

Course 55021A: Configuring and Administering Hyper-V in Windows Server 2012

Course Outline

Module 1: Planning for Virtualization

After completing this module students will be able to describe virtualization as it relates to server environments. Students will be able to plan for hardware requirements, storage, availability, and security.

Lessons

- Overview of Microsoft Virtualization
- Assessment of Virtualization Candidates
- Planning for Virtualization

Lab : Assessing the Environment for Virtualization

Module 2: Implementing Server Virtualization with Hyper-V

This module describes how to install and configure Hyper-V virtual machines, configuring virtual storage, and configuring virtual networks. Students will be able to design their Hyper-V environment and storage networks.

Lessons

- Implementing Hyper-V
- Managing Virtual Machine Storage
- Managing Virtual Networks

Lab : Installing and Configuring the Hyper-V Server Role

Module 3: Creating and Configuring Virtual Hard Disks and Virtual Machines

After completing this module students will be able to determine and configure the most appropriate virtual hard disk(s) format to use in their environment. Students also will be able to create and configure virtual machines.

Lessons

- Creating and Configuring Virtual Hard Disks
- Creating and Configuring Virtual Machines
- Managing Virtual Machine Snapshots
- Virtual Machine Import

Lab: Creating Virtual Hard Disks and Virtual Machines

Module 4: Configure Networking in Hyper-V

This module describes all of the new network features available in Hyper-V. Students will be able to describe Hyper-V Network Virtualization along with the Hyper-V Extensible Switch. Students will also be able to plan how to implement the new networking features available with Windows Server 2012 Hyper-V.

Lessons

- Advanced features of Virtual Network Adapters
- Hyper-V Network Virtualization
- Hyper-V Extensible Switch

Lab: Configuring Network Settings

Module 5: Scale-up Virtual Machines

This module explains how Windows Server 2012 can be used to scale-up your virtual machines. Students will learn the details around non-uniform memory access (NUMA) and the other scale-up options in Windows Server 2012. It also compares the scale-up options in Windows Server 2012 with the options that were available in previous versions of Windows Server.

Lessons

- Overview of Scale-up options in Windows Server 2012
- Non-uniform memory access (NUMA)
- Hyper-v Scale Comparison

Lab : Configuring NUMA

Module 6: Hyper-V Replica and Disaster Recovery

This module describes disaster recovery options for Hyper-V, including Hyper-V Replica and backup/restore options for Hyper-V. Students will learn how to plan and prepare for Hyper-V Replica, learn how to configure and enable replication, perform planned failovers, and how to respond to unplanned failovers. They will also learn how to backup and restore Hyper-V hosts and virtual machines.

Lessons

- Overview of Hyper-V Replica
- Configuring Hyper-V Replica
- Hyper-V Replica Failover Operations
- Hyper-V Backup

Lab : Configuring Hyper-V Replica and Backups

Module 7: Hyper-V Migration

This module describes the Hyper-V virtual machine (VM) mobility technologies. Students will learn changes to Live Migration that are introduced with Windows Server 2012. Students will also learn best practices for securing Live Migrations.

Lessons

- Live Migration Overview
- Storage Migration Overview
- Live Migration Security
- Live Migration using SMB

Lab : Implementing Migration in Hyper-V

- Describe Live Migration using SMB
- Describe Live Migration between clusters
- Describe Live Migration Security