Administering System Center Configuration Manager 2016
Course Duration: 40 Hours (5 Days)

Overview

The Administering System Center Configuration Manager 2016 course is designed to provide IT professionals with the knowledge and skills to effectively use Microsoft's Configuration Manager to manage a network of computers. This comprehensive course covers a wide range of topics, including System architecture, Client deployment, inventory management, Application deployment, Software updates, Endpoint Protection, Compliance management, Operating system deployment, and Site maintenance. Learners will gain hands-on experience through labs, where they will explore tools, configure services, deploy applications, manage Software updates, and more. This course is crucial for those looking to leverage Configuration Manager for Enterprise management solutions and to ensure the security and compliance of their IT environment. By mastering these skills, IT professionals can streamline their management operations, effectively deploy and manage applications, maintain up-to-date systems, and safeguard their networks against threats.

Audience Profile

The Administering System Center Configuration Manager 2016 course is designed for IT professionals responsible for managing and deploying devices and applications across enterprises.

- Systems Administrators
- Configuration Manager Administrators
- IT Managers
- Desktop Support Technicians
- Enterprise Desktop Administrators
- Network Managers
- Infrastructure Managers
- Information Systems Managers
- Help Desk Professionals
- IT Professionals seeking expertise in enterprise management solutions
- Professionals responsible for hardware and software inventory management
- Security Administrators enforcing network and data security policies
- Infrastructure Architects involved in system design and configuration
- Compliance Officers managing organizational security and compliance requirements

Course Syllabus

Module 1: Managing Computers and Mobile Devices in the Enterprise

This module introduces the features of Configuration Manager that facilitate complex management tasks, including:

- Hardware and software inventory
- Application management
- Operating system deployment
- Settings management
- Software update management
- Remote client troubleshooting
- Protection against malware
- Microsoft System Center Configuration Manager (Configuration Manager) provides various features that help manage devices and users both on-premises and in the cloud. Organizations using Configuration Manager can deliver more effective IT services in areas such as software deployment, settings management, and asset management.
- This module covers the primary features, architecture, and management tools used with Configuration Manager. It also provides a foundational understanding that supports subsequent modules.

Lessons:

- Overview of systems management using enterprise management solutions
- Overview of the Configuration Manager architecture
- Overview of Configuration Manager administrative tools
- Tools for monitoring and troubleshooting a Configuration Manager site

Lab: Exploring Configuration Manager Tools

- Searching within the Configuration Manager console
- Using Windows PowerShell with Configuration Manager
- Using Configuration Manager Service Manager to manage components
- Monitoring site and component status
- Reviewing log files using the Configuration Manager Trace tool

After completing this module, students will be able to:

- Explain how Configuration Manager addresses the challenges of managing systems and users in today's enterprises.
- Describe the Configuration Manager architecture.
- Utilize administrative tools for Configuration Manager.
- Use monitoring and troubleshooting tools for a Configuration Manager site.

Module 2: Analyzing Data Using Queries, Reports, and CMPivot

- Configuration Manager stores a vast amount of data about the resources in your environment. To efficiently locate devices or users meeting specific criteria, you can create and run queries. Queries help in building collections or retrieving detailed resource information.
- This module introduces queries and explains how to create and run them. It also covers the Configuration Manager's reporting capabilities, which require setting up a Reporting Services point. Additionally, you will learn about CMPivot, a tool that enables real-time data collection and decision-making across connected devices.

Lessons:

- Introduction to queries
- Configuring SQL Server Reporting Services (SSRS)
- Analyzing real-time device states using CMPivot

Lab: Creating and Running Queries

- Creating data queries
- Creating subselect queries

Lab: Configuring SSRS

- Setting up a Reporting Services point

Lab: Analyzing Real-Time Device States with CMPivot

- Using CMPivot to analyze the current state of devices

After completing this module, students will be able to:

- Create and configure data and status message queries.
- Configure and manage SQL Server Reporting Services (SSRS) and the reporting services point.
- Use CMPivot to query and analyze real-time data from connected devices.

Module 3: Preparing the Configuration Manager Management Infrastructure

- Effective resource management in Configuration Manager depends on discovering and assigning devices to a site. This module covers boundaries and boundary groups, which define logical network locations for managed devices.
- You will also learn about discovery processes to identify computers, users, and network infrastructure. Additionally, the module discusses collections, which organize resources for tasks like software deployment, update management, and compliance settings.

Lessons:

- Configuring site boundaries and boundary groups
- Configuring resource discovery
- Organizing resources using device and user collections

Lab: Configuring Boundaries and Resource Discovery

- Setting up boundaries, boundary groups, and fallback relationships
- Configuring Active Directory discovery methods

Lab: Configuring User and Device Collections

- Creating device and user collections
- Configuring a maintenance window

After completing this module, students will be able to:

- Configure boundaries and boundary groups.
- Configure resource discovery.
- Organize resources using device and user collections.

