Module Title : Course 20416B : Implementing Desktop Application Environments
Duration : 5 days

Course Description

In this five-day course, build the skills you need to design, deploy, and manage a physical and virtual Windows Server 2012 application management infrastructure, and focus on using Microsoft System Center 2012 Service Pack 1 (SP1). You will also learn to design, deploy, and manage Windows 8 Enterprise applications in a physical and virtual environment and in the cloud. This course is designed for experienced IT professionals who support medium to large enterprises, have previous experience working with operating systems running Windows Server, have their Windows 2012 Server certification (MCSA), and have taken course 20413: Designing and Implementing a Server Infrastructure or have equivalent skills. Note: This course maps to the skills and knowledge measured by Microsoft Exam 70-416: Implementing Desktop Application Environments.

Audience

This course is intended for Information Technology professionals who are interested in specializing in Windows 8 application deployments and managing the application environments for large organizations. People attending this training could be support technicians or currently in deployment roles and are considering taking the next step in their career or enhancing their skills in the areas of planning and deploying Windows 8 desktops.

A secondary audience for this course is IT professionals who are looking to take one or both exams: 70-415: Implementing an Enterprise Desktop and Device Infrastructure and 70-416: Implementing Desktop Application Environments as a stand-alone, or as part of the requirement for the MCSE: Desktop Infrastructure certification.

Prerequisites

This course requires that you meet the following prerequisites:
The attendee should have experience administering Windows Server in an environment that typically has the following characteristics:

- 2,500 to 50,000 or more users
- Multiple physical locations and multiple domain controllers
- Network services and resources such as messaging, databases, file and print, firewalls, Internet access, an intranet, and client computer management

The attendee should have:

- Experience supporting Windows 8 client desktops and deploying and managing applications, both physical and virtual.
- An MCSA and 20415B or equivalent knowledge.

In addition to their professional experience, students who attend this training should already have the following technical knowledge, and should:

- Have solid understanding of TCP/IP and networking concepts.
- Have a solid understanding of Windows and Active Directory Domain Services (AD DS), for example, domain user accounts, domain vs. local user accounts, user profiles, and group membership.
- Understand how to use scripts and batch files.
- Have solid understanding of security concepts such as authentication and authorization.
- Be able to perform a clean installation of Windows 8, upgrade to Windows 8, and migrate user-related data and settings from Windows XP.
- Be able to configure disks, partitions, volumes, and device drivers to enable Windows 8 to function as desired.
- Be able to configure and troubleshoot permissions and other settings to allow access to resources and applications on Windows 8 systems.
- Be able to configure settings to enable network connectivity.
- Be able to configure and troubleshoot a wireless network connection.
- Be able to configure and troubleshoot Windows 8 security
- Be able to configure mobile computers and devices.
- Understand the client administration capabilities of Windows Server and be familiar with management tools such as the Microsoft System Center suite of products.
- Understand the concepts of deployment,packaging,and imaging and Have a familiarity with SQL Server concepts.

Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills:

- 20410B: Installing and Configuring Windows Server 2012
- 20411B: Administering Windows Server 2012
- 20412B: Configuring Advanced Windows Server 2012 services
- 20415B: Implementing a Desktop Infrastructure

At Course Completion

After completing this course, students will be able to:

- Design an application distribution strategy that is appropriate for an organizational environment.
- Diagnose and remediate application compatibility problems for desktop and presentation virtualization-based deployments.
- Use Group Policy and Windows Intune to deploy applications to client devices.
- Deploy applications centrally using System Center 2012 Configuration Manager SP1.
- Configure self-service application deployment using System Center 2012 Configuration Manager SP1, System Center 2012 Service Manager SP1, and Windows Store apps.
- Design and deploy Windows Server 2012 roles and features to support presentation virtualization.
- Prepare, deploy and manage applications for Remote Desktop, RemoteApp, and Remote Desktop Web Access.
- Design and deploy Windows Server 2012 roles and features to support application virtualization.
- Virtualize and deploy applications by using App-V and System Center 2012 Configuration Manager SP1.
- Plan and configure the appropriate infrastructure to streamline the deployment of software updates to applications, and plan and configure application security.
- Plan and implement application upgrades, supersedence, and application coexistence.
- Monitor the deployment, performance, and utilization of applications and determine whether current application hosting platforms are meeting business needs.

Course Outline

Module 1: Designing an Application Distribution Strategy

This module discusses the high-level aspects of designing an application distribution strategy. The topics covered can help students identify the aspects in an environment that influence application distribution and identify the most common distribution methods used in the Windows environment.

