



Complete Computing, Inc.

SERVING OUR CUSTOMERS SINCE 1982

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

Course length: 5 day(s)

Course Description

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 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server 2016.

Audience Profile

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.

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 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.

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.

Prerequisites

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..

Course Content

Module 1: Installing, upgrading, and migrating servers and workloads

This module explains how to prepare and install Nano Server and Server Core. This module also explains how to upgrade and migrate server roles and workloads. Finally, this module explains how to choose an activation model based on your environment characteristics.

- 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

This module explains how to manage disks and volumes in Windows Server 2016.

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

Module 3: Implementing enterprise storage solutions

This module describes the direct-attached storage (DAS), network-attached storage (NAS), and storage area networks (SANs). It also helps you understand Microsoft Internet Storage Name Service (iSNS) Server, data center bridging, and Multipath I/O (MPIO). Additionally, this module also compares Fibre Channel, Internet Small Computer System Interface (iSCSI), and Fibre Channel Over Ethernet (FCoE), and describes how to configure sharing in Windows Server 2016.

- 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

Module 4: Implementing Storage Spaces and Data Deduplication

This module explains how to implement and manage Storage Spaces. This module also explains how to implement Data Deduplication.

- Implementing Storage Spaces
- Managing Storage Spaces
- Implementing Data Deduplication

Module 5: Installing and configuring Hyper-V and virtual machines

This module provides an overview of Hyper-V. This module also explains how to configure, manage, and install Hyper-V.

- 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



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Module 6: Deploying and managing Windows Server and Hyper-V containers

This module provides an overview of containers in Windows Server 2016. It also explains how to deploy, install, configure, and manage containers in Windows Server 2016.

- 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

This module provides an overview of high availability, business continuity, and disaster recovery. It further explains how to plan high availability and disaster recovery solutions. Additionally, in this module you will know how to back up and restore the Windows Server 2016 operating system and data by using Windows Server Backup. Finally, you will learn about Windows Server 2016 high availability with failover clustering.

- 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 Backup
- High availability with failover clustering in Windows Server 2016

Module 8: Implementing and managing failover clustering

This module explains how to plan, create, configure, maintain, and troubleshoot a failover cluster. This module also explains how to implement site high availability with stretch 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

This module describes integrating Hyper-V virtual machines in a clustered environment. It also explains how to implement and maintain Hyper-V virtual machines on failover clusters. Additionally, this module also explains how to configure network health protection.

- 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

Module 10: Implementing Network Load Balancing

This module provides an overview of NLB clusters. It also explains how to plan and configure an NLB cluster implementation.

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



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Module 11: Creating and managing deployment images

This module provides an introduction to deployment images. It also explains how to create and manage deployment images by using the Microsoft Deployment Toolkit (MDT). Additionally, it explains how to evaluate an organization's requirements for server virtualization.

- 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

This module provides an overview on WSUS and explains the deployment options. It explains how to update management process with WSUS and also how to use Performance Monitor. Additionally, this module also provides an overview of PowerShell Desired State Configuration (DSC) and Windows Server 2016 monitoring tools. Finally, this module describes how to use Performance Monitor and monitor Event Logs.

- 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