
Server Virtualization with Windows Server Hyper-V and System Center

Duration: 5 Days **Course Code: M20409** **Version: B** **Delivery Method: Company Event**

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.

Please note that due to the nature of the lab / environment build delegates may be required to work in pairs.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

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.

Objectives:

- 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.
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Prerequisites:

- Delegates need to have attended the M20410, and are advised to attend the M20411, before attending this course
 - 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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Content:

Module 1: Evaluating the Environment for Virtualization

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

Lab : Evaluating the Environment for Virtualization

- Selecting the Appropriate Virtualization Method
- Assessing the Environment by Using MAP

Module 2: Installing and Configuring the Hyper-V Role

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

Lab : Installing and Configuring the Hyper-V Role

- Installing the Hyper-V Server Role
- Configuring Hyper-V Settings
- Accessing and Managing Hyper-V Remotely

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

- 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

Lab : Creating and Managing Virtual Hard Disks and Virtual Machines

- Creating and Managing Virtual Hard Disks
- Creating and Managing Virtual Machines

Lab : Creating and Managing Checkpoints and Monitoring Hyper-V

- Importing Virtual Machines and Working with Checkpoints
- Monitoring Hyper-V

Module 4: Creating and Configuring Virtual Machine Networks

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

Module 5: Virtual Machine Movement and Hyper-V Replica

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

Lab : Moving Virtual Machine and Configuring Constrained Delegation

- Moving Hyper-V Storage and Virtual Machines

Lab : Configuring and Using Hyper-V Replica

- Configuring and Managing Hyper-V Replica

Module 6: Implementing Failover Clustering with Hyper-V

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

Lab : Implementing Failover Clustering with Hyper-V

- Creating a Hyper-V Failover Cluster
- Managing a Hyper-V Failover Cluster

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

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

Lab : Installing and Configuring System Center 2012 R2 Virtual Machine Manager

- Installing and Configuring System Center 2012 R2 VMM
- Managing Hosts and Host Groups

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

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

Lab : Network Infrastructure Management

- Implementing a Network Infrastructure

Lab : Managing Infrastructure Storage

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

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

Lab : Creating and Managing Virtual Machines by Using System Center 2012 R2 Virtual Machine Manager

- Creating a Virtual Machine and Modifying Its Properties
- Cloning a Virtual Machine

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

Objects

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

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

- Configuring and Managing the Virtual Machine Manager Library
- Creating and Managing Profiles and Templates

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

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

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

- Creating a Cloud
- Working With User Roles
- Deploying Virtual Machines to a Private Cloud

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

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

Lab : Managing Services in System Center

<p>Virtualization</p> <p>Lab : Creating and Using Hyper-V Virtual Switches</p> <ul style="list-style-type: none"> ■ Creating and Using Windows Server 2012 R2 Hyper-V Virtual Switches <p>Lab : Creating and Using Advanced Virtual Switch Features</p> <ul style="list-style-type: none"> ■ Configuring and Using Advanced Virtual Switch Features <p>Lab : Configuring and Testing Hyper-V Network Virtualization</p> <ul style="list-style-type: none"> ■ Configuring Hyper-V Network Virtualization 	<ul style="list-style-type: none"> ■ Implementing a Storage Infrastructure <p>Lab : Infrastructure Updates Management</p> <ul style="list-style-type: none"> ■ Managing Infrastructure Updates 	<p>2012 R2 VMM and App Controller</p> <ul style="list-style-type: none"> ■ Creating a Service Template ■ Deploying a Service and Updating a Service Template ■ Configuring App Controller ■ Deploying a Virtual Machine in App Controller <p>Module 13: Protecting and Monitoring Virtualization Infrastructure</p> <ul style="list-style-type: none"> ■ 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 <p>Lab : Monitoring and Reporting Virtualization Infrastructure</p> <ul style="list-style-type: none"> ■ Implementing Microsoft System Center 2012 R2 Operations Manager Agents ■ Configuring Operations Manager Monitoring Components ■ Configuring Operations Manager Integration with System Center 2012 R2 Virtual Machine Manager (VMM)
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Additional Information:

Course 20410B - Installing and Configuring Windows Server 2012 Course 20411B - Administering Windows Server 2012

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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