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Software Development & Education Center

Microsoft Windows Server 2012

Microsoft Windows Server 2012
(MCSE)
Course 20413A: Designing and Implementing a Server Infrastructure

About this Course
This 5-day instructor-led course provides you with the skills and knowledge needed to plan, design, and deploy a physical and logical Windows Server 2012 Active Directory Domain Services (AD DS) infrastructure. The course also provides the skills to perform name resolution, application integration, and optimization of automate remediation and maintenance of network services.

Audience Profile
Candidates for this course have good Windows client and server operating system knowledge and basic AD DS and networking experience in an enterprise/small business (SMB) environment together with application configuration experience. This course is intended for IT professionals who are responsible for planning, designing, and deploying a physical and a logical Windows Server 2012 enterprise Active Directory Domain Services (AD DS) infrastructure including the network services necessary. Students have experience of previous Windows Server operating systems and possess Windows Server 2012 certification (MCSA) or equivalent skills. This course is also intended for IT professionals who are looking to take the exam 70-413: Designing and Implementing a Server Infrastructure, as a stand-alone, or as part of the requirement for the MCSE: Server Infrastructure certification.

At Course Completion
After completing this course, students will be able to:

- Implement server upgrade and migration.
- Design an automated server installation strategy.
- Plan and implement a server deployment infrastructure.
- Plan and implement file and storage services.
- Design and implement a Dynamic Host Configuration Protocol (DHCP) solution.
- Design a name resolution solution strategy.
- Design and manage an IP address management solution.
• Design a VPN solution.
• Design a DirectAccess solution.
• Implement a scalable remote access solution.
• Design a network protection solution.
• Implement a network protection solution.
• Design a forest and domain infrastructure.
• Implement a forest and domain infrastructure.
• Design a Group Policy strategy.
• Design an Active Directory permission model.
• Design an Active Directory sites topology.
• Design a domain controller strategy.
• Design and implement a branch office infrastructure.

Prerequisites:
Before attending this course, students must have:

• A good understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) fundamentals and networking concepts.
• A good working knowledge of both Windows Server 2012 and Active Directory Domain Services (AD DS). For example, domain user accounts, domain vs. local user accounts, user profiles, and group membership.
• A good understanding of both scripts and batch files.
• A solid understanding of security concepts, such as authentication and authorization.
• Familiarity with deployment, packaging, and imaging tools.
• Ability to work in a team/virtual team.
• Ability to produce good documentation and have the appropriate communication skills to create proposals and make budget recommendations.
• Knowledge equivalent to Windows 2012 MCSA.
Course Outline

Module 1: Planning Server Upgrade and Migration
This module explains how to plan a server upgrade and migration strategy.
Lessons
- Upgrade and Migration Considerations
- Creating a Server Upgrade and Migration Plan
- Planning for Virtualization

Lab: Planning Server Upgrade and Migration
- Planning a Server Upgrade and Migration Strategy

Module 2: Planning and Implementing a Server Deployment Infrastructure
This module explains how to design an automated server installation strategy and plan and implement a server deployment infrastructure.
Lessons
- Selecting an Appropriate Server Imaging Strategy
- Selecting a Deployment Automation Strategy
- Implementing an Automated Deployment Strategy

Lab: Planning and Implementing a Server Deployment Infrastructure
- Planning an Automated Server Installation and Deployment Strategy
- Preparing the Windows Server Image
- Deploying Windows Server

Module 3: Designing and Maintaining an IP Configuration and Address Management Solution
This module explains how to design and maintain IP address management (IPAM) and a Dynamic Host Configuration Protocol (DHCP) solution.
Lessons
- Designing and Implementing DHCP
- Planning and Implementing DHCP Scopes
- Planning and Implementing an IPAM Provisioning Strategy
Lab: Designing and Maintaining an IP Configuration and IP Address Management Solution

- Designing an IP Addressing Scheme for Contoso (Optional)
- Planning DHCP to Support Your Proposed Scheme
- Planning an IPAM Deployment
- Implementing DHCP and IPAM

Module 4: Designing and Implementing Name Resolution

This module explains how to design a name resolution solution strategy.

Lessons

- Designing a DNS Server Implementation Strategy
- Designing the DNS Namespace
- Designing and Implementing DNS Zones
- Designing and Configuring DNS Zone Replication and Delegation
- Optimizing DNS Servers
- Designing DNS for High Availability and Security

Lab: Designing and Implementing Name Resolution

- Designing a DNS Name Resolution Strategy
- Planning a DNS Server Placement Strategy
- Planning DNS Zones and DNS Zone Replication
- Implementing DNS

Module 5: Designing and Implementing an Active Directory Domain Services Forest and Domain Infrastructure

This module explains how to design and implement an AD DS forest and domain infrastructure.

