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Azure portal overview

2/24/2022 • 5 minutes to read • [Edit Online](#)

This article introduces the Azure portal, identifies portal page elements, and helps you get familiar with the Azure portal management experience.

What is the Azure portal?

The Azure portal is a web-based, unified console that provides an alternative to command-line tools. With the Azure portal, you can manage your Azure subscription using a graphical user interface. You can build, manage, and monitor everything from simple web apps to complex cloud deployments. Create custom dashboards for an organized view of resources. Configure accessibility options for an optimal experience.

The Azure portal is designed for resiliency and continuous availability. It has a presence in every Azure datacenter. This configuration makes the Azure portal resilient to individual datacenter failures and avoids network slow-downs by being close to users. The Azure portal updates continuously and requires no downtime for maintenance activities.

Azure portal menu

You can [choose the default mode for the portal menu](#). It can be docked or it can act as a flyout panel.

When the portal menu is in flyout mode, it's hidden until you need it. Select the menu icon to open or close the menu.



+ Create a resource

🏠 Home

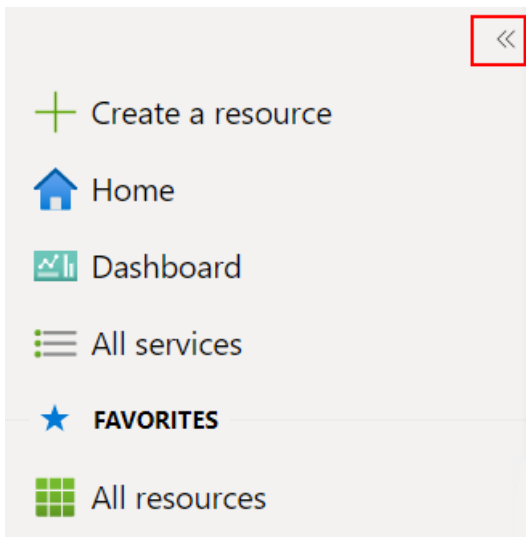
📊 Dashboard

☰ All services

★ FAVORITES

📦 All resources

If you choose docked mode for the portal menu, it will always be visible. You can collapse the menu to provide more working space.



Azure Home

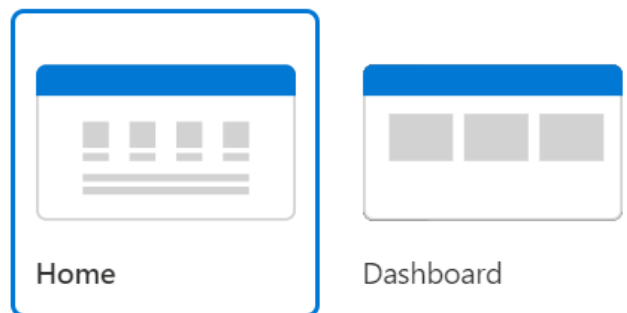
As a new subscriber to Azure services, the first thing you see after you [sign in to the portal](#) is **Azure Home**. This page compiles resources that help you get the most from your Azure subscription. We include links to free online courses, documentation, core services, and useful sites for staying current and managing change for your organization. For quick and easy access to work in progress, we also show a list of your most recently visited resources.

You can't customize the Home page, but you can choose whether to see **Home** or **Dashboard** as your default view. The first time you sign in, there's a prompt at the top of the page where you can save your preference. You can [change your startup page selection at any time in Portal settings](#).

Startup views

Choose your portal landing page and the directory that will load on startup.

Startup page



Azure Dashboard

Dashboards provide a focused view of the resources in your subscription that matter most to you. We've given you a default dashboard to get you started. You can customize this dashboard to bring the resources you use frequently into a single view. Any changes you make to the default view affect your experience only. However, you can create additional dashboards for your own use, or publish your customized dashboards and share them with other users in your organization. For more information, see [Create and share dashboards in the Azure portal](#).

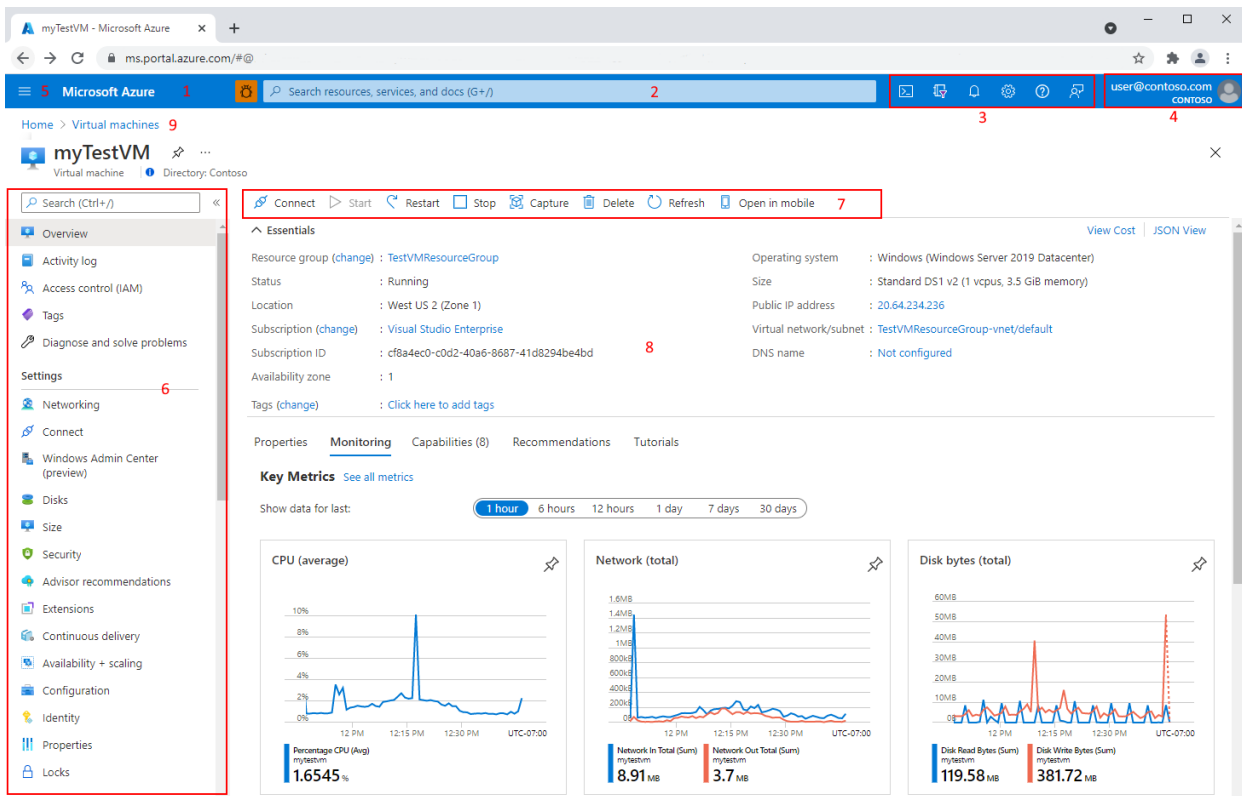
As noted above, you can [set your startup page to Dashboard](#) if you want to see your most recently used [dashboard](#) when you sign in to the Azure portal.

Getting around the portal

It's helpful to understand the basic portal layout and how to interact with it. Here, we'll introduce the components of the user interface and some of the terminology we use to give instructions. For a more detailed tour of the portal, see the course lesson [Navigate the portal](#).

The Azure portal menu and page header are global elements that are always present. These persistent features are the "shell" for the user interface associated with each individual service or feature and the header provides access to global controls. The configuration page (sometimes referred to as a "blade") for a resource may also have a resource menu to help you move between features.

The figure below labels the basic elements of the Azure portal, each of which are described in the following table. In this example, the current focus is a virtual machine, but the same elements apply no matter what type of resource or service you're working with.



KEY	DESCRIPTION
1	Page header. Appears at the top of every portal page and holds global elements.

KEY	DESCRIPTION
2	Global search. Use the search bar to quickly find a specific resource, a service, or documentation.
3	Global controls. Like all global elements, these features persist across the portal and include: Cloud Shell, subscription filter, notifications, portal settings, help and support, and send us feedback.
4	Your account. View information about your account, switch directories, sign out, or sign in with a different account.
5	Azure portal menu. This global element can help you to navigate between services. Sometimes referred to as the sidebar. (Items 9 and 10 in this list appear in this menu.)
6	Resource menu. Many services include a resource menu to help you manage the service. You may see this element referred to as the left pane. Here, you'll see commands that are contextual to your current focus.
7	Command bar. These controls are contextual to your current focus.
8	Working pane. Displays details about the resource that is currently in focus.
9	Breadcrumb. You can use the breadcrumb links to move back a level in your workflow.
10	Master control to create a new resource in the current subscription. Expand or open the Azure portal menu to find + Create a resource . You can also find this option on the Home page. Then, search or browse the Azure Marketplace for the resource type you want to create.
11	Your favorites list in the Azure portal menu. To learn how to customize this list, see Add, remove, and sort favorites .

Get started with services

If you're a new subscriber, you'll have to create a resource before there's anything to manage. Select **+ Create a resource** to view the services available in the Azure Marketplace. You'll find hundreds of applications and services from many providers here, all certified to run on Azure.

We pre-populate your [Favorites](#) in the sidebar with links to commonly used services. To view all available services, select **All services** from the sidebar.

TIP

The quickest way to find a resource, service, or documentation is to use *Search* in the global header.

Watch this video for a demo on how to use global search in the Azure portal.

Next steps

- Learn more about where to run Azure portal in [Supported browsers and devices](#).
- Stay connected on the go with [Azure mobile app](#).
- Onboard and set up your cloud environment with the [Azure Quickstart Center](#).

Get started with the Azure Quickstart Center

2/24/2022 • 2 minutes to read • [Edit Online](#)

Azure Quickstart Center is a guided experience in the Azure portal available to anyone who wants to improve their knowledge of Azure. For organizations new to Azure, it's the fastest way to onboard and set up your cloud environment.

Use Azure Quickstart Center

1. Sign in to the [Azure portal](#).
2. In the search bar, type "Quickstart Center", and then select it.

Or, select **All services** from the Azure portal menu, then select **General** > **Quickstart Center**.

For an in-depth look at what Azure Quickstart Center can do for you, check out this video:

[Introduction to Azure Quickstart Center](#)

Get started

Azure Quickstart Center has two options in the **Get started** tab:

- **Start a project:** If you're ready to create a resource, this section lets you learn more about your choices before you commit to a service option. You'll discover more about the service and why you should use it, explore costs, and identify prerequisites. After making your choice, you can go directly to create.
- **Setup guides:** Designed for the IT admin and cloud architect, our guides introduce key concepts for Azure adoption. Structured steps help you take action as you learn, applying Microsoft's recommended best practices. The migration guide helps you assess readiness and plan as you prepare to shift to Azure.

Take an online course

The **Take an online course** tab of the Azure Quickstart Center highlights free introductory course modules from Microsoft Learn.

Select a tile to launch a course and learn more about cloud concepts and managing resources in Azure.

You can also select **Browse our full Azure catalog** to see all Azure learning paths and modules.

Next steps

- Learn more about Azure setup and migration in the [Microsoft Cloud Adoption Framework for Azure](#).
- Unlock your cloud skills with more courses from [Microsoft Learn](#).

Supported devices

2/24/2022 • 2 minutes to read • [Edit Online](#)

The [Azure portal](#) is a web-based console and runs in the browser of all modern desktops and tablet devices. To use the portal, you must have JavaScript enabled on your browser. We recommend not using ad blockers in your browser because they can cause issues with some portal features.

If you need to manage Azure resources from a mobile device, try the [Azure mobile app](#). It's available for iOS and Android.

Recommended browsers

We recommend that you use the most up-to-date browser that's compatible with your operating system. The following browsers are supported:

- Microsoft Edge (latest version)
- Safari (latest version, Mac only)
- Chrome (latest version)
- Firefox (latest version)

Quickstart: Create a Windows virtual machine in the Azure portal

2/24/2022 • 3 minutes to read • [Edit Online](#)

Applies to: ✓ Windows VMs

Azure virtual machines (VMs) can be created through the Azure portal. This method provides a browser-based user interface to create VMs and their associated resources. This quickstart shows you how to use the Azure portal to deploy a virtual machine (VM) in Azure that runs Windows Server 2019. To see your VM in action, you then RDP to the VM and install the IIS web server.

If you don't have an Azure subscription, create a [free account](#) before you begin.

Sign in to Azure

Sign in to the Azure portal at <https://portal.azure.com>.

Create virtual machine

1. Type **virtual machines** in the search.
2. Under **Services**, select **Virtual machines**.
3. In the **Virtual machines** page, select **Create** and then **Virtual machine**. The **Create a virtual machine** page opens.
4. In the **Basics** tab, under **Project details**, make sure the correct subscription is selected and then choose to **Create new** resource group. Type *myResourceGroup* for the name.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ [Create new](#)

5. Under **Instance details**, type *myVM* for the **Virtual machine name** and choose *Windows Server 2019 Datacenter - Gen2* for the **Image**. Leave the other defaults.

Instance details

Virtual machine name * ⓘ

Region * ⓘ

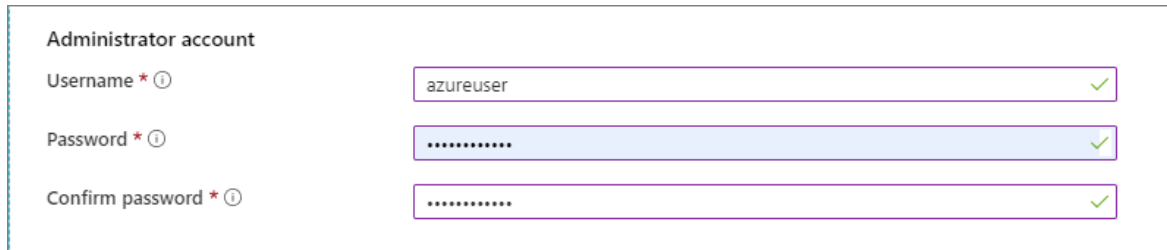
Availability options ⓘ

Security type ⓘ

Image * ⓘ [See all images](#) | [Configure VM generation](#)

Size * ⓘ [See all sizes](#)

6. Under **Administrator account**, provide a username, such as *azureuser* and a password. The password must be at least 12 characters long and meet the [defined complexity requirements](#).



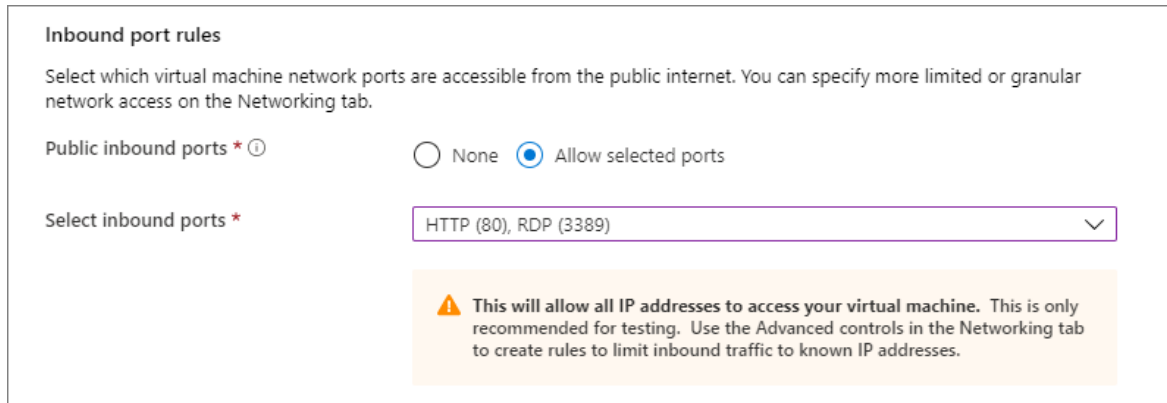
Administrator account

Username * ⓘ azureuser ✓

Password * ⓘ ✓

Confirm password * ⓘ ✓

7. Under **Inbound port rules**, choose **Allow selected ports** and then select **RDP (3389)** and **HTTP (80)** from the drop-down.



Inbound port rules

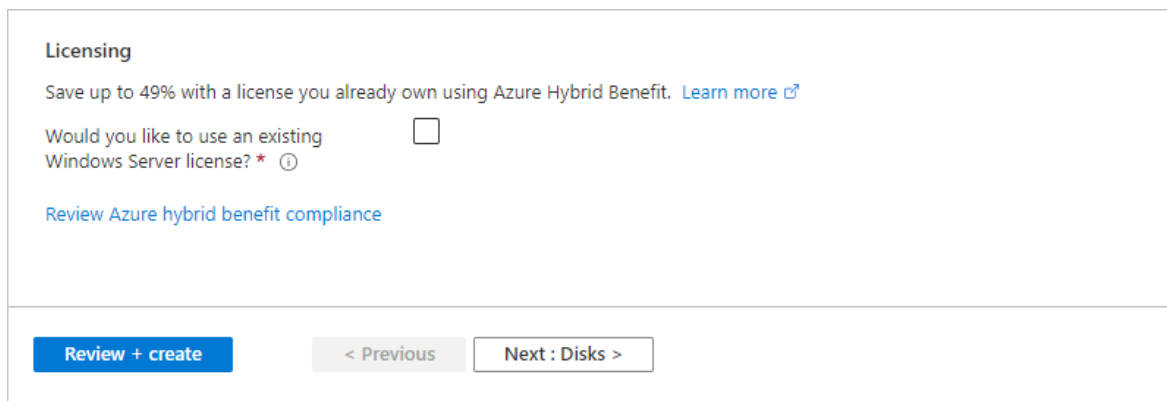
Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * ⓘ None Allow selected ports

Select inbound ports * HTTP (80), RDP (3389) ✓

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

8. Leave the remaining defaults and then select the **Review + create** button at the bottom of the page.



Licensing

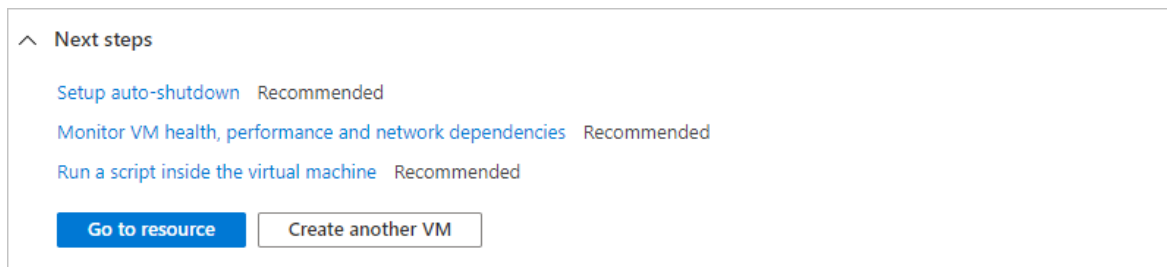
Save up to 49% with a license you already own using Azure Hybrid Benefit. [Learn more](#) ↗

Would you like to use an existing Windows Server license? * ⓘ

[Review Azure hybrid benefit compliance](#)

Review + create < Previous Next : Disks >

9. After validation runs, select the **Create** button at the bottom of the page.
10. After deployment is complete, select **Go to resource**.



Next steps

[Setup auto-shutdown](#) Recommended

[Monitor VM health, performance and network dependencies](#) Recommended

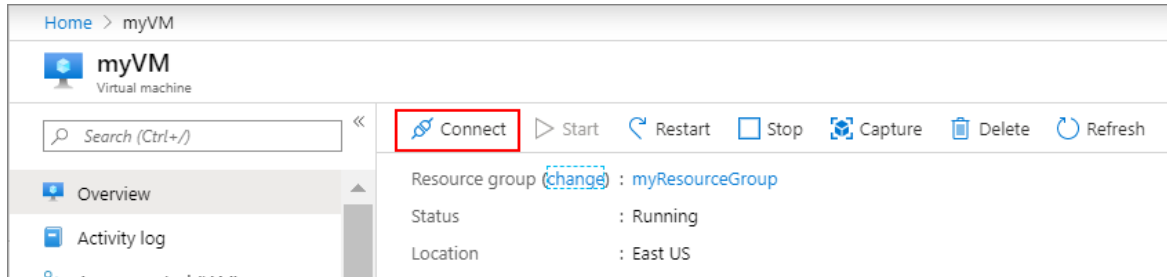
[Run a script inside the virtual machine](#) Recommended

Go to resource Create another VM

Connect to virtual machine

Create a remote desktop connection to the virtual machine. These directions tell you how to connect to your VM from a Windows computer. On a Mac, you need an RDP client such as this [Remote Desktop Client](#) from the Mac App Store.

1. On the overview page for your virtual machine, select the **Connect > RDP**.



2. In the **Connect with RDP** page, keep the default options to connect by IP address, over port 3389, and click **Download RDP file**.
3. Open the downloaded RDP file and click **Connect** when prompted.
4. In the **Windows Security** window, select **More choices** and then **Use a different account**. Type the username as `localhost\username`, enter the password you created for the virtual machine, and then click **OK**.
5. You may receive a certificate warning during the sign-in process. Click **Yes** or **Continue** to create the connection.

Install web server

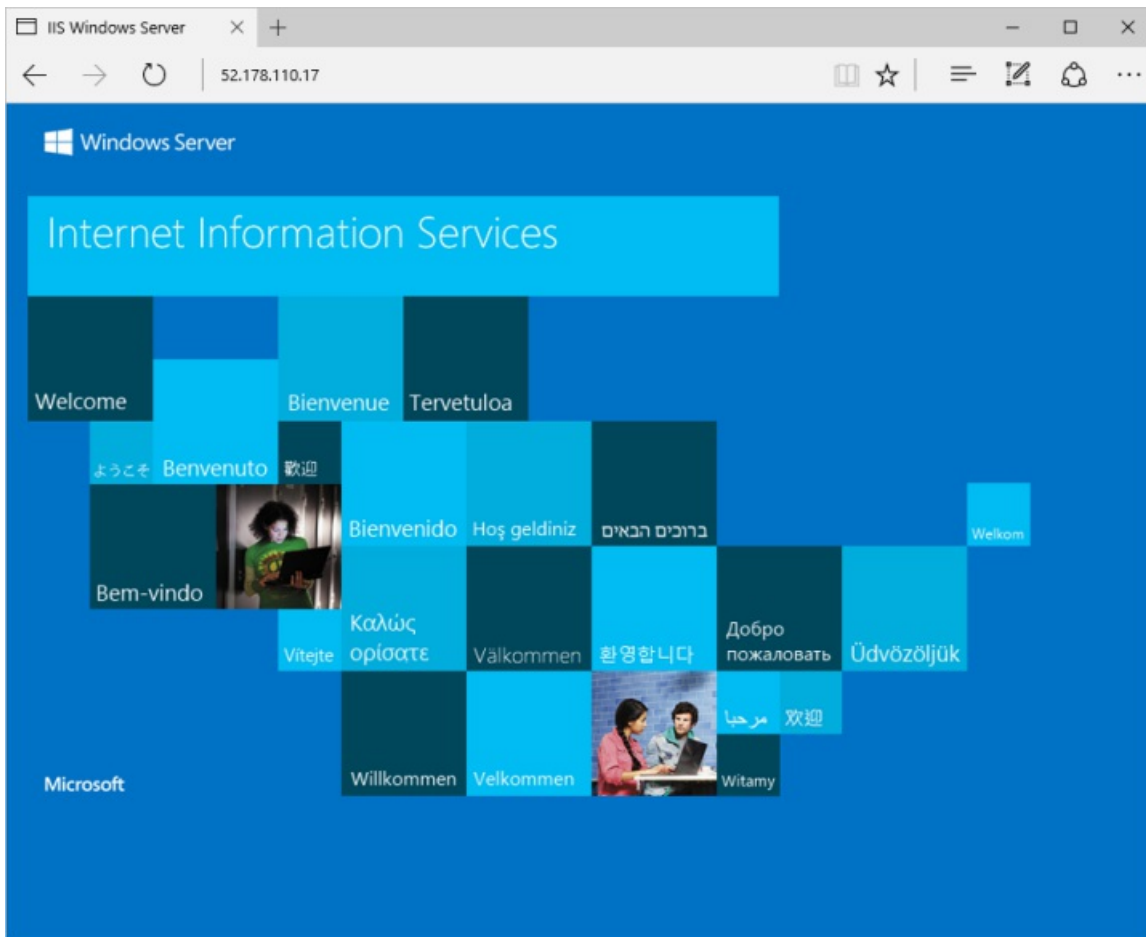
To see your VM in action, install the IIS web server. Open a PowerShell prompt on the VM and run the following command:

```
Install-WindowsFeature -name Web-Server -IncludeManagementTools
```

When done, close the RDP connection to the VM.

View the IIS welcome page

In the portal, select the VM and in the overview of the VM, hover over the IP address to show **Copy to clipboard**. Copy the IP address and paste it into a browser tab. The default IIS welcome page will open, and should look like this:



Clean up resources

When no longer needed, you can delete the resource group, virtual machine, and all related resources.

1. On the Overview page for the VM, select the **Resource group** link.
2. At the top of the page for the resource group, select **Delete resource group**.
3. A page will open warning you that you are about to delete resources. Type the name of the resource group and select **Delete** to finish deleting the resources and the resource group.

Next steps

In this quickstart, you deployed a simple virtual machine, opened a network port for web traffic, and installed a basic web server. To learn more about Azure virtual machines, continue to the tutorial for Windows VMs.

[Azure Windows virtual machine tutorials](#)

Quickstart: Create an Azure portal dashboard with Azure CLI


2/24/2022 • 3 minutes to read • [Edit Online](#)

A dashboard in the Azure portal is a focused and organized view of your cloud resources. This article shows you how to use Azure CLI to create a dashboard. In this example, the dashboard shows the performance of a virtual machine (VM), as well as some static information and links.

- An Azure account with an active subscription. [Create an account for free](#).

Prerequisites

- Use the Bash environment in [Azure Cloud Shell](#). For more information, see [Azure Cloud Shell Quickstart - Bash](#).

 Launch Cloud Shell

- If you prefer to run CLI reference commands locally, [install](#) the Azure CLI. If you are running on Windows or macOS, consider running Azure CLI in a Docker container. For more information, see [How to run the Azure CLI in a Docker container](#).
 - If you're using a local installation, sign in to the Azure CLI by using the [az login](#) command. To finish the authentication process, follow the steps displayed in your terminal. For additional sign-in options, see [Sign in with the Azure CLI](#).
 - When you're prompted, install Azure CLI extensions on first use. For more information about extensions, see [Use extensions with the Azure CLI](#).
 - Run [az version](#) to find the version and dependent libraries that are installed. To upgrade to the latest version, run [az upgrade](#).
- If you have multiple Azure subscriptions, choose the appropriate subscription in which to bill the resources. Select a subscription by using the [az account set](#) command:

```
az account set --subscription 00000000-0000-0000-0000-000000000000
```

- Create an [Azure resource group](#) by using the [az group create](#) command (or use an existing resource group):

```
az group create --name myResourceGroup --location centralus
```

Create a virtual machine

Create a virtual machine by using the [az vm create](#) command:

```
az vm create --resource-group myResourceGroup --name myVM1 --image win2016datacenter \  
--admin-username azureuser --admin-password 1StrongPassword$
```

NOTE

This is a new username and password (not the account you use to sign in to Azure). The password must be complex. For more information, see [username requirements](#) and [password requirements](#).

The deployment starts and typically takes a few minutes to complete.

Download the dashboard template

Since Azure dashboards are resources, they can be represented as JSON. For more information, see [The structure of Azure dashboards](#).

Download the file [portal-dashboard-template-testvm.json](#).

Then, customize the downloaded template file by changing the following to your values:

- `<subscriptionID>`: Your subscription
- `<rgName>`: Resource group, for example `myResourceGroup`
- `<vmName>`: Virtual machine name, for example `myVM1`
- `<dashboardTitle>`: Dashboard title, for example `Simple VM Dashboard`
- `<location>`: Your Azure region, for example `centralus`

For more information, see [Microsoft portal dashboards template reference](#).

Deploy the dashboard template

You can now deploy the template from within Azure CLI.

1. Run the [az portal dashboard create](#) command to deploy the template:

```
az portal dashboard create --resource-group myResourceGroup --name 'Simple VM Dashboard' \
  --input-path portal-dashboard-template-testvm.json --location centralus
```

2. Check that the dashboard was created successfully by running the [az portal dashboard show](#) command:

```
az portal dashboard show --resource-group myResourceGroup --name 'Simple VM Dashboard'
```

To see all the dashboards for the current subscription, use [az portal dashboard list](#):

```
az portal dashboard list
```

You can also see all the dashboards for a specific resource group:

```
az portal dashboard list --resource-group myResourceGroup
```

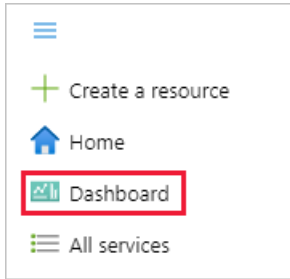
To update a dashboard, use the [az portal dashboard update](#) command:

```
az portal dashboard update --resource-group myResourceGroup --name 'Simple VM Dashboard' \
  --input-path portal-dashboard-template-testvm.json --location centralus
```

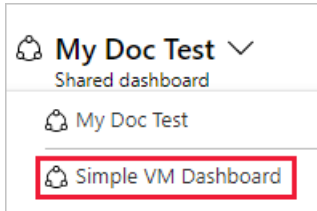
Review deployed resources

Verify that you can see data about your virtual machine in the Azure portal dashboard.

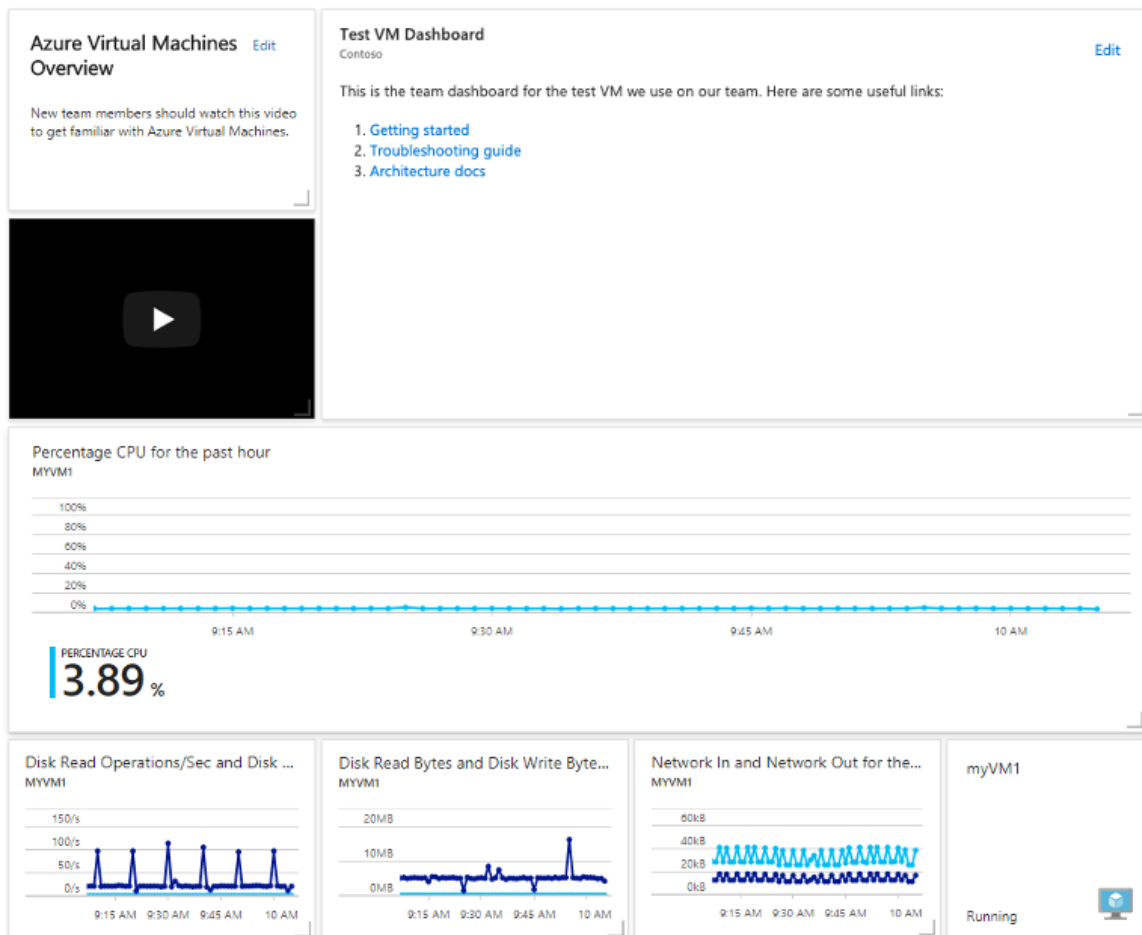
1. In the Azure portal menu, select **Dashboard**.



2. On the dashboard page, select **Simple VM Dashboard**.



3. Review the dashboard, which should look similar to the one shown here. While some of the content is static, there are also charts that show the performance of the VM you created at the beginning.



Clean up resources

To remove the virtual machine and associated dashboard that you created, delete the resource group that contains them.

