

# Configuring, Managing and Maintaining Windows Server 2008-based Servers

Course 6419B: Five days; Instructor-Led

## About this Course

This five-day instructor-led course provides students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server 2008 and R2 environment. This course covers the core skills required by anyone working with Windows Server 2008 Servers.

## Audience Profile

Candidates for this course are information technology (IT) professionals who work in medium to large organizations. The primary candidate is a Windows Server administrator who operates Windows Servers on a daily basis and who requires the skills for configuring, managing, and maintaining servers installed with Windows Server 2008, including the Release 2 (R2) edition. Candidates are typically responsible for day-to-day management of the server operating system and various server roles such as DHCP, DNS, file and print services, directory services, and software distribution. This course may also be considered in combination with other exam preparation materials for candidates wishing to prepare for MCTS and MCITP certification in Windows Server 2008.

Other candidates for this course include IT Pros with skills within other IT areas or operating systems who wish to gain an insight into Windows Server 2008 and Windows Server 2008 R2.

## At Course Completion

After completing this course, students will be able to:

- Describe the Windows Server 2008 environment including the roles, features, and the tools used to perform effective server management.
- Manage the DNS and DHCP server infrastructure roles.
- Configure secure and efficient access to file services.
- Configure and manage Distributed File Systems.
- Manage file resources by using File Server Resource Manager.
- Configure and secure Remote Access.
- Manage Active Directory Domain Services.
- Configure Active Directory object administration and Domain Trust.
- Create and manage Group Policy objects.
- Configure user and computer settings by using Group Policy.
- Implement security settings by using Group Policy.
- Provide efficient network access for remote offices.
- Monitor and maintain Windows Server 2008.
- Manage Windows Server 2008 backup, restore, and recovery.

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## Prerequisites

Before attending this course, in addition to their professional experience, students must have:

- At least one year experience operating Windows Servers in the area of account management, server maintenance, server monitoring, or server security.
- Certification related to the Microsoft Technology Associate (MTA) Networking Fundamentals, Security Fundamentals, and Windows Server Administration Fundamentals designations, or equivalent knowledge as outlined in course 6420B: Fundamentals of Windows Server 2008.
- A+, Server+, hardware portion of Network+, or equivalent knowledge.
- Working knowledge of networking technologies.
- Intermediate understanding of network operating systems.
- Basic knowledge of Active Directory.
- An understanding of security concepts and methodologies (for example, corporate policies).
- Basic knowledge of TCP/IP.
- Basic knowledge of scripting tools such as PowerShell and WMI.

## Course OutlineModule 1: Overview of the Windows Server 2008 Management

In this module, students learn the Windows Server 2008 environment including the roles, features, and the tools used to perform effective server management.

### Lessons

- Lesson 1: Understanding the Windows Server 2008 Environment
- Lesson 2: Overview of Windows Server 2008 Server Roles and Features
- Lesson 3: Windows Server 2008 Administration Tools
- Lesson 4: Managing Windows Server 2008 Server Core

### Lab : Managing Server Roles in a Windows Server 2008 Environment

- Exercise 1: Determining Server Roles and Installation Types
- Exercise 2: Installing Windows Server 2008 Server Roles and Features
- Exercise 3: Managing Windows Server 2008 Server Core

After completing this module, students will be able to:

- Describe the considerations for implementing and managing a Windows Server 2008 environment.
- Explain Windows Server 2008 server roles and features.
- Describe Windows Server 2008 administration tools.
- Manage Windows Server 2008 Server Core.

## Module 2: Managing Windows Server 2008 Infrastructure Roles

In this module, students learn about IPv6 addressing and how to install and configure the DNS and DHCP server infrastructure roles.

