pcsnet

MWS3-2 - MOC 20740 - INSTALLATION, STORAGE AND COMPUTE WITH WINDOWS SERVER 2016

Categoria: **Windows Server 2016**

INFORMAZIONI SUL CORSO

Durata:	Categoria:	Qualifica Istruttore:	Dedicato a:	Produttore:
5 Giorni	Windows Server 2016	Microsoft Certified Trainer	Professionista IT	Microsoft

OBIETTIVI

Preparare e installare Nano Server, un'installazione Server Core, e pianificare un aggiornamento del server e una strategia di migrazione.

Descrivere le varie opzioni di archiviazione: i formati della tabella delle partizioni, i dischi di base e dinamici, i file system, dischi rigidi virtuali e le unità hardware, e spiegare come gestire dischi e volumi.

Descrivere le soluzioni storage enterprise e scegliere la soluzione appropriata per una data situazione.

Implementare e gestire spazi di stoccaggio e deduplicazione dei dati.

Installare e configurare Microsoft Hyper-V.

Distribuire, configurare e gestire container Windows e Hyper-V.

Descrivere le tecnologie di alta disponibilità e disaster recovery in Windows Server 2016.

Pianificare, creare e gestire un failover cluster.

Implementare il failover clustering per le macchine virtuali Hyper-V.

Configurare un cluster per il bilanciamento del carico di rete (NLB), e pianificarne l'implementazione.

Creare e gestire immagini di distribuzione.

Gestire, monitorare e manutenere le installazioni di macchine virtuali.

PREREQUISITI

Conoscenza di base dei fondamenti di networking.

Conoscenza e comprensione delle migliori pratiche di sicurezza.

Comprensione dei concetti di base si ADDS.

Conoscenze di base di hardware del server.

Esperienza di supporto e configurazione di sistemi operativi client Windows, come Windows 8 o Windows 10.

CONTENUTI

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

Lab : Installing and configuring Nano Server
Implementing Nano Server
Completing post-installation tasks on the Nano Server
Performing remote management
After completing this module, students will be able to:
Choose the appropriate version of the Windows Server operating system, and describe the installation options and new features of Windows Server 2016.
Prepare and install Nano Server and Server Core.
Consider whether an upgrade or migration is the best approach, and use tools to help determine upgrade or migration suitability.
Migrate server roles and workloads within a domain and across domains or forests.
Choose an activation model based on your environment characteristics.

Module 2: Configuring local storage
Managing disks in Windows Server 2016
Managing volumes in Windows Server 2016

Lab : Managing disks and volumes in Windows Server 2016
Creating and Managing virtual hard disks by using Windows PowerShell
Converting virtual hard disks from .vhd to .vhdx
Resizing a volume
After completing this module, students will be able to:
Manage disks in Windows Server 2016.
Manage 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

Lab : Planning and configuring storage technologies and components
Planning storage requirements
Configuring iSCSI storage
Configuring and managing the share infrastructure
After completing this module, students will be able to:
Describe DAS, NAS, and SANs, and the usage scenarios for each topology.
Compare Fibre Channel, FCoE, an iSCSI target and initiator.
Describe iSNS, MPIO, data center bridging, and Windows Storage Server 2016 (two versions—Workgroup and

Standard).
Configure server message block (SMB) and network file system (NFS) shares by using Server Manager and Windows PowerShell.

Module 4: Implementing Storage Spaces and Data Deduplication
Implementing Storage Spaces
Managing Storage Spaces
Implementing Data Deduplication

Lab : Implementing Storage Spaces
Creating a storage space
Enabling and configuring storage tiering

Lab : Implementing Data Deduplication
Installing Data Deduplication
Configuring Data Deduplication
After completing this module, students will be able to:
Implement Storage Spaces as an enterprise storage solution.
Manage Storage Spaces by using Server Manager and Windows PowerShell.
Implement 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

Lab : Installing and configuring Hyper-V
Installing the Hyper-V server role
Configuring Hyper-V settings
Creating and configuring a virtual machine
Managing a virtual machine by using PowerShell Direct
After completing this module, students will be able to:
Describe Hyper-V and virtualization.
Prepare to install the Hyper-V role.
Configure storage on Hyper-V host servers.
Configure networking on Hyper-V host servers.
Configure Hyper-V virtual machines.
Move virtual machines from one host to another host, using PowerShell Direct to manage a virtual machine, and manage miscellaneous virtual machine settings.

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

Lab : Installing and configuring containers
Installing and configuring Windows Server containers by using Windows PowerShell
Installing and configuring Windows Server containers by using Docker
After completing this module, students will be able to:
Explain the purpose of Windows Server and Hyper-V containers.

Deploy and manage Windows Server and Hyper-V containers.

Install, configure, and manage 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

Lab : Planning and implementing a high availability and disaster recovery solution

Determining the appropriate high availability and disaster recovery solution

Implementing storage migration

Implementing Hyper-V Replica

After completing this module, students will be able to:

Describe high availability, business continuity, and disaster recovery.

Plan for high availability and disaster recovery solutions with Hyper-V virtual machines.

Back up and restore Hyper-V hosts, virtual machines, Active Directory Domain Services (AD DS), and file and web servers by using Windows Server Backup.

Describe Windows Server 2016 high availability with failover clustering.

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

Lab : Implementing a failover cluster

Creating a failover cluster

Verifying quorum settings and adding a node

Lab : 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

Adding and removing disks from the cluster

After completing this module, students will be able to:

Describe the requirements and infrastructure considerations for a failover cluster.

Create and configure a new failover cluster.

Monitor and maintain failover clusters.

Troubleshoot failover clusters by using various tools such as Performance Monitor, Event Viewer, and Windows PowerShell.

Configure and implement a stretch cluster.

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

Lab : Implementing failover clustering with Hyper-V

Configuring a failover cluster for Hyper-V

Configuring a highly available virtual machine

After completing this module, students will be able to:

Explain the integration of Hyper-V in Windows Server 2016 with failover clustering.

Implement and maintain Hyper-V virtual machines on failover clusters.

Describe and configure network health protection.

Module 10: Implementing Network Load Balancing

Overview of NLB clusters

Configuring an NLB cluster

Planning an NLB implementation

Lab : Implementing an NLB cluster

Implementing an NLB cluster

Configuring and managing the NLB cluster

Validating high availability for the NLB cluster

After completing this module, students will be able to:

Describe NLB and how it works.

Configure an NLB cluster.

Describe the considerations for implementing NLB.

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

Lab : Using MDT to deploy Windows Server 2016

Installing and configuring MDT

Creating and deploying an image

After completing this module, students will be able to:

Explain the purpose of deployment images and the tools that you use to deploy and maintain them.

Implement and manage deployment images by using MDT.

Evaluate their organization's requirements for server virtualization.

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

Lab : Implementing WSUS and deploying updates

Implementing WSUS

Configuring update settings

Approving and deploying an update by using WSUS

Lab : Monitoring and troubleshooting Windows Server 2016

Establishing a performance baseline

Identifying the source of a performance problem

Viewing and configuring centralized event logs

After completing this module, students will be able to:

Describe the purpose of Windows Server Update Services (WSUS) and the requirements to implement WSUS.

Manage the update process with WSUS.

Describe the purpose and benefits of PowerShell DSC.

Describe the monitoring tools available in Windows Server 2016.

Describe how to use Performance Monitor.

Describe how to manage event logs.