

## (20740B) – Installation, Storage, and Compute with Windows Server 2016

### OBJECTIVE

This 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.

### COURSE TOPICS

#### 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

#### 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 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 by using Docker

**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 by using Windows Server Backup
- High availability with failover clustering in Windows Server 2016

**Module 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

**Module 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

**Module 10: Implementing Network Load Balancing**

- Overview of NLB
- 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

## 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.

## TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

## COURSE DURATION

24 Hours (in 3 days)

Time: 9:00am to 6:00pm

Lunch Time: 1:00pm to 2:00pm

## CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course