Caution

Deleting the resource group will delete all of the resources contained within it. If the resource group contains

additional resources aside from your virtual machine and dashboard, those resources will also be deleted.

```
az group delete --name myResourceGroup
```

To remove only the dashboard, use the [az portal dashboard delete](#) command:

```
az portal dashboard delete --resource-group myResourceGroup --name "Simple VM Dashboard"
```

Next steps

For more information about Azure CLI commands for dashboards, see:

[Azure CLI: az portal dashboard](#).

Quickstart: Create an Azure portal dashboard with PowerShell

2/24/2022 • 4 minutes to read • [Edit Online](#)

A dashboard in the Azure portal is a focused and organized view of your cloud resources. This article focuses on the process of using the Az.Portal PowerShell module to create a dashboard. The dashboard shows the performance of a virtual machine (VM), as well as some static information and links.




Requirements

- An Azure account with an active subscription. [Create an account for free](#).
- If you choose to use PowerShell locally, this article requires that you install the Az PowerShell module and connect to your Azure account using the [Connect-AzAccount](#) cmdlet. For more information about installing the Az PowerShell module, see [Install Azure PowerShell](#).

Use Azure Cloud Shell

Azure hosts Azure Cloud Shell, an interactive shell environment that you can use through your browser. You can use either Bash or PowerShell with Cloud Shell to work with Azure services. You can use the Cloud Shell preinstalled commands to run the code in this article, without having to install anything on your local environment.

To start Azure Cloud Shell:

OPTION	EXAMPLE/LINK
Select Try It in the upper-right corner of a code block. Selecting Try It doesn't automatically copy the code to Cloud Shell.	
Go to https://shell.azure.com , or select the Launch Cloud Shell button to open Cloud Shell in your browser.	
Select the Cloud Shell button on the menu bar at the upper right in the Azure portal .	

To run the code in this article in Azure Cloud Shell:

1. Start Cloud Shell.
2. Select the **Copy** button on a code block to copy the code.
3. Paste the code into the Cloud Shell session by selecting **Ctrl+Shift+V** on Windows and Linux, or by selecting **Cmd+Shift+V** on macOS.
4. Select **Enter** to run the code.

Choose a specific Azure subscription

If you have multiple Azure subscriptions, choose the appropriate subscription in which the resources should be

billed. Select a specific subscription using the [Set-AzContext](#) cmdlet.

```
Set-AzContext -SubscriptionId 00000000-0000-0000-0000-000000000000
```

Define variables

You'll be using several pieces of information repeatedly. Create variables to store the information.

```
# Name of resource group used throughout this article
$resourceGroupName = 'myResourceGroup'

# Azure region
$location = 'centralus'

# Dashboard Title
$dashboardTitle = 'Simple VM Dashboard'

# Dashboard Name
$dashboardName = $dashboardTitle -replace '\s'

# Your Azure Subscription ID
$subscriptionID = (Get-AzContext).Subscription.Id

# Name of test VM
$vmName = 'myVM1'
```

Create a resource group

Create an [Azure resource group](#) using the [New-AzResourceGroup](#) cmdlet. A resource group is a logical container in which Azure resources are deployed and managed as a group.

The following example creates a resource group based on the name in the `$resourceGroupName` variable in the region specified in the `$location` variable.

```
New-AzResourceGroup -Name $resourceGroupName -Location $location
```

Create a virtual machine

The dashboard you create in the next part of this quickstart requires an existing VM. Create a VM by following these steps.

Store login credentials for the VM in a variable. The password must be complex. This is a new user name and password; it's not, for example, the account you use to sign in to Azure. For more information, see [username requirements](#) and [password requirements](#).

```
$Cred = Get-Credential
```

Create the VM.

```
$AzVmParams = @{
    ResourceGroupName = $resourceGroupName
    Name = $vmName
    Location = $location
    Credential = $Cred
}
New-AzVm @AzVmParams
```

The VM deployment now starts and typically takes a few minutes to complete. After deployment completes, move on to the next section.

Download the dashboard template

Since Azure dashboards are resources, they can be represented as JSON. The following code downloads a JSON representation of a sample dashboard. For more information, see [The structure of Azure Dashboards](#).

```
$myPortalDashboardTemplateUrl = 'https://raw.githubusercontent.com/Azure/azure-docs-powershell-samples/master/azure-portal/portal-dashboard-template-testvm.json'

$myPortalDashboardTemplatePath = "$HOME\portal-dashboard-template-testvm.json"

Invoke-WebRequest -Uri $myPortalDashboardTemplateUrl -OutFile $myPortalDashboardTemplatePath -
UseBasicParsing
```

Customize the template

Customize the downloaded template by running the following code.

```
$Content = Get-Content -Path $myPortalDashboardTemplatePath -Raw
$Content = $Content -replace '<subscriptionID>', $subscriptionID
$Content = $Content -replace '<rgName>', $resourceGroupName
$Content = $Content -replace '<vmName>', $vmName
$Content = $Content -replace '<dashboardTitle>', $dashboardTitle
$Content = $Content -replace '<location>', $location
$Content | Out-File -FilePath $myPortalDashboardTemplatePath -Force
```

For more information about the dashboard template structure, see [Microsoft portal dashboards template reference](#).

Deploy the dashboard template

You can use the `New-AzPortalDashboard` cmdlet that's part of the Az.Portal module to deploy the template directly from PowerShell.

```
$DashboardParams = @{
    DashboardPath = $myPortalDashboardTemplatePath
    ResourceGroupName = $resourceGroupName
    DashboardName = $dashboardName
}
New-AzPortalDashboard @DashboardParams
```

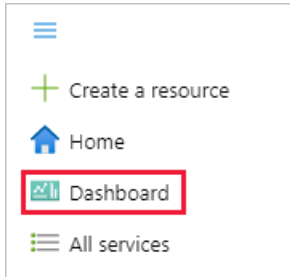
Review the deployed resources

Check that the dashboard was created successfully.

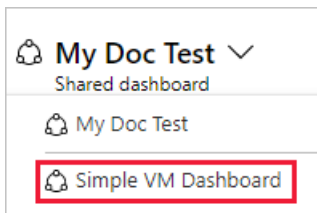
```
Get-AzPortalDashboard -Name $dashboardName -ResourceGroupName $resourceGroupName
```

Verify that you can see data about your virtual machine in the Azure portal dashboard.

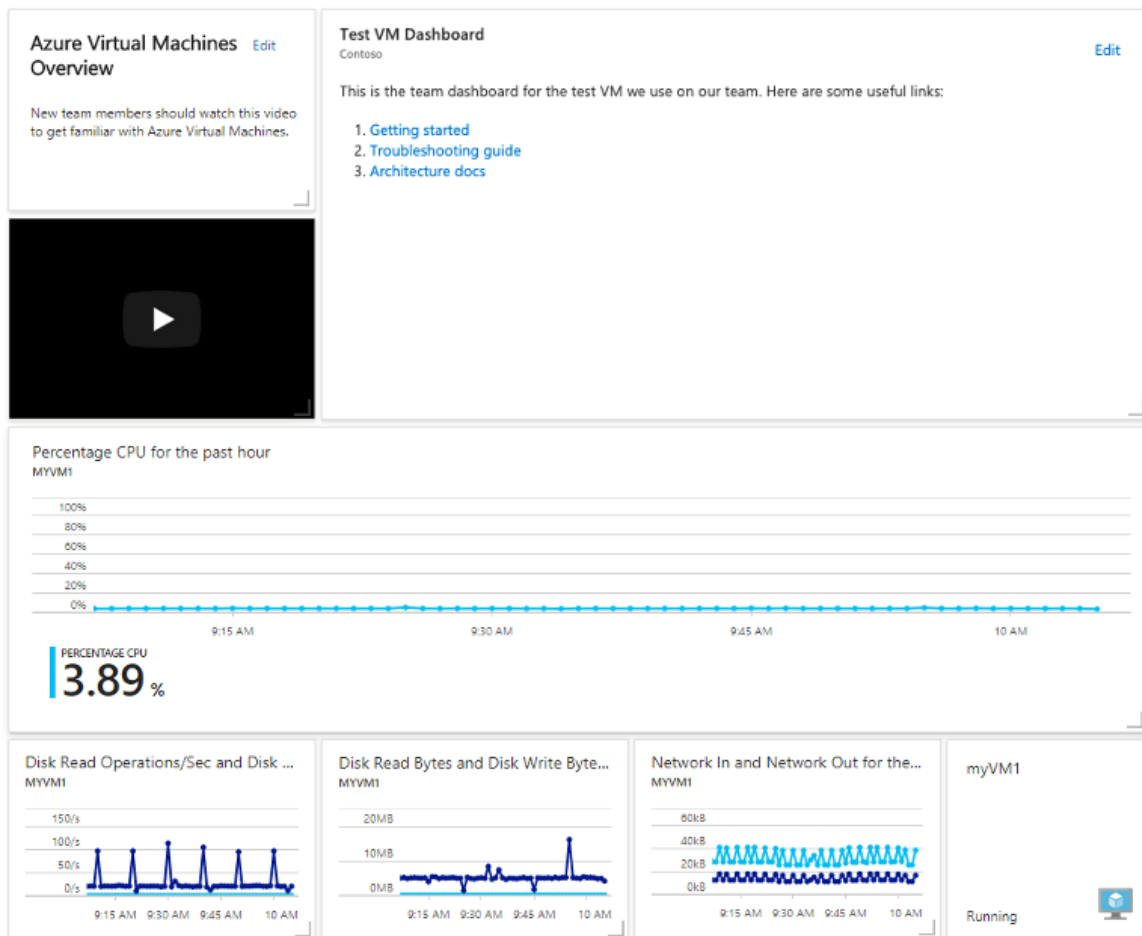
1. In the Azure portal menu, select **Dashboard**.



2. On the dashboard page, select **Simple VM Dashboard**.



3. Review the dashboard, which should look similar to the one shown here. While some of the content is static, there are also charts that show the performance of the VM you created at the beginning.



Clean up resources

To remove the VM and associated dashboard, delete the resource group that contains them.

Caution

Deleting the resource group will delete all of the resources contained within it. If the resource group contains additional resources aside from your virtual machine and dashboard, those resources will also be deleted.

```
Remove-AzResourceGroup -Name $resourceGroupName  
Remove-Item -Path "$HOME\portal-dashboard-template-testvm.json"
```

Next steps

For more information about the cmdlets contained in the Az.Portal PowerShell module, see:

[Microsoft Azure PowerShell: Portal Dashboard cmdlets](#)

Quickstart: Create a dashboard in the Azure portal by using an ARM template

2/24/2022 • 3 minutes to read • [Edit Online](#)

A dashboard in the Azure portal is a focused and organized view of your cloud resources. This quickstart focuses on the process of deploying an Azure Resource Manager template (ARM template) to create a dashboard. The dashboard shows the performance of a virtual machine (VM), as well as some static information and links.

An [ARM template](#) is a JavaScript Object Notation (JSON) file that defines the infrastructure and configuration for your project. The template uses declarative syntax. In declarative syntax, you describe your intended deployment without writing the sequence of programming commands to create the deployment.

If your environment meets the prerequisites and you're familiar with using ARM templates, select the **Deploy to Azure** button. The template will open in the Azure portal.



Prerequisites

- An Azure account with an active subscription. [Create an account for free.](#)

Create a virtual machine

The dashboard you create in the next part of this quickstart requires an existing VM. Create a VM by following these steps.

1. In the Azure portal, select **Cloud Shell** from the global controls at the top of the page.



2. In the **Cloud Shell** window, select **PowerShell**.



3. Copy the following command and enter it at the command prompt to create a resource group.

```
New-AzResourceGroup -Name SimpleWinVmResourceGroup -Location EastUS
```

4. Next, copy the following command and enter it at the command prompt to create a VM in your new resource group.

```
New-AzVm `
  -ResourceGroupName "SimpleWinVmResourceGroup" `
  -Name "myVM1" `
  -Location "East US"
```

5. Enter a username and password for the VM. This is a new user name and password; it's not, for example, the account you use to sign in to Azure. For more information, see [username requirements](#) and [password](#)

[requirements](#).

After the VM has been created, move on to the next section.

Review the template

The template used in this quickstart is from [Azure Quickstart Templates](#). The template for this article is too long to show here. To view the template, see [azuredeploy.json](#). The template defines one Azure resource, a dashboard that displays data about the VM you created.

Deploy the template

This example uses the Azure portal to deploy the template. You can also use other methods to deploy ARM templates, such as [Azure PowerShell](#), [Azure CLI](#), or [REST API](#).

1. Select the following image to sign in to Azure and open a template.



2. Select or enter the following values, then select **Review + create**.

Create an Azure portal dashboard ...

Azure quickstart template

Basics Review + create

Template



Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ

Instance details

Region * ⓘ

Virtual Machine Name * ⓘ

Virtual Machine Resource Group * ⓘ

Dashboard Name ⓘ

Dashboard Display Name ⓘ

Location

Visual Studio Enterprise	▼
SimpleWinVmResourceGroup	▼
Create new	
(US) East US	✓
myVM1	✓
SimpleWinVmResourceGroup	✓
[guid(parameters('virtualMachineName'), parameters('virtualMachineRes...	
Simple VM Dashboard	✓
[resourceGroup().location]	

Review + create

< Previous

Next : Review + create >

Unless it's specified, use the default values to create the dashboard.

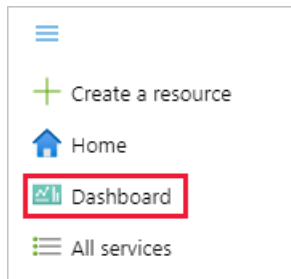
- **Subscription:** select the Azure subscription.
- **Resource group:** select **SimpleWinVmResourceGroup**.
- **Location:** If not automatically selected, choose **East US**.
- **Virtual Machine Name:** enter **myVM1**.
- **Virtual Machine Resource Group:** enter **SimpleWinVmResourceGroup**.

3. Select **Create**. You'll see a notification confirming when the dashboard has been deployed successfully.

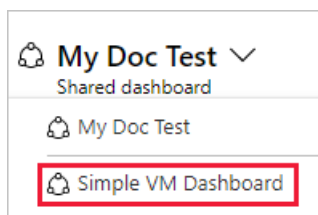
Review deployed resources

Verify that you can see data about your virtual machine in the Azure portal dashboard.

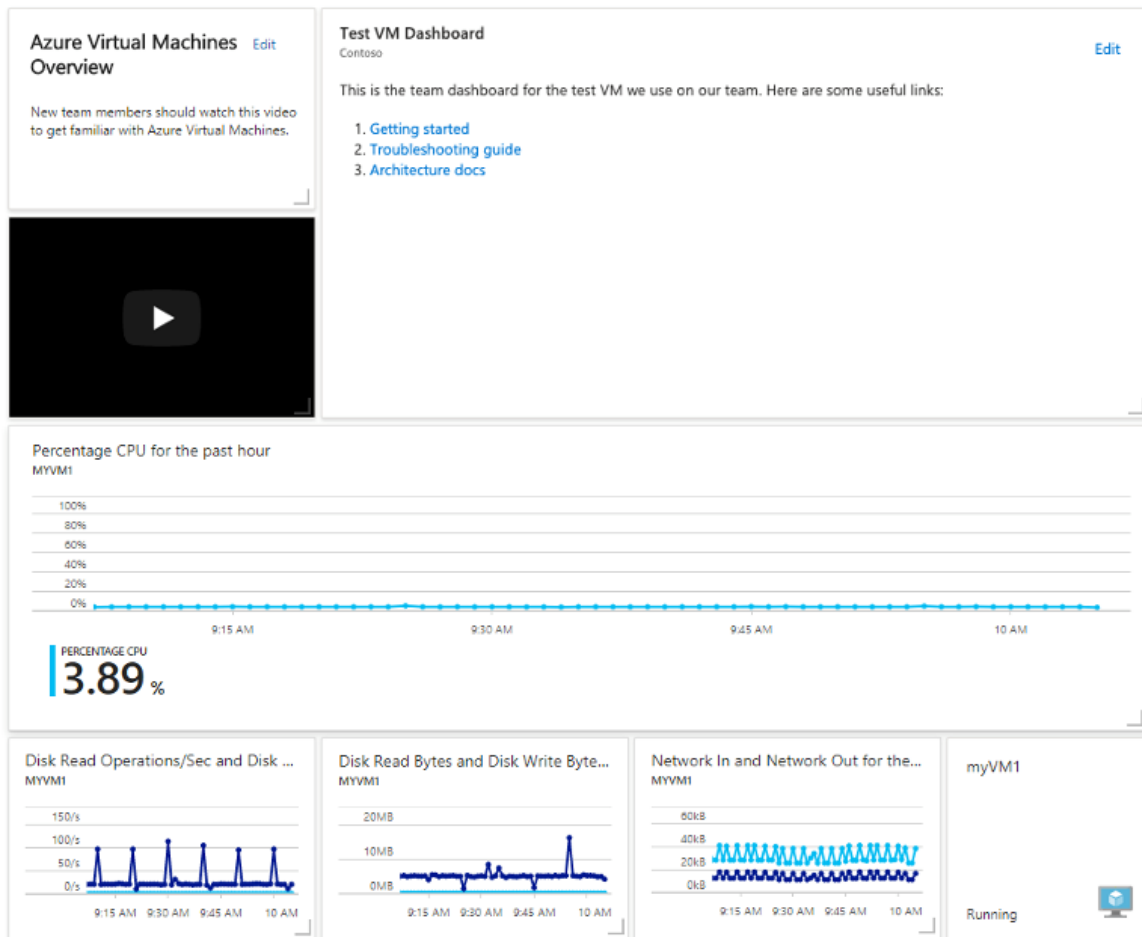
1. In the Azure portal menu, select **Dashboard**.



2. On the dashboard page, select **Simple VM Dashboard**.



3. Review the dashboard, which should look similar to the one shown here. While some of the content is static, there are also charts that show the performance of the VM you created at the beginning.



Clean up resources

If you want to remove the VM and associated dashboard, delete the resource group that contains them.

1. In the Azure portal, search for `SimpleWinVmResourceGroup`, then select it in the search results.
2. On the `SimpleWinVmResourceGroup` page, select **Delete resource group**, enter the resource group name to confirm, then select **Delete**.

Caution

Deleting a resource group will delete all of the resources contained within it. If the resource group contains additional resources aside from your virtual machine and dashboard, those resources will also be deleted.

Next steps

For more information about dashboards in the Azure portal, see:

[Create and share dashboards in the Azure portal](#)

Manage Azure portal settings and preferences

2/24/2022 • 10 minutes to read • [Edit Online](#)

You can change the default settings of the Azure portal to meet your own preferences.

Most settings are available from the **Settings** menu in the top right section of global page header.



NOTE

We're in the process of moving all users to the newest settings experience described in this topic. For information about the older experience, see [Manage Azure portal settings and preferences \(older version\)](#).

Directories + subscriptions

The **Directories + subscriptions** page lets you manage directories and set subscription filters.

Switch and manage directories

In the **Directories** section, you'll see your **Current directory** (which you're currently signed in to).

The **Startup directory** shows the default directory when you sign in to the Azure portal. To choose a different startup directory, select **change** to go to the [Appearance + startup views](#) page, where you can change this option.

To see a full list of directories to which you have access, select **All Directories**.

To mark a directory as a favorite, select its star icon. Those directories will be listed in the **Favorites** section.


To switch to a different directory, select the directory that you want to work in, then select the **Switch** button in its row.

A screenshot of the Azure portal's 'Directories + subscriptions' settings page. The page title is 'Portal settings | Directories + subscriptions'. On the left is a navigation menu with options: 'Directories + subscriptions' (selected), 'Appearance + startup views', 'Language + region', 'My information', and 'Signing out + notifications'. The main content area shows 'Default subscription filter' set to 'All subscriptions' and 'Advanced filters' turned off. Under 'Directories', the 'Current directory' is 'Contoso' and the 'Startup directory' is 'Last visited (change)'. Below this is a 'Favorites' section with a search bar and a table of directories. The table has columns for 'Directory name', 'Domain', and 'Directory ID'. The 'Contoso' directory is marked as 'Current' with a green checkmark. Other directories listed are 'Contoso Sales', 'Contoso Finance', 'Contoso Marketing', and 'Contoso IT', each with a 'Switch' button. At the bottom left, there are 'Useful links' for settings, Safelist URLs, Microsoft partner network, Privacy Statement, and More Azure resources.

Subscription filters

You can choose the subscriptions that are filtered by default when you sign in to the Azure portal. This can be helpful if you have a primary list of subscriptions you work with but use others occasionally.

To use customized filters, select **Advanced filters**. You'll be prompted to confirm before continuing.

Advanced filters 

Enable advanced filters

Enabling advanced filters will reload the Azure portal and replace Default subscription filter with advanced filters. Your currently-selected subscriptions will be saved as a new advanced filter and be activated on reload. Do you wish to continue?

[Continue](#)

[Cancel](#)

This will enable the **Advanced filters** page, where you can create and manage multiple subscription filters. Any currently selected subscriptions will be saved as an imported filter that you can use again. If you want to stop using advanced filters, select the toggle again to restore the default subscription view. Any custom filters you've created will be saved and will be available to use if you enable **Advanced filters** in the future.

Advanced filters 

Disable advanced filters

Disabling advanced filtering will reload the Azure portal and restore the Default subscriptions filter view. All of your advanced filters and customizations will be saved and available to use when you enable advanced filters next time. Do you wish to continue?

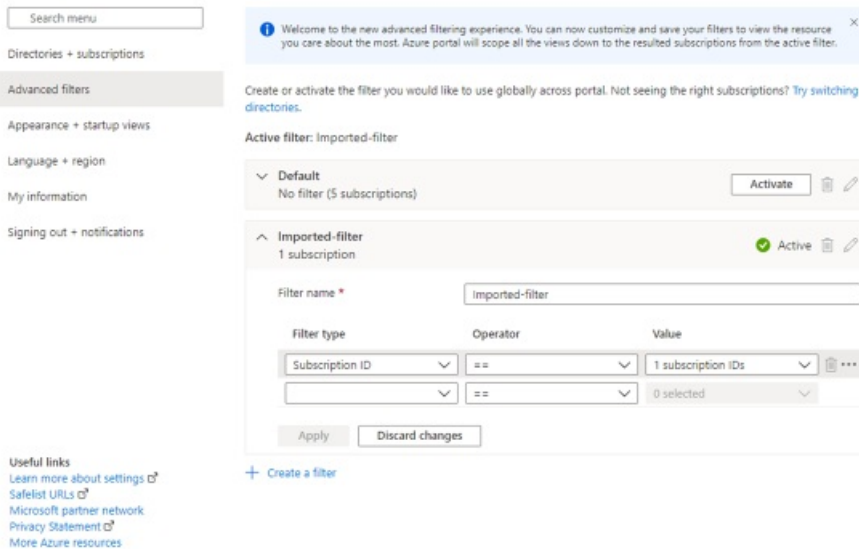
[Continue](#)

[Cancel](#)

Advanced filters

On the **Advanced filters** page, you can create, modify, or delete subscription filters.

Portal settings | Advanced filters



Search menu

Directories + subscriptions

Advanced filters

Appearance + startup views

Language + region

My information

Signing out + notifications

Useful links
[Learn more about settings](#)
[SafeList URLs](#)
[Microsoft partner network](#)
[Privacy Statement](#)
[More Azure resources](#)

Welcome to the new advanced filtering experience. You can now customize and save your filters to view the resource you care about the most. Azure portal will scope all the views down to the resulted subscriptions from the active filter.

Create or activate the filter you would like to use globally across portal. Not seeing the right subscriptions? [Try switching directories.](#)

Active filter: Imported-filter

Filter type	Operator	Value
Default		No filter (5 subscriptions)
Imported-filter		1 subscription

Filter name * Imported-filter

Filter type	Operator	Value
Subscription ID	==	1 subscription IDs
	==	0 selected

[Apply](#) [Discard changes](#)

[+ Create a filter](#)

The **Default** filter shows all subscriptions to which you have access. This filter is used if there are no other filters, or when the active filter fails to include any subscriptions.

You may also see a filter named **Imported-filter**, which includes all subscriptions that had been selected previously.

To change the filter that is currently in use, select that filter from the **Advanced filter** drop-down box. You can also select **Modify advanced filters** to go to the **Advanced filters** page, where you can create, modify, and

delete your filters.

Create a filter

To create a new filter, select **Create a filter**. You can create up to ten filters.

Each filter must have a unique name that is between 8 and 50 characters long and contains only letters, numbers, and hyphens.

The screenshot shows a 'Create a filter' dialog box. At the top left, there is a button labeled 'Create a filter' which is highlighted with a red rectangular box. Below this, the 'Filter name *' field contains the text 'Contoso-Test-Subscriptions' and has a green checkmark on the right. Underneath, there are three columns: 'Filter type', 'Operator', and 'Value'. The 'Filter type' dropdown menu is highlighted with a red rectangular box. The 'Operator' dropdown is set to '==' and the 'Value' dropdown is set to '0 selected'. At the bottom left, there are two buttons: 'Create' and 'Cancel'. The 'Create' button is highlighted with a red rectangular box.

After you've named your filter, enter at least one condition. In the **Filter type** field, select either **Subscription name**, **Subscription ID**, or **Subscription state**. Then select an operator and enter a value to filter on.

The screenshot shows a dropdown menu titled 'Operator'. The dropdown is open, displaying a search bar at the top with the text 'Search'. Below the search bar, a list of operators is shown: '==', '!=', 'contains', '!contains', 'startswith', '!startswith', 'endswith', and '!endswith'. The '==' operator is currently selected and highlighted.

When you're finished adding conditions, select **Create**. Your filter will then appear in the list in **Active filters**.

Modify or delete a filter

You can modify or rename an existing filter by selecting the pencil icon in that filter's row. Make your changes, and then select **Apply**.

NOTE

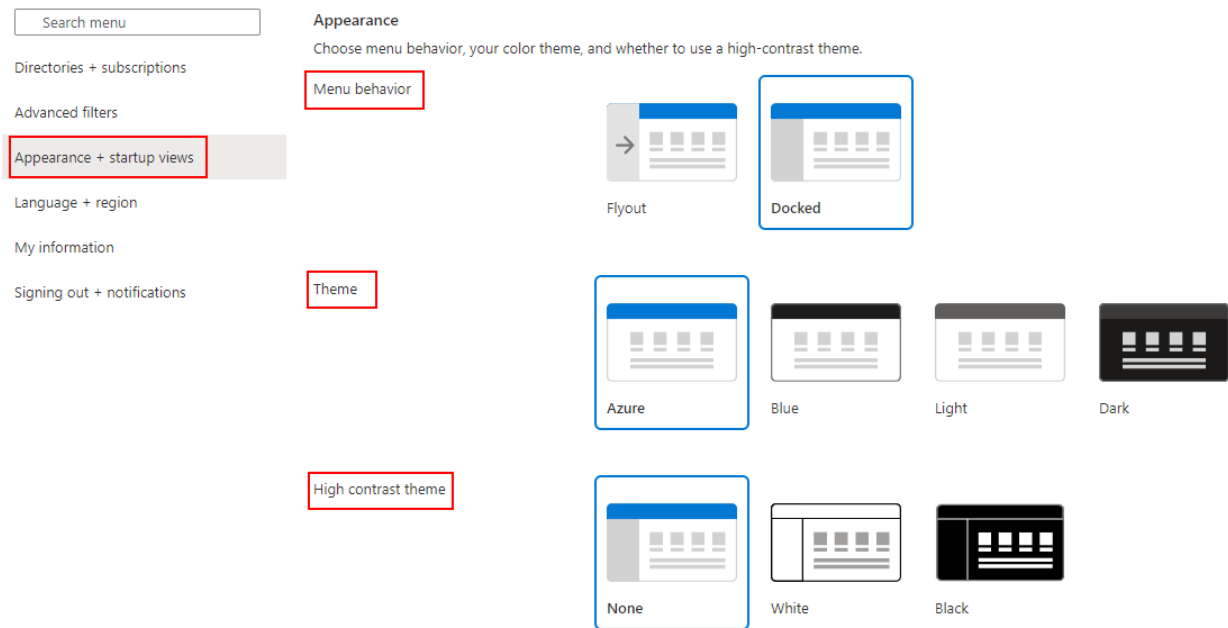
If you modify a filter that is currently active, and the changes result in 0 subscriptions, the **Default** filter will become active instead. You can't activate a filter which doesn't include any subscriptions.

To delete a filter, select the trash can icon in that filter's row. You can't delete the **Default** filter or any filter that is currently active.

Appearance + startup views

The **Appearance + startup views** pane has two sections. The **Appearance** section lets you choose menu behavior, your color theme, and whether to use a high-contrast theme, and the **Startup views** section lets you set options for what you see when you first sign in to the Azure portal.

Portal settings | Appearance + startup views



Set menu behavior

The **Menu behavior** section lets you choose how the default Azure portal menu behaves.

- **Flyout:** The menu will be hidden until you need it. You can select the menu icon in the upper left hand corner to open or close the menu.
- **Docked:** The menu will always be visible. You can collapse the menu to provide more working space.

Choose a theme or enable high contrast

The theme that you choose affects the background and font colors that appear in the Azure portal. In the **Theme** section, you can select from one of four preset color themes. Select each thumbnail to find the theme that best suits you.

Alternatively, you can choose a theme from the **High contrast theme** section. These themes can make the Azure portal easier to read, especially if you have a visual impairment. Selecting either the white or black high-contrast theme will override any other theme selections.

Startup page

Choose one of the following options for the page you'll see when you first sign in to the Azure portal.

- **Home:** Displays the home page, with shortcuts to popular Azure services, a list of resources you've used most recently, and useful links to tools, documentation, and more.
- **Dashboard:** Displays your most recently used dashboard. Dashboards can be customized to create a workspace designed just for you. For example, you can build a dashboard that is project, task, or role focused. For more information, see [Create and share dashboards in the Azure portal](#).

Startup directory

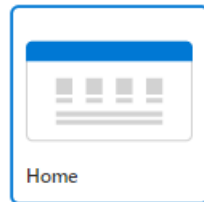
Choose one of the following options for the directory to work in when you first sign in to the Azure portal.

- **Sign in to your last visited directory:** When you sign in to the Azure portal, you'll start in whichever directory you'd been working in last time.
- **Select a directory:** Choose this option to select one of your directory. You'll start in that directory every time you sign in to the Azure portal, even if you had been working in a different directory last time.

Startup views

Choose your portal landing page and the directory that will load on startup.

Startup page



Home

Dashboard

Startup directory

- Last visited
 Select a directory

Apply

Discard changes

Language + region

Choose your language and the regional format that will influence how data such as dates and currency will appear in the Azure portal.

Portal settings | Language + region

Search menu

Choose your language and the regional format that will influence how your date/time and currency will appear.

Directories + subscriptions

Language

English

Advanced filters

Regional format

English (United States)

Appearance + startup views

Language + region

My information

Signing out + notifications

NOTE

These language and regional settings affect only the Azure portal. Documentation links that open in a new tab or window use your browser's settings to determine the language to display.

Language

Use the drop-down list to select from the list of available languages. This setting controls the language you see for text throughout the Azure portal.

Regional format

Select an option to control the way dates, time, numbers, and currency are shown in the Azure portal.

The options shown in the **Regional format** drop-down list changes based on the option you selected for **Language**. For example, if you select **English** as your language, and then select **English (United States)** as the regional format, currency is shown in U.S. dollars. If you select **English** as your language and then select **English (Europe)** as the regional format, currency is shown in euros.

Select **Apply** to update your language and regional format settings.

My information

The **My information** page lets you update the email address that is used for updates on Azure services, billing,

support, or security issues. You can also opt in or out from additional emails about Microsoft Azure and other products and services.

Near the top of the **My information** page, you'll see options to export, restore, or delete settings.

Portal settings | My information

Search menu

Export settings Restore default settings Delete all settings and private dashboards

Directories + subscriptions

Appearance + startup views

Language + region

My information

Signing out + notifications

Please confirm or enter a new email address so we can update you on any Azure service, billing, support, or security issues.

Email address * user@contoso.com

I would like to hear from Microsoft and its family of companies via email about Microsoft Azure and other Microsoft products and services. To withdraw consent or manage your contact preferences, visit the [Promotional Communications Manager](#) or [Privacy Statement](#).

Useful links

- [Learn more about settings](#)
- [SafeList URLs](#)
- [Microsoft partner network](#)
- [Privacy Statement](#)
- [More Azure resources](#)

Apply Discard changes

Export user settings

Information about your custom settings is stored in Azure. You can export the following user data:

- Private dashboards in the Azure portal
- User settings like favorite subscriptions or directories
- Themes and other custom portal settings

It's a good idea to export and review your settings if you plan to delete them. Rebuilding dashboards or redoing settings can be time-consuming.

To export your portal settings, select **Export settings** from the top of the settings **Overview** pane. This creates a *.json* file that contains your user settings data.

Due to the dynamic nature of user settings and risk of data corruption, you can't import settings from the *.json* file.

Restore default settings

If you've made changes to the Azure portal settings and want to discard them, select **Restore default settings** from the top of the settings **Overview** pane. You'll be prompted to confirm this action. When you do so, any changes you've made to your Azure portal settings will be lost. This option doesn't affect dashboard customizations.