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## Lessons

- Lesson 1: Understanding IPv6 Addressing
- Lesson 2: Overview of the Domain Name System Server Role
- Lesson 3: Configuring DNS Zones
- Lesson 4: Overview of the DHCP Server Role
- Lesson 5: Configuring DHCP Scopes and Options

### Lab : Lab A: Installing and Configuring the DNS Server Role

- Exercise 1: Installing and Configuring the DNS Server Role
- Exercise 2: Configuring Primary Zones and Resource Records
- Exercise 3: Monitoring and Troubleshooting DNS

### Lab : Lab B: Installing and Configuring the DHCP Server Role

- Exercise 1: Installing and authorizing the DHCP Server Role
- Exercise 2: Configuring DHCP Scopes and Options

After completing this module, students will be able to:

- Describe IPv6 addressing.
- Describe the features and concepts related to the DNS server role.
- Configure DNS zones.
- Describe the features and concepts related to the DHCP server role.
  
- Configure DHCP Scopes and options.

## Module 3: Module 3: Configuring Access to File Services

In this module, students learn how to configure secure and efficient access to file services.

## Lessons

- Lesson 1: Overview of Access Control
- Lesson 2: Managing NTFS File and Folder Permissions
- Lesson 3: Managing Permissions for Shared Resources
- Lesson 4: Determining Effective Permissions

### Lab : Managing Access to File Services

- Exercise 1: Planning a Shared Folder Implementation (Discussion)
- Exercise 2: Implementing a Shared Folder Implementation
- Exercise 3: Evaluating the Shared Folder Implementation

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After completing this module, students will be able to:

- Describe the concept of access control for file services.
- Manage NTFS file system and folder permissions.
- Manage permissions for shared resources.
- Determine effective permissions.

#### **Module 4: Configuring and Managing Distributed File System**

In this module, students will learn how to configure and manage a Distributed File System infrastructure.

##### **Lessons**

- Lesson 1: Distributed File System Overview
- Lesson 2: Configuring DFS Namespaces
- Lesson 3: Configuring DFS Replication

##### **Lab : Installing and Configuring Distributed File System**

- Exercise 1: Installing the Distributed File System Role Service
- Exercise 2: Creating a DFS Namespace
- Exercise 3: Configuring Folder Targets and Folder Replication
- Exercise 4: Viewing Diagnostic Reports for Replicated Folders

After completing this module, students will be able to:

- Describe the Distributed File System.
- Configure DFS Namespaces.
- Configure DFS Replication.

#### **Module 5: Managing File Resources by Using File Server Resource Manager**

In this module, students will learn how to use File Server Resource Manager to assist in data storage capacity management.

##### **Lessons**

- Lesson 1: Overview of File Server Resource Manager
- Lesson 2: Configuring Quota Management
- Lesson 3: Implementing File Screening
- Lesson 4: Managing Storage Reports
- Lesson 5: Implementing Classification Management and File Management Tasks

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## Lab : Lab A: Installing FSRM and Implementing Quota Management

- Exercise 1: Installing the FSRM Role Service
- Exercise 2: Configuring Storage Quotas

## Lab : Lab B: Configuring File Screening and Storage Reports

- Exercise 1: Configuring File Screening
- Exercise 2: Generating Storage Reports

## Lab : Lab C: Configuring Classification and File Management Tasks

- Exercise 1: Configuring Classification Management
- Exercise 2: Implementing File Management Tasks

After completing this module, students will be able to:

- Describe File Server Resource Manager.
- Configure quota management.
- Implement file screening.
- Implement classification management and file management tasks.
  
- Manage storage reports.

## Module 6: Configuring and Securing Remote Access

In this module, students will learn how to secure remote access using features such as a Virtual Private Networks, Network Access Protection (NAP), and DirectAccess.

### Lessons

- Lesson 1: Configuring a Virtual Private Network Connection
- Lesson 2: Overview of Network Policies
- Lesson 3: Integrating Network Access Protection with VPNs
- Lesson 4: Configuring VPN Enforcement by Using NAP
- Lesson 5: Overview of DirectAccess
- Lesson 6: Deploying DirectAccess

## Lab : Lab A: Implementing a Virtual Private Network

- Exercise 1: Configuring Routing and Remote Access as a VPN Remote
- Exercise 2: Configuring a Custom Network Policy

## Lab : Lab B: Implementing NAP into a VPN Remote Access Solution

- Exercise 1: Configuring NAP Components
- Exercise 2: Configuring Client Settings to support NAP

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## Lab : Lab C: Implementing DirectAccess

- Exercise 1: Reviewing the Existing Infrastructure Configuration
- Exercise 2: Configuring Infrastructure Services for DirectAccess
- Exercise 3: Configuring the DirectAccess Server and Verifying Connectivity

After completing this module, students will be able to:

- Configure a VPN connection.
- Explain network policies.
- Integrate NAP with VPNs.
- Configure and monitor NAP.
- Describe DirectAccess.