Lessons

- Designing an AD DS Forest
- Designing and Implementing AD DS Forest Trusts
- Designing and Implementing AD DS Domains
- Designing DNS Namespaces in AD DS Environments
- Designing AD DS Domain Trusts
Lab: Designing and Implementing an AD DS Forest Infrastructure
- Designing an AD DS Forest Infrastructure
- Implementing AD DS Forest Trusts

Lab: Designing and Implementing an AD DS Domain Infrastructure
- Designing an AD DS Domain Infrastructure
- Implementing an AD DS Domain Infrastructure

Module 6: Designing and Implementing an OU Infrastructure and AD DS Permissions Model
This module explains how to design and implement an organizational unit (OU) infrastructure and AD DS permissions model.

Lessons
- Planning the AD DS Administrative Tasks Delegation Model
- Designing the OU Structure
- Designing and Implementing an AD DS Group Strategy

Lab: Designing and Implementing an AD DS OU Infrastructure and AD DS Delegation Model
- Designing an OU Infrastructure
- Implementing the OU Design
- Designing and Implementing an AD DS Permissions Model

Module 7: Designing and Implementing a Group Policy Object Strategy
This module explains how to design and implement a Group Policy Object (GPO) strategy.

Lessons
- Gathering the Information Required for a GPO Design
- Designing and Implementing GPOs
- Designing GPO Processing
- Planning Group Policy Management

Lab: Designing and Implementing Group Policy Object Strategy
- Designing a GPO Strategy
- Implementing the GPO Design
Module 8: Designing and Implementing an AD DS Physical Topology
This module explains how to design an AD DS sites topology and a domain controller placement strategy.

Lessons
- Designing and Implementing AD DS Sites
- Designing AD DS Replication
- Designing the Placement of Domain Controllers
- Virtualization Considerations for Domain Controllers
- Designing Highly-Available Domain Controllers

Lab: Designing and Implementing an AD DS Physical Topology
- Designing AD DS Sites and AD DS Replication
- Planning the Placement of Domain Controllers
- Implementing AD DS Sites and Domain Controllers

Module 9: Planning and Implementing Storage
This module explains how to plan and implement storage.

Lessons
- Storage Considerations
- Planning and Implementing iSCSI SANs

Lab: Planning and Implementing Storage
- Planning a Storage Solution
- Implementing Storage Services

After completing this module, students will be able to:
- Plan for efficient storage.
- Plan and implement an iSCSI storage area network.

Module 10: Planning and Implementing File Services
This module explains how to plan and implement file services.

Lessons
- Planning and Implementing a Distributed File System
- Planning and Implementing BranchCache
- Planning and Implementing Dynamic Access Control
Lab: Designing and Implementing File Services

- Planning Data Access
- Planning and Implementing Dynamic Access Control

**Module 11: Designing and Implementing Network Access Services**

This module explains how to design and implement network access services.

**Lessons**

- Designing and Implementing Remote Access Services
- Designing RADIUS Authentication by Using a Network Policy Server
- Designing a Perimeter Network
- Planning and Implementing DirectAccess

Lab: Designing and Implementing Network Access Services

- Planning and Implementing a VPN Solution
- Planning and Implementing a DirectAccess Solution

**Module 12: Designing and Implementing Network Protection**

This module explains how to design and implement network protection.

**Lessons**

- Overview of Network Security Design
- Identifying and Mitigating Common Network Security Threats
- Designing and Implementing a Windows Firewall Strategy
- Designing and Implementing a Network Access Protection Infrastructure

Lab: Designing and Implementing Network Protection

- Designing a Windows Firewall Solution
- Implementing a Windows Firewall Solution
- Designing a NAP Solution
- Implementing NAP with VPN Enforcement
About this Course
In this course, students will learn how to plan and implement some of the more advanced features available in Windows Server 2012. Course 20413A is a prerequisite course for Course 20414A.

Audience Profile
This course is intended for Information Technology (IT) professionals who are responsible for planning, designing and deploying a physical and logical Windows Server 2012 enterprise and Active Directory Domain Services (AD DS) infrastructures including the network services. Candidates would typically have experience of previous Windows Server operating systems and have Windows Server 2012 certification (MCSA) or equivalent skills. The secondary audience for this course will be candidates are IT professionals who are looking to take the exam 70-414: Implementing an Advanced Enterprise Server Infrastructure, as a standalone, or as part of the requirement for the MCSE certification.

