(20409B) – Server Virtualization with Windows Server Hyper- V and System Center

OBJECTIVE

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

COURSE TOPICS

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

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

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

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 Virtualization

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

Module 6: Implementing Failover Clustering with Hyper-V

- Overview of Failover Clustering
- Configuring and Using Shared Storage

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Hotline: 2833 3816
Fax: 2851 6452
Email: info@gallantcomputer.com
Website: www.gallantcomputer.com

- Implementing and Managing Failover Clustering with Hyper-V

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

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

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

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

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

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

Module 13: Protecting and Monitoring Virtualization Infrastructure

- 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

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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.

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

TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

COURSE DURATION

24 Hours (in 3 days)

CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course