

Course 10324A: Implementing and Managing Microsoft Desktop Virtualization

About this Course

This five-day instructor-led course provides you with the knowledge and skills to implement and manage desktop virtualization solutions. This course provides an overview of virtualization and the various Microsoft products that you can use to implement and deploy a virtualization solution. The course explains how to configure and manage a MED-V deployment. Then, it describes the procedures for deploying an App-V solution by implementing App-V servers and clients and by sequencing applications. The course then covers the configuration of Remote Desktop Services and RemoteApp programs. Finally, the course describes the concept of user state virtualization and procedures for configuring the Virtual Desktop Infrastructure (VDI).

Audience Profile

This course is intended for Microsoft Windows Server 2008 system and desktop administrators who will manage and implement desktop and application virtualization technologies within their networks. The students for this course typically are responsible for implementing their organizations' desktop and application virtualization, or their information technology (IT) management has directed them to research and/or implement desktop and application virtualization in the existing environment. Students should have a minimum of 1.5 years of experience working with Windows Server 2008 as a server or desktop administrator. This course does not require prior experience with virtualization. However, we highly recommend familiarity with virtualization concepts and management tools.

At Course Completion

After completing this course, students will be able to:

- Plan desktop virtualization scenarios.
- Implement and configure Windows Virtual PC and the Windows XP mode.
- Implement Microsoft Enterprise Desktop Virtualization.
- Configure and deploy MED-V images.
- Manage a MED-V deployment.
- Implement App-V servers.
- Plan and deploy Application Virtualization clients.
- Administer the App-V infrastructure by using the App-V Management Console.
- Sequence applications for deployment by using the App-V infrastructure or a standalone installation.
- Configure and use Remote Desktop Services and RemoteApp programs.
- Implement user state virtualization.
- Configure and use Virtual Desktop Infrastructure.
- Compare and review the various desktop virtualization technologies.

Prerequisites

Before attending this course, students must have:

- Basic skills with Windows Command line
- Monitoring and Management Tools
- Networking
- AD DS, including Group Policy deployments
- Performance Monitoring
- Troubleshooting

Course Outline

Module 1: Overview of Desktop Virtualization Scenarios

Many organizations are exploring the use of virtualization to optimize their IT environment and streamline their IT management practices. Microsoft provides several products and technologies that will enable organizations to implement virtualization solutions in many different ways. This module provides an overview of the Microsoft virtualization technologies, and provides information on planning and managing virtualized environments.

Lessons

- Overview of Virtualization
- Overview of Virtualization Management
- Planning an Application and Desktop Virtualization Deployment

Lab: Planning Desktop Virtualization Scenarios

- Identifying Virtualization Solutions
- Planning Desktop Virtualization Scenarios

After completing this module, students will be able to:

- Explain the benefits and options for virtualization.
- Identify the solutions for managing a virtual environment.
- Plan an application and desktop virtualization deployment.

Module 2: Implementing Windows Virtual PC and Windows XP Mode

This module covers the concept of virtual machines and how Windows Virtual PC uses it for virtualizing a complete client system. The module also covers the requirements and the procedures for installing and configuring Windows Virtual PC and virtual machines.

Lessons

- Installing Windows Virtual PC
- Configuring Windows Virtual PC
- Installing, Configuring, and Managing the Windows XP Mode
- Creating and Deploying Custom Images of Windows XP Mode

Lab: Implementing Windows Virtual PC and Windows XP Mode

- Installing Windows Virtual PC
- Using Windows XP Mode

After completing this module, students will be able to:

- Install and enable Windows Virtual PC.
- Configure a virtual machine.
- Install, configure, and manage the Windows XP Mode.
- Create and deploy custom Windows XP Mode images.

Module 3: Implementing Microsoft Enterprise Desktop Virtualization

This module covers the architecture, functionalities, and benefits of MED-V. It also describes the roles of the MED-V client and MED-V Management server and the procedures for deploying them.

