Introduction

The **MCSA: Windows Server 2016** course is designed for IT professionals aiming to gain in-depth knowledge of the latest Windows Server technology. This training will help participants leverage their existing knowledge of earlier Windows Server versions (such as Windows Server 2008 or 2012) and upgrade their skills to effectively manage and configure **Windows Server 2016**. Upon completion, participants will be ready for the **MCSA Windows Server 2016** certification exam, validating their expertise and enhancing their qualifications in Microsoft server solutions.

By exploring advanced features of Windows Server 2016 and providing hands-on experience, this course serves as a definitive step towards mastering the modern Windows Server environment.

Targeted Groups

This course is ideal for:

- **System Administrators** with experience in **Windows Server 2008** or **Windows Server 2012**.
- IT professionals aiming to upgrade their skills to **Windows Server 2016**.
- Individuals seeking **MCSA certification** in Windows Server technology.

Course Objectives

By the end of the **MCSA Windows Server 2016** course, participants will be able to:

- **Install and configure** Windows Server 2016 with precision.
- Manage **storage solutions** using tools like **Storage Spaces** and **Data Deduplication**.
- Implement **Active Directory Domain Services (AD DS)** and integrate **Azure AD**.
- Utilize **Active Directory Federation Services (AD FS)** for secure identity management.
- **Configure and manage Hyper-V** for virtualization.
- Master **advanced networking features** to enhance server performance.
- Implement **software-defined networking (SDN)** to streamline network management.
- Provide **remote access solutions** via **DirectAccess** and **VPN**.
- Implement **failover clustering** strategies to ensure availability and disaster recovery.

Targeted Competencies

Participants will develop competencies in:

- **Installing and configuring Server Core**.
- Managing **storage strategies**, including **Storage Spaces** and **Data Deduplication**.

- Managing **Active Directory** effectively.
- Implementing **network services**, including **IPAM** and **advanced networking** features.
- Handling **Windows Server and Hyper-V containers**.
- Creating **failover clustering** solutions for high availability and disaster recovery.

Course Content

Unit 1: Installing and Configuring Windows Server 2016

- Introduction to **Windows Server 2016** features.
- Step-by-step installation and configuration techniques.
- Upgrade and migration strategies.
- Activation models and server role migration.

Unit 2: Overview of Storage in Windows Server 2016

- Configuring **Internet SCSI (iSCSI)** storage.
- Using **Storage Spaces** for flexible storage management.
- Implementing **Data Deduplication** for efficient storage utilization.

Unit 3: Implementing the Directory Services Feature

- Deploying **Active Directory Domain Services (AD DS)**.
- Managing domain controllers and **service accounts**.
- Integrating **Azure Active Directory** with on-premises services.

Unit 4: Implementing AD FS

- Overview of **AD FS** for **Single Sign-On (SSO)** solutions.
- Step-by-step **AD FS** deployment.
- Configuring **Azure AD FS** for seamless integration with Microsoft online services.

Unit 5: Implementing Network Services

- Enhancements in **networking** with **Windows Server 2016**.
- Deploying and managing **IP Address Management (IPAM)**.
- Managing IP address spaces and configurations using IPAM.

Unit 6: Implementing Hyper-V

- **Hyper-V** configuration and management.
- Optimizing **Hyper-V storage** and **networking**.
- Creating and managing **Hyper-V virtual machines**.

Unit 7: Configuring Advanced Networking Features

- High-performance **networking features** in **Windows Server 2016**.
- Configuring **advanced Hyper-V networking** for enterprise environments.

Unit 8: Implementing Software-Defined Networking

- Introduction to **software-defined networking (SDN)**.
- Benefits and implementation of **network virtualization**.
- Deploying a **Network Controller** for centralized network management.

Unit 9: Implementing Remote Access

- Overview of **remote access solutions**.
- Implementing **DirectAccess** and **VPN** for secure connectivity.

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

- Capabilities and use cases of **Windows Server containers**.
- Preparing the environment for containerization.
- Configuring and managing **container instances**.

Unit 11: Implementing Failover Clustering

- **Failover clustering** for high availability.
- Implementing and maintaining **failover clusters** for continuous operation.

Unit 12: Implementing Failover Clustering with Windows Server 2016 Hyper-V

- Integrating **Hyper-V** with **failover clustering** for reliability.
- Implementing **Hyper-V virtual machines** on failover clusters.
- Utilizing **Hyper-V Replica** for disaster recovery.

This course is designed to ensure participants gain the skills and knowledge needed to succeed in modern **Windows Server environments** and pass the **MCSA Windows Server 2016 certification** exam with confidence.