

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

1h 17m

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

Configuring a Caching-only DNS Server
Configuring Server Properties
Demo - Configuring DNS

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

1h 5m

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

1h 4m

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

Post-Installation Tasks
Other DHCP Options
DHCP on the Server Core
Chapter 4 Review

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

1h 20m

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

1h 31m

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

Demo - Health Policy
Chapter 8 Review

Chapter 9 - Managing Software Updates

36m

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

1h 39m

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

1h 37m

Lesson 1: Managing File Security

NTFS Files Permissions

NTFS Permissions
Methods of Securing Files
EFS
How to Encrypt a File/Folder
Sharing Encrypted Files
Configuring EFS Using GPS
Demo - File Security
Demo - EFS

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

40m

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