



# Updating Your Windows Server 2003 Technology Skills to Windows Server 2008

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**MS6416: 5 Days**

## **Course Overview**

This five-day instructor-led course teaches the features and technologies of Windows Server 2008 and Windows Server 2008 R2 to IT professionals who have specialist skills in working with Windows Server 2003 technologies. For students with the appropriate skillset, the course facilitates accelerated learning of Windows Server 2008 and covers features and technologies up to and including Windows Server 2008 R2 Sp1.

## **Audience Profile**

The audience for this course is IT Professionals who wish to upgrade their existing Microsoft Certified Systems Administrator (MCSA) or Microsoft Certified Systems Engineer (MCSE) skills on Windows Server 2003 to Windows Server 2008 and Windows Server 2008 R2, and who also plan to take the following upgrade exams:

- 70-648, TS: Upgrading your MCSA on Windows Server 2003 to MCTS on Windows Server 2008
- Or
- 70-649, TS: Upgrading your MCSE on Windows Server 2003 to MCTS on Windows Server 2008

While the course is specifically targeted at the students who are certified as outlined earlier and are planning to take the upgrade exams listed above, the course may also be of benefit to IT professionals who do not hold an MCSA or MCSE on Windows Server 2003, but do have extensive experience with Windows Server 2003 and wish to update those skills to Windows Server 2008 and Windows Server 2008 R2.

## **At Course Completion**

After completing this course, students will be able to:

- Install and configure Windows Server 2008.
- Manage servers with Windows Server 2008.
- Configure networking and network services.
- Install and configure Network Policy Services and remote access services.
- Configure and manage Active Directory Domain Services.
- Manage Group Policies in Active Directory Domain Services.
- Configure Active Directory Certificate Services.
- Configure Active Directory identity and access solutions.
- Install and configure Remote Desktop Services.
- Manage Remote Desktop Services.
- Install and configure web servers and applications with Internet Information Services
- Configure storage technologies in Windows Server 2008
- Configure high availability in Windows Server 2008.
- Configure virtualization in Windows Server 2008.

## **Prerequisites**

Before attending this course, students should have the following technical knowledge:

- Either MCSA or MCSE certification in Windows Server 2003
- Students who do not hold either of these qualifications should have the following:
- Experience in planning, implementing, managing, maintaining, and securing Microsoft Windows Server 2003, including Active Directory, Network Infrastructure, Terminal Services, and Internet Information Services (IIS)
- Working knowledge of networking, such as TCP/IP and Domain Name System (DNS)



- Experience in installing, configuring, and administering Windows XP, Windows Vista, or Windows 7

## Course Outline

### Module 1: Installing and Configuring Windows Server 2008

This module explains how to plan and prepare the environment and servers for installation, upgrade, and migration to Windows Server 2008 and Windows Server 2008 R2 operating systems from Windows Server 2003.

#### Lessons

- Overview of Windows Server
- Installing Windows Server 2008
- Managing Server Roles and Features
- Configuring and Managing Windows Server 2008 Server Core
- Choosing a Deployment Strategy
- Deploying Windows Server 2008

#### Lab : Installing Windows Server and Configuring Post-Installation Settings

- Install Windows Server 2008 R2
- Configuring Server Core
- Enabling Remote Management
- Adding the Domain Name System and Dynamic Host Configuration Protocol Server Roles

#### Lab : Deploying Windows Server 2008

- Installing and Configuring Windows Deployment Services
- Creating Operating System Images with Windows Deployment Services
- Using an Unattended File with Windows Deployment Services
- Completing Windows Deployment Services Configuration

After completing this module, students will be able to:

- Describe the steps necessary to prepare to install Windows Server 2008.
- Install Windows Server 2008.
- Add and remove server roles and features.
- Configure and manage Server Core.
- Select a deployment technology.
- Deploy Windows Server 2008.

### Module 2: Server Management in Windows Server 2008

This module explains new technologies and options available to manage the operating system environment. The module discusses and allows students practice storage configuration,

boot configuration, scheduled tasks and services, event logs, and performance monitoring.

