Configuring Windows Server 2008 Network Infrastructure

- Course Number: 70-642

Certification Exam

This course is preparation for the Microsoft Technical Specialist (TS) exam, Exam 70-642: TS: Windows Server 2008 Network Infrastructure, Configuring

Course Overview

When you pass Exam 70-642: TS: Windows Server 2008 Network Infrastructure, Configuring, you complete the requirements for the following certification:

- Microsoft Certified Technology Specialist (MCTS): Windows Server 2008 Network Infrastructure, Configuring

Exam 70-642 counts as credit toward the following certifications:

- Microsoft Certified IT Professional (MCITP): Enterprise Administrator
- Microsoft Certified IT Professional (MCITP): Server Administrator

Prerequisites/Audience

The Microsoft Certified Technology Specialist (MCTS) on Windows Server 2008 credential is intended for IT professionals who work in the complex computing environment of medium-sized to large companies. The MCTS candidate should have at least one year of experience implementing and administering a network operating system in an environment that has the following characteristics:

- 250 to 5,000 or more users
- Three or more physical locations
- Three or more domain controllers
- Network services and resources such as messaging, a database, file and print, a proxy server, a firewall, the Internet, an intranet, remote access, and client computer management
- Connectivity requirements such as connecting branch offices and individual users in remote locations to the corporate network and connecting corporate networks to the Internet

Course Outline

Course Introduction 4m

Chapter 1 - Understanding and Configuring IP 1h 55m
Lesson 1: Understanding and Configuring Network Connections
What are Network Layers
OSI Model
Encapsulation
OSI vs TCP/IP Model
Configuring Networking Properties for Vista and 2008 Server
Viewing Network Connections
Network Connection Components
Viewing and Configuring an Address
Troubleshooting Network Connectivity
Demo - Configuring IP
Demo - Testing Connectivity

Lesson 2: Understanding IP Version 4
Ipv4 Address Structure
The Subnet Mask
Binary to Decimal Conversion
Routing and Default Gateways
RFC 1918
What is Subnetting
Demo - IP Addressing

Lesson 3: Understanding IP Version 6
Introducing IPv6
IPv6 Address Types
IPv6 Transition Technologies
Chapter 1 Review

Chapter 2 - Configuring Name Resolution
Lesson 1: Understanding Name Resolution in Windows Server 2008 Networks
Name Resolution Methods in Windows
Broadcast Name Resolution
WINS Server Name Resolution
How a DNS Query Works
DNS Query Example
DNS Query Illustrated
How Caching Works
Demo - Name Resolution

Lesson 2: Deploying a DNS Server
Deploying a DNS Server on a DC
Deploying a DNS Server on a Stand-alone or Member-Server
Deploying a DNS Server on Server Core
Lesson 3: Configuring DNS Client Settings
Specifying DNS Servers
Suffix Search List
Configuring Dynamic Update Settings
Clearing the Client Cache
Demo - DNS Client
Chapter 2 Review

Chapter 3 - Configuring a DNS Zone Infrastructure
Lesson 1: Creating and Configuring Zones
Creating Zones
AD Zone Replication Scope
Creating a Forward or Reverse Lookup Zone
Dynamic Updates
Examining Built-in Resource Records
Enabling DNS to use WINS Resolution
Aging and Scavenging
Demo - Global Names Zone

Lesson 2: Configuring Zone Replication and Transfers
Configure a Zone Replication Scope for Active Directory
Choosing Zone Replication Scope
Creating Custom Application Directory Partitions
Zone Transfers
Implementing Stub Zones
Demo - Secondary Zone
Chapter 3 Review

Chapter 4 - Creating a DHCP Infrastructure
Lesson 1: Installing a DHCP Server
Understanding DHCP Address Assignment
Address Leases
DHCP Scopes
Adding the DHCP Server Role
DHCPv6 Stateless Mode
Demo - DHCP
Demo - DHCP Options