Delete user settings and dashboards

Information about your custom settings is stored in Azure. You can delete the following user data:

- Private dashboards in the Azure portal
- User settings like favorite subscriptions or directories
- Themes and other custom portal settings

It's a good idea to export and review your settings before you delete them. Rebuilding [dashboards](#) or redoing custom settings can be time-consuming.

NOTE

This article provides steps about how to delete personal data from the device or service and can be used to support your obligations under the GDPR. For general information about GDPR, see the [GDPR section of the Microsoft Trust Center](#) and the [GDPR section of the Service Trust portal](#).

To delete your portal settings, select **Delete all settings and private dashboards** from the top of the **My information** page. You'll be prompted to confirm the deletion. When you do so, all settings customizations will return to the default settings, and all of your private dashboards will be lost.

Signing out + notifications

This pane lets you manage pop-up notifications and session timeouts.

Portal settings | Signing out + notifications

Search menu

Directories + subscriptions

Advanced filters

Appearance + startup views

Language + region

My information

Signing out + notifications

Signing out

Sign me out when inactive

Never

Notifications

Enable pop-up notifications

Signing out

The inactivity timeout setting helps to protect resources from unauthorized access if you forget to secure your workstation. After you've been idle for a while, you're automatically signed out of your Azure portal session. As an individual, you can change the timeout setting for yourself. If you're an admin, you can set it at the directory level for all your users in the directory.

Change your individual timeout setting (user)

In the drop-down menu next to **Sign me out when inactive**, choose the duration after which your Azure portal session is signed out if you're idle.

Portal settings | Signing out + notifications

Search menu

Directories + subscriptions

Advanced filters

Appearance + startup views

Language + region

My information

Signing out + notifications

Signing out

Sign me out when inactive

Notifications

Enable pop-up notifications

Never

Never

After 15 minutes

After 30 minutes

After 45 minutes

After 1 hour

After 1.5 hours

After 2 hours

Custom duration

Select **Apply** to save your changes. After that, if you're inactive during the portal session, Azure portal will sign out after the duration you set.

If your admin has enabled an inactivity timeout policy, you can still set your own, as long as it's shorter than the directory-level setting. To do so, select **Override the directory inactivity timeout policy**, then enter a time interval for the **Override value**.

Signing out

Inactivity timeout is being enforced by the tenant administrator. You will be signed out after 15 minutes of inactivity.

Override the directory inactivity timeout policy ⓘ

Override value

Notifications

Enable pop-up notifications

Change the directory timeout setting (admin)

Admins in the [Global Administrator role](#) can enforce the maximum idle time before a session is signed out. This inactivity timeout setting applies at the directory level. The setting takes effect for new sessions. It won't apply immediately to any users who are already signed in. For more information about directories, see [Active Directory Domain Services Overview](#).

If you're a Global Administrator, and you want to enforce an idle timeout setting for all users of the Azure portal, select **Enable directory level idle timeout** to turn on the setting. Next, enter the **Hours** and **Minutes** for the maximum time that a user can be inactive before their session is automatically signed out. After you select **Apply**, this setting will apply to all users in the directory.

Signing out

Default timeout: 00:10:00 (Note that the default timeout policy cannot currently be managed by the Azure portal.)

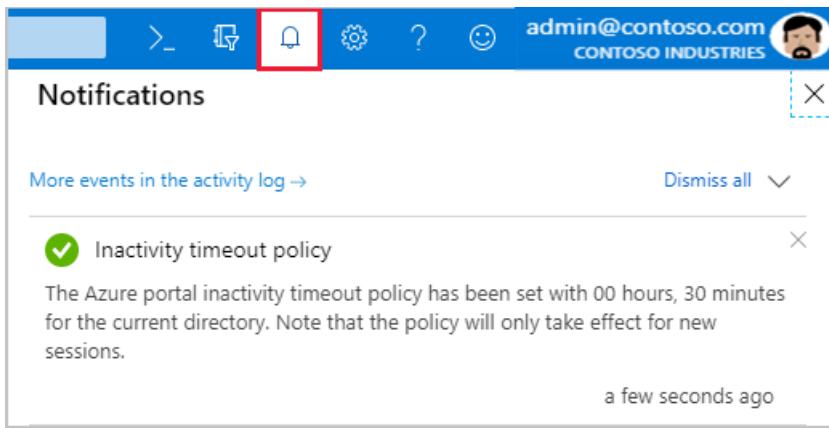
Enable directory level idle timeout

Hours Minutes

Inactivity timeout is being enforced by the tenant administrator. You will be signed out after 15 minutes of inactivity.

Override the directory inactivity timeout policy ⓘ

To confirm that the inactivity timeout policy is set correctly, select **Notifications** from the global page header and verify that a success notification is listed.



Enable or disable pop-up notifications

Notifications are system messages related to your current session. They provide information such as showing your current credit balance, confirming your last action, or letting you know when resources you created become . When pop-up notifications are turned on, the messages briefly display in the top corner of your screen.

To enable or disable pop-up notifications, select or clear **Enable pop-up notifications**.

To read all notifications received during your current session, select **Notifications** from the global header.



To view notifications from previous sessions, look for events in the Activity log. For more information, see [View the Activity log](#).

Next steps

- [Learn about keyboard shortcuts in the Azure portal](#)
- [View supported browsers and devices](#)
- [Add, remove, and rearrange favorites](#)
- [Create and share custom dashboards](#)
- [Watch Azure portal how-to videos](#)

Manage Azure portal settings and preferences (older version)

2/24/2022 • 6 minutes to read • [Edit Online](#)

You can change the default settings of the Azure portal to meet your own preferences.

IMPORTANT

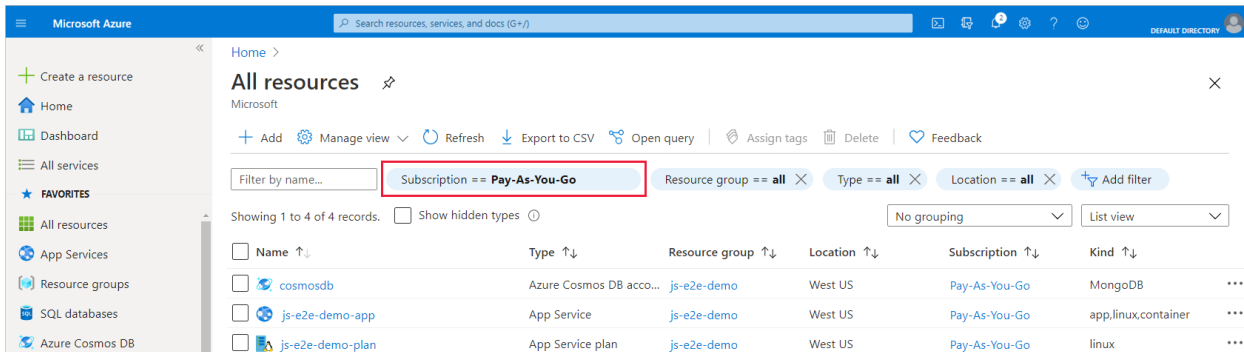
We're in the process of moving all Azure users to a newer experience. This topic describes the older experience. For the latest information, see [Manage Azure portal settings and preferences](#).

Most settings are available from the **Settings** menu in the global page header.

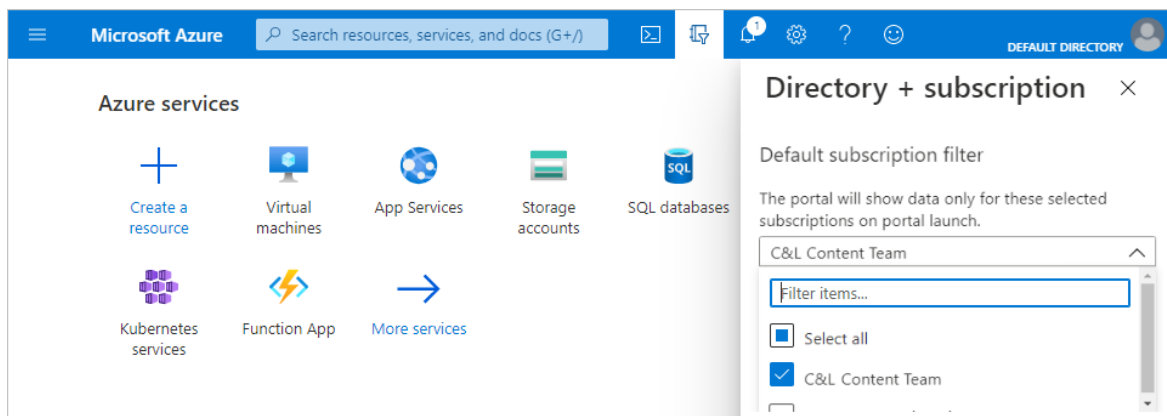


Choose your default subscription

You can change the subscription that opens by default when you sign-in to the Azure portal. This is helpful if you have a primary subscription you work with but use others occasionally.

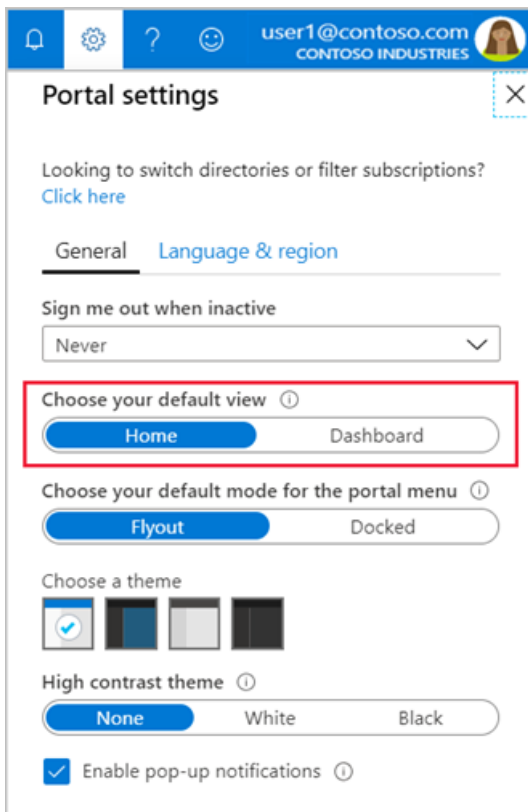


1. Select the directory and subscription filter icon in the global page header.
2. Select the subscriptions you want as the default subscriptions when you launch the portal.



Choose your default view

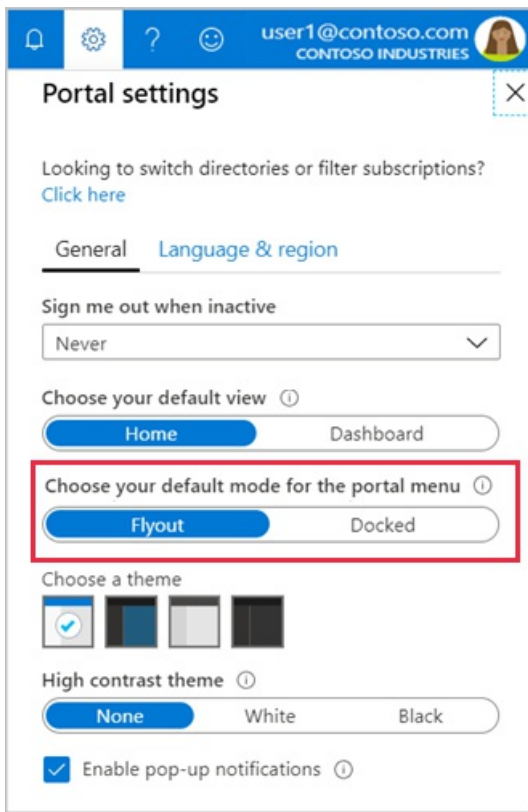
You can change the page that opens by default when you sign in to the Azure portal.



- **Home** can't be customized. It displays shortcuts to popular Azure services and lists the resources you've used most recently. We also give you useful links to resources like Microsoft Learn and the Azure roadmap.
- Dashboards can be customized to create a workspace designed just for you. For example, you can build a dashboard that is project, task, or role focused. If you select **Dashboard**, your default view will go to your most recently used dashboard. For more information, see [Create and share dashboards in the Azure portal](#).

Choose a portal menu mode

The default mode for the portal menu controls how much space the portal menu takes up on the page.

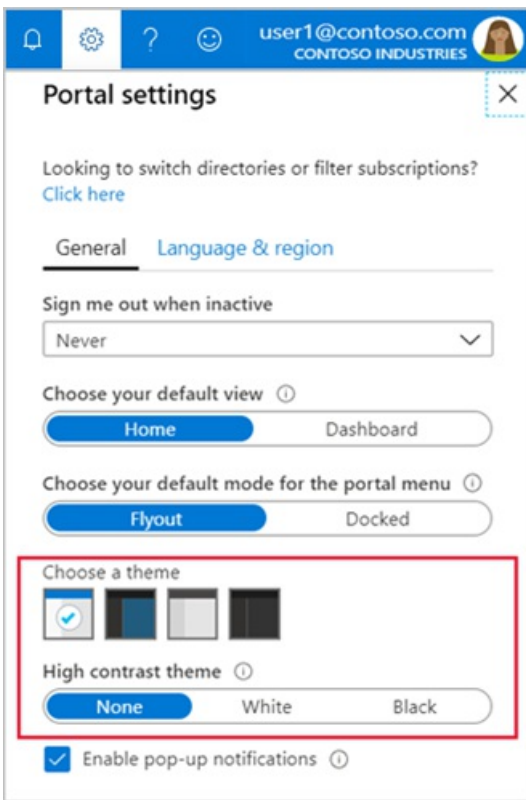


- When the portal menu is in **Flyout** mode, it's hidden until you need it. Select the menu icon to open or close the menu.
- If you choose **Docked mode** for the portal menu, it's always visible. You can collapse the menu to provide more working space.

Choose a theme or enable high contrast

The theme that you choose affects the background and font colors that appear in the Azure portal. You can select from one of four preset color themes. Select each thumbnail to find the theme that best suits you.

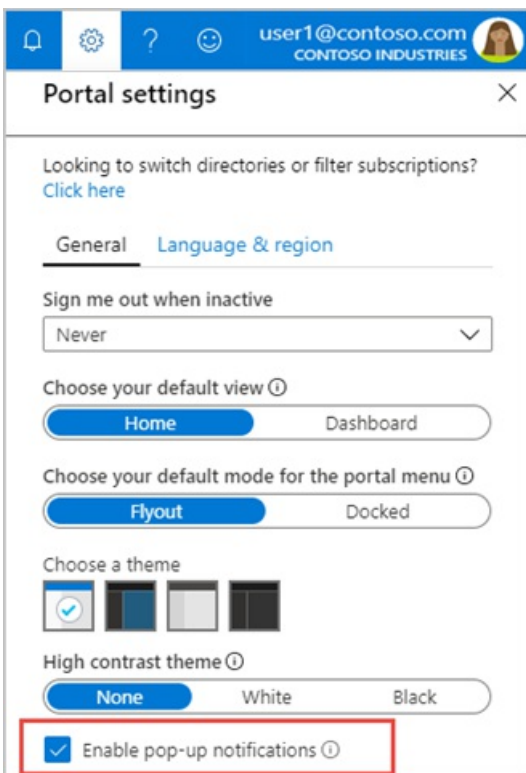
Alternatively, you can choose one of the high-contrast themes. The high contrast themes make the Azure portal easier to read for people who have a visual impairment; they override all other theme selections.



Enable or disable pop-up notifications

Notifications are system messages related to your current session. They provide information like your current credit balance, when resources you just created become available, or confirm your last action, for example. When pop-up notifications are turned on, the messages briefly display in the top corner of your screen.

To enable or disable pop-up notifications, select or clear **Enable pop-up notifications**.



To read all notifications received during your current session, select **Notifications** from the global header.



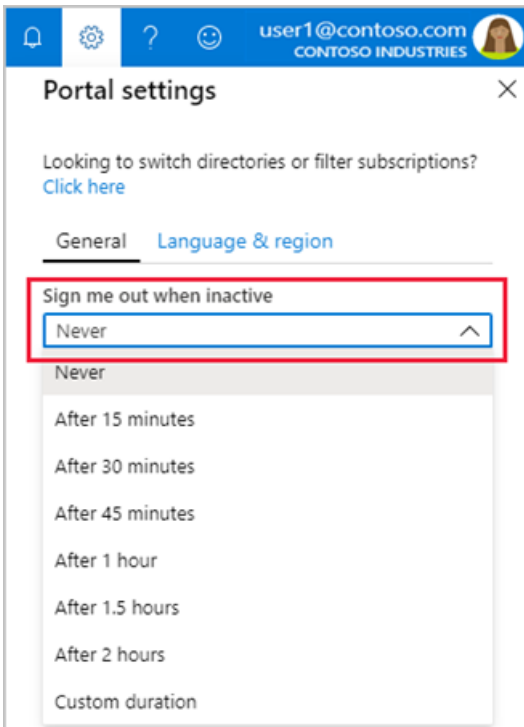
If you want to read notifications from previous sessions, look for events in the Activity log. For more information, see [View the Activity log](#).

Change the inactivity timeout setting

The inactivity timeout setting helps to protect resources from unauthorized access if you forget to secure your workstation. After you've been idle for a while, you're automatically signed out of your Azure portal session. As an individual, you can change the timeout setting for yourself. If you're an admin, you can set it at the directory level for all your users in the directory.

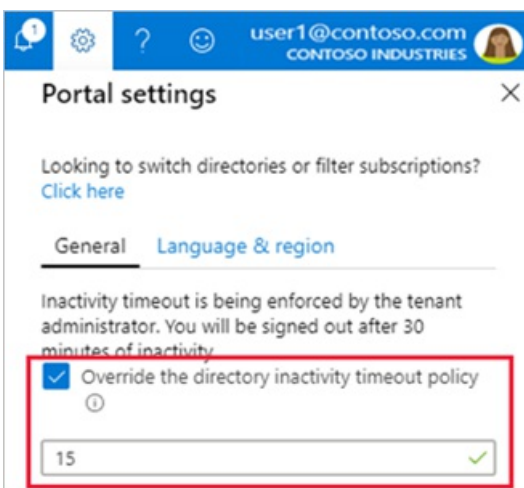
Change your individual timeout setting (user)

Select the drop-down under **Sign me out when inactive**. Choose the duration after which your Azure portal session is signed out if you're idle.



The change is saved automatically. If you're idle, your Azure portal session will sign out after the duration you set.

If your admin has enabled an inactivity timeout policy, you can still set your own, as long as it's less than the directory-level setting. Select **Override the directory inactivity timeout policy**, then set a time interval.



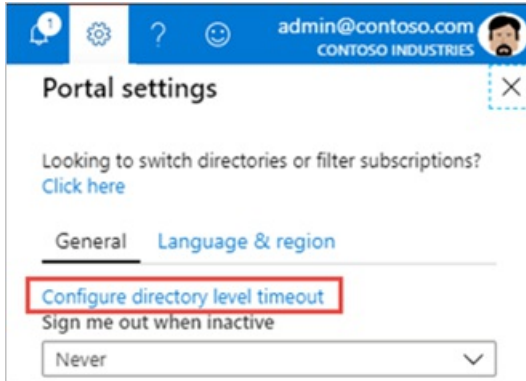
Change the directory timeout setting (admin)

Admins in the [Global Administrator role](#) can enforce the maximum idle time before a session is signed out. The

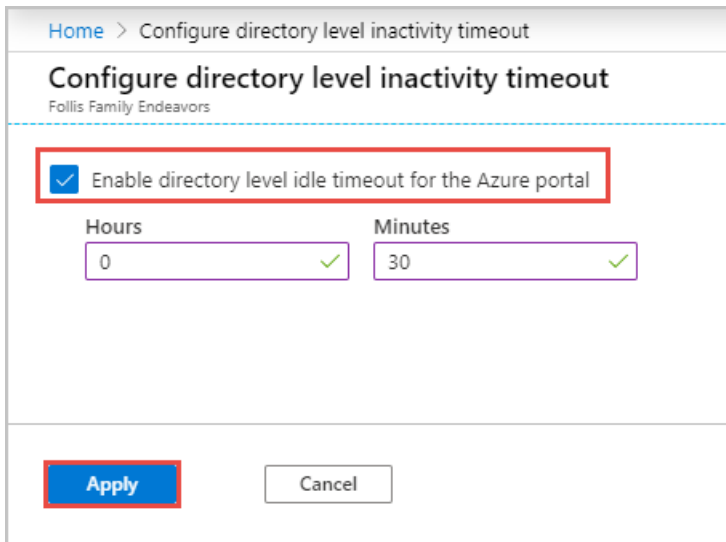
inactivity timeout setting applies at the directory level. The setting takes effect for new sessions. It won't apply immediately to any users who are already signed in. For more information about directories, see [Active Directory Domain Services Overview](#).

If you're a Global Administrator, and you want to enforce an idle timeout setting for all users of the Azure portal, follow these steps:

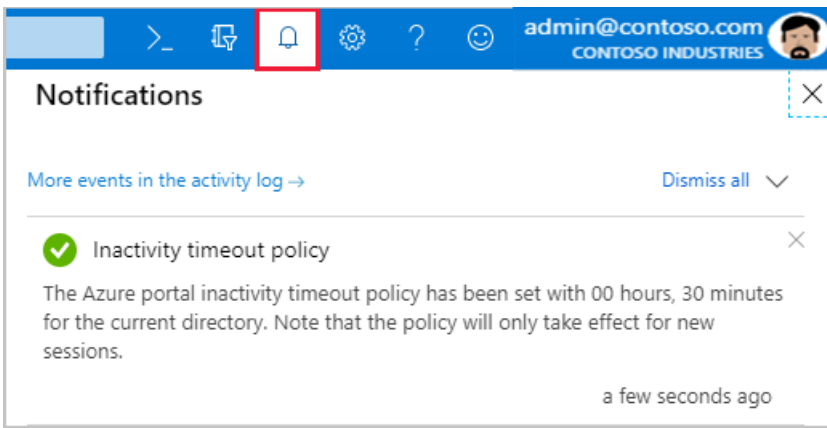
1. Select the link text **Configure directory level timeout**.



2. On the **Configure directory level inactivity timeout** page, select **Enable directory level idle timeout for the Azure portal** to turn on the setting.
3. Next, enter the **Hours** and **Minutes** for the maximum time that a user can be idle before their session is automatically signed out.
4. Select **Apply**.

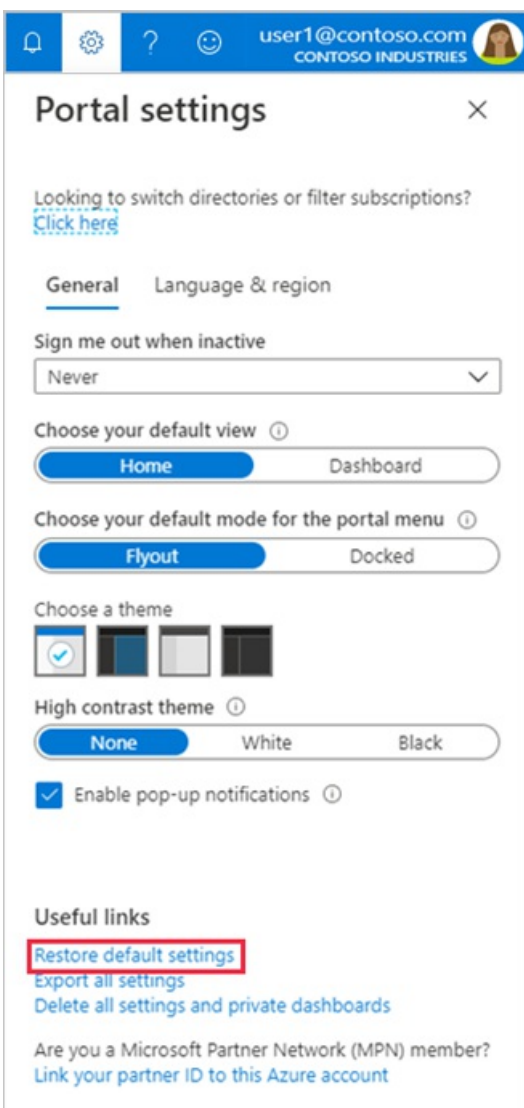


To confirm that the inactivity timeout policy is set correctly, select **Notifications** from the global page header. Verify that a success notification is listed.



Restore default settings

If you've made changes to the Azure portal settings and want to discard them, select **Restore default settings**. Any changes you've made to portal settings will be lost. This option doesn't affect dashboard customizations.



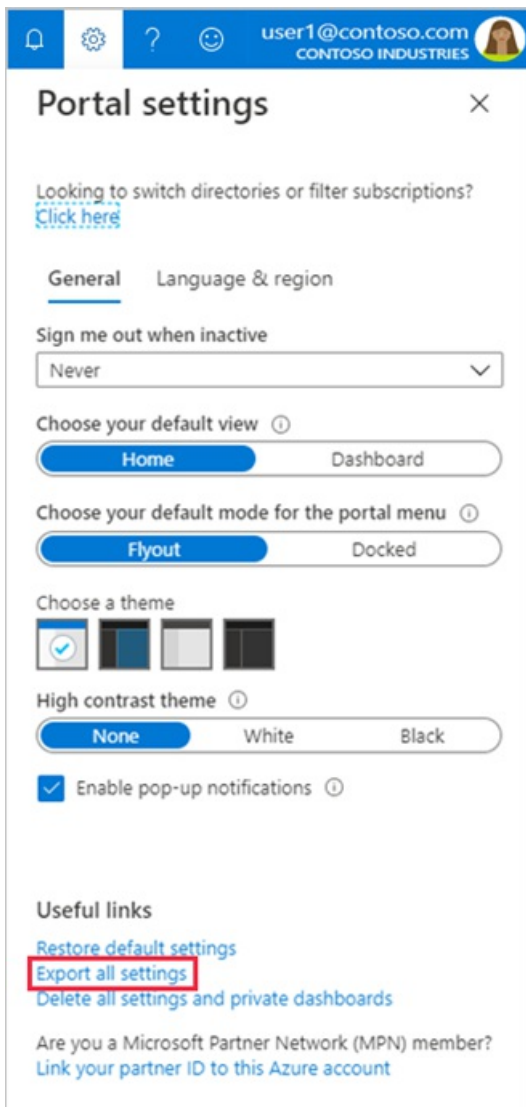
Export user settings

Information about your custom settings is stored in Azure. You can export the following user data:

- Private dashboards in the Azure portal
- User settings like favorite subscriptions or directories, and last logged-in directory
- Themes and other custom portal settings

It's a good idea to export and review your settings if you plan to delete them. Rebuilding dashboards or redoing settings can be time-consuming.

To export your portal settings, select **Export all settings**.



Exporting settings creates a *.json* file that contains your user settings like your color theme, favorites, and private dashboards. Due to the dynamic nature of user settings and risk of data corruption, you can't import settings from the *.json* file.

Delete user settings and dashboards

Information about your custom settings is stored in Azure. You can delete the following user data:

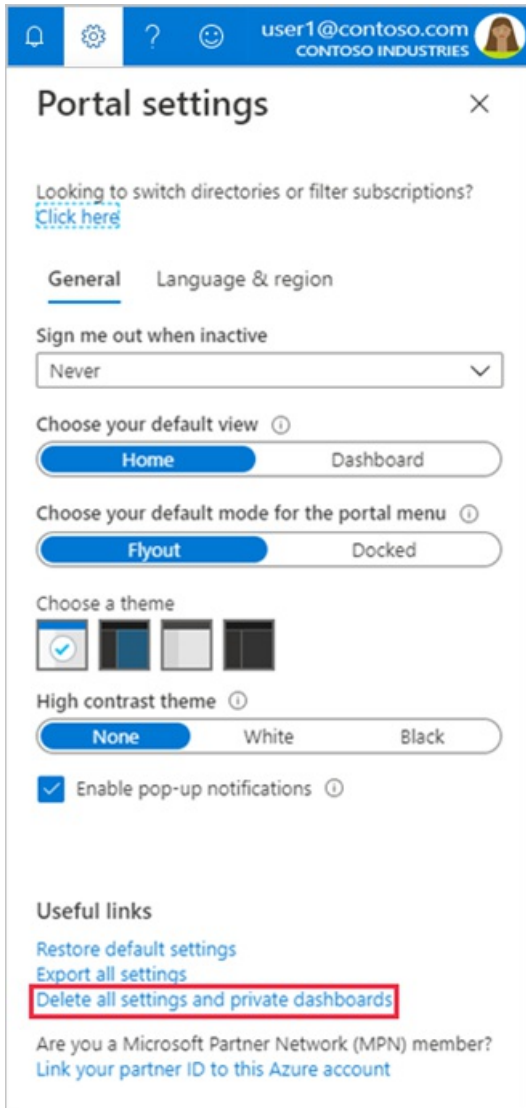
- Private dashboards in the Azure portal
- User settings like favorite subscriptions or directories, and last logged-in directory
- Themes and other custom portal settings

It's a good idea to export and review your settings before you delete them. Rebuilding dashboards or redoing custom settings can be time-consuming.

NOTE

This article provides steps about how to delete personal data from the device or service and can be used to support your obligations under the GDPR. For general information about GDPR, see the [GDPR section of the Microsoft Trust Center](#) and the [GDPR section of the Service Trust portal](#).

To delete your portal settings, select **Delete all settings and private dashboards**.



Change language and regional settings

There are two settings that control how the text in the Azure portal appears:

- The **Language** setting controls the language you see for text in the Azure portal.
- **Regional format** controls the way dates, time, numbers, and currency are shown.

To change the language that is used in the Azure portal, use the drop-down to select from the list of available languages.

The regional format selection changes to display regional options for only the language you selected. To change that automatic selection, use the drop-down to choose the regional format you want.

For example, if you select English as your language, and then select United States as the regional format, currency is shown in U.S. dollars. If you select English as the language and then select Europe as the regional format, currency is shown in euros.

Select **Apply** to update your language and regional format settings.

Portal settings

Looking to switch directories or filter subscriptions?
[Click here](#)

General **Language & region**

Language
Choose the language displayed in the portal.
English

Regional Format
Choose a regional format that will influence how your date/time, numeric, and currency data will appear.
English (United States)

Apply Discard

NOTE

These language and regional settings affect only the Azure portal. Documentation links that open in a new tab or window use your browser's language settings to determine the language to display.

Next steps

- [Keyboard shortcuts in Azure portal](#)
- [Supported browsers and devices](#)
- [Add, remove, and rearrange favorites](#)
- [Create and share custom dashboards](#)
- [Azure portal how-to video series](#)

Add, remove, and rearrange favorites

2/24/2022 • 2 minutes to read • [Edit Online](#)

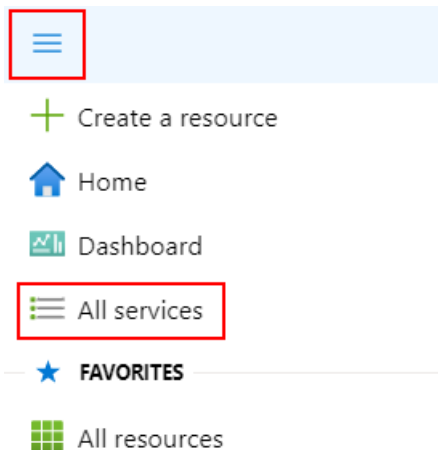
Add or remove items from your **Favorites** list in the Azure portal so that you can quickly go to the services you use most often. We've already added some common services to your **Favorites** list, but you'll likely want to customize it. You're the only one who sees the changes you make to **Favorites**.

Add a favorite

Items that are listed under **Favorites** are selected from **All services**. Hover over a service name to display information and resources related to the service. A filled star icon ★ next to the service name indicates that the item appears on the **Favorites** list. Select the star icon to add a service to the **Favorites** list.

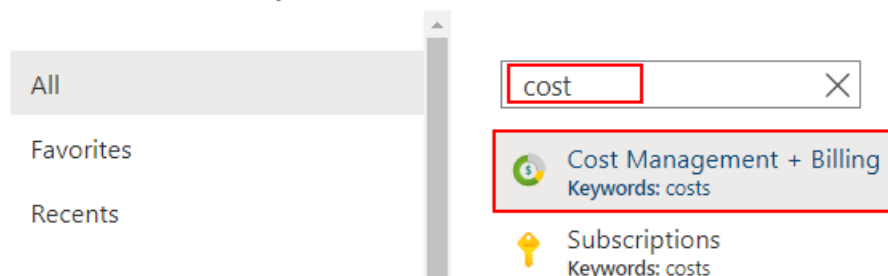
In this example, we'll add Cost Management + Billing to the **Favorites** list.

1. Select **All services** from the Azure portal menu.

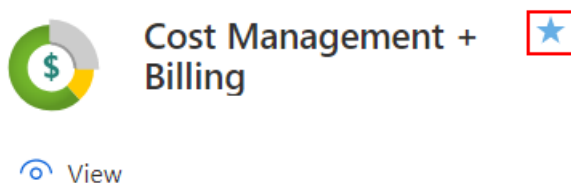


2. Enter the word "cost" in the search field. Services that have "cost" in the title or that have "cost" as a keyword are shown.