#### Lessons

- Managing Windows Server with Server Manager
- Managing Server Updates by using WSUS
- Managing Backup and Restore by Using Windows Server Backup
- Managing Event Logs and Auditing
- Performance and Resource Management

#### Lab : Managing Windows Server 2008

- Configuring a Replica WSUS Server
- Managing Windows Server Backup
- Configuring Event Logging

After completing this module, students will be able to:

- Describe and use Server Manager.
- Manage server updates by using Windows Server Update Services 3.0 SP2.
- Manage backup and restore by using Windows Server Backup.
- Describe and perform event logging and auditing.
- Perform reliability and performance monitoring

### Module 3: Configuring Networking and Network Services

This module describes how to configure and troubleshoot the new networking technologies and settings on Windows Server 2008.

#### Lessons

- Configuring IPv6 Addressing
- Migrating from IPv4 to IPv6
- DHCP and DNS Enhancements in Windows Server 2008
- Configuring and Managing Windows Firewall with Advanced Security
- Configuring Routing and Networking with Windows Server 2008

#### Lab : Configuring Networking and Network Services

- Configuring an ISATAP Router
- Configuring DHCP and DNS
- Configuring Windows Firewall

After completing this module, students will be able to:

- Configure IPv6 addressing.
- Describe and implement IPv6 migration technologies.



- Describe the enhancements to DHCP and DNS in Windows Server 2008
- Configure Windows Firewall with Advanced Security.
- Configure routing with Windows Server 2008

## Module 4: Configuring Network Policy Server and Remote Access services

This module explains how to configure Network Policy Server and Remote Access Services in Windows Server 2008. It outlines how to secure your remote access clients by using network policies and, where appropriate, Network Access Protection (NAP) as well as covering technologies such as VPN and also explaining DirectAccess, a feature available with Windows Server 2008 R2.

### Lessons

- Overview of Network Policy Server
- Configuring a Network Policy Server
- Configuring Remote Access
- Managing DirectAccess in Windows Server 2008 R2
- Implementing Network Access Protection
- Configuring VPN Enforcement by Using NAP

### Lab : Configuring Network Policy Server and Remote Access Services

- Configuring Routing and Remote Access as a VPN Remote Access Solution
- Configuring a Custom Network Policy
- Create and Distribute a CMAK Profile

### Lab : Configuring NAP with VPN Enforcement

- Configuring NAP Components
- Configuring Client Settings to Support NAP

After completing this module, students will be able to:

- Understand the purpose of the Network Policy and Access Services server role.
- Configure NPS.
- Configure remote access.
- Describe and deploy DirectAccess.
- Describe NAP. Configure VPN enforcement by using NAP

## Module 5: Configuring and Managing Active Directory Domain Services

This module explains the new and improved features of Windows 2008 and Windows 2008 R2 Active Directory Domain Services, such as RODC, fine-grained password policies and advanced auditing and others.

### Lessons

- Active Directory Enhancements in Windows Server 2008 and 2008 R2
- Installing and Configuring Domain Controllers
- Configuring Read-Only Domain Controllers
- Configuring Fine-Grained Password Policies
- Managing Active Directory Objects with Windows PowerShell
- Active Directory Database Management

### Lab : Configuring Active Directory Domain Services

- Installing and Configuring an RODC
- Implementing Fine-Grained Password Policies

### Lab : Managing AD DS Objects and Database

- Using PowerShell Commands to Administer Active Directory
- Working with Active Directory Snapshots
- Restoring Deleted Objects with Active Directory Recycle Bin

After completing this module, students will be able to:

- Describe Active Directory Enhancements in Windows Server 2008 and 2008 R2.
- Install and configure domain controllers.
- Configure read-only domain controllers.
- Configure fine-grained password policies.
- Manage Active Directory objects with Windows PowerShell.
- Perform Active Directory database management

## Module 6: Managing Group Policy in Active Directory Domain Services

This module explains what is new in the management of an Active Directory Domain Services infrastructure, what improvements were made to Group Policy, what are Group Policy Preferences, and how the ability to restart the Active Directory database service (NTDS) supports and simplifies advanced administrative tasks.