At Course Completion
After completing this course, students will be able to:

- Plan and implement server virtualization strategy.
- Plan and implement networks and storage for virtualization.
- Plan and deploy virtual machines.
- Manage a virtual machine deployment.
- Plan and implement a server monitoring strategy.
- Plan and implement high availability for file services and applications.
- Plan and implement a highly available infrastructure using failover clustering.
- Plan and implement a business continuity strategy.
- Plan and implement a public key infrastructure (PKI).
- Plan and implement an identity federation infrastructure.
- Plan and Implement an information rights management infrastructure.
Prerequisites

Before attending this course, students must have:

- Understanding of TCP/IP and networking concepts.
- Understanding of Windows Server 2012 and AD DS, including planning, designing and deploying.
- Understanding of scripts and batch files.
- Understanding of security concepts such as authentication and authorization.
- Understanding of deployment, packaging, and imaging tools.
- Working in a team or a virtual team.
- Creating proposals and making budget recommendation.
- Have achieved the Windows Server 2012 MCSA certification as well as information in the course 20413A: Designing and Implementing an Enterprise Server Infrastructure.
Course Outline

Module 1: Planning and Implementing a Server Virtualization Strategy
This module explains how to plan and implement a server virtualization strategy using Microsoft System Center 2012.

Lessons
- Overview of System Center 2012 Components
- Integrating System Center 2012 and Server Virtualization
- Planning and Implementing a Server Virtualization Host Environment

Lab: Planning and Implementing a Server Virtualization Strategy
- Planning the Hyper-V Host Deployment
- Configuring Hyper-V Host Groups
- Configuring VMM Libraries

Module 2: Planning and Implementing Networks and Storage for Virtualization
This module explains how to plan a storage infrastructure for a Hyper-V server virtualization deployment.

Lessons
- Planning a Storage Infrastructure for Virtualization
- Implementing a Storage Infrastructure for Virtualization
- Planning and Implementing a Network Infrastructure for Virtualization

Lab: Planning and Implementing Virtualization Networks and Storage
- Planning a Storage Infrastructure for Virtualization
- Planning a Network Infrastructure for Virtualization
- Implementing a Storage Infrastructure for Virtualization
- Implementing a Network Infrastructure for Virtualization

Module 3: Planning and Deploying Virtual Machines
This module explains how to plan and deploy virtual machines on Windows Hyper-V.

Lessons
- Planning Virtual Machine Configuration
- Preparing for Virtual Machine Deployments with VMM
- Deploying Virtual Machines
Lab: Planning and Implementing a Virtual Machine Deployment and Management Strategy

- Planning Physical to Virtual Server Conversions
- Planning Virtual Machine and Service Templates
- Configuring VMM Profiles and Templates

Module 4: Planning and Implementing a Virtualization Administration Solution

This module explains how to plan and implement a virtualization administration solution by using System Center 2012.

Lessons

- Planning and Implementing Microsoft System Center Administration
- Planning and Implementing Self-Service with System Center
- Planning and Implementing Automation with System Center

Lab: Planning and Implementing a Virtualization Administration Solution

- Planning Administrative Delegation and Self-Service in System Center 2012
- Configuring Delegated Administration and Self-Service in VMM
- Configuring Process Automation in System Center 2012

Module 5: Planning and Implementing a Server Monitoring Strategy

This module explains how to plan and implement a server monitoring strategy using the Windows Server 2012 tools and using Microsoft System Center 2012 - Operations Manager (Operations Manager).

Lessons

- Planning Monitoring in Windows Server 2012
- Overview of System Center Operations Manager
- Planning and Configuring Monitoring Components
- Configuring Integration with VMM

Lab: Implementing a Server Monitoring Strategy

- Configuring Server Monitoring Using Windows Server 2012
- Implementing Operations Manager Monitoring
- Configuring the Operations Manager Monitoring Components
- Monitoring Virtual Machines and Host Machines
Module 6: Planning and Implementing High Availability for File Services and Applications

This module explains how to plan and implement an application and file services infrastructure that is highly available.