All services | All



3. Hover over the service name to display the **Cost Management + Billing** information card. Select the star icon.

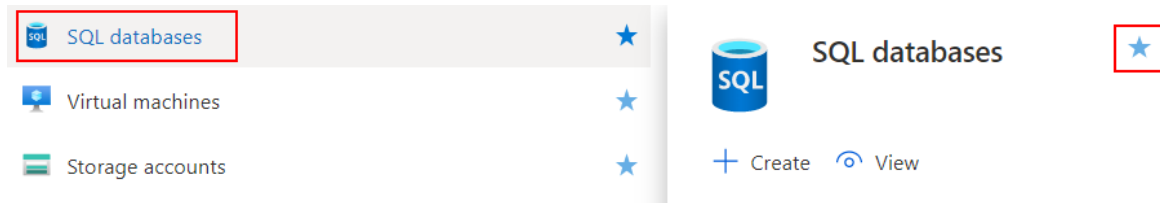


4. **Cost Management + Billing** is now added as the last item in your **Favorites** list.

Remove an item from Favorites

You can now remove an item directly from the **Favorites** list.

1. In the **Favorites** section of the portal menu, hover over the name of the service you want to remove.



2. On the information card, select the star so that it changes from filled to unfilled. The service is removed from the **Favorites** list.

Rearrange favorites

You can change the order in which your favorite services are listed. Just select an item, then drag and drop it to another location under **Favorites**.

Next steps

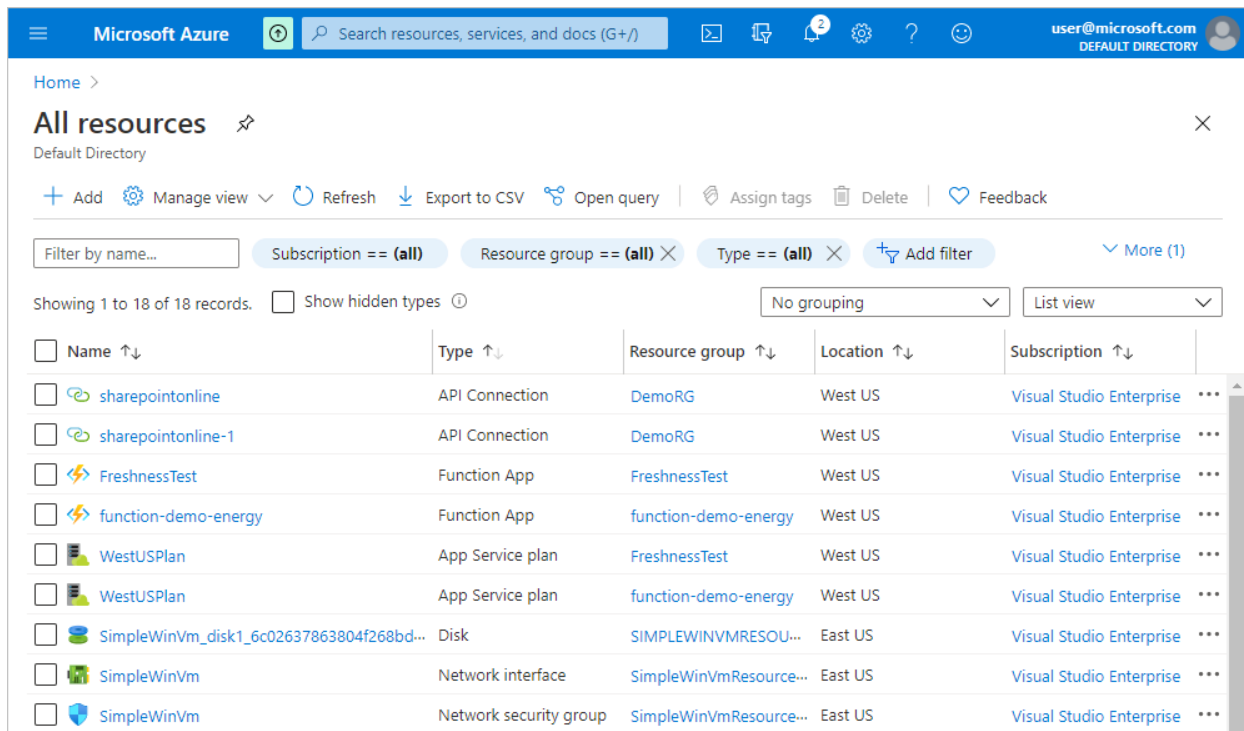
- To create a project-focused workspace, see [Create and share dashboards in the Azure portal](#).
- Explore the [Azure portal how-to video series](#).

View and filter Azure resource information

2/24/2022 • 2 minutes to read • [Edit Online](#)

The Azure portal enables you to browse detailed information about resources across your Azure subscriptions. This article shows you how to filter information and use different views to better understand your resources.

The article focuses on the **All resources** screen shown in the following screenshot. Screens for individual resource types, such as virtual machines, have different options, such as starting and stopping a VM.

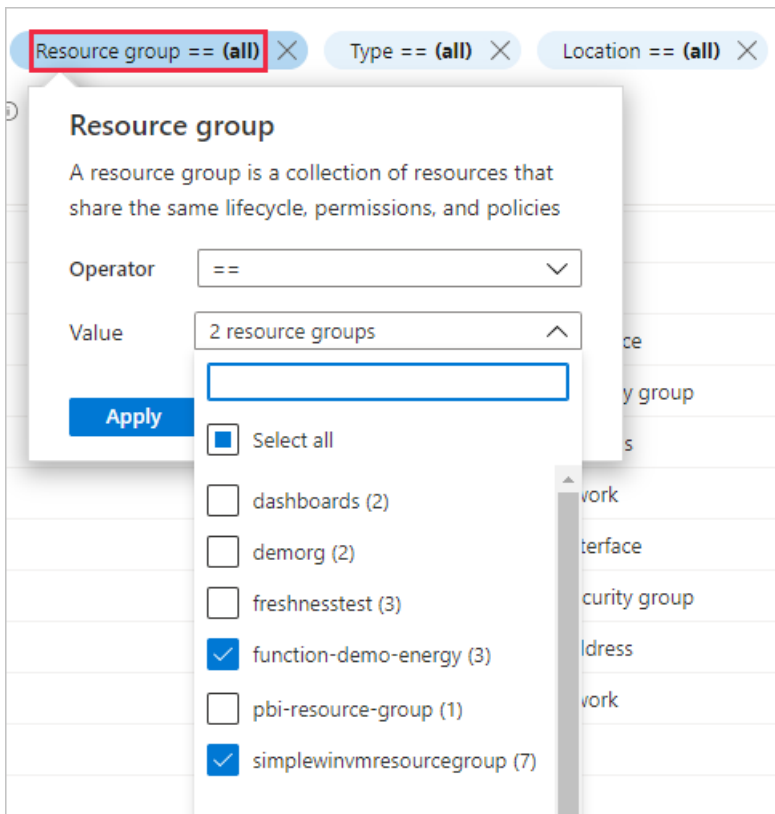


The screenshot shows the Azure portal interface for the 'All resources' page. The page title is 'All resources' and it is associated with the 'Default Directory'. The interface includes a search bar, navigation icons, and a user profile. Below the header, there are several action buttons: '+ Add', 'Manage view', 'Refresh', 'Export to CSV', 'Open query', 'Assign tags', 'Delete', and 'Feedback'. A filter bar shows 'Filter by name...' and several active filters: 'Subscription == (all)', 'Resource group == (all)', and 'Type == (all)'. There is also an 'Add filter' button and a 'More (1)' dropdown. Below the filter bar, it says 'Showing 1 to 18 of 18 records.' and 'Show hidden types'. There are also dropdowns for 'No grouping' and 'List view'. The main content is a table with the following columns: Name, Type, Resource group, Location, and Subscription. The table contains 8 rows of resource information.

Name	Type	Resource group	Location	Subscription
sharepointonline	API Connection	DemoRG	West US	Visual Studio Enterprise
sharepointonline-1	API Connection	DemoRG	West US	Visual Studio Enterprise
FreshnessTest	Function App	FreshnessTest	West US	Visual Studio Enterprise
function-demo-energy	Function App	function-demo-energy	West US	Visual Studio Enterprise
WestUSPlan	App Service plan	FreshnessTest	West US	Visual Studio Enterprise
WestUSPlan	App Service plan	function-demo-energy	West US	Visual Studio Enterprise
SimpleWinVm_disk1_6c02637863804f268bd...	Disk	SIMPLEWINVMRESOU...	East US	Visual Studio Enterprise
SimpleWinVm	Network interface	SimpleWinVmResource...	East US	Visual Studio Enterprise
SimpleWinVm	Network security group	SimpleWinVmResource...	East US	Visual Studio Enterprise

Filter resources

Start exploring **All resources** by using filters to focus on a subset of your resources. The following screenshot shows filtering on resource groups, selecting two of the six resource groups in a subscription.



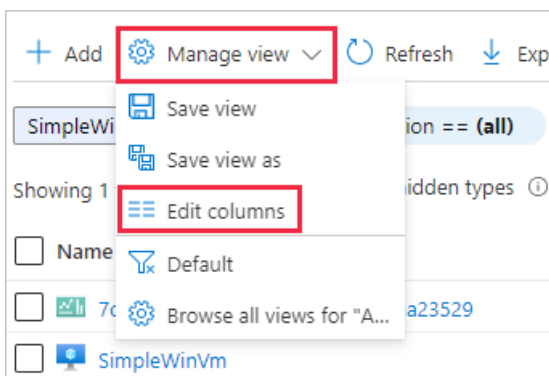
You can combine filters, including those based on text searches, as shown in the following screenshot. In this case the results are scoped to resources that contain "SimpleWinVM" in one of the two resource groups already selected.

SimpleWinVM Subscription == (all) Resource group == (2) Type == (all) Location == (all) Add filter

Showing 1 to 7 of 7 records. Show hidden types

Name	Type	Resource group
7d74f700-72e9-45d4-8f4f-14f82aa23529 (Simple VM Dashboard)	Shared dashboard	SimpleWinVmResourceGroup
SimpleWinVm	Virtual machine	SimpleWinVmResourceGroup
SimpleWinVm	Network interface	SimpleWinVmResourceGroup
SimpleWinVm	Network security group	SimpleWinVmResourceGroup
SimpleWinVm	Public IP address	SimpleWinVmResourceGroup
SimpleWinVm	Virtual network	SimpleWinVmResourceGroup
SimpleWinVm_disk1_6c02637863804f268bd28dbffdba276d	Disk	SIMPLEWINVMRESOURCEGROUP

To change which columns are included in a view, select **Manage view** then **Edit columns**.

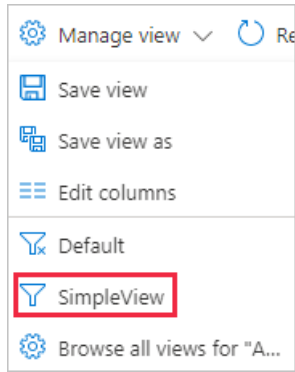


Save, use, and delete views

You can save views that include the filters and columns you've selected. To save and use a view:


1. Select **Manage view** then **Save view**.

2. Enter a name for the view then select **OK**. The saved view now appears in the **Manage view** menu.



3. To use a view, switch between **Default** and one of your own views to see how that affects the list of resources displayed.

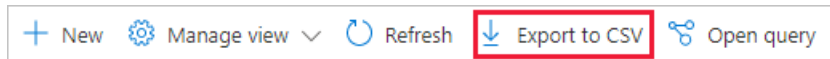
To delete a view:

1. Select **Manage view** then **Browse all views**.
2. In the **Saved views** pane, select the view then select the **Delete** icon .

Export information from a view

You can export the resource information from a view. To export information in CSV format:

1. Select **Export to CSV**.



2. Save the file locally, then open in Excel or another application that supports the CSV format.

As you move around the portal, you'll see other areas where you can export information, such as an individual resource group.

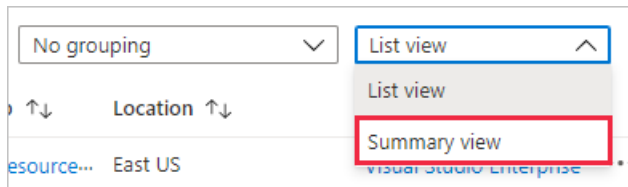
Summarize resources with visuals

The views we've looked at so far have been *list views*, but there are also *summary views* that include visuals. You can save and use these views just like you can with list views. Filters persist between the two types of views. There are standard views, like the **Location** view shown below, as well as views that are relevant to specific services, such as the **Status** view for Azure Storage.



To save and use a summary view:

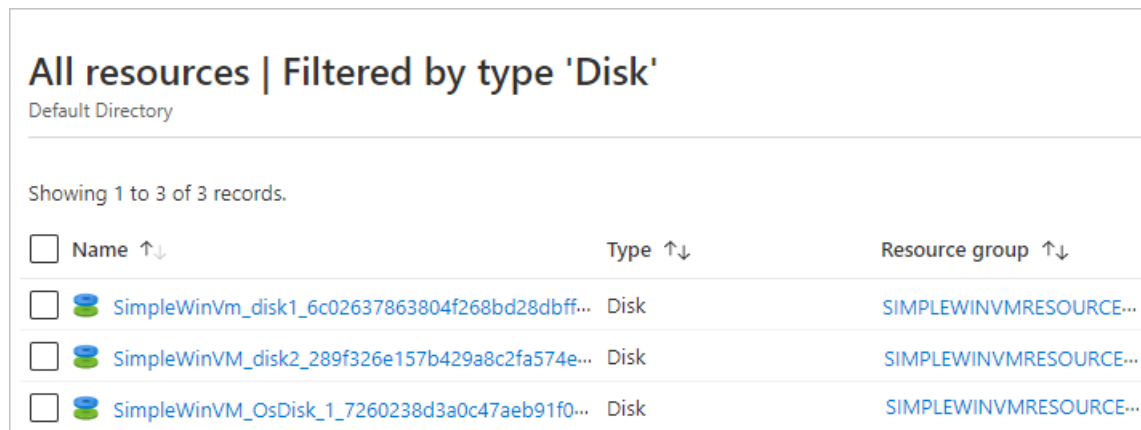
1. From the view menu, select **Summary view**.



2. The summary view enables you to summarize by different attributes, including **Location** and **Type**. Select a **Summarize by** option and an appropriate visual. The following screenshot shows the **Type** summary with a **Bar chart** visual.






3. Select **Manage view** then **Save** to save this view like you did with the list view.
4. In the summary view, under **Type summary**, select a bar in the chart. Selecting the bar provides a list filtered down to one type of resource.



All resources | Filtered by type 'Disk'
Default Directory

Showing 1 to 3 of 3 records.

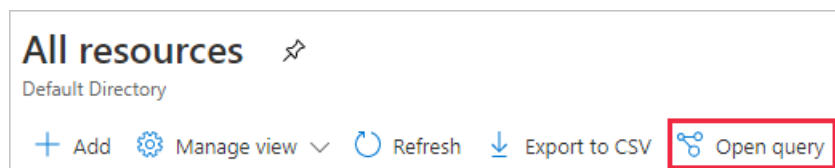
<input type="checkbox"/>	Name ↑↓	Type ↑↓	Resource group ↑↓
<input type="checkbox"/>	 SimpleWinVm_disk1_6c02637863804f268bd28dbff...	Disk	SIMPLEWINVMRESOURCE...
<input type="checkbox"/>	 SimpleWinVM_disk2_289f326e157b429a8c2fa574e...	Disk	SIMPLEWINVMRESOURCE...
<input type="checkbox"/>	 SimpleWinVM_OsDisk_1_7260238d3a0c47aeb91f0...	Disk	SIMPLEWINVMRESOURCE...

Run queries in Azure Resource Graph

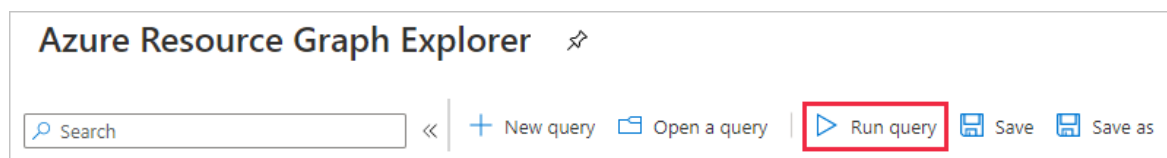
Azure Resource Graph provides efficient and performant resource exploration with the ability to query at scale across a set of subscriptions. The **All resources** screen in the Azure portal includes a link to open a Resource Graph query that is scoped to the current filtered view.

To run a Resource Graph query:

1. Select **Open query**.



2. In Azure Resource Graph Explorer, select **Run query** to see the results.



For more information, see [Run your first Resource Graph query using Azure Resource Graph Explorer](#).

Next steps

[Azure portal overview](#)

[Create and share dashboards in the Azure portal](#)

Create a dashboard in the Azure portal

2/24/2022 • 8 minutes to read • [Edit Online](#)

Dashboards are a focused and organized view of your cloud resources in the Azure portal. Use dashboards as a workspace where you can monitor resources and quickly launch tasks for day-to-day operations. Build custom dashboards based on projects, tasks, or user roles, for example.

The Azure portal provides a default dashboard as a starting point. You can edit the default dashboard and create and customize additional dashboards.

NOTE

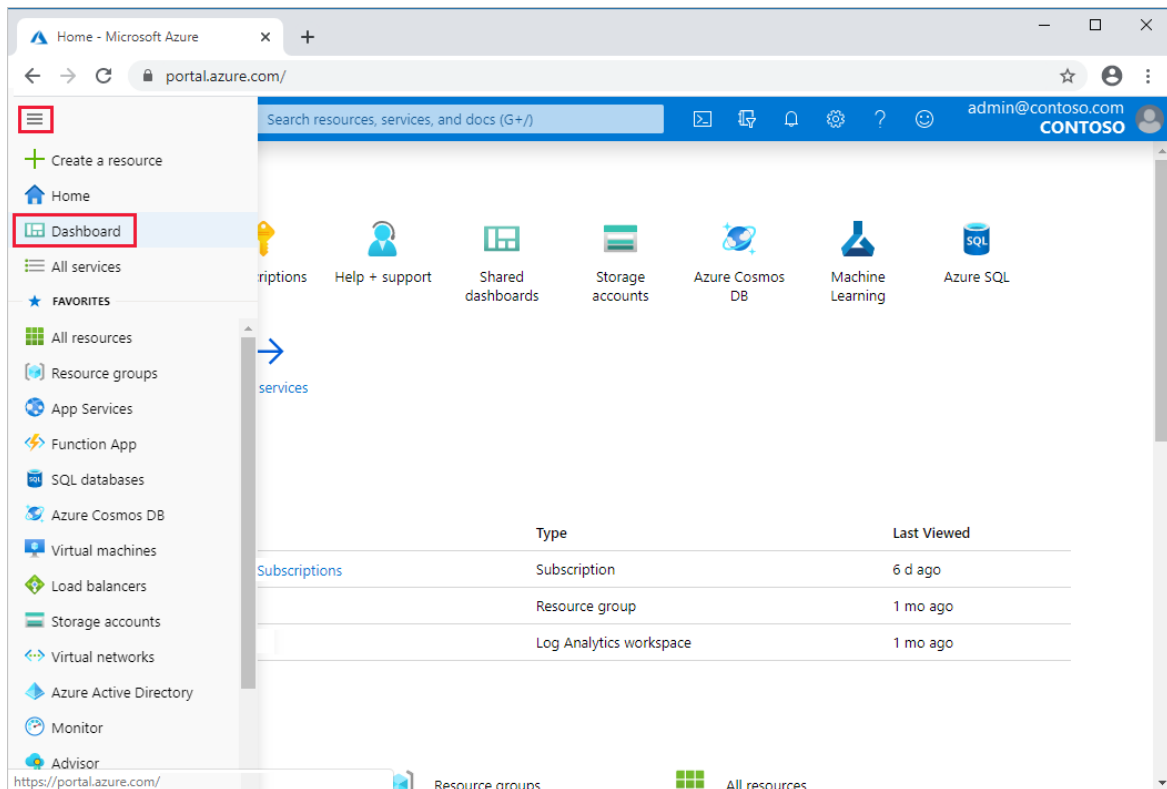
Each user can create up to 100 private dashboards. If you [publish and share the dashboard](#), it will be implemented as an Azure resource in your subscription and won't count towards this limit.

This article describes how to create a new dashboard and customize it. For information on sharing dashboards, see [Share Azure dashboards by using Azure role-based access control](#).

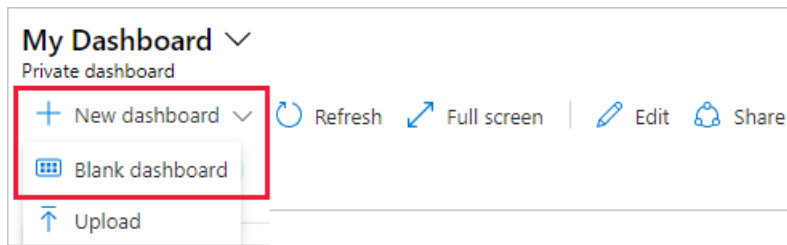
Create a new dashboard

This example shows how to create a new private dashboard with an assigned name. All dashboards are private when created, although you can choose to publish and share your dashboard with other users in your organization if you'd like.

1. Sign in to the [Azure portal](#).
2. From the Azure portal menu, select **Dashboard**. Your default view might already be set to dashboard.

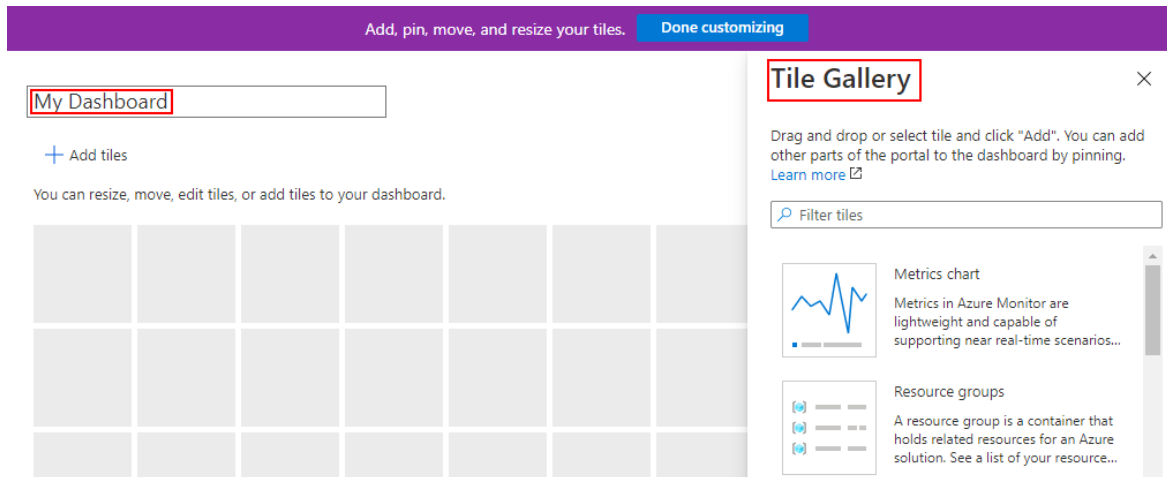


3. Select **New dashboard**, then select **Blank dashboard**.



This action opens the **Tile Gallery**, from which you can select tiles, and an empty grid where you'll arrange the tiles.

4. Select the **My Dashboard** text in the dashboard label and enter a name that will help you easily identify the custom dashboard.



5. To save the dashboard as is, select **Done customizing** in the page header. Or, continue to Step 2 of the next section to add tiles and save your dashboard.

The dashboard view now shows your new dashboard. Select the arrow next to the dashboard name to see dashboards available to you. The list might include dashboards that other users have created and shared.

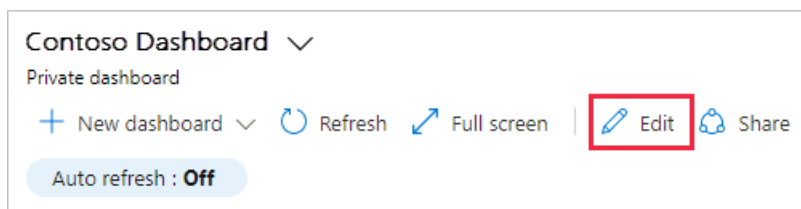
Edit a dashboard

Now, let's edit the dashboard to add, resize, and arrange tiles that represent your Azure resources.

Add tiles from the Tile Gallery

To add tiles to a dashboard, follow these steps:

1. Select **Edit** from the dashboard's page header.

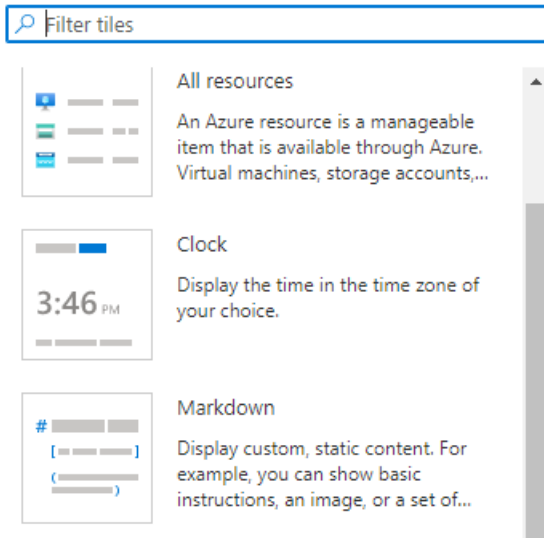


2. Browse the **Tile Gallery** or use the search field to find a certain tile. Select the tile you want to add to your dashboard.

Tile Gallery



Drag and drop or select tile and click "Add". You can add other parts of the portal to the dashboard by pinning. [Learn more](#)



3. Select **Add** to add the tile to the dashboard with a default size and location. Or, drag the tile to the grid and place it where you want. Add any tiles you want, but here are a couple of ideas:

- Add **All resources** to see any resources you've already created.
- If you work with more than one organization, add the **Organization identity** tile to your dashboard to clearly show which organization the resources belong to.

4. If desired, [resize or rearrange](#) your tiles.

5. To save your changes, select **Save** in the page header. You can also preview the changes without saving by selecting **Preview** in the page header. This preview mode also allows you to see how [filters](#) affect your tiles. From the preview screen, you can select **Save** to keep the changes, **Discard** to remove them, or **Edit** to go back to the editing options and make further changes.



NOTE

A markdown tile lets you display custom, static content on your dashboard. This could be basic instructions, an image, a set of hyperlinks, or even contact information. For more information about using a markdown tile, see [Use a markdown tile on Azure dashboards to show custom content](#).

Pin content from a resource page

Another way to add tiles to your dashboard is directly from a resource page.

Many resource pages include a pin icon in the page header, which means that you can pin a tile representing the source page. In some cases, a pin icon may also appear by specific content within a page, which means you can pin a tile for that specific content, rather than the entire page.



If you select this icon, you can pin the tile to an existing private or shared dashboard. You can also create a new dashboard which will include this pin by selecting **Create new**.

Pin to dashboard



Existing Create new

Type ⓘ

Private

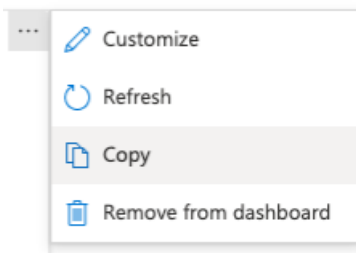
Shared

Dashboard

My Dashboard

Copy a tile to a new dashboard

If you want to reuse a tile on a different dashboard, you can copy it from one dashboard to another. To do so, select the context menu in the upper right corner and then select **Copy**.

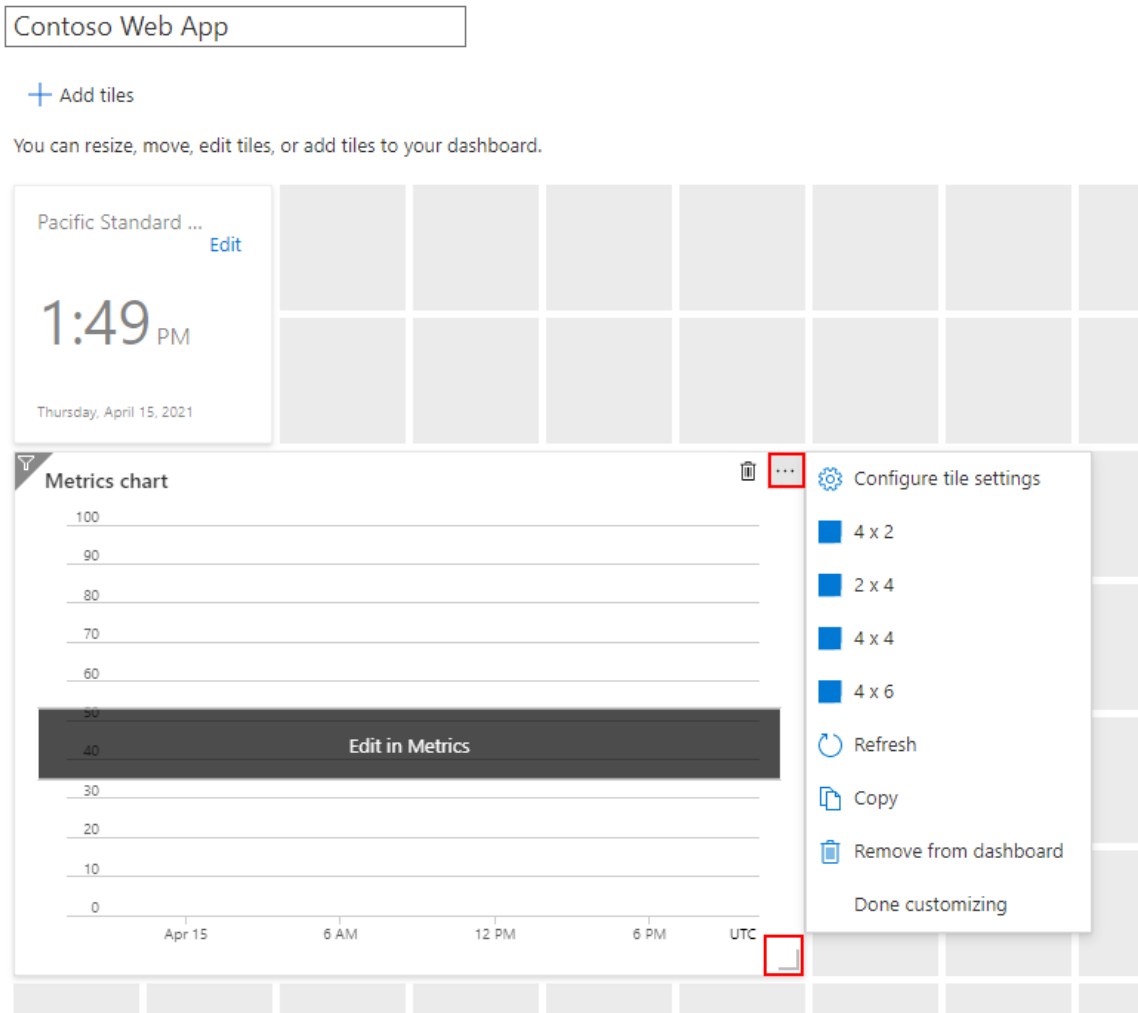


You can then select whether to copy the tile to an existing private or shared dashboard, or create a copy of the tile within the dashboard you're already working in. You can also create a new dashboard which will include a copy of the tile by selecting **Create new**.

Resize or rearrange tiles

To change the size of a tile or to rearrange the tiles on a dashboard, follow these steps:

1. Select **Edit** from the page header.
2. Select the context menu in the upper right corner of a tile. Then, choose a tile size. Tiles that support any size also include a "handle" in the lower right corner that lets you drag the tile to the size you want.



3. Select a tile and drag it to a new location on the grid to arrange your dashboard.

Set and override dashboard filters

Near the top of your dashboard, you'll see options to set the **Auto refresh** and **Time settings** for data displayed in the dashboard, along with an option to add additional filters.

Contoso Web App

Private dashboard

+ New dashboard ▾ Refresh ↗ Full screen | ✎ Edit 🔄 Share :

Auto refresh : **Every hour**

UTC Time : **Past 24 hours**

+🔍 Add filter

By default, data will be refreshed every hour. To change this, select **Auto refresh** and choose a new refresh interval. When you've made your selection, select **Apply**.

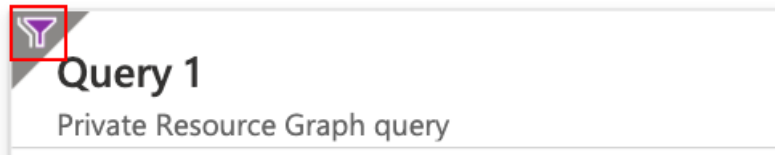
The default time settings are **UTC Time**, showing data for the **Past 24 hours**. To change this, select the button and choose a new time range, time granularity, and/or time zone, then select **Apply**.

To apply additional filters, select **Add filter**. The options you'll see will vary depending on the tiles in your dashboard. For example, you may be able to show only data for a specific subscription or location. Select the filter you'd like to use and make your selections. The filter will then be applied to your data. To remove a filter, select the X in its button.

Tiles which support filtering have a 🗑 filter icon in the top-left corner of the tile. Some tiles allow you to override the global filters with filters specific to that tile. To do so, select **Configure tile data** from the context menu, or select the filter icon, then apply the desired filters.

If you set filters for a particular tile, the left corner of that tile displays a double filter icon, indicating that the data

in that tile reflects its own filters.



