

20740: Installation, Storage, and Compute with Windows Server 2016 Boot Camp

Course Details

Course Outline

1. Installing, upgrading, and migrating servers and workloads

- Introducing Windows Server 2016
- Preparing and installing Server Core
- Preparing for upgrades and migrations
- Migrating server roles and workloads
- Windows Server activation models
- **Lab : Installing and configuring Server Core**
 1. Installing Server Core
 2. Completing post-installation tasks on Windows Server 2016 Core
 3. Performing remote management

2. Configuring local storage

- Managing disks in Windows Server
- Managing volumes in Windows Server
- **Lab : Configuring local storage**
 1. Creating and managing volumes
 2. Resizing volumes
 3. Managing virtual hard disks

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 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. Implementing Storage Spaces and Data Deduplication

- Implementing Storage Spaces
- Managing Storage Spaces
- Implementing Data Deduplication
- **Lab : Implementing Storage Spaces**
 1. Creating a Storage Space
- **Lab : Implementing Data Deduplication**
 2. Installing Data Deduplication
 3. Configuring Data Deduplication

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 virtual machines
- **Lab : Installing and configuring Hyper-V**
 1. Verify installation of the Hyper-V server role
 2. Configuring Hyper-V networks
 3. Creating and configuring virtual machines
 4. Enable nested virtualization for a virtual machine

6. Deploying and managing Windows and Hyper-V containers

- Overview of containers in Windows Server 2016
- Deploying Windows Server and Hyper-V containers
- Installing, configuring, and managing containers by using Docker
- **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. 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 by using Windows Server Backup

- 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. Configuring Hyper-V replicas

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 : Implementing failover clustering**
 1. Creating a failover cluster
 2. Verifying quorum settings and adding a node
 - a. Lab : Managing a failover cluster**
 1. Evicting a node and verifying quorum settings
 2. Changing the quorum from disk witness to file-share witness, and defining node voting
 3. Verifying high availability

9. Implementing failover clustering with Windows Server 2016 Hyper-V

- Overview of the integration of Hyper-V Server 2016 with failover clustering
- Implementing Hyper-V VMs on failover clusters
- Key features for VMs in a clustered environment
- **Lab : Implementing failover clustering with Windows Server 2016 Hyper-V**
 1. Configure iSCSI storage
 2. Configuring a failover cluster for Hyper-V
 3. Configuring a highly available VM

10. Implementing Network Load Balancing

- Overview of NLB
- Configuring an NLB cluster
- Planning an NLB implementation

- **Lab : Implementing NLB**
 1. Implementing a Network Load Balancing (NLB) cluster
 2. Configuring and managing the NLB cluster
 3. Validating high availability for the NLB cluster

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. Configuring MDT
 2. Creating and deploying an image

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 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