### Lessons

- Group Policy Enhancements in Windows server 2008
- Managing Security with Group Policy
- Managing Clients With Group Policy Preferences

### Lab : Managing Group Policies

- Creating a Central Store
- Configuring Administrative Templates

### Lab : Managing Client Security with Group Policy

- Configuring Application Control Policies



### **Lab : Managing Clients with Group Policy Preferences**

Deploying Group Policy Preferences

After completing this module, students will be able to:

- Describe the new features in Group Policy.
- Implement security settings with Group Policy.
- Configure Group Policy preferences

## **Module 7: Configuring Active Directory Certificate Services**

This module explains how to manage enterprise PKI smoothly in Windows Server 2008 and Windows Server 2008 R2 while ensuring a manageable, secure infrastructure, maintaining application and legacy system compatibility.

### **Lessons**

Active Directory Certificate Services Overview  
Deploying Active Directory Certificate Services  
Managing Certificate Templates  
Managing Certificate Enrollment  
Managing Certificate Revocation  
Managing Certificate Recovery

### **Lab : Configuring and Managing Active Directory Certificate Services**

Installing the AD CS Server Role and Configuring CAs  
Managing Certificate Revocation  
Managing Certificate Recovery

After completing this module, students will be able to:

- Describe Active Directory Certificate Services and enhancements in Windows Server 2008.
- Deploy AD CS infrastructure.
- Manage certificate templates.
- Manage certificate enrollment.
- Manage certificate revocation.
- Manage certificate recovery

## **Module 8: Configuring Active Directory Identity and Access Solutions**

This module explains the Active Directory(AD) roles of AD LDS, AD FS and AD RMS, how they fit into the overall Windows Server 2008 management concept, and how to configure a Windows Server 2008 and Windows Server 2008 R2 infrastructure to incorporate these roles.

### **Lessons**

Installing and Configuring AD LDS  
Installing and Configuring AD FS  
Overview of AD RMS  
Installing and Configuring AD RMS

### **Lab : Configuring AD LDS**

Configuring AD LDS Instances and Partitions  
Configuring AD LDS Replication

### **Lab : Configuring AD RMS**

Installing the AD RMS Server Role  
Configuring AD RMS Templates  
Configuring AD RMS Trust Policies  
Testing AD RMS Functionality

After completing this module, students will be able to:

- Install and configure Active Directory Lightweight Directory Services.
- Describe Active Directory Federation Services.
- Describe Active Directory Rights Management Services.
- Install and configure Active Directory Rights Management Services

## **Module 9: Installing and Configuring Remote Desktop Services**

This module provides an overview of RDS and related role services, and the procedures for connecting to an RD Session host. The module describes RemoteApp programs and the methods for accessing them. The module also explains how to use RD Gateway to access RDS infrastructure securely from an external network.

### **Lessons**

Overview of Remote Desktop Services  
Implementing RemoteApp Infrastructure  
Implementing Remote Desktop Gateway

### **Lab : Implementing Remote Desktop Services**

Preparing the RDS Environment  
Publishing RemoteApp programs  
Accessing Published RemoteApp Programs

After completing this module, students will be able to:

- Describe Remote Desktop Services.
- Implement Remote Applications.
- Implement Remote Desktop Gateway

## **Module 10: Managing Remote Desktop Services**

It is very important to manage client connections for Remote Desktop to provide a stable and secure environment. In this module, you will learn about Remote Desktop Session Host and Connection Broker, Remote Desktop Licensing, and Remote Desktop client connections management.

### **Lessons**

Managing RD Session Host and Connection Broker  
Configuring and Managing Remote Desktop Licensing



Managing Remote Desktop Client Connections

### **Lab : Managing Remote Desktop Services**

Installing the RDS Role Services and Reviewing the RDL Manager Tool

Using WSRM to apply an equal per user resource management policy

Installing and Configuring Remote Desktop Services Connection Broker

After completing this module, students will be able to:

- Installing the RDS Role Services and Reviewing the RDL Manager Tool
- Using WSRM to apply an equal per user resource management policy
- Installing and Configuring Remote Desktop Services Connection Broker

## **Module 11: Installing and Configuring Web Servers and Applications with Internet Information Services**

This module explains the new Web Server (IIS) 7.0 and 7.5 roles available on Windows Server 2008 and Windows Server 2008 R2, respectively. This module also describes the application servers that help configure a simple website, an FTP server, and an SMTP server within the IIS role.

