Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure

- Course Number: 2278
- Length: 5 Day(s)

Certification Exam

This course will help you prepare for the following Microsoft Certified Professional exam:

- **Exam 70-293**: Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure

Course Overview

The goal of this five-day course is to provide students with the knowledge and skills necessary to plan and maintain a Windows Server 2003 network infrastructure.

This is the fifth course in the Windows Server 2003 Systems Engineer curriculum.

Prerequisites

Before attending this course, students must have completed:

- Course 2277: Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services, or have equivalent knowledge and skills.

Audience

This course is appropriate for individuals employed as or seeking a position as a systems engineer. This course is also appropriate for individuals currently supporting a competitive platform who want to enhance their job skills on Microsoft Windows Server 2003 networking.

The entry criteria for this course include individuals who are:

- IT professionals and new to Windows Server 2003 network implementation.
- Preparing for the Microsoft Certified Systems Engineer (MCSE) certification.

Course Outline

- Module 1 - Introduction to Network Infrastructure
  - 1.1 Introduction to Network Infrastructure
  - 1.2 Network Design
1.3 Network Diagrams
1.4 Planning a Network Infrastructure Project
1.5 Project Components
1.6 Master Project Plan
1.7 Selecting Key Stakeholders
1.8 Scope Management
1.9 Best Practices
1.10 Planning Windows Server 2003 Network

Module 2 - Planning & Optimizing a TCP/IP Physical & Logical Network

Binary Basics
1.1 Decimal Numbering
1.2 Binary Numbering
1.3 Binary Decimal Conversions

Subnet Masks
2.1 Network Classes
2.2 What is a Subnet Mask
2.3 Default Subnet Masks

Custom Subnetting
3.1 The Need for Subnetting
3.2 Simple Class A Subnetting
3.3 Simple Class B Subnetting

Subnetting
4.1 Class B Subnetting
4.2 Subnetting Gotchas
4.3 Class A Subnetting

Assigning Address
5.1 Subnet Structure
5.2 Address Assignments
5.3 Class C Subnetting
5.4 Class C Assignments

Solving Addressing Problems
6.1 Private Address
6.2 Variable
6.3 Classless Inter-Domain Routing

Monitoring Traffic
7.1 System Monitor
7.2 Network Monitor
Lab- Using Network Monitor