Lesson 2: Configuring a DHCP Server
Lesson 1: Routing
Routing Overview
Routing Process
Examining Network Routes
Routing Protocols
Routing and Remote Access
Demo - IP Routing
Demo - Routing Protocols
Chapter 5 Review

Chapter 6 - Protecting Network Traffic with IPSec
Lesson 1: Configuring IPSec
What is IPSec?
IPSec Policies
Connection Security Rules
Security Associations
How IPSec Connections are Established.
Authentication Methods for IPSec
Predefined IPSec Policy
IP Security Rule Wizard
Connection Security Rule Wizard
Demo - IPSec
Chapter 6 Review

Chapter 7 - Connecting to Networks
Lesson 1: Configuring Network Address Translation
NAT Concepts
Windows 2008 NAT Options
Configuring ICS
Configuring NAT using RRAS
Troubleshooting NAT

Lesson 2: Configuring Wireless Networks
Wireless Networking Concepts
Wireless Networking Standards
Wireless Security Standards
Wireless Infrastructure
Authenticating Wireless with Windows Server 2008
Connecting to Wireless Networks
Best Practices
Demo - Wireless Network
Demo - Wireless Group Policy

Lesson 3: Connecting to Remote Networks
Remote Access Overview
Configuring Dial-Up Server
Configuring VPN Connections
Configuring the VPN Server
Other Options
Testing Connectivity
Demo - VPN Connections
Chapter 7 Review

Chapter 8 - Configuring Windows Firewall and Network Access Protection
1h 46m

Lesson 1: Configuring Windows Firewall
Why are Firewalls Important
Inbound Filtering
Outbound Filtering
Firewall Scope
Authorizing Connections
Group Policies
Demo - Windows Firewall Inbound
Demo - Windows Firewall Outbound

Lesson 2: Configuring Network Access Protection
Concepts of NAP
System Health Agents and Validators
The NAP Process
Planning NAP Deployment
Installing and Configuring NAP
Other Configurations
IPSec Rules
802.1x Configuration
Configuring DHCP
Configuring NAP Components
Configuring SHVs
Configuring Network Policies
Demo - Install NAP
Demo - NPS
Demo - SHV
**Chapter 9 - Managing Software Updates**

Lesson 1: Understanding Windows Server Update Services
- WSUS Overview
- WSUS Architecture
- WSUS Requirements
- Planning for the WSUS Installation
- Auditing Updates
- Demo - Install WSUS

Lesson 2: Using Windows Server Update Services
- WSUS
- How to Troubleshoot Update Problems
- How to Remove Updates
- Chapter 9 Review

**Chapter 10 - Monitoring Computers**

Lesson 1: Monitoring Event Logs
- Event Forwarding Concepts
- How to Configure Event Forwarding
- Configuring the Collecting Computer
- Creating a Subscription
- Configure Event Forwarding to use HTTPS
- Demo - Monitoring Events

Lesson 2: Monitoring Performance and Reliability
- Performance Monitor
- Reliability Monitor
- Built-In Data Collector Sets
- Demo - WRPM

Lesson 3: Using Network Monitor
- Installing Network Monitor
- Analyze Network Data
- Demo - Network Monitor
- Chapter 10 Review

**Chapter 11 - Managing Files**

Lesson 1: Managing File Security
- NTFS Files Permissions
Lesson 2: Sharing Folders
The File Services Server Role
Using Quotas
Configuring Quotas
Sharing Folders (Cont.)
DFS Overview
Installing DFS
Demo - DFS

Lesson 3: Backing Up and Restoring Files
Shadow Copies
Managing Shadow Copies
Windows Server Backup
Recovery
Demo - Back Up
Chapter 11 Review

Chapter 12 - Managing Printers

Lesson 1: Managing Printers
Installing the Print Services Server Role
Installing Printers
Sharing Printers
Printer Pooling
Printer Priority
Managing Internet Printing
Generating Notifications
Migrating Printers
Managing Printers with the CLI
Demo - Managing Printers
Demo - Web Printing
Chapter 12 Review
Course Closure

Total Duration: 15h 45m