

Course 20417D:

# Upgrading Your Skills to MCSA Windows Server 2012

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## Course Details

### Course Outline

#### Module 1: Installing and Configuring Windows Server 2012

This module explains how to install and configure Windows Server 2012. It specifically covers requirements and considerations for installation and the installation of roles and installation types such as Server Core. It also covers the implementation and configuration of remote management of servers running Windows Server 2012.

#### Lessons

- Installing Windows Server 2012 R2
- Configuring Windows Server 2012 R2 and Windows Server 2012
- Configuring Remote Management for Windows Server 2012 R2 and Windows Server 2012

#### Lab : Installing and Configuring Windows Server 2012 R2

- Installing Windows Server 2012 R2 Server Core
- Configuring a Computer Running a Server Core Installation of Windows Server 2012 R2
- Configuring Remote Management for Servers Running Windows Server 2012 R2

After completing this module, students will be able to:

- Install Windows Server 2012 R2.
- Configure Windows Server 2012 R2 and Windows Server 2012.
- Configure Remote Management for Windows Server 2012 R2 and Windows Server 2012.

#### Module 2: Managing Windows Server 2012 by Using Windows PowerShell

This module explains how to use Windows PowerShell to manage Windows Server 2012. It will provide an overview of Windows PowerShell and the Windows PowerShell Integrated Scripting Environment (ISE). It will also cover Windows PowerShell in the context of AD DS and general server management.

## Lessons

- Overview of Windows PowerShell
- Using Windows PowerShell to Manage AD DS
- Managing Servers by Using Windows PowerShell

## Lab : Managing Servers Running Windows Server 2012 by Using Windows PowerShell

- Introduction to Windows PowerShell
- Managing AD DS by Using Windows PowerShell
- Managing Servers by Using Windows PowerShell

After completing this module, students will be able to:

- Describe the Windows PowerShell command line interface.
- Use Windows PowerShell to manage Active Directory Domain Services (AD DS).
- Manage servers by using Windows PowerShell.

## Module 3: Managing Storage in Windows Server 2012

This module explains how to configure storage in Windows Server 2012.

## Lessons

- Storage Features in Windows Server 2012
- Configuring iSCSI Storage
- Configuring Storage Spaces in Windows Server 2012
- Configuring BranchCache in Windows Server 2012

## Lab : Managing Storage on Servers Running Windows Server 2012

- Configuring iSCSI Storage
- Configuring a Redundant Storage Space

## Lab : Implementing BranchCache

- Performing Initial Configuration Tasks for BranchCache
- Configuring BranchCache on the Branch Server
- Configuring BranchCache Client Computers
- Monitoring BranchCache

After completing this module, students will be able to:

- Describe the storage features in Windows Server 2012.
- Configure iSCSI storage.

- Configure Storage Spaces.
- Configure BranchCache.

#### Module 4: Implementing Network Services

This module explains how to configure advanced features for Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP). It also explains how to configure IP Address Management (IPAM) and Network Access Protection (NAP).

##### Lessons

- Implementing DNS and DHCP Enhancements
- Implementing IPAM
- Managing IP Address Spaces with IPAM
- NAP Overview
- Implementing NAP

##### Lab : Implementing Network Services

- Configuring New Features in DNS and DHCP
- Configuring IP Address Management

##### Lab : Deploying NAP

- Configuring NAP
- Verifying the NAP Deployment

After completing this module, students will be able to:

- Implement DHCP and DNS enhancements.
- Implement IPAM.
- Manage IP address spaces with IPAM.
- Describe NAP.
- Implement NAP.

#### Module 5: Implementing Remote Access

This module covers the options for provisioning remote access with Windows Server 2012. It will specifically cover DirectAccess and VPNs and the considerations for implementing and managing these remote access technologies in your Windows Server 2012 environment, including the use of certificates.

##### Lessons

- Remote Access Overview
- Implementing DirectAccess by Using the Getting Started Wizard
- Implementing and Managing an Advanced DirectAccess Infrastructure
- Implementing VPN

Lab : Implementing DirectAccess

- Configuring the DirectAccess Infrastructure
- Configuring the DirectAccess Clients
- Verifying the DirectAccess Configuration

After completing this module, students will be able to:

- Install and manage the Remote Access role in Windows Server 2012.
- Implement DirectAccess by using the Getting Started Wizard.
- Implement and manage an advanced DirectAccess infrastructure.
- Implement VPN access in Windows Server 2012.

Module 6: Implementing Failover Clustering

This module explains how to provide high availability for network services and applications by implementing Failover Clustering. It will provide an overview of the terms and technologies as well as specific considerations and options for the services and applications under discussion.

Lessons

- Overview of Failover Clustering
- Implementing a Failover Cluster
- Configuring Highly-Available Applications and Services on a Failover Cluster
- Maintaining a Failover Cluster
- Implementing a Multisite Failover Cluster

Lab : Implementing Failover Clustering

- Configuring a Failover Cluster
- Deploying and Configuring a Highly Available File Server
- Validating the Deployment of the Highly-Available File Server
- Configuring Cluster-Aware Updating on the Failover Cluster

After completing this module, students will be able to:

- Describe failover clustering.

