



## Course M6421-ILT

### Configuring and Troubleshooting a Windows Sever 2008 Network Infrastructure

Five days, Instructor-Led

#### INTRODUCTION

This five-day instructor-led course provides students with the knowledge and skills to configure and troubleshoot a Windows Sever 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies. Students will gain an understanding of the network technologies most commonly used with Windows Server 2008 and IP-enabled networks. Students will also learn how to secure servers and maintain update compliance.

#### AUDIENCE

The primary audience for this course includes Active Directory technology specialists aspiring to be Enterprise Administrators (Tier 4 day-to-day network operations) or Network Administrators (Tier 2). Experienced Server Administrators aspiring to be Enterprise Administrators would also benefit from this course.

The secondary audience for this course includes Storage Area Network Administrators who need to understand this information to deploy or extend their current storage infrastructure. Operations Managers who need this information to support troubleshooting efforts and business decisions would also benefit from this course.

#### PREREQUISITES

Before attending this course, students must have:

- Working experience with Windows Server 2003.
- Basic knowledge of Active Directory.
- An understanding of security concepts and methodologies (for example, corporate policies).
- Basic knowledge of DHCP.
- Basic knowledge of IPsec.

#### COURSE OUTLINE

##### MODULE 1: INSTALLING AND CONFIGURING SERVERS

This module explains how to identify the appropriate usage scenario and installation type for a server and then install and configure appropriate server roles and features.

Lessons

- Installing Windows Server 2008
- Managing Server Roles and Features
- Overview of the Server Core Installation Option

##### **Lab: Installing and Configuring Servers and Server Roles**

- Exercise 1: Identifying Server Types
- Exercise 2: Installing and Configuring Server Roles and Features
- Exercise 3: Configuring Server Core and Performing Basic Management Tasks

##### MODULE 2: CONFIGURING AND TROUBLESHOOTING DNS

This module explains how to configure, manage and troubleshoot DNS server and zone properties to be used in a secure environment.

Lessons

- Installing the DNS Server Role
- Configuring the DNS Server Role
- Configuring DNS Zones



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- Configuring DNS Zone Transfers
- Managing and Troubleshooting DNS

#### **Lab: Configuring and Verifying a DNS Solution**

- Exercise 1: Configuring a DNS Infrastructure
- Exercise 2: Monitoring and Troubleshooting DNS

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#### MODULE 3: CONFIGURING AND MANAGING WINS

This module explains how to configure, manage and troubleshoot WINS servers.

##### Lessons

- Overview of the Windows Internet Name Service
- Managing the WINS Server
- Configuring WINS Replication
- Migrating from WINS to DNS

#### **Lab: Configuring a WINS Infrastructure**

- Exercise 1: Installing WINS
- Exercise 2: Configuring WINS Burst Handling
- Exercise 3: Configuring WINS Replication
- Exercise 4: Migrating from WINS to DNS

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#### MODULE 4: CONFIGURING AND TROUBLESHOOTING DHCP

This module explains how to configure, manage and troubleshoot a DHCP environment supporting an IPV4 infrastructure.

##### Lessons

- Overview of the DHCP Server Role
- Configuring DHCP Scopes and Options
- Managing a DHCP Database
- Monitoring and Troubleshooting DHCP
- Securing DHCP

#### **Lab: Configuring and Troubleshooting the DHCP Server Role**

- Exercise 1: Installing and Authorizing the DHCP Server Role
- Exercise 2: Configuring a DHCP Scope
- Exercise 3: Troubleshooting Common DHCP Issues

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#### MODULE 5: CONFIGURING AND TROUBLESHOOTING IPV6 TCP/IP

This module explains how to configure and troubleshoot static and dynamic IPv6 addresses, including subnet prefix lengths, gateways and DNS servers.

##### Lessons

- Overview of IPv6
- Coexistence with IPv6
- IPv6 Tunneling Technologies



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- Transitioning from IPv4 to IPv6
- Troubleshooting IPv6

#### Lab A: Configuring an ISATAP Router

- Exercise 1: Configuring a New IPv6 Network and Client
- Exercise 2: Configuring an ISATAP Router to Enable Communication Between an IPv4 Network and an IPv6 Network

#### Lab B: Converting the Network

- Exercise 1: Transitioning to an IPv6-Only Network

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## MODULE 6: CONFIGURING AND TROUBLESHOOTING ROUTING AND REMOTE ACCESS

This module explains how to configure and troubleshoot Routing and Remote Access Services.

