MOC 20415B: Implementing a Desktop Infrastructure

Course Overview

This course provides students with the knowledge and skills needed to plan, design, and implement a Windows 8 desktop infrastructure.

Course Introduction

Module 01 - Assessing and Determining Desktop Deployment Options
Lesson 1: Overview of the Enterprise Desktop Life Cycle
The Enterprise Desktop Life Cycle Model
Planning and Purchasing
Desktop Deployment
Application Management
Operation and Support
Upgrade and Retirement
Lesson 2: Assessing Hardware and Infrastructure Readiness for a Desktop Deployment
Guidelines for an Effective Enterprise Desktop Deployment
Discussion: Assessing the Current Environment
Tools Used to Help Assess the Current Environment
Configuration Manager Features to Help Infrastructure Assessments
Lesson 3: Using MAP to Assess Deployment Readiness
Phased Approach of MAP Assessment
Using MAP Inventory and Assessment Reporting
MAP Sample Database
Lesson 4: Overview of Enterprise Desktop Deployment Methods
Selecting a Deployment Method for Enterprise Desktops
Considerations for Using a Media-Based Local Installation
What Is LTI Deployment?
What Is ZTI Deployment?
Providing a Remote Desktop Environment by Using VDI
Using Windows To Go as a Desktop Deployment Option
Lesson 5: Volume Activation Technologies for Enterprise Desktops
What Is Activation?
Volume Activation Technologies
How Active Directory-Based Activation Works
How KMS Activation Works
Tools Used to Manage Activation
Implementing Activation Solutions in a Multisite Environment
Demo - Using Hyper-V Manager
Demo - Collecting Infrastructure Data
Demo - Implementing a Volume Activation Solution
Module 01 Review
Module 02 - Planning an Image Management Strategy

Lesson 1: Overview of Windows Image Format
- Discussion: Challenges of Maintaining Images in Your Organization
- Types of Images Used for Current Windows Environments
- Benefits of the Windows Image File Format
- DISM vs. ImageX
- Demo - Using Image Management Tools to View the Contents of a Windows Image File

Lesson 2: Overview of Image Management
- Considerations for Managing Operating System Images
- What Is a Boot Image?
- What Is an Install Image?
- Image Strategies
- Maintaining and Servicing an Image
- Managing Device Drivers for Images

Module 02 Review

Module 03 - Configuring Desktop Security

Lesson 1: Implementing a Centralized Desktop Security Solution
- Discussion: Securing Enterprise Desktops
- Discussion: Applying Security Before or After Image Deployment
- Audit Policies for Enterprise Desktops
- Managing UAC Policies
- Demo - Configuring Audit Policies and User Account Control
- Device and Media Restriction Policies for Enterprise Desktops
- Removable Storage Access GP Settings
- Demo - Using Group Policy to Configure Device and Media Restrictions

Lesson 2: Planning and Implementing BitLocker
- Planning for BitLocker in the Enterprise Environment
- Prerequisites for Implementing BitLocker
- MBAM
- Planning and Deploying the MBAM Server Infrastructure
- Planning and Deploying the MBAM Client
- Demo - Implementing the MBAM Server and Client Components
- Managing BitLocker Usage and Compliance
- Recovering Encrypted Drives by Using MBAM

Lesson 3: Planning and Implementing EFS
- Prerequisites for Implementing EFS
- How EFS Works
- Planning for EFS in the Enterprise Environment
- Comparing Self-Signed Certificates to CA-Issued Certificates
- Planning for Key and Data Recovery
- Demo - Configuring EFS in an Enterprise Environment

Module 03 Review

Module 04 - Capturing and Managing a Desktop Operating System Image

Lesson 1: Overview of Windows ADK
- What Is Windows ADK?
- Deployment Features Included in Windows ADK
- Assessment Features Included in Windows ADK

