Customization, Configuration, Development and Extending Boot Camp

Length

- 5 days

Prerequisites

- Working knowledge of Dynamics 365 (CRM) features and functionality, development, implementation, and data structures.
- A working knowledge of programming, Visual Studio, and familiarity of C# provides the best technical background for this course.

Audience

- Dynamics 365 CRM developers
- Partners/customers with a technical background and familiarity with Microsoft Dynamics

The first half of this instructor-led, hands on lab course is intended Individuals wishing to learn or obtain certification in Microsoft Dynamics 365 CRM Customization and Configuration. This course will go over Configuration, Implementation of Entities and fields, how to manage solutions, forms and visualizations as well as business rules and work flows. This course will help you prepare for the MB2-716 Dynamics 365. Introduction to Microsoft Dynamics 365 Customization and Configuration and Visual Development. (This class supports: Dynamics 365 Customer Engagement, Dynamics 365 Plan1, Dynamics CRM 2016, Dynamics CRM 2015 and Dynamics CRM 2013).

The second half of the course provides you with the information how you can develop and extend Dynamics 365. This course focuses on extension methods documented in the Microsoft Dynamics 365 CRM. Developing a concise understanding of business process implementation and workflows. In addition, the course describes how to use Plug-ins. You can develop extensions for Dynamics 365 to support custom functionally beyond sales and service. The platform is a full application environment with database, application server and client interface. This class lets you develop (extend) the product to "fit" your specific needs.

You will have FULL use of a Dynamics 365 for Operations lab environment in this class.

Corresponding Customization Exam: MB2-716 Microsoft Dynamics 365 Customization and Configuration

Corresponding Development Exam: None

Course Outline

Module 1: Overview of CRM Customization and Configuration
Learn how to use the new tools to support Dynamics CRM

- Application Module vs. Framework (What you can build and what is provided by Microsoft)

Module 2: Dynamics 365 Customization and Configuration Certification Topics (Exam MB2-716)
Note: All Dynamics CRM 2016 certifications expired 1/1/2018. All Dynamics

What You'll Learn

- Building your own Apps with the Dynamics 365 App Designer
- Customization Sitemap Navigation
- Customizing the Command Bar Ribbon
- Dynamics 365 New Client API object model
- Using the D365 Discovery and IOrganization Service
- Querying Data and Executing Operations
- Custom Workflow Activities
- Creating Plug-ins or working with pre-built Plugin sample code example
- How to configure Dynamics 365
- Implement MS Dynamics 365 Entities, entity relationships and fields
- Create and manage MS Dynamics 365 solutions, forms, views, and visualizations
- Implement business rules, work flows and process flows

Professionals need to have the new Dynamics 365 Certifications. All Microsoft Dynamics partners will have to gain the new: Cloud Business Applications competency.

- New exams and certifications: MCSA, MBSE
- The Cloud Business Applications competency
- Configure Microsoft Dynamics 365
- Implement Microsoft Dynamics 365 entities, entity relationships, and fields
- Create & manage D365 solutions, forms, views, & visualizations
- Implement business rules, workflows, and business process flows
- New topics added to the certification exam

Module 3: Dynamics 365 and Office 365

D365 works with many of the Office 365 Applications. Together D365 and O365 can increase productivity and communications for your organization.

- The different options for connecting a D365 and Office 365
- Use Folder Tracking to better track emails
- Use Office Groups for Collaboration
- Setup Server-Side SharePoint Integration
- Configure OneNote Integration
- (D365 and O365 help keep people updated)

Module 4: Customizing and Configuring Dynamics 365 to Match Your Unique Business Requirements

Tailor D365 to fit your organization today and tomorrow

- Configuration – Setup and one-time decisions
- Customization – Making D365 match your organizations needs
- Visual Development – Powerful tools with no-programming
- Development – Using D365, Visual Studio and programming in the C# language
- (Customization never ends because your boss has a "new idea!")

Module 5: Security Model (Enforcing Your Organization's Security Requirements)

D365 can support multiple security scenarios. Learn how to establish and administrator a security model that "fits" your organization.

- Overview of the Dynamics 365 Security Model
- Create, Configure and Manage Security Roles
- Users / Teams & Security Roles
- Setting up Hierarchical Security
- (Security give the right people access and denies the wrong people)

Module 6: Working with Dynamics 365 Solutions

The full name is Solution Packages. What is inside a solution is components and objects developed and exported from a D365 system. This could be a small as a single webform or as larger a complete D365 system for a specific industry.

- Dynamics 365 Solutions Overview
- Including Components in Solutions
- Solution Publishers and Versioning
- Solutions Types
- Working with Multiple Solutions
- Export & Import Solutions

Module 7: Entity and Field Customizations

To understand entities, we need to look at the database supporting D365. An Entity is a database table and a Field is a database table column, but there are differences and the term entity refers to the table, columns and associated elements.

- Entities Overview
- Entity Ownership (and why this is important)
- Working with Entity Properties
- System vs. Custom Entities
- D365 Fields (Data Types) (Database Columns)
- Working with Different Field Types

Module 8: Entity Relationships

Entities are linked and pass data is a manor specified by established relationships between entities.

