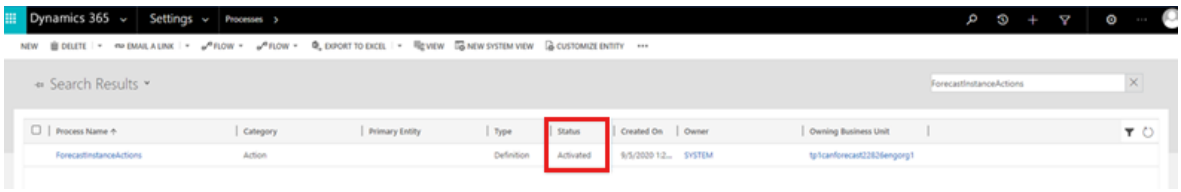
1. Go to **Advanced settings**, and then select **Settings** > **Process Center** > **Processes**.
2. In the search box, enter **ForecastInstanceActions**. You can see that the process is in the **Draft** state.



3. Select the process, and then select **Activate**.



4. On the confirmation message, select **Activate**.



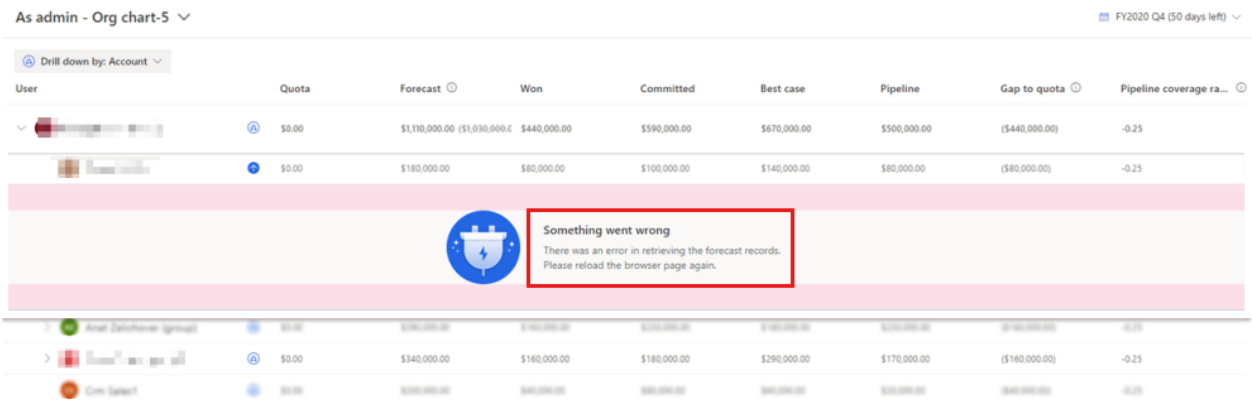
5. Verify that the process state is **Activated**, and then close **Settings**.

Issue 5 - Can't view drill down data in a forecast grid

Cause

You don’t have enough privileges for **Forecast Configuration** entity to view drill down data in the forecast grid. The error shown in the following image is displayed.

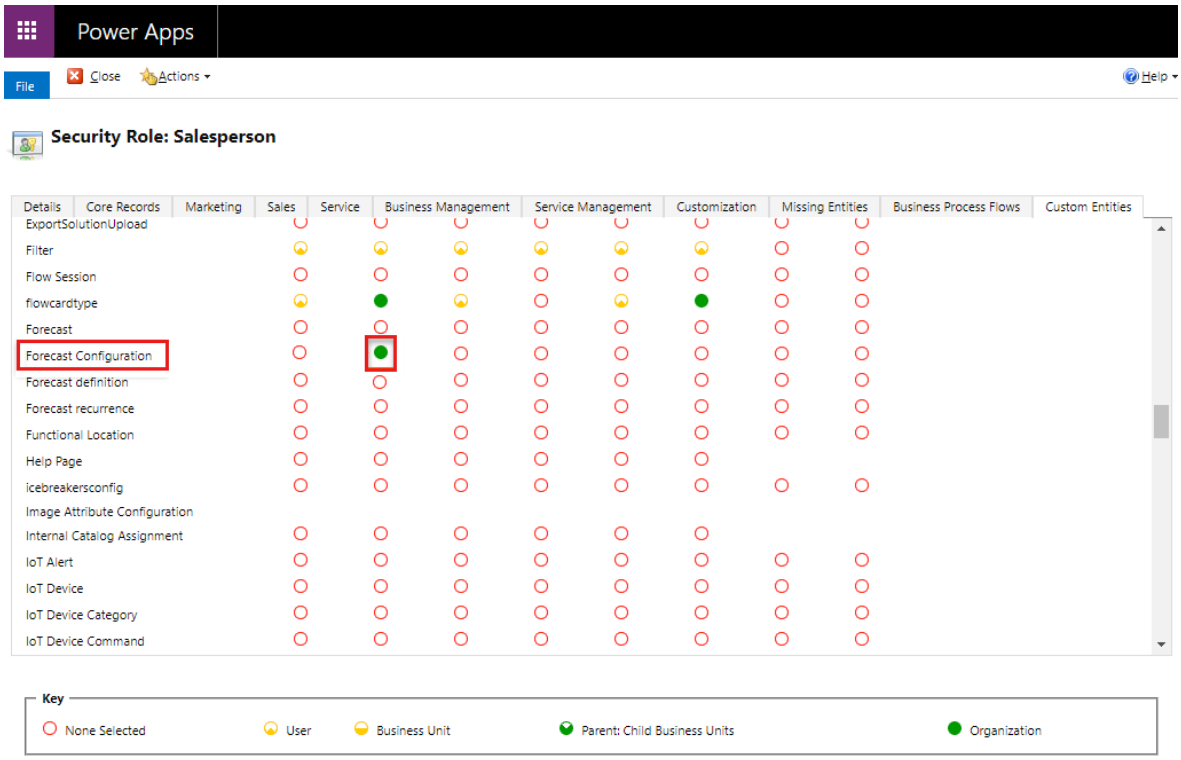
> Something went wrong.
> There was an error in retrieving the forecast records.
> Please reload the browser page again.



Resolution

To resolve this error, your administrator must provide read privileges on **Forecast Configuration** entity to your security role. Follow these steps:

1. Go to **Advanced settings**, and then select **Settings** > **Security** > **Security Roles**.
2. Select the security role for which you want to apply the privileges.
3. On the security role page, select **Custom Entities** tab and go to **Forecast Configuration** row.
4. Select and provide the read privileges.



5. Close the settings.

Issue 6 - Forecast category fields aren't updated

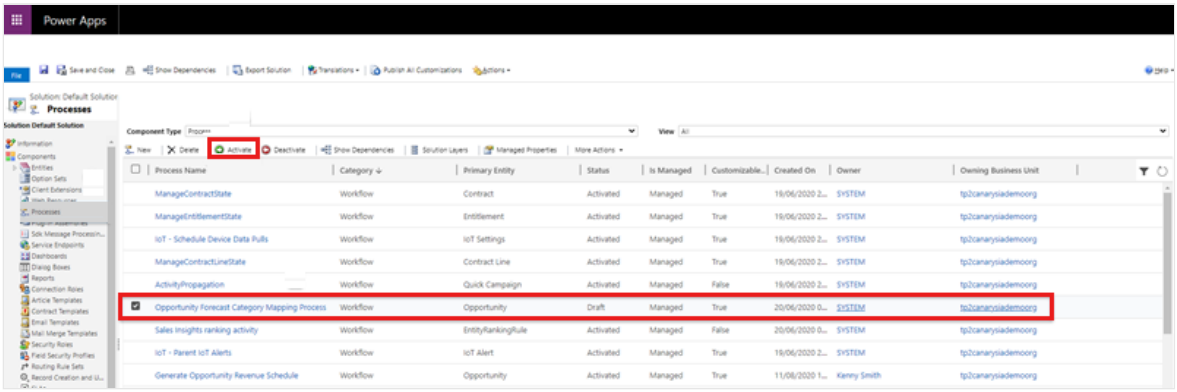
Cause

In a forecast, after updating the forecast category field to **Won** or **Lost**, the opportunities still appear in the previous pipeline bucket. This error occurs because the **Opportunity Forecast Category Mapping Process** workflow is disabled in your organization.

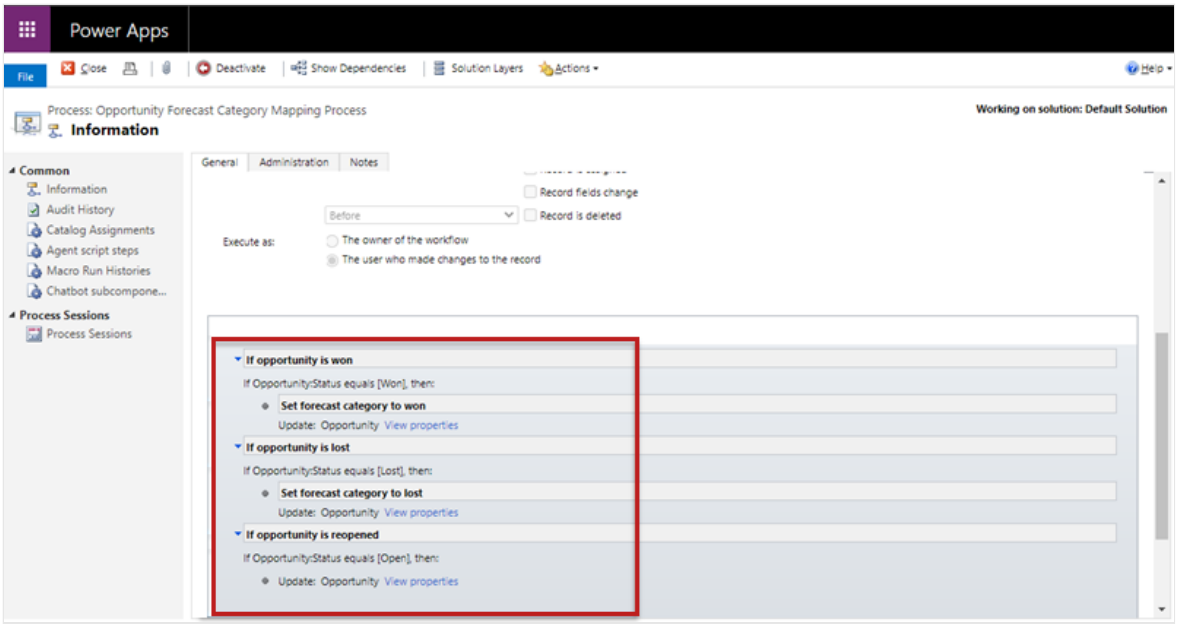
Resolution

To resolve the error, activate the **Opportunity Forecast Category Mapping Process** workflow. Follow these steps:

1. Go to **Advanced settings**, and then select **Settings** > **Customizations** > **Customize the System**.
2. In the sitemap, select **Processes**.
3. Select the **Opportunity Forecast Category Mapping Process** workflow and then select **Activate**.



The forecast categories in the opportunities will be updated properly. The opportunities that were changed before activating the workflow must be manually changed. Also, open the **Opportunity Forecast Category Mapping Process** workflow and verify that the conditions are properly defined for each forecast category.



4. Save and close the settings.

Issue 7 - Can't activate a forecast that has a hierarchy-related column of lookup type

Cause

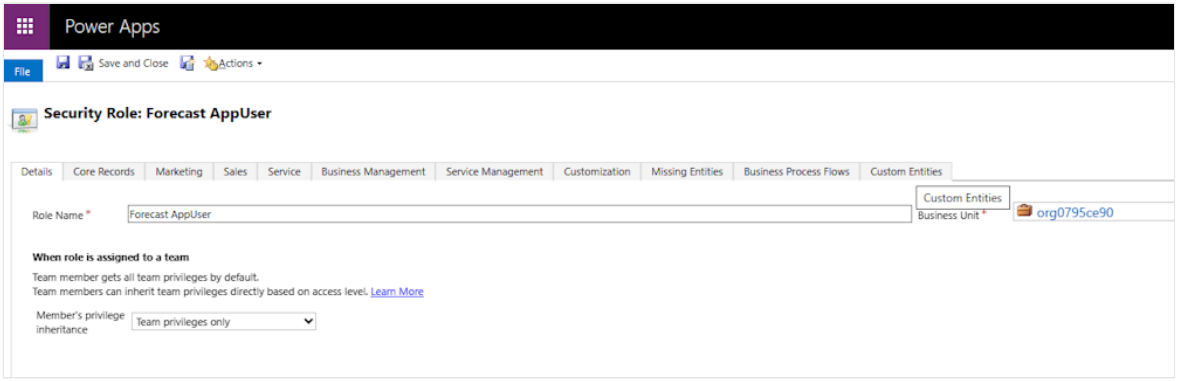
This issue occurs because the "Dynamics 365 Sales Forecasting" user doesn't have the read permission to the hierarchy-related lookup entity.

Resolution

To solve the issue, follow the steps:

1. Go to **Advanced settings**, and select **Settings** > **System** > **Security** > **Security roles**.

2. Open the **Forecast AppUser** role and select the tab where the entity type is present.



3. Enable the **Read** permission at the organization level for the lookup field's entity type.
4. Save the changes.

Issue 8 - Can't activate a forecast

Cause

The forecast activation fails due to multiple reasons.

Resolution

To solve the issue, follow the steps:

1. Ensure that you have done all the mandatory configurations for your forecast model.
2. Ensure that hierarchy filters in the forecast configuration don't filter out the entire hierarchy. Go to the **Preview** section in the **General** step to ensure that the hierarchy exists. For more information, see Add additional filters to a forecast.

Issue 9 - Can't find the forecast configuration option in App Settings

Cause

The forecast configuration option might not be visible in the App Settings of the Sales Hub app due to the following reasons:

- You don't have the read permission to the forecast configuration entity.
- Your administrator didn't manually add the forecast grid and configuration under the **Performance Management** section.

Resolution

To solve the issue, follow these steps:

1. Assign the Forecast Manager security role to the user who should be able to create and manage forecast configurations.

2. In **Forecast configuration**, the forecast navigation pane items must be added in a custom app.

Issue 10 - Can't view forecasts for user hierarchy

Cause

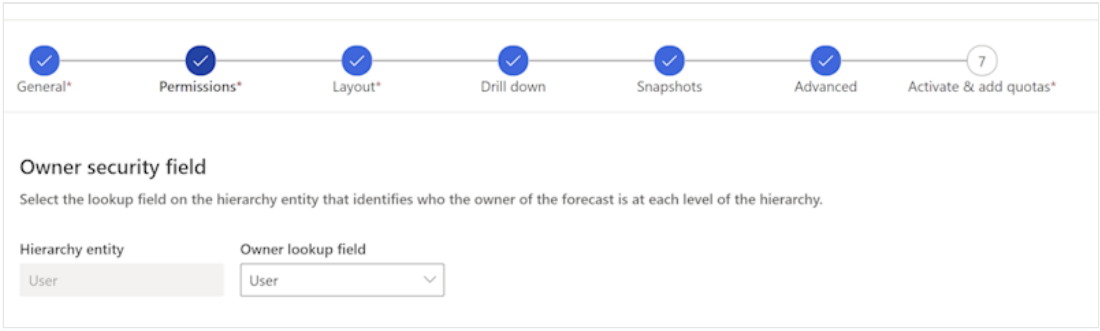
This issue occurs due to insufficient permissions to view the forecast.

Resolution

To solve the issue, make sure that:

1. One of these conditions is satisfied:

   - You're the owner of the forecast. The **Owner lookup field** in the **Permissions** step of the forecast configuration shows who the owner is.

   - You're part of the security roles that have the read permission, as configured in the **Permissions** step of the forecast configuration.

   - Someone has shared the forecast with you. For more information, see Enable or disable forecast sharing.

2. The **Owner lookup field** in the **Permissions** step of the forecast configuration isn't set to **None**. If it's set to **None**, no one can view the forecast.

Issue 11 - Forecast field values show zero or blank in the forecast grid

Cause

The fields in the rollup entity have field-level security.

Resolution

To solve the issue, you need to provide the read permission to the Dynamics 365 Sales Forecasting user in the field security profiles. Otherwise, the column will show **0** to all users except system administrators. Follow these steps to configure the field security profiles:

1. Go to **Settings**> **Security** > **Field Security Profiles**.
2. Select an existing profile or create a new one.
3. Select **Users** or **Teams** to add the users or teams that you want to grant access to the secure fields.
4. Select **Field Permissions** to set the permissions for each field. You can select **Read**, **Create**, or **Update**, or a combination of them.
5. Save and close the profile.

Issue 12 - Can't manually recalculate the prediction column on the Forecasts page

Cause

The prediction column on the **Forecasts** page can't be manually recalculated.

Resolution

The prediction column in the Forecast is automatically recalculated after every seven days, and it doesn't support manual recalculation. This is because predictions are based on AI-driven models that look at historical data and the open sales pipeline to predict future revenue outcome. The prediction column shows the predicted revenue for each seller and manager based on the **Status** field of an opportunity. To optimize the accuracy of the predictions, ensure the **Forecast Category** values are kept in sync with the **Status** field. For the out-of-the-box forecast category, a workflow ensures that when an opportunity is closed as **Won** or **Lost**, the forecast category is updated with the proper value.

Issue 13 - Forecast underlying grid view is disabled (read-only) when the page is loading

Cause

A custom JavaScript configured in the forecast configuration prevents the grid from being editable.

Resolution

To solve the issue, review the custom JavaScript code and check if it disables the underlying records grid view.