Modify tile settings

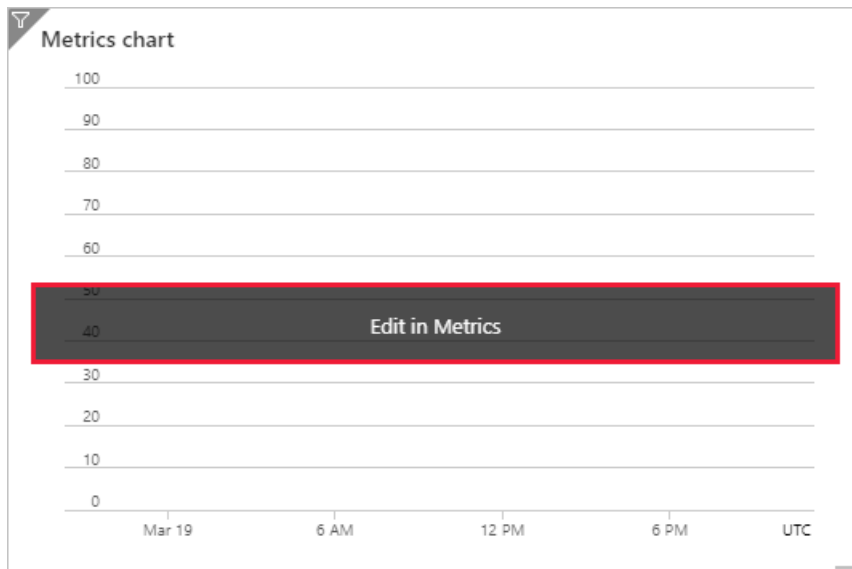
Some tiles might require more configuration to show the information you want. For example, the **Metrics chart** tile has to be set up to display a metric from Azure Monitor. You can also customize tile data to override the dashboard's default time settings and filters.

Complete tile configuration

Any tile that needs to be set up displays a banner until you customize the tile. For example, in the **Metrics chart**, the banner reads **Edit in Metrics**. Other banners may use different text, such as **Configure tile**.

To customize the tile:

1. In the page header select **Save** to exit edit mode.
2. Select the banner, then do the required setup.



Customize time span for a tile

Data on the dashboard shows activity and refreshes based on the global filters. Some tiles will allow you to select a different time span for just one tile. To do so, follow these steps:

1. Select **Customize tile data** from the context menu or from the ∇ in the upper left corner of the tile.



2. Select the checkbox to **Override the dashboard time settings at the tile level.**

Configure tile settings ×

Time settings

Override the dashboard time settings at the tile level.

Timespan Past 24 hours ▼

Time granularity Automatic ▼

Show time as UTC Local (UTC-7:00)

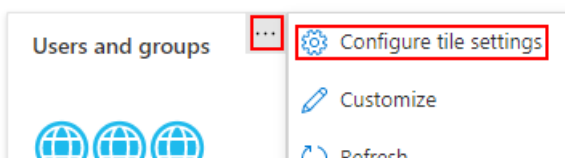
3. Choose the time span to show for this tile. You can choose from the past 30 minutes to the past 30 days or define a custom range.

4. Choose the time granularity to display. You can show anywhere from one-minute increments to one-month.

5. Select **Apply**.

Change the title and subtitle of a tile

Some tiles allow you to edit their title and subtitle. To do so, select **Configure tile settings** from the context menu.



Make any changes to the tile's title and/or subtitle, then select **Apply**.

Configure tile settings ×

Edit title



Title *

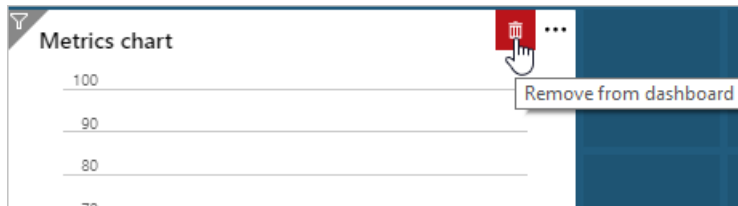
✓

Subtitle

Delete a tile


To remove a tile from a dashboard, do one of the following:

- Select the context menu in the upper right corner of the tile, then select **Remove from dashboard**.
- Select  **Edit** to enter customization mode. Hover in the upper right corner of the tile, then select the  delete icon to remove the tile from the dashboard.



Clone a dashboard

To use an existing dashboard as a template for a new dashboard, follow these steps:

1. Make sure that the dashboard view is showing the dashboard that you want to copy.
2. In the page header, select  **Clone**.
3. A copy of the dashboard, named **Clone of your dashboard name** opens in edit mode. Use the preceding steps in this article to rename and customize the dashboard.

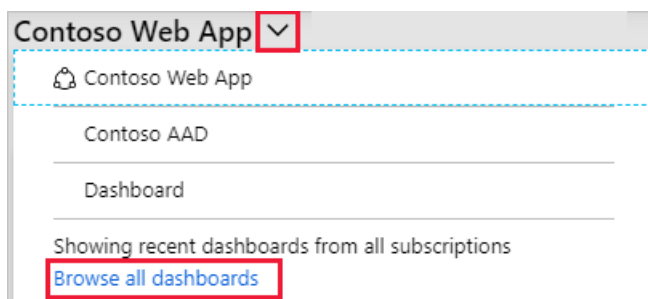
Publish and share a dashboard

When you create a dashboard, it's private by default, which means you're the only one who can see it. To make dashboards available to others, you can publish and share them. For more information, see [Share Azure dashboards by using Azure role-based access control](#).

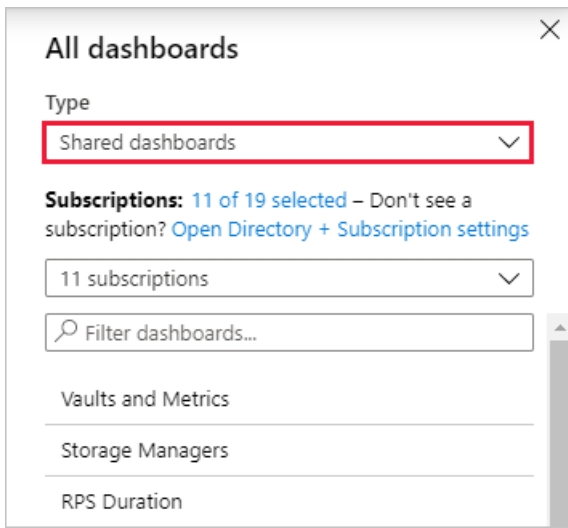
Open a shared dashboard

To find and open a shared dashboard, follow these steps:

1. Select the arrow next to the dashboard name.
2. Select from the displayed list of dashboards. If the dashboard you want to open isn't listed:
 - a. select **Browse all dashboards**.




- b. In the **Type** field, select **Shared dashboards**.

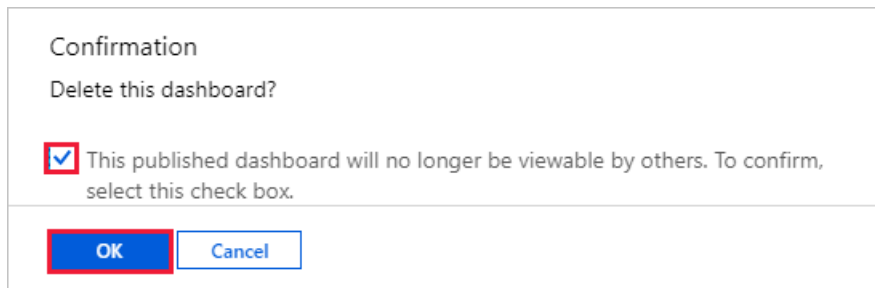


- c. Select one or more subscriptions. You can also enter text to filter dashboards by name.
- d. Select a dashboard from the list of shared dashboards.

Delete a dashboard

To permanently delete a private or shared dashboard, follow these steps:

1. Select the dashboard you want to delete from the list next to the dashboard name.
2. Select  **Delete** from the page header.
3. For a private dashboard, select **OK** on the confirmation dialog to remove the dashboard. For a shared dashboard, on the confirmation dialog, select the checkbox to confirm that the published dashboard will no longer be viewable by others. Then, select **OK**.



Recover a deleted dashboard

If you're in the global Azure cloud, and you delete a *published* dashboard in the Azure portal, you can recover that dashboard within 14 days of the delete. For more information, see [Recover a deleted dashboard in the Azure portal](#).

Next steps

- [Share Azure dashboards by using Azure role-based access control](#)
- [Programmatically create Azure dashboards](#)

Share Azure dashboards by using Azure role-based access control

2/24/2022 • 3 minutes to read • [Edit Online](#)

After configuring a dashboard, you can publish it and share it with other users in your organization. You allow others to view your dashboard by using [Azure role-based access control \(Azure RBAC\)](#). Assign a single user or a group of users to a role. That role defines whether those users can view or modify the published dashboard.

All published dashboards are implemented as Azure resources. They exist as manageable items within your subscription and are contained in a resource group. From an access control perspective, dashboards are no different from other resources, such as a virtual machine or a storage account. Individual tiles on the dashboard enforce their own access control requirements based on the resources they display. You can share a dashboard broadly while protecting the data on individual tiles.

Understanding access control for dashboards

With Azure role-based access control (Azure RBAC), you can assign users to roles at three different levels of scope:

- subscription
- resource group
- resource

The permissions you assign inherit from the subscription down to the resource. The published dashboard is a resource. You may already have users assigned to roles for the subscription that apply for the published dashboard.

Let's say you have an Azure subscription and various members of your team have been assigned the roles of *owner*, *contributor*, or *reader* for the subscription. Users who are owners or contributors can list, view, create, modify, or delete dashboards within the subscription. Users who are readers can list and view dashboards, but can't modify or delete them. Users with reader access can make local edits to a published dashboard, such as when troubleshooting an issue, but they can't publish those changes back to the server. They can make a private copy of the dashboard for themselves.

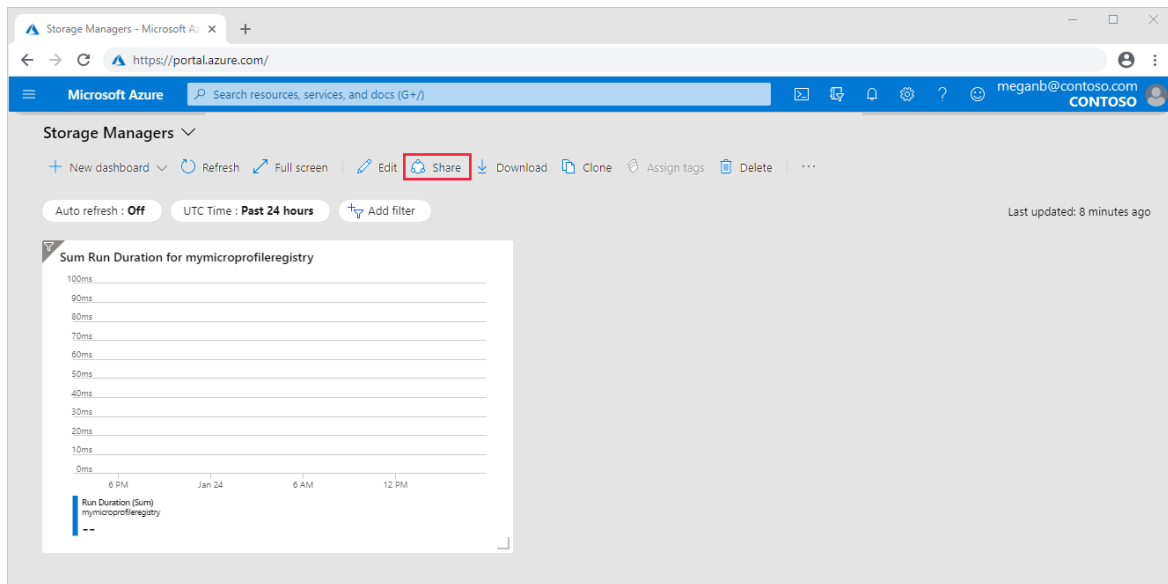
You could assign permissions to the resource group that contains several dashboards or to an individual dashboard. For example, you may decide that a group of users should have limited permissions across the subscription but greater access to a particular dashboard. Assign those users to a role for that dashboard.

Publish a dashboard

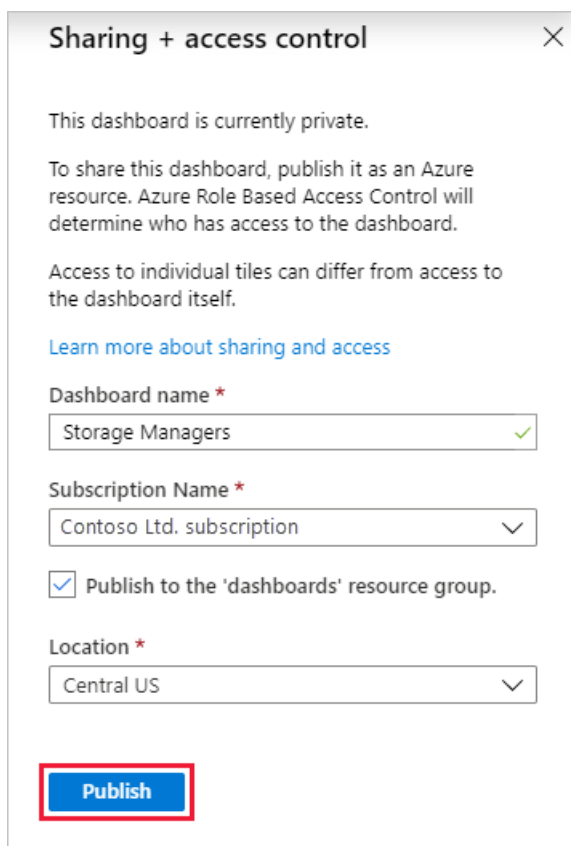
Let's suppose you configure a dashboard that you want to share with a group of users in your subscription. The following steps show how to share a dashboard to a group called Storage Managers. You can name your group whatever you like. For more information, see [Managing groups in Azure Active Directory](#).

Before assigning access, you must publish the dashboard.

1. In the dashboard, select **Share**.



2. In **Sharing + access control**, select **Publish**.



By default, sharing publishes your dashboard to a resource group named **dashboards**. To select a different resource group, clear the checkbox.

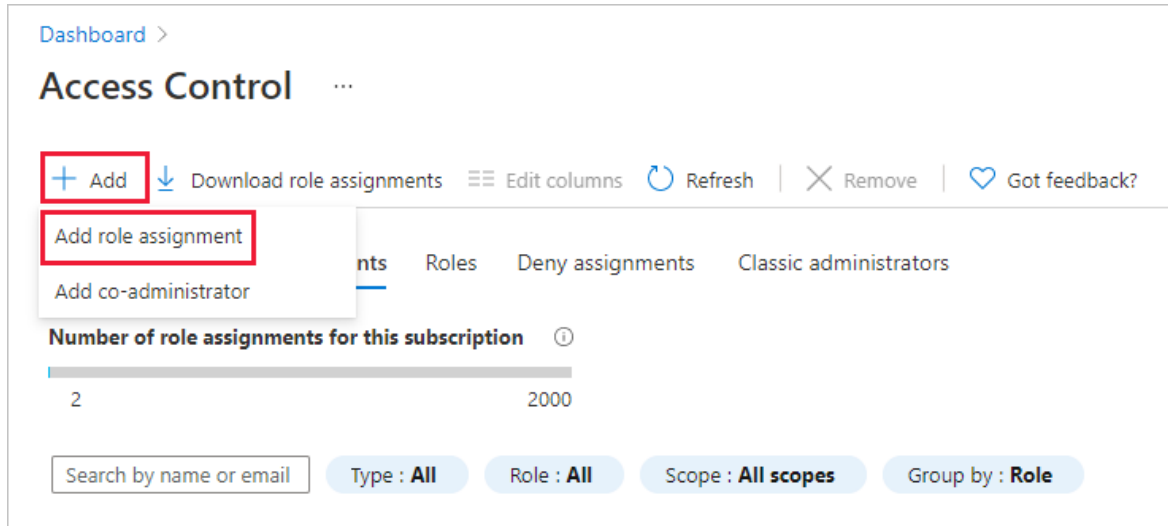
Your dashboard is now published. If the permissions inherited from the subscription are suitable, you don't need to do anything more. Other users in your organization can access and modify the dashboard based on their subscription level role.

Assign access to a dashboard

You can assign a group of users to a role for that dashboard.

1. After publishing the dashboard, select **Manage sharing**.
2. In **Access Control** select **Role assignments** to see existing users that are already assigned a role for this dashboard.

3. To add a new user or group, select **Add** then **Add role assignment**.



4. Select the role that represents the permissions to grant, such as **Contributor**.

5. Select the user or group to assign to the role. If you don't see the user or group you're looking for in the list, use the search box. Your list of available groups depends on the groups you've created in Active Directory.

6. When you've finished adding users or groups, select **Save**.

Next steps

- For a list of roles, see [Azure built-in roles](#).
- To learn about managing resources, see [Manage Azure resources by using the Azure portal](#).

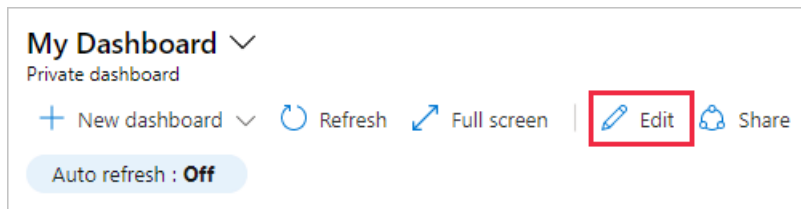
Use a markdown tile on Azure dashboards to show custom content

2/24/2022 • 2 minutes to read • [Edit Online](#)

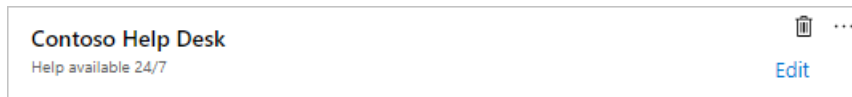
You can add a markdown tile to your Azure dashboards to display custom, static content. For example, you can show basic instructions, an image, or a set of hyperlinks on a markdown tile.

Add a markdown tile to your dashboard

1. Select **Dashboard** from the Azure portal menu.
2. In the dashboard view, select the dashboard where the custom markdown tile should appear, then select **Edit**.




3. In the **Tile Gallery**, locate the tile called **Markdown** and select **Add**. The tile is added to the dashboard and the **Edit Markdown** pane opens.
4. Enter values for **Title** and **Subtitle**, which display on the tile after you move to another field.




5. Select one of the options for including markdown content: **Inline editing** or **Insert content using URL**.
 - Select **Inline editing** if you want to enter markdown directly.

Content

Provide Markdown content by entering text inline or by specifying the URL to a Markdown file. For added security, the URL can reference a storage account blob secured with encryption.

[Docs link](#) 

Inline editing

Insert content using URL 

__Getting help__

Having trouble? First, try the troubleshooting resources for the service. If you're still stuck, contact the Contoso help desk to connect with an internal expert.


```
<img width='50'
src='https://portal.azure.com/favicon.
ico' />
```

More resources at <https://docs.microsoft.com/azure/>Microsoft Azure Help


- Select **Insert content using URL** if you want to use existing markdown content that's hosted online.


Content

Provide Markdown content by entering text inline or by specifying the URL to a Markdown file. For added security, the URL can reference a storage account blob secured with encryption.

[Docs link](#) 

Inline editing

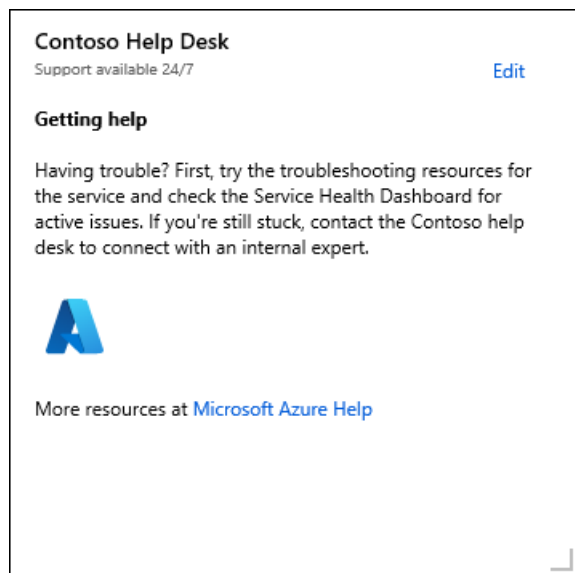
Insert content using URL 

<https://github.com/contoso/helpdesk.md> 

NOTE

For added security, create a markdown file and store it in an [Azure storage account blob where encryption is enabled](#). For additional control, configure the encryption with [customer-managed keys stored in Azure Key Vault](#). You can then point to the file using the **Insert content using URL** option. Only users with permissions to the file can see the markdown content on the dashboard. You might need to set a [cross-origin resource sharing \(CORS\)](#) rule on the storage account so that the Azure portal (<https://portal.azure.com/>) can access the markdown file in the blob.

6. Select **Done** to dismiss the **Edit Markdown** pane. Your content appears on the Markdown tile, which you can resize by dragging the handle in the lower right-hand corner.



Markdown content capabilities and limitations

You can use any combination of plain text, Markdown syntax, and HTML content on the markdown tile. The Azure portal uses an open-source library called *marked* to transform your content into HTML that is shown on the tile. The HTML produced by *marked* is pre-processed by the portal before it's rendered. This step helps make sure that your customization won't affect the security or layout of the portal. During that pre-processing, any part of the HTML that poses a potential threat is removed. The following types of content aren't allowed by the portal:

- JavaScript – `<script>` tags and inline JavaScript evaluations are removed.
- iframes - `<iframe>` tags are removed.
- Style - `<style>` tags are removed. Inline style attributes on HTML elements aren't officially supported. You may find that some inline style elements work for you, but if they interfere with the layout of the portal, they could stop working at any time. The Markdown tile is intended for basic, static content that uses the default styles of the portal.

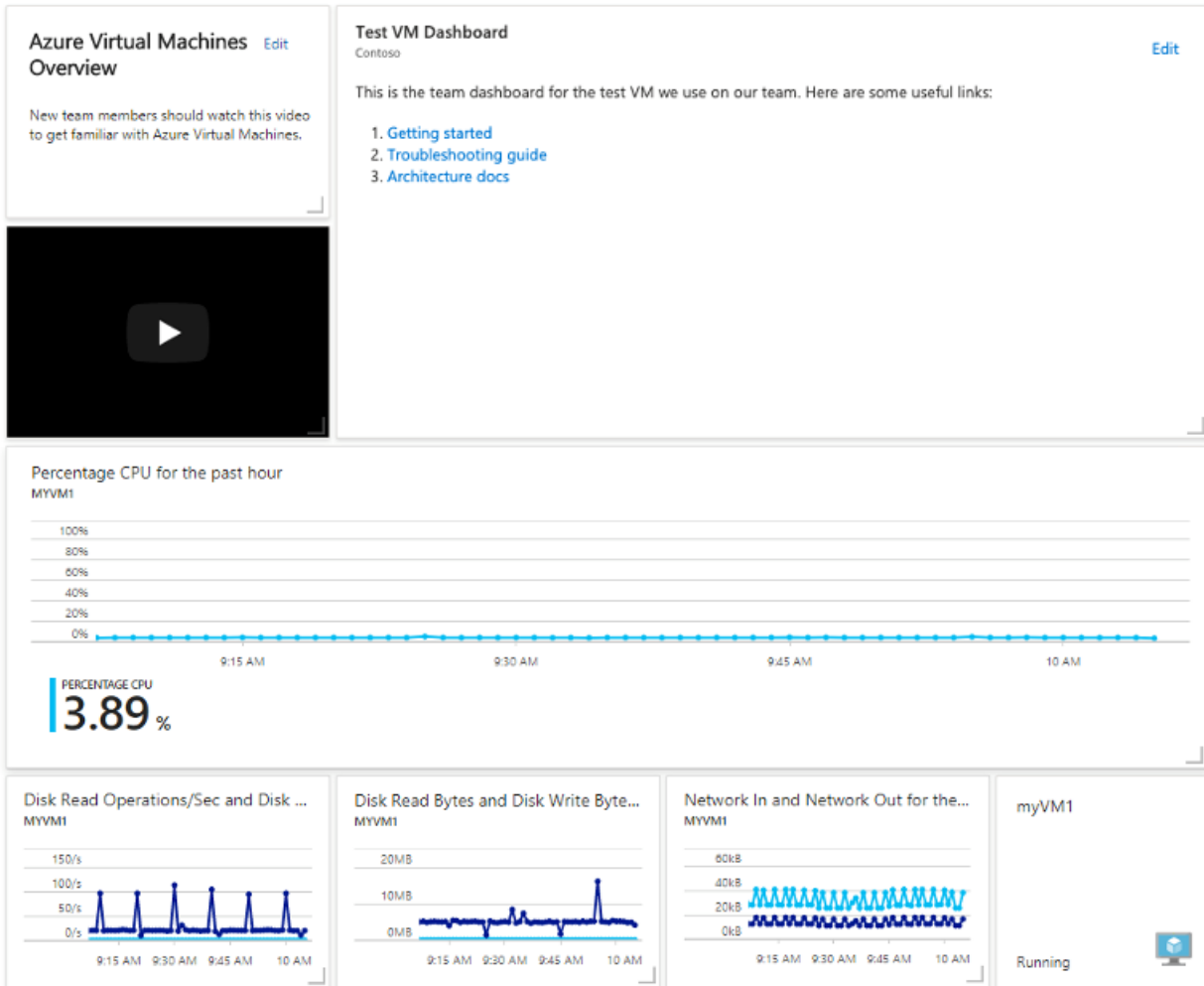
Next steps

- Learn more about [creating dashboards in the Azure portal](#).
- Learn how to [share a dashboard by using Azure role-based access control](#).

Programmatically create Azure dashboards

2/24/2022 • 11 minutes to read • [Edit Online](#)

This article walks you through the process of programmatically creating and publishing Azure dashboards. The sample dashboard shown below is referenced throughout the document.



Overview

Shared dashboards in the [Azure portal](#) are [resources](#), just like virtual machines and storage accounts. You can manage resources programmatically by using the [Azure Resource Manager REST APIs](#), the [Azure CLI](#), and [Azure PowerShell commands](#).

Many features build on these APIs to make resource management easier. Each of these APIs and tools offers ways to create, list, retrieve, modify, and delete resources. Since dashboards are resources, you can pick your favorite API or tool to use.

Whichever tools you use, to create a dashboard programmatically, you construct a JSON representation of your dashboard object. This object contains information about the tiles on the dashboard. It includes sizes, positions, resources they're bound to, and any user customizations.

The most practical way to generate this JSON document is to use the Azure portal to create an initial dashboard with the tiles you want. Then export the JSON and create a template from the result that you can modify further and use in scripts, programs, and deployment tools.

Create a dashboard

To create a dashboard, select **Dashboard** from the [Azure portal](#) menu, then select **New dashboard**.

For detailed instructions, see [Create a dashboard in the Azure portal](#).

Share the dashboard

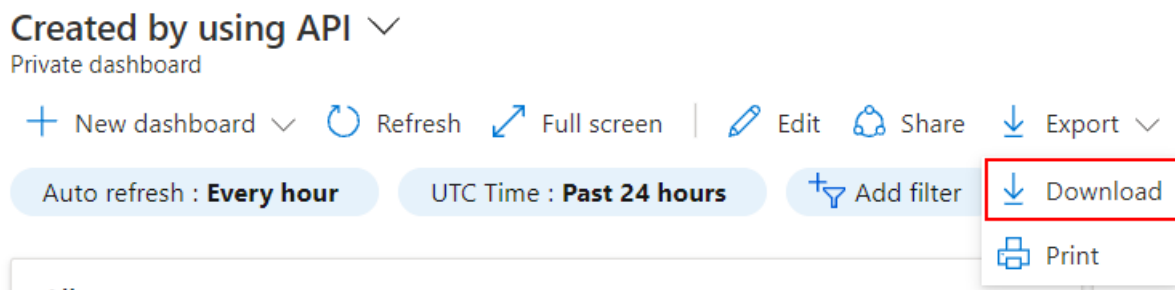
After you configure the dashboard, the next step is to publish the dashboard using the **Share** command.

When you share a dashboard, you'll need to choose which subscription and resource group to publish to. You must have write access to the subscription and resource group that you choose. For more information, see [Assign Azure roles using the Azure portal](#).

For detailed instructions, see [Share Azure dashboards by using Azure role-based access control](#).

Fetch the JSON representation of the dashboard

Sharing the dashboard only takes a few seconds. When it's done, the next step is to export the JSON using the **Download** command.



You can also retrieve information about the dashboard resource programmatically by using [REST APIs](#) or other methods.

Create a template from the JSON

The next step is to create a template from this JSON. You'll be able to use the template programmatically with the appropriate resource management APIs, command-line tools, or within the portal.

You don't have to fully understand the dashboard JSON structure to create a template. In most cases, you want to preserve the structure and configuration of each tile. Then parameterize the set of Azure resources that the tiles point to.

Look at your exported JSON dashboard and find all occurrences of Azure resource IDs. Our example dashboard has multiple tiles that all point at a single Azure virtual machine. That's because our dashboard only looks at this single resource. If you search the sample JSON, included at the end of the document, for `"/subscriptions"`, you'll find several occurrences of this ID.

```
/subscriptions/6531c8c8-df32-4254-d717-  
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1
```

To publish this dashboard for any virtual machine in the future, parameterize every occurrence of this string within the JSON.

There are two approaches for APIs that create resources in Azure:

- Imperative APIs create one resource at a time. For more information, see [Resources](#).
- A template-based deployment system that creates multiple, dependent resources with a single API call. For more information, see [Deploy resources with Resource Manager templates and Azure PowerShell](#).

Template-based deployment supports parameterization and templating. We use this approach in this article.

Programmatically create a dashboard from your template using a template deployment

Azure offers the ability to orchestrate the deployment of multiple resources. You create a deployment template that expresses the set of resources to deploy and the relationships between them. The JSON format of each resource is the same as if you were creating them one by one. The difference is that the template language adds a few concepts like variables, parameters, basic functions, and more. This extended syntax is only supported in the context of a template deployment. It doesn't work if used with the imperative APIs discussed earlier. For more information, see [Understand the structure and syntax of Azure Resource Manager templates](#).

Parameterization should be done using the template's parameter syntax. You replace all instances of the resource ID we found earlier as shown here.

Example JSON property with hard-coded resource ID:

```
id: "/subscriptions/6531c8c8-df32-4254-d717-b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
```

Example JSON property converted to a parameterized version based on template parameters

```
id: "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
```

Declare required template metadata and the parameters at the top of the JSON template like this:

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "virtualMachineName": {
      "type": "string"
    },
    "virtualMachineResourceGroup": {
      "type": "string"
    },
    "dashboardName": {
      "type": "string"
    }
  },
  "variables": {},
  ... rest of template omitted ...
}
```

Once you've configured your template, deploy it using any of the following methods:

- [REST APIs](#)
- [PowerShell](#)
- [Azure CLI](#)
- [The Azure portal template deployment page](#)

Next you'll see two versions of our example dashboard JSON. The first is the version that we exported from the portal that was already bound to a resource. The second is the template version that can be programmatically bound to any virtual machine and deployed using Azure Resource Manager.

JSON representation of our example dashboard

This example is similar to what you'll see if you followed along with this article. The instructions exported the JSON representation of a dashboard that is already deployed. The hard-coded resource identifiers show that this dashboard is pointing at a specific Azure virtual machine.

