



# COMPLETE COMPUTING, INC.

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## 20409BC: Server Virtualization with Windows Server Hyper-V® and System Center

*Course length: 5 day(s)*

### Course Description

Get hands-on instruction and practice implementing Microsoft Server Virtualization with Windows Server 2012 R2 Hyper-V and System Center 2012 R2 Virtual Machine Manager in this 5-day Microsoft Official Course. This course provides the hands-on training that can help you prepare for the Microsoft Specialist exam 74-409: Server Virtualization with Windows Server Hyper-V and System Center. You will learn the skills you need to deploy and manage a Microsoft Server Virtualization infrastructure in an enterprise environment. You will learn how to configure, manage, and maintain Windows Server 2012 R2 Hyper-V and System Center 2012 R2 Virtual Machine Manager including networking and storage services. You will learn how to configure key Microsoft Server Virtualization features such as Generation 2 Virtual Machines, Replication Extension, Online Export, Cross-Version Live Migration, Online VHDX Resizing, Live Migration Performance tuning as well as Dynamic Virtual Switch Load Balancing and virtual Receive Side Scaling (vRSS). As part of the learning experience, you will perform hands-on exercises in a virtual lab environment. NOTE: This course is based on Windows Server 2012 R2 Preview and System Center 2012 R2 Preview. This course is designed for experienced IT professionals who support medium to large enterprises and have experience administering Windows Server 2012.

### 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®

### Performance-Based Objectives

Upon successful completion of 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.

**400 WEST 7<sup>TH</sup> STREET (7<sup>TH</sup> & SPRING) LITTLE ROCK AR 72201-4288**  
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- 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 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

### Module 2: Installing and Configuring the Hyper-V Server Role

- Installing the Hyper-V Server 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 and Managing Virtual Machines

### 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
- 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 System Center 2012 Virtual Machine Manager
- Installing System Center 2012 R2 Virtual Machine Manager
- Adding Hosts and Managing Host Groups



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## **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 System Center 2012 R2 Virtual Machine**

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

## **Module 11: Managing Clouds in 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 System Center 2012 R2 Virtual Machine Manager and App Controller**

- Understanding Services in System Center 2012 R2 Virtual Machine Manager
- Creating and Managing Services in VMM
- Using System Center 2012 R2 App Controller

## **Module 13: Protecting and Monitoring Virtualization Infrastructure**

- Overview of Backup and Restore Options for Virtual Machines
- Protecting Virtualization Infrastructure by Using Data Protection Manager
- Using System Center Operations Manager for Monitoring and Reporting
- Integrating Virtual Machine Manager with Operations Manager