- Overview of Relationships in Dynamics 365
- 1:N, N:1 and N:N Relationships
- Working with Hierarchical Data
- Using Entity Mapping to Pre-Populate Data
- Connection and Connection Roles

Module 9: Customizing Forms

One of the first changes your users will ask if for changes to the visual display. Forms are how D365 display data to users. Form Security also restricts which forms are shown to whom.

- Dynamics 365 Form Types
- How to Build Dynamics 365 Forms
- Specialized Form Components
- Using Access Teams and Sub-Grids for Record Sharing
- Working with Multiple Forms

Module 10: Views and Visualizations

Views are important for two reasons: displaying a set of records to your users and providing the dataset for reports and the visual charts, dashboards

- Types of Views in Dynamics 365
- Creating and Customizing Views
- Customizing Charts
- Customizing Dashboards

- Using Dynamics 365's Theming Feature

Module 11: Business Rules

Business Rules reduce the need for JavaScript in forms. This provided a "better managed" way of validation data received from forms.

- The New Business Rules Designer
- Business Rules Overview
- Business Rule Structure and Design
- Using Conditions and Actions

Module 12: Business Process Flows

The visual display of progress is useful for tracking the status and displaying on mobile devices.

- The new Visual Process Flow Designer
- Overview of Business Process Flows
- Using Stages, Steps, and Categories
- Reviews Options for Conditional Branching
- Workflows and Business Process Flows
- Role Driven Process Flows

Module 13: Customizing for Mobile

Are you ready to support 1,000+ mobile displays? Don't bother, design a D365 mobile for and the Mobile App will take care of the 1,000+ mobile devices in the market today.

- Examine Considerations when deploying the mobile client.
- Explore strategies for customizing the mobile client.
- Navigation and Form Considerations
- Custom Controls
- Business Rules vs Client Scripting
- When to consider a custom developed solution

Module 14: Building Your Own Apps with the Dynamics 365 App Designer

The current trend is for more Visual Designers, Visual Tools and less programming. This module shows you how to use the new Visual Tools in D365.

- The new modular Business Applications in Dynamics 365
- Using App Designer to Create Apps
- Learn how to build modular business applications with App Modules
- Understand how to configure App Modules

Module 15: Customization Sitemap Navigation

How you can make the top level navigation only show the areas your organizations will use or adding new sections to your D365.

- Editing the Sitemap

- Choosing the best Sitemap for your organization
- Example of Sitemaps for Sales, Service and Government
- New Sitemap Visual Editor
- XRMToolBox and XRMTools

Module 16: Customizing the Command Bar Ribbon

Often you want to make a new command available or hide "delete" from specific users.

- Adding new Buttons and custom command
- Controlling Commands with Security Roles
- Controlling Commands by editing the Ribbon
- Linking to Internet Information sources

Module 17: Dynamics 365 New Client API object model

The Object Model for D365 has changed. If you have D365 Plan 1, CRM 2016, CRM 2015, CRM 2013 or CRM 2011. You need to know what has changed and what you need to update on your existing D365 (CRM).

- Objects and methods for custom business functionality
- Support for JavaScript
- Get or set attribute values
- Show and hide user interface elements
- Reference multiple controls per attribute
- Access multiple forms per entity
- Manipulate form navigation items
- Interact with the business process flow control

Module 18: Using the Dynamics 365 Discovery and IOrganization Service

The two main services help you connect to the "right" Organization and then control the privileges to ensure security and object access.

- The Discovery service and the specific D365 Organization
- Endpoint address URL to access business data
- Discovery service access methods:
    - The Web API
    - Organization Service API
- Organization Service API
    - The primary web service to work with data and metadata
    - Adding IOrganization references to your Visual Studio project

Module 19: Querying Data and Executing Operations

How to use the methods to query Microsoft D365 to create, update and Delete.

- Query Expression
- QueryByAttitude
- LINQ Queries

- FetchXML
- Filtered Views
- OData
- Execute Method
- Requests and Responses
- Using the Metadata Service Web Service

Module 20: Custom Processes (Workflow) Activities

The terms keep changing, but in essence the "workflows" automation a task. The particular term: process, dialogue, workflow and advanced workflow specify the usage, method of creation and execution.

- Overview of Processes, Workflows and Advanced Workflows
- Overview of Dialogues
- Setting up Custom Workflow Activity Assemblies
- Configuring a Custom Workflow Activity
- Creating Custom Workflow Activities
- Debugging Custom Workflow Activities
- Creating and Modifying Windows Workflow Foundation (XAML Workflows)
- Modifying an Existing Workflow in Visual Studio

Module 21: Creating Plug-Ins and Working with Pre-Built Plugins

Plug-ins are programs developed in a .NET language (we use C#). Plug-ins extend the functionality of events. Learn how plug-ins are used, how to develop Plug-ins, how to register, deploy and debug Plug-ins.

- Overview of Plug-ins
- .NET assemblies
- On-Premises and Online
- Event Framework
- Plug-in Isolation, Trusts and Statistics
- Developing Plug-ins
- Impersonation in Plug-ins
- Entity Classes and Plug-ins
- Register and Deploy Plug-ins
- Debugging Plug-ins
- Windows Azure Integration with Microsoft Dynamics 365
- Working with pre-built Plugins