

6435 - Designing a Windows Server 2008 Network Infrastructure

Duration: 5 days

Overview:

This five-day course will provide students with an understanding of how to design a Windows Server 2008 Network Infrastructure that meets business and technical requirements for network services.

Target Audience:

The primary audience for this course is IT professionals, including Windows 2000 Server and Windows Server 2003 enterprise administrators interested in becoming a Windows Server 2008 Enterprise Administrator who focuses on network solutions.

Pre-requisites:

Before attending this course, students must have:

- Active Directory Technology Specialist level knowledge and concepts.
- Network Infrastructure Technology Specialist level knowledge and experience.
- Applications Infrastructure Technology Specialist level knowledge and experience.
- Windows Vista TS level of knowledge and experience.
- Intermediate understanding of networking concepts such as TCP/IP, name resolution, and connection methods.
- Intermediate understanding of security best practices for authentication and file permissions.
- Intermediate understanding of server and network hardware.

Module 1: Overview of Network Infrastructure Design

Lessons

- Preparing for Network Infrastructure Design
- Designing the Network Topology
- Designing Network Infrastructure for Virtualisation
- Designing a Change Management Structure for a Network

Lab : Designing Network Infrastructure in Windows Server 2008

- Preparing for the Network Infrastructure Design
- Designing the Network Topology
- Designing Network Infrastructure for Virtualisation
- Designing a Change Management plan
- Lab Discussion

Module 2: Designing Network Security

Lessons

- Overview of Network Security Design
- Creating a Network Security Plan
- Identifying Threats to Network Security
- Analysing Security Risks
- Defence-in-Depth Model Overview

Lab : Designing a Network Security Plan

- Identifying a Team for the Security Plan Scenario
- Identifying Threats
- Analysing Risk
- Discussion of Designing a Network Security Plan

Module 3: Designing IP Addressing

Lessons

- Designing an IPv4 Addressing Scheme
- Designing an IPv6 Addressing Scheme
- Designing DHCP Implementation
- Designing DHCP Configuration Options

Lab : Designing IP Addressing in Windows Server 2008

- Designing an IPv4 Addressing Scheme
- Designing an IPv6 Addressing Scheme
- Designing a DHCP Implementation
- Discussion of IP Address Allocation

Module 4: Designing Routing and Switching

Lessons

- Preparing for Designing a Network Routing Topology
- Selecting Network Devices
- Designing Internet Connectivity and Perimeter Networks
- Designing Routing Communications
- Evaluating Network Performance

Lab : Designing a Network Routing Topology

- Designing the Placement of Routers
- Designing a Perimeter Network
- Evaluating Network Performance
- Discussion of Designing a Network Routing Topology

Module 5: Designing Security for Internal Networks

Lessons

- Designing Windows Firewall Implementation
- Overview of IPSec
- Designing IPSec Implementation

Lab : Designing a Secure Internal Network

- Designing a Windows Firewall Implementation
- Designing an IPSec Implementation

Module 6: Designing Name Resolution

Lessons

- Collecting Information for a Name Resolution Design
- Designing a DNS Server Strategy
- Designing a DNS Namespace
- Designing DNS Zone Implementation
- Designing Zone Replication and Delegation

Lab : Designing a Name Resolution Strategy in Windows Server 2008

- Designing a DNS Server Strategy
- Designing a DNS Namespace
- Designing a DNS Zone and Replication Strategy
- Discuss the Design of Name Resolution
- Implement a DNS Zone and Replication Strategy

At Course Completion:

After completing this course, students will be able to:

- Describe key components of network infrastructure design.
- Describe how to design a secure network.
- Design a plan for allocating IP addresses to workstations and servers.
- Design a network topology.
- Describe the internal considerations for network security and how they can be addressed.
- Design an appropriate name resolution system that incorporates Domain Name System (DNS).
- Optimise a name resolution system that incorporates DNS and Windows Internet Name Service (WINS).
- Design a solution for network access.
- Design a Network Access Protection (NAP) solution.
- Design a solution for operating system deployment and maintenance.
- Design the deployment of file services.
- Design print services in Windows Server 2008.
- Design high availability for applications and services.

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Module 7: Designing Advanced Name Resolution

Lessons

- Optimising DNS Queries
- Designing DNS for High Availability
- Designing a WINS Name Resolution Strategy

Lab : Designing a Name Resolution Strategy in Windows Server 2008

- Optimise DNS Resolution
- Designing and Configuring WINS Name Resolution
- Integrating DNS and WINS Name Resolution

Module 8: Planning and Deploying the Application Virtualisation Management System

Lessons

- Gathering Data for Designing Network Access Solutions
- Securing and Controlling Network Access
- Designing Remote Access Services
- Designing RADIUS Authentication with Network Policy Services
- Designing Wireless Access

Lab : Designing a Network Access Solution

- Designing a Remote Access Solution
- Designing Network Policy Services
- Designing a Wireless Connection Solution
- Discuss the Design of Network Access
- Deploying an SSTP VPN Solution

Module 9: Designing Network Access Protection

Lessons

- Designing the NAP Platform Architecture
- NAP Architecture
- NAP Enforcement
- Designing NAP Policy
- Designing NAP Enforcement and Remediation

Lab : Designing Network Access Protection

- Analysing Enforcement Methods
- Designing DHCP Enforcement
- Designing IPSec Enforcement
- Implementing DHCP Enforcement

Module 10: Designing Operating System Deployment and Maintenance

Lessons

- Determining Operating System Deployment Requirements
- Deploying an Operating System by Using WDS
- Planning for the Creation and Modification of Images
- Designing Multicast Transmission of Images

Lab : Designing Operating System Deployment and Maintenance

- Designing an Operating System Deployment Solution
- Designing WDS Deployment
- Designing WDS Images
- Designing a WSUS Deployment
- Discussing Operating System Deployment and Maintenance

Module 11: Designing File Services and DFS in Windows Server 2008

Lessons

- Designing File Services
- Designing DFS
- Designing the FSRM Configuration

Lab : Designing File Services and DFS in Windows Server 2008

- Selecting File Services Components
- Designing DFS
- Designing FSRM
- Implementing DFS
- Implementing FSRM

Module 12: Designing High Availability in Windows Server 2008

Lessons

- Overview of High Availability
- Designing Network Load Balancing for High Availability
- Designing Failover Clustering for High Availability
- Designing Geographically Dispersed Failover Clusters

Lab : Designing High Availability in Windows Server 2008

- Designing High Availability
- Implementing an NLB Design
- Implementing a Failover Cluster Design

Module 13: Designing Print Services in Windows Server 2008

Lessons

- Overview of a Print Services Design
- Windows Server 2008 Printing Features
- Designing Print Services

Lab : Designing Shared Resources in Windows Server 2008

- Analysing the Components of a Print Services Design
- Designing a Shared Printer Deployment