

6331 – Deploying and Managing Microsoft System Centre Virtual Manager

Vendor Course Code: 6331

Course Length: 3 days

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

Skills Gained:

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.
- 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 Centre Configuration Manager (SCCM) and deploy patches using WSUS.
- Describe and configure SCOM reporting.
- Use SCOM to select potential virtualisation targets based on workload and performance characteristics.
- Describe considerations for monitoring host server utilisation; measure and analyse host server utilisation; and identify important considerations in growth planning.
- Monitor and manage the progress of VMM jobs.
- Locate failed jobs and recover failed jobs.

Key Topics:

Module 1: Installing System Centre 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

Installing System Centre Virtual Machine Manager Server Components
Installing the VMM Administrator Console
Installing the VMM Self-Service Portal

Lab : Installing System Centre Virtual Machine Manager
Installing VMM Server
Installing the VMM Administrator Console
Installing the VMM Self-Service Portal and Configuring a DNS Record

After completing this module, students will be able to:

- Identify installation prerequisites and requirements for VMM.
- Select secure settings for VMM installations.
- Install VMM management packs.
- Describe prerequisites for installing the Administrator Console.
- Configure the Windows Firewall for the VMM Administrator Console.
- Configure managed hosts.
- Describe prerequisites for the VMM Self-Service Portal.
- Configure IIS to support the Self-Service Portal.
- Install the Self-Service Portal.

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

Adding Hosts to VMM
Configuring Hardware
Configuring VMM Settings
Managing VMM Security

Lab : Configuring VM Hardware, Hosts, and User Roles
Configuring Hosts
Configuring VM Hardware
Configuring User Roles

After completing this module, students will be able to:

- Configure host server hardware to support VMs.
- Add VM hosts to VMM.
- Install the VMM agent.
- Add VMWare servers to VMM.
- Create filters.
- Configure delegated administration.
- Set host or group permissions.
- Configure VMM settings to support a test environment.

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

Configuring the VMM Self-Service Portal
Maintaining a VMM Library
Managing Library Files

Lab : Configuring the VMM Self-Service Portal and Library
Configuring the VMM Self-Service Portal
Maintaining a VMM Library

After completing this module, students will be able to:

- Configure access to the VMM Self-Service Portal.
- Configure quotas on the VMM Self-Service Portal.
- Self-provision VMs using the VMM Self-Service Portal.
- Add a VMM library including library shares and library servers.
- Manage the contents of VMM library shares.

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
Deploying VMs
Moving VMs Between Hosts

Lab : Deploying and Managing VMs
Deploying VMs
Using Intelligent Placement

After completing this module, students will be able to:

- Deploy VMs using multiple methods.
- Use Intelligent Placement to deploy VMs.
- Identify considerations for SAN VM migrations.
- Perform a Quick Migration.
- Use Intelligent Placement to move a VM.

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
Converting Physical Computers to Virtual Machines
Migrating Virtual Machines to Hyper-V

Lab : Converting Virtual Machines Using VMM
Converting a Microsoft Virtual Server VM
Converting a VMWare Virtual Machine

After completing this module, students will be able to:

- Convert a physical computer to a VM.
- Convert other VM formats to Hyper-V VMs using VMM.

Module 6: Deploying Highly Available VMs

Module 6 describes considerations and procedures for deploying clustered VMs.

Lessons
Introducing Virtual Machine High Availability
Deploying Host Clustering
Deploying Guest Clustering

Lab : Planning for Highly Available Virtual Machines
Designing Host Clustering Hardware
Selecting Guest Clustering Type

After completing this module, students will be able to:

- Describe considerations for configuring host clustering.
- Describe procedures for configuring host clustering.
- Describe considerations for configuring guest clustering.
- Describe procedures for configuring guest clustering.

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
Managing Virtual Machine Checkpoints
Managing Virtual Machine Updates

Lab : Managing Virtual Machine Checkpoints and Updates

Managing Virtual Machine Checkpoints
Managing Virtual Machine Updates

After completing this module, students will be able to:

- Identify scenarios where VMM Checkpoints may be used to meet operational requirements.
- Create a VM Checkpoint.
- Describe considerations for update management using System Centre Configuration Manager (SCCM).
- Deploy updates using WSUS.

Module 8: Implementing Monitoring and Reporting

Module 8 describes procedures for integrating System Centre 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 virtualisation targets and to monitor and plan host server utilisation.

Lessons

Integrating System Centre Operations Manager
Performance and Resource Optimisation
Planning and Managing Hyper-V

Lab : Configuring VMM and Operations Manager for Reporting
Setting Up VMM for Reporting and PRO
Enabling PRO
Viewing Reports

After completing this module, students will be able to:

- Describe and configure SCOM reporting.
- Use SCOM to select potential virtualisation targets based on workload and performance characteristics.
- Describe considerations for monitoring host server utilisation.
- Measure and analyse host server utilisation.
- Identify important considerations in growth planning.

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

Monitoring Jobs
Troubleshooting and Repairing Jobs

Lab : Troubleshooting Jobs
Using PowerShell to View Jobs
Running PowerShell Script to Generate Jobs
Managing Jobs
Troubleshooting Failed Jobs

After completing this module, students will be able to:

- Monitor and manage the progress of VMM jobs.
- Locate failed jobs and recover failed jobs.

Target Audience:

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

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 Centre Virtual Machine Manager (VMM) (optional)
- Server Virtualisation using Virtual Server 2005, Virtual PC, or VMWare
- Operating knowledge of System Centre Operations Manager 2007