Lessons

- Overview of MED-V
- Implementing MED-V Management Servers
- Implementing a MED-V Client

Lab: Implementing MED-V

- Configuring the Existing Infrastructure
- Deploying the MED-V Server
- Deploying the MED-V Client

After completing this module, students will be able to:

- Describe the features and functionality of MED-V.
- Implement the MED-V server infrastructure.
- Implement the MED-V client.

Module 4: Configuring and Deploying MED-V Images

This module explains how to create, configure, deploy, and work with MED-V images. It also describes how to upload a MED-V image and deploy it to the client.

Lessons

- Configuring MED-V Images
- Deploying MED-V Images

Lab: Configuring and Deploying MED-V Images

- Creating MED-V Images
- Testing MED-V Images
- Updating, Packing, and Uploading the Image

After completing this module, students will be able to:

- Configure MED-V images.
- Deploy MED-V images.

Module 5: Managing a MED-V Deployment

This module explains how to manage a MED-V deployment, create reports, and perform basic MED-V troubleshooting. The module explains the concept of MED-V Workspace and describes how to configure Workspace Policy and deploy it to the client.

Lessons

- Implementing the MED-V Workspace Policy
- Working with MED-V Workspace
- Reporting and Troubleshooting MED-V

Lab: Managing a MED-V deployment

- Creating and Configuring a Workspace Policy
- Using the MED-V Client
- Implementing MED-V Reporting and Troubleshooting

After completing this module, students will be able to:

- Implement the MED-V Workspace Policy.
- Work with MED-V Workspace.
- Implement MED-V reporting and troubleshooting.

Module 6: Implementing Microsoft Application Virtualization

This module provides an overview of application virtualization, and it explains the requirements and interactions of App-V components. It explains how to plan the App-V infrastructure, and the available deployment scenarios. The module also provides an overview of the App-V server and App-V client installation process, and describes how to configure an App-V client.

Lessons

- Introduction to Application Virtualization
- Planning for Application Virtualization
- Deploying Application Virtualization Servers

Lab: Implementing Application Virtualization

- Planning the App-V Implementation
- Installing an App-V Management Server
- Installing an App-V Streaming Server
- Configuring a Client to Use the Streaming Server

After completing this module, students will be able to:

- Provide an overview of application virtualization.
- Plan for deploying application virtualization.
- Deploy application virtualization servers

Module 7: Planning and Deploying App-V Clients

This module explains how to configure and manage the application virtualization client. It provides an overview of the desktop and the terminal server client, and their installation methods. The module also describes the installation and configuration options for the client software.

Lessons

- Overview of the App-V Client
- Installing and Configuring the App-V Client
- Managing Client Configuration Features

Lab: Deploying the App-V Client in Stand-Alone Mode

- Installing and Configuring the App-V Client
- Installing a Stand-Alone Package

Lab: Managing Client Configuration Features

- Configuring the App-V Client Properties
- Configuring a Publishing Server for the App-V Client
- Configuring Applications by Using the Desktop Client
- Installing and Configuring Settings by Using the Group Policy App-V Template

After completing this module, students will be able to:

- Describe the purpose and functionality of the App-V client.
- Install and configure the App-V client.
- Manage client configuration features.

Module 8: Managing and Administering Application Virtualization

This module explains how to administer the App-V infrastructure by providing an overview of the App-V Management Console, its deployment on the administrative workstation, and the required permissions for administering the App-V Management server. Additionally, the module provides information about publishing and modifying virtualized applications, configuring version upgrades, enforcing license compliance, and managing server groups and server objects.

Lessons

- Using the Application Virtualization Management Console
- Publishing Applications into the App-V Environment
- Performing Advanced Administration Tasks for Application Virtualization

Lab: Publishing Applications in the App-V Environment

- Configuring System Options
- Managing App-V Administrators
- Publishing and Configuring an Application
- Verifying Application Permissions

Lab: Implementing License Enforcement

- Publishing an Application
- Creating a License Group
- Creating a New Provider Policy
- Testing License Enforcement

After completing this module, students will be able to:

- Manage App-V administrators and system options by using the Application Virtualization Management Console.
- Publish applications to the App-V environment.
- Perform advanced App-V administration tasks.