### **Lessons**

Managing the Web Server Role  
Configuring web Applications and Sites  
Configuring a File Transfer Protocol Server and Simple Mail Transfer Protocol Server  
Configuring Secure Websites and Servers

### **Lab : Installing and Configuring IIS and Creating a Website in IIS**

Deploying the Web Server (IIS) Server Role  
Configuring the Contoso Website to enable logging and back up the site configuration

### **Lab : Implementing FTP and SMTP Services in IIS**

Installing FTP and SMTP  
Configuring and Testing FTP  
Configuring and Testing SMTP

### **Lab : Implementing Security on Websites**

Enabling Integrated Windows Authentication  
Configuring SSL

After completing this module, students will be able to:

- Manage the Web Server role

- Configure websites, applications, and virtual folders
- Configure both the File Transfer Protocol and the Simple Mail Transfer Protocol
- Configure IIS to enable a more secure website platform

## **Module 12: Configuring Active Directory Certificate Services**

This module explains how to manage enterprise PKI smoothly in Windows Server 2008 and Windows Server 2008 R2 while ensuring a manageable, secure infrastructure, maintaining application and legacy system compatibility.

### **Lessons**

Active Directory Certificate Services Overview  
Deploying Active Directory Certificate Services  
Managing Certificate Templates  
Managing Certificate Enrollment  
Managing Certificate Revocation  
Managing Certificate Recovery

### **Lab : Configuring and Managing Active Directory Certificate Services**

Installing the AD CS Server Role and Configuring CAs  
Managing Certificate Revocation  
Managing Certificate Recovery

After completing this module, students will be able to:

- Describe Active Directory Certificate Services and enhancements in Windows Server 2008.
- Deploy AD CS infrastructure.
- Manage certificate templates.
- Manage certificate enrollment.
- Manage certificate revocation.
- Manage certificate recovery

## **Module 13: Configuring Active Directory Certificate Services**

This module explains how to manage enterprise PKI smoothly in Windows Server 2008 and Windows Server 2008 R2 while ensuring a manageable, secure infrastructure, maintaining application and legacy system compatibility.

### **Lessons**

Active Directory Certificate Services Overview  
Deploying Active Directory Certificate Services  
Managing Certificate Templates  
Managing Certificate Enrollment  
Managing Certificate Revocation  
Managing Certificate Recovery

### **Lab : Configuring and Managing Active Directory Certificate Services**



Installing the AD CS Server Role and Configuring CAs  
Managing Certificate Revocation  
Managing Certificate Recovery

Managing Certificate Templates  
Managing Certificate Enrollment  
Managing Certificate Revocation  
Managing Certificate Recovery

After completing this module, students will be able to:

- Describe Active Directory Certificate Services and enhancements in Windows Server 2008.
- Deploy AD CS infrastructure.
- Manage certificate templates.
- Manage certificate enrollment.
- Manage certificate revocation.
- Manage certificate recovery

### **Module 14: Configuring Active Directory Certificate Services**

This module explains how to manage enterprise PKI smoothly in Windows Server 2008 and Windows Server 2008 R2 while ensuring a manageable, secure infrastructure, maintaining application and legacy system compatibility.



#### **Lessons**

Active Directory Certificate Services Overview  
Deploying Active Directory Certificate Services

### **Lab : Configuring and Managing Active Directory Certificate Services**

Installing the AD CS Server Role and Configuring CAs  
Managing Certificate Revocation  
Managing Certificate Recovery

After completing this module, students will be able to:

- Describe Active Directory Certificate Services and enhancements in Windows Server 2008.
- Deploy AD CS infrastructure.
- Manage certificate templates.
- Manage certificate enrollment.
- Manage certificate revocation.
- Manage certificate recovery