### Lessons

- Configuring Network Access
- Configuring VPN Access
- Overview of Network Policies
- Overview of the Connection Manager Administration Kit
- Troubleshooting Routing and Remote Access

#### Lab: Configuring and Managing Network Access

- Exercise 1: Configuring Routing and Remote Access as a VPN Remote Access Solution
- Exercise 2: Configuring a Custom Network Policy
- Exercise 3: Configuring Logging
- Exercise 4: Configuring a Connection Profile

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## MODULE 7: INSTALLING, CONFIGURING, AND TROUBLESHOOTING THE NETWORK POLICY SERVER ROLE SERVICE

This module explains how to install, configure and troubleshoot the Network Policy Server Role service.

### Lessons

- Installing and Configuring a Network Policy Server
- Configuring RADIUS Clients and Servers
- NPS Authentication Methods
- Monitoring and Troubleshooting a Network Policy Server

#### Lab: Configuring and Managing Network Policy Server

- Exercise 1: Installing and Configuring the Network Policy Server Role Service
- Exercise 2: Configuring a RADIUS Client
- Exercise 3: Configuring Certificate Auto-Enrollment

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## MODULE 8: CONFIGURING NETWORK ACCESS PROTECTION

This module explains how to configure and manage NAP for DHCP, VPN, and 802.1X.

### Lessons

- Overview of Network Access Protection



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- How NAP Works
- Configuring NAP
- Monitoring and Troubleshooting NAP

#### Lab: Configuring NAP for DHCP and VPN

- Exercise 1: Configuring NAP for DHCP Clients
- Exercise 2: Configuring NAP for VPN Clients

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## MODULE 9: CONFIGURING IPSEC

This module explains how to configure and test IPsec.

#### Lessons

- Overview of IPsec
- Configuring Connection Security Rules
- Configuring IPsec NAP Enforcement

#### Lab: Configuring IPsec NAP Enforcement

- Exercise 1: Preparing the Network Environment for IPsec NAP Enforcement
- Exercise 2: Configuring and Testing IPsec NAP Enforcement

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## MODULE 10: MONITORING AND TROUBLESHOOTING IPSEC

This module explains how to monitor and troubleshoot IPsec.

#### Lessons

- Monitoring IPsec Activity
- Troubleshooting IPsec

#### Lab: Monitoring and Troubleshooting IPsec

- Exercise 1: Monitoring IPsec Connectivity
- Exercise 2: Configuring Connection Security
- Exercise 3: Troubleshooting IPsec

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## MODULE 11: CONFIGURING AND MANAGING DISTRIBUTED FILE SYSTEM

This module explains how to configure and manage Distributed File System.

#### Lessons

- DFS Overview
- Configuring DFS Namespaces
- Configuring DFS Replication

#### Lab: Configuring DFS

- 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

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#### MODULE 12: CONFIGURING AND MANAGING STORAGE TECHNOLOGIES

This module explains how to configure and troubleshoot file system storage technologies included with Windows Server 2008.

##### Lessons

- Windows Server 2008 Storage Management Overview
- Managing Storage Using File Server Resource Manager
- Configuring Quota Management
- Implementing File Screening
- Managing Storage Reports

##### **Lab: Configuring and Managing Storage Technologies**

- Exercise 1: Installing the FSRM Role Service
- Exercise 2: Configuring Storage Quotas
- Exercise 3: Configuring File Screening
- Exercise 4: Generating Storage Reports

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#### MODULE 13: CONFIGURING AVAILABILITY OF NETWORK RESOURCES AND CONTENT

This module explains how to describe and configure backup and recovery methods.

##### Lessons

- Backing Up Data
- Configuring Shadow Copies
- Providing Server and Service Availability

##### **Lab: Configuring Availability of Network Resources**

- Exercise 1: Configuring Windows Server Backup and Restore
- Exercise 2: Configuring Shadow Copying
- Exercise 3:Configuring Network Load Balancing

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#### MODULE 14: CONFIGURING SERVER SECURITY COMPLIANCE

This module explains how to configure and analyze server security and security update compliance.

##### Lessons

- Securing a Windows Infrastructure
- Using Security Templates to Secure Servers
- Configuring an Audit Policy
- Overview of Windows Sever Update Services
- Managing WSUS

##### **Lab: Configuring Server Security Compliance**

- Exercise 1: Configuring and Analyzing Security
- Exercise 2: Analyzing Security Templates
- Exercise 3: Configuring Windows Software Update Services