Course Syllabus

Updating your Network Infrastructure and Active Directory Technology Skills to Windows Server 2008

This five-day instructor-led course provides students with the knowledge and skills to work with Network Infrastructure and Active Directory technologies in Windows Server 2008. This course is intended for individuals who already have experience with Network Infrastructure and Active Directory technologies in Windows Server 2000 or Windows Server 2003 to upgrade their skills to Windows Server 2008.

Audience

This course is intended for IT Professionals experienced on the technologies included in Windows Server 2000 or Windows Server 2003, and who hold an MCSE or MCSA certification and/or equivalent knowledge.

Prerequisites

Before attending this course, students must have:

- Experience planning, implementing, managing, maintaining, and securing Microsoft Windows Server 2000 or 2003, including Active Directory and Network Infrastructure server roles.
- Working knowledge of networking, for example, TCP/IP and Domain Name System (DNS).
- Experience installing, configuring, and administering Microsoft Windows 2000, Windows XP Professional, or Microsoft Vista.
- MCSA on Windows Server 2003 or MCSE on Windows Server 2003 recommended.

At Course Completion

After completing this course, students will be able to:

- Install and configure Windows Server 2008.
- Add and configure Windows Server Core roles.
- Explain the new backup infrastructure, including Volume Shadow Copy Service.
- Identify new and improved networking features with Windows Server 2008.
- Configure Hyper-V virtual machines.
- Identify considerations when upgrading from a Windows Server 2003 to a Windows Server 2008 Active Directory infrastructure.
- Install and configure Active Directory Federation Services, Active Directory Lightweight Directory Services, and Active Directory Rights Management Services.
- Use Read-Only Domain Controllers.
- Identify new features in AD DS auditing.
- Implement AD DS auditing.
- Configure Windows Server 2008 Failover Clustering.
- Configure Windows Server 2008 Network Load Balancing.

Module 1: Installing and Configuring Windows Server 2008

This module explains how to install and configure Windows Server 2008. It also explores using Server Manager to work with roles, features, PowerShell and other aspects of server configuration like Automatic Updates.

Lessons

☐ Server Manager Roles
☐ Windows Server 2008 Features
☐ Active Directory Improvements

Lab: Configuring Windows Server 2008

☐ Initial Configuration Tasks
☐ Server Manager Console
☐ Server Manager Wizards
☐ Windows PowerShell

After completing this module, students will be able to:

☐ Describe Windows Server 2008 roles.
☐ Describe Windows Server 2008 features.

☐ Describe Windows Server 2008 Active Directory Improvements.

Module 2: Windows Deployment Services

This module explains how to use benefits and components of Windows Deployment Services, including image capture and management.

Lessons

☐ Introducing Windows Deployment Services
☐ WDS Components

Lab: Working With Windows Deployment Services

☐ Install and Configure Windows Deployment Services
☐ Working with Images
☐ Creating Images
☐ Using Unattended Files

After completing this module, students will be able to:

☐ Describe Windows Deployment Services benefits.
☐ Describe Windows Deployment Services (WDS) components.

Module 3: Windows Server 2008 Server Core

This module explains how to use key functionality and benefits of a Server Core installation, including adding and configuring roles.

Lessons

☐ Server Core Introduction
☐ Configuring and Managing Server Core

Lab: Server Core

☐ Installing Windows Server Core
☐ Configure Server Core
☐ Add and Configure Server Roles
☐ Add Backup Feature
☐ Managing Server Core

After completing this module, students will be able to:

☐ Describe Windows Server Core.
☐ Add and configure Windows Server Core roles.

Module 4: Windows Backup

This module provides an overview of the new backup infrastructure in Windows Server 2008, including Volume Shadow Copy service, scheduled vs. manual backups, media, the Universal Disk Format (UDF), and restoring data.

Lessons

☐ Backup Infrastructure
☐ Optical Media
☐ Restore Utilities

Lab: Backup and Restore System Data

☐ Perform Installation Tasks
☐ Schedule a Backup
☐ Create a Manual Backup
☐ Schedule Daily AD DS Backup via Command Line
☐ Backup and Recovery with Vista Client
☐ Restore Files and Folders
☐ Perform Windows RE Tasks

After completing this module, students will be able to:

☐ Explain the new backup infrastructure, including Volume Shadow Copy Service.
☐ Identify backup-capable media in Windows Server 2008.
☐ Restore Windows Server 2008 backups.

