



**CTREC
HILTON**
IT ACADEMY

BUILDING TRAINING SOLUTIONS
FOR THE IT WORLD

Deploying and Managing Microsoft System Center Virtual Machine Manager

Days:	3
Format:	Instructor-Led
Class Code	6331
Certification Exams:	None
Certification Track:	None

Recommended Course Sequence

Knowledge of prerequisites noted below.

Course content is subject to change without notice.

Course Description:

This three-day instructor-led course teaches students how to implement a Microsoft System Center Virtual Machine Manager V2 solution in an organization. The course also discusses how to install, configure, and deploy VMM.

Target Student:

The audience for this class would be Consultants or Integrators planning on doing Enterprise VMM implementations and advanced VMM administrators.

Delivery Method:

Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

Prerequisites:

Before attending this course, students must have technical knowledge and skills in the following areas:

- Windows Server 2000/2003 System Administration
- Basic understanding of System Center Virtual Machine Manager (VMM) (optional)
- Server Virtualization using Virtual Server 2005, Virtual PC, or VMWare
- Operating knowledge of System Center Operations Manager 200

At Course Completion:

After completing this course, students will be able to:

- Identify installation prerequisites and requirements for VMM, select secure settings for VMM installations; and install VMM management packs.
- Describe prerequisites for installing the Administrator Console; configure the Windows Firewall for the VMM Administrator Console; and configure managed hosts.
- Describe prerequisites for the VMM Self-Service Portal; configure IIS to support the Self-Service Portal; and install the Self-Service Portal.
- Configure host server hardware to support VMs.
- Add VM hosts to VMM; install the VMM agent; add VMWare servers to VMM; and create filters.
- Configure delegated administration; set host or group permissions; and configure VMM settings to support a test environment.
- Configure access to the VMM Self-Service Portal; configure quotas on the VMM Self-Service Portal; and self-provision VMs using the VMM Self-Service Portal.
- Add a VMM library including library shares and library servers and manage the contents of VMM library shares.
- Deploy VMs using multiple methods; and use Intelligent Placement to deploy VMs.

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- Identify considerations for SAN VM migrations; perform a Quick Migration; and use Intelligent Placement to move a VM.
- Convert a physical computer to a VM.
- Convert other VM formats to Hyper-V VMs using VMM.
- Describe considerations for configuring host clustering and describe procedures for configuring host clustering.
- Describe considerations for configuring guest clustering and describe procedures for configuring guest clustering.
- Identify scenarios where VMM Checkpoints may be used to meet operational requirements and create a VM Checkpoint.
- Describe considerations for patch management using System Center Configuration Manager (SCCM) and deploy patches using WSUS.
- Describe and configure SCOM reporting.
- Use SCOM to select potential virtualization targets based on workload and performance characteristics.
- Describe considerations for monitoring host server utilization; measure and analyze host server utilization; and identify important considerations in growth planning.
- Monitor and manage the progress of VMM jobs.
- Locate failed jobs and recover failed jobs.

Course Outline

Module 1: Installing System Center Virtual Machine Manager

Module 1 describes the installation prerequisites for VMM and describes the procedure for installing VMM. In addition, Module 1 describes the procedure to install the VMM Administrator Console and the VMM Self-Service Portal.

Lessons
<ul style="list-style-type: none">■ Installing System Center Virtual Machine Manager Server Components■ Installing the VMM Administrator Console■ Installing the VMM Self-Service Portal
Lab : Installing System Center Virtual Machine Manager
<ul style="list-style-type: none">■ Installing VMM Server■ Installing the VMM Administrator Console■ Installing the VMM Self-Service Portal and Configuring a DNS Record

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Module 2: Configuring VM Hardware, Hosts, and User Roles

Module 2 describes host server hardware configuration considerations. In addition, Module 2 describes general host server configuration procedures including security configuration procedures.