Feedback

Was this page helpful? Yes No

Provide product feedback

Troubleshoot issues with in-app marketing

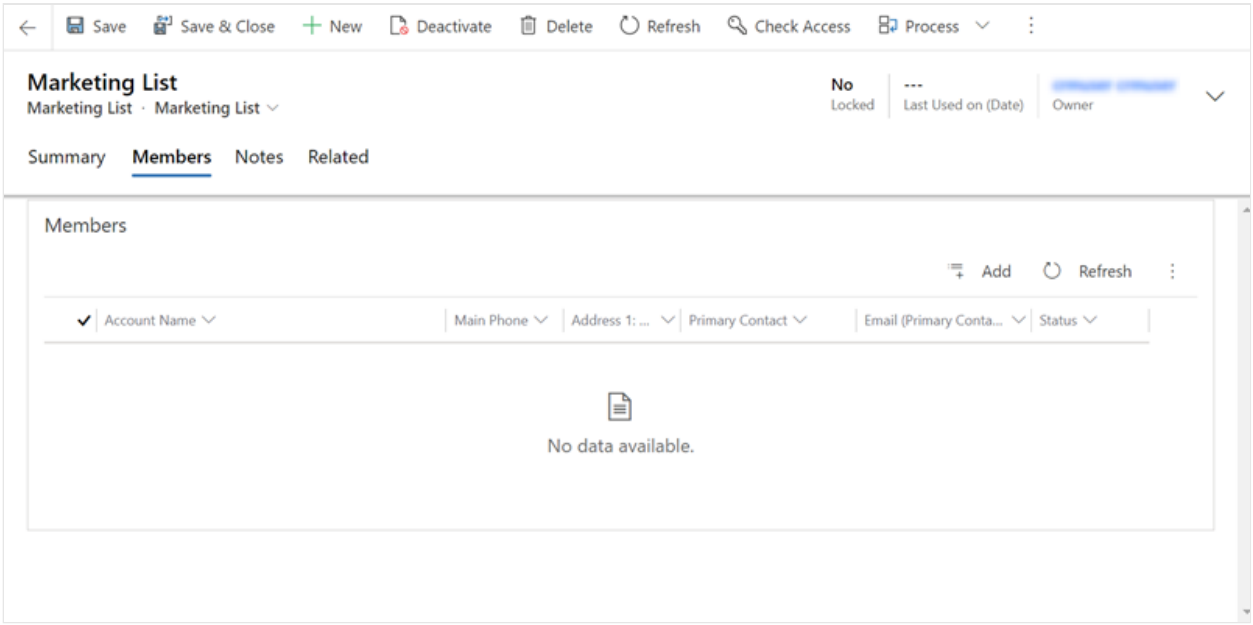
Article • 09/09/2022

This article helps you troubleshoot and resolve issues related to in-app marketing.

Issue 1 - Members view isn't available when you open the Marketing List form

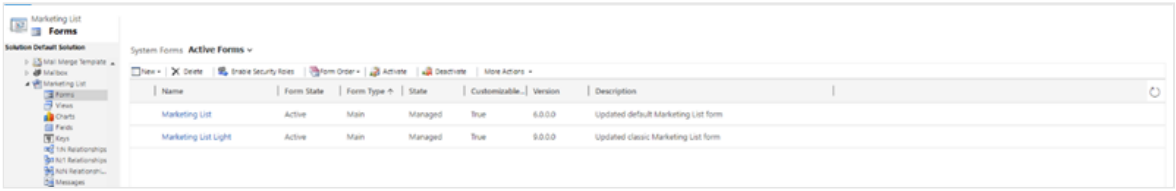
Cause

The issue is occurring due to the customization of views for each subgrid in the Marketing List form, causing the member list to appear empty.

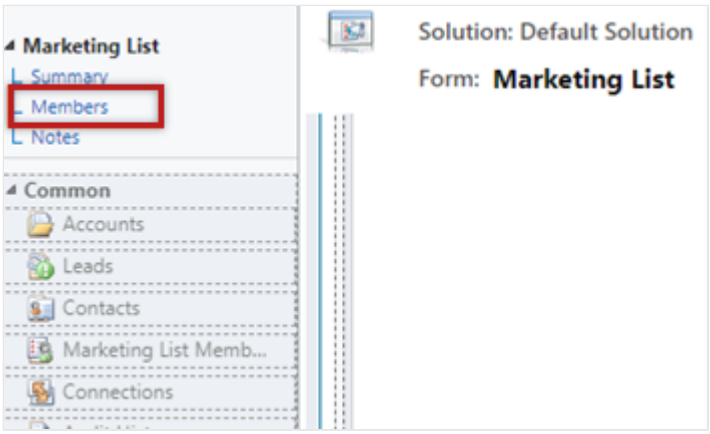


Resolution

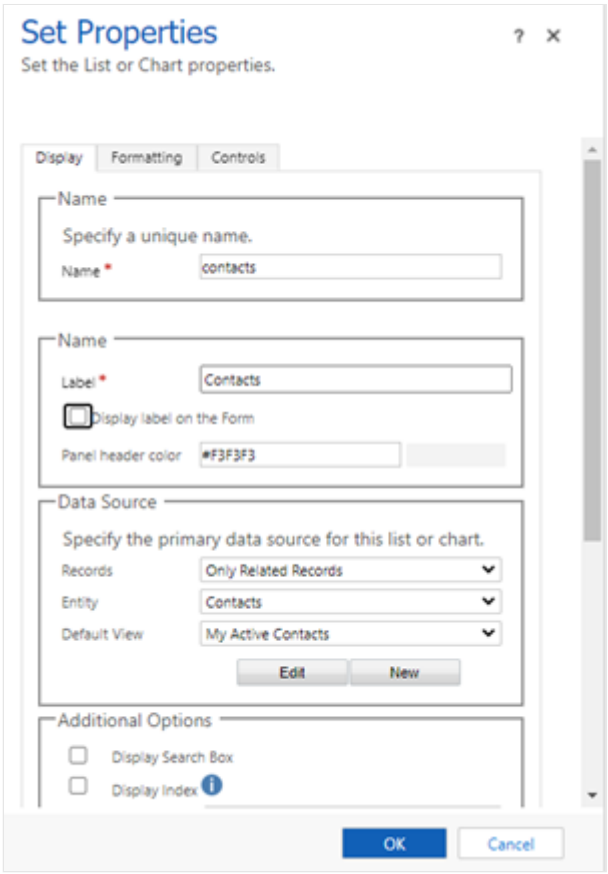
1. Go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. From the site map, open **Entities** > **Marketing List** > **Forms**.
3. From the list of forms, select the **Marketing List** form.



4. On the **Marketing List** form, from the **Marketing List** site map, select **Members**.



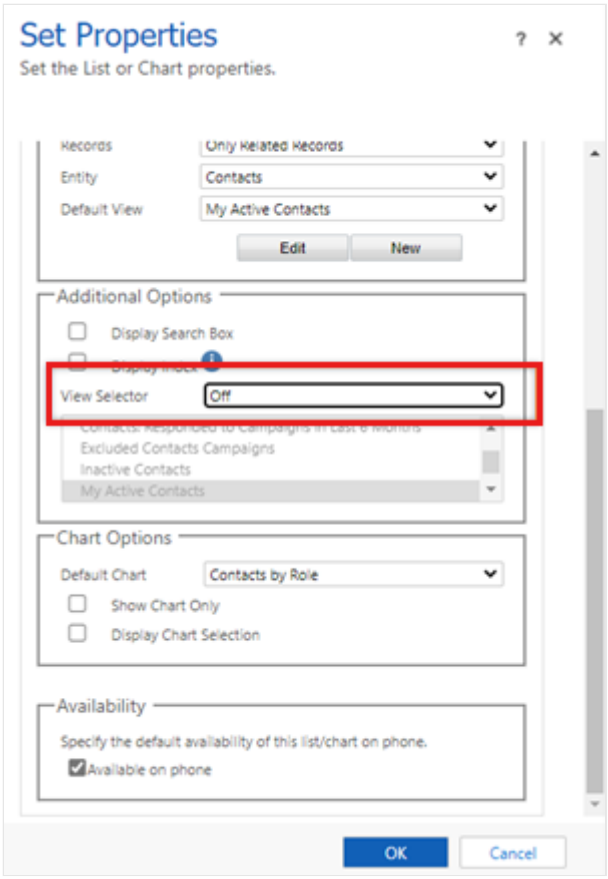
5. Select **Contacts**, and then select **Change Properties**. The **Set Properties** window opens.



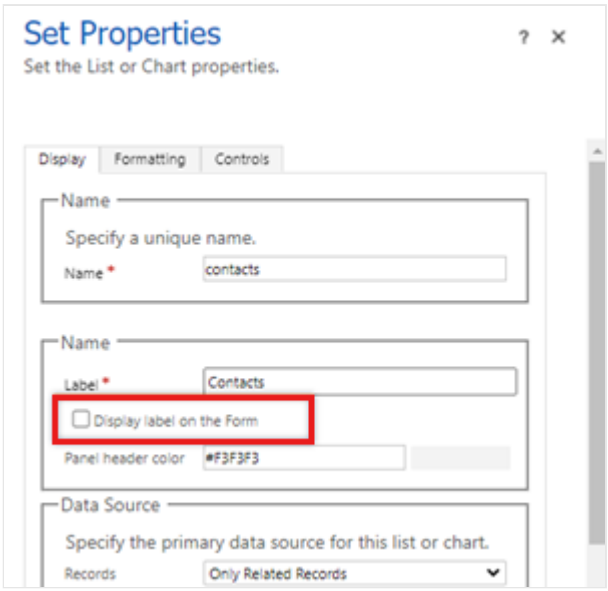
6. In the **Additional Options** section, from the **View Selector** drop-down list, select **Show Selected Views**.

   The list of additional options appears.

7. Select the **My Active Contacts** view, and from the **View Selector** drop-down list, select **Off**.



8. In the **Name** section, clear the **Display label on the Form** checkbox.



9. Select **OK**.

10. Repeat steps 5 through 9 for **Accounts** and **Leads**.

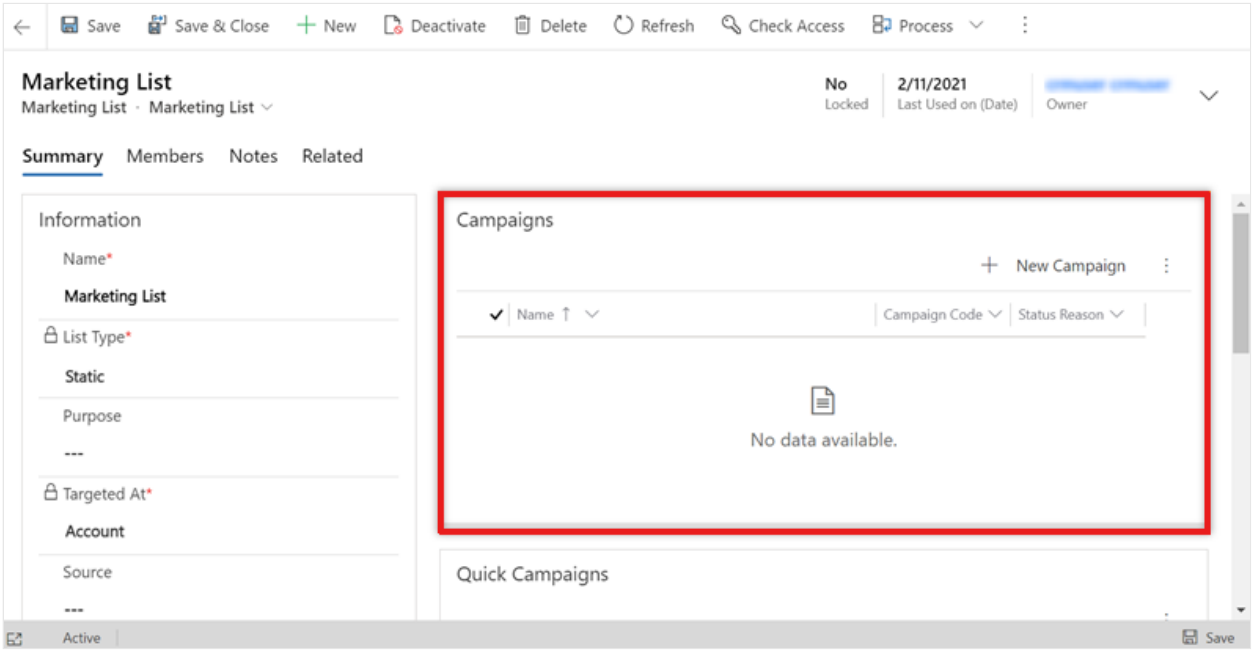
11. Save and publish the form.

Issue 2 - Can't associate a campaign created from the Marketing List form with a Marketing

List record in Unified Interface

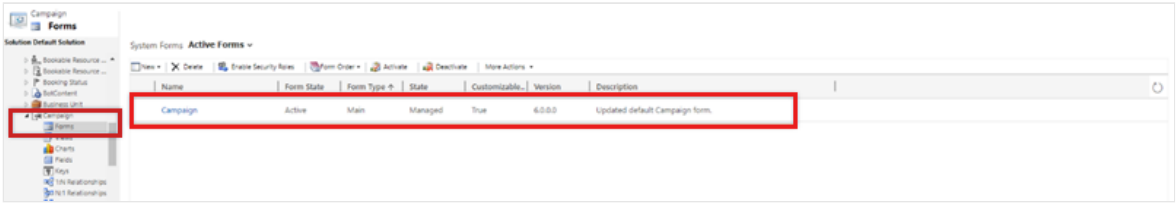
Cause

The issue occurs because the attribute **TmpRegardingObjectId** has been removed from the Campaigns form.

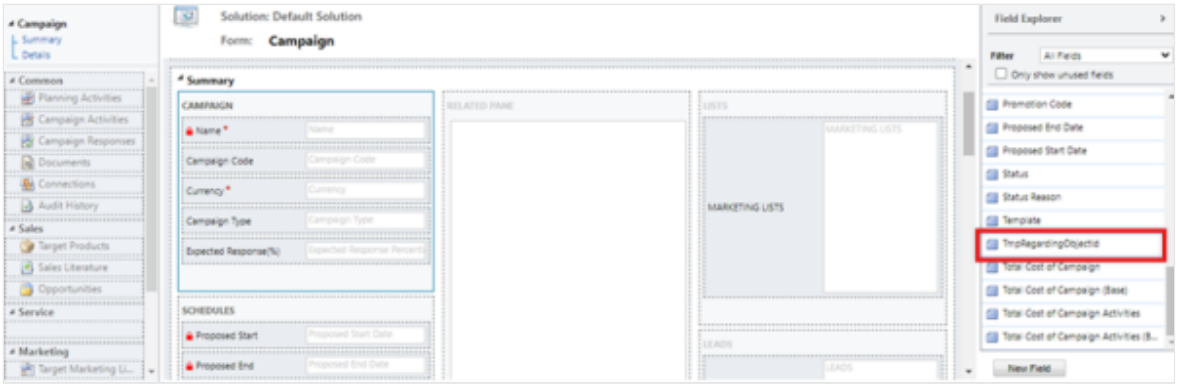


Resolution

1. Go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. From the site map, open **Entities** > **Campaign** > **Forms**.
3. From the list of forms, select the **Campaign** form.



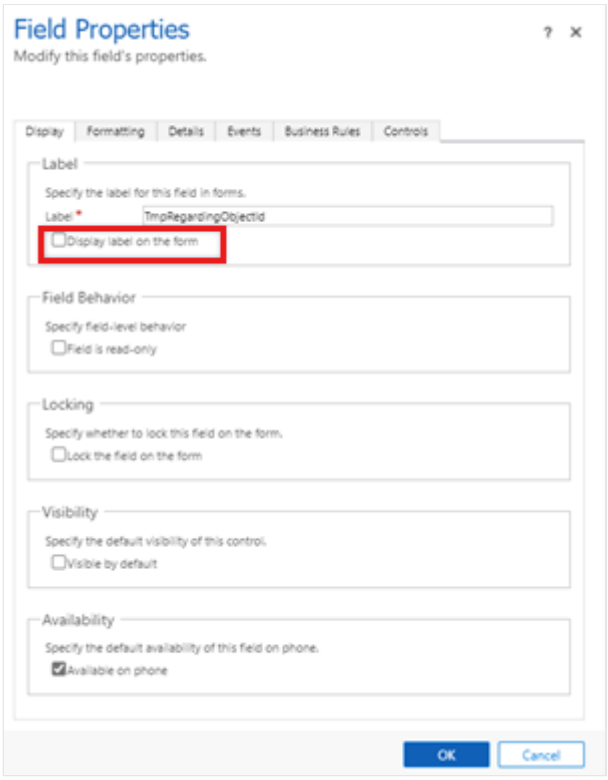
4. From the **Field Explorer** pane displayed on the right side of the page, add the field **TmpRegardingObjectId** to the form.



5. Select the **TmpRegardingObjectId** field, and then select **Change Properties**.

   The Set Properties window opens.

6. In the **Label** section, clear the **Display label on the Form** checkbox, and in the **Visibility** section, clear the **Visible by default** checkbox.



7. Save and publish the form.

Issue 3 - Can't find a related account field for a member account by using advanced find in Unified Interface

Cause

The issue occurs because the Contact or Account display name has been changed in the application, and the **Company Name (RELATED_TYPE)** picks the related type from the changed display name.

Resolution

In Unified Interface, the company name entity is available as **Company Name (Account)**. For example, if you rename the **Account** as **Organization**, the entity will be renamed as **Company Name (Organization)**.

