

MOC 55133 DC PowerShell for System Center Configuration Manager Administrators

Course Summary

Description

This three-day instructor-led course provides students with the knowledge and skills needed to use PowerShell for Microsoft Endpoint Configuration Manager (ECM) administration. In this course, students learn how to access the PowerShell commands included with ECM 2203 and use them to perform configuration tasks for a primary site. Individual cmdlets will be used in working with objects such as Boundaries, Boundary Groups, Collections, Software Deployment, Patching, Compliance Settings, OSD Task Sequences, and many others. Basic scripting will also be covered so that students can learn how to put PowerShell to use when working with large sets of objects.

Objectives

After taking this course, students will be able to:

- Create additional site system roles on existing or new servers.
- Modify high level site settings.
- Create and modify Discovery Methods, Boundaries and Boundary Groups.
- Create Collections using any of the membership rules available.
- Delegate authority through Roles and Scopes.
- Install the Configuration Manager client, modify client settings and restrict access to site systems.
- Deploy software to clients.
- Deploy software updates to clients.
- Configure compliance settings targeted against collections.
- Modify settings that govern monitoring functions such as Alerts and Status Settings.
- Work with Task Sequences for Operating System Deployment.
- Write basic PowerShell scripts using cmdlets learned and scripting constructs to accomplish configuration tasks.

Topics

- Review of Endpoint Configuration Manager Concepts
- Managing Resources
- Working with Clients
- Distributing Software
- Updating Systems with WSUS and ECM
- How PowerShell Can Manage Compliance Settings
- Configuring Operating System Deployment Objects
- Working at the Site Level
- Security and Monitoring
- Using PowerShell Scripting to Automate Tasks

Audience

This course is intended for IT professionals who need to manage the day-to-day environment of an ECM 2203 or newer environment. Knowledge of the workings of a standalone primary ECM site and basic PowerShell experience is recommended.

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Course Summary (cont)

Prerequisites

Before attending this course, students must have:

- Basic Windows and Active Directory knowledge.
- Conceptual knowledge of Configuration Manager objects and how they interact.
- Basic experience performing configuration tasks in ECM using the graphical console.
- Experience working from a command prompt.
- Basic knowledge of the fundamentals of Windows PowerShell.

Duration

Three Days

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Course Outline

I. Review of Endpoint Configuration Manager Concepts

This module explains the main capabilities of a Endpoint Configuration Manager hierarchy. In a brief review students will learn how the various objects work together to provide the functionality delivered with ECM 2203.

- A. Architecture of a Microsoft Endpoint Configuration Manager 2203 Installation
- B. Managing Assets
- C. Content Delivery and Management
- D. Security, Monitoring, and Remote Management
- E. Lab: Reviewing a Primary Site Installation
 - a. Install SQL Server 2019
 - b. Install Endpoint Configuration Manager 2203
 - c. Review the Administration Workspace
 - d. Review the Assets and Compliance Workspace
 - e. Looking at the Software Library
 - f. Review the Monitoring Workspace

II. Managing Resources

This module explains how to use PowerShell cmdlets to work with resources. Topics include configuring discovery methods, creating and modifying Boundaries and Boundary Groups, and working with Collections. On-demand and scheduled collection membership evaluation settings will also be discussed.

- A. Implementing Discovery
- B. Organizing Resources with Collections

- C. Working with Boundaries
- D. Lab: Configuring Discovery, Collections and Boundaries
 - a. Configuring Discovery
 - b. Creating Collections
 - c. Working with Boundaries and Boundary Groups

III. Working with Clients

This module explains how to use PowerShell to manage devices with a Configuration Manager client. Topics include installing the client software, invoking client actions, modifying client settings and changing the status of clients. The module also describes how to set a client device variable, deploy new settings to the client, and refresh client status results.