```
{
  "properties": {
    "lenses": {
      "0": {
        "order": 0,
        "parts": {
          "0": {
            "position": {
              "x": 0,
              "y": 0,
              "rowSpan": 2,
              "colSpan": 3
            },
            "metadata": {
              "inputs": [],
              "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
              "settings": {
                "content": {
                  "settings": {
                    "content": "## Azure Virtual Machines Overview\r\nNew team members should watch this video to get familiar with Azure Virtual Machines.",
                    "title": "",
                    "subtitle": ""
                  }
                }
              }
            },
            "1": {
              "position": {
                "x": 3,
                "y": 0,
                "rowSpan": 4,
                "colSpan": 8
              },
              "metadata": {
                "inputs": [],
                "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
                "settings": {
                  "content": {
                    "settings": {
                      "content": "This is the team dashboard for the test VM we use on our team. Here are some useful links:\r\n\r\n1. [Getting started](https://www.contoso.com/tsgs)\r\n1. [Troubleshooting guide](https://www.contoso.com/tsgs)\r\n1. [Architecture docs](https://www.contoso.com/tsgs)",
                      "title": "Test VM Dashboard",
                      "subtitle": "Contoso"
                    }
                  }
                }
              }
            }
          },
          "2": {
            "position": {
              "x": 0,
              "y": 2,
              "rowSpan": 2,
              "colSpan": 3
            },
            "metadata": {
              "inputs": []
            }
          }
        }
      }
    }
  }
}
```

```

    "inputs": [
      {
        "type": "Extension[azure]/HubsExtension/PartType/VideoPart",
        "settings": {
          "content": {
            "settings": {
              "title": "",
              "subtitle": "",
              "src": "https://www.youtube.com/watch?v=YcylDIiKaSU&list=PLLasX02E8BPCsnETz0XAMfpLR1LIBqpgs&index=4",
              "autoplay": false
            }
          }
        }
      },
      {
        "type": "Extension[azure]/HubsExtension/PartType/VideoPart",
        "settings": {
          "content": {
            "settings": {
              "title": "",
              "subtitle": "",
              "src": "https://www.youtube.com/watch?v=YcylDIiKaSU&list=PLLasX02E8BPCsnETz0XAMfpLR1LIBqpgs&index=4",
              "autoplay": false
            }
          }
        }
      }
    ],
    "3": {
      "position": {
        "x": 0,
        "y": 4,
        "rowSpan": 3,
        "colSpan": 11
      },
      "metadata": {
        "inputs": [
          {
            "name": "queryInputs",
            "value": {
              "timespan": {
                "duration": "PT1H",
                "start": null,
                "end": null
              },
              "id": "/subscriptions/6531c8c8-df32-4254-d717-b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
              "chartType": 0,
              "metrics": [
                {
                  "name": "Percentage CPU",
                  "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                }
              ]
            }
          }
        ]
      }
    },
    "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
    "settings": {}
  },
  "4": {
    "position": {
      "x": 0,
      "y": 7,
      "rowSpan": 2,
      "colSpan": 3
    },
    "metadata": {
      "inputs": [
        {
          "name": "queryInputs",
          "value": {
            "timespan": {
              "duration": "PT1H",
              "start": null,
              "end": null
            },
            "id": "/subscriptions/6531c8c8-df32-4254-d717-b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
            "chartType": 0,
            "metrics": [

```



```

        metrics : [
            {
                "name": "Disk Read Operations/Sec",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
            },
            {
                "name": "Disk Write Operations/Sec",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
            }
        ]
    },
    "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
    "settings": {}
}
},
"5": {
    "position": {
        "x": 3,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 3
    },
    "metadata": {
        "inputs": [
            {
                "name": "queryInputs",
                "value": {
                    "timespan": {
                        "duration": "PT1H",
                        "start": null,
                        "end": null
                    },
                    "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
                    "chartType": 0,
                    "metrics": [
                        {
                            "name": "Disk Read Bytes",
                            "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                        },
                        {
                            "name": "Disk Write Bytes",
                            "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                        }
                    ]
                }
            }
        ]
    },
    "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
    "settings": {}
}
},
"6": {
    "position": {
        "x": 6,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 3
    },
    "metadata": {
        "inputs": [
            {
                "name": "queryInputs",

```

```

        "value": {
            "timespan": {
                "duration": "PT1H",
                "start": null,
                "end": null
            },
            "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
            "chartType": 0,
            "metrics": [
                {
                    "name": "Network In",
                    "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                },
                {
                    "name": "Network Out",
                    "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                }
            ]
        }
    },
    "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
    "settings": {}
}
},
"7": {
    "position": {
        "x": 9,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 2
    },
    "metadata": {
        "inputs": [
            {
                "name": "id",
                "value": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
            }
        ],
        "type": "Extension/Microsoft_Azure_Compute/PartType/VirtualMachinePart",
        "asset": {
            "idInputName": "id",
            "type": "VirtualMachine"
        },
        "defaultMenuItemId": "overview"
    }
}
}
},
"metadata": { }
},
" id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/dashboards/providers/Microsoft.Portal/dashboards/aa9786ae-e159-483f-b05f-
1f7f767741a9",
    "name": "aa9786ae-e159-483f-b05f-1f7f767741a9",
    "type": "Microsoft.Portal/dashboards",
    "location": "westus",
    "tags": {
        "hidden-title": "Created via API"
    }
}
}

```

Template representation of our example dashboard

The template version of the dashboard has defined three parameters called `virtualMachineName`, `virtualMachineResourceGroup`, and `dashboardName`. The parameters let you point this dashboard at a different Azure virtual machine every time you deploy. This dashboard can be programmatically configured and deployed to point to any Azure virtual machine. To test this feature, copy the following template and paste it into the [Azure portal template deployment page](#).

This example deploys a dashboard by itself, but the template language lets you deploy multiple resources, and bundle one or more dashboards alongside them.

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "virtualMachineName": {
      "type": "string"
    },
    "virtualMachineResourceGroup": {
      "type": "string"
    },
    "dashboardName": {
      "type": "string"
    }
  },
  "variables": {},
  "resources": [
    {
      "properties": {
        "lenses": {
          "0": {
            "order": 0,
            "parts": {
              "0": {
                "position": {
                  "x": 0,
                  "y": 0,
                  "rowSpan": 2,
                  "colSpan": 3
                },
                "metadata": {
                  "inputs": [],
                  "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
                  "settings": {
                    "content": {
                      "settings": {
                        "content": "## Azure Virtual Machines Overview\r\n\r\nNew team members should watch this video to get familiar with Azure Virtual Machines.",
                        "title": "",
                        "subtitle": ""
                      }
                    }
                  }
                }
              }
            }
          },
          "1": {
            "position": {
              "x": 3,
              "y": 0,
              "rowSpan": 4,
              "colSpan": 8
            },
            "metadata": {
              "inputs": [],
              "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
              "settings": {
                "content": {
```

```

        content: {
            "settings": {
                "content": "This is the team dashboard for the test VM we
use on our team. Here are some useful links:\r\n\r\n1. [Getting started](https://www.contoso.com/tsgs)\r\n1. [Troubleshooting guide](https://www.contoso.com/tsgs)\r\n1. [Architecture docs]
(https://www.contoso.com/tsgs)",
                "title": "Test VM Dashboard",
                "subtitle": "Contoso"
            }
        }
    },
    "2": {
        "position": {
            "x": 0,
            "y": 2,
            "rowSpan": 2,
            "colSpan": 3
        },
        "metadata": {
            "inputs": [],
            "type": "Extension[azure]/HubsExtension/PartType/VideoPart",
            "settings": {
                "content": {
                    "settings": {
                        "title": "",
                        "subtitle": "",
                        "src": "https://www.youtube.com/watch?
v=YcylDIiKaSU&list=PLLasX02E8BPCsnETz0XAMfpLR1LIBqpgs&index=4",
                        "autoplay": false
                    }
                }
            }
        },
    },
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            "rowSpan": 3,
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                            "start": null,
                            "end": null
                        },
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parameters('virtualMachineName'))]",
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                            "resourceId": "
[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines',
parameters('virtualMachineName'))]"
                        }
                    ]
                }
            ]
        },
        "type":

```

```

"Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
  "settings": {}
}
},
"4": {
  "position": {
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    "y": 7,
    "rowSpan": 2,
    "colSpan": 3
  },
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        "value": {
          "timespan": {
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            "start": null,
            "end": null
          },
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          "chartType": 0,
          "metrics": [
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              "resourceId": "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
            },
            {
              "name": "Disk Write Operations/Sec",
              "resourceId": "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
            }
          ]
        }
      }
    ]
  }
},
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    "colSpan": 3
  },
  "metadata": {
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      {
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        "value": {
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            "duration": "PT1H",
            "start": null,
            "end": null
          },
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          "chartType": 0,
          "metrics": [

```

```

        {
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            "resourceId": "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
        },
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    ]
}
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        "y": 7,
        "rowSpan": 2,
        "colSpan": 3
    },
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            {
                "name": "queryInputs",
                "value": {
                    "timespan": {
                        "duration": "PT1H",
                        "start": null,
                        "end": null
                    }
                },
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                "chartType": 0,
                "metrics": [
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                        "resourceId": "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
                    },
                    {
                        "name": "Network Out",
                        "resourceId": "[resourceId(parameters('virtualMachineResourceGroup'), 'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
                    }
                ]
            }
        ]
    }
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"settings": {}
},
"7": {
    "position": {
        "x": 9,
        "y": 7,
        "rowSpan": 2,

```

```

        "colSpan": 2
      },
      "metadata": {
        "inputs": [
          {
            "name": "id",
            "value": "[resourceId(parameters('virtualMachineResourceGroup'),
'Microsoft.Compute/virtualMachines', parameters('virtualMachineName'))]"
          }
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          "type": "VirtualMachine"
        },
        "defaultMenuItemId": "overview"
      }
    }
  }
}
},
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"apiVersion": "2015-08-01-preview",
"type": "Microsoft.Portal/dashboards",
"name": "[parameters('dashboardName')]",
"location": "westus",
"tags": {
  "hidden-title": "[parameters('dashboardName')]"
}
}
]
}


```

Now that you've seen an example of using a parameterized template to deploy a dashboard, you can try deploying the template by using the [Azure Resource Manager REST APIs](#), the [Azure CLI](#), or [Azure PowerShell commands](#).

Programmatically create a dashboard by using Azure CLI

Prepare your environment for the Azure CLI.

- Use the Bash environment in [Azure Cloud Shell](#). For more information, see [Azure Cloud Shell Quickstart - Bash](#).

 Launch Cloud Shell

- If you prefer to run CLI reference commands locally, [install](#) the Azure CLI. If you are running on Windows or macOS, consider running Azure CLI in a Docker container. For more information, see [How to run the Azure CLI in a Docker container](#).
 - If you're using a local installation, sign in to the Azure CLI by using the [az login](#) command. To finish the authentication process, follow the steps displayed in your terminal. For additional sign-in options, see [Sign in with the Azure CLI](#).
 - When you're prompted, install Azure CLI extensions on first use. For more information about extensions, see [Use extensions with the Azure CLI](#).
 - Run [az version](#) to find the version and dependent libraries that are installed. To upgrade to the latest version, run [az upgrade](#).
- These examples use the following dashboard: [portal-dashboard-template-testvm.json](#). Be sure to replace all of the content in angled brackets with your values.

Run the [az portal dashboard create](#) command to create a dashboard based on your template:

```
az portal dashboard create --resource-group myResourceGroup --name 'Simple VM Dashboard' \  
  --input-path portal-dashboard-template-testvm.json --location centralus
```

You can update a dashboard by using the [az portal dashboard update](#) command:

```
az portal dashboard update --resource-group myResourceGroup --name 'Simple VM Dashboard' \  
  --input-path portal-dashboard-template-testvm.json --location centralus
```

See the details of a dashboard by running the [az portal dashboard show](#) command:

```
az portal dashboard show --resource-group myResourceGroup --name 'Simple VM Dashboard'
```

To see all the dashboards for the current subscription, use [az portal dashboard list](#):

```
az portal dashboard list
```

You can also see all the dashboards for a resource group:

```
az portal dashboard list --resource-group myResourceGroup
```

Next steps

- Learn how to [use markdown tiles on Azure dashboards to show custom content](#).
- Explore all Azure CLI commands for dashboards, see [az portal dashboard](#).
- Learn how to [manage Azure portal settings and preferences](#).

Azure portal how-to video series

2/24/2022 • 2 minutes to read • [Edit Online](#)

The Azure portal how-to video series showcases how to work with Azure services in the Azure portal. Each week the Azure portal team adds to the video playlist. These interactive demos can help you be more efficient and productive.

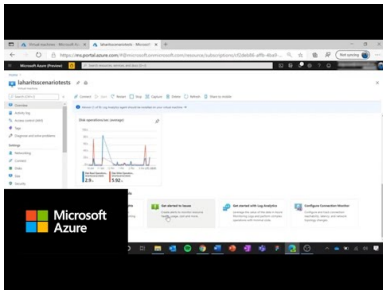
Featured video

In this featured video, we show you how to build tabs and alerts in Azure workbooks.

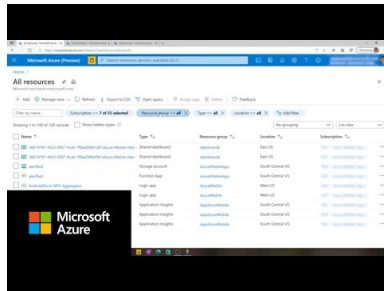
[How to build tabs and alerts in Azure workbooks](#)

Catch up on these recent videos you may have missed:

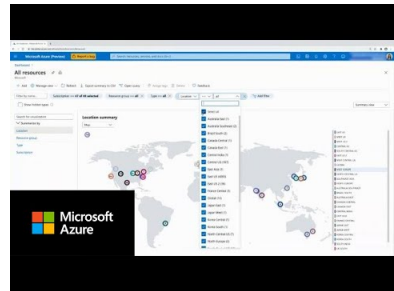
HOW TO EASILY MANAGE YOUR VIRTUAL MACHINE



HOW TO USE PILLS TO FILTER IN THE AZURE PORTAL



HOW TO GET A VISUALIZATION VIEW OF YOUR RESOURCES



Video playlist

Explore the [Azure portal how-to series](#) for some great tips on how to make the most of the Azure portal. Subscribe to the channel to be notified when new videos are added.

Next steps

Explore hundreds of videos for Azure services in the [video library](#).

Create an Azure support request

2/24/2022 • 5 minutes to read • [Edit Online](#)

Azure enables you to create and manage support requests, also known as support tickets. You can create and manage requests in the [Azure portal](#), which is covered in this article. You can also create and manage requests programmatically, using the [Azure support ticket REST API](#), or by using [Azure CLI](#).

NOTE

The Azure portal URL is specific to the Azure cloud where your organization is deployed.

- Azure portal for commercial use is: <https://portal.azure.com>
- Azure portal for Germany is: <https://portal.microsoftazure.de>
- Azure portal for the United States government is: <https://portal.azure.us>

Azure provides unlimited support for subscription management, which includes billing, quota adjustments, and account transfers. For technical support, you need a support plan. For more information, see [Compare support plans](#).

Getting started

You can get to **Help + support** in the Azure portal. It's available from the Azure portal menu, the global header, or the resource menu for a service. Before you can file a support request, you must have appropriate permissions.

Azure role-based access control

To create a support request, you must have the [Owner](#), [Contributor](#), [Support Request Contributor](#) role, or a custom role with [Microsoft.Support/*](#), at the subscription level.

To create a support request without a subscription, for example an Azure Active Directory scenario, you must be an [Admin](#).

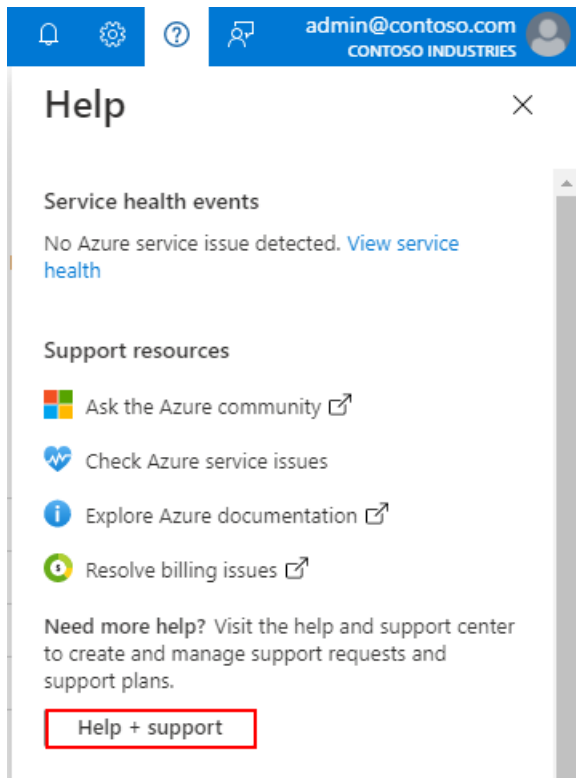
IMPORTANT

If a support request requires investigation into multiple subscriptions, you must have the required access for each subscription involved ([Owner](#), [Contributor](#), [Reader](#), [Support Request Contributor](#), or a custom role with the [Microsoft.Support/supportTickets/read](#) permission).

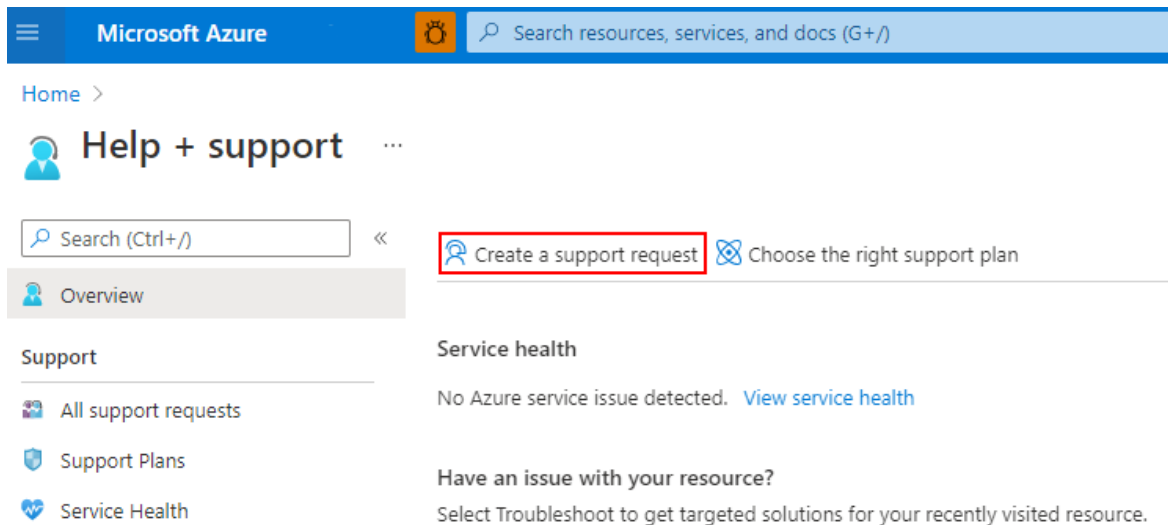
Go to Help + support from the global header

To start a support request from anywhere in the Azure portal:

1. Select the ? in the global header, then select **Help + support**.



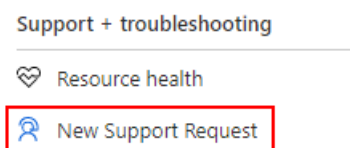
2. Select **Create a support request**. Follow the prompts to provide information about your problem. We'll suggest some possible solutions, gather details about the issue, and help you submit and track the support request.



Go to Help + support from a resource menu

To start a support request in the context of the resource you're currently working with:

1. From the resource menu, in the **Support + troubleshooting** section, select **New Support Request**.



2. Follow the prompts to provide us with information about the problem you're having. When you start the support request process from a resource, some options are pre-selected for you.

Create a support request

We'll walk you through some steps to gather information about your problem and help you solve it. Each step is described in the following sections.

Problem description

The first step of the support request process is to select an issue type. You'll then be prompted for more information, which can vary depending on what type of issue you selected. If you select **Technical**, you'll need to specify the service that your issue relates to. Depending on the service, you'll see additional options for **Problem type** and **Problem subtype**.

IMPORTANT

In most cases, you'll need to specify a subscription. Choose the subscription where you are experiencing the problem. The support engineer assigned to your case will be able to access the subscription you specify here. You can tell them about additional subscriptions in your description (or by [sending a message](#) later), but the support engineer will only be able to work on [subscriptions to which you have access](#).

1. **Problem description** 2. Recommended solution 3. Additional details 4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *	<input type="text" value="Technical"/>
Subscription *	<input type="text" value="My Subscription (cf00000-0000-0000-0000-000000000000)"/>
	Can't find your subscription? Show more ⓘ
Service	<input checked="" type="radio"/> My services <input type="radio"/> All services
Service type *	<input type="text" value="Virtual Machine running Windows"/>
Summary *	<input type="text" value="Briefly describe your issue"/>
Problem type *	<input type="text" value="Cannot start or stop my VM"/>
Problem subtype *	<input type="text" value="Select a problem subtype"/>

Once you've provided all of these details, select **Next**.

Recommended solution

Based on the information you provided, we'll show you recommended solutions you can use to try and resolve the problem. In some cases, we may even run a quick diagnostic. Solutions are written by Azure engineers and will solve most common problems.

If you're still unable to resolve the issue, continue creating your support request by selecting **Next**.

Additional details

Next, we collect additional details about the problem. Providing thorough and detailed information in this step helps us route your support request to the right engineer.

1. Complete the **problem details** so that we have more information about your issue. If possible, tell us when the problem started and any steps to reproduce it. You can upload a file, such as a log file or output from diagnostics. For more information on file uploads, see [File upload guidelines](#).
2. In the **Advanced diagnostic information** section, select **Yes** or **No**. Selecting **Yes** allows Azure support to gather [advanced diagnostic information](#) from your Azure resources. If you prefer not to share this

information, select **No**. See the [Advanced diagnostic information logs](#) section for more details about the types of files we might collect.

In some cases, there will be additional options to choose from. For example, for certain types of Virtual Machine problem types, you can choose whether to [allow access to a virtual machine's memory](#).

1. In the **Support method** section, select the severity of impact. The maximum severity level depends on your [support plan](#).
2. Provide your preferred contact method, your availability, and your preferred support language.
3. Next, complete the **Contact info** section so we know how to contact you.

Select **Next** when you've completed all of the necessary information.

Review + create

Before you create your request, review all of the details that you'll send to support. You can select **Previous** to return to any tab if you need to make changes. When you're satisfied the support request is complete, select **Create**.

A support engineer will contact you using the method you indicated. For information about initial response times, see [Support scope and responsiveness](#).

Advanced diagnostic information logs

When you allow collection of [advanced diagnostic information](#), Microsoft support can collect information that can help solve your problem more quickly. This non-exhaustive list includes examples of the most common files collected under advanced diagnostic information for different services or environments.

- [Microsoft Azure PaaS VM logs](#)
- [Microsoft Azure IaaS VM logs](#)
- [Microsoft Azure Service Fabric logs](#)
- [StorSimple support packages and device logs](#)
- [SQL Server on Azure Virtual Machines logs](#)
- [Azure Active Directory logs](#)
- [Azure Stack Edge support package and device logs](#)
- [Azure Synapse Analytics logs](#)

Memory dump collection

When you create a support case for certain Virtual Machine (VM) problem types, you will be asked whether you'll allow support to access your virtual machine's memory. If you do so, we may collect a memory dump to help diagnose the problem.

A complete memory dump is the largest kernel-mode dump file. This file includes all of the physical memory that is used by Windows. A complete memory dump does not, by default, include physical memory that is used by the platform firmware.

The dump is copied from the compute node (Azure host) to another server for debugging within the same datacenter. Customer data is protected, since the data does not leave Azure's secure boundary.

The dump file is created by generating a Hyper-V save state of the VM. This will pause the VM for up to 10 minutes, after which time the VM is resumed. The VM is not restarted as part of this process.

Next steps

To learn more about self-help support options in Azure, watch this video:

Follow these links to learn more:

- [How to manage an Azure support request](#)
- [Azure support ticket REST API](#)
- Engage with us on [Twitter](#)
- Get help from your peers in the [Microsoft Q&A question page](#)
- Learn more in [Azure Support FAQ](#)

Manage an Azure support request

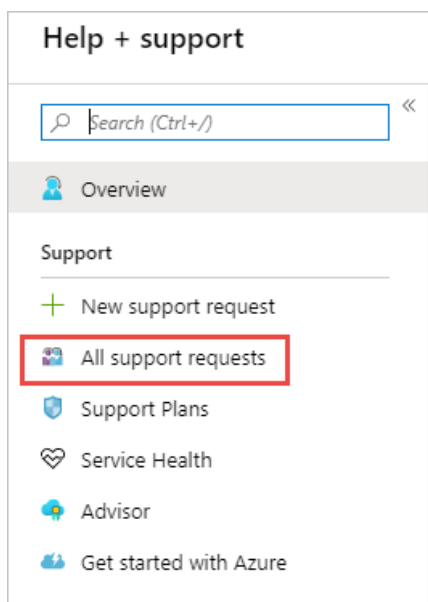
2/24/2022 • 3 minutes to read • [Edit Online](#)

After you [create an Azure support request](#), you can manage it in the [Azure portal](#). You can also create and manage requests programmatically by using the [Azure support ticket REST API](#) or [Azure CLI](#). Additionally, you can view your open requests in the [Azure mobile app](#).

To manage a support request, you must have the [Owner](#), [Contributor](#), or [Support Request Contributor](#) role at the subscription level. To manage a support request that was created without a subscription, you must be an [Admin](#).

View support requests

View the details and status of support requests by going to **Help + support > All support requests**.



On this page, you can search, filter, and sort support requests. Select a support request to view details, including its severity and any messages associated with the request.

Send a message

1. On the **All support requests** page, select the support request.
2. On the **Support Request** page, select **New message**.
3. Enter your message and select **Submit**.

Change the severity level

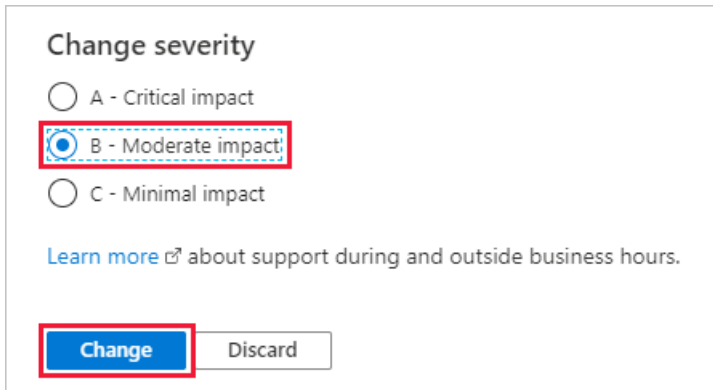
NOTE

The maximum severity level depends on your [support plan](#).

1. On the **All support requests** page, select the support request.
2. On the **Support Request** page, select **Change**.

3. The Azure portal shows one of two screens, depending on whether your request is already assigned to a support engineer:

- If your request hasn't been assigned, you see a screen like the following. Select a new severity level, then select **Change**.



Change severity

A - Critical impact

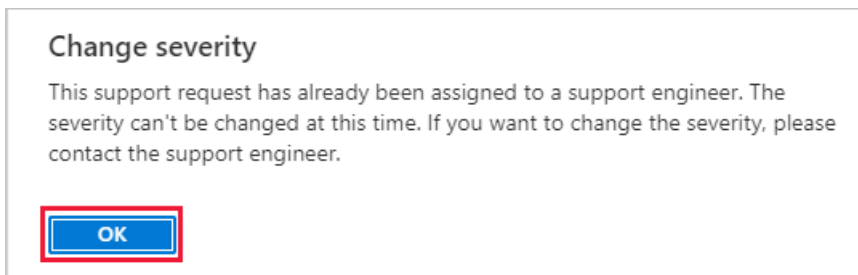
B - Moderate impact

C - Minimal impact

[Learn more](#) about support during and outside business hours.

Change Discard

- If your request has been assigned, you see a screen like the following. Select **OK**, then create a [new message](#) to request a change in severity level.



Change severity

This support request has already been assigned to a support engineer. The severity can't be changed at this time. If you want to change the severity, please contact the support engineer.

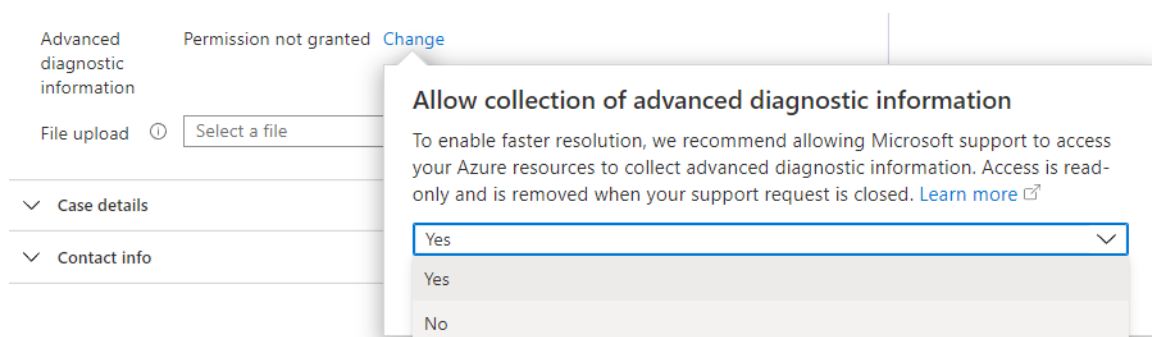
OK

Allow collection of advanced diagnostic information

When you create a support request, you can select **Yes** or **No** in the **Advanced diagnostic information** section. This option determines whether Azure support can gather [diagnostic information](#) such as [log files](#) from your Azure resources that can potentially help resolve your issue. Azure support can only access advanced diagnostic information if your case was created through the Azure portal and you've granted permission to allow it.

To change your **Advanced diagnostic information** selection after the request has been created:

1. On the **All support requests** page, select the support request.
2. On the **Support Request** page, look for **Advanced diagnostic information** and then select **Change**.
3. Select **Yes** or **No**, then select **OK** to confirm.



Advanced diagnostic information Permission not granted [Change](#)

File upload

Case details

Contact info

Allow collection of advanced diagnostic information

To enable faster resolution, we recommend allowing Microsoft support to access your Azure resources to collect advanced diagnostic information. Access is read-only and is removed when your support request is closed. [Learn more](#)

Yes

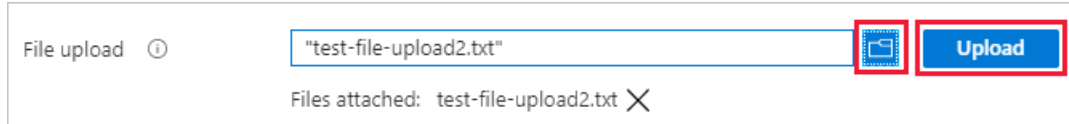
Yes

No

Upload files

You can use the file upload option to upload diagnostic files or any other files that you think are relevant to a support request.

1. On the **All support requests** page, select the support request.
2. On the **Support Request** page, browse to find your file, then select **Upload**. Repeat the process if you have multiple files.



File upload guidelines

Follow these guidelines when you use the file upload option:

- To protect your privacy, don't include personal information in your upload.
- The file name must be no longer than 110 characters.
- You can't upload more than one file.
- Files can't be larger than 4 MB.
- All files must have a valid file name extension, such as *.docx* or *.xlsx*. Most file name extensions are supported, but you can't upload files with the extensions *.bat*, *.cmd*, *.exe*, *.ps1*, *.js*, *.vbs*, *.com*, *.lnk*, *.reg*, *.bin*, *.cpl*, *.inf*, *.ins*, *.isu*, *.job*, *.jse*, *.msi*, *.msp*, *.paf*, *.pif*, *.rgs*, *.scr*, *.sct*, *.vbe*, *.vb*, *.ws*, *.wsf*, or *.wsh*.

Close a support request

To close a support request, [send a message](#) and let us know you'd like to close the request.

Reopen a closed request

To reopen a closed support request, create a [new message](#), which automatically reopens the request.

Cancel a support plan

To cancel a support plan, see [Cancel a support plan](#).

Next steps

- Review the process to [create an Azure support request](#).
- Learn about the [Azure support ticket REST API](#).

View quotas

2/24/2022 • 2 minutes to read • [Edit Online](#)

The **Quotas** page in the Azure portal is the centralized location where you can view your quotas. **My quotas** provides a comprehensive, customizable view of usage and other quota information so that you can assess quota usage. You can also request quota increases directly from **My quotas**.

To view the **Quotas** page, sign in to the [Azure portal](#) and enter "quotas" into the search box.

TIP

After you've accessed **Quotas**, the service will appear at the top of the Home page in the Azure portal. You can also [add Quotas to your Favorites list](#) so that you can quickly go back to it.

View quota details

To view detailed information about your quotas, select **My quotas** in the left menu on the **Quotas** page.

NOTE

You can also select a specific Azure provider from the **Quotas** overview page to view quotas and usage for that provider. If you don't see a provider, check the [Azure subscription and service limits page](#) for more information.

On the **My quotas** page, you can choose which quotas and usage data to display. The filter options at the top of the page let you filter by location, provider, subscription, and usage. You can also use the search box to look for a specific quota.

Home > Quotas

Quotas | My quotas

Search (Ctrl+/) Request increase Refresh

Overview

Settings

My quotas

Showing 1 to 100 of 4284 records in 1 groups.

Quota	Provider	Location	Usage
No usage (Showing 100 of 4284)			
Availability Sets	Microsoft.Compute	Australia Central	0% 0 of 2,500
Total Regional vCPUs	Microsoft.Compute	Australia Central	0% 0 of 100
Virtual Machines	Microsoft.Compute	Australia Central	0% 0 of 25,000
Virtual Machine Scale Sets	Microsoft.Compute	Australia Central	0% 0 of 2,500
Dedicated vCPUs	Microsoft.Compute	Australia Central	0% 0 of 3,000

In the list of quotas, you can toggle the arrow shown next to **Quota** to expand and close categories. You can do the same next to each category to drill down and create a view of the information you need.

Request quota increases

You can request quota increases directly from **My quotas**. The process for requesting an increase will depend on the type of quota.

Request a quota increase

Some quotas display a pencil icon. Select this icon to quickly request an increase for that quota.

After you select the pencil icon, enter the new limit for your request in the **Quota Details** pane, then select **Save and Continue**. After a few minutes, you'll see a status update confirming whether the increase was fulfilled. If you close **Quota details** before the update appears, you can check it later in the Azure Activity Log.

If your request wasn't fulfilled, you can select **Create a support request** so that your request can be evaluated by our support team.

Create a support request

If the quota displays a support icon rather than a pencil, you'll need to create a support request in order to request the increase.

Selecting the support icon will take you to the **New support request** page, where you can enter details about your new request. A support engineer will then assist you with the quota increase request.

