Training: Microsoft

MS-55341 Installation, Storage, and Compute with Windows Server

Microsoft Partner

TRAINING GOALS:

This five-day course is designed primarily for IT professionals who have some experience with Windows Server. It is designed for professionals who will be responsible for managing storage and compute by using Windows Server, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server.

Although this course and the associated labs are written for Windows Server 2022, the skills taught will also be backwards compatible for Server 2016 and Server 2019.

The course and labs also focus on how to administer Windows Server using not only the traditional tools such as PowerShell and Server manager, but also Windows Admin Center.

Audience profile:

This course is intended for IT professionals who have some experience working with Windows Server, and who are looking for a single five-day course that covers storage and compute technologies in Windows Server. This course will help them update their knowledge and skills related to storage and compute for Windows Server.

Candidates suitable for this course would be:

- Windows Server administrators who are relatively new to Windows Server administration and related technologies, and who want to learn more about the storage and compute features in Windows Server.
- IT professionals with general IT knowledge who are looking to gain knowledge about Windows Server especially around storage and compute technologies in Windows Server.

At Course Completion:

- Prepare and install Windows Server and plan a server upgrade and migration strategy.
- Describe the various storage options, including partition table formats, basic and dynamic disks, file systems, virtual hard disks, and drive hardware, and explain how to manage disks and volumes.
- Describe enterprise storage solutions, and select the appropriate solution for a given situation.
- Implement and manage Storage Spaces and Data Deduplication.
- Install and configure Microsoft Hyper-V, and configure virtual machines.

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- Deploy, configure, and manage Windows and Hyper-V containers.
- Describe the high availability and disaster recovery technologies in Windows Server.
- Plan, create, and manage a failover cluster.
- Implement failover clustering for Hyper-V virtual machines.
- Configure a Network Load Balancing (NLB) cluster, and plan for an NLB implementation.
- Create and manage deployment images.
- Manage, monitor, and maintain virtual machine installations.

CONSPECT:

- Module 1: Installing, upgrading, and migrating servers and workloads
  - Introducing Windows Server
  - Preparing and installing Server Core
  - Preparing for upgrades and migrations
  - Migrating server roles and workloads
  - Windows Server activation models
  - Lab 1: Installing and configuring Windows Server
- Module 2: Configuring local storage
  - Managing disks in Windows Server
  - Managing volumes in Windows Server
  - Lab 1: Configuring local storage
- Module 3: Implementing enterprise storage solutions
  - Overview of DAS, NAS, and SANs
  - Comparing Fibre Channel, iSCSI, and Fibre Channel over Ethernet
  - Understanding iSNS, DCB, and MPIO
  - Configuring sharing in Windows Server
- Module 4: Implementing Storage Spaces and Data Deduplication
  - Implementing Storage Spaces
  - Managing Storage Spaces
  - Implementing Data Deduplication
  - Lab 1: Implementing Storage Spaces
  - Lab 2: Implementing Data Deduplication
- Module 5: Installing and configuring Hyper-V and virtual machines
  - Overview of Hyper-V
  - Installing Hyper-V
  - Configuring storage on Hyper-V host servers

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- Configuring networking on Hyper-V host servers
- Configuring Hyper-V virtual machines
- Managing virtual machines
- Lab 1: Installing and configuring Hyper-V

- Module 6: Deploying and managing containers
  - Overview of containers in Windows Server
  - Deploying Windows Server and Hyper-V containers
  - Installing, configuring, and managing containers by using Docker
  - Lab 1: Installing and configuring containers
- Module 7: High availability and disaster recovery
  - Defining levels of availability
  - Planning high availability and disaster recovery solutions with Hyper-V virtual machines
  - Backing up and restoring by using Windows Server Backup
  - High availability with failover clustering in Windows Server
  - Lab 1: Planning and implementing a high availability and disaster recovery solution
- Module 8: Implementing failover clustering
  - Planning a failover cluster
  - Creating and configuring a new failover cluster
  - Maintaining a failover cluster
  - Troubleshooting a failover cluster
  - Implementing site high availability with stretch clustering
  - Lab 1: Implementing failover clustering
  - Lab 2: Managing a failover cluster
- Module 9: Implementing failover clustering with Windows Server Hyper-V
  - Overview of the integration of Hyper-V with failover clustering
  - Implementing Hyper-V VMs on failover clusters
  - Key features for VMs in a clustered environment
  - Lab 1: Implementing failover clustering with Windows Server Hyper-V
- Module 10: Implementing Network Load Balancing
  - Overview of NLB
  - Configuring an NLB cluster
  - Planning an NLB implementation
  - Lab 1: Implementing NLB
- Module 11: Creating and managing deployment images
  - Introduction to deployment images
  - Creating and managing deployment images by using MDT

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- Virtual machine environments for different workloads
- Lab 1: Using MDT to deploy Windows Server

- Module 12: Managing, monitoring, and maintaining virtual machine installations
  - WSUS overview and deployment options
  - Update management process with WSUS
  - Overview of Windows PowerShell DSC
  - Overview of Windows Server monitoring tools
  - Using Performance Monitor
  - Monitoring event logs
  - Lab 1: Implementing WSUS and deploying updates
  - Lab 2: Monitoring and troubleshooting Windows Server

REQUIREMENTS:

- A basic understanding of networking fundamentals.
- An awareness and understanding of security best practices.
- An understanding of basic Active Directory concepts.
- Basic knowledge of server hardware.
- Experience supporting and configuring Windows client operating systems such as Windows 10 or Windows 11.

Difficulty level



CERTIFICATE:

Certificate of completing an authorized Microsoft training

TRAINER:

Microsoft Certified Trainer

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