Issue: Can't send emails by using the email quick campaign distribution list

Cause

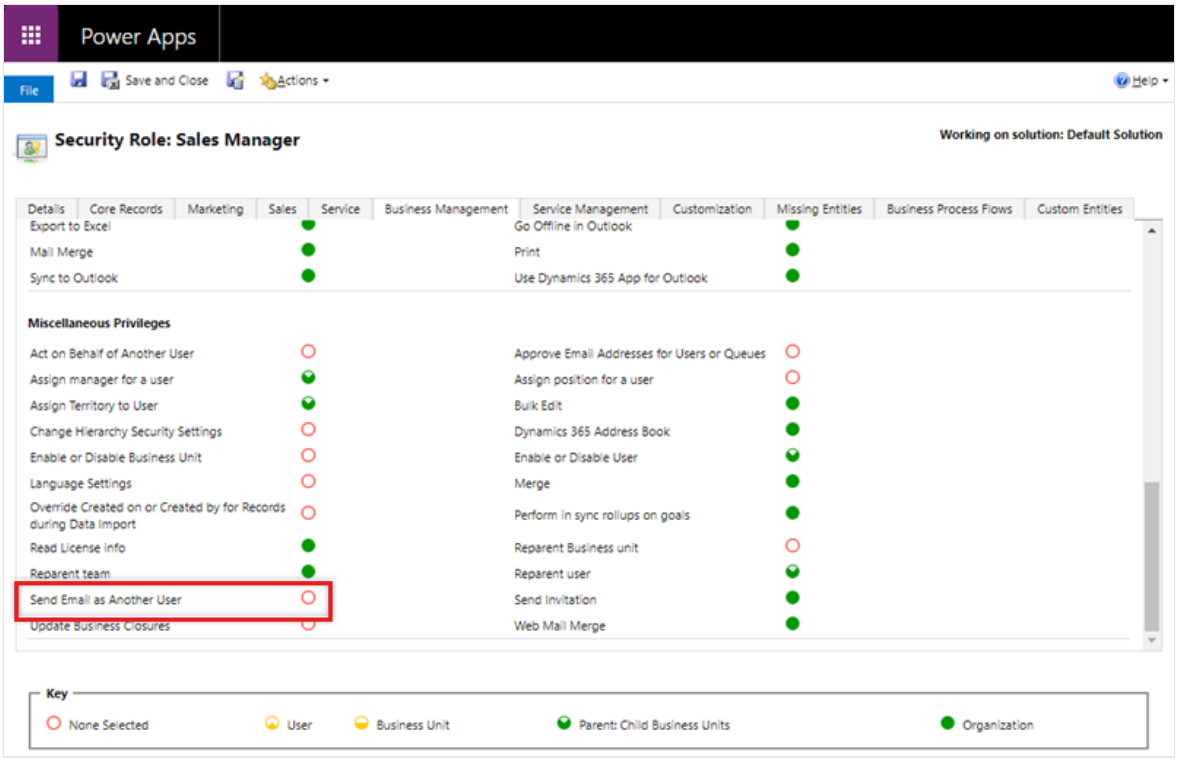
The issue occurs because of one of the following reasons:

- The users don't have permissions to send emails on behalf of other users.
- The owner of the record (marketing list members) hasn't allowed other Dynamics 365 users to send emails on the owner's behalf.

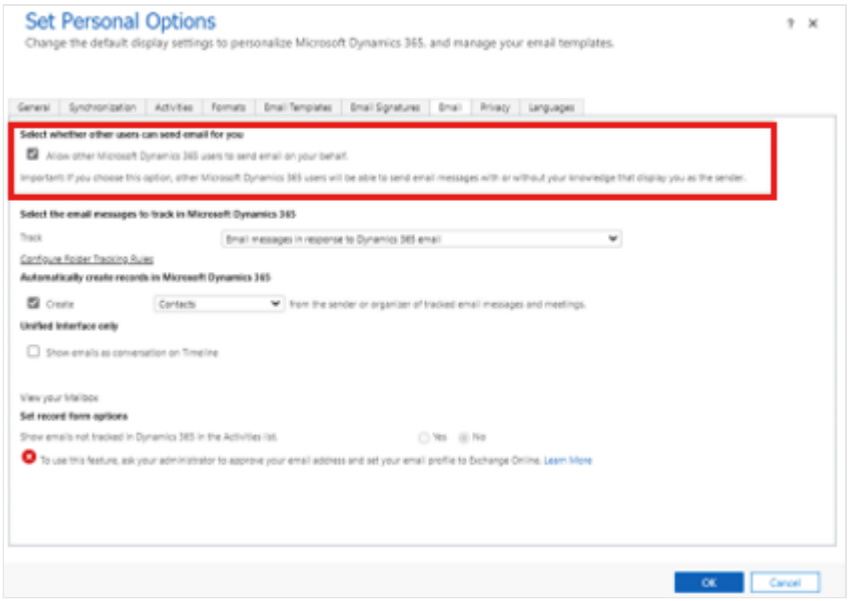
Resolution

To resolve the issue, do one of the following:

- For the user who's creating the quick campaign, the **Send Email as Another User** privilege must be assigned to at least one role assigned to the user. For more information, see Create a security role with team member's privilege inheritance.



- For the owner of the record, the **Allow other Microsoft Dynamics 365 users to send email on your behalf** checkbox must be selected under **Select whether other users can send email for you** on the **Set Personal Options** dialog box.



Issue 4 - Can't change the form field in the email within the quick campaign wizard

Cause

The issue is caused by insufficient permissions for the **Send Email as another User** option for your role.

Resolution

Provide sufficient permissions for the **Send Email as another User** option to one of your roles.

Issue 5 - Can't see email templates in the distribute dialog box

Cause

The email template selector in Unified Interface relies on certain access levels for different entities.

Resolution

To resolve the issue, users require access to system user records. Provide the access to system users by assigning them security roles in your Dynamics 365 organization. For more information, see Configure user security to resources in an environment.

Issue 6 - The campaign distribution process is stuck with a status of Pending or Failed

Cause

The campaign distribution process requires a workflow to run in the background. When the workflow is disabled, campaign distribution won't be completed and will be stuck in a **Pending** or **Failed** state.

Resolution

To resolve this issue, enable the workflow background process and then activate the **ActivityPropagation** process.

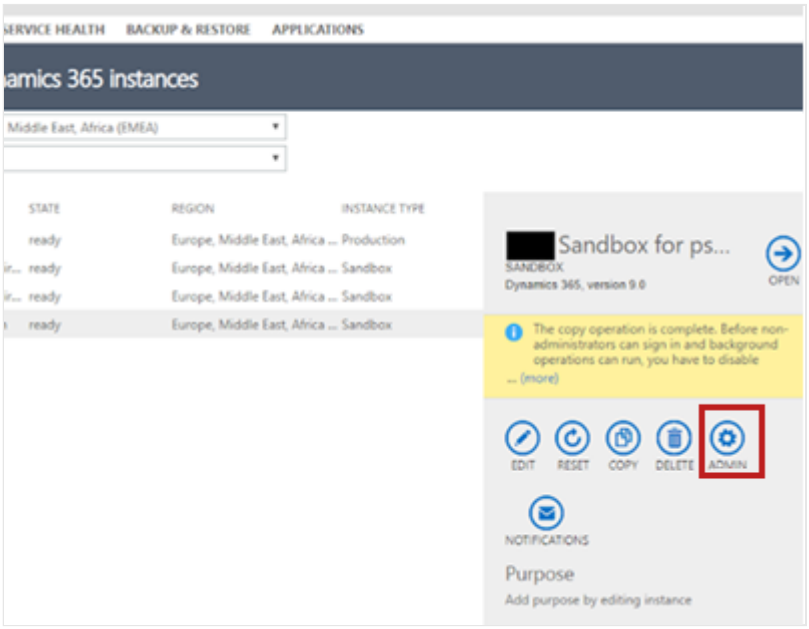
Enable the workflow background process

1. Go to **Advanced Settings** > **Settings** > **System** > **System Jobs**.

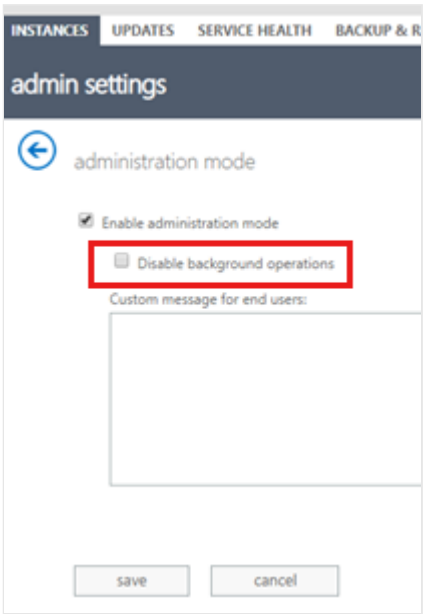
2. Go to **ActivityPropagation** jobs and under **Process Sessions**, select the job that matches or approximately matches, the date and time at which the quick campaign was run.

3. Verify that an error message is displayed under the details section, stating that the async operation was skipped because the org is in **Disable Background Processing** mode. Update the settings for your environment by doing the following:

   a. Go to the Dynamics 365 admin center, select your instance, and then select **Admin Settings**.



   b. Clear the **Disable background operations** checkbox.

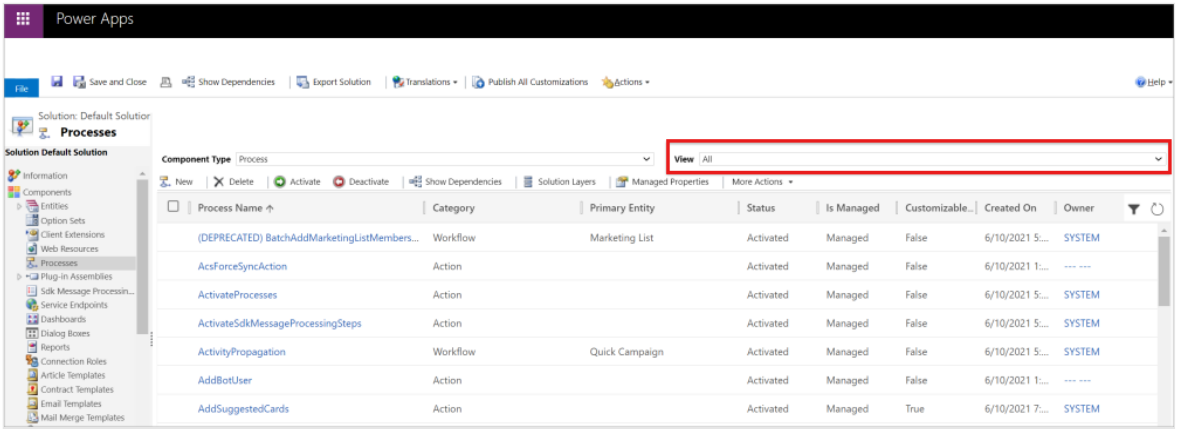


4. Save your settings, and exit.

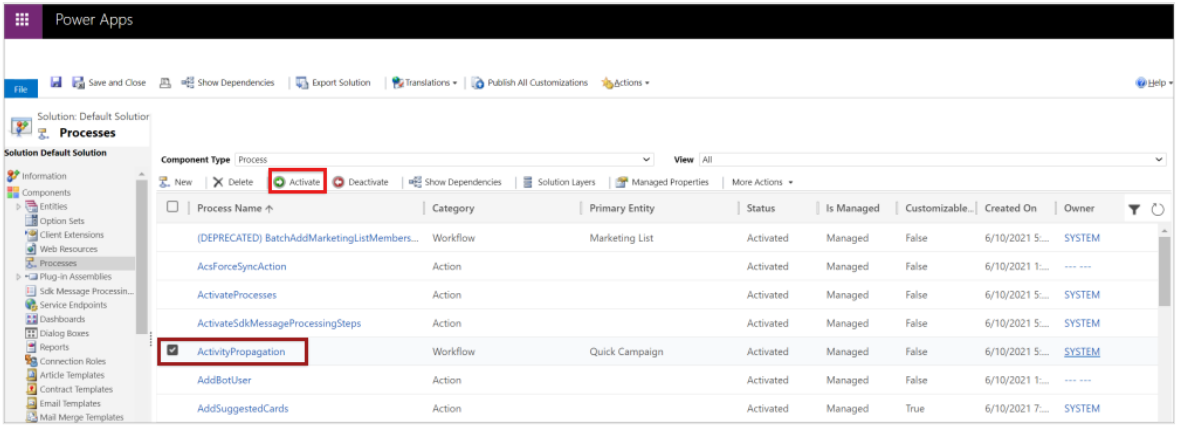
Activate the ActivityPropagation process

1. Go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. From the site map, go to **Processes**.
3. In the view selector, select **All**.

   All the available processes are displayed.



4. Select the **ActivityPropagation** process, and then select **Activate**.



Issue 7 - My quick campaign failed and it's set to Aborted

Cause

The issue is caused by the failure of a stack trace that's related to the custom plug-ins in the workflow process.

Resolution

1. Go to **Advanced Settings** > **Settings** > **System** > **System Jobs**.

2. Go to **ActivityPropagation** jobs and under **Process Sessions**, select the job that matches or approximately matches, the date and time at which the quick campaign was run.

The system job contains information that includes the stack trace that has the failure. Resolve the failure as mentioned in the stack trace failure documentation.

Issue 8 - The quick campaign is executing an unstoppable loop and generating thousands of failure records

Cause

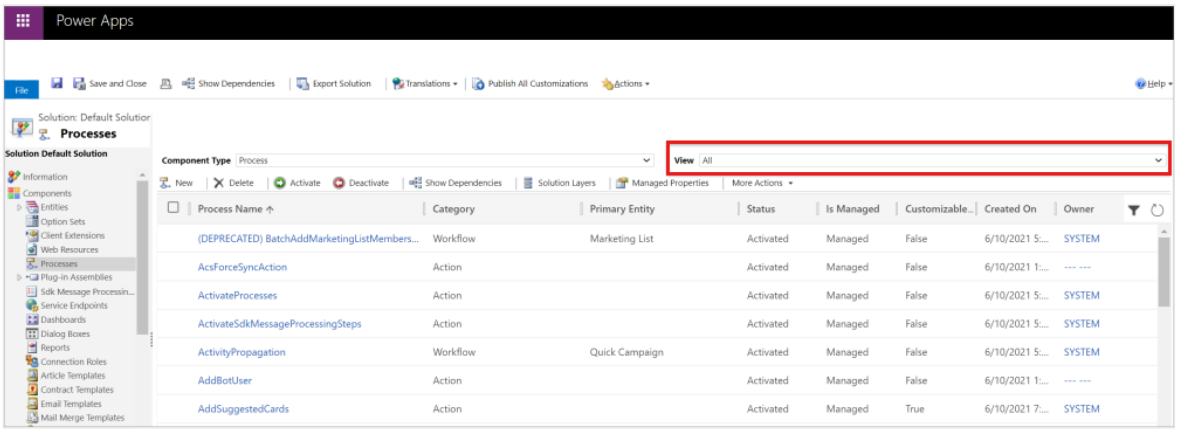
Due to unknown conditions, when a workflow fails to create campaign activities, it goes into an unstoppable loop and keeps creating campaign activities, which all fail. You'll observe that the number of failures keeps increasing until it exceeds the number of members in the targeted marketing list.

Resolution

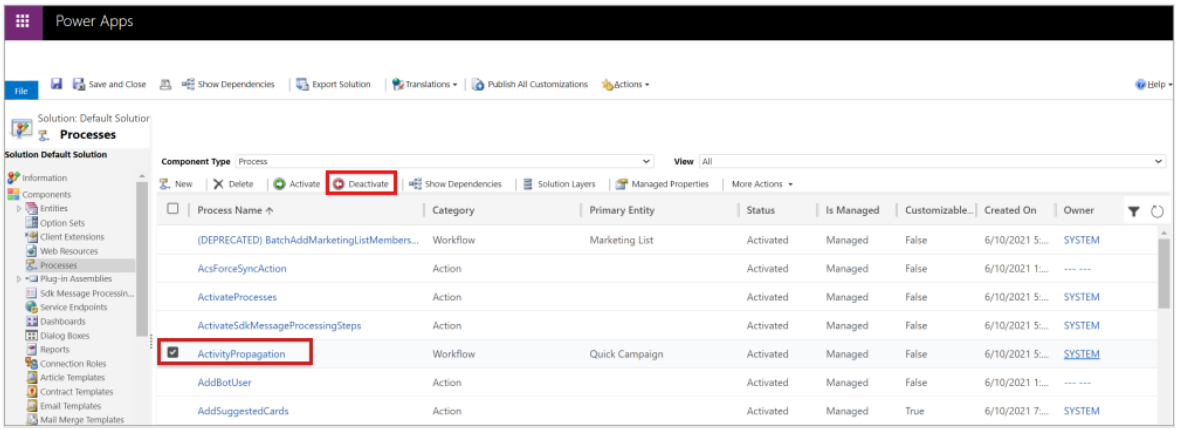
Deactivate the **ActivityPropagation** workflow, and then activate it again.

1. Go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. From the site map, go to **Processes**.
3. In the view selector, select **All**.

   All the available processes are displayed.



