M55341B : Installation, Storage, and Compute with Windows Server

Course Outline

Module 1: Installing, Upgrading, and Migrating Servers and Workloads
This module covers the features of Windows Server, installing Server Core, planning server upgrades, and migrating server roles and workloads within and across domains. It also discusses selecting the right activation model.

Lessons:

1. Introducing Windows Server
2. Preparing and Installing Server Core
3. Preparing for Upgrades and Migrations
4. Migrating Server Roles and Workloads
5. Windows Server Activation Models

Lab: Installing and Configuring Windows Server

Outcomes:

- Understand Windows Server features.
- Install and configure Windows Server.
- Plan and execute server upgrades and migrations.
- Choose appropriate activation models.

Module 2: Configuring Local Storage
Focuses on managing disks, volumes, and virtual hard disks in Windows Server.

Lessons:

1. Managing Disks in Windows Server
2. Managing Volumes in Windows Server

Lab: Configuring Local Storage

- Creating and Managing Volumes
- Resizing Volumes
- Managing Virtual Hard Disks

Outcomes:

- Manage disks and volumes in Windows Server.

Module 3: Implementing Enterprise Storage Solutions
Covers DAS, NAS, and SANs, along with iSCSI storage and sharing configurations.

Lessons:

1. Overview of DAS, NAS, and SANs
2. Comparing Fibre Channel, iSCSI, and FCoE
3. Understanding iSNS, DCB, and MPIO
4. Configuring Sharing in Windows Server

Lab: Planning and Configuring Storage Technologies

- Planning Storage Requirements
- Configuring iSCSI Storage
- Managing Share Infrastructure

Outcomes:

- Differentiate between storage solutions and configure storage sharing.

Module 4: Implementing Storage Spaces and Data Deduplication
Explores implementing and managing Storage Spaces and Data Deduplication for efficient storage management.
Lessons:
1. Implementing Storage Spaces
2. Managing Storage Spaces
3. Implementing Data Deduplication

Lab:
- Creating Storage Spaces
- Installing and Configuring Data Deduplication

Outcomes:
- Efficiently manage enterprise storage using Storage Spaces and Data Deduplication.

Module 5: Installing and Configuring Hyper-V and Virtual Machines
Provides an overview of virtualization, Hyper-V installation, and virtual machine management.
Lessons:
1. Overview of Hyper-V
2. Installing Hyper-V
3. Configuring Storage and Networking in Hyper-V
4. Managing Virtual Machines

Lab:
- Configuring Hyper-V and Creating Virtual Machines

Outcomes:
- Install and manage Hyper-V and virtual machines.

Module 6: Deploying and Managing Containers
Teaches deploying and managing Windows Server and Hyper-V containers using Docker.
Lessons:
1. Overview of Containers
2. Deploying Containers
3. Managing Containers with Docker

Lab: Installing and Configuring Containers
Outcomes:
- Deploy and manage containers effectively.

Module 7: High Availability and Disaster Recovery
Covers disaster recovery planning, failover clustering, and Windows Server backup.
Lessons:
1. Levels of Availability
2. Planning High Availability with Hyper-V
3. Windows Server Backup
4. High Availability with Failover Clustering

Lab:

- Configuring Disaster Recovery Solutions

Outcomes:

- Plan and implement high availability and disaster recovery solutions.

Module 8: Implementing Failover Clustering

Explains planning, implementing, and maintaining failover clusters and stretch clustering.

Lessons:

1. Planning Failover Clusters
2. Creating and Configuring Failover Clusters
3. Maintaining and Troubleshooting Clusters

Lab:

- Creating and Verifying Failover Clusters

Outcomes:

- Implement and troubleshoot failover clusters.

Module 9: Implementing Failover Clustering with Hyper-V

Describes integrating Hyper-V with failover clustering for highly available virtual environments.

Lessons:

1. Overview of Integration with Failover Clustering
2. Implementing Hyper-V VMs on Clusters
3. Features of Clustered VMs

Lab: Configuring Highly Available VMs

Outcomes:

- Integrate Hyper-V with failover clustering.

Module 10: Implementing Network Load Balancing (NLB)

Explains configuring and managing NLB clusters for load balancing and high availability.

Lessons:

1. Overview of NLB
2. Configuring NLB Clusters
3. Planning NLB Implementation

Lab: Configuring NLB Clusters

Outcomes:

- Configure and manage NLB clusters for load balancing.

Module 11: Creating and Managing Deployment Images

Focuses on creating and managing deployment images using MDT and virtual environments.

Lessons:

1. Overview of Deployment Images
2. Using MDT for Deployment

Lab: Deploying Windows Server with MDT

Outcomes:

- Create and deploy Windows Server images.

Module 12: Managing, Monitoring, and Maintaining Virtual Installations

Covers WSUS, PowerShell DSC, and performance monitoring tools.

Lessons:

1. WSUS Overview
2. Managing Updates with WSUS
3. Windows PowerShell DSC
4. Monitoring Tools in Windows Server

Lab:

- Implementing WSUS and Monitoring Performance

Outcomes:

- Monitor and maintain virtual environments using WSUS and PowerShell DSC.