Module 4: Deploying and Managing the Configuration Manager Client

- Configuration Manager client software enables management of Windows-based devices, allowing operations like hardware/software inventory reporting, application installation, updates, and compliance settings configuration.
- This module covers client software requirements, supported operating systems, and installation methods. It also explains default and custom client settings that control interactions between managed devices and the Configuration Manager environment.

Lessons:

- Overview of the Configuration Manager client
- Deploying the Configuration Manager client
- Configuring and monitoring client status
- Managing client settings and performing administrative operations

Lab: Deploying the Configuration Manager Client Software

- Preparing the site for client installation
- Deploying the client software using client push installation

Lab: Configuring and Monitoring Client Status

- Configuring and monitoring client health

Lab: Managing Client Settings

- Configuring client settings
- Performing management operations

After completing this module, students will be able to:

- Describe the requirements and considerations for installing the Configuration Manager client software.
- Deploy the Configuration Manager client software.
- Manage Configuration Manager client settings.

Module 5: Managing Inventory for PCs and Applications

- This module provides an overview of inventory collection and explains how to manage the collected information. You will also learn about the process of collecting hardware and software inventory, initiating inventory cycles, and securing inventory collection. Additionally, this module covers software metering to monitor program usage and the configuration and management of Asset Intelligence.

Lessons

- Overview of inventory collection
- Configuring hardware and software inventory
- Managing inventory collection
- Configuring software metering
- Configuring and managing Asset Intelligence

Lab: Configuring and Managing Inventory Collection

- Configuring and managing hardware inventory

Lab: Configuring Software Metering

- Configuring software metering

Lab: Configuring and Managing Asset Intelligence

- Preparing the site for Asset Intelligence
- Configuring Asset Intelligence
- Monitoring license agreements using Asset Intelligence
- Viewing Asset Intelligence reports

After completing this module, students will be able to:

- Describe inventory collection.
- Configure and collect hardware and software inventory.
- Manage inventory collection.
- Configure software metering.

- Configure Asset Intelligence.

Module 6: Distributing and Managing Content Used for Deployments

- Microsoft System Center Configuration Manager (Configuration Manager) clients obtain content—such as packages, applications, software updates, and operating system images—from a content infrastructure consisting of distribution points and peer cache sources. In this module, you will review content distribution and management features, configure distribution points, and learn how to distribute and monitor content. You will also perform content validation and prestaging.

Lessons

- Preparing the infrastructure for content management
- Distributing and managing content on distribution points

Lab: Distributing and Managing Content for Deployments

- Installing a new distribution point
- Managing content distribution

After completing this module, students will be able to:

- Prepare the infrastructure for content management.
- Distribute and manage content on distribution points.

Module 7: Deploying and Managing Applications

- In this module, you will learn methods for creating, deploying, and managing applications using Configuration Manager. You will also learn how to use the Software Center and Application Catalog to install available applications. Additionally, you will explore application deployments for non-traditional scenarios, install Windows 10 apps, and deploy virtualized applications.

Lessons

- Overview of application management
- Creating applications
- Deploying applications
- Managing applications
- Deploying virtual applications using Configuration Manager (Optional)
- Deploying and managing Windows Store apps

Lab: Creating and Deploying Applications

- Creating applications with requirements
- Deploying applications

Lab: Managing Application Supersedence and Removal

- Managing application supersedence
- Uninstalling the Excel Viewer application

Lab: Deploying Virtual Applications Using Configuration Manager (Optional)

- Deploying virtual applications

Lab: Using Configuration Manager to Deploy Windows Store Apps

- Configuring support for sideloading Windows Store apps
- Configuring a Windows Store app
- Deploying Windows 10 apps to users

After completing this module, students will be able to:

- Describe the application management features of Configuration Manager.
- Create applications.
- Deploy applications.
- Manage applications.
- Configure and deploy virtual applications.
- Configure and deploy Windows Store apps.

Module 8: Maintaining Software Updates for Managed PCs

- This module explains how to use the software updates feature in Configuration Manager to implement an end-to-end management process for the complex task of identifying, deploying, and monitoring Microsoft and third-party software updates on your Configuration Manager clients.

Lessons

- The software updates process
- Preparing a Configuration Manager site for software updates
- Managing software updates
- Configuring automatic deployment rules
- Monitoring and troubleshooting software updates
- Enabling third-party updates

Lab: Configuring the Site for Software Updates

- Configuring and synchronizing the software update point

Lab: Deploying and Managing Software Updates

- Determining software update compliance

- Deploying software updates to clients
- Configuring automatic deployment rules

After completing this module, students will be able to:

- Describe how the software updates feature integrates with Configuration Manager.
- Prepare the Configuration Manager site for software updates.
- Manage software updates using Configuration Manager.
- Configure automatic deployment rules.
- Monitor and troubleshoot software updates.
- Enable third-party updates.