4. Select the **ActivityPropagation** workflow, and then select **Deactivate**.

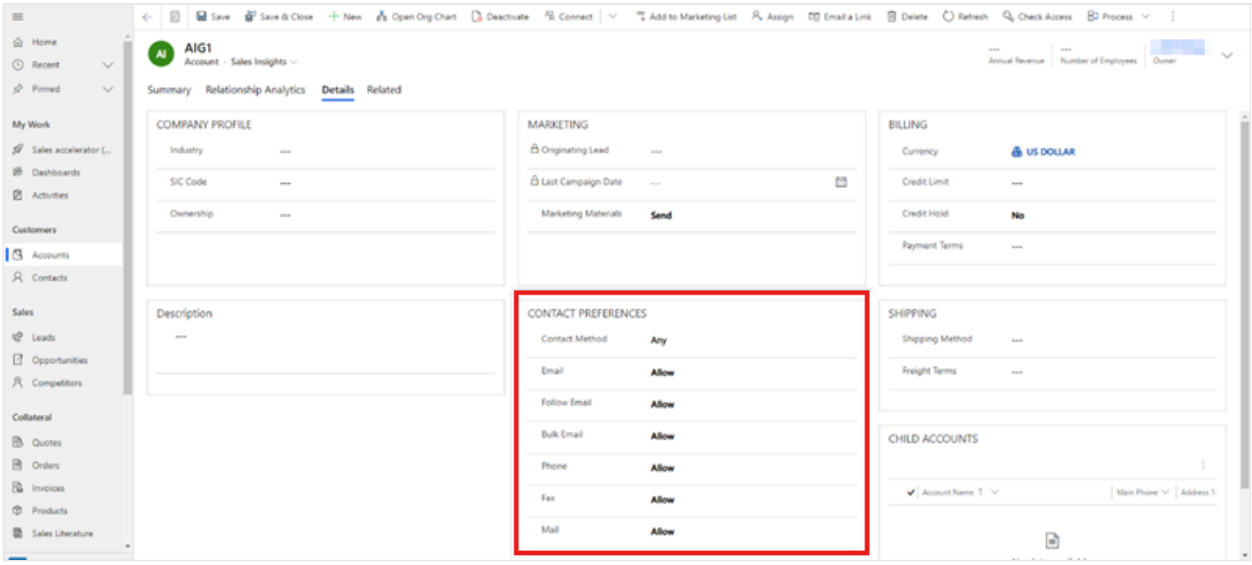


5. Wait 24 hours, and then reactivate the **ActivityPropagation** workflow.

Issue 9 - Campaign distribution doesn't create activities on target entities

Target records (account, contact, and lead) can identify their preferences for receiving marketing materials through campaign distribution: these include emails, phones, fax, and bulk mail.

Campaign activities are created for members of the Marketing List only when their preferences are set to **Allow** or **Send**.



Issue 10 - Campaign distribution is failing for some members

Cause

Campaign distribution is based on the members in the marketing list. The member can be an account, contact, or lead. A campaign distribution can fail for members due to one of the following reasons:

- There's no email address associated with the member.
- The email address associated with the member is invalid.
- The member has configured the **Send Marketing Material** field in the member record as **Do not send**.

Resolution

Review the detailed reason for the failure in the **Excluded members** grid, and take any necessary action.

Issue 11 - The Campaign tab isn't available in account, contact, or lead forms in Unified Interface

Cause

Because there's no direct relationship between the campaign table and accounts, contacts, or leads, the **Campaign** tab isn't available in those forms. The only way to view the campaign list is through a distributed campaign activity, because a distributed campaign activity is the true indication that a target entity is being used in a campaign.

Resolution

To resolve the issue, add the **Campaign Activities** tab to the form.

> ⓘ **Note**
>
> In this example, we're using the Account entity.

1. Go to **Advanced Settings** > **Settings** > **Customizations** > **Customize the System**.
2. From **Components**, select **Entities** > **Account** > **Forms**.
3. Open the form to which you want to add the subgrid.
4. On the form page, select the **Insert** tab, and then select **One column**.

A new column is added as a tab.

5. Select the tab, and then select **Change Properties**. The **Tab Properties** dialog opens.

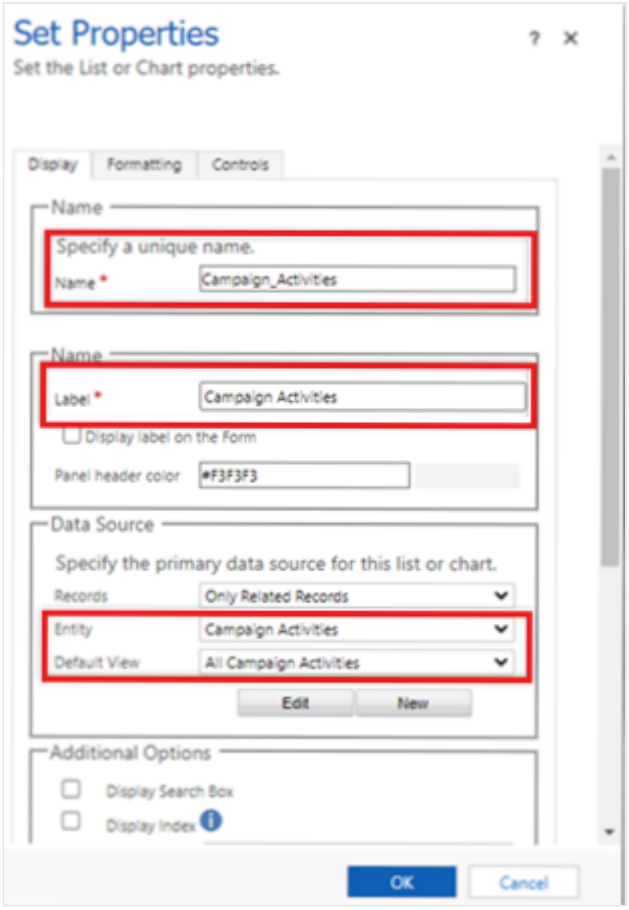
6. Enter the values for **Name** and **Label** as **Campaign Activities**, and then select **OK**. The tab is then renamed as **Campaign Activities**.

7. Select the **Campaign Activities** tab, go to the **Insert** tab, and then select **Sub-Grid**.

   The **Set Properties** dialog for the subgrid opens.

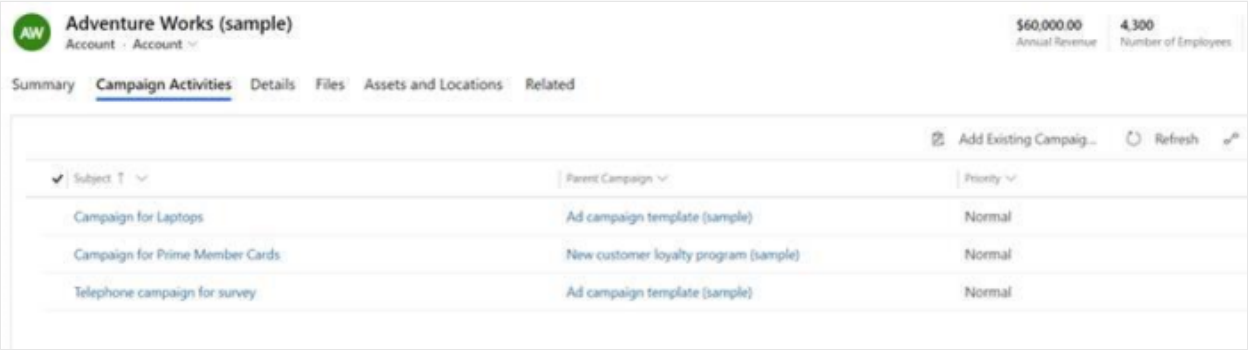
8. On the **Display** tab, enter the following information:

   - In the **Name** section, for the unique name, enter **Campaign_Activities**.
   - In the **Name** section, for **Label**, enter **Campaign Activities**.
   - In the **Data Source** section, do the following:
     - For **Entity**, select **Campaign Activities**.
     - For **Default View**, select **All Campaign Activities**.



9. Save the changes and publish the form.

To verify that the issue has been resolved, open the account that has been used in campaigns and has some distributed campaign activities. Select the **Campaign Activities** tab to verify that the related campaign activities appear.



Issue 12 - User is getting timed out when trying to delete a static marketing list

Cause

Deletion of a static marketing list with a large number of members (more than 50,000) takes much time, and results into a time-out.

Resolution

It's recommended to first remove all members from the marketing list by using Remove using Advanced Find, and then delete the marketing list. For the better performance of application and avoid time outs, remove the members in the marketing list in groups of 10,000 at a time. For example, if there are 20,000 members in a marketing list and you want to remove the members. Remove 10,000 members first and then remove the other 10,000.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with Unified Interface

Article • 09/09/2022

This article helps you troubleshoot and resolve issues related to Unified Interface.

Issue: Out-of-the-box or custom entities appear as read-only in Unified Interface apps

Some out-of-the-box and custom entities are appearing as read-only in the Sales Hub app (Unified Interface). However, these entities are editable in the legacy web client. Some out-of-the-box buttons are also unavailable on the forms in Unified Interface.

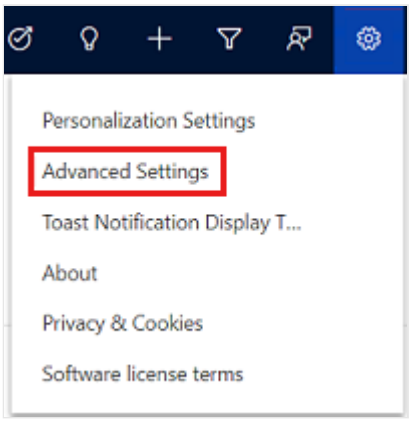
Cause

This could happen when an entity is set to be read-only in Unified Client.

Resolution

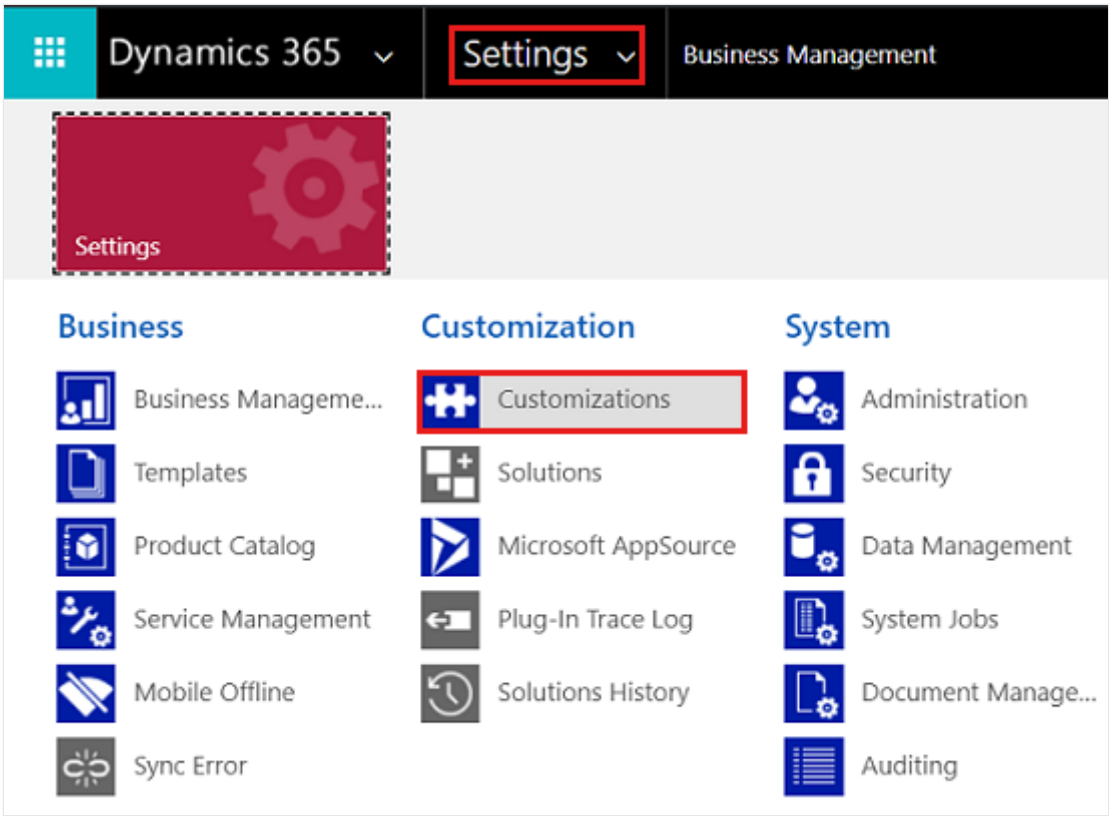
To resolve this issue, follow these steps:

1. On the navigation bar in your app, select the **Settings** icon and then select **Advanced Settings**.

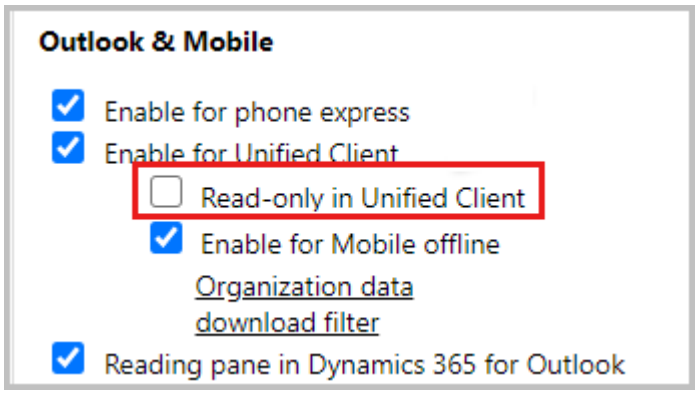
   

   The **Business Management** page opens in a new browser tab.

2. On the navigation bar, select **Settings** and then select **Customizations**.



3. On the **Customization** page, select **Customize the System**.
4. In the solution explorer, under **Components**, expand **Entities** and then select the specific entity that's appearing as read-only.
5. On the **General** tab, under **Outlook & Mobile**, clear the **Read-only in Unified Client** check box.



6. Save and publish the customizations.
7. In the Sales Hub app, refresh the window.

All the out-of-the-box actions will be available and entities will be editable.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with the Sales Pipeline chart and its phases in Dynamics 365 Sales

Article • 09/09/2022

This article helps you troubleshoot and resolve issues related to the Sales Pipeline chart and its phases.

The Sales Pipeline chart consists of pipeline phases of an opportunity. The phase is based on the stage of the business process flow the opportunity is in, such as 1-Qualify, 2-Develop, and so on. For more information, see Understand the sales pipeline chart and its phases.

Issue 1 - Multiple pipeline phases with different sequences, such as 6-Close and 7-Close

Cause

This issue can occur if you've changed the sequence of a stage category option (for example, you changed **Close** from 6 to 7). Existing opportunities that moved to the **Close** stage before you made this change will continue to show the same pipeline phase value that was set when they moved to the **Close** stage. However, opportunities that move to the **Close** stage after you made this change will use the new sequence for the **Close** stage.

Resolution

You can resolve this issue by resetting the values for older opportunities either by changing the stage of the business process flow to some other stage and then bringing it back to the **Close** stage, or by updating the **stepname** attribute of the opportunity programmatically.

Issue 2 - Pipeline phase values from multiple business process flow definitions

Cause

This is to be expected if you use multiple business process flow definitions for the Opportunity entity. The out-of-the-box pipeline phase attribute is set on every stage change in the business process flow of the **Opportunity** record, irrespective of how many business process flows are associated with that record.

Resolution

If you have multiple business process flows, consider adding a custom field to the Opportunity Sales Process and setting its value programmatically for the stage changes you require in the business process flow for the opportunity.

Issue 3 - The sales pipeline chart ordering is displayed differently in Unified Interface vs. the legacy web client

The legacy web client displays the chart by using the value of the associated category option, whereas in Unified Interface the stages are displayed alphabetically. Because the pipeline phases are prefixed with the order defined in the **Stage category** option set, they're displayed according to the category option sequence (1, 2, and so on).

Issue 4 - The stages are not sorted numerically when the number of stages are beyond 9

Cause

Charts in Unified Interface are sorted alphabetically. When you've sales stages beyond 9, (for example: 10-OnHold, 11-Pipeline), those stages appear in the chart before any stage which starts with 2. In other words, the chart renders all the phases with first character as 1 and then displays the phases starting with 2 and so on.

Resolution

To resolve this issue, you must set up a custom attribute/column and populate it based on the chart requirements. For more information, see How to create and edit columns.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with emails

Article • 09/09/2022

This article helps you troubleshoot and resolve issues related to emails in Dynamics 365 Sales.

Issue: Email editor shows incorrect title in contextual email popup window

After upgrading to Dynamics 365 2020 release wave 2, the email editor shows incorrect title in contextual email popup window.

Cause

For out of the box email forms, the `onload` and `onchange` events are triggered that helps in updating email title and other attributes in the contextual email popup. If you have a custom email form or an unmanaged layer form, the `onload` and `onchange` events won't be available. Therefore, the email title is displayed incorrectly.

Resolution

To resolve this issue, you must add the `onload` and `onchange` events to the custom email forms.