- A. Installing the Configuration Manager Client
- B. Managing Client Settings
- C. Managing Client Operations
- D. Monitoring Client Status
- E. Lab: Utilizing PowerShell to Manage Clients
 - a. Install the Configuration Manager client
 - b. Managing Client Settings
 - c. Managing Client Operations
 - d. Monitoring Client Status

IV. Distributing Software

This module explains how to configure the software distribution functionality, create and modify software packages and applications, establish Global Conditions for use with Requirement Rules, and work with Distribution Points and Distribution Point Groups.

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Course Outline (cont)

- A. Configure the Software Distribution Components
- B. Working with Distribution Points
- C. Creating Content for Distribution
- D. Deploying Software Applications
- E. Lab: Using Cmdlets to Publish Content
 - a. Extending the Infrastructure
 - b. Deploying a Windows Installer Application
 - c. Implementing Additional Features of Configuration Manager

V. Updating Systems with WSUS and ECM

This module explains how to use the PowerShell commands to create and configure the integration of ECM and ESUS using a Software Update Point. It also describes how to create and modify Software Update Groups and Automatic Deployment Rules. Cmdlets are also used to manage Deployment Packages and their associated Deployments.

- A. Integrating Configuration Manager and WSUS
- B. Managing Updates through Software Update Groups
- C. Creating and Deploying Update Packages
- D. Working with Automatic Deployment Rules
- E. Lab: Using Configuration Manager Commands to Manage Software Updates
 - a. Preparing the Environment for Software Updates

- b. Deploy Updates
- c. Create an Automatic Deployment Rule

VI. How PowerShell Can Manage Compliance Settings

This module explains how to use PowerShell cmdlets to create and manage Configuration Items and Baselines. Deployment of Baselines is also discussed.

- A. Creating Compliance Settings Objects
- B. Deploying and Monitor the Baseline
- C. Lab: How PowerShell Can Manage Compliance
 - a. Creating Compliance Settings Objects
 - b. Deploy and Monitor the Baseline

VII. Configuring Operating System Deployment Objects

This module explains how to take advantage of the PowerShell commands with ECM to configure the Operating System Deployment function. It also describes how to configure Drivers and Driver Packages, Boot Images, Operating System Images and Task Sequences. Deployment of Task Sequences to Collections is also covered.

- A. Preparing the OSD Environment
- B. Working with Task Sequences
- C. Lab: Operating System Deployment with Windows PowerShell
 - a. Creating Required OSD Objects
 - b. Prepare the Task Sequence

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Course Outline (cont)

VIII. Working at the Site Level

This module explains how to manage site level configurations such as adding site system roles and creating Secondary sites. It also describes how to setup email notification for alerts and modify the hierarchy settings.

- A. Modify the Site
- B. Adding Site System Roles
- C. Adding a Secondary Site
- D. Lab : Modifying Site Settings
 - a. Modifying the Site Configuration
 - b. Adding Site System Roles

IX. Security and Monitoring

This module explains how to use cmdlets to implement role based administration through security roles and scopes. It also describes how Endpoint Protection policies can be configured and deployed. The module also explains various monitoring functions available through PowerShell such as Alerts, Status Filter Rules, Status Summarizers, Status Message Queries and Alert Subscriptions.

- A. Configuring Role Based Administration
- B. Implementing Endpoint Protection
- C. Configuring Monitoring Options
- D. Lab: Implementing Security and Monitoring
 - a. Configuring Role Based Administration
 - b. Configuring Anti-Malware Protection
 - c. Modifying Monitoring Options

XI. Using PowerShell Scripting to Automate Tasks

This module explains how to use constructs such as if, switch, foreach, and for, alongside commands to create scripts that automate various Configuration Manager Tasks.

- A. Review of Scripting Constructs
- B. Introduction to the Configuration Manager WMI Classes
- C. Lab: Writing Scripts for Configuration Manager Activities
 - a. Establishing the Infrastructure
 - b. Deploy Software
 - c. Run the Full Script

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