

# Course 6421A: Configuring and Troubleshooting a Windows Server 2008 Network Infrastructure

## 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.

## 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
- 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

## 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

## 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

**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
- Transitioning from IPv4 to IPv6
- Troubleshooting IPv6

**Lab: 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: Lab B: Converting the Network**

- Exercise 1: Transitioning to an IPv6-Only Network

**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

**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

**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
- 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

## 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

## 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

## 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

## 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

## **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

## **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 Server 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