Module 3 - Planning and Troubleshooting Routing and Switching

Network Topology
1.1 Networking Devices
1.2 Server Locations
1.3 Internet Connectivity
1.4 Monitoring Traffic
1.5 Troubleshooting
Lab- Install NAT
• 3.6 Client Configuration
• Lab- Add a DNS Zone
• Lab- Add a Host Resource Record
• Lab- Add a Sub Zone
• Lab- Add a Sub-Domain
• Lab- Install DNS
• Active Directory DNS Integration
• 4.1 Locating Active Directory Resources
• 4.2 SRV Records
• 4.3 AI Intergrated Zones
• Lab- Verify SRV Records
• Lab- Install a New Domain
• Lab- Raise Forest Functionality Level
• Lab- Raise Domain Functionality Level
• Lab- Configure a Secondary DNS Zone
• Monitoring DNS
• 5.1 DNS Logs
• 5.2 Replication Monitor
• 5.3 System Monitor
• 5.4 Command Line Tools
• Lab- Create a DNS Log
• Module 7 -Planning and Optimizing WINS
• 1.1 The Role of WINS in the Network
• 1.2 Functions of Naming
• 1.3 NetBIOS Names
• 1.4 NetBIOS Name Registration
• 1.5 Using NetBIOS Names
• 1.6 NetBIOS Utilities
• 1.7 NetBIOS Name Resolution
• 1.8 LMHOSTS
• 1.9 Installing and Configuring a WINS Server
• 1.10 Configuring a WINS Server
• 1.11 Installing WINS
• 1.12 Demo - WINS Server Configuration
• 1.13 Managing Records in WINS
• 1.14 WINS Client Configuration
• 1.15 DHCP Server WINS Configuration
• 1.16 Configuring WINS Replication
• 1.17 Demo - WINS Replication
• 1.18 Managing and Monitoring WINS
• Module 8 - IPSec Setup and Configuration
• 1.1 IPSec Setup and Configuration
• 1.2 Default Policy Rules
• 1.3 Rules Relating to IPSec Connection
• 1.4 IPSec Default Policies
• 1.5 Client (Respond Only) Settings
- 1.6 Server (Request Security) Settings
- 1.7 Secure Server (Require Security)
- 1.8 Choosing an IPSec Deployment
- 1.9 Authentication Methods
- 1.10 Factors in using IPSec
- 1.11 IPSec Troubleshooting
- 1.12 Demo - MMC & Adding IPSec Snapin
- 1.13 Demo - Creating a New IPSec Policy
- 1.14 Demo - IP Default Policies Overview
- 1.15 Demo - IPSec Monitor Tools
- 1.16 Group Policy Management Console
- 1.17 Key Exchange Info through Event Viewer
- 1.18 Demo - Disable IKE Auditing
- 1.19 Verifying Policy Application using RSoP
- 1.20 Demo - RSoP Usage
- 1.21 Demo - RSoP Planning Mode
- Module 9 - Network Access Planning
- 1.1 Network Access Planning
- 1.2 Network Access Requirements
- 1.3 Network Access
- 1.4 Authentication Protocols
- 1.5 Security Hosts
- 1.6 Network Access Connection Methods
- 1.7 Virtual Private Network (VPN)
- 1.8 Dial-Up
- 1.9 Wireless
- 1.10 Demo - Configure RRAS for VPN/Dial-up
- 1.11 Remote Access Policy Strategy
- 1.12 Policies - Remote Access
- 1.13 Policy Conditions
- 1.14 Demo - Remote Access Policy (VPN)
- 1.15 Dial-in Properties for User Account
- 1.16 User Profile
- 1.17 Account Dial-in
- 1.18 Demo – Remote Access Policy (Dial-up)
- 1.19 Network Access Authentication
- 1.20 Using IAS for Authentication
- 1.21 Demo - Configuring IAS
- 1.22 Network Access Considerations
- 1.23 Authentication - (Security)
- Module 10 - Network Access Troubleshooting
- 1.1 Network Access Troubleshooting
- 1.2 Network Access Logs
- 1.3 Network Access Events
- 1.4 Tools - Network Access
- 1.5 Demo - Tools: Ping, Pathping & Tracert
1.6 LAN Authentication Troubleshooting
1.7 Troubleshooting - Remote Connection
1.8 LAN Authentication Issues
1.9 Security Events (Logging)
1.10 Account Logon Events Auditing
1.11 Logon Events Auditing
1.12 Demo - Auditing Account Logon Events
1.13 Demo - Viewing Through Event Viewer
1.14 Remote Access Troubleshooting
1.15 Demo - Certification Revocation
1.16 Authentication with IAS Logs
1.17 PPP Logging
1.18 Demo - PPP Logging
1.18 Remote Access Connection Issues
1.19 Wireless Access Authenticating
1.20 Typical VPN Problems
1.21 Dial-Up Access Problems
1.22 Troubleshooting Remote Access
1.23 Demo - Troubleshooting Remote Access
Module 11 - Planning WS2003 Network Infrastructure
1.1 Planning WS2003 Network Infrastructure
1.2 Planning Documentation
1.3 Documenting Daily Events
1.4 Capacity Planning
1.5 Deployment Planning
1.6 Security Planning
1.7 Pilot Planning
1.8 Test Planning
1.9 Development/Testing Process
1.10 Test Lab
1.11 Staging Area
1.12 Development/Test Guidelines
1.13 Network Management and Maintenance
1.14 Network Service (Microsoft)