Module 5: Windows Server 2008 Updates to Networking

This module explains how to use new and improved networking features in Windows Server 2008, including server and domain isolation, IPv6, and DNS.

Lessons

☐ Networking with Windows Server 2008
☐ New Networking Features
☐ DNS with Windows Server 2008
☐ Configuring Routing
☐ Configuring Wireless Settings in Server 2008

Lab 1: Reviewing Networking Defaults and Settings
☐ Review the Network Center
☐ Creating Domain Isolation Policies
☐ Create a Centralized QoS Policy
☐☐☐Communicate with Link-Local Addresses

Lab 2: DNS Management Settings

☐ Creating Zones in Windows Server 2008
☐ Create Resource Records
☐☐☐Configure Zone Transfers

After completing this module, students will be able to:

☐ Describe the Windows Server 2008 network architecture.
☐ Identify new and improved networking features with Windows Server 2008.
☐ List new improvements to DNS with Windows Server 2008.
☐ Describe routing configuration components in Windows Server 2008.
☐ Describe new features for wireless networks.

Module 6: Network Policies and Access Protection

This module explains how to use Network Access Protection (NAP) and related technologies to enforce security and client health policies.

Lessons

☐ Network Policies Access Protection
☐ Enforcement Options
☐ Network Access Protection Scenarios
☐ Routing and Remote Access

Lab: Using Network Access Protection

☐ Configuring Network Access Protection for DHCP
☐ Configuring Network Access Protection for VPN
☐ Configuring Network Access Protection for IPsec

After completing this module, students will be able to:

☐ Describe how Network Policies Access Protection (NAP) works.
☐ Identify NAP enforcement options.
☐ Identify scenarios for NAP usage.
☐ Describe Routing and Remote Access (RRAS).

Module 7: Hyper-V

This module explains how to use new capabilities and architecture in Hyper-V, including integrated management functions for physical and virtual environments.

Lessons
☐ Introducing Hyper-V
☐ Configuring Hyper-V
Lab: Configuring Hyper-V
☐ Install and Configure Hyper-V
☐ Configure Virtual Networks
☐ Add Virtual Machines
☐ Monitoring and Optimization

After completing this module, students will be able to:

☐ List the new features of Hyper-V.
☐☐☐Configure Hyper-V virtual machines.

Module 8: Planning for Windows Server 2008 Active Directory Services
This module explains how to install and configure the Active Directory Domain Services (ADDS) server role and administering it with Server Manager. It also explores planning for deploying an Active Directory Domain Services infrastructure.

Lessons

☐ Planning for AD DS Deployment
☐☐☐Upgrade Considerations

Lab 1: Installing a Windows Server 2008 Forest

☐ Install a New Forest

Lab 2: Installing Windows Server 2008 in an Existing Forest

☐ Install a Windows Server 2008 DC in an Existing Forest
☐ Verify Active Directory Installation

After completing this module, students will be able to:

☐ Plan for a Windows Server 2008 Active Directory Domain Services deployment.
☐ Identify considerations when upgrading from a Windows Server 2003 to a Windows Server 2008 Active Directory infrastructure.

Module 9: Active Directory Domain Services

This module explains how to create and manage accounts, subnets, Site-Links, and Group Policy with new features in Active Directory Domain Services.

Lessons
☐ What's New in AD DS
☐ Manageability and Reliability

☐ Create Accounts
☐ Review Operations Masters Role
☐ Review Sites
☐ Working with Subnets
☐ Working with Site-Links
☐ AD DS and Group Policy
☐ Review DNS Configuration

After completing this module, students will be able to:

☐ Describe new features in AD DS.
☐ List manageability and reliability enhancements in AD DS.

Module 10: Identity and Access Services in Windows Server 2008 Active Directory

This module introduces Windows Server 2008's new Active Directory Services:
☐ Active Directory Federation Services for identity access solution
☐ Active Directory Lightweight Directory Services (replaces Active Directory Account Management with Windows Server 2003), providing directory services for applications.
☐ Active Directory Right Management Services, enabling the creation of information-
Protection solutions.

