

Course 20409: Server Virtualization with Windows Server Hyper-V and System Center

Length: 5 days | Audience: IT Professionals | Level: 300

OVERVIEW

This five day course will provide you with the knowledge and skills required to design and implement Microsoft Server Virtualization solutions using Hyper-V and System Center.

This course is intended for IT professionals who are responsible for designing, implementing, managing, and maintaining a virtualization infrastructure or are interested in learning about current Microsoft Virtualization technologies. The secondary audience for this course includes IT decision makers who will determine which virtualization product to implement in their data centers.

After completing this course, students will be able to:

- Evaluate an organization's virtualization requirements and plan for server virtualization.
- Install and configure the Hyper-V server role.
- Create virtual machines, create and manage virtual hard disks and work with snapshots.
- Create and configure virtual machine networks in a Hyper-V environment.
- Implement virtual machine movement and Hyper-V Replica.
- Provide high availability for Hyper-V environment by implementing failover clustering.
- Manage virtual environment by using System Center 2012 R2 Virtual Machine Manager.
- Manage networking and storage infrastructure in Virtual Machine Manager.
- Configure and manage Virtual Machine Manager library and library objects.
- Create and manage virtual machines by using Virtual Machine Manager.
- Create and manage clouds by using System Center 2012 R2 Virtual Machine Manager.
- Create and manage services in System Center 2012 R2 Virtual Machine Manager.
- Protect virtualization infrastructure by using Windows Server Backup and Data Protection Manager.

COURSE OUTLINE

Module 1: Evaluating the Environment for Virtualization

This module provides an overview of Microsoft virtualization technologies and the various components of System Center 2012 R2. The module also explains how to evaluate the current environment for virtualization and extend virtualization to the cloud.

Lessons

- Overview of Microsoft Virtualization
- Overview of System Center 2012 R2 Components
- Evaluating Current Environment for Virtualization
- Extending Virtualization to the Cloud Environment

Module 2: Installing and Configuring the Hyper-V Role

This module describes how to install and manage the Hyper-V role. The module also explains how to configure Hyper-V settings, storage, and networking.

Lessons

- Installing the Hyper-V Role
- Managing Hyper-V
- Configuring Hyper-V Settings
- Hyper-V Host Storage and Networking

Module 3: Creating and Managing Virtual Hard Disks, Virtual Machines, and Checkpoints

This module explains how to create and configure virtual hard disks and virtual machines. The module then describes how to install, import, monitor, and manage virtual machines.

Lessons

- Creating and Configuring Virtual Hard Disks
- Creating and Configuring Virtual Machines
- Installing and Importing Virtual Machines
- Managing Virtual Machine Checkpoints
- Monitoring Hyper-V
- Designing Virtual Machines for Server Roles and Services

Module 4: Creating and Configuring Virtual Machine Networks

This module explains how to create and use Hyper-V virtual switches and Hyper-V networking features. The module also describes how to configure and implement Hyper-V network virtualization.

Lessons

- Creating and Using Hyper-V Virtual Switches
- Advanced Hyper-V Networking Features
- Configuring and Using Hyper-V Network Virtualization

Module 5: Virtual Machine Movement and Hyper-V Replica

This module describes how to provide high availability and redundancy for virtualization. The module also explains how to implement virtual machine movement and Hyper-V Replica.

Lessons

- Providing High Availability and Redundancy for Virtualization
- Implementing Virtual Machine Movement
- Implementing and Managing Hyper-V Replica

Module 6: Implementing Failover Clustering with Hyper-V

This module provides an overview of failover clustering. The module also describes how to configure shared storage, and how to implement failover clustering with Hyper-V.

Lessons

- Overview of Failover Clustering
- Configuring and Using Shared Storage
- Implementing and Managing Failover Clustering with Hyper-V

Module 7: Installing and Configuring System Center 2012 R2 Virtual Machine Manager

This module describes how to integrate System Center and server virtualization. The module also describes how to install System Center 2012 R2 Virtual Machine Manager, add hosts, and manage host groups.

Lessons

- Integrating System Center and Server Virtualization
- Overview of VMM
- Installing VMM
- Adding Hosts and Managing Host Groups

Module 8: Managing the Networking and Storage Infrastructure in System Center 2012 R2 Virtual Machine Manager

This module describes how to manage networking infrastructure, storage infrastructure, and infrastructure updates.

Lessons

- Managing Networking Infrastructure
- Managing Storage Infrastructure
- Managing Infrastructure Updates

Module 9: Creating and Managing Virtual Machines by Using Microsoft System Center 2012 R2 Virtual Machine Manager

This module explains how to create, clone, and convert virtual machines. The module also provides an overview of virtual machine updating.

Lessons

- Virtual Machine Management Tasks in VMM
- Creating, Cloning, and Converting Virtual Machines
- Overview of Virtual Machine Updating

Module 10: Configuring and Managing the Microsoft System Center 2012 R2 Virtual Machine Manager Library and Library Objects

This module provides an overview of the Virtual Machine Library. The module also describes how to work with profiles and templates.

Lessons

- Overview of the Virtual Machine Manager Library
- Working With Profiles and Templates

Module 11: Managing Clouds in Microsoft System Center 2012 R2 Virtual Machine Manager

This module provides an introduction to clouds and describes how to create and manage a cloud. The module also describes how to work with user roles in VMM.

Lessons

- Introduction to Clouds
- Creating and Managing a Cloud
- Working With User Roles in Virtual Machine Manager

Module 12: Managing Services in Microsoft System Center 2012 R2 Virtual Machine Manager and App Controller

This module provides an overview of services in System Center 2012 R2 VMM. The module also describes how to create and manage services in VMM and how to use System Center 2012 R2 App Controller.

Lessons

- Understanding Services in VMM
- Creating and Managing Services in VMM
- Using App Controller

Module 13: Protecting and Monitoring Virtualization Infrastructure

This module provides an overview of backup and restore options for virtual machines. The module describes how to use DPM and System Center Operations Manager for protection, monitoring, and reporting.

Lessons

- Overview of Backup and Restore Options for Virtual Machines
- Protecting Virtualization Infrastructure by Using DPM
- Using Operations Manager for Monitoring and Reporting
- Integrating VMM with Operations Manager

PREREQUISITES

Before attending this course, students must have:

- An understanding of TCP/IP and networking concepts
- An understanding of different storage technologies and concepts
- The ability to work in a team/virtual team
- An understanding of Windows PowerShell®

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