## Module 7: Managing Active Directory Domain Services

In this module, students will learn about the Active Directory infrastructure and how to manage AD DS objects.

### Lessons

- Lesson 1: Overview of the Active Directory Infrastructure
- Lesson 2: Working with Active Directory Administration Tools
- Lesson 3: Managing User Accounts
- Lesson 4: Managing Computer Accounts
- Lesson 5: Managing Groups
- Lesson 6: Using Queries to Locate Objects in AD DS

## Lab : Lab A: Creating and Managing User and Computer Accounts

- Exercise 1: Creating and Configuring User Accounts
- Exercise 2: Creating and Configuring Computer Accounts

## Lab : Lab B: Managing Groups and Locating Objects in AD DS

- Exercise 1: Implementing Role-Based Management Using Groups
- Exercise 2: Finding Objects in Active Directory

After completing this module, students will be able to:

- Explain the Active Directory infrastructure.
  - Work with Active Directory Administration Tools.
  - Manage user accounts.
  - Manage computer accounts.
  - Manage groups.
- 
- Use queries to locate objects in AD DS.

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## **Module 8: Configuring Active Directory Object Administration and Domain Trust**

In this module, students will learn how to configure and manage AD DS object permissions; and configure trust between AD DS domains.

### **Lessons**

- Lesson 1: Configuring Active Directory Object Administration
- Lesson 2: Configuring Active Directory Trusts

### **Lab : Lab A: Configuring Active Directory Delegation**

- Exercise 1: Delegating Control of AD DS Objects
- Exercise 2: Creating Managed Service Accounts in AD DS

### **Lab : Lab B: Administer Trust Relationships**

- Exercise 1: Administering a Trust Relationship

After completing this module, students will be able to:

- Configure Active Directory object administration.
- Configure Active Directory trusts.

## **Module 9: Creating and Managing Group Policy Objects**

In this module, students will learn how to create and manage Group Policy Objects (GPOs).

### **Lessons**

- Lesson 1: Overview of Group Policy
- Lesson 2: Configuring the Scope of Group Policy Objects
- Lesson 3: Managing Group Policy Objects
- Lesson 4: Evaluating and Troubleshooting Group Policy Processing

### **Lab : Lab A: Creating and Configuring GPOs**

- Exercise 1: Creating and Configuring Group Policy Objects
- Exercise 2: Managing the Scope of GPO Application

### **Lab : Lab B: Creating and Configuring GPOs**

- Exercise 1: Verifying GPO Application
- Exercise 2: Managing GPOs
- Exercise 3: Delegating Administrative Control of GPOs

## Lab : Lab C: Troubleshooting Group Policy

- Exercise 1: Troubleshooting incorrect policy settings – Scenario 1
- Exercise 2: Troubleshooting incorrect policy settings – Scenario 2

After completing this module, students will be able to:

- Explain Group Policy.
- Configure the scope of GPOs.
- Manage GPOs.
- Evaluate and troubleshoot Group Policy processing.

## Module 10: Using Group Policy to Configure User and Computer Settings

In this module, students will understand the specific settings that can be managed using Group Policy.