Lessons

☐ Active Directory Federation Services
☐ Active Directory Lightweight Directory Services
☐ Active Directory Rights Management Services

Lab 1: Active Directory Federation Services

☐ Install AD FS
☐ Configure Certificates
☐ Configure Web Server
☐ Configure the Account Federation Server
☐ Configure the Resource Federation Server
☐ Access Application from Client Computer

Lab 2: Active Directory Rights Management Services

☐ Install and Configure AD RMS
☐ Verify AD RMS Functionality

After completing this module, students will be able to:

☐ Install and configure Active Directory Federation Services.
☐ Install and configure Active Directory Lightweight Directory Services.
☐ Install and configure Active Directory Rights Management Services.

Module 11: Read-Only Domain Controllers

This module explains how to set up and manage a read-only domain controller.

Lessons
☐   Read-Only Domain Controllers ☐   Read-Only Domain Controller Operation

Lab: Read-Only Domain Controllers
☐   Deploying an RODC ☐   Administering an RODC

After completing this module, students will be able to:

☐   Describe the Read-Only Domain Controllers role.
☐   Use Read-Only Domain Controllers.

Module 12: Auditing Active Directory Domain Services Changes

This module explores new auditing features in Active Directory Domain Services and how to set up and manage auditing events.

Lessons

☐   What's New in AD DS Auditing
☐☐☐Implementing AD DS Change Auditing

Lab: Using AD DS Auditing

☐☐☐Set-up AD DS Auditing
☐   Create and View Auditing Events

After completing this module, students will be able to:

☐   Identify new features in AD DS auditing.
☐☐Implement AD DS auditing.

Module 13: Enterprise PKI Active Directory Certificate Services (AD CS)

This module explains how to set up and manage Active Directory Certificate Services using PKIView.

Lessons

☐   Certificate Authority

Lab: PKI Enhancements in Windows Vista and Windows Server 2008

☐   Add a Certificate Server Role
☐   Exploring New Enrolment UI
☐   Introducing CA performance monitors UI
☐   Exploring delegated enrolment UI
☐   Introducing OCSP configuration UI
☐   Explore Certificate Revocation

After completing this module, students will be able to:

☐   List improvements to Certificate Services.

Module 14: High Availability Features

This module explains how to use failover clustering and network load balancing.

Lessons
☐   Failover Clustering ☐   Network Load Balancing
Lab: High Availability Features
☐   Installing a Two-Node File Server Cluster ☐   Configure Network Load Balancing with IIS

After completing this module, students will be able to:

☐   Configure Windows Server 2008 Failover Clustering.

☐☐Configure Windows Server 2008 Network Load Balancing.

Module 15: Performance Monitoring and Optimization

This module explains how to use Windows Server 2008's performance monitoring tools, including using Windows System Resource Manager to implement server resource controls.

  Lessons

☐   Windows Reliability and Performance Monitor
☐   Microsoft Windows System Resource Manager
☐   Monitoring Events

  Lab: Performance Monitoring and Optimization

☐   Reviewing Performance and Reliability Monitoring
☐   Key Scenarios for Monitoring Performance and Reliability
☐   Add Windows System Resource Manager Feature
☐   Windows System Resource Manager Scenarios
☐   Configure Windows System Resource Manager for Terminal Services

After completing this module, students will be able to:

☐   Describe the features of Windows Reliability and Performance Monitor.
☐   Implement server resource controls using Windows System Resource Manager.
☐   Describe improvements to Windows Server 2008 event monitoring tools.

  Module 16: Software Maintenance Using Windows Server Update Services

This module introduces Microsoft® Windows Server Update Services (WSUS), a tool for managing and distributing software updates that resolve known security vulnerabilities and other stability issues in Microsoft Windows® 2000 and newer operating systems, as well as other Microsoft applications. This module also describes how to install the client and server components of WSUS. It also provides necessary information about managing the WSUS infrastructure.

  Lessons

☐   Introduction to Windows Server Update Services
☐   Installing and Configuring Windows Server Update Services
☐   Managing Windows Server Update Services

Lab: Installing and Configuring Windows Server Update Services

☐   Install Prerequisites
☐   Install WSUS
☐   Restore a WSUS Installation
☐☐☐Create a Computer Group and Manage Updates

After completing this module, students will be able to:

☐   • Explain Microsoft WSUS
☐   • Install and configure WSUS
☐   • Manage the WSUS infrastructure

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