Module 9: Implementing Endpoint Protection for Managed PCs

- This module explains how to use the security-related features in Configuration Manager to help protect client computers from malware threats and configure specific Windows Defender Firewall settings for clients. Endpoint Protection in Configuration Manager, based on System Center Endpoint Protection functionality, supports the deployment, management, and monitoring of antimalware policies, Windows Defender Firewall settings, Windows Defender Application Guard policies, Windows Defender Exploit Guard policies, and Windows Defender Application Control policies on client computers.

Lessons

- Overview of Endpoint Protection in Configuration Manager
- Configuring, deploying, and monitoring Endpoint Protection policies
- Configuring and deploying advanced threat policies

Lab: Implementing Microsoft System Center Endpoint Protection

- Configuring the System Center Endpoint Protection point and client settings
- Configuring and deploying Endpoint Protection policies
- Monitoring Endpoint Protection

Lab: Implementing Advanced Threat Policies

- Creating and deploying advanced threat protection policies

After completing this module, students will be able to:

- Configure Endpoint Protection to detect and remediate malware and security vulnerabilities.
- Configure, deploy, and manage Endpoint Protection policies.
- Configure and deploy advanced threat protection policies.

Module 10: Managing Compliance and Secure Data Access

- Many enterprise organizations require systems—such as servers, laptops, desktops, and mobile devices—to meet specific configuration and compliance requirements. Compliance settings in Configuration Manager play a key role in identifying existing configurations, detecting systems with adverse configuration changes, and automatically remediating these settings when necessary.
- Compliance settings also help control how users manage and access data within the enterprise network environment. For computers running Windows 8 or later, you can manage data using folder redirection, offline files, and roaming profiles. Additionally, you can control access to data using remote connection profiles, virtual private network (VPN) profiles, Wi-Fi profiles, and certificate profiles.
- This module covers compliance settings that can be managed using Configuration Manager. You will learn to use these settings to maintain configuration requirements and provide secure data access to enterprise resources.

Lessons

- Overview of compliance settings
- Configuring compliance settings
- Viewing compliance results
- Managing resource and data access

Lab: Managing Compliance Settings

- Managing configuration items and baselines
- Viewing compliance settings and reports
- Configuring remediation in compliance settings
- Using compliance information to create collections

After completing this module, students will be able to:

- Describe the features of compliance settings.
- Configure compliance settings.
- View compliance results.
- Manage resource and data access.

Module 11: Managing Operating System Deployment

- This module explains how to use the operating system deployment feature in Configuration Manager to create and deploy operating system images to both unmanaged computers and those managed by Configuration Manager.
- You will explore various deployment scenarios, including deploying operating systems to new systems and upgrading existing ones. Configuration Manager uses both its own features and Windows components to manage and deliver operating system images. You can configure settings on a reference

computer before capturing its operating system image or use task sequences created by Configuration Manager to deploy the image to target systems.

- Additionally, this module explains how to develop a strategy for operating system deployment and manage Windows as a service.

Lessons

- Overview of operating system deployment
- Preparing a site for operating system deployment
- Deploying an operating system
- Managing Windows as a service

Lab: Preparing the Site for Operating System Deployment

- Managing the site system roles used to support operating system deployment
- Managing packages to support operating system deployment

Lab: Deploying Operating System Images for Bare-Metal Installations

- Preparing the operating system image
- Creating a task sequence to deploy an image
- Deploying an image

After completing this module, students will be able to:

- Describe the terminology, components, and scenarios used to deploy operating systems with Configuration Manager.
- Prepare a site for operating system deployment.
- Deploy an operating system image.
- Manage Windows as a service.

Module 12: Managing and Maintaining a Configuration Manager Site

- This module covers role-based administration, Remote Tools, and site maintenance tasks in Configuration Manager. It also explains how to back up and recover a Configuration Manager site system and use recommendations from Management Insights to simplify administration.

Lessons

- Configuring role-based administration
- Configuring Remote Tools
- Overview of Configuration Manager site maintenance and Management Insights
- Backing up and recovering a Configuration Manager site
- Updating the Configuration Manager infrastructure

Lab: Configuring Role-Based Administration

- Configuring a new scope for Toronto administrators
- Configuring a new administrative user

Lab: Configuring Remote Tools

- Configuring the Remote Tools client settings and permissions
- Managing desktops using Remote Control

Lab: Maintaining a Configuration Manager Site

- Configuring maintenance tasks in Configuration Manager
- Configuring the Backup Site Server task
- Recovering a site from a backup

After completing this module, students will be able to:

- Configure role-based administration.
- Configure Remote Tools to support client activity.
- Identify Configuration Manager site maintenance tasks.
- Back up and recover a Configuration Manager site.
- Use Updates and Servicing to install updates to the Configuration Manager infrastructure.