Module 9: Sequencing Applications for Virtualization

This module provides an overview of App-V sequencing and explains how to sequence applications for deployment by using the App-V infrastructure or a standalone installation. It explains how to install and configure the App-V Sequencer. The module also covers packaging options, and the procedures for upgrading existing packages, and creating standalone packages.

Lessons

- Overview of Application Sequencing
- Planning and Configuring the Sequencer Environment
- Performing Application Sequencing
- Advanced Sequencing Scenarios

Lab: Sequencing Applications for Virtualization

- Installing the App-V Sequencer
- Sequencing an Application
- Deploying and Testing the Application
- Upgrading and Redeploying the Application
- Sequencing a Hard-Coded Application

After completing this module, students will be able to:

- Describe how to implement application sequencing.
- Plan and configure the sequencer environment.
- Sequence applications for virtualization.
- Perform advanced sequencing.

Module 10: Configuring Remote Desktop Services and RemoteApp

This module explains how to configure and use Remote Desktop Services (RDS) and RemoteApp programs. It provides an overview of the main RDS role services and the services that are required for implementing RemoteApp. This module also covers RD Connection Broker and the integration of published RemoteApp programs with Windows 7 clients.

Lessons

- Overview of RDS
- Publishing RemoteApp by Using RDS
- Accessing RemoteApp Programs from Clients

Lab: Configuring RDS and RemoteApp Programs

- Preparing the RDS Environment
- Publishing RemoteApp Programs
- Accessing Published RemoteApp Programs

After completing this module, students will be able to:

- Describe the features of RDS.
- Publish RemoteApp programs.
- Access published RemoteApp programs from clients.

Module 11: Implementing User State Virtualization

This module explains the importance of the user state and how you can configure user state. It covers the features of user profiles, the profile types that Windows supports, and the differences between them. The module also covers folder redirection, and explains how to configure and use them.

Lessons

- Overview of User State
- Configuring Roaming Profiles and Folder Redirection

Lab: Implementing User State Virtualization

- Configuring and Testing Roaming Profiles
- Configuring and Testing Folder Redirection
- Configuring Offline Files

After completing this module, students will be able to:

- Describe the features of user profiles and the available user profile types.
- Configure roaming profiles and folder redirection.

Module 12: Configuring Virtual Desktop Infrastructure

This module describes how to configure and use Virtual Desktop Infrastructure (VDI). It provides an overview of Hyper-V server role and the integration of VDI with RDS and Hyper-V. The module also covers the procedures for configuring different types of virtual desktops and explains how to configure a virtual machine for use as a virtual desktop. Finally, the module provides details on deploying VDI to Windows 7 desktops.

Lessons

- Overview of Windows Server 2008 R2 Hyper-V
- Introduction to VDI
- Configuring Personal and Pooled Virtual Desktops

Lab: Configuring Virtual Desktop Infrastructure

- Configuring RDS Infrastructure for VDI
- Configuring a Virtual Machine for VDI
- Configuring and Testing the Personal Virtual Desktop
- Configuring and Testing User State Virtualization and the Virtual Desktop Pool

After completing this module, students will be able to:

- Describe the features and functionality of Hyper-V.
- Describe the features and benefits of VDI.
- Configure personal and pooled virtual desktops.

Module 13: Summary of Desktop Virtualization Technologies

This module reviews the features of the various desktop virtualization technologies that this course covers. The module also covers some real-world scenarios for implementing these technologies.

Lessons

- Review of Desktop Virtualization Technologies
- Real-World Usage Scenarios

After completing this module, students will be able to:

- Compare the features of various desktop virtualization technologies.
- Describe real-world scenarios for using desktop virtualization technologies.