NETLOGIC TRAINING CENTER

Course Training

Installation, Storage, and Compute with Windows Server 2016 (70-740)

Course Content

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.

Course Objective

By the end of the course, you should be able to meet the following objectives:

- 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 Prerequisite

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 Pre-Test

Not Required

Course Details

Day 1

Item	Subject	Details	Personal Lab and devices	Workgroup Lab and devices
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	Theory and Lecture	
		Break		
2	Configuring local storage	• Managing disks in Windows Server • Managing volumes in Windows Server	Theory and Lecture	
	Summary challenge advance lab for Install Nano Server and configure local storage	Lab 1 - Installing Nano Server - Completing post-installation tasks on Nano Server - Performing remote management Lab 2 - Managing disks in Windows Server - Managing volumes in Windows Server	(Lab 1 and 2) **Real Device** Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version	

Day 2

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
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	Theory and Lecture	
4	Implementing Storage Spaces and Data Deduplication	• Implementing Storage Spaces • Managing Storage Spaces • Implementing Data Deduplication	Theory and Lecture	
		Break		
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	Theory and Lecture	
	Summary challenge advance lap for Planning , configuring storage , Data Duplicated And Hyper-V	Lab 1 - Planning storage requirements - Configuring iSCSI storage - Configuring and managing the share infrastructure - Creating a Storage Space - Installing Data Deduplication - Configuring Data Deduplication Lab 2 - Verify installattion of the Hyper-V server role - Configuring Hyper-V networks - Creating and configuring a virtual machines - Enable nested virtualization for a virtual machine	(Lab 1 and 2) **Real Device** Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version	

Day 3

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
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	Theory and Lecture	
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	Theory and Lecture	
		Break		
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	Theory and Lecture	
	Summary challenge advance lap for Installing , configuring containers and Planning and implementing a high availability and disaster , Failover cluster	Lab 1 - Installing and configuring Windows Server containers by using Windows PowerShell - Installing and configuring Windows Server containers by using Docker Installing Lab 2 - recovery solution - Determining the appropriate high availability and disaster recovery solution - Implementing storage migration - Configuring Hyper-V replicas Lab 3 - Creating a failover cluster - Verifying quorum settings and adding a node - Managing a failover cluster - Evicting a node and verifying quorum settings - Changing the quorum from Disk Witness to File - Share Witness, and defining node voting - Verifying high availability	(Lab 1 ,2 and 3) **Real Device** Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version	

Day 4

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
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	Theory and Lecture	
		Break		
10	vSphere HA, vSphere Fault Tolerance, and Protecting Data	• Explain the vSphere HA architecture • Configure and manage a vSphere HA cluster • Use vSphere HA advanced parameters • Define clusterwide restart ordering capabilities • Enforce infrastructural or intra-app dependencies during failover • Describe vSphere HA heartbeat networks and datastore heartbeats • Introduce vSphere Fault Tolerance • Enable vSphere Fault Tolerance on virtual machines • Support vSphere Fault Tolerance interoperability with vSAN • Examine enhanced consolidation of vSphere Fault Tolerance virtual machines • Introduce vSphere Replication • Use vSphere Data Protection to back up and restore data	Theory and Lecture	
	Summary challenge advance lap for Implementing failover clustering with Windows Server 2016 Hyper-V and Implementing NLB	Lab 1 - Configure iSCSI storage - Configuring a failover cluster for Hyper-V - Configuring a highly available VM Lab 2 - Implementing a Network Load Balancing (NLB) cluster - Configuring and managing the NLB cluster - Validating high availability for the NLB cluster	(Lab 1 and 2) **Real Device** Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version	

Day 5

Item	Subject	Details	Trainee Lab and devices	Workgroup Lab and devices
11	Creating and managing deployment images	• Introduction to deployment images • Creating and managing deployment images by using MDT • Virtual machine environments for different workloads	Theory and Lecture	
		Break		
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	Theory and Lecture	
	Summary challenge advance lap for Using MDT to deploy Windows Server 2016 and Implementing WSUS and deploying updates and Troubleshooting	Lab 1 - Configuring MDT - Creating and deploying an image Lab 2 - Configuring update settings - Approving and deploying an update by using WSUS Lab 3 - Establishing a performance baseline - Identifying the source of a performance problem - Viewing and configuring centralized event logs	(Lab 1.2 and 3) **Real Device** Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version	

Course Post-Test

Not Required

Course Materials

Not include in this class training (but you can requested from sale team)

Course Devices Training (Per 1 Person)

Cisco Server UCS C-Series

Cisco Catalyst 3560-CX

Storage QNAP

vmware

Windows Server 2016