- Implement a failover cluster.
- Configure highly-available applications and services.
- Maintain a failover cluster.
- Implement multisite failover clustering.

## Module 7: Implementing Hyper-V

This module explains how to install and configure Hyper-V virtual machines. It will cover general configuration as well as storage and networking considerations. It will also cover differences introduced in Windows Server 2012 R2.

### Lessons

- Configuring Hyper-V Servers
- Configuring Hyper-V Storage
- Configuring Hyper-V Networking
- Configuring Hyper-V Virtual Machines

### Lab : Implementing Server Virtualization with Hyper-V

- Installing the Hyper-V Server Role
- Configuring Virtual Networking
- Creating and Configuring a Virtual Machine

After completing this module, students will be able to:

- Configure Hyper-V servers.
- Configure Hyper-V storage.
- Configure Hyper-V networking.
- Configure Hyper-V virtual machines.

## Module 8: Implementing Failover Clustering with Windows Server 2012 R2 Hyper-V

This module explains how to deploy and manage Hyper-V virtual machines in a failover cluster. It will provide an overview of the technologies involved as well as details on general configuration and migration of virtual machines.

### Lessons

- Overview of the Integration of Hyper-V Server 2012 with Failover Clustering
- Implementing Hyper-V Virtual Machines on Failover Clusters
- Implementing Windows Server 2012 Hyper-V Virtual Machine Movement

- Implementing Hyper-V Replica

Lab : Implementing Failover Clustering with Windows Server 2012 Hyper-V

- Configuring Hyper-V Replica
- Configuring a Failover Cluster for Hyper-V
- Configuring a Highly Available Virtual Machine

After completing this module, students will be able to:

- Describe how Hyper-V integrates with Failover Clustering.
- Implement Hyper-V virtual machines in failover clusters.
- Implement Hyper-V virtual machine movement.
- Implement Hyper-V Replica.

Module 9: Implementing Secure Data Access for Users and Devices

This module explains how to configure secure data access for users and devices. It will primarily cover the implementation of Dynamic Access Control (DAC) and Work Folders.

Lessons

- Dynamic Access Control Overview
- Implementing DAC Components
- Implementing DAC for Access Control
- Implementing Access-Denied Assistance
- Implementing and Managing Work Folders

Lab : Implementing Secure File Access

- Preparing for DAC Deployment
- Implementing DAC
- Validating and Remediating DAC
- Implementing Work Folders

After completing this module, students will be able to:

- Describe DAC.
- Implement DAC components.
- Implement DAC for access control.
- Implement access-denied assistance.
- Implement and manage Work Folders.

## Module 10: Implementing AD DS

This module explains how to implement AD DS in Windows Server 2012. It covers the deployment and configuration of domain controllers as well as the use and implementation of service accounts, Group Policy, and services offered by Windows Azure Active Directory. It also covers the general maintenance of AD DS.

### Lessons

- Deploying AD DS Domain Controllers
- Configuring AD DS Domain Controllers
- Implementing Service Accounts
- Implementing Group Policy in AD DS
- Overview of Windows Azure Active Directory
- Maintaining AD DS

### Lab : Implementing AD DS

- Deploying a Read-Only Domain Controller
- Implementing Service Accounts in AD DS

### Lab : Troubleshooting and Maintaining AD DS

- Troubleshooting Group Policy
- Maintaining AD DS

After completing this module, students will be able to:

- Deploy domain controllers.
- Configure domain controllers.
- Implement service accounts.
- Implement Group Policy.
- Describe Windows Azure Active Directory.
- Maintain AD DS.

## Module 11: Implementing AD FS

This module explains how to implement an AD FS deployment. It will cover a single organization usage scenario as well as a business-to-business scenario. The module also covers Web Application Proxy and Workplace Join.

### Lessons

- Overview of AD FS
- Deploying AD FS

- Implementing AD FS for a Single Organization
- Deploying AD FS in a Business-to-Business Federation Scenario
- Implementing Web Application Proxy
- Implementing Workplace Join

Lab : Implementing AD FS

- Installing and Configuring AD FS
- Configuring an Internal Application for AD FS
- Configuring AD FS for a Federated Business Partner
- Implementing Web Application Proxy
- Performing a Workplace Join

After completing this module, students will be able to:

- Describe AD FS.
- Explain how to deploy AD FS.
- Explain how to implement AD FS for a single organization.
- Explain how to deploy AD FS in a business-to-business federation scenario.
- Explain how to implement Web Application Proxy.
- Explain how to implement Workplace Join.

Module 12: Monitoring and Maintaining Windows Server 2012

This module explains how to monitor and maintain Windows Server 2012. It will cover Performance Monitor and data collector sets as well as server backup and recovery technologies.

Lessons

- Monitoring Windows Server 2012
- Implementing Windows Server Backup
- Implementing Server and Data Recovery

Lab : Monitoring and Maintaining Windows 2012 Servers

- Configuring Centralized Monitoring for Servers Running Windows Server 2012
- Backing Up Servers Running Windows Server 2012
- Restoring Files by Using Windows Server Backup

After completing this module, students will be able to:

- Monitor Windows Server 2012.

- Implement Windows Server Backup.
  - Restore data and servers by using Windows Server Backup.
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