Module 04 Review
Deployment Process Supported by Windows ADK

Lesson 2: Managing Windows PE
What Is Windows PE?
Windows PE Requirements
Limitations of Windows PE
Common Command-Line Tools for Supporting Windows PE
Optional Components Supported by Windows PE
Demo - Customizing a Windows PE Image
Demo - Creating Windows PE Media
Demo - Installing Windows ADK

Lesson 3: Building a Reference Image by Using Windows SIM and Sysprep
Overview of Windows Setup
What Are the Windows Setup Configuration Passes?
The Process of Installing Windows Setup
Modifying Setup Processes by Using Answer Files
Demo - Creating Answer Files by Using Windows SIM
Preparing Installations by Using Sysprep
Overview of the Sysprep Process
Using Answer Files with Sysprep

Lesson 4: Capturing and Servicing a Reference Image
Overview of DISM
How to Capture Images by Using DISM
How to Mount and Modify Images by Using DISM
Servicing an Image by Using DISM
Overview of Activation and Rearming
Demo - Mounting and Servicing an Image by Using DISM

Lesson 5: Configuring and Managing Windows DS
Overview of Windows DS
Image Types Supported by Windows DS
Considerations for Designing a Windows DS Environment
Process for Installing and Configuring the Windows DS Environment
Adding Existing Images and Creating Capture Images
Creating a Custom Install Image by Using the Image Capture Wizard
Provisioning Drivers by Using Windows DS
Deploying VHD Images by Using Windows DS
Module 04 Review

Module 05 - Planning and Implementing User State Migration
Lesson 1: Overview of User State Migration
What is User State Migration?
Tools for User State Migration
Features and Elements of USMT
How USMT Works

Lesson 2: Planning User State Migration
Considerations for a User State Migration
Common Migration Scenarios
Determining What to Migrate
Choosing a Migration Store and Location
Demo - Creating and Customizing USMT XML Files
Demo - Capturing and Restoring User State by Using USMT
Lesson 3: Migrating User State by Using USMT
Creating a Custom XML Migration File
Creating a Config.xml File
Capturing User State by Using ScanState
Restoring User State by Using LoadState
Performing an Offline Migration
Best Practices for Using USMT
Demo - Upgrade to Windows 8
Module 05 Review

Module 06 - Planning and Deploying Desktops by Using the Microsoft Deployment Toolkit
Lesson 1: Planning for the LTI Environment
Overview of the LTI Process
Planning the MDT Imaging Strategy
Prerequisites for Using MDT to Perform LTI
What Is the MDT Deployment Share?
Overview of the Task Sequence

Lesson 2: Implementing MDT 2012 for LTI
Installing and Configuring MDT 2012
Demo - Installing MDT
Overview of the MDT Deployment Process
Demo - Configuring the Deployment Share
Overview of the MDT Configuration Files
Overview of the MDT Task Sequence Templates
Demo - Configuring a Task Sequence and Updating the Deployment Share
Deploying Windows Operating Systems by Using the Deployment Wizard
Advanced Configuration and Monitoring Options for MDT

Lesson 3: Integrating Windows DS with MDT
How Windows DS Enhances an MDT Environment
Creating and Importing an MDT Boot Image into Windows DS
Windows DS Multicasting with MDT Deployments
Module 06 Review

Module 07 - Planning and Deploying Desktops by Using System Center 2012 Configuration Manager
Lesson 1: Planning the ZTI Environment
Overview of the Configuration Manager Site Infrastructure
Overview of Configuration Manager Site Server Roles
Overview of Operating System Deployment Scenarios for ZTI
Server Roles and Tasks for Operating System Deployment Processes
Infrastructure Components to Support Operating System Deployment
Integrating MDT with Configuration Manager
Demo - Configuring MDT Integration

Lesson 2: Preparing the Site for Operating System Deployment
Overview of Site Preparation Tasks
Preparing the Distribution Point to Support PXE and Multicast
Configuring the Network Access Account
Preparing Boot Images
Operating System Image and Operating System Installers
Demo - Creating an Operating System Image Package
Demo - Managing Device Drivers
Additional Packages Used in an Operating System Deployment