Lessons

- Planning and Implementing Storage Spaces
- Planning and Implementing DFS
- Planning and Implementing Network Load Balancing

Lab: Planning and Implementing High Availability for File Services and Applications

- Planning a High Availability Strategy for File Services
- Planning a High Availability Strategy for Web Applications
- Implementing a High Availability Solution for File Storage
- Implementing a High Availability Solution Using Network Load Balancing

Module 7: Planning and Implementing a Highly Available Infrastructure Using Failover Clustering

This module explains how to plan and implement a highly available server infrastructure by using the failover clustering features in Windows Server 2012.

Lessons

- Planning a Failover Clustering Infrastructure
- Implementing Failover Clustering
- Integrating Failover Clustering with Server Virtualization
- Planning a Multi-Site Failover Cluster

Lab: Planning and Implementing a Highly Available Infrastructure Using Failover Clustering

- Designing Highly Available Server Roles
- Implement Hyper-V Replica
- Deploy a Failover Cluster
- Implement a Scale-Out File Server
- Implement Highly Available Virtual Machines
- Implement Operations Manager and VMM Integration
Module 8: Planning and Implementing an Server Updates Infrastructure
This module explains how to plan and implement an infrastructure for updating Windows Servers and virtual machines.

Lessons
- Planning and Implementing a Windows Server Update Services (WSUS) Deployment
- Planning Software Updates with System Center 2012 Configuration Manager
- Planning and Implementing Updates in a Server Virtualization Infrastructure

Lab: Planning and Implementing an Update Remediation Infrastructure
- Implement Host Updating in VMM
- Configuring Cluster-Aware Updating
- Planning a WSUS Deployment
- Deploying a Replica Server
- Configure and Validate the WSUS Server Deployment

Module 9: Planning and Implementing a Business Continuity Strategy
This module explains how to plan and implement a business continuity strategy in a Windows Server 2012 environment.

Lessons
- Overview of Business Continuity Planning
- Planning and Implementing Backup Strategies
- Planning and Implementing Recovery
- Planning and Implementing Virtual Machine Backup and Recovery

Lab: Implementing a Virtual Machine Backup Strategy with Data Protection Manager
- Configuring Data Protection Manager
- Implementing Backup and Restore for Virtual Machine Data
- Implementing Virtual Machine Backup and Recovery using Data Protection Manager

Module 10: Planning and Implementing an Public Key Infrastructure
This module explains how to plan and implement a PKI deployment, and plan and implement a certificate management solution.
Lessons

- Planning and Implementing a Certification Authority Deployment
- Planning and Implementing Certificate Templates
- Planning and Implementing Certificate Distribution and Revocation
- Planning and Implementing Key Archival and Recovery

Lab: Planning and Implementing an Active Directory Certificate Services (AD CS) Infrastructure

- Planning the AD CS Deployment
- Deploying the Certificate Authority (CA) Infrastructure
- Implementing Certificate Templates
- Implementing Certificate Revocation and Distribution

Module 11: Planning and Implementing an Identity Federation Infrastructure

This module explains how to plan and implement an AD FS server deployment and claims aware application access.

Lessons

- Planning and Implementing an AD FS Server Infrastructure
- Planning and Implementing AD FS Claim Providers and Relying Parties
- Planning and Implementing AD FS Claims and Claim Rules

Lab: Planning and Implementing an Active Directory Federation Services (AD FS) Infrastructure

- Designing the AD FS Deployment
- Configuring Prerequisite Components for AD FS
- Deploying AD FS for Internal Users
- Deploying AD FS for a Partner Organization

Module 12: Planning and Implementing an Information Rights Management Infrastructure

This module describes how to plan and implement an Active Directory Rights Management Services (AD RMS) deployment, plan and manage AD RMS templates and access, and plan and implement external access to AD RMS services.
Lessons

- Planning and Implementing an AD RMS Cluster
- Planning and Implementing AD RMS Templates and Policies
- Planning and Implementing External Access to AD RMS Services
- Planning and Implementing AD RMS Integration with Dynamic Access Control (DAC)

Lab: Planning and Implementing an AD RMS Infrastructure

- Planning the AD RMS Deployment
- Deploy the AD RMS Infrastructure for Internal Users
- Implement AD RMS Integration with DAC
- Implement AD RMS Integration with External Users
Course 20415A: Implementing a Desktop Infrastructure

About this Course
This 5-day instructor-led course provides you with the skills and knowledge needed to plan, design, and implement a Windows 8 desktop infrastructure. The course provides guidance on planning and deploying desktops by using several technologies such as User State Migration Tool (USMT), Microsoft Deployment Toolkit (MDT), Virtual Desktop Infrastructure (VDI), and more. Additionally, the course describes how to protect desktops and monitor their health and performance.