1. Create a new solution.
2. Add the custom email form to the newly created solution.
3. Export the solution.
4. Add the following code in the form's XML:

XML

```
<events>
    <event name="onload" application="true" active="true">
        <InternalHandlers>
            <Handler functionName="Activities.Email.formOnload"
libraryName="Activities/SystemLibraries/Email_main_system_library.js"
handlerUniqueId="ecdfe4d8-d6d3-4d21-ab68-8ea75bb30a79" enabled="true"
parameters="" passExecutionContext="true" />
            <Handler
functionName="Activities.Email.NotifyPanelSubjectChange"
```

```
libraryName="Activities/SystemLibraries/Email_main_system_library.js"
handlerUniqueId="{706607A8-4424-4C9A-847A-602FC8035B48}" enabled="true"
parameters="" passExecutionContext="true" solutionaction="Added"/>
        </InternalHandlers>
    </event>
    <event name="onchange" application="true" active="true"
attribute="subject" solutionaction="Added">
        <Handlers>
            <Handler
functionName="Activities.Email.NotifyPanelSubjectChange"
libraryName="Activities/SystemLibraries/Email_main_system_library.js"
handlerUniqueId="{706607A8-4424-4C9A-847A-602FC8035B48}" enabled="true"
parameters="" passExecutionContext="true"/>
        </Handlers>
    </event>
</events>
<clientresources>
    <internalresources>
        <clientincludes>
            <internaljscriptfile
src="$webresource:Activities/SystemLibraries/Email_main_system_library.
js" />
        </clientincludes>
    </internalresources>
</clientresources>
```

5. Import the solution.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with the Sales Premium features

Article • 09/09/2022

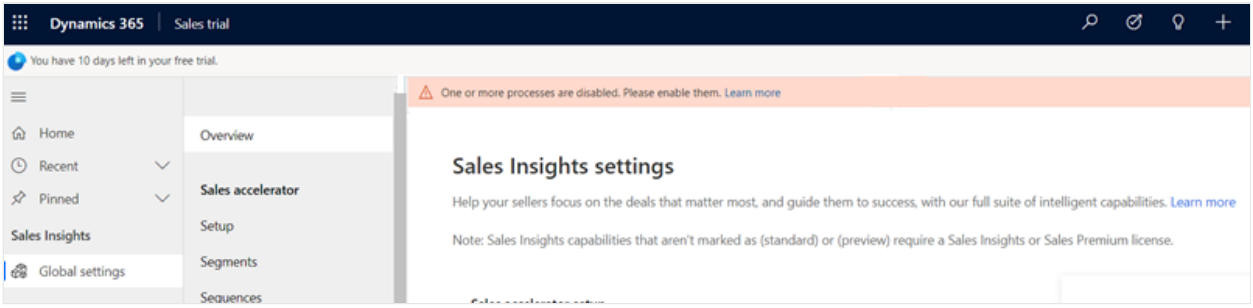
This article helps you troubleshoot and resolve issues related to the Sales Premium features.

Issue: Can't install or Sales Insights features doesn't work as defined

Cause

This issue could occur when some of the processes that are related to Sales Insights are disabled in your organization and a warning message is displayed in the **Sales Insights settings** page as shown below:

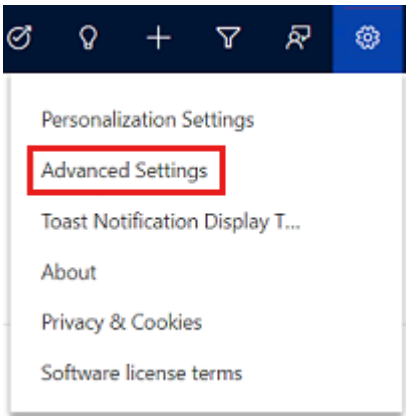
> One or more processes are disabled. Please enable them.



Resolution

To solve this issue, enable the Sales Insights processes that are disabled. Follow these steps:

1. In your app, select the **Settings** icon, and then select **Advanced Settings**.



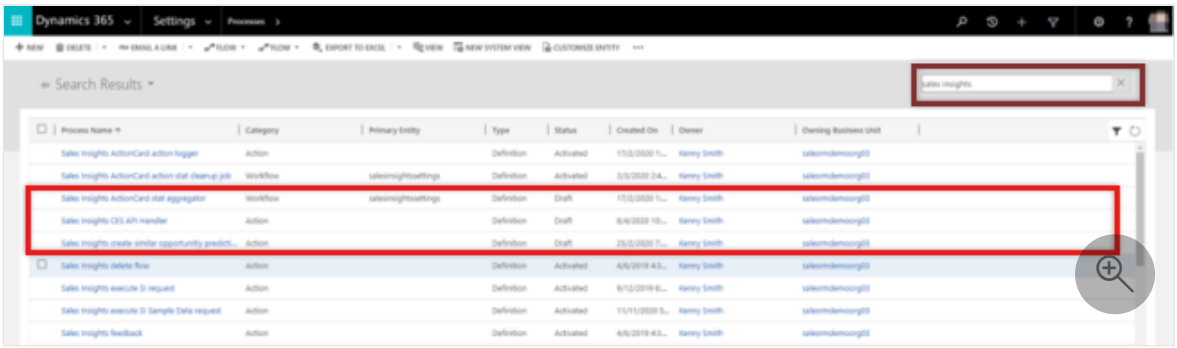
The **Business Management** page opens.

2. On the navigation bar, select **Settings**, and then under **Process Center**, select **Processes**.

3. On the **Processes** page, choose the **All Processes** view and the search for sale insights.

   A list of Sales Insights processes is displayed.

4. Verify that the statuses of all Sales Insights processes are in **Activated** state. In this example, you can see that the **Sales Insights ActionCard stat aggregator**, **Sales Insights CES API Handler**, and **Sales Insights create similar opportunity prediction model** processes are in draft state.



5. Select the processes that are in **Draft** state and activate.

Feedback

Was this page helpful? Yes No

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Troubleshoot issues with Dynamics 365 Sales Professional

Article • 09/09/2022

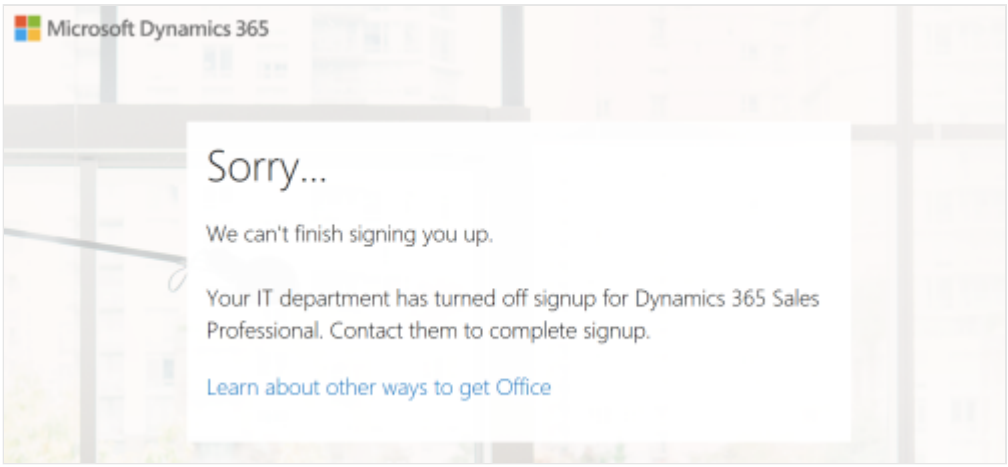
Use the following troubleshooting topics to quickly find information to solve your users' issues.

Issue 1 - Can't sign up for a Sales Professional trial

Cause

If your Microsoft 365 tenant administrator has disabled trial sign-up for your organization, you'll see the following error message:

> Your IT department has turned off signup for Dynamics 365 Sales Professional Trial. Contact them to complete signup.



There are two ways that the tenant administrator can prevent users from performing self-service sign-up:

- Prevent email sign-ups for the tenant by using the `AdHocSubscriptionsNotAllowed` parameter
- Prevent new users to be created within the tenant (`NewUsersNotAllowed`).

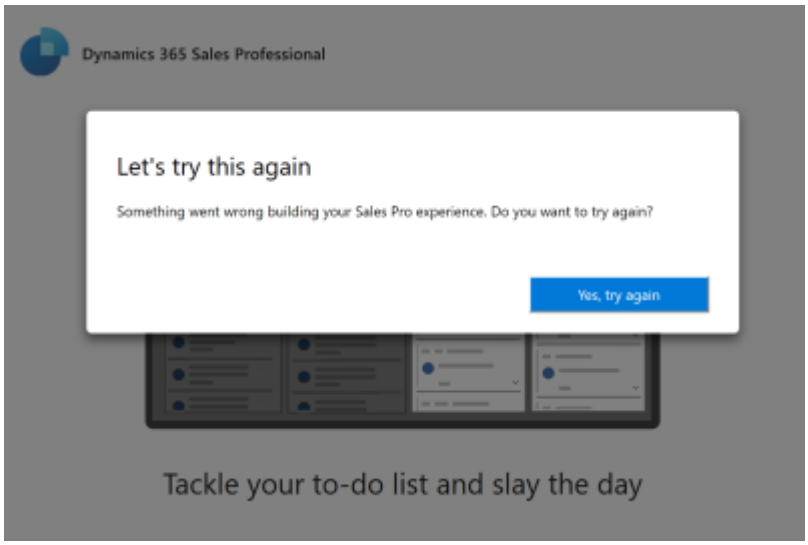
Resolution

Contact your IT department and work with them to help you sign up.

Issue 2 - "Something went wrong building your Sales Pro experience. Do you want to try again?" error occurs when signing up

When you sign up, you receive the following error message:

> Something went wrong building your Sales Pro experience. Do you want to try again?



Cause

There are several possible reasons for this error:

- You've already signed up for the Sales Professional application for your tenant, and are trying to sign up again by using other credentials for the same tenant before the expiry of the first trial instance.
- You aren't using the complete sign-up URL, but are using the reply URL present in the sign-up URL. For example, you're using `https://salesprotrial.dynamics.microsoft.com` instead of https://signup.microsoft.com/Signup?sku=9c7bff7a-3715-4da7-88d3-07f57f8d0fb6&RU=https://salesprotrial.dynamics.microsoft.com.
- The Sales Professional trial license that's assigned to you as part of the sign-up process isn't synced with Azure Active Directory.

Resolution

Try the following steps to resolve this issue:

1. Clear your browser cache, and close the browser.
2. Wait for at least five minutes, and then open the browser in private browsing mode.
3. Use the full sign-up URL.

Feedback

Was this page helpful? Yes No

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Frequently asked questions about Dynamics 365 Sales

FAQ

Licenses

What's the difference between Sales Premium and Sales Insights?

Sales Premium, like Sales Enterprise, is a type of license. Sales Insights is an add-in for Dynamics 365 Sales. Sales Premium includes all Sales Enterprise capabilities and premium Sales Insights capabilities. Sales Enterprise includes basic Sales Insights capabilities. For a detailed comparison of the capabilities in each license, go to the **Compare Dynamics 365 Sales plans** section on the Pricing page.

Where can I find the comparison chart for Dynamics 365 Sales licenses?

The following license options are available for Dynamics 365 Sales:

- Sales Premium
- Sales Enterprise
- Sales Professional

For a detailed comparison of the capabilities available with each license, go to the **Compare Dynamics 365 Sales plans** section on the Pricing page.

Can I use the Sales Hub app with the Sales Professional license?

No, the Sales Hub app is only for the Sales Enterprise and Sales Premium customers. Though this app may be visible in Sales Professional environments, the users aren't entitled to use it. Sales Professional users are entitled to use only the Sales Professional app. We recommend that you hide or delete the Sales Hub app to avoid any accidental usage.

Where can I find the Sales Professional and Sales Insights documentation?

We've merged the documentation for Sales Enterprise, Sales Professional, and Sales Insights into this unified Sales documentation. The license and role requirements section at the top of an article indicates whether the content applies to the license you have. Any bookmarks you have should automatically redirect to the corresponding pages in the new unified documentation.

Entity - Activity

I'm redirected to the default tab when I save an appointment from a non-default tab. Why?

This is by design. If the SchedulingEngine feature is enabled for appointments, you are redirected to the default tab, when you save the appointment from a non-default tab.

Why are appointments saved automatically even when there's a custom script to stop automatic saving?

This is by design. If the SchedulingEngine feature is enabled for appointments, the system overrides any custom script and saves the appointments automatically.

Why does the Open Record Set button disappear when an appointment is saved?

If the SchedulingEngine feature is enabled for appointments, the **Open Record Set** button disappears when you select **Save** but reappears when you refresh the page. For more information, go to Open Record Set.

Why are synchronized appointments from Outlook shown as unsaved in Dynamics 365?

This is by design. Disable the automatic save option in Dynamics 365 to show synchronized appointments from Outlook as saved in Dynamics 365.

Why can't I see the What's new functionality in Unified Interface?

This is by design. The What's new functionality is only available in the legacy web client. The equivalent in Unified Interface is to insert the Timeline control (with posts enabled) on the dashboard:

1. In your app, select **Settings** , and then select **Advanced Settings**.

   The **Business Management** page opens in a new browser tab.

2. On the navigation bar, select **Settings**, and then under **Customization**, select **Customizations**.

3. Select **Customize the System**.

4. Under **Components** in the solution explorer, select **Dashboards**.

5. Select and open the dashboard to which you want to add the Timeline control.

6. On the toolbar at the top of the page, select **Timeline**.

7. Update the **Timeline Control Properties** as required, and then select **OK**.

8. Save the dashboard, and then publish the customization.

Entities - Lead, opportunity, quote, order, invoice

Where is the deal manager workspace?

The deal manager workspace has been replaced by the opportunity pipeline view. All deal manager links or bookmarks are automatically redirected to the **My Open Opportunities** view. Select **Show As** > **Pipeline view** to open the opportunity pipeline view.

Are there any differences between the opportunity pipeline view and the deal manager workspace?

Yes. The following table describes the differences between the deal manager workspace and the opporunity pipeline view.

Component	Opportunity pipeline view	Deal manager
Access control	Available for all users who have access to the Opportunities page.	Available only for security roles that were granted access to the workspace.
Editable grid	Uses the Power Apps editable grid control and can be customized in Power Apps.	Customization was done using JavaScript.
Side panel	Uses the default opportunity form in the side panel.	A separate **In Context View** form was used in the side panel with limited customizations.

Why can't I find the pipeline view option?

There are several possibilities:

- The **Show As** option may be hidden in the three-dot menu on the **Opportunities** page.
- Your administrator might have customized the **Show As** list. Ask your administrator to add the control.
- Your organization might not have opted in to early access features. Contact your administrator if you'd like to try them out.
- Your administrator might have disabled custom views for opportunities. Ask your administrator to add the view manually.

What's the difference between the duplicate detection capability in Power Platform and Dynamics 365 Sales?

Power Platform detects duplicates by comparing the matchcode that's created for each record. For more information, go to Detect duplicate data so you can fix or remove it.

Dynamics 365 Sales detects duplicates with an AI model that compares leads using fuzzy logic and the matchcode that's generated for each lead.

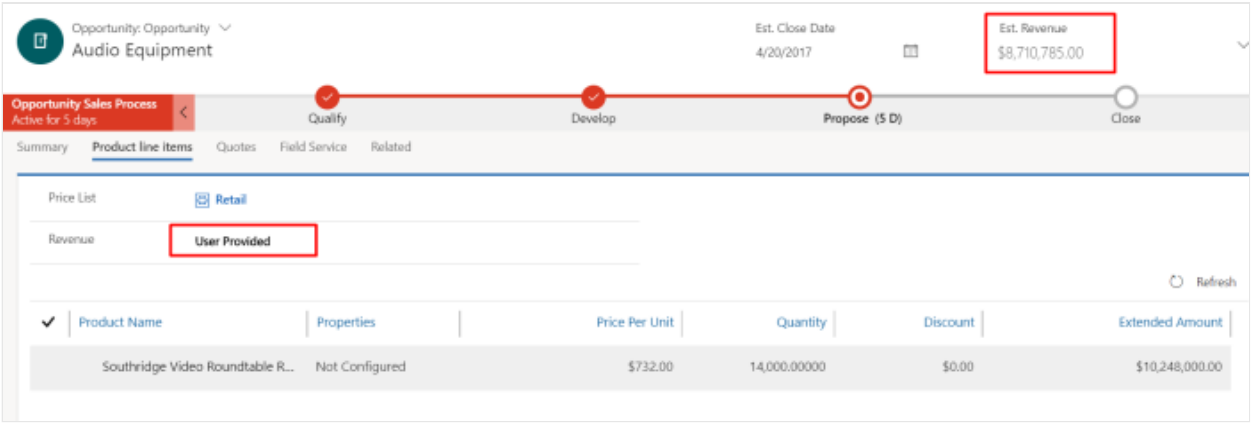
The following table shows an example of the two methods for detecting duplicates.

Rule type	Applied for
Fuzzy logic	- Similar lead name and company name - Similar lead name and the same email domain
Matchcode	- Email address - Phone number

For more information, go to Enable duplicate lead detection.

Why can't I edit Est. Revenue in the Opportunity form?

To edit **Est. Revenue** in the **Opportunity** form, **Revenue** must be set as **User Provided** and the opportunity must be in an **Open** state.



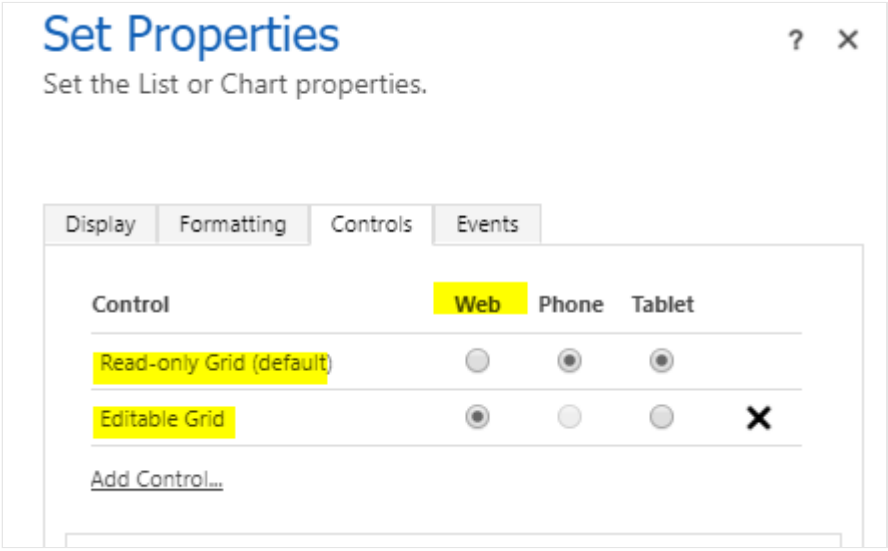
Why aren't estimated revenue and total amount calculated automatically?