**Lesson 3: Building a Reference Image by Using a Configuration Manager Task Sequence**
- Strategies for Configuring a Reference Computer
- Overview of Configuration Manager Task Sequences
- Creating a Build and Capture Task Sequence
- Demo - Creating a Build and Capture Task Sequence
- Deploying a Build and Capture Task Sequence
- Demo - Deploying a Build and Capture Task Sequence
- Overview of Task Sequence Media

**Lesson 4: Deploying Client Images by Using MDT Task Sequences**
- Process for Deploying an Operating System Image
- Creating a Client Task Sequence by Using MDT
- Integrating Application Deployment by Using a Task Sequence
- Monitoring and Troubleshooting Image Deployments
- Module 07 Review

**Module 08 - Planning and Implementing a Remote Desktop Services Infrastructure**

**Lesson 1: Overview of Remote Desktop Services**
- Remote Desktop Services in Windows Server 2012
- Comparing Virtual Machine-based Desktop Deployment and Session-Based Virtualization Deployment
- Types of Virtual Machine-based Desktop Deployment
- Types of Session-Based Virtualization Deployment
- Overview of Remote Desktop Role Services
- Overview of the Remote Desktop Client Experience
- Methods Used to Connect to the Remote Desktop Services Environment

**Lesson 2: Planning the Remote Desktop Services Environment**
- Assessing Remote Desktop Infrastructure Requirements
- Planning for RD Licensing Requirements
- Implementing the RD Connection Broker
- Considerations for the RD Web Access Role
- Planning for the RD Virtualization Host
- Planning for the RD Session Host
- Overview of Remote Desktop Services Collections
- Considerations for User Profile Data

**Lesson 3: Configuring a Virtual Machine-based Desktop Deployment**
- Overview of the VDI Deployment Process
- Creating and Configuring a Virtual Desktop Machine-Based Deployment
- Preparing Virtual Desktop Templates for Virtual Machine-Based Desktop Deployment
- Modifying Deployment Properties
- Creating Virtual Desktop Collections
- Options for High Availability

**Lesson 4: Configuring a Session-Based Desktop Deployment**
- Overview of the Session-Based Desktop Deployment Process
- Demo - Creating a Session-Based Desktop Deployment
- Process for Creating a Session Collection
- Overview of Session Collection Properties
- Overview of RemoteApp Programs
- Demo - Configuring RemoteApp Publishing
- Options for High Availability

**Lesson 5: Extending the Remote Desktop Services Environment to the Internet**
Considerations for RD Gateway Placement
Certificate Requirements for the RD Gateway
Demo - Configuring Deployment Properties for Using an RD Gateway Server
Planning and Configuring RD Gateway Authorization Policies
Integrating NAP with the RD Gateway
Configuring the RDC Client to Use the RD Gateway
Module 08 Review

Module 09 - Managing User State Virtualization for Enterprise Desktops
Lesson 1: Overview of User State Virtualization
What Is Windows User State?
Types of User Profiles
Discussion: Challenges of User Profiles
What Is User State Virtualization?
Benefits of User State Virtualization
User State Virtualization Technologies

Lesson 2: Planning User State Virtualization
The User State Virtualization Planning Strategy
Assessing User Data Requirements
Assessing User Settings
Evaluating Compatibility
Evaluating Usage Scenarios
Evaluating Infrastructure and Manageability Requirements

Lesson 3: Configuring Roaming Profiles, Folder Redirection, and Offline Files
How Roaming User Profiles Works
Configuring Roaming User Profiles
How Folder Redirection Works
Demo - Configuring Folder Redirection
Managing Offline Files
Demo - Configuring and Managing Offline Files Settings

Lesson 4: Implementing UE-V
Overview of UE-V
UE-V Architecture
Deploying the UE-V Agent
Managing the UE-V Agent
Demo - Managing the UE-V Agent with Group Policy
Configuring Storage Settings for UE-V
Creating Custom UE-V Settings Location Templates
Module 09 Review