Audience Profile
The course is primarily intended for IT Professionals who manage the desktop environments for organizations, and want to specialize in Windows 8 desktop deployments. These IT professionals typically work in complex computing environments of large to enterprise-sized organizations. In addition, the secondary audience for this course includes IT professionals who want to take the 70-415: Implementing an Enterprise Desktop and Device Infrastructure exam as a stand-alone, or as part of the requirement for the MCSE: Desktop Infrastructure certification.

At Course Completion
After completing this course, students will be able to:

- Assess and determine desktop deployment options.
- Plan an image management strategy.
- Implement desktop security.
- Capture and manage a desktop operating system image.
- Plan and implement User State Migration.
- Plan and deploy desktops by using the Microsoft Deployment Toolkit.
- Plan and deploying desktops by using System Center 2012 Configuration Manager.
- Plan and implement a Remote Desktop Services infrastructure.
- Manage user state virtualization for enterprise desktops.
- Plan and implement an updates infrastructure to support enterprise desktops.
- Protect enterprise desktops from malware and data loss.
- Monitoring the performance and health of the desktop infrastructure.

**Prerequisites**

Before attending this course, students must have:

- Solid understanding of TCP/IP and networking concepts
- Solid knowledge of Windows and Active Directory Domain Services (AD DS)—for example, domain user accounts, domain vs. local user accounts, user profiles, and group membership
- Good understanding of scripts and batch files
- Solid understanding of security concepts such as authentication and authorization
- Familiarity with the client administration capabilities of Windows Server
- General knowledge of management tools such as System Center 2012 Configuration Manager, System Center 2012 Operations Manager, and System Center 2012 Data Protection Manager.
- Familiarity with imaging, packaging, and operating system deployment concepts
- Familiarity with certificates and Certification Authority (CA) implementation and configuration
- Knowledge equivalent to Windows 2012 MCSA
- 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
  - Support for Windows 8 client desktops
  - Deployment and management of both physical and virtual applications
Course Outline

Module 1: Assessing and Determining Desktop Deployment Options
This module describes the enterprise desktop lifecycle and explains how you can assess hardware and infrastructure readiness. The module then describes how to identify and select the most appropriate deployment option based upon organizational requirements.

Lessons
- Overview of the Enterprise Desktop Life Cycle
- Assessing Hardware and Infrastructure Readiness for a Desktop Deployment
- Overview of Enterprise Desktop Deployment Methods
- Volume Activation Technologies for Enterprise Desktops

Lab: Assessing and Determining Desktop Deployment Options
- Planning a Desktop Deployment Strategy
- Collecting Infrastructure Data
- Implementing a Volume Activation Solution

Module 2: Planning an Image Management Strategy
This module describes Windows image formats and helps you to define an efficient image management strategy based upon business requirements.

Lessons
- Overview of Windows Image Formats
- Overview of Image Management

Lab: Planning an Image Management Strategy
- Assessing Business Requirements to Support an Image Management Strategy

Module 3: Implementing Desktop Security
This module describes how to deploy and manage a secure desktop by implementing centralized policies, BitLocker settings, and Encrypted File System (EFS) settings.

Lessons
- Implementing a Centralized Desktop Security Solution
- Planning and Implementing BitLocker
- Planning and Implementing Encrypted File System
Lab: Configuring Desktop Security
- Configuring Desktop Security using Group Policy
- Configuring Drive Encryption Using BitLocker

Lab: Configuring File Encryption Using EFS
- Implementing a Centrally Managed EFS Solution
- Implementing an EFS Recovery Solution

Module 4: Capturing and Managing a Desktop Operating System Image
This module describes how to use the Windows Assessment and Deployment Kit (ADK) and Windows Deployment Services (WDS) to create, capture, and manage a desktop operating system image.

Lessons
- Overview of Windows ADK
- Managing the Windows Pre-installation Environment
- Building a Reference Image Using Windows SIM and Sysprep
- Capturing and Servicing a Reference Image
- Configuring and Managing Windows Deployment Services

Lab: Preparing the Imaging and Pre-installation Environment
- Installing Windows ADK
- Configuring a Custom Windows PE Environment

Lab: Building a Reference Image Using Windows SIM and Sysprep
- Building a Custom Answer File Using Windows SIM
- Installing a Reference Computer Using a Custom Answer File
- Generalizing a Reference Computer Using Sysprep

Lab: Capturing and Servicing a Reference Image
- Capturing a Reference System Image
- Servicing a Reference System Image

Lab: Configuring and Managing Windows Deployment Services
- Planning the Windows Deployment Services Environment
- Installing and Configuring the Windows Deployment Services Server Role
• Capturing a Reference Image Using WDS
• Deploying an Image Using WDS

Module 5: Planning and Implementing User State Migration
This module describes how to use the User State Migration Tool (USMT) to migrate appropriate user data and settings to a new desktop operating system.