For more information about opening a support request, see [Create an Azure support request](#).

Next steps

- Learn about [Azure subscription and service limits, quotas, and constraints](#).
- Learn about other ways to request increases for [VM-family vCPU quotas](#), [vCPU quotas by region](#), and [spot vCPU quotas](#).

Increase VM-family vCPU quotas

2/24/2022 • 2 minutes to read • [Edit Online](#)

Azure Resource Manager enforces two types of vCPU quotas for virtual machines:

- standard vCPU quotas
- spot vCPU quotas

Standard vCPU quotas apply to pay-as-you-go VMs and reserved VM instances. They are enforced at two tiers, for each subscription, in each region:

- The first tier is the total regional vCPU quota.
- The second tier is the VM-family vCPU quota such as D-series vCPUs.

This article shows how to request increases for VM-family vCPU quotas. You can also request increases for [vCPU quotas by region](#) or [spot vCPU quotas](#).

Increase a VM-family vCPU quota

To request a standard vCPU quota increase per VM-family from **Usage + quotas**:

1. In the Azure portal, search for and select **Subscriptions**.
2. Select the subscription whose quota you want to increase.
3. In the left pane, select **Usage + quotas**.
4. In the main pane, find the VM-family vCPU quota you want to increase, then select the pencil icon. The example below shows Standard DSv3 Family vCPUs deployed in the East US region. The **Usage** column displays the current quota usage and the current quota limit.
5. In **Quota details**, enter your new quota limit, then select **Save and continue**.

The screenshot shows the Azure portal interface for managing quotas. The main pane displays a list of quotas for the 'CSCP-CCE-CapacityUX-Test' subscription. The 'Standard DSv3 Family vCPUs' quota is highlighted with a red box and a red circle with the number 4. The 'Usage + quotas' menu item in the left navigation pane is also highlighted with a red circle with the number 3. A 'Quota Details' dialog box is open on the right, showing the 'East US' region. The dialog displays the current usage (2 of 40001) and the current limit (40100) for the 'Standard DSv3 Family vCPUs' quota. A red circle with the number 5 is next to the 'New limit' input field. A 'Save and Continue' button is visible at the bottom of the dialog.

Quota	Usage	New limit
Standard DSv3 Family vCPUs	2 of 40001	40100

Your request will be reviewed, and you'll be notified whether the request is approved or rejected. This usually happens within a few minutes. If your request is rejected, you'll see a link where you can open a support request so that a support engineer can assist you with the increase.

NOTE

If your request to increase your VM-family quota is approved, Azure will automatically increase the regional vCPU quota for the region where your VM is deployed.

TIP

When creating or resizing a virtual machine and selecting your VM size, you may see some options listed under **Insufficient quota - family limit**. If so, you can request a quota increase directly from the VM creation page by selecting the **Request quota** link.

Increase a VM-family vCPU quota from Help + support

To request a standard vCPU quota increase per VM family from **Help + support**, create a new support request in the Azure portal.

1. For **Issue type**, select **Service and subscription limits (quotas)**.
2. For **Subscription**, select the subscription whose quota you want to increase.
3. For **Quota type**, select **Compute-VM (cores-vCPUs) subscription limit increases**.

New support request ...

1. **Problem description** 2. Recommended solution 3. Additional details 4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *	Service and subscription limits (quotas) ▼
Subscription *	mySubscription (00000000-0000-0000-0000-000000000000) ▼
	Can't find your subscription? Show more ⓘ
Quota type *	Compute-VM (cores-vCPUs) subscription limit increases ▼

From there, follow the steps described in [Create a support request](#).

Increase multiple VM-family CPU quotas in one request

You can also request multiple increases at the same time (bulk request). Doing a bulk request quota increase may take longer than requesting to increase a single quota.

To request multiple increases together, first go to the **Usage + quotas** page as described above. Then do the following:

1. Select **Request Increase** near the top of the screen.
2. For **Quota type**, select **Compute-VM (cores-vCPUs) subscription limit increases**.

3. Select **Next** to go to the **Additional details** screen, then select **Enter details**.

4. In the **Quota details** screen:

Quota details ×

Deployment model *
Resource Manager

Location *
(US) North Central US

North Central US

Quota (vCPU) *
2 selected

Quota	Usage	New limit
DASv4-series vCPUs	4 of 50	52
Standard Dsv3 Family vCPUs	4 of 100	102

[Learn more about Azure compute quota increase requests](#)

Save and continue

- For **Deployment model**, ensure **Resource Manager** is selected.
- For **Locations**, select all regions in which you want to increase quotas.
- For each region you selected, select one or more VM series from the **Quotas** drop-down list.
- For each **VM Series** you selected, enter the new vCPU limit that you want for this subscription.
- When you're finished, select **Save and continue**.

5. Enter or confirm your contact details, then select **Next**.

6. Finally, ensure that everything looks correct on the **Review + create** page, then select **Create** to submit your request.

Next steps

- Learn more about [vCPU quotas](#).
- Learn about [Azure subscription and service limits, quotas, and constraints](#).

Increase regional vCPU quotas

2/24/2022 • 2 minutes to read • [Edit Online](#)

Azure Resource Manager enforces two types of vCPU quotas for virtual machines:

- standard vCPU quotas
- spot vCPU quotas

Standard vCPU quotas apply to pay-as-you-go VMs and reserved VM instances. They are enforced at two tiers, for each subscription, in each region:

- The first tier is the total regional vCPU quota.
- The second tier is the VM-family vCPU quota such as D-series vCPUs.

This article shows how to request regional vCPU quota increases for all VMs in a given region. You can also request increases for [VM-family vCPU quotas](#) or [spot vCPU quotas](#).

Special considerations

When considering your vCPU needs across regions, keep in mind the following:

- Regional vCPU quotas are enforced across all VM series in a given region. As a result, decide how many vCPUs you need in each region in your subscription. If you don't have enough vCPU quota in each region, submit a request to increase the vCPU quota in that region. For example, if you need 30 vCPUs in West Europe and you don't have enough quota, specifically request a quota for 30 vCPUs in West Europe. When you do so, the vCPU quotas in your subscription in other regions aren't increased. Only the vCPU quota limit in West Europe is increased to 30 vCPUs.
- When you request an increase in the vCPU quota for a VM series, Azure increases the regional vCPU quota limit by the same amount.
- When you create a new subscription, the default value for the total number of vCPUs in a region might not be equal to the total default vCPU quota for all individual VM series. This discrepancy can result in a subscription with enough quota for each individual VM series that you want to deploy. However, there might not be enough quota to accommodate the total regional vCPUs for all deployments. In this case, you must submit a request to explicitly increase the quota limit of the regional vCPU quotas.

Increase a regional vCPU quota

To request a regional vCPU quota from **Usage + quotas**:

1. In the Azure portal, search for and select **Subscriptions**.
2. Select the subscription whose quota you want to increase.
3. In the left pane, select **Usage + quotas**. Use the filters to view your quota by usage.
4. In the main pane, select **Total Regional vCPUs**, then select the pencil icon. The example below shows the regional vCPU quota for the NorthEast US region.

CSCP-CCE-CapacityUX-Test | Usage + quotas

Subscription

Search (Ctrl+F)

Request Increase Refresh

Search 2 locations 3 providers Show all No grouping

Showing 1 to 100 of 274 records.

Quota	Provider	Location	Usage	Limit	Link
Network Watchers	Microsoft.Network	East US	100%	1 of 1	Link
Storage Accounts	Microsoft.Storage	West US	1%	2 of 250	Link
Public IP Addresses - Standard	Microsoft.Network	East US	0%	1 of 1000	Link
Public IP Addresses - Basic	Microsoft.Network	East US	0%	1 of 1000	Link
Static Public IP Addresses	Microsoft.Network	East US	0%	1 of 1000	Link
Virtual Networks	Microsoft.Network	East US	0%	1 of 1000	Link
Network Security Groups	Microsoft.Network	East US	0%	2 of 5000	Link
Standard D5v3 Family vCPUs	Microsoft.Compute	East US	0%	2 of 40000	Link
Total Regional vCPUs	Microsoft.Compute	East US	0%	2 of 49913	Link
Virtual Machines	Microsoft.Compute	East US	0%	1 of 25000	Link
Premium Storage Managed Disks	Microsoft.Compute	East US	0%	1 of 50000	Link
Network Interfaces	Microsoft.Network	East US	0%	1 of 65536	Link
Public IPv4 Prefix Length	Microsoft.Network	West US	0%	0 of 28	Link
Route filters per Express route BGP Peering	Microsoft.Network	West US	0%	0 of 1	Link
Route filter rules per Route Filter	Microsoft.Network	West US	0%	0 of 1	Link
Inbound rules per Network Interface	Microsoft.Network	West US	0%	0 of 300	Link
Secondary IP Configurations per Network Interface	Microsoft.Network	West US	0%	0 of 256	Link
Routes with service tag per Route Table	Microsoft.Network	West US	0%	0 of 25	Link
Routes per Route Table	Microsoft.Network	West US	0%	0 of 400	Link
Outbound Rules per Load Balancer	Microsoft.Network	West US	0%	0 of 5	Link
Frontend IP Configurations per Load Balancer	Microsoft.Network	West US	0%	0 of 200	Link
Inbound Rules per Load Balancer	Microsoft.Network	West US	0%	0 of 250	Link
Security rules addresses or ports per Network Security Group	Microsoft.Network	West US	0%	0 of 4000	Link

Previous Page 1 of 3 Next

5. In **Quota details**, enter your new quota limit, then select **Save and continue**.

Your request will be reviewed, and you'll be notified whether the request is approved or rejected. This usually happens within a few minutes. If your request is rejected, you'll see a link where you can open a support request so that a support engineer can assist you with the increase.

TIP

You can also request multiple increases at the same time. For more information, see [Increase multiple VM-family CPU quotas in one request](#).

Increase a regional quota from Help + support

To request a standard vCPU quota increase per VM family from **Help + support**, create a new support request in the Azure portal.




1. For **Issue type**, select **Service and subscription limits (quotas)**.
2. For **Subscription**, select the subscription whose quota you want to increase.
3. For **Quota type**, select **Compute-VM (cores-vCPUs) subscription limit increases**.

New support request ...

1. Problem description 2. Recommended solution 3. Additional details 4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *	Service and subscription limits (quotas) 
Subscription *	mySubscription (00000000-0000-0000-0000-000000000000) 
	Can't find your subscription? Show more ⓘ
Quota type *	Compute-VM (cores-vCPUs) subscription limit increases 

From there, follow the steps described in [Create a support request](#).

Next steps

- Review the [list of Azure regions and their locations](#).
- Get an overview of [Azure regions for virtual machines](#) and how to to maximize a VM performance, availability, and redundancy in a given region.

Increase spot vCPU quotas

2/24/2022 • 2 minutes to read • [Edit Online](#)

Azure Resource Manager enforces two types of vCPU quotas for virtual machines:

- standard vCPU quotas
- spot vCPU quotas

Standard vCPU quotas apply to pay-as-you-go VMs and reserved VM instances. They are enforced at two tiers, for each subscription, in each region:

- The first tier is the total regional vCPU quota.
- The second tier is the VM-family vCPU quota such as D-series vCPUs.

Spot vCPU quotas apply to [spot virtual machines \(VMs\)](#) across all VM families (SKUs).

This article shows you how to request quota increases for spot vCPUs. You can also request increases for [VM-family vCPU quotas](#) or [vCPU quotas by region](#).

Special considerations

When considering your spot vCPU needs, keep in mind the following:

- When you deploy a new spot VM, the total new and existing vCPU usage for all spot VM instances must not exceed the approved spot vCPU quota limit. If the spot quota is exceeded, the spot VM can't be deployed.
- At any point in time when Azure needs the capacity back, the Azure infrastructure will evict spot VMs.

Increase a spot vCPU quota

To request a quota increase for a spot vCPU quota:

1. In the Azure portal, search for and select **Subscriptions**.
2. Select the subscription whose quota you want to increase.
3. In the left pane, select **Usage + quotas**.
4. In the main pane, search for spot and select **Total Regional Spot vCPUs** for the region you want to increase.
5. In **Quota details**, enter your new quota limit.

The example below requests a new quota limit of 103 for the Spot vCPUs across all VM-family vCPUs in the West US region.

The screenshot displays the Azure portal interface for managing quotas. On the left, a table lists 18 records of quotas for Microsoft.Compute across various regions. The 'Total Regional Spot vCPUs' row is highlighted with a red box and a red circle containing the number 1. On the right, the 'Quota Details' sidebar for 'West US' shows 'Total Regional Low-priority vCPUs' with a usage of 0 and a new limit of 103, also highlighted with a red box and a red circle containing the number 5. A 'Save and Continue' button is visible at the bottom right of the sidebar.

6. Select **Save and continue**.

Your request will be reviewed, and you'll be notified whether the request is approved or rejected. This usually happens within a few minutes. If your request is rejected, you'll see a link where you can open a support request so that a support engineer can assist you with the increase.

Increase a spot quota from Help + support

To request a spot vCPU quota increase from **Help + support**, create a new support request in the Azure portal.

1. For **Issue type**, select **Service and subscription limits (quotas)**.
2. For **Subscription**, select the subscription whose quota you want to increase.
3. For **Quota type**, select **Compute-VM (cores-vCPUs) subscription limit increases**.

New support request ...

1. **Problem description**
2. Recommended solution
3. Additional details
4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *

Subscription *

Can't find your subscription? [Show more](#) ⓘ

Quota type *

From there, follow the steps described in [Create a support request](#).

Next steps

- Learn more about [Azure spot virtual machines](#).

- Learn about [Azure subscription and service limits, quotas, and constraints](#).

Increase a VM-family vCPU quota for the Classic deployment model

2/24/2022 • 2 minutes to read • [Edit Online](#)

The Classic deployment model is the older generation Azure deployment model. It enforces a global vCPU quota limit for virtual machines and virtual machine scale sets. The Classic deployment model is no longer recommended, and is now superseded by the Resource Manager model.

To learn more about these two deployment models and the advantages of using Resource Manager, see [Resource Manager and classic deployment](#).

When a new subscription is created, a default quota of vCPUs is assigned to it. Any time a new virtual machine is deployed using the Classic deployment model, the sum of new and existing vCPU usage across all regions must not exceed the vCPU quota approved for the Classic deployment model.

You can request vCPU quota increases for the Classic deployment model in the Azure portal by using **Help + support** or **Usage + quotas**.

Request quota increase for the Classic deployment model using Help + support

Follow the instructions below to create a vCPU quota increase request for the Classic deployment model by using **Help + support** in the Azure portal.

1. Sign in to the [Azure portal](#), and [open a new support request](#).
2. For **Issue type**, choose **Service and subscription limits (quotas)**.
3. Select the subscription that needs an increased quota.
4. For **Quota type**, select **Compute-VM (cores-vCPUs) subscription limit increases**. Then select **Next**.

New support request ...

1. Problem description 2. Recommended solution 3. Additional details 4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *

Subscription *

Can't find your subscription? [Show more](#) ⓘ

Quota type *

5. In the **Problem details** section, select **Enter details**. For deployment model, select **Classic**, then select a location.

6. For **SKU family**, select one or more SKU families to increase.
7. Enter the new limits you would like on the subscription. When you're finished, select **Save and continue** to continue creating your support request.
8. Complete the rest of the **Additional information** screen, and then select **Next**.
9. On the **Review + create** screen, review the details that you'll send to support, and then select **Create**.

Request quota increase for the Classic deployment model from Usage + quotas

Follow the instructions below to create a vCPU quota increase request for the Classic deployment model from **Usage + quotas** in the Azure portal.

1. From <https://portal.azure.com>, search for and select **Subscriptions**.
2. Select the subscription that needs an increased quota.
3. Select **Usage + quotas**.
4. In the upper right corner, select **Request increase**.
5. Follow the steps above (starting at step 4) to complete your request.

Next steps

- Learn about [Azure subscription and service limits, quotas, and constraints](#).
- Learn about the advantages of using the [Resource Manager deployment model](#).

Increase networking quotas

2/24/2022 • 2 minutes to read • [Edit Online](#)

This article shows how to request increases for networking quotas in the [Azure portal](#).

To view your current networking usage and quota in the Azure portal, open your subscription, then select **Usage + quotas**. You can also use the following options to view your network usage and limits.

- [Usage CLI](#)
- [PowerShell](#)
- [The network usage API](#)

You can request an increase in the Azure portal by using **Help + support** or in **Usage + quotas** for your subscription.

NOTE

To change the default size of **Public IP Prefixes**, select **Min Public IP InterNetwork Prefix Length** from the dropdown list.

Request networking quota increase by using Help + support

Follow the instructions below to create a networking quota increase request by using **Help + support** in the Azure portal.

1. Sign in to the [Azure portal](#), and [open a new support request](#).
2. For **Issue type**, choose **Service and subscription limits (quotas)**.
3. Select the subscription that needs an increased quota.
4. Under **Quota type**, select **Networking**. Then select **Next**.

[Home](#) > [Help + support](#) >

New support request

1. **Problem description** 2. Recommended solution 3. Additional details 4. Review + create

Tell us your issue, and we'll help you resolve it.

Provide information about your billing, subscription, quota management, or technical issue (including requests for technical advice).

Issue type *	<input type="text" value="Service and subscription limits (quotas)"/>
Subscription *	<input type="text" value="Contoso, Ltd. Subscription"/>
	Can't find your subscription? Show more
Quota type *	<input type="text" value="Networking"/>

5. In the **Problem details** section, select **Enter details**. Follow the prompts to select a deployment model, location, the resources to include in your request, and the new limit you would like on the subscription

for those resources. When you're finished, select **Save and continue** to continue creating your support request.

Quota details



Deployment Model *

Resource Manager



Location *

West US



Resources *

Public IP Addresses - Basic (Current usage: 900, Current limit : 1000)



New Limit * ⓘ

1500



Save and continue

6. Complete the rest of the **Additional information** screen, and then select **Next**.
7. On the **Review + create** screen, review the details that you'll send to support, and then select **Create**.

Request networking quota increase from Usage + quotas

Follow these instructions to create a networking quota increase request from **Usage + quotas** in the Azure portal.

1. From <https://portal.azure.com>, search for and select **Subscriptions**.
2. Select the subscription that needs an increased quota.
3. Select **Usage + quotas**.
4. In the upper right corner, select **Request increase**.
5. Follow the steps above (starting at step 4) to complete your request.

Next steps

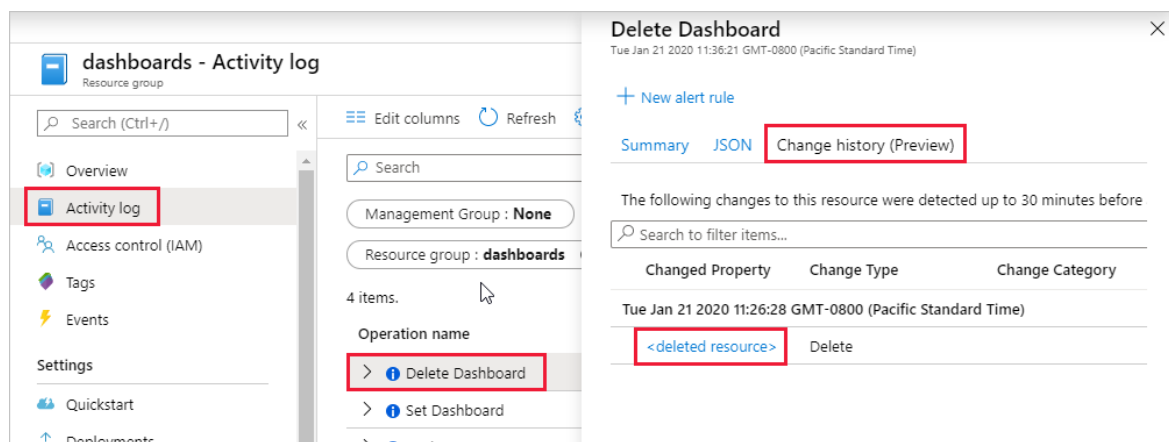
- Review details on [networking limits](#).
- Learn about [Azure subscription and service limits, quotas, and constraints](#).

Recover a deleted dashboard in the Azure portal

2/24/2022 • 2 minutes to read • [Edit Online](#)

If you're in the global Azure cloud, and you delete a *published* dashboard in the Azure portal, you can recover that dashboard within 14 days of the delete. If you're in an Azure Government cloud or the dashboard isn't published, you cannot recover it, and you must rebuild it. For more information about publishing a dashboard, see [Publish dashboard](#). Follow these steps to recover a published dashboard:

1. From the Azure portal menu, select **Resource groups**, then select the resource group where you published the dashboard (by default, it's named **dashboards**).
2. Under **Activity log**, expand the **Delete Dashboard** operation. Select the **Change history** tab, then select **<deleted resource>**.



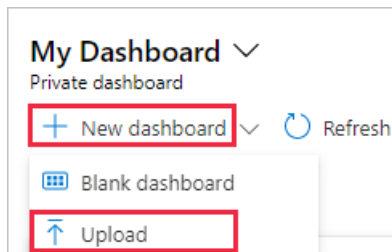
3. Select and copy the contents of the left pane, then save to a text file with a *.json* file extension. The portal uses the JSON file to re-create the dashboard.

```

1-{
2  "id": "/subscriptions/00000000-0000-0000-0000-000000000000/resourcegroups
3  "name": "00000000-0000-0000-0000-000000000000",
4  "type": "microsoft.portal/dashboards",
5  "location": "centralus",
6  "tags": {
7    "hidden-title": "Simple VM Dashboard"
8  },
9  "kind": "",
10 "sku": null,
11 "plan": null,
12 "managedBy": "",
13 "properties": {
14   "lenses": {
15     "0": {
16       "order": 0,
17       "parts": {
18         "0": {
19           "metadata": {
20             "inputs": [],
21             "settings": {
22               "content": {
23                 "settings": {
24                   "content": "## Azure Virtual Machi
25                   "markdownUri": null
26                 }
27               }
28             }
29           "type": "Extension/HubsExtension/PartType/Mark
30         },
31       "position": {
32         "colSpan": 2

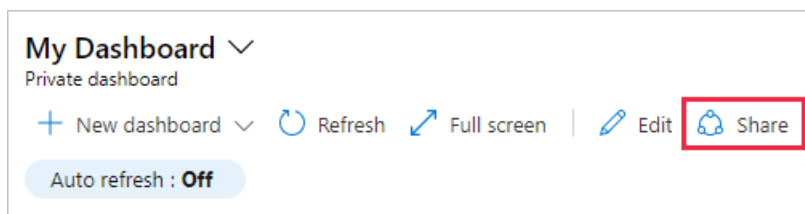
```

4. From the Azure portal menu, select **Dashboards**, then select **Upload**.



5. Select the JSON file you saved. The portal re-creates the dashboard with the same name and elements as the deleted dashboard.

6. Select **Share** to publish the dashboard and re-establish the appropriate access control.



Capture a browser trace for troubleshooting

2/24/2022 • 6 minutes to read • [Edit Online](#)


If you're troubleshooting an issue with the Azure portal, and you need to contact Microsoft support, we recommend you first capture a browser trace and some additional information. The information you collect can provide important details about the portal at the time the issue occurs. Follow the steps in this article for the developer tools in the browser you use: Google Chrome or Microsoft Edge (Chromium), Microsoft Edge (EdgeHTML), Apple Safari, or Firefox.

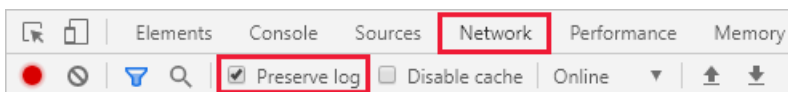
IMPORTANT

Microsoft support uses these traces for troubleshooting purposes only. Please be mindful who you share your traces with, as they may contain sensitive information about your environment.

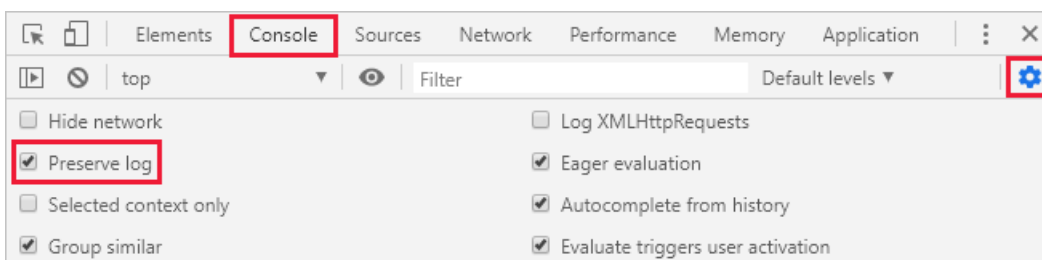
Google Chrome and Microsoft Edge (Chromium)

Google Chrome and Microsoft Edge (Chromium) are both based on the [Chromium open source project](#). The following steps show how to use the developer tools, which are very similar in the two browsers. For more information, see [Chrome DevTools](#) and [Microsoft Edge \(Chromium\) Developer Tools](#).

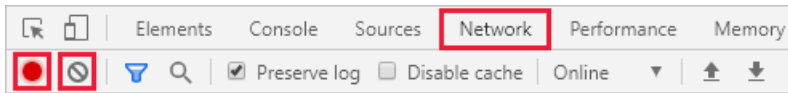
1. Sign in to the [Azure portal](#). It's important to sign in *before* you start the trace so that the trace doesn't contain sensitive information related to your sign-in.
2. Start recording the steps you take in the portal, using [Steps Recorder](#).
3. In the portal, navigate to the step just prior to where the issue occurs.
4. Press F12 or select  > **More tools** > **Developer tools**.
5. By default, the browser keeps trace information only for the page that's currently loaded. Set the following options so the browser keeps all trace information, even if your repro requires going to more than one page:
 - a. Select the **Network** tab, then select **Preserve log**.



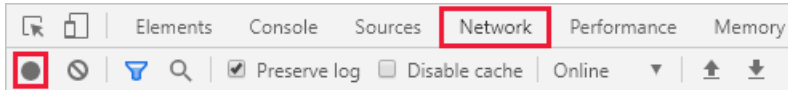
- b. Select the **Console** tab, select **Console settings**, then select **Preserve Log**. Select **Console settings** again to close the settings pane.



6. Select the **Network** tab, then select **Stop recording network log** and **Clear**.



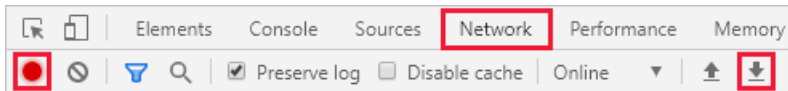
7. Select **Record network log**, then reproduce the issue in the portal.



You will see session output similar to the following image.

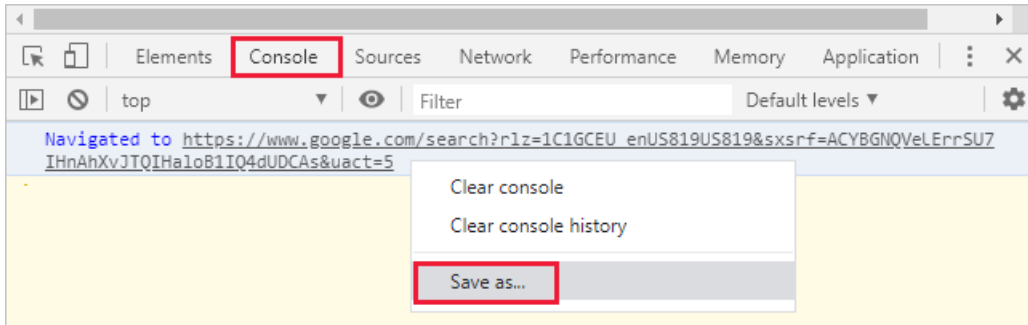
Name	Status	Type	Initiator	Size	Time	Waterfall
gen_204?atyp=i&ei=4gYdXr8Bw_v6BP_cia...	204	text/html	/xjs//js/k=xjs.s.en U...	40 B	33 ms	
search?rlz=1C1GCEU_enUS819US819&sxsr...	200	document	Other	90.4 KB	589 ms	
KFOICnqEu92Fr1MmWUIfBBc4.woff2	200	font	VM1043_search:120	(memory c...	0 ms	
data:image/gif;base...	200	gif	/search?rlz=1C1GCE...	(memory c...	0 ms	
KFOmCnqEu92Fr1Mu4mxK.woff2	200	font	VM1043_search:120	(disk cache)	1 ms	
googlelogo_color_92x30dp.png	200	png	/search?rlz=1C1GCE...	(memory c...	0 ms	
photo.jpg	200	png	/search?rlz=1C1GCE...	(memory c...	0 ms	

8. After you have reproduced the unexpected portal behavior, select **Stop recording network log**, then select **Export HAR** and save the file.



9. Stop Steps Recorder, and save the recording.


10. Back in the browser developer tools pane, select the **Console** tab. Right-click one of the messages, then select **Save as...**, and save the console output to a text file.



11. Package the HAR file, console output, and screen recording in a compressed format like .zip, and share that with Microsoft support.

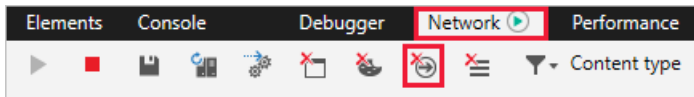
Microsoft Edge (EdgeHTML)

The following steps show how to use the developer tools in Microsoft Edge (EdgeHTML). For more information, see [Microsoft Edge \(EdgeHTML\) Developer Tools](#).

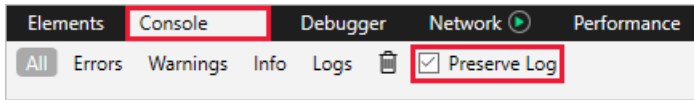
1. Sign in to the [Azure portal](#). It's important to sign in *before* you start the trace so that the trace doesn't contain sensitive information related to your sign-in.
2. Start recording the steps you take in the portal, using [Steps Recorder](#).
3. In the portal, navigate to the step just prior to where the issue occurs.
4. Press F12 or select  > **More tools** > **Developer tools**.
5. By default, the browser keeps trace information only for the page that's currently loaded. Set the following options so the browser keeps all trace information, even if your repro requires going to more

than one page:

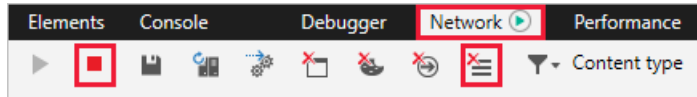
- a. Select the **Network** tab, then clear the option **Clear entries on navigate**.



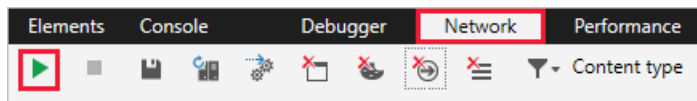
- b. Select the **Console** tab, then select **Preserve Log**.



6. Select the **Network** tab, then select **Stop profiling session** and **Clear session**.



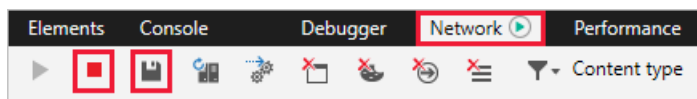
7. Select **Start profiling session**, then reproduce the issue in the portal.



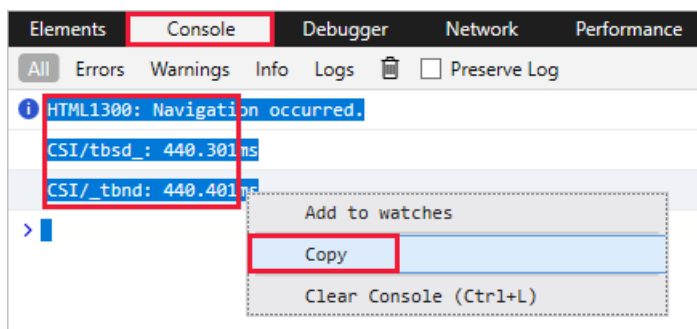
You will see session output similar to the following image.

Name	Protocol	Method	Result	Content type	Received	Time	Initiator	0ms	16:40mi
https://ogs.google.com/	HTTP/2	GET	404	text/html	1.52 KB	21.55 ms			
https://ogs.google.com/	HTTP/2	GET	404	text/html	1.52 KB	14.6 ms			
log?format=json&hasfast=true https://play.google.com/	HTTP/2	POST	200	text/plain	131 B	98.27 ms	XMLHttpRequest		
log?format=json&hasfast=true https://play.google.com/	HTTPS/...	GET	200 OK		(from cache)	0 s			
gen_204?atyp=i&kei=V_YYs3tAaW50PEocWHgAs... https://www.google.com/	HTTP/2	POST	204	text/html	0 B	88.25 ms	Beacon		
url?sa=t&tct=j&q=&esrc=s&source=web&cd=2&v... https://www.google.com/	HTTP/2	GET	200	text/html	482 B	40.34 ms	document		
gen_204?atyp=i&kei=V_YYs3tAaW50PEocWHgAs... https://www.google.com/	HTTP/2	POST	204	text/html	0 B	30.54 ms	Beacon		

8. After you have reproduced the unexpected portal behavior, select **Stop profiling session**, then select **Export as HAR** and save the file.