### Lessons

- Lesson 1: Using Group Policy to Configure Folder Redirection and Scripts
- Lesson 2: Using Administrative Templates to Manage Users and Computers
- Lesson 3: Deploying Software by Using Group Policy
- Lesson 4: Deploying Group Policy Preferences

## Lab : Lab A: Configuring Logon Scripts and Folder Redirection with Group Policy

- Exercise 1 Using a Group Policy Logon Script to Map a Network Drive
- Exercise 2: Using Group Policy to Redirect Folders

## Lab : Lab B: Configuring Administrative Templates

- Exercise 1: Configuring Administrative Templates

## Lab : Lab C: Deploying Software Using (Group Policy)

- Exercise 1: Deploying a Software Package Using Group Policy

## Lab : Lab D: Deploying Group Policy Preferences

- Exercise 1: Configure Group Policy Preferences

After completing this module, students will be able to:

- Use Group Policy to configure folder redirection and scripts.
- Use Administrative Templates to manage users and computers.
- Deploy software using Group Policy.

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- Deploy Group Policy preferences.

## **Module 11: Implementing Security Settings Using Group Policy**

In this module, students will learn how to secure network clients using Group Policy.

### **Lessons**

- Lesson 1: Overview of Security Settings
- Lesson 2: Implementing Fine-Grained Password Policies
- Lesson 3: Restricting Group Membership and Access to Software

### **Lab : Lab A: Implementing Security Using Group Policy**

- Exercise 1: Configuring Account and Security Policy
- Exercise 2: Implementing Fine-Grained Password Policies

### **Lab : Lab B: Configuring Restricted Groups and Application Control Policies**

- Exercise 1: Configuring Restricted Groups
- Exercise 2: Configuring Application Control Policies

After completing this module, students will be able to:

- Understand security settings.
- Implement Fine-Grained Password Policies.
- Restrict group membership and access to software.

## **Module 12: Providing Efficient Network Access for Remote Offices**

In this module, students will learn solutions that can be implemented to provide efficient remote office network access.

### **Lessons**

- Lesson 1: Overview of Remote Office Requirements
- Lesson 2: Implementing Read-Only Domain Controllers
- Lesson 3: Implementing BranchCache

### **Lab : Lab A: Deploying a Read-Only Domain Controller**

- Exercise 1: Installing an RODC
- Exercise 2: Configuring Password Replication Policy and Credential Caching

### **Lab : Lab B: Deploying BranchCache**

- Exercise 1: Configuring BranchCache in Distributed Cache Mode
- Exercise 2: Configuring BranchCache in Hosted Cache Mode

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After completing this module, students will be able to:

- Explain remote office requirements.
- Implement Read-Only Domain Controllers.
- Implement BranchCache.

### **Module 13: Monitoring and Maintaining Windows Server 2008**

In this module, students will learn how to plan for and implement performance baselines and perform server monitoring using monitoring tools.

#### **Lessons**

- Lesson 1: Planning Maintenance Tasks
- Lesson 2: Calculating a Server Baseline
- Lesson 3: Interpreting Performance Counters
- Lesson 4: Selecting Appropriate Monitoring Tools

#### **Lab : Creating a Baseline of Performance Metrics**

- Exercise 1: Determining Performance Metrics
- Exercise 2: Configuring a Performance Baseline
- Exercise 3: Viewing Performance using Monitoring Tools

After completing this module, students will be able to:

- Plan monitoring tasks.
- Calculate server baselines.
- Interpret performance counters.
  
- Select appropriate monitoring tools.

### **Module 14: Managing Windows Server 2008 Backup, Restore, and Recovery**

In this module, students will learn how to plan for and identify backup and restore strategies and to identify steps needed to recover from server startup issues.

#### **Lessons**

- Lesson 1: Planning and Implementing File Backups on Windows Server 2008
- Lesson 2: Planning and Implementing File Recovery
- Lesson 3: Recovering Active Directory
- Lesson 4: Troubleshooting Windows Server Startup

#### **Lab : Lab A: Implementing Windows Server Backup and Recovery**

- Exercise 1: Evaluating the Existing Backup Plan
- Exercise 2: Implementing a Recovery Plan

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## Lab : Lab B: Recovering Active Directory Objects

- Exercise 1: Enabling Active Directory Recycle Bin
- Exercise 2: Restoring a Deleted Active Directory Object

After completing this module, students will be able to:

- Plan and implement backup on Windows Server 2008.
- Plan and implement server restore.
- Describe Active Directory recovery methods.
  
- Troubleshoot Windows Server startup.

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