Lessons
• Overview of User State Migration
• Planning User State Migration by Using USMT
• Migrating User State by Using USMT

Lab: Planning and Implementing User State Migration
• Planning for User State Migration
• Creating and Customizing the USMT XML Files
• Capturing and Restoring User State by Using USMT

Lab: Migrating User State Using Hard-Link Migration
• Performing a Hard-Link Migration

Module 6: Planning and Deploying Desktops Using the Microsoft Deployment Toolkit
This module describes how to use the Microsoft Deployment Toolkit (MDT) 2012 to deploy Windows operating systems in lite touch installation scenarios.

Lessons
• Planning for the Lite Touch Installation Environment
• Implementing MDT 2012 for Lite Touch Installation
• Integrating Windows Deployment Services with MDT

Lab: Planning and Deploying Desktops Using the Microsoft Deployment Toolkit
• Planning for the MDT Lite Touch Installation Environment
• Installing MDT 2012 and the Prerequisite Components
• Creating and Configuring the MDT 2012 Deployment Share
• Deploying and Capturing a Reference Operating System Image
• Integrating WDS with MDT 2012 To Provide PXE Boot Capabilities
Module 7: Planning and Deploying Desktops by Using System Center 2012 Configuration Manager

This describes how to use System Center 2012 Configuration Manager to implement a zero touch installation for deploying enterprise desktops.

Lessons

- Planning the Zero Touch Installation Environment
- Preparing the Site for Operating System Deployment
- Building a Reference Image Using a Configuration Manager Task Sequence
- Using MDT Task Sequences to Deploy Client Images

Lab: Preparing the Environment for Operating System Deployment

- Planning the Operating System Deployment Infrastructure
- Preparing the Zero Touch Installation Environment
- Configuring the Deployment Packages and System Images

Lab: Using MDT and Configuration Manager to Perform a Zero-Touch Installation

- Performing a Zero Touch Installation

Module 8: Planning and Implementing a Remote Desktop Services Infrastructure

This module describes how to plan and implement session virtualization deployment and a virtual desktop infrastructure (VDI) based upon Windows Server 2012 Remote Desktop Services.

Lessons

- Overview of Remote Desktop Services
- Planning the Remote Desktop Services Environment
- Configuring a Virtual Desktop Infrastructure Deployment
- Configuring a Session-Based Desktop Deployment
- Extending the Remote Desktop Services Environment to the Internet

Lab: Planning and Implementing a Remote Desktop Services Infrastructure

- Planning the Remote Desktop Services Environment
- Configuring a Virtual Desktop Infrastructure Scenario
- Configuring a Session-Based Desktop Scenario
Lab: Extending Internet Access to the RDS Infrastructure
- Planning the RD Gateway Policies
- Configuring the RD Gateway

Module 9: Managing User State Virtualization for Enterprise Desktops
This module describes how to plan and configure user state virtualization to provide a consistent desktop client experience.

Lessons
- Overview of User State Virtualization
- Planning User State Virtualization
- Configuring Roaming Profiles, Folder Redirection, and Offline Files
- Implementing Microsoft User Experience Virtualization

Lab: Deploying and Managing User State Virtualization
- Planning User State Virtualization
- Implementing User State Virtualization

Module 10: Planning and Implementing an Updates Infrastructure to Support Enterprise Desktops
Students will be able to plan and implement an updates infrastructure to support both physical and virtual enterprise desktops.

Lessons
- Planning an Updates Infrastructure for the Enterprise
- Implementing Configuration Manager 2012 to Support Software Updates
- Managing Updates for Virtual Machines and Images
- Using Windows Intune for Managing Software Updates

Lab: Planning and Implementing an Updates Infrastructure
- Planning an Updates Infrastructure
- Implementing Software Updates Using Configuration Manager 2012
- Implementing Software Updates for Virtual Machine Libraries
Module 11: Protecting Enterprise Desktops from Malware and Data Loss
This module describes how to use System Center technologies such as Endpoint protection and Data Protection Manager (DPM) to protect enterprise desktops from malware and data loss.