When you add products to an opportunity, quote, order, or invoice, the **Est. Revenue** and **Total Amount** fields are automatically updated only if you've selected system pricing calculation. For more information, go to Configure product catalog settings.

Entities - Opportunity Product, Quote Product, Order Product, and Invoice Product

Why can't I make inline edits or see grid actions like move up or move down in the Product subgrid?

If you select a view other than **Opportunity Product Inline Edit View** in the legacy web client, you can't make inline edits or see grid actions like move up, move down, and lock icons. This is by design. The inline edit view is available in Unified Interface. To verify whether a grid can be edited, go to **Grid control properties**.



> **Note**
>
> - In Unified Interface, the behavior of the grid columns **Price Per Unit** and **Quantity** as editable or non-editable is independent of the view that's selected.
> - An editable grid doesn't guarantee that all columns are editable; it depends on the **Pricing**.

Why are some fields editable while some are locked in the product subgrid?

There are certain restrictions on inline editing, based on the type of product in the Products subgrid for opportunity, quote, order, and invoice:

- If it's an individual (unbundled) product and it exists in the product catalog, all fields except **Quantity** and **Discount** are locked for editing.

- If it's an individual product and it exists in the product catalog as a write-in, all fields except **Product Name**, **Quantity**, and **Discount** are locked for editing.
- If it's a product bundle or an optional item in a bundle, all fields except **Quantity** and **Discount** are locked for editing.
- If it's a required product in a bundle, all fields are locked for editing.

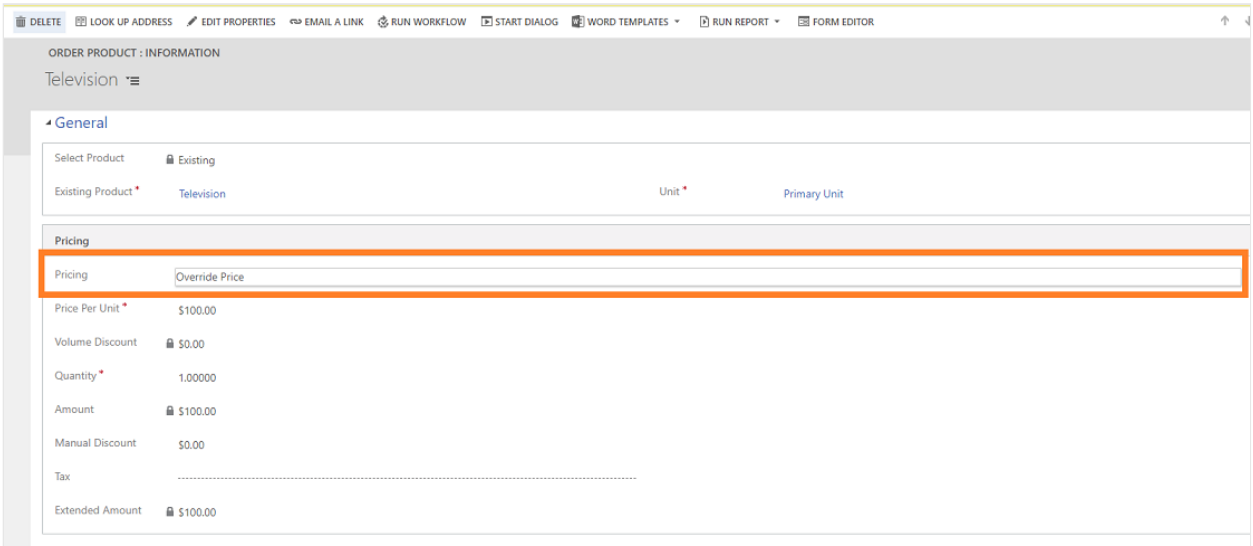
How can I set the default pricing to override price on the product form?

To set the value of the default **Pricing** as **Override Price** on the opportunity, quote, order, or invoice product form, follow these steps:

1. Go to **Settings** > **Customizations** > **Customize the System**.
2. Select **Entities** > **Opportunity Product** > **Fields**.

   > ⓘ Note
   >
   > For quote, order, and invoice, select **Quote Product**, **Order Product**, and **Invoice Product** forms respectively.

3. Select **ispriceoverridden**, and then set **Default Value** to **Override Price**.
4. Save and publish the customizations.



Why can't I update the owning business unit for opportunity products?

There's no direct relationship between business units and opportunity products. The owning business unit for opportunity products is automatically inherited from the parent opportunity. So, you can't update the owning business unit at the opportunity product-level.

Product Pricing

How do I change the default value for Prices Locked?

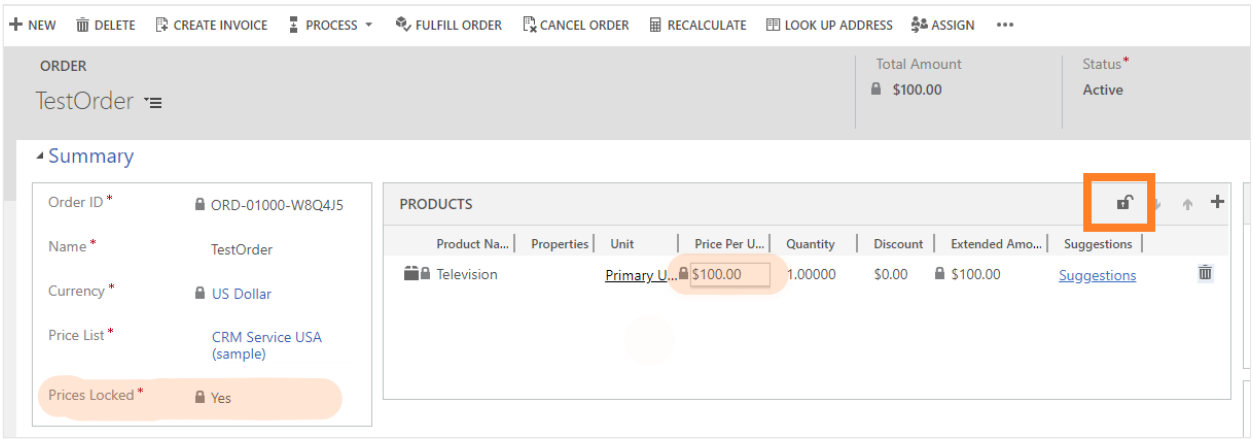
You can change the default value for **Prices Locked** in the **Order** or **Invoice** form through customizations or the inline editable grid:

1. Go to **Settings** > **Customizations** > **Customize the System**.
2. Select **Entities** > **Order** or **Invoice** > **Fields**.
3. Select **ispricelocked**, and then set **Default Value** to **No**.
4. Save and publish the customizations.

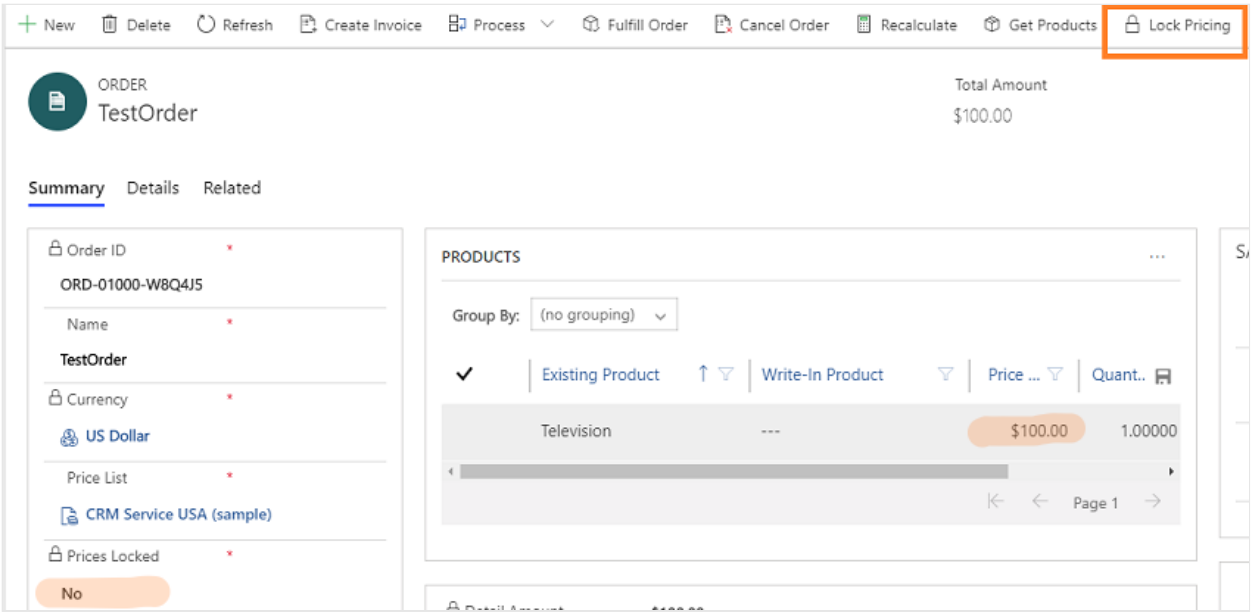
How do I change the state of Prices Locked?

To change the state of **Prices Locked**, select the **Lock** icon on the inline editable grid.

In the legacy web client:



In Unified Interface:



Why can't I change the values in the Price Per Unit column in the Products grid?

The **Prices Locked** (**ispricelocked**) setting controls whether the prices specified on the **Order** or **Invoice** form can be changed.

The following tables show the interaction between **Prices Locked** and **Price Per Unit** on editable and non-editable grids in the **Products** subgrid and **Order** product form.

For existing products:

Prices Locked	**Price Per Unit (editable grid)**	**Price Per Unit (non-editable grid)**	**Order product form**
Yes	Non-editable	Non-editable	Non-editable
No and **Pricing** is **Override Price**	Editable	Non-editable	Editable
No and **Pricing** is **Use Default**	Non-editable	Non-editable	Non-editable

For write-in products:

Prices Locked	Price Per Unit **(editable grid)**	Price Per Unit **(non-editable grid)**	Order **product form**
Yes	Non-editable	Non-editable	Non-editable
No	Editable	Non-editable	Editable

How does changing the product price in Pricelist affect Price Per Unit on the Order product form?

The following table shows the effect of changing the product price in **Pricelist** on the **Price Per Unit** of the **Order** product form.

Entity state	**IsPriceLocked**	**Pricing**	**Does** Price Per Unit **change?**
Editable	Yes	Default or Override	No
Editable	No	Default	Yes
Editable	No	Override	No
ReadOnly	Yes or No	Default or Override	No

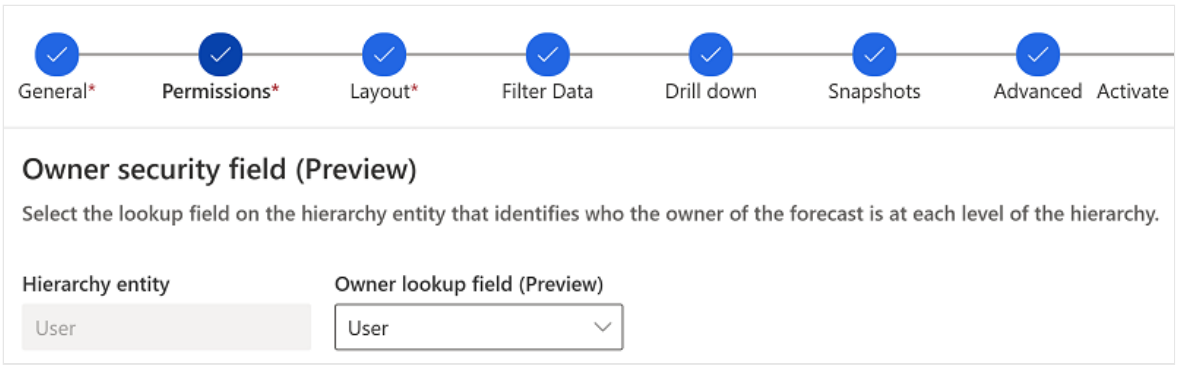
Forecasting

Who owns the forecast?

To view the forecast owner:

1. In the Sales Hub app, select **App Settings**.
2. Under **Performance management**, select **Forecast configuration**.
3. Select the forecast configuration that's related to the forecast, and then select the **Permissions** step.

4. Check the **Owner lookup field** field to determine who owns the forecast.



For more information, go to Define the forecast owner.

How do I change the forecast calculation for lost opportunities?

By default, the forecast calculation for lost opportunities is based on the actual revenue. To change it to estimated revenue, go to the **Layout** step of the forecast configuration, select the **Lost** forecast category, and then select **Est. Revenue** in the **Amount** field. For more information, go to Choose layout and columns.

Can I manually set the forecast category of an opportunity as Won or Lost?

Technically, you can. The **Opportunity** form and editable grids, other than the grid in the forecast, allow the selection of **Won** or **Lost** as forecast categories.

However, manually setting the forecast category will interfere with your forecast and rollup values, and isn't an ideal practice. For example, if you manually set the value of an opportunity to **Won** without closing the opportunity, the opportunity might not even show up in the forecast. By default, forecasts are configured to show an opportunity as **Won** only when the actual revenue and actual close date are available.

The best practice is to close the opportunity as **Won** or **Lost** and have the forecast category automatically updated. For more information, go to Close opportunities as won or lost.

Focused view

Is there any administration setup required to use focused view?

No. Focused view is available out-of-the-box and doesn't require any setup.

Is focused view available on custom apps?

Yes, focused view is available on custom apps.

How is focused view different from the system and user created views?

Focused view is a new entity layout similar to the current default grid layout, which helps the users to view all the assigned records in one area similar to the Sales accelerator workspace.

What all views can I see in focused view?

You can see all the system and user created views that are available in the grid layout.

What are the filter capabilities available in focused view?

Currently, only the grid column-level filters are available for the columns in the primary entity. For example, Lead entity-related columns on lead grid.

How can I disable focused view in my organization?

To disable the focused view in your organization, your administrator must send an email to Microsoft customer support.

Is focused view available for custom entities?

No. Currently, focused view is available only for account, contact, lead, and opportunity entities.

Text message (SMS)

Which service providers are supported?

Currently, only Telesign, Twilio, and Infobip are supported as SMS channel providers.

Can a same number be used across multiple Dynamics 365 applications such as Sales and Marketing?

No. The number must be unique for each application, although the same channel provider can be used across applications.

Can I add my teammate to an ongoing SMS conversation with my customer?

No. Currently, group SMS isn't supported as part of the SMS capability. However, a number can be assigned to a team, which can be used by the team to collaborate with a customer. All the conversations are added to the entity timeline.

Can I see if my customer has read the message or the message content?

No. Currently, you can only see if the message is delivered to the customer.

Can I send or receive SMS through my mobile device?

No. You can't send or receive SMS through your mobile device.

Who can see an incoming SMS notification if the number is assigned to a team?

In this case, all the users see the notification and can choose to respond to the customer. If a message comes from an unknown number, only the team admin gets the notification. Team members can view the message only in the **Activities** page.

Frequently asked questions about Sales Premium

Article • 09/13/2023

Licenses and storage

What's the difference between Sales Premium and Sales Insights?

Sales Premium refers to the license. Sales Insights refers to the capabilities. The Sales Premium license includes both Sales Enterprise and Sales Insights capabilities. Basic Sales Insights capabilities are also available with the Sales Enterprise license.

Where can I find the comparison chart for Dynamics 365 Sales licenses?

The following license options are available for Dynamics 365 Sales:

- Sales Premium
- Sales Enterprise
- Sales Professional

For a detailed comparison of each license, go to the **Compare Dynamics 365 Sales plans** section on the Pricing page.

After I installed Sales Insights, I see a spike in the data usage. How much storage data does Sales Insights need?

When you install Sales Insights, corresponding analytics tables are created for contacts, opportunities, leads, accounts, and activityparty tables. The storage requirement for these analytics tables is directly proportional to the amount of data in Dataverse. The tables are stored as files in the managed data lake and will be counted against your total file storage quota. For more information, see New Microsoft Dataverse storage capacity.

General

In which region is Sales Premium available?

Sales Premium is available in the following countries or regions:

- Asia Pacific (APJ)
- Canada (CAN)
- Europe, the Middle East, and Africa (EMEA)
- France (FRA)
- Great Britain (GBR)
- India (IND)
- Japan (JPN)
- North America (NAM)
- Oceania (OCE)
- South Africa (ZAF)
- South America (SAM)
- Switzerland (CHE)
- United Arab Emirates (UAE)

Sales Premium isn't available in the following datacenters:

- Germany
- Korea
- Norway
- Government Community Cloud (GCC), including USG
- Department of Defense (DoD)
- China

In which region are the features available?

The following table lists the regions in which Sales Premium features are available.

Feature	NAM	EMEA	GBR	APJ	CAN	IND	JPN	OCE	CHE	FRA	SAM	ZAF	UAE
Assistant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conversation intelligence	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Notes analysis	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Premium forecasting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Predictive	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Feature	NAM	EMEA	GBR	APJ	CAN	IND	JPN	OCE	CHE	FRA	SAM	ZAF	UAE
lead scoring													
Predictive opportunity scoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Relationship analytics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sales accelerator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Who knows whom	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	No	No	No

> ⓘ Note
>
> **Basic who knows whom** information is available in all regions. However, **enhanced who knows whom** information is available only in the regions listed in the table.

Which version of Exchange is supported for features in Sales Premium?

The following table shows the version of Exchange that's supported for Sales Premium features.

