OD20740C: Installation, Storage, and Compute with Windows Server 2016 MOD

Course Details

Course Outline

1. **Module 1: Installing, upgrading, and migrating servers and workloads**
    - Introducing Windows Server 2016
    - Preparing and installing Nano Server and Server Core
    - Preparing for upgrades and migrations
    - Migrating server roles and workloads
    - Windows Server activation models
    - **Lab : Installing and configuring Nano Server**
    1. Implementing Nano Server
    2. Completing post-installation tasks on the Nano Server
    3. Performing remote management
2. **Module 2: Configuring local storage**
    - Managing disks in Windows Server 2016
    - Managing volumes in Windows Server 2016
    - **Lab : Managing disks and volumes in Windows Server 2016**
    1. Creating and Managing virtual hard disks by using Windows PowerShell
    2. Converting virtual hard disks from .vhd to .vhdx
    3. Resizing a volume
3. **Module 3: Implementing enterprise storage solutions**
    - Overview of direct-attached storage, network-attached storage, and storage area networks
    - Comparing Fibre Channel, iSCSI, and FCoE
    - Understanding iSNS, data centre bridging, and MPIO
    - Configuring sharing in Windows Server 2016
    - **Lab : Planning and configuring storage technologies and components**
    1. Planning storage requirements
    2. Configuring iSCSI storage
    3. Configuring and managing the share infrastructure

4. **Module 4: Implementing Storage Spaces and Data Deduplication**
    - Implementing Storage Spaces
    - Managing Storage Spaces
    - Implementing Data Deduplication
    - **Lab : Implementing Storage Spaces**
    1. Creating a storage space
    2. Enabling and configuring storage tiering
    - **Lab : Implementing Data Deduplication**
    3. Installing Data Deduplication
    4. Configuring Data Deduplication
5. **Module 5: Installing and configuring Hyper-V and virtual machines**
    - Overview of Hyper-V
    - Installing Hyper-V
    - Configuring storage on Hyper-V host servers
    - Configuring networking on Hyper-V host servers
    - Configuring Hyper-V virtual machines
    - Managing Hyper-V virtual machines
    - **Lab : Installing and configuring Hyper-V**
    1. Installing the Hyper-V server role
    2. Configuring Hyper-V settings
    3. Creating and configuring a virtual machine
    4. Managing a virtual machine by using PowerShell Direct.
6. **Module 6: Deploying and managing Windows Server and Hyper-V containers**
    - Overview of containers in Windows Server 2016
    - Deploying Windows Server and Hyper-V containers
    - Installing, configuring, and managing containers
    - **Lab : Installing and configuring containers**
    1. Installing and configuring Windows Server containers by using Windows PowerShell
    2. Installing and configuring Windows Server containers by using Docker
7. **Module 7: Overview of 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 the Windows Server 2016 operating system and data by using Windows Server B
- High availability with failover clustering in Windows Server 2016
- **Lab : Planning and implementing a high availability and disaster recovery solution**

1. Determining the appropriate high availability and disaster recovery solution
2. Implementing storage migration
3. Implementing Hyper-V Replica

8. Module 8: Implementing and managing 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 : Implementing a failover cluster

1. Creating a failover cluster
2. Verifying quorum settings and adding a node

- **Lab : Managing a failover cluster**

3. Evicting a node and verifying quorum settings
4. Changing the quorum from Disk Witness to File Share Witness, and defining node voting
5. Adding and removing disks from the cluster

9. Module 9: Implementing failover clustering for Hyper-V virtual machines

- Overview of integrating Hyper-V in Windows Server 2016 with failover clustering
- Implementing and maintaining Hyper-V virtual machines on failover clusters
- Key features for virtual machines in a clustered environment
- **Lab : Implementing failover clustering with Hyper-V**

1. Configuring a failover cluster for Hyper-V
2. Configuring a highly available virtual machine

10. Module 10: Implementing Network Load Balancing

- Overview of NLB clusters
- Configuring an NLB cluster
- Planning an NLB implementation
- **Lab : Implementing an NLB cluster**

1. Implementing an NLB cluster

2. Configuring and managing the NLB cluster
3. Validating high availability for the NLB cluster

11. Module 11: Creating and managing deployment images

- Introduction to deployment images
- Creating and managing deployment images by using MDT
- Virtual machine environments for different workloads
- **Lab : Using MDT to deploy Windows Server 2016**

1. Installing and configuring MDT
2. Creating and deploying an image

12. Module 12: Managing, monitoring, and maintaining virtual machine installations

- WSUS overview and deployment options
- Update management process with WSUS
- Overview of PowerShell DSC
- Overview of Windows Server 2016 monitoring tools
- Using Performance Monitor
- Monitoring Event Logs
- **Lab : Implementing WSUS and deploying updates**

1. Implementing WSUS
2. Configuring update settings
3. Approving and deploying an update by using WSUS

- **Lab : Monitoring and troubleshooting Windows Server 2016**

4. Establishing a performance baseline
5. Identifying the source of a performance problem
6. Viewing and configuring centralized event logs