Lessons

- Overview of System Center 2012 Endpoint Protection
- Configuring Endpoint Protection Client Settings and Monitoring Status
- Using Windows Intune Endpoint Protection
- Protecting Desktops by Using System Center 2012 Data Protection Manager

Lab: Implementing Client Endpoint Protection

- Configuring the Endpoint Protection Point
- Configuring and Deploying Endpoint Protection Policies
- Configuring Client Settings to Support Endpoint Protection
- Monitoring Endpoint Protection

Lab: Configuring Data Protection for Client Computer Data

- Configuring and Verifying Client Data Protection

Module 12: Monitoring the Performance and Health of the Desktop Infrastructure
This module describes how to identify and monitor relevant services and components to ensure the health and performance of the enterprise desktop infrastructure.

Lessons

- Performance and Health Monitoring for the Desktop Infrastructure
- Monitoring the Virtual Desktop Infrastructure

Lab: Monitoring the Performance and Health of the Desktop Infrastructure

- Configuring Performance and Reliability Monitoring for Desktops
- Configuring Operations Manager for Monitoring Virtual Environments
Course 20416A: Implementing Desktop Application Environments

About this Course
This five-day course provides students with the skills and knowledge to be able to design, deploy and manage a physical as well as a virtual Windows Server 2012 application management infrastructure. Students will also learn to design, deploy and manage Windows 8 Enterprise applications in a physical and virtual environment as well as in the cloud. Students should have experience with course 20415: Implementing a Desktop Infrastructure, and have their Windows 2012 Server certification (MCSA) or equivalent skills. This course also maps to and supports exam 70-416: Implementing Desktop Application Environments.

Audience Profile
This course is intended for IT 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.

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 Configuration Manager.
Configure self-service application deployment using Configuration Manager, Service Manager, and Windows 8 Application Store.

Design and deploy Windows Server 2012 roles and features to support presentation virtualization.


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.

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.

**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 20415A 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.
- 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:

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

Module 1: Designing an Application Distribution Strategy
This module explains how to design an application distribution strategy that is appropriate for an organizational environment.

Lessons
- Determining Business Requirements for Application Distribution
- Overview of Application Distribution Strategies

Lab: Designing an Application Deployment Strategy
- Choosing an Appropriate Application Deployment Strategy for the Sydney Office
- Choosing an Appropriate Application Deployment Strategy for the Melbourne Office
- Choosing an Appropriate Application Deployment Strategy for the Brisbane Office
- Choosing an Appropriate Application Deployment Strategy for the Wellington Office
- Choosing an Appropriate Application Deployment Strategy for the Perth Office

Module 2: Diagnosing and Remediating Application Compatibility
This module explains how to diagnose and remediate application compatibility problems for desktop and presentation virtualization-based deployments.

Lessons
- Diagnosing Application Compatibility Issues
- Evaluating and Implementing Remediation Solutions
- Resolving Compatibility Issues with the Application Compatibility Toolkit

Lab: Diagnosing and Remediating Application Compatibility
- Installing and Configure ACT
- Analyzing Applications for Potential Compatibility Issues
- Mitigating Application Compatibility Issues
- Automating the Deployment of Shims

Module 3: Deploying Applications by Using Group Policy and Windows Intune
This module explains how to use Group Policy and Windows Intune to deploy applications to client devices.
Lessons

- Deploying Applications by Using Group Policy
- Deploying Applications by Using Windows Intune

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

- Deploying an Application by Using Group Policy
- Performing Windows Intune Simulations

Module 4: Deploying Applications by Using System Center Configuration Manager

This module covers how to deploy applications centrally using Configuration Manager.

Lessons

- Understanding Application Deployment by Using Configuration Manager 2012
- Deploying Applications by Using Configuration Manager 2012

Lab: Deploying Applications by Using Configuration Manager 2012

- Create a Configuration Manager 2012 Query
- Create Configuration Manager 2012 User and Device Collections

Module 5: Configuring Self-Service Application Deployment

This module explains how to configure self-service application deployment using Configuration Manager, Service Manager, and Windows 8 Application Store.

Lessons

- Understanding Self-Service Application Deployment
- Configuring Self-Service with Windows Intune
- Self-Service Deployment with Configuration Manager 2012
- Self-Service Deployment with Service Manager 2012

Lab: Configuring Self-Service Application Deployment

- Preparing System Center 2012 Configuration Manager to Support a Service Manager 2012 Self-Service Portal
- Configuring a Service Manager 2012 Self-Service Portal
- Verifying that Users Are Able to Provision Applications by Using the Self-Service Portal
Module 6: Designing and Implementing Presentation Virtualization Infrastructure

This module describes how to design and deploy Windows Server 2012 roles and features to support presentation virtualization.