Feature	Exchange Online	Exchange Server 2013 and above	Is Exchange required?
Relationship analytics and health	Yes	No	No
Assistant	Yes	No	No
Email engagement	Yes	Yes	Yes
Who knows whom	Yes	No	Yes

> ⓘ Note
>
> - The assistant and relationship analytics can work without Exchange. However, the information displayed in relationship analytics won't contain Exchange data and the assistant won't display cards that are based on Exchange data.

- For relationship analytics, support for Exchange Online is available only in North America (NAM) and Europe, the Middle East, and Africa (EMEA).
- For who knows whom, the organization's Office 365 data location must be in one of the following locations and not in your region specific data canter location:
  - Global Geography 1 – EMEA (Austria, Finland, France, Ireland, Netherlands).
  - Global Geography 2 – Asia Pacific (Hong Kong SAR, Japan, Malaysia, Singapore, South Korea).
  - Global Geography 3 – Americas (Brazil, Chile, United States).

    To learn more on data center locations, see **Data Center Locations**.

What languages are supported?

The following table shows which languages are supported for Sales Premium features.

Feature	Language supported
Assistant, Assistant studio, Auto capture, Email engagement, Predictive lead scoring, Predictive opportunity scoring, Premium forecasting, Relationship analytics, Sales accelerator, and Who knows whom	Arabic, Basque, Bulgarian, Catalan, Chinese Simplified (PRC), Chinese Traditional (Hong Kong SAR), Chinese Traditional (Taiwan), Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, Galician, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Kazakh, Korean, Latvian, Lithuanian, Malay, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Serbian (Cyrillic), Serbian (Latin), Slovakian, Slovenian, Spanish, Swedish, Thai, Turkish, Ukrainian, and Vietnamese.
Notes analysis	English, French, German, Italian, and Dutch for machine learning models.
Exchange insight cards in Assistant	Only English - United States (en-US) for machine learning models.
Activity-content based Auto capture	- For activity suggestions, the body of emails and meetings are analyzed in English, French, German, Italian, Dutch, and Norwegian.
Conversation intelligence	Go to Languages supported for conversation intelligence

Learn more about infrastructure availability (PDF) .

Where is my organization's data stored?

The following table shows where your data is stored, depending on the region where your organization is hosted.

Region	Primary Azure datacenter location	Secondary Azure datacenter location
Asia Pacific (APJ)	South East Asia (Singapore)	East Asia (Hong Kong SAR)
Canada (CAN)	Canada Central (Toronto)	Canada East (Quebec City)
Europe, the Middle East, and Africa (EMEA)	West Europe (Netherlands)	North Europe (Ireland)
France (FRA)	France Central (Paris)	--
Great Britain (GBR)	UK South (London)	UK West (Cardiff)
India (IND)	Central India (Pune)	South India (Chennai)
Japan (JPN)	Japan East (Tokyo, Saitama)	Japan West (Osaka)
North America (NAM)	East US (Virginia)	West US 2 (Washington)
Oceania (OCE)	Australia East (New South Wales)	Australia Southeast (Victoria)
South America (SAM)	Brazil South	Brazil Southeast
Switzerland (CHE)	Switzerland North	Switzerland West

More information: Azure Regional Pairs

Which users can push data from Dynamics 365 Sales to Dataverse?

The Dynamics 365 Sales data is pushed to Dataverse to generate insights such as, predictive scoring, relationship analytics, who knows whom, and predictive forecasting. A set of predefined system and application users are used to push data from Dynamics 365 Sales to Dataverse. For more information, see System and application users.

Why are my entities updated by some application users?

System and application users update certain entities with insights about the records. For example, lead and opportunity entities are updated by the application users to add predictive scores. Similarly, contact, opportunity, lead, and account entities are updated with relationship KPIs and analytics. More information: Which users can push data from Dynamics 365 Sales to Dataverse?

Digital selling

What's the capacity limit on using digital selling capabilities?

When you set up Sales Premium features using your Dynamics 365 Sales Enterprise license, the features are available with the following capacity limits:

- Access to the workspace and up to 1,500 records connected to any defined sequence per environment per month. Manual activities not connected to a sequence will also be displayed without a capacity limit.
- Predictive scoring for 1,500 lead or opportunity records scored per environment, per month.

How can I get the full capacity of digital selling capabilities?

If you need more capacity, upgrade to Dynamics 365 Sales Premium. Learn more about Dynamics 365 Sales pricing.

Assistant

Why am I getting an "insufficient permissions" alert while using an insight card?

If you see an alert about having insufficient permissions to use an Insight card, take these steps:

1. Go to **Settings** > **Security** > **Security Roles**.
2. Choose the user role viewing the insight cards.
3. Select the **Core Records** tab.
4. Set the privileges to Read and Write access for **Action card** and **Action card User Settings**.

Why am I getting a "contact administrator" error while authenticating credentials in assistant studio?

Your organization's policies are restricting third-party tools to access user information. To resolve the issue, use the Azure portal to provide consent for yourself for third-party tools to access your data. To provide consent for the entire organization, contact your tenant administrator. Select the enterprise application as **Dynamics 365 Sales Insights** in Azure portal while providing the consent. Learn how to grant admin consent in Enterprise apps.

Sales accelerator

How do I add the Up next widget to an entity form?

> **Note**
>
> You can add the **Up next** widget only to managed entity forms.

1. Go to **Settings** > **Solutions** and then create an empty solution. For example, **AddWidget**.
2. Add a **Form** to the solution.
3. Save the changes and publish the customizations.
4. Export the created **AddWidget** solution as **UnManaged**.
5. Delete the solution **AddWidget** from the organization.
6. Extract the zip file of the downloaded solution.
7. In the file `Solution.xml`, change the `<Managed>` value to 1 and then save. `<Managed>1</Managed>`
8. In the `customizations.xml` file, remove the parameter `<systemform unmodified="1">`.

9. Choose the `<column>` under the **Summary** tab, where you want to add the widget.

10. Add the `<section>` tag as follows:

XML

```
<section name="CadenceWidget" showlabel="false" showbar="false" id="
{<NEW_GUID_G1>}" IsUserDefined="0" layout="varwidth" columns="1"
labelwidth="115" celllabelalignment="Left" celllabelposition="Left"
labelid="{<NEW_GUID_G2> }">
  <labels>
      <label description="Cadence Widget" languagecode="1033" />
  </labels>
  <rows>
      <row>
          <cell id="{<NEW_GUID_G3>}" showlabel="false" colspan="1"
rowspan="6" labelid="{<NEW_GUID_G4> }">
              <labels>
                  <label description="Cadence widget"
languagecode="1033" />
              </labels>
              <control id="CadenceWidgetControl" classid="{F9A8A302-
114E-466A-B582-6771B2AE0D92}"  uniqueid="{<NEW_GUID_G5>}"
isunbound="true">
                  <parameters />
              </control>
          </cell>
      </row>
      <row />
      <row />
      <row />
      <row />
      <row />
  </rows>
</section>
```

11. Replace all the `<NEW_GUID_G>` occurrences by generating a new GUID for each place.

12. For `<controlDescriptions>` node, add a child node as following:

XML

```
<controlDescription forControl="{<GUID_G5>}">
<customControl formFactor="2"
name="MscrmControls.AcceleratedSales.CadenceWidgetControl">
    <parameters />
</customControl>
<customControl formFactor="0"
name="MscrmControls.AcceleratedSales.CadenceWidgetControl">
    <parameters />
</customControl>
<customControl formFactor="1"
```

```
name="MscrmControls.AcceleratedSales.CadenceWidgetControl">
    <parameters />
</customControl>
</controlDescription>
```

13. Replace the `<GUID_G5>` in `customizations.xml` with the **GUID_G5** generated from **step 11**.
14. Save the changes and zip the folder.
15. Open Dynamics 365 and go to **Settings** > **Solutions**.
16. Import the zipped solution.
17. Publish all customizations.
18. Verify that the **Up next** widget successfully shows up on the form.

How to add sales accelerator to the site map in your custom app

Use the site map designer from the app designer to add the sales accelerator site map to your custom app. More information: Add the sales accelerator site map entry to custom app.

Relationship analytics and health

Which data is used to generate basic relationship insights?

Basic insights:

Uses email, phone call, and appointments sent or received in Dynamics 365.

Enhanced insights:

Uses email, phone call, and appointments sent or received in Dynamics 365 and Exchange (if configured).

What is the frequency of KPI updates?

Basic insights:

Updated in near real-time—as soon as a related activity is marked as completed in Dynamics 365.

Enhanced insights:

Updated every 24 hours.

What are the signals in relationship health?

Relationship health looks at activity, recency, engagement, and sentiment of activities between sellers and customers.

Is Office 365 consent mandatory for the relationship intelligence feature to work?

Office consent isn't mandatory for relationship analytics, health score, and who knows whom. You'll get basic relationship insights based on the data in Dynamics 365. When you provide consent in Office 365 to use Exchange data, you'll get more accurate and complete relationship information.

What happens if I select the Exchange checkbox but the Office 365 admin hasn't provided the consent?

The data from Exchange isn't collected until the consent is provided. Work with your Office 365 administrator to get the consent. Learn more about providing consent for collecting Office 365 data

I see that the Exchange checkbox is selected, though I hadn't selected it or provided the required consent for it in the past.

With the recent changes to the relationship intelligence feature, the Exchange checkbox is selected by default for all the existing customers. However, no data will be collected from Exchange until your Office 365 administrator provides consent. You can clear the checkbox if you aren't planning to integrate with Exchange.

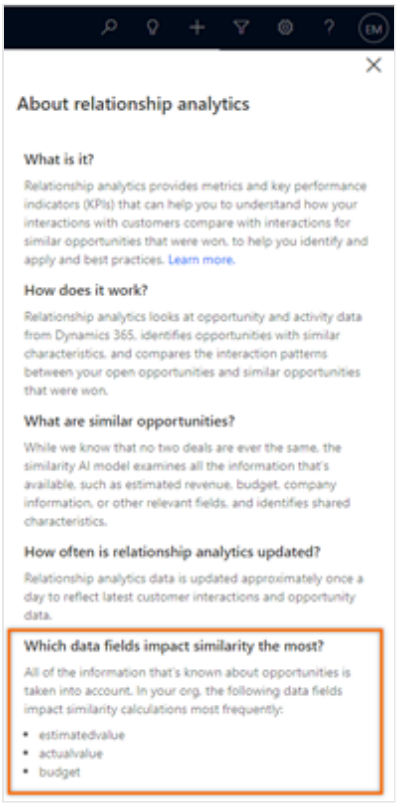
Can I influence the relationship health score?

An administrator can influence the relationship health score by changing the weight of activity types and the expected level of communications with customers. More

information: Configure relationship analytics and health

How are similar won deals identified?

AI models identify the factors that affect the identification of similar won deals. The factors may differ from organization to organization based on the custom and out-of-the-box fields. To view the fields that determined the similar won deals at that point in time, select the information icon corresponding to any section heading.



Predictive lead and opportunity scoring

What do I need in order to use lead and opportunity scoring?

Install Dynamics 365 Sales Insights and use the standard lead entity or the standard opportunity entity. A minimum number of leads or opportunities is required to build a scoring model:

To build a lead scoring model, you need to have a minimum of 40 qualified and 40 disqualified leads.
To build an opportunity scoring model, you need to have a minimum of 40 won and 40 lost opportunities.

The leads and opportunities must have been created on or after January 1, in the previous year.

How frequently are the predictive scores updated?

Lead scores: For new leads, the scoring happens in near real-time. The score will be displayed within five minutes of saving a new lead. For updated leads, the scores are refreshed after every 24 hours.

Opportunity scores: For new and updated opportunities, the scores are refreshed after every 24 hours.

Why aren't my leads scored in real-time?

Real-time scoring is supported only for new leads. If you don't see the score even after 15 minutes of saving or importing the new lead, contact your administrator. Your administrator can verify whether the model that's scoring the new lead was created or edited, and published after the real-time scoring feature was rolled out. For more information, see Real-time scoring.

Can I customize the model?

Yes, you are able to modify which attributes are selected to train the model. That said, the out-of-the-box model automatically selects the attributes it determines are most relevant for your business.

Can I create multiple models for leads and opportunities?

Yes, you can add and publish multiple models that are specific to each line of business in your organization.

What is the difference between score and grade?

The score is generated by the machine learning model.
The grade is just grouping scores in four buckets that the admin can configure.

Notes analysis

What does Notes analysis look at for the intent?

Notes analysis looks at notes and posts on the timeline for the intent that may indicate a record should be created. Notes analysis looks for meeting requests, meetings, tasks, and contacts.

Auto capture

How long does the application take to display captured suggestions?

For activities, the suggestions are displayed immediately.

Who knows whom

Why am I not seeing some of my colleagues in the who knows whom suggestions?

If you know that a colleague has interacted with a customer but their information is not shown in Who Knows Whom widget, it could be due to the following reasons:

Basic insights:

Displays only the top five users who contacted the customer the most through emails and appointments in Dynamics 365. So, colleagues who have contacted through phone calls and those who had fewer interactions through emails and appointments will not be listed.

Enhanced insights:

- Those colleagues are not a part of your Dynamics 365 organization.
- Those colleagues are not a part of the security role that's enabled for relationship intelligence.
- Those colleagues are a part of the security group that your Office 365 admin has opted out.
- Those colleagues have explicitly opted out of sharing their data.

See also Which colleagues show up as connections?

How long does it take for suggestions to appear?

Basic insights:

Who knows whom suggestions are available out-of-the-box if the email and appointment data is available in Dynamics 365.

Enhanced insights:

After your Microsoft 365 admin provides consent, you'll start seeing the results within a day. However, the suggestions may not be complete right away as the data will be processed in batches over a period of four days.

Which colleagues show up as connections?

Basic insights:

Users who have contacted the customer the most through emails and appointments in Dynamics 365.

Enhanced insights:

Users in your organization who have frequently and recently interacted with the contact or lead show up as connections, unless they have opted out. Administrators have the option to opt out groups such as C-suite, M&A, finance, and so on. Users can opt out by turning off data sharing with Dynamics 365 applications.

How are the connections weighted?

Basic insights:
Uses only frequency. The connections are weighted based on the number of interactions through emails and appointments in Dynamics 365. Top five users who have interacted the most with the contact or lead are displayed.

Enhanced insights:
Uses frequency and recency. If your administrator has enabled Exchange integration, the connections are weighted based on recent and frequent interactions through emails or appointments.

Every seller will see the same set of introducers for a contact or lead.

How frequently is the data collected?

Basic insights:

Collected in near real-time—as soon as a related activity is marked as completed in Dynamics 365.

Enhanced insights:

When you enable who knows whom and provide the required consent, Exchange data for the past year is collected and insights are generated based on that data. After this, Exchange data is collected daily and insights are updated based on the latest data.

What is the source for who knows whom data?

Basic insights:

Emails and appointments sent and received in Dynamics 365.

Enhanced insights
Emails and meeting information in Exchange Online is the source data. Learn more about how connections weighted

Where are the insights from Exchange generated?

After the Microsoft 365 admin provides consent, the Exchange data is collected and stored in Dynamics 365. Insights are generated from the stored data in Dynamics 365.

> **Important**
>
> Microsoft 365 and Dynamics 365 each have their own service-specific licensing terms. The service-specific terms that apply depend on which service processes your data. For example, when a copy of your Microsoft 365 data is transferred to Dynamics 365, your Microsoft 365 data in that copy becomes Dynamics 365 data and the Dynamics 365 service-specific terms apply.

When will my data be removed after I opt out of data sharing in Exchange?

If you're part of a security group that has been opted out by your administrator, the system can take up to 24 hours to remove data from all apps. It can take up to 30 days to remove backed-up data from Microsoft 365 storage accounts.

If you've opted out on your own, the data is removed immediately.

How can an administrator opt out users?

The following administrators can opt out users at different levels:

- **Microsoft 365 Global administrator** can opt out users of a Microsoft 365 security group. For example, opt out groups such as C-suite, M&A, finance, and so on. More information: Provide consent to collect data from Microsoft 365
- **Dynamics 365 administrator** can enable who knows whom for specific security roles to avoid opting in all Dynamics 365 users automatically. When you enable it for a specific role, the Exchange data is collected only from users who are part of the security role. More information: Enable relationship intelligence

Conversation intelligence

Which Conversation intelligence features are available in Dynamics 365 Sales versus Microsoft Sales Copilot?

Feature	Microsoft Sales Copilot	Sales Enterprise / Sales Premium
Call processing		
Conversation intelligence for phone calls from Teams (Inbound / Outbound)	No	Yes, unlimited access to conversation intelligence
Conversation intelligence for Teams meetings	Yes (unlimited)	Yes[12] [1] Using the Microsoft Sales Copilot app for Teams [2] Unlimited Microsoft Sales Copilot hours included with Sales Premium / Sales Enterprise license
During the call		
Real-time conversation intelligence	No	Yes
Conversation intelligence for seller-only recordings (When customer is not recorded)	No	Yes
After the call		
Conversation summary and details logged back into CRM record	No	Yes

Feature	Microsoft Sales Copilot	Sales Enterprise / Sales Premium
Editing and sharing a conversation summary	No	Yes
Scheduling an action item from a conversation summary	No	Yes
Aggregated dashboards for managers	No	Yes
Manager Coaching tools	No	Yes
Admin configurations		
Storage of call recording and conversation intelligence insights	Teams storage only	Option of Microsoft provided storage, or your own Azure storage
Supported languages for conversation intelligence	Conversation intelligence languages listed in this article: Supported languages in Microsoft Sales Copilot	Conversation intelligence languages listed in this section: What languages are supported for Sales Premium?
Supported languages for UI	User interface languages listed in this article: Supported languages in Microsoft Sales Copilot	All languages supported in Dynamics 365 Sales

How long does it take for data updates to reflect in the app?