9. Stop Steps Recorder, and save the recording.
10. Back in the browser developer tools pane, select the **Console** tab, and expand the window. Place your cursor at the start of the console output then drag and select the entire contents of the output. Right-click, then select **Copy**, and save the console output to a text file.

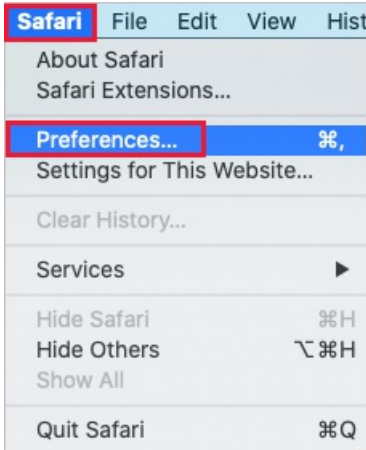


11. Package the HAR file, console output, and screen recording in a compressed format like .zip, and share that with Microsoft support.

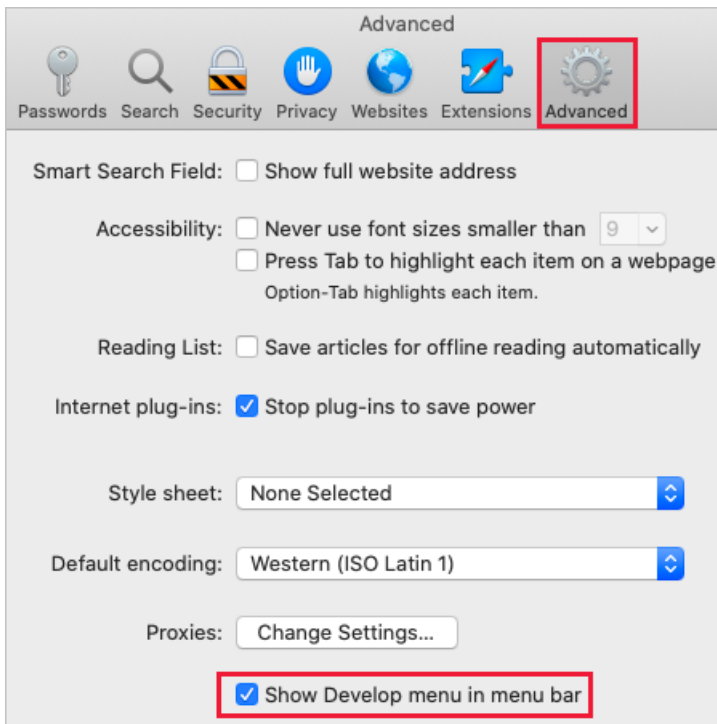
Apple Safari

The following steps show how to use the developer tools in Apple Safari. For more information, see [Safari Developer Tools overview](#).

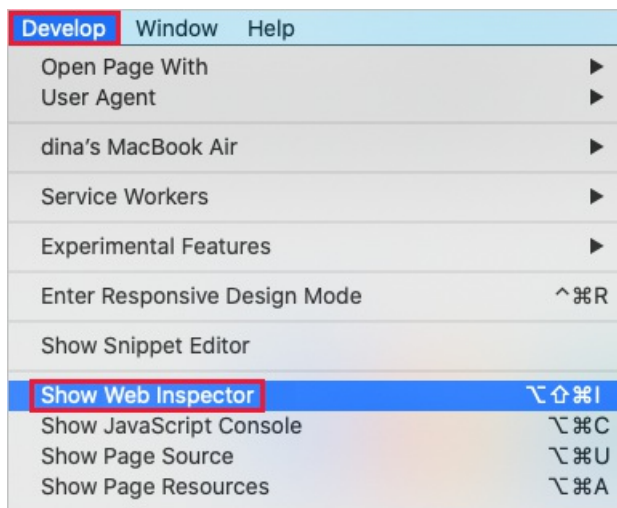
1. Enable the developer tools in Apple Safari:
 - a. Select **Safari**, then select **Preferences**.



- b. Select the **Advanced** tab, then select **Show Develop menu in menu bar**.

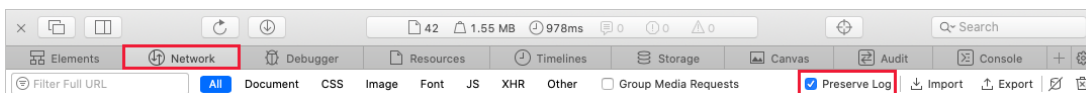


2. Sign in to the [Azure portal](#). It's important to sign in *before* you start the trace so that the trace doesn't contain sensitive information related to your sign-in.
3. Start recording the steps you take in the portal. For more information, see [How to record the screen on your Mac](#).
4. In the portal, navigate to the step just prior to where the issue occurs.
5. Select **Develop**, then select **Show Web Inspector**.

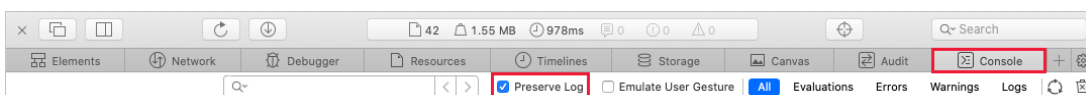


6. By default, the browser keeps trace information only for the page that's currently loaded. Set the following options so the browser keeps all trace information, even if your repro requires going to more than one page:

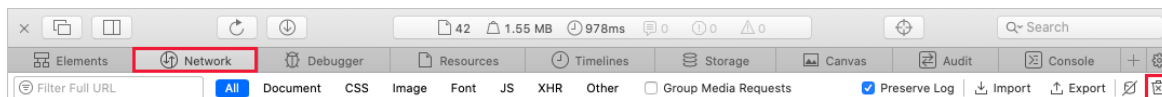
a. Select the **Network** tab, then select **Preserve Log**.



b. Select the **Console** tab, then select **Preserve Log**.



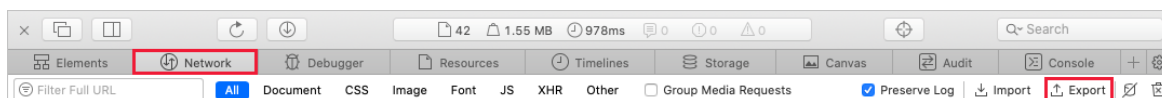
7. Select the **Network** tab, then select **Clear Network Items**.



8. Reproduce the issue in the portal. You will see session output similar to the following image.

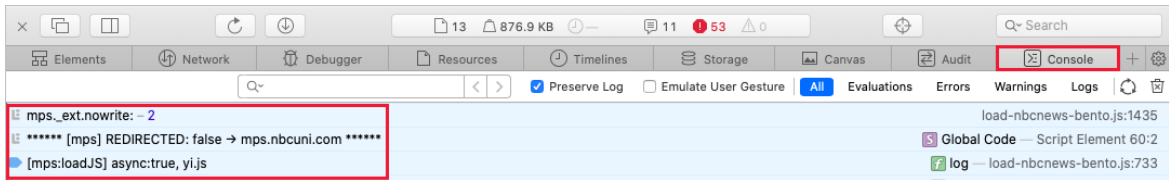
Name	Domain	Type	Transfer Size	Time	1000.0ms	2.00s
search	www.google.com	document	99.93 KB	698ms		
googlelogo_color_92x30dp.png	www.google.com	png	3.91 KB	27.7ms		
desktop_searchbox_sprites302_hr.png	www.google.com	png	(memory)	0ms		
data:image/svg+xml;base64,PHN...go=	—	svg	486 B	14.7ms		
loading_24.gif	www.gstatic.com	gif	4.49 KB	236ms		
data:image/gif;base64,R0l...w==	—	gif	85 B	61.8ms		
data:image/svg+xml;base64,PHN...z4K	—	svg	238 B	60.3ms		

9. After you have reproduced the unexpected portal behavior, select **Export** and save the file.



10. Stop the screen recorder, and save the recording.


11. Back in the browser developer tools pane, select the **Console** tab, and expand the window. Place your cursor at the start of the console output then drag and select the entire contents of the output. Use Command-C to copy the output and save it to a text file.



- Package the HAR file, console output, and screen recording in a compressed format like .zip, and share that with Microsoft support.

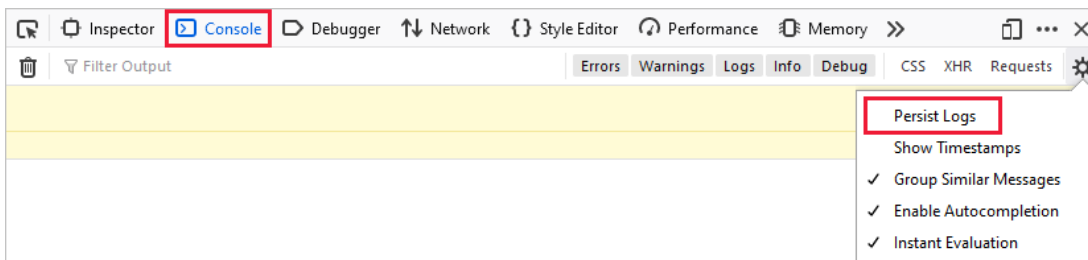
Firefox

The following steps show how to use the developer tools in Firefox. For more information, see [Firefox Developer Tools](#).

- Sign in to the [Azure portal](#). It's important to sign in *before* you start the trace so that the trace doesn't contain sensitive information related to your sign-in.
- Start recording the steps you take in the portal. Use [Steps Recorder](#) on Windows, or see [How to record the screen on your Mac](#).
- In the portal, navigate to the step just prior to where the issue occurs.
- Press F12 or select  > **Web Developer** > **Toggle Tools**.
- By default, the browser keeps trace information only for the page that's currently loaded. Set the following options so the browser keeps all trace information, even if your repro requires going to more than one page:
 - Select the **Network** tab, then select **Persist Logs**.



- Select the **Console** tab, select **Console settings**, then select **Persist Logs**.



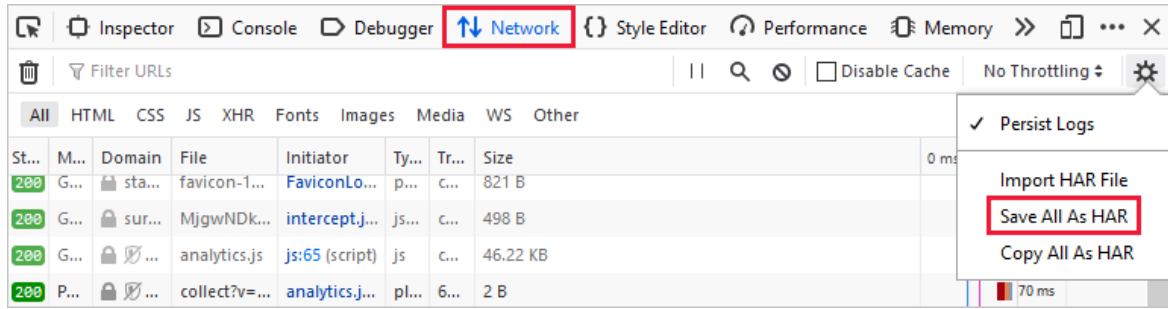
- Select the **Network** tab, then select **Clear**.



- Reproduce the issue in the portal. You will see session output similar to the following image.

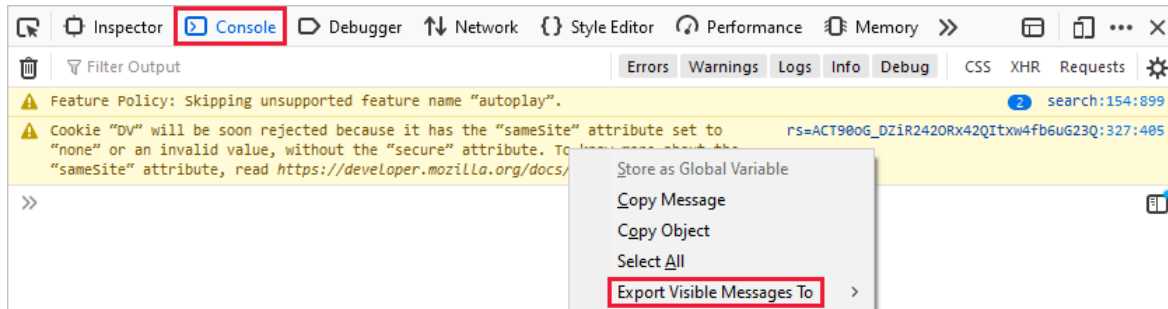
Status	Method	Domain	File	Cause	Type	Transferred	Size
204	POST	www.google.com	gen_204?atyp=i&ei=UIO5Xpm...	beacon	html	434 B	0 B
204	POST	www.google.com	gen_204?atyp=i&ei=UIO5Xpm...	beacon	html	434 B	0 B
200	GET	encrypted-tbn3.gs...	shopping?q=tbn:AND9GcQQG...	img	png	4.03 KB	3.47 KB
204	POST	www.google.com	gen_204?atyp=i&ei=UIO5Xpm...	beacon	html	434 B	0 B
204	POST	www.google.com	gen_204?atyp=i&ei=UIO5Xpm...	beacon	html	434 B	0 B
204	POST	www.google.com	gen_204?atyp=i&ei=UIO5Xpm...	beacon	html	434 B	0 B

8. After you have reproduced the unexpected portal behavior, select **Save All As HAR**.



9. Stop Steps Recorder on Windows or the screen recording on Mac, and save the recording.

10. Back in the browser developer tools pane, select the **Console** tab. Right-click one of the messages, then select **Export Visible Messages To**, and save the console output to a text file.



11. Package the HAR file, console output, and screen recording in a compressed format like .zip, and share that with Microsoft support.

Next steps

- Read more about the [Azure portal](#).
- Learn how to [open a support request](#) in the Azure portal.

Keyboard shortcuts in the Azure portal

2/24/2022 • 2 minutes to read • [Edit Online](#)

This article lists the keyboard shortcuts that work throughout the Azure portal. Individual services may have their own additional keyboard shortcuts.

The letters that appear below represent letter keys on your keyboard. For example, to use **G+N**, hold down the **G** key and then press **N**.

Actions

TO DO THIS ACTION	PRESS
Create a resource	G+N
Open All services	G+B
Search resources, services, and docs	G+/
Search resource menu items	CTRL+/
Move up the selected left sidebar item	ALT+Shift+Up Arrow
Move the selected left sidebar item down	ALT+Shift+Down Arrow

Navigation

TO DO THIS NAVIGATION	PRESS
Move focus to command bar	G+,
Toggle focus between header and left sidebar	G+.

Go to

TO GO TO THIS LOCATION	PRESS
Go to Dashboard	G+D
Go to All resources	G+A
Go to Resource groups	G+R
Open the left sidebar item at this position	G+number

Examples of additional keyboard shortcuts for specific areas

- [Azure Resource Graph Explorer](#)

- [Kusto Explorer](#)
- [Azure Maps drawing module](#)

Next steps

- [Turn on high contrast or change theme](#)
- [Learn about supported browsers and devices](#)

Allow the Azure portal URLs on your firewall or proxy server

2/24/2022 • 2 minutes to read • [Edit Online](#)

To optimize connectivity between your network and the Azure portal and its services, you may want to add specific Azure portal URLs to your allowlist. Doing so can improve performance and connectivity between your local- or wide-area network and the Azure cloud.

Network administrators often deploy proxy servers, firewalls, or other devices, which can help secure and give control over how users access the internet. Rules designed to protect users can sometimes block or slow down legitimate business-related internet traffic. This traffic includes communications between you and Azure over the URLs listed here.

TIP

For help diagnosing issues with network connections to these domains, check <https://portal.azure.com/selfhelp>.

Azure portal URLs for proxy bypass

The URL endpoints to allow for the Azure portal are specific to the Azure cloud where your organization is deployed. To allow network traffic to these endpoints to bypass restrictions, select your cloud, then add the list of URLs to your proxy server or firewall. We do not recommend adding any additional portal-related URLs aside from those listed here, although you may want to add URLs related to other Microsoft products and services. Depending on which services you use, you may not need to include all of these URLs in your allowlist.

- [Public Cloud](#)
- [U.S. Government Cloud](#)
- [China Government Cloud](#)

```
*.aadcdn.microsoftonline-p.com
*.aka.ms
*.applicationinsights.io
*.azure.com
*.azure.net
*.azure-api.net
*.azuredatalakestore.net
*.azureedge.net
*.loganalytics.io
*.microsoft.com
*.microsoftonline.com
*.microsoftonline-p.com
*.msauth.net
*.msftauth.net
*.trafficmanager.net
*.visualstudio.com
*.asazure.windows.net (Analysis Services)
*.core.windows.net (Azure Storage)
*.database.windows.net (SQL Server)
*.graph.windows.net (Azure AD Graph)
*.kusto.windows.net (Azure Data Explorer/Kusto)
*.search.windows.net (search)
*.servicebus.windows.net (Azure Service Bus)
```

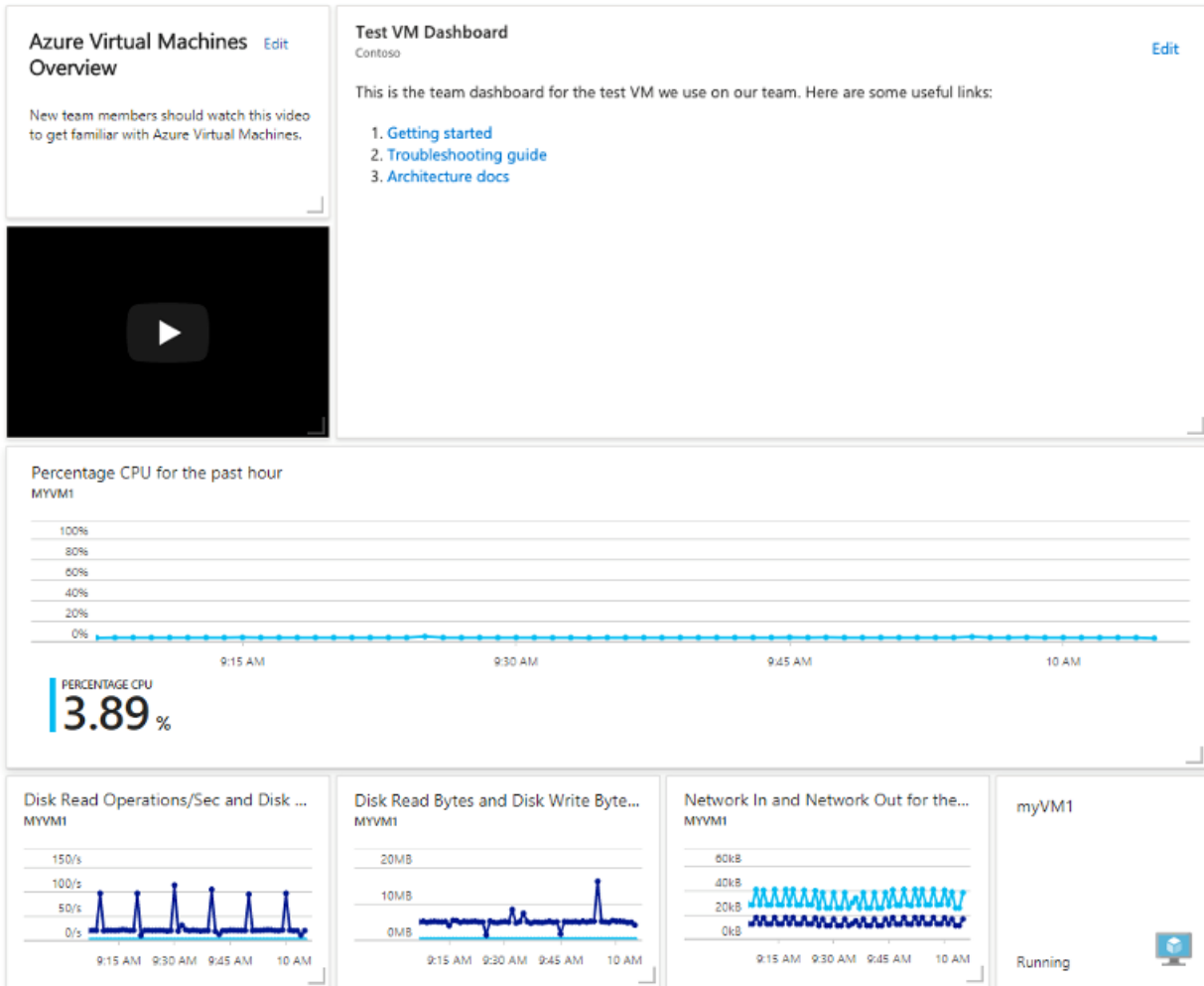
NOTE

Traffic to these endpoints uses standard TCP ports for HTTP (80) and HTTPS (443).

The structure of Azure dashboards

2/24/2022 • 7 minutes to read • [Edit Online](#)

This document walks through the structure of an Azure dashboard, using the following dashboard as an example:



Since shared [Azure dashboards are resources](#), this dashboard can be represented as JSON. The following JSON represents the dashboard visualized above.

```
{
  "properties": {
    "lenses": {
      "0": {
        "order": 0,
        "parts": {
          "0": {
            "position": {
              "x": 0,
              "y": 0,
              "rowSpan": 2,
              "colSpan": 3
            },
            "metadata": {
              "inputs": [],
              "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
              "settings": {
```

```

        "content": {
            "settings": {
                "content": "## Azure Virtual Machines Overview\r\nNew team members
should watch this video to get familiar with Azure Virtual Machines.",
                "title": "",
                "subtitle": ""
            }
        }
    },
    "1": {
        "position": {
            "x": 3,
            "y": 0,
            "rowSpan": 4,
            "colSpan": 8
        },
        "metadata": {
            "inputs": [],
            "type": "Extension[azure]/HubsExtension/PartType/MarkdownPart",
            "settings": {
                "content": {
                    "settings": {
                        "content": "This is the team dashboard for the test VM we use on our
team. Here are some useful links:\r\n\r\n1. [Getting started](https://www.contoso.com/tsgs)\r\n1.
[Troubleshooting guide](https://www.contoso.com/tsgs)\r\n1. [Architecture docs]
(https://www.contoso.com/tsgs)",
                        "title": "Test VM Dashboard",
                        "subtitle": "Contoso"
                    }
                }
            }
        },
    },
    "2": {
        "position": {
            "x": 0,
            "y": 2,
            "rowSpan": 2,
            "colSpan": 3
        },
        "metadata": {
            "inputs": [],
            "type": "Extension[azure]/HubsExtension/PartType/VideoPart",
            "settings": {
                "content": {
                    "settings": {
                        "title": "",
                        "subtitle": "",
                        "src": "https://www.youtube.com/watch?
v=YcylDIiKaSU&list=PLLasX02E8BPCsnETz0XAMfpLR1LIBqpgs&index=4",
                        "autoplay": false
                    }
                }
            }
        },
    },
    "3": {
        "position": {
            "x": 0,
            "y": 4,
            "rowSpan": 3,
            "colSpan": 11
        },
        "metadata": {
            "inputs": [
                {
                    "name": "queryInputs",

```

```

        "value": {
            "timespan": {
                "duration": "PT1H",
                "start": null,
                "end": null
            },
            "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
            "chartType": 0,
            "metrics": [
                {
                    "name": "Percentage CPU",
                    "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                }
            ]
        }
    },
    "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
    "settings": {}
}
},
"4": {
    "position": {
        "x": 0,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 3
    },
    "metadata": {
        "inputs": [
            {
                "name": "queryInputs",
                "value": {
                    "timespan": {
                        "duration": "PT1H",
                        "start": null,
                        "end": null
                    },
                    "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
                    "chartType": 0,
                    "metrics": [
                        {
                            "name": "Disk Read Operations/Sec",
                            "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                        },
                        {
                            "name": "Disk Write Operations/Sec",
                            "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
                        }
                    ]
                }
            }
        ],
        "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
        "settings": {}
    }
},
"5": {
    "position": {
        "x": 3,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 3
    },

```



```

    "metadata": {
      "inputs": [
        {
          "name": "queryInputs",
          "value": {
            "timespan": {
              "duration": "PT1H",
              "start": null,
              "end": null
            },
            "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
            "chartType": 0,
            "metrics": [
              {
                "name": "Disk Read Bytes",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
              },
              {
                "name": "Disk Write Bytes",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
              }
            ]
          }
        }
      ],
      "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
      "settings": {}
    }
  },
  "6": {
    "position": {
      "x": 6,
      "y": 7,
      "rowSpan": 2,
      "colSpan": 3
    },
    "metadata": {
      "inputs": [
        {
          "name": "queryInputs",
          "value": {
            "timespan": {
              "duration": "PT1H",
              "start": null,
              "end": null
            },
            "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
            "chartType": 0,
            "metrics": [
              {
                "name": "Network In",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
              },
              {
                "name": "Network Out",
                "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
              }
            ]
          }
        }
      ],
      "type": "Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart",
      "settings": {}
    }
  }
}

```

```

    },
    "7": {
      "position": {
        "x": 9,
        "y": 7,
        "rowSpan": 2,
        "colSpan": 2
      },
      "metadata": {
        "inputs": [
          {
            "name": "id",
            "value": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
          }
        ],
        "type": "Extension/Microsoft_Azure_Compute/PartType/VirtualMachinePart",
        "asset": {
          "idInputName": "id",
          "type": "VirtualMachine"
        },
        "defaultMenuItemId": "overview"
      }
    }
  },
  "metadata": {
    "model": {
      "timeRange": {
        "value": {
          "relative": {
            "duration": 24,
            "timeUnit": 1
          }
        },
        "type": "MsPortalFx.Composition.Configuration.ValueTypes.TimeRange"
      }
    }
  }
},
"id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/dashboards/providers/Microsoft.Portal/dashboards/aa9786ae-e159-483f-b05f-
1f7f767741a9",
"name": "aa9786ae-e159-483f-b05f-1f7f767741a9",
"type": "Microsoft.Portal/dashboards",
"location": "eastasia",
"tags": {
  "hidden-title": "Created via API"
}
}

```

Common resource properties

Let's break down the relevant sections of the JSON. The top-level properties, **id**, **name**, **type**, **location**, and **tags** properties are shared across all Azure resource types. That is, they don't have much to do with the dashboard's content.

ID

The Azure resource ID, subject to the [naming conventions of Azure resources](#). When the portal creates a dashboard, it generally chooses an ID in the form of a guid, but you can use any valid name when you create them programmatically.

Name

The name is the segment of the resource ID that does not include the subscription, resource type, or resource group information. Essentially, it's the last segment of the resource ID.

Type

All dashboards are of type **Microsoft.Portal/dashboards**.

Location

Unlike other resources, dashboards don't have a runtime component. For dashboards, the location indicates the primary geographic location that stores the dashboard's JSON representation. The value should be one of the location codes that can be fetched using the [locations API on the subscriptions resource](#).

Tags

Tags are a common feature of Azure resources that let you organize your resource by arbitrary name value pairs. Dashboards include one special tag called **hidden-title**. If your dashboard has this property populated, then that value is used as the display name for your dashboard in the portal. Azure resource IDs cannot be renamed, but tags can. This tag gives you a way to have a renamable display name for your dashboard.

```
"tags": { "hidden-title": "Created via API" }
```

Properties

The properties object contains two properties, **lenses** and **metadata**. The **lenses** property contains information about the tiles on the dashboard. The **metadata** property is there for potential future features.

Lenses

The **lenses** property contains the dashboard. The lens object in this example contains a single property called "0". Lenses are a grouping concept that isn't currently implemented. For now, all of your dashboards have this single property on the lens object, again, called "0".

Parts

The object underneath the "0" contains two properties, **order** and **parts**. In the current version of dashboards, **order** is always 0. The **parts** property contains an object that defines the individual parts (also referred to as tiles) on the dashboard.

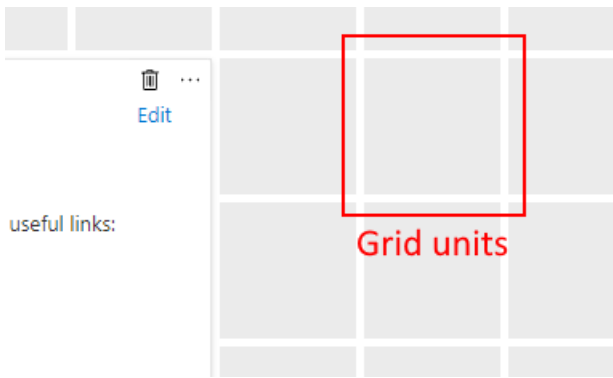
The **parts** object contains a property for each part, where the name of the property is a number. The number isn't significant.

Each individual part object has a **position**, and **metadata**.

Position

The **position** property contains the size and location information for the part expressed as **x**, **y**, **rowSpan**, and **colSpan**. The values are in terms of grid units. These grid units are visible when the dashboard is in the customize mode as shown here. If you want a tile to have a width of two grid units, a height of one grid unit, and a location in the top left corner of the dashboard then the position object looks like this:

```
location: { x: 0, y: 0, rowSpan: 2, colSpan: 1 }
```



Metadata

Each part has a metadata property, an object has only one required property called **type**. This string tells the portal which tile to show. Our example dashboard uses these types of tiles:

1. `Extension/Microsoft_Azure_Monitoring/PartType/MetricsChartPart` – Used to show monitoring metrics
2. `Extension[azure]/HubsExtension/PartType/MarkdownPart` – Used to show with text or images with basic formatting for lists, links, etc.
3. `Extension[azure]/HubsExtension/PartType/VideoPart` – Used to show videos from YouTube, Channel9, and any other type of video that works in an HTML video tag.
4. `Extension/Microsoft_Azure_Compute/PartType/VirtualMachinePart` – Used to show the name and status of an Azure virtual machine.

Each type of part has its own configuration. The possible configuration properties are called **inputs**, **settings**, and **asset**.

Inputs

The inputs object generally contains information that binds a tile to a resource instance. The virtual machine part in our sample dashboard contains a single input that uses the Azure resource ID to express the binding. This resource ID format is consistent across all Azure resources.

```
"inputs":
[
  {
    "name": "id",
    "value": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
  }
]
```

The metrics chart part has a single input that expresses the resource to bind to, along with information about the metric(s) being displayed. Here is the input for the tile that shows the Network In and Network Out metrics.

```

"inputs":
[
  {
    "name": "queryInputs",
    "value":
    {
      "timespan":
      {
        "duration": "PT1H",
        "start": null,
        "end": null
      },
      "id": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1",
      "chartType": 0,
      "metrics":
      [
        {
          "name": "Network In",
          "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
        },
        {
          "name": "Network Out",
          "resourceId": "/subscriptions/6531c8c8-df32-4254-d717-
b6e983273e5d/resourceGroups/contoso/providers/Microsoft.Compute/virtualMachines/myVM1"
        }
      ]
    }
  }
]

```

Settings

The settings object contains the configurable elements of a part. In our sample dashboard, the Markdown part uses settings to store the custom markdown content along with a configurable title and subtitle.

```

"settings":
{
  "content":
  {
    "settings":
    {
      "content": "This is the team dashboard for the test VM we use on our team. Here are some useful
links:\r\n\r\n1. [Getting started](https://www.contoso.com/tsgs)\r\n1. [Troubleshooting guide]
(https://www.contoso.com/tsgs)\r\n1. [Architecture docs](https://www.contoso.com/tsgs)",
      "title": "Test VM Dashboard",
      "subtitle": "Contoso"
    }
  }
}

```

Similarly, the video tile has its own settings that contain a pointer to the video to play, an autoplay setting, and optional title information.

```
"settings":
{
  "content":
  {
    "settings":
    {
      "title": "",
      "subtitle": "",
      "src": "https://www.youtube.com/watch?v=YcylDIiKaSU&list=PLLasX02E8BPCsnETz0XAMfpLR1LIBqpgs&index=4",
      "autoplay": false
    }
  }
}
```

Asset

Tiles that are bound to first class manageable portal objects (called assets) have this relationship expressed via the asset object. In our example dashboard, the virtual machine tile contains this asset description. The **idInputName** property tells the portal that the ID input contains the unique identifier for the asset, in this case the resource ID. Most Azure resource types have assets defined in the portal.

```
"asset": { "idInputName": "id", "type": "VirtualMachine" }
```

Next steps

- Learn how to create a dashboard [in the Azure portal](#) or [programmatically](#).
- Learn how to [use markdown tiles on Azure dashboards to show custom content](#).

Azure Policy built-in definitions for Azure portal

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This page is an index of [Azure Policy](#) built-in policy definitions for Azure portal. For additional Azure Policy built-ins for other services, see [Azure Policy built-in definitions](#).

The name of each built-in policy definition links to the policy definition in the Azure portal. Use the link in the **Version** column to view the source on the [Azure Policy GitHub repo](#).

Azure portal

NAME (AZURE PORTAL)	DESCRIPTION	EFFECT(S)	VERSION (GITHUB)
Shared dashboards should not have markdown tiles with inline content	Disallow creating a shared dashboard that has inline content in markdown tiles and enforce that the content should be stored as a markdown file that's hosted online. If you use inline content in the markdown tile, you cannot manage encryption of the content. By configuring your own storage, you can encrypt, double encrypt and even bring your own keys. Enabling this policy restricts users to use 2020-09-01-preview or above version of shared dashboards REST API.	Audit, Deny, Disabled	1.0.0

Next steps

- See the built-ins on the [Azure Policy GitHub repo](#).
- Review the [Azure Policy definition structure](#).
- Review [Understanding policy effects](#).