Lessons

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

Lab: Deploying and Implementing Presentation Virtualization Infrastructure

- Assessing Capacity Requirements for Presentation Virtualization
- Deploying Highly Available Presentation Virtualization Infrastructure

Module 7: Preparing, Configuring and Deploying Presentation Virtualization Applications

This module explains how to prepare, deploy and manage applications for Remote Desktop, RemoteApp, and Remote Desktop Web Access.

Lessons

- Determining Presentation Virtualization Application Strategies
- Deploying Remote Desktop, RemoteApp, and RD 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

Module 8: Designing and Deploying an Application Virtualization Environment

This module covers how to design and deploy Windows Server 2012 roles and features to support application virtualization.

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
- Configuring App-V Client Settings

Module 9: Preparing, Sequencing, and Deploying Virtual Applications

This module describes how to virtualize and deploy applications by using App-V and System Center 2012 Configuration Manager.

Lessons

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

Lab: Virtualizing Applications by Using App-V Sequencer and Deploy Sequenced Applications

- Installing and Configuring App-V Sequencer
- Sequencing Applications
- Deploying App-V Applications by Using Configuration Manager

Module 10: Planning and Implementing Application Updates and Security

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

Lessons

- Planning Application Updates
- Deploying Updates With WSUS
- Deploying Application Updates by Using Configuration Manager 2012
- Implementing Application Security

Lab: Planning and Deploying Application Updates

- Determining an Appropriate Update Deployment Strategy
- Updating Deployed Applications
- Updating an App-V Application
- Deploying AppLocker Policy to Control Application Execution
Module 11: Planning and Implementing Application Upgrade and Supersedence

This module explains how to plan and implement application upgrades and supersedence. It also covers how to plan and implement application coexistence.

Lessons

- Planning and Implementing Application Upgrades and Supersedence
- Planning and Implementing Application Coexistence

Lab: Upgrading Applications

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

Module 12: Monitoring Application Deployment, Utilization, and Performance

This module describes how to monitor the deployment, performance, and utilization of applications and determine whether current application hosting platforms are meeting business needs.

Lessons

- Planning and Implementing Application Monitoring Infrastructure
- Application Metering, Inventory and Asset Intelligence
- Monitoring Application Resource Utilization

Lab: Planning and Implementing Application Monitoring

- Planning Application Inventory
- Generating Software Inventory
- Metering Application Usage
- Monitoring Application Resource Utilization on RD Session Host Servers
- Remediating Peak Resource Utilization
Industry Interface Program

Projects

- Modular Assignments
- Mini Projects
- 1 Major Project

Domains / Industry

- Retail Industry
- Banking & Finance
- Service
- E-Commerce
- Manufacturing & Production
- Web Application Development
- Research & Analytics
- HR & Consultancy
- FMCG
- Consumer Electronics
- Event Management Industry
- Telecom
Training & Performance Tracking

Knowledge related to current technology aspects and corporate level deliverable & Continuous training and assessment to make you industry ready. Throughout the Training Curriculum Candidate will go through a Scheduled Assessment Process as below:

- Continues Assessments
- Practical Workshops
- Modular Assignments
- Case Studies & Analysis
- Presentations (Latest Trends & Technologies)
- Tech Seminars
- Technical Viva
- Observing live Models of various projects
- Domain Specific Industry Projects
Skills Development Workshop

Communication is something which all of us do from the very first day of our life, yet there is a question that haunts us most of the time “Did I express myself correctly in such and such situation?” The answer to this question is really tricky, because in some cases we leave our signatures and good impression but in some others we even fail to get our idea clearly. It happens mostly because we don’t know how to act in certain situations. Every time we fail we don’t lose completely, we do learn something, but prior knowledge of the same thing could be more beneficial because then we could have turned that failure into success.

The course / workshop would focus at many aspects of personality, like:

- Building positive relationships with peers & seniors
- Building self-confidence & Developing clear communication skills
- Exploring and working on factors that help or hinder effective interpersonal communication
- Learning impacts of non-verbal behavior & Dealing with difficult situations and difficult people

Workshops Consists of Following Activities:

- Personality Development
- Group Discussions & Debates
- Seminars & Presentations
- Case Studies & Analysis
- Corporate Communication Development
- HR & Interview Skills
- Management Games & Simulations
- Aptitude, Logical & Reasoning Assessments & Development