Lessons

- Developing an Application Lifecycle Strategy
- Determining Business Requirements for Application Distribution
- Overview of Application Distribution Strategies

Lab : Designing an Application Distribution Strategy

- Choosing an Appropriate Application Deployment Strategy for the Product Catalog App

After completing this module, students will be able to:

- Describe how to develop an application lifecycle strategy.
- Describe the important factors to assess prior to application distribution design, including client configuration and deployment infrastructure.
- Describe application distribution strategies.
- Design an application distribution strategy.

Module 2: Diagnosing and Remediating Application Compatibility

This module describes the process for addressing common application compatibility issues experienced during a new operating system deployment. The module also explains how to use Microsoft Application Compatibility Toolkit (ACT) to help inventory, analyze, and mitigate application compatibility issues.

Lessons

- Diagnosing Application Compatibility Issues
- Evaluating and Implementing Remediation Solutions
- Resolving Compatibility Issues by Using ACT

Lab : Diagnosing and Remediating Application Compatibility

- Analyzing Applications for Potential Compatibility Issues
- Mitigating Application Compatibility Issues

After completing this module, students will be able to:

- Understand important considerations for diagnosing application compatibility issues.
- Explain the solutions available for remediating application compatibility issues.
- Resolve application compatibility issues with ACT.

Module 3: Deploying Software by Using Group Policy and Windows Intune This module discusses using Group Policy and Windows Intune to deploy software as part of a software deployment strategy. It also covers sideloading, which is the specialized software deployment method specific to Windows Store apps.**Lessons**

- Deploying Software by Using Group Policy
- Sideloading Windows Store Apps
- Deploying Software by Using Windows Intune

Lab : Centralizing Software Deployment by Using Group Policy and Windows Intune

- Deploying Software by Using Group Policy
- Sideloading a Windows Store App
- Performing Windows Intune Simulations

After completing this module, students will be able to:

- Deploy software centrally by using Group Policy.
- Install Windows Store apps by using sideloading.
- Deploy software to clients by using Windows Intune.

Module 4: Deploying Applications by Using Microsoft System Center 2012 Configuration Manager SP1

This module describes how to use System Center 2012 Configuration Manager SP1 to manage the software deployment and management lifecycle, including deploying software, targeting a group of user or computers, validating the success of software deployment, and removing software from computers when that software is no longer required.

Lessons

- Understanding Software Deployment by Using System Center 2012 Configuration Manager SP1
- Deploying Software by Using System Center 2012 Configuration Manager SP1

Lab : Deploying Applications by Using System Center 2012 Configuration Manager SP1

- Creating Queries by Using System Center 2012 Configuration Manager SP1
- Creating User and Device Collections
- Deploying Applications to Collections

After completing this module, students will be able to:

- Understand methods of deploying software with Microsoft System Center 2012 Configuration Manager Service Pack 1 (SP1).
- Use System Center 2012 Configuration Manager SP1 to deploy software.

Module 5: Configuring Self-Service Application Deployment

This module describes planning, configuring and using self-service application deployment. It describes configuring self-service application deployment for Windows Intune clients and for Microsoft System Center 2012 Configuration Manager clients, in addition to using Microsoft System Center 2012 - Service Manager and Microsoft System Center 2012 - Orchestrator to improve the self-service application deployment process.

Lessons

- Understanding Self-Service Application Deployment
- Configuring Self-Service with Windows Intune
- Self-Service Deployment by Using System Center 2012 Configuration Manager SP1
- Self-Service Deployment with Service Manager and Orchestrator

Lab : Configuring Self-Service Application Deployment

- Planning Self-Service Application Deployment
- Deploying Self-Service Software by Using the Configuration Manager Application Catalog
- Using the Configuration Manager Application Catalog

After completing this module, students will be able to:

- Plan self-service application deployment.
- Configure self-service application deployment for Windows Intune clients.
- Configure self-service application deployment for Microsoft System Center 2012 Configuration Manager clients.
- Use Microsoft System Center 2012 - Service Manager and Microsoft System Center 2012 - Orchestrator to improve the self-service application deployment process.

Module 6: Designing and Implementing Presentation Virtualization Infrastructure

This module introduces you to presentation virtualization concepts and to the components that are used for presentation virtualization in computers running Windows so that you can plan the deployment of apps using presentation virtualization in your environment.

Lessons

- Assessing Presentation Virtualization Requirements
- Planning Presentation Virtualization Infrastructure
- Deploying Presentation Virtualization Infrastructure
- Extending the Presentation Virtualization Infrastructure

Lab : Deploying and Implementing Presentation Virtualization Infrastructure

- Assessing Capacity Requirements for Presentation Virtualization
- Configuring Presentation Virtualization Infrastructure
- Configuring High Availability for Presentation Virtualization Infrastructure
- Configuring Remote Access for Presentation Virtualization Infrastructure

After completing this module, students will be able to:

- Describe how to assess presentation virtualization requirements.
- Describe how to plan presentation virtualization infrastructure.
- Describe how to deploy presentation virtualization infrastructure.
- Describe how to extend presentation virtualization infrastructure.

