



20740: Installation, Storage, and Compute with Windows Server® 2016

Duration: 5 Days

Method: Instructor-Led

Certification: Microsoft® Certified Solutions Associate (MCSA): Windows Server 2016 — Exam 1 of 3: 70-740 Installation, Storage, and Compute with Windows Server® 2016

Course Description

This course is designed primarily for IT professionals who have some experience with Windows Server®. It is also for professionals who will be responsible for managing storage and compute by using Windows Server® 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server® 2016.

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.
- 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® 2016.
- IT professionals with general IT knowledge, who are looking to gain knowledge about Windows Server®, especially around storage and compute technologies in Windows Server® 2016.
- IT professionals looking to take the first exam for certification.

Prerequisites

To attend this course, candidates should 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.



Course Objectives

Upon successful completion of this course, candidates 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 Content

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

Module 2: Configuring Local Storage

- Managing disks in Windows Server® 2016
- Managing volumes in Windows Server® 2016

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



Course Content, *Continued*

Module 4: Implementing Storage Spaces and Data Deduplication

- Implementing Storage Spaces
- Managing Storage Spaces
- 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
- Configuring networking on Hyper-V® host servers
- Configuring Hyper-V® virtual machines
- Managing Hyper-V® virtual machines

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

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

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

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



Course Content, *Continued*

Module 10: Implementing Network Load Balancing

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

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

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

LABS INCLUDED

