

20740 Installation, Storage, and Compute with Windows Server 2016

Overview

This course is designed for students who are responsible for managing storage by using Windows Server 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available in Windows Server 2016.

Prerequisite Comments

Before attending this course, students must have:

A basic understanding of networking fundamentals; An awareness and understanding of security best practices; An understanding of basic AD DS concepts; Basic knowledge of server hardware; Experience supporting and configuring Windows client operating systems such as Windows 8 or Windows 10. Additionally, students would benefit from having some previous Windows Server operating system experience, such as experience as a Windows Server systems administrator.

Target Audience

This course is intended for IT professionals who have some experiencing working with Windows Server, and who are looking for a single five-day course that covers storage and compute technologies in Windows Server 2016. This course will help them update their knowledge and skills related to storage and compute for Windows Server 2016. The secondary audience for this course are IT professionals looking to take the Microsoft 70-740 certification exam, Installation, Storage and Compute with Windows Server 2016.

Course Objectives

After completing this course, students will be able to:

Prepare and install Nano Server, a Server Core installation, 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.

Deploy, configure, and manage Windows and Hyper-V containers.

Describe the high availability and disaster recovery technologies in Windows Server 2016.

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.

Course Outline

1 - Installing, Upgrading, & Migrating Servers & 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

2 - Configuring Local Storage

Managing disks in Windows Server
Managing volumes in Windows Server
Lab : Configuring local storage

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

4 - Implementing Storage Spaces & Data Deduplication

Implementing Storage Spaces
Managing Storage Spaces
Implementing Data Deduplication
Lab: Implementing Storage Spaces
Lab: Implementing Data Deduplication

5 - Installing & 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

6 - Deploying & Managing Windows Server & 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

7 - Overview of High Availability & 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

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 a failover cluster
Lab: Managing a failover cluster

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

10 - Implementing Network Load Balancing

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

11 - Creating & 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

12 - Managing, Monitoring, & 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
Lab: Monitoring and troubleshooting Windows Server 2016

