Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services
Course No. MS2277 ● 5 Days

► COURSE OVERVIEW
This five-day instructor-led course provides students with the knowledge and skills to implement and manage a Microsoft Windows® Server 2003 network infrastructure. The course is intended for systems administrator and systems engineer candidates who are responsible for implementing and managing server networking technologies. These tasks include implementing routing; implementing and managing Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); securing Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates; configuring a network access infrastructure by configuring the connections for remote access clients, and managing and monitoring network access.

This is the fourth course in the Systems Administrator and Systems Engineer track for Windows Server 2003, and it is the final course in the Systems Administrator track.

► AUDIENCE
This course is intended for individuals who are employed as or seeking employment as a systems administrator or systems engineer.

► OBJECTIVES
Upon successful completion of this course, students will be able to:
• Install and configure routing by using the Routing and Remote Access service.
• Install and configure the DHCP Server service.
• Manage and monitor DHCP.
• Configure host and network basic input/output system (NetBIOS) name resolution.
• Install and configure the DNS Server service.
• Manage and monitor DNS.
• Install, configure, and manage WINS.
• Secure IP traffic by using IPSec and certificates.
• Implement a network access infrastructure by configuring the connections for virtual, dial-up, and wireless clients.
• Manage and monitor remote connections in a network access infrastructure.

► PREREQUISITES
Before attending this course, students must have completed:
• Course 2276: Implementing a Microsoft Windows Server 2003 Network Infrastructure: Network Hosts, or have equivalent knowledge and skills.

► COURSE OUTLINE
MODULE 1: CONFIGURING ROUTING BY USING ROUTING AND REMOTE ACCESS

Topics
Installing and Configuring the Routing and Remote Access Service
Configuring Packet Filters

Skills
After completing this module, students will be able to:
• Install and configure routing.
• Configure packet filters.
Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services
Course No. MS2277 • 5 Days

MODULE 2: ALLOCATING IP ADDRESSING BY USING DYNAMIC HOST CONFIGURATION PROTOCOL

Topics
- Adding and Authorizing a DHCP Server Service
- Configuring a DHCP Scope
- Configuring a DHCP Reservation
- Configuring DHCP Options
- Configuring a DHCP Relay Agent

Skills
- After completing this module, students will be able to:
  - Describe the role of DHCP in the network infrastructure.
  - Add and authorize a DHCP Server service.
  - Configure a DHCP scope.
  - Configure DHCP options.
  - Configure a DHCP reservation.
  - Configure a DHCP relay agent.

Lab
Allocating IP Addressing by Using DHCP

MODULE 3: MANAGING AND MONITORING DYNAMIC HOST CONFIGURATION PROTOCOL (DHCP)

Topics
- Overview of Managing and Monitoring DHCP
- Managing a DHCP Database
- Viewing DHCP Statistics
- Monitoring DHCP Server Performance by Using the DHCP Audit Log

Skills
- After completing this module, students will be able to:
  - Explain the purpose of managing and monitoring DHCP.
  - Manage a DHCP database.
  - View DHCP statistics.
  - Monitor DHCP server performance by using the DHCP audit log.
  - Monitor DHCP server performance by using the Performance console.
  - Manage and monitor DHCP.

MODULE 4: RESOLVING NAMES

Topics
- Configuring Names on a Client
- Configuring Host Name Resolution
- Configuring NetBIOS Name Resolution

Skills
- After completing this module, students will be able to:
  - Describe the name resolution process.
  - Configure a name on a client.
  - Configure host name resolution.
  - Configure NetBIOS name resolution.
  - Resolve names.
Module 5: Resolving Host Names by Using Domain Name System (DNS)

Topics
- Installing the DNS Server Service
- Configuring the Properties for the DNS Server Service
- Configuring the DNS Zones
- Configuring a DNS Client
- Configuring DNS Dynamic Updates
- Configuring DNS Zone Transfers
- Delegating Authority for Zones

Skills
After completing this module, students will be able to:
- Install the DNS Server service.
- Configure the properties for the DNS Server service.
- Configure the DNS zones.
- Configure a DNS client.
- Configure dynamic updates.
- Configure DNS zone transfers.
- Delegate authority for zones.

Module 6: Managing and Monitoring Domain Name System

Topics
- Configuring the Time to Live Interval
- Configuring Aging and Scavenging
- Integrating DNS and WINS
- Verifying that a Resource Record Exists by Using Nslookup, DnsCmd, and Dnslint
- Testing the DNS Server Configuration
- Monitoring DNS Server Performance by Using the Performance Console
- Monitoring DNS Server Performance by Using the DNS Logging

Skills
- Explain the role of DNS in the network infrastructure.
- Install and configure a WINS server.
- Configure WINS replication.
- Manage records in WINS.
- Manage a WINS database.

Lab
- Resolving WINS Server Configuration Issues

Module 7: Resolving NetBIOS Names by Using Windows Internet Naming Service

Topics
- Installing and Configuring a WINS Server
- Configuring the WINS Server
- Managing Records in WINS
- Configuring WINS Replication
- Managing the WINS database

Skills
After completing this module, students will be able to:
- Explain the role of WINS in the network infrastructure.
MODULE 8: SECURING NETWORK TRAFFIC BY USING IPSec AND CERTIFICATES

Topics
Implementing IPSec
Implementing IPSec with Certificates
Monitoring IPSec

Skills
After completing this module, students will be able to:

• Implement IPSec.
• Implement IPSec with certificates.
• Monitor IPSec.

Lab
Identifying and Resolving Configuration Issues with IPSec Policy

MODULE 9: CONFIGURING NETWORK ACCESS

Topics
Introduction to a Network Access Infrastructure
Configuring a VPN Connection
Configuring a Dial-up Connection
Configuring a Wireless Connection
Controlling User Access to a Network
Centralizing Network Access Authentication and Policy Management by Using IAS

Skills
After completing this module, students will be able to:

• Explain the purpose of a network access infrastructure.
• Describe the components of a network access infrastructure.
• Explain what a network access server is.
• Explain what types of clients access a network.
• Explain what types of authentication methods are used in a network access infrastructure.

Lab
Identifying and Resolving Common Issues with VPN Configuration Settings

MODULE 10: MANAGING AND MONITORING NETWORK ACCESS

Topics
Managing the Network Access Services
Configuring Logging on a Network Access Server
Collecting and Monitoring Network Access Data

Skills
After completing this module, students will be able to:

• Manage the network access services.
• Configure logging on the network access server.
• Collect and monitor network access data.
Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services
Course No. MS2277 ● 5 Days