

# **VOISIP TELECOMMUNICATIONS LIMITED**

## **MCSA 70-740 COURSE OUTLINE**

### **Module 1: Install Windows servers in host & Compute Environment**

This module describes the use case scenarios for windows server 2016, explains how to install windows server 2016 and windows server 2016 core OS. Also, migration & upgrade strategies are explained. Finally the module also describes the various licensing models inherent in Windows server 2016.

- Windows Server 2016 introduction
- Windows Server 2016 installation & upgrade
- Windows Server 2016 Licensing models
- Installation of Windows Server Core
- Configuration of Servers for remote management
- Configuring post- installation tasks

### **Module 2: Implementing Windows Server 2016 Active Directory**

This module explains how to configure & manage active directory users and computer accounts, Active directory roles & features. It also delves deep into group policy objects for access control

- Introduction to Windows Server active Directory services
- Installation of active directory Domain Controller
- Installation of Windows Server 2016 features and roles
- Creating & automating active directory user accounts
- Creating & configuring active directory Computer accounts
- Configuring active directory organizational units
- Group Policy Objects (Get Your Control Freak On: Staring to Control What Your Users Can and Can't Do through Group Policy).
- Group policy central store & refresh
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## **Module 3: Configuring Core enterprise storage solutions**

This module explains how to manage disks and volumes in windows server 2016 environment.

- Overview of DAS, NAS, and SAN storage mechanisms
- Comparing Fibre Channel, iSCSI, and Fibre Channel over Ethernet
- Configuring shared folders in Windows Server 2016
- Configuring local storage
- Configuring storage spaces using enclosures
- Configuring work folders & offline files
- configure GUID partition table (GPT) disks; create VHD and VHDX files using Disk Management or Windows PowerShell
- configure NFS and SMB shares using Server Manager
- Configuring NFS file & folder permission
- Manage and maintain Storage Spaces.
- Describe and implement Data Deduplication.

## **Module 4: Implementing enterprise storage solutions**

This module discusses direct-attached storage (DAS), network-attached storage (NAS), and storage area networks (SANs). It also explains the purpose of Microsoft Internet Storage Name Service (iSNS) Server, data center bridging (DCB), and Multipath I/O (MPIO). Additionally, this module 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 DAS, NAS, and SANs
- Comparing Fibre Channel, iSCSI, and Fibre Channel over Ethernet
- Understanding iSNS, DCB, and MPIO
- Configuring sharing in Windows Server 2016

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

This module provides a detailed explanation of Microsoft Hyper-V & virtualization technology. It further details how to install & configure hyper-v, and how to configure networking and storage on hyper-v host servers.

- Overview of Hyper-V
- Installing Hyper-V
- Configuring storage on Hyper-V host servers
- Add or remove memory in a running VM. Configure dynamic memory.

- Configuring networking on Hyper-V host servers
- Configure nic teaming in VMs . Configure bandwidth Management
- Configuring Hyper-V virtual machines
- Managing virtual machines. Create Linux and FreeBSD Vms.
- Export & Import VMs. Troubleshoot Vm configuration versions.
- Enable nested virtualization for a virtual machine
- Configure Hyper-V storage. Create VHDs and VHDX files using Hyper-v Manager
- Create Shared VHDX files. Resize a virtual hard disk. Configure passthrough disk
- Configure storage quality of service.

## **Lesson 6: Implementing Windows Containers**

This module provides an overview of containers in Windows Server 2016. Additionally, this module explains how to deploy Windows Server and Hyper-V containers. It also explains how to install, configure, and manage containers by using Docker.

- Overview of containers in Windows Server 2016
- Deploying Containers in a physical or virtualized environment
- Installing, configuring, and managing containers by using Docker
- Configure docker startup options. Manage Windows Containers using Docker CLI
- Manage Container networking. Manage resource control.

## **Module 7: High Availability & disaster recovery Mechanisms**

This module provides an overview of high availability and high availability with failover clustering in Windows Server 2016. It also explains how to plan high availability and disaster recovery solutions with Hyper-V virtual machines. Additionally, this module explains how to back up and restore the Windows Server 2016 operating system and data by using Windows Server Backup.

- Defining the different levels of availability
- Planning high availability and disaster recovery solutions with Hyper-V virtual machines
- Backing up and restoring by using Windows Server Backup
- Implementing High availability with failover clustering in Windows Server 2016
- Configuring replicas for Hyper-V virtual machines

## **Module 8 : Implementing failover clustering**

This module describes how Hyper-V integrates with failover clustering. It also explains how to implement Hyper-V virtual machines (VMs) in failover clusters.

- Planning a failover cluster
- Implementing Single or Multi-Domain clusters
- Creating and configuring a new failover cluster
- Maintaining a failover cluster
- Configuring Quorum settings
- Troubleshooting a failover cluster
- Implementing site high availability with stretch clustering
- Verifying high availability
- 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.
- Performing a live migration.
- Performing a storage migration
- Import, export and copy VMs
- Configure VM network health protection

## **Module 9: Implementing Network Load balancing (NLB)**

- Introduction to NLB
- Configuring NLB prerequisites
- Configuring an NLB cluster
- Configure cluster operation mode
- Planning an NLB implementation

## **Module 10: Maintaining & Monitoring Server Environments**

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

- Windows Server Update Services (WSUS) overview and deployment options
- Updating management process with WSUS
- Configuring WSUS groups, Patch management in mixed environment
- Implementing anti-malware with windows defender
- Perform backup & restore operations using windows server backup.
- Determining backup strategies for different windows server roles & workloads
- Overview of Windows Server 2016 monitoring tools
- Using Performance Monitor
- Using Resource monitor

- Manage and monitor windows server using Windows Admin Center
- Monitoring event logs