Conversation intelligence data is refreshed periodically and could take up to 12 hours to appear in the app. We continue to make improvements to reduce the delay.

How many hours of conversation intelligence are available with Microsoft Sales Copilot?

You get unlimited call recording and processing hours with Microsoft Sales Copilot. You must create the meeting in Outlook and turn on the **Teams meeting** toggle to get conversation intelligence through Microsoft Sales Copilot. For more information, see Use Microsoft Sales Copilot in Teams.

Can sellers (or non-managers) use this app?

The application is available for sellers to view their conversational insights.

Is an admin needed to enable the app for my organization?

An administrator must configure the application for you to use. If an administrator didn't configure the application, you can explore the app with the demo data that's provided.

Which telephony system do you support?

The application is independent of telephony systems. If you have stereo call recordings (two-channel stereo), we process them at scale to generate insights.

What does the onboarding experience require?

As part of the onboarding experience, you must provide the access key to the Azure blob location where you upload your call recording files for processing. You must adhere to standard metadata format (in JSON) of conversation intelligence and upload that along with every call recording file. You must also share trackers that you care about, along with your competitive brands and products, for conversation intelligence to track these words across calls.

How is the sentiment model built?

Conversation intelligence transcribes the calls into text and generates sentiment from the text in the conversation.

I have mono-channel recording files. Can I still use conversation intelligence?

No, we **do not** process mono-channel call recording files. We only support stereo-type call recording files.

How long does it take to see the results?

Conversation intelligence takes a few minutes to process and display the data on the dashboard, depending on the size and format of the call recording files. You must have at least 10 call recording files to process and display the data.

Do you retain the call recordings?

No. The call recordings are deleted as soon as the audio file is processed.

See also

Overview of Dynamics 365 Sales
Introduction to administering Sales Insights features

Deprecations in Dynamics 365 Sales

Article • 07/21/2023

The features that have been deprecated in Dynamics 365 Sales are listed in this article. For more information on other deprecations that impact all the Dynamics 365 customer engagement apps, see Important changes (deprecations) coming in Power Apps, Power Automate, and customer engagement apps.

> **Important**
>
> "Deprecated" means we intend to remove the feature or capability in a major future release. The feature or capability will continue to work and is fully supported until it is officially removed. This deprecation notification might span a few years. After removal, the feature or capability will no longer work. We are notifying you now so that you have sufficient time to plan and update your code before the feature or capability is removed.

Exchange-based cards will be deprecated

Starting from Sunday, October 1, 2023, the following Exchange-based cards will be deprecated:

- Send Content Request Card
- Task Due Today Exchange Card
- Upcoming Meeting Exchange Card
- Recent Meeting Exchange Card
- Lead Detection Card
- Meeting Today Exchange Card
- Missed Email Card
- Issue Detection Card
- Meeting Request Card
- Yes or No Card

After the cards are deprecated, they'll no longer be available. You can create your own cards using Power Automate. Learn more.

Rank optimization of insight cards will be deprecated

Starting from Sunday, October 1, 2023, the rank optimization feature of insights cards will be deprecated. After the feature is deprecated, existing ranking rules will be unavailable and will not apply to insight cards. To optimize and prioritize the cards, turn off those cards that are not in use. Learn more.

Playbooks is deprecated

Effective July 2023, the playbooks feature is deprecated. You can no longer access, create, or launch playbooks. If you've added playbook entries to your custom app, remove them manually. Playbooks are replaced by sequences. Learn more about sequences.

Talking points is deprecated

Effective August 2022, the talking points feature is deprecated. After the feature is deprecated, you'll stop getting talking point suggestions on the contact and lead pages. To continue getting suggestions, you can buy the LinkedIn Sales Navigator license and integrate it with Dynamics 365 Sales. For more information on what you get with the integration, see View and work with LinkedIn Sales Navigator controls on forms and for instructions on how to integrate, see Integrate LinkedIn Sales Navigator solutions for Dynamics 365 Sales.

Premium auto capture is deprecated

Effective July 2022, premium auto capture is deprecated. The deprecation impacts customers who have enabled the premium auto capture preview. This feature enables users to get activity and contact suggestions.

You can switch to basic auto capture to get activity suggestions. However, no alternative is available for contact suggestions currently. For more information about basic auto capture, see Capture customer-related activities with auto capture.

> **Note**
>
> If you've added the premium auto capture suggestion grid to your custom app, remove it manually. The grid will not show any suggestions after the feature is deprecated.

Dynamics 365 assistant cards - Opportunity at Risk (sentiment detection) and Opportunity at Risk (phrase detection)

Effective March 31, 2022, the Opportunity at Risk (sentiment detection) and Opportunity at Risk (phrase detection) cards are deprecated. After May 30, 2022, these cards will no longer be supported.
The Opportunity at Risk cards, both sentiment detection and phrase detection, have been disabled from the backend and insights are no longer generated. However, these cards are still visible through the Settings page. When users are trying to activate these cards, activation fails.

Dynamics 365 Product Visualize is deprecated

Effective October 04, 2021, Dynamics 365 Product Visualize is deprecated. After October 04, 2021 the product will cease to function and will no longer be supported.

Dynamics 365 - Gamification is deprecated

Effective April 1, 2021, Dynamics 365 – Gamification is deprecated. Until September 30, 2021, Microsoft provided limited support for this solution. From October 1, 2021, the Dynamics 365 – Gamification solution won't be functional. To uninstall Gamification, delete the **GamificationUpdater** and **Gamification** solutions from the Dynamics 365 organization. Note that you must first delete the **GamificationUpdater** solution followed by the **Gamification** solution. More information: Delete a preferred solution.

Internet Explorer 11 support for Dynamics 365 and Microsoft Power Platform is deprecated

Effective December 2020, Microsoft Internet Explorer 11 support for Microsoft Dynamics 365 and Microsoft Power Platform is deprecated. Internet Explorer 11 won't be supported after August 2021.

This will impact customers who use Dynamics 365 and Microsoft Power Platform products that are designed to be used through an Internet Explorer 11 interface. After August 2021, Internet Explorer 11 won't be supported for such Dynamics 365 and Microsoft Power Platform products. We recommend that customers transition to Microsoft Edge.

For the complete list of products impacted by this change or for information on transitioning from Internet Explorer 11 to a supported browser, see FAQ: Internet Explorer 11 deprecation for Dynamics 365 and Microsoft Power Platform Products. If you've questions, contact your Microsoft Customer Service representative or Microsoft Partner.

Dynamics 365 assistant application for Teams is deprecated

Effective October 15, 2020, assistant application for Teams is deprecated. The Dynamics 365 Sales mobile app has been enhanced to include some of the features of the assistant application for Teams. More information: Use the Dynamics 365 Sales mobile app

Dynamic 365 Sales bot is deprecated

Effective June 2, 2020, the Dynamics 365 Sales bot, a feature that enables users to retrieve sales information through a bot within Dynamics 365 Sales app for Teams, will be deprecated. Until July 31, 2020, Microsoft will continue to provide support for the feature, but won't release any new functionality beyond what is already present. After July 31, 2020, you'll no longer be able to receive responses to conversations. The bot won’t be available for new customers. Existing customers may still be able to access the bot from the Chat, however the bot won't respond to questions.

It is our goal to deliver a powerful bot experience that allows users to retrieve and manage information. Based on usage data and feedback from our customers, we'll be working on a powerful, extensible set of capabilities and features that will allow you to intuitively access and interact with sales information—among other entities—through a bot interface. We'll keep you updated on timing for when this will be available.

Responsible AI FAQs for Dynamics 365 Sales

Article • 10/05/2023

An AI system includes not only the technology, but also the people who use it, the people affected by it, and the environment in which it's deployed. Microsoft's Responsible AI FAQs are intended to help you understand how AI technology works, the choices system owners and users can make that influence system performance and behavior, and the importance of thinking about the whole system, including the technology, the people, and the environment. You can use Responsible AI FAQs to better understand specific AI systems and features that Microsoft develops.

Responsible AI FAQs are part of a broader effort to put Microsoft's AI principles into practice. To find out more, see Microsoft AI principles.

AI-driven features in this app

This app contains a growing list of AI-driven features. To learn about the capabilities and impact of specific features, select a feature name from the list.

- FAQ for summarization in Copilot
- FAQ for email in Copilot

FAQ for summarization capabilities in Copilot

Article • 10/05/2023

These frequently asked questions (FAQ) describe the AI impact of the Dynamics 365 Sales's summarization feature in Copilot.

What is summarization in Copilot?

Summarization in Copilot is an AI-powered feature that empowers sellers with a quick summary of important and relevant information about lead and opportunity entities in an easy-to-consume format. The summarization process is powered by large language models, which employ natural language processing techniques to analyze and condense information from CRM.

What are summarization's capabilities?

Summarization is available for the following use cases—lead summary, opportunity summary, and meeting preparation.

Lead summary: A Lead summary in Dynamics 365 Sales generates a summary using the key fields of the lead view. The default lead summary includes the following information:

- Lead topic / What is the lead interested in?
- Lead source
- When was the lead created? (Date)
- Lead's Preferred method of contact
- Insights from the Lead's parent account
- Insights from the Lead's parent contact

However, the admin can configure the field to be selected to generate the summary via App settings. The first seven fields of any selected view can be used to create a meaningful summary. The generated summary can be shared with other stakeholders and help everyone get up to speed quickly.

Opportunity summary: An opportunity summary in Dynamics 365 Sales generates a summary using the key fields of an opportunity view. The default opportunity summary includes the following information:

- Account name and contact information
- Size of the a/c, budget, estimated revenue
- Customer requirement & value proposition
- Stage and status is the opportunity and estimated close date and revenue
- Products involved in the opportunity
- Key Stakeholders

However, the admin can configure the field to be selected to generate the summary via App settings. The first seven fields of any selected view can be used to create a meaningful summary. The generated summary can be shared with other stakeholders and help everyone get up to speed quickly.

Meeting preparation: Meeting preparation is a feature that detects any upcoming meetings within the next 24 hours on the seller's calendar and enables them to prepare for the meeting with ease. This feature summarizes the three latest notes and the most recent email associated with the entity's timeline, providing sellers with valuable insights and key points to drive productive discussions. They can quickly grasp the context and relevant points, enabling them to engage with stakeholders more effectively and confidently.

What is summarization's intended use?

The summarization features are designed to help sellers with the following tasks:

- Get a quick summary of the leads and opportunities from multiple data sources, providing an overview of important details by quickly assessing key information at a glance.
- Accelerate the lead enrichment and qualification process by leveraging the power of diverse data streams. Enhance lead profiles with relevant data to gain a deeper understanding and efficiently assess lead quality.
- Prepare for customer meetings with ease using summarized notes and interactions. Access a summary of important customer interactions from the notes

section of the relevant record and latest email to quickly refresh your memory, highlight relevant discussion points, and drive productive meetings.

How was summarization evaluated? What metrics are used to measure performance?

The effectiveness and impact of summarization can be evaluated by the following metrics.

- **Time saved:** Measure the amount of time sellers save in understanding leads, opportunities, and preparing for meetings compared to previous methods. This can be quantified by analyzing the average time spent on these tasks before and after implementing summarization features.
- **Efficiency gains:** Assess the increase in sales efficiency by examining the number of leads qualified and opportunities pursued within a given timeframe. Compare this data to previous performance to gauge the impact of our summarization features on accelerating the sales pipeline.

What are the limitations of summarization? How can users minimize the impact of the summarization's limitations when using the system?

While the summarization feature offers numerous benefits, it is important to be aware of the limitations it might have.

- The quality of the generated summaries heavily relies on the accuracy and completeness of the data entered into the system. If there are inaccuracies, missing information, or inconsistencies in the input data, it may affect the reliability and usefulness of the generated summaries
- The summarization feature operates based on predefined fields and parameters set by administrators. While this ensures consistency, it may limit the flexibility for the seller to tailor the summaries according to their individual preferences. The configuration is determined by the admin at this point.

What operational factors and settings allow for effective and responsible use of the summarization feature?

To ensure effective and responsible use of the summarization feature, it is important to consider the following operational factors and settings.

- Ensure data quality and consistency and regularly update missing data.
- Ensure that the fields configured for the summarization process are relevant and align with the specific business needs to help sellers reap maximum benefits of the features.

See also

Use Copilot in Dynamics 365 Sales

FAQ for Copilot for emails

Article • 10/05/2023

These frequently asked questions (FAQ) describe the AI impact of the email capabilities in Copilot in Dynamics 365 Sales.

What is Copilot for emails?

Copilot for email empowers sellers with AI-assisted email response in the context of their customer engagement. Sellers can leverage advanced language models to generate tailored responses that address customer concerns effectively. Sellers are also provided with the email thread summary for quick recap of the recent interactions and reminders that help them stay on top of their inbox.

What can the system do?

The email copilot features are aimed at improving the seller productivity, by helping them draft and reply emails better and faster. The system summarizes long email threads, provides a summary and draft that the seller can review before responding to their customer. It also monitors the inbox time and highlights emails with pending action items.

What is/are system's intended use(s)?

- Copilot lets you spend less time composing email. Select a predefined category or enter your own text, and Copilot suggests content that helps you quickly create emails to follow up, reply to inquiries, and move a deal forward. Adjust the tone and length of the message to better resonate with your customers, fostering stronger connections. You can further customize the suggested content before you send it. Copilot is equally invaluable on the receiving end, summarizing lengthy email threads when you respond to incoming messages. By condensing complex discussions, it streamlines the communication process and ensures comprehension.
- Copilot helps to keep you on track by identifying action items and key customer requests in your incoming emails that you might have missed. Also, continuously monitors your inbox to keep you up to date.
- Copilot contextual emails and email summaries were already generally available in Outlook. Now, together with email follow-up, they're also available—along with

email follow-up—for public preview within Dynamics 365 Sales. Sellers can now fully enjoy the support of Copilot email features directly.

How was Copilot for email evaluated? What metrics are used to measure performance?

- The capability was evaluated on a collection of manually curated question-and-answer datasets, covering multiple industries.
- More evaluation was performed over custom datasets for offensive and malicious prompts and responses.

What are the limitations of Copilot for email? How can users minimize the impact of Copilot for email's limitations when using the system?

- Copilot for email only supports English language as of now. Non-English users won't be able to use the features.
- The email Reminder feature gives only a brief summary of the email thread. However, for a detailed summary and best actions, it's recommended to use this feature with other email copilot features to decide the next best action and execute the same seamlessly.

What operational factors and settings allow for effective and responsible use of the system?

- The system doesn't provide any setting or customization to the end user to tweak the system behavior.
- Follow these procedures to make the most of the Copilot for email:
  - Choose the right prompt to generate emails and choose the right tone and length for the content: Include the right keywords, use a group of words or a full sentence, keep all the key-points around the same topic.
  - Always review and edit content ideas suggestions before sending them to your customer.

See also

Use Copilot in Dynamics 365 Sales

Dynamics 365 Sales documentation

Discover how to make the most of Dynamics 365 Sales with online training courses, docs, and videos covering product capabilities and how-to articles. Learn how to use Dynamics 365 Sales to build strong relationships with your customers, take actions based on insights, and close deals faster.

GET STARTED
Welcome to Dynamics 365 Sales

WHAT'S NEW
What's new

TRAINING
Training

CONCEPT
Troubleshoot

Implement

Guidance

- Implementation
- Business processes
- Security and compliance

Try/Buy/Install

- Try Dynamics 365 Sales
- Buy Dynamics 365 Sales
- Install Dynamics 365 Sales apps

Set up

- Create an environment
- Grant users access
- Set up sales basics
- Set up the mobile experience

Administer and develop

Configure

- Configure sales accelerator
- Configure assistant
- Configure forecasts
- Enable relationship intelligence

Integrate

- Configure Teams chat
- Connect to Exchange Online
- Enable OneDrive for Business
- Integrate with Sharepoint

Sales Copilot

- Enable and set up Sales Copilot
- Configure Sales Copilot

Configure conversation intelligence

Install LinkedIn Sales Insights

Develop

Developer Guide

Sales table reference

Sales insights table reference

Use

Manage your sales cycle

Understand the sales process

Manage leads

Manage opportunities

Manage quote, order, and invoice

Sales Copilot

Use Sales Copilot

Compose and send email messages using Copilot

View and copy email summary

Use predictions and insights

Prioritize leads through predictive scores

Prioritize opportunities through predictive scores

Improve customer relationship with relationship analytics

Coach sellers with conversation intelligence

Forecast sales

Define and track your sales goals

Project accurate revenue with sales forecasting

Predict future revenue outcomes using premium forecasting

Accelerate sales

Prioritize sales pipeline with work lists

Group records based on segments

Create conditional workflows with sequences

Collaborate with customers

Create and send email message

Use Microsoft Teams chat

Collaborate using SharePoint

Use dashboards and reports

Track progress with dashboards and charts

Analyze your sales data with Power BI

Go mobile

Install the mobile app

Learn the basics

Use the mobile app

View operational metrics and KPIs

Related products

Microsoft Sales Copilot

Use Microsoft 365 applications to automatically capture, access, and register data into any CRM system.

Customer Insights

Connect data from various transactional, behavioral, and observational sources to create a 360-degree customer view.

Marketing

Orchestrate personalized journeys across all touchpoints to strengthen customer relationships and earn their...

LinkedIn Sales Navigator

Use LinkedIn Sales Navigator to enhance key application scenarios by connecting the system of record with the...

Power Platform

Build custom apps using Power Apps, automate workflows to improve business productivity using Power Automate, and...