Authorized Training Center

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ORACLE APPROVED EDUCATION CENTER

Microsoft GOLD CERTIFIED Partner

Implementing an Advanced Server Infrastructure Course 20414
36 Contact Hours

Course Overview

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

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 understand how Active Directory server roles are used and learn about the purpose and components of Active Directory Domain Services (AD DS). Students will learn how to configure organizational units and user, computer and group accounts. Lastly, students will learn how to manage access to shared resources.

Prerequisites

Before attending this course, students must have:
-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 an server updates infrastructure.
-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.

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
After completing this module, students will be able to:
Describe the System Center 2012 components.
Describe how System Center 2012 is used to manage a server virtualization deployment.
Plan and implement a server virtualization environment based on Windows Server 2012 Hyper-V and Microsoft System Center 2012 - Virtual Machine Manager (VMM).

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
After completing this module, students will be able to:
Plan a storage infrastructure for a Hyper-V server virtualization deployment.
Implement a storage infrastructure for server virtualization.
Plan and implement a network infrastructure for server 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

After completing this module, students will be able to:
Plan a virtual machine configuration.
Plan and configure the VMM profiles and templates that can be used to implement a VMM deployment.
Plan and implement a virtual machine deployment in VMM.

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
After completing this module, students will be able to:
Plan a delegated administration model in System Center 2012.
Plan self-service and automation of a virtual machine environment by using the System Center 2012.
Plan automation of a virtual machine environment by using 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
After completing this module, students will be able to:
Plan a monitoring strategy using the Windows Server 2012 tools.
Describe the Operations Manager components and describe how Operations Manager can be used to monitor physical and virtual servers.
Plan and configure management packs, notifications and reporting.
Configure the integration of Operations Manager and VMM.

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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
After completing this module, students will be able to:
Plan and implement a highly available storage infrastructure by using storage spaces.
Plan and implement a highly available file services deployment by using distributed file system (DFS).
Plan and implement high availability for applications by using network load balancing (NLB).

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
After completing this module, students will be able to:
Plan and implement a highly available storage infrastructure by using storage spaces
Plan and implement a highly available file services deployment by using DFS.
Plan and implement high availability for applications by using NLB.

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
After completing this module, students will be able to:
Plan and implement a WSUS deployment to distribute updates to Windows Servers.
Plan a software update deployment infrastructure by using Configuration Manager.
Plan and implement updates for Hyper-V hosts by using Cluster Aware Updating and VMM.

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
After completing this module, students will be able to:
Describe the high level requirements and strategies for implementing a business continuity strategy.
Plan backup strategies for a variety of Windows roles.
Plan and implement recovery of servers and data.

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
After completing this module, students will be able to:
Plan and implement a CA deployment hierarchy in AD CS.
Design and implement a strategy for configuring and maintaining certificate templates.
Design and implement a strategy for distributing and revoking certificates.
Plan and implement private key and certificate recovery.

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
After completing this module, students will be able to:
Plan and implement and AD FS server infrastructure.
Plan and implement AD FS claim providers and relying parties.
Plan and implement AD FS claims and claim rules.

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
After completing this module, students will be able to:
Plan, implement, and manage an AD RMS cluster.
Plan and implement AD RMS templates and policies.
Plan and implement external access to AD RMS services.
Plan the integration of AD RMS and DAC.