

Introduction:

The **Upgrading Your Skills to MCSA: Windows Server 2016** course is designed to enhance your existing knowledge of earlier versions of Windows Server and prepare you for the MCSA Windows Server 2016 certification. This training will help IT professionals leverage their experience and gain in-depth knowledge of the advanced features and functionalities of Windows Server 2016. The course provides hands-on experience and prepares participants for the certification exam, allowing them to confidently manage and maintain a Windows Server 2016 environment.

This MCSA certification is globally recognized and serves as proof of your expertise in the latest Microsoft server technologies, which are essential for IT professionals working in today's dynamic business environments.

Targeted Groups:

This course is ideal for IT professionals who have experience with Windows Server 2012 or Windows Server 2008. It is particularly beneficial for:

- System administrators with hands-on experience with Windows Server 2008 R2 or 2012.
- IT professionals looking to update their skills to align with Windows Server 2016.
- Those seeking to validate their expertise with the MCSA certification in Microsoft server solutions.

Course Objectives:

Upon completing this course, participants will be able to:

- Install and configure Windows Server 2016 with precision and confidence.
- Effectively manage and configure storage solutions in Windows Server 2016.
- Implement directory services and understand their organizational impact.
- Utilize Active Directory Federation Services (AD FS) for federated identity management.
- Master networking within the Windows Server environment.
- Implement and manage virtualization using Microsoft Hyper-V.
- Configure and troubleshoot advanced networking features for enhanced server performance.

- Embrace software-defined networking to simplify network management.
- Provide reliable remote access solutions in a server environment.
- Deploy and manage Windows Server and Hyper-V containers.
- Implement robust failover clustering strategies for disaster recovery and business continuity.

Targeted Competencies:

Participants will develop competencies in:

- Installing and configuring Server Core installations.
- Managing storage strategies, including Storage Spaces and Data Deduplication.
- Implementing and managing Active Directory Domain Services (AD DS).
- Configuring advanced network services for optimal performance.
- Handling Windows Server and Hyper-V containers.
- Implementing high-availability solutions using failover clustering.

Course Content:

Unit 1: Installing and Configuring Windows Server 2016

- Overview of Windows Server 2016 features.
- Installing Windows Server 2016 with best practices.
- Configuration strategies to optimize server performance.
- Upgrade and migration strategies for transitioning to Windows Server 2016.
- Migrating server roles and workloads.

Unit 2: Overview of Storage in Windows Server 2016

- Configuring Internet SCSI (iSCSI) storage solutions.

- Leveraging Storage Spaces for flexible storage management.
- Implementing Data Deduplication to improve storage efficiency.

Unit 3: Implementing the Directory Services Feature

- Deploying Active Directory Domain Services (AD DS) domain controllers.
- Managing service accounts to enhance security.
- Integrating Azure AD with on-premises directory services.

Unit 4: Implementing AD FS

- Introduction to Active Directory Federation Services (AD FS) and its role in Single Sign-On (SSO).
- Step-by-step deployment of AD FS.
- Implementing AD FS tailored for specific organizational needs.
- Configuring a Web Application Proxy in AD FS environments.

Unit 5: Implementing Network Services

- Enhancements in networking with Windows Server 2016.
- Implementing IP Address Management (IPAM) to manage address spaces.
- Managing IP address spaces using IPAM tools.

Unit 6: Implementing Hyper-V

- Configuring the Hyper-V role in Windows Server 2016.
- Managing Hyper-V storage and networking for optimized virtualization.
- Creating and managing Hyper-V virtual machines and their resources.

Unit 7: Configuring Advanced Networking Features

- Exploring high-performance networking features in Windows Server 2016.

- Configuring advanced Hyper-V networking features for enterprise-level solutions.

Unit 8: Implementing Software-Defined Networking (SDN)

- Understanding the principles of Software-Defined Networking (SDN).
- Implementing network virtualization and its benefits.
- Deploying Network Controllers for centralized network management.

Unit 9: Implementing Remote Access

- Configuring remote access solutions, including DirectAccess and VPN.
- Setting up and managing Virtual Private Network (VPN) connections.

Unit 10: Deploying and Managing Windows Server and Hyper-V Containers

- Exploring the capabilities of Windows Server 2016 containers.
- Preparing the server environment to support container technologies.
- Installing and managing Windows Server and Hyper-V containers.

Unit 11: Implementing Failover Clustering

- Understanding failover clustering and its role in high-availability solutions.
- Implementing failover clusters with best practices.
- Configuring applications and services for failover clusters to ensure continuous operation.
- Troubleshooting and maintaining failover clusters.

Unit 12: Implementing Failover Clustering with Hyper-V

- Integrating Hyper-V with failover clustering for enhanced reliability.
- Implementing Hyper-V virtual machines on failover clusters.
- Using Hyper-V Replica for disaster recovery and workload balancing.

This course will prepare participants to effectively manage the advanced features of Windows Server 2016 and pursue the MCSA certification, equipping them with the skills to work with cutting-edge server solutions.