Lessons
<ul style="list-style-type: none">■ Adding Hosts to VMM■ Configuring Hardware■ Configuring VMM Settings■ Managing VMM Security
Lab : Configuring VM Hardware, Hosts, and User Roles
<ul style="list-style-type: none">■ Configuring Hosts■ Configuring VM Hardware■ Configuring User Roles

Module 3: Configuring the VMM Self-Service Portal and Library

Module 3 describes considerations and procedures for configuring the VMM Self-Service Portal and Library. This includes enabling user- or group-level access to the Self-Service Portal, configuring quotas, and using the Self-Service Portal to self-provision VMs. In addition, Module 3 describes procedures for maintaining VMM library servers and shares and the contents of library shares.

Lessons
<ul style="list-style-type: none">■ Configuring the VMM Self-Service Portal■ Maintaining a VMM Library■ Managing Library Files
Lab : Configuring the VMM Self-Service Portal and Library
<ul style="list-style-type: none">■ Configuring the VMM Self-Service Portal■ Maintaining a VMM Library

Module 4: Deploying and Managing VMs

Module 4 describes VM deployment and management tasks. This includes using VMM Intelligent Placement, VM Templates, and other automated VM deployment tools. In addition, Module 4 describes using VMM to move VMs between available hosts

Lessons
<ul style="list-style-type: none">■ Deploying VMs■ Moving VMs Between Hosts
Lab : Deploying and Managing VMs
<ul style="list-style-type: none">■ Deploying VMs■ Using Intelligent Placement

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Module 5: Converting from Physical or Virtual Platforms

Module 5 describes important considerations for converting physical and virtual computers to Microsoft VMs. This includes procedures for using deployment agents to execute conversions to Microsoft VMs as well as converting from third-party formats.

Lessons
<ul style="list-style-type: none">■ Converting Physical Computers to Virtual Machines■ Migrating Virtual Machines to Hyper-V
Lab: Transferring Data
<ul style="list-style-type: none">■ Converting a Microsoft Virtual Server VM■ Converting a VMWare Virtual Machine

Module 6: Deploying Highly Available VMs

Module 6 describes considerations and procedures for deploying clustered VMs.

Lessons
<ul style="list-style-type: none">■ Introducing Virtual Machine High Availability■ Deploying Host Clustering■ Deploying Guest Clustering
Lab : Planning for Highly Available Virtual Machines
<ul style="list-style-type: none">■ Designing Host Clustering Hardware■ Selecting Guest Clustering Type

Module 7: Managing Virtual Machine Checkpoints and Updates

Module 7 describes procedures for managing VMs using checkpoints and updates. This includes identifying scenarios for using VMM VM Checkpoints and procedures for creating VM Checkpoints. In addition, Module 7 describes update deployment using WSUS and SCCM tools.

Lessons
<ul style="list-style-type: none">■ Managing Virtual Machine Checkpoints■ Managing Virtual Machine Updates
Lab : Managing Virtual Machine Checkpoints and Updates
<ul style="list-style-type: none">■ Managing Virtual Machine Checkpoints■ Managing Virtual Machine Updates

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Module 8: Implementing Monitoring and Reporting

Module 8 describes procedures for integrating System Center Operations Manager with VMM to extend the capabilities of VMM. This includes using SCOM reporting with VMM. In addition, Module 8 describes using SCOM to select potential virtualization targets and to monitor and plan host server utilization

Lessons
<ul style="list-style-type: none">■ Integrating System Center Operations Manager■ Performance and Resource Optimization■ Planning and Managing Hyper-V
Lab : Configuring VMM and Operations Manager for Reporting
<ul style="list-style-type: none">■ Setting Up VMM for Reporting and PRO■ Enabling PRO■ Viewing Reports

Module 9: Monitoring and Troubleshooting Jobs

Module 9 describes procedures for monitoring and troubleshooting VMM jobs. This includes monitoring and verifying multiple job types as well as recovering from failed jobs.

Lessons
<ul style="list-style-type: none">■ Monitoring Jobs■ Troubleshooting and Repairing Jobs
Lab : Troubleshooting Jobs
<ul style="list-style-type: none">■ Using PowerShell to View Jobs■ Running PowerShell Script to Generate Jobs■ Managing Jobs■ Troubleshooting Failed Jobs