Module 10 - Planning and Implementing an Updates Infrastructure to Support Enterprise Desktops
Lesson 1: Planning an Updates Infrastructure for the Enterprise
What Is an Updates Infrastructure?
Overview of Update Classifications
Determining Systems to Update
Methods for Deploying and Managing Updates

Lesson 2: Supporting Software Updates with System Center 2012 Configuration Manager
Configuration Manager Software Update Architecture
Synchronizing the Software Update Catalog Metadata
Scanning for Update Compliance
Software Update Client Settings and Actions
Methods for Determining Software Update Status
Demo - Installing the Software Update Point and Configuring Client Settings
Manual Deployment of Software Updates
Demo - Deploying Software Updates
Configuring Automatic Deployment Rules
Software Update Reports

Lesson 3: Managing Updates for Virtual Machines and Images
Maintaining Updates for Windows Images
Managing Software Updates for Virtual Machines
Servicing Workflow for Offline Virtual Machines in a VMM Library
Servicing Virtual Machine Templates
Updating Virtual Machines That Are Stopped on a Host
Updating VHDs Stored in the VMM Library
Infrastructure and Server Preparation to Support Virtual Machine Servicing Tool 2012
Preparing the Virtual Machines and Updates
Configuring Virtual Machine Servicing Tool 2012 Settings and Servicing Jobs

Lesson 4: Using Windows Intune for Managing Software Updates
Features of Windows Intune
Deploying and Enrolling Windows Intune Clients
Configuring Windows Intune Service Settings for Updates
Configuring Policy Templates for Managing Update Settings
Deploying Updates to Client Computers
Module 10 Review

Module 11 - Protecting Enterprise Desktops from Malware and Data Loss
Lesson 1: Overview of System Center 2012 Endpoint Protection
Benefits of System Center 2012 Endpoint Protection
System Center 2012 Endpoint Protection Architecture
Planning Sources for Definition Updates
Creating and Deploying the Antimalware Policy
Demo - Configuring System Center 2012 Endpoint Protection Server Settings and Antimalware Policies

Lesson 2: Configuring System Center 2012 Endpoint Protection Client Settings and Monitoring Status
Client Settings for System Center 2012 Endpoint Protection
Demo - Configuring Client Settings for System Center 2012 Endpoint Protection
Managing System Center 2012 Endpoint Protection
Configuring Antimalware Alerts
Monitoring System Center 2012 Endpoint Protection Status

Lesson 3: Using Windows Intune Endpoint Protection
Process for Deploying Windows Intune Endpoint Protection
Determining Computer Malware Protection Status
Configuring Policies to Support Windows Intune Endpoint Protection
Investigating Malware Activity

Lesson 4: Protecting Desktops by Using DPM
Overview of DPM Features and Architecture
Usage Scenarios for DPM
Methods for Managing Protected Client Computers
Protecting Client Data by Using Protection Groups
Demo - Configuring Protection Groups for Client Computers
Recovering Client Computer Data
Monitoring Client Computers by Using DPM Reports
Module 11 Review

Module 12 - Monitoring the Performance and Health of the Desktop Infrastructure

Lesson 1: Performance and Health Monitoring of the Desktop Infrastructure
Desktop Infrastructure Monitoring Scenarios
Methods Used for Monitoring the Health and Performance of Enterprise Desktops
Demo - Configuring Auditing and Event Viewer Subscriptions
Generating a Reliability Report
Best Practices for Monitoring the Performance of Desktop Computers
What Is Agentless Exception Monitoring?

Lesson 2: Monitoring VDI
Considerations for Monitoring VDI
Monitoring RD Virtualization Host Performance
Monitoring RD Session Host Performance
Monitoring VDI by Using Operations Manager
Demo - Monitoring Servers by Using Operations Manager
Module 12 Review
Course Closure

Total Duration: 14h 15m