Module 7: Preparing, Configuring, and Deploying Presentation Virtualization Applications

This module discusses presentation virtualization strategies and which strategy to use in a given situation. It also discusses how to deploy applications to Remote Desktop Session Host servers as traditional, RemoteApp, and Remote Desktop Web Access applications.

Lessons

- Determining Presentation Virtualization Application Strategies
- Planning and Deploying Remote Desktop, RemoteApp, and Remote Desktop Web Access

Lab : Configuring Applications for Presentation Virtualization

- Configuring Access to RD Session Host Resources
- Deploying RD Session Host Desktop Applications
- Configuring and Deploying a RemoteApp Application
- Verifying Applications by Using RD Web Access

After completing this module, students will be able to:

- Determine an appropriate presentation virtualization application strategy.
- Plan how to deploy applications and deploy them to Remote Desktop Session Host (RD Session Host) servers as traditional, RemoteApp, and Remote Desktop Web Access (RD Web Access) applications.

Module 8: Designing and Deploying an Application Virtualization Environment

This module discusses how to determine which application virtualization infrastructure model best suits an organization's needs. Additionally, this module covers how to determine which Windows Server 2012 roles and features are needed to support the model you have selected, and which Group Policy settings should be configured.

Lessons

- Overview of Application Virtualization Models
- Deploying Application Virtualization Infrastructure Components
- Configuring Application Virtualization Client Support

Lab : Planning and Deploying Application Virtualization Infrastructure

- Planning the Deployment of App-V Roles and Features
- Deploying App-V Infrastructure and Configuring App-V Client Settings

After completing this module, students will be able to:

- Choose an appropriate application virtualization model to meet your business requirements.
- Deploy components to support your chosen application virtualization model.
- Deploy and configure the Microsoft Application Virtualization (App-V) 5 client.

Module 9: Preparing, Sequencing, and Deploying Virtual Applications

This module describes sequencing applications by using the Microsoft Application Virtualization (App-V) Sequencer. It also describes how to stream sequenced applications and how to locally install sequenced applications.

Lessons

- Sequencing Applications with App-V and Deploying App-V Applications

Lab : Preparing, Sequencing, and Deploying Virtual Applications

- Installing and Configuring the App-V Sequencer and Sequencing Applications
- Preparing App-V Applications by Using System Center 2012 Configuration Manager SP1
- Deploying Sequenced Applications

After completing this module, students will be able to:

- Install the App-V 5.0 Sequencer and sequence applications.
- Deploy sequenced applications.

Module 10: Planning and Implementing Application Updates and Security

This module discusses how to configure the appropriate infrastructure to streamline the deployment of software updates to applications. It also covers how to plan and configure application security.

Lessons

- Planning Application Updates
- Deploying Updates by Using WSUS
- Deploying Application Updates by Using System Center 2012 Configuration Manager SP1
- Implementing Application Security

Lab : Preparing and Deploying Application Updates

- Preparing a System Center 2012 Configuration Manager SP1 Site to Support Software Updates
- Updating Deployed Applications by Using System Center 2012 Configuration Manager SP1
- Resequencing an App-V Application and Deploying AppLocker Policy

After completing this module, students will be able to:

- Plan application updates.
- Deploy application updates by using Microsoft Windows Server Update Services (WSUS).
- Deploy application updates by using Microsoft System Center 2012 Configuration Manager with Service Pack 1 (SP1).
- Implement application security.

Module 11: Planning and Implementing Application Upgrades

This module covers planning and implementing application upgrades and supersedence, including how to deploy multiple versions of an application, how to uninstall applications, how to retire applications, and how to manage user settings. It also covers planning application concurrency and implementing it by using App-V, Client Hyper-V, RemoteApp, VDI, and Remote Desktop Services.

Lessons

- Overview of Application Upgrades and Overview of Application Concurrency

Lab : Upgrading Applications

- Planning an Application Upgrade Strategy
- Deploying an Application and Replacing a Deployed Application
- Configuring Application Version Coexistence

After completing this module, students will be able to:

- Plan and implement application upgrades and supersedence.
- Plan and implement application concurrency.

Module 12: Monitoring Application Deployment, Use, and Performance

This module describes using application monitoring as an essential part of managing applications in an enterprise environment. It also covers planning software inventory and metering, and monitoring application resource use.

Lessons

- Planning Application Monitoring
- Planning Software Inventory and Metering
- Monitoring Application Resource Utilization

Lab : Monitoring Application Deployment, Utilization, and Performance

- Configuring Asset Intelligence
- Configuring System Center 2012 Operations Manager SP1 for Monitoring a Server

After completing this module, you will be able to:

- Describe how to plan application monitoring.
- Describe how to plan software inventory and metering.

Describe how to monitor application resource use.