55021 Configuring and Administering Hyper-V in Windows Server 2012

Overview

Students will learn the history of Virtualization as it pertains to Microsoft technologies. Students will learn the new features of Hyper-V in Windows Server 2012.

Prerequisite Comments

• Deep understanding of Virtualization technologies
• Prior experience with Hyper-V or other virtualization technologies
• Previous storage configuration experience
• Previous networking configuration experience

Target Audience

This course is intended for Network Administrators who are responsible for virtualization in their environment specifically Hyper-V.

Course Objectives

After completing this course students will be able to install, configure, and administer Hyper-V in Windows Server 2012. Students will also be able to describe the High Availability features built into Hyper-V in Windows Server 2012.

Students will also be able to: • Describe Microsoft's virtualization technologies.
• Implement Hyper-V.
• Design and Manage virtual machine storage solutions.
• Design and Manage virtual networks.
• Design the Hyper-V host architecture.
• Design the virtual machine architecture.
• Design a Windows Server 2012 Hyper-V Virtualization Infrastructure.
• Describe and manage Hyper-V Snapshots
• Describe Hyper-V host and virtual machine high availability.
• Describe storage options for Virtual Machines.
• Describe the different types of virtual hard disks.
• Describe the Hyper-V integration services.
• Describe Live Migration.
• Understand Storage Migration.
• Understand Virtual Machine Import.

Course Outline
Planning for Virtualization

Overview of Microsoft Virtualization
Assessment of Virtualization Candidates
Planning for Virtualization
Lab 1: Assessing the Environment for Virtualization

Implementing Server Virtualization with Hyper-V

Implementing Hyper-V
Managing Virtual Machine Storage
Managing Virtual Networks
Lab 1: Installing and Configuring the Hyper-V Server Role

Creating and Configuring Virtual Hard Disks and Virtual Machines

Creating and Configuring Virtual Hard Disks
Creating and Configuring Virtual Machines
Managing Virtual Machine Snapshots
Virtual Machine Import
Lab 1: Creating Virtual Hard Disks and Virtual Machines

Configure Networking in Hyper-V

Advanced features of Virtual Network Adapters
Hyper-V Network Virtualization
Hyper-V Extensible Switch
Lab 1: Configuring Network Settings

Scale-up Virtual Machines

Overview of Scale-up options in Windows Server 2012
Non-uniform memory access (NUMA)
Hyper-v Scale Comparison
Lab 1: Configuring NUMA

Hyper-V Replica and Disaster Recovery

Overview of Hyper-V Replica
Configuring Hyper-V Replica
Hyper-V Replica Failover Operations
Hyper-V Backup
Lab 1: Configuring Hyper-V Replica and Backups
Hyper-V Migration

Live Migration Overview
Storage Migration Overview
Live Migration Security
Live Migration using SMB
Lab 1: Implementing Migration in Hyper-V