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Course 6421A:

Configuring and Troubleshooting a Windows Server 2008 Network Infrastructure

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| Length: | 5 Day(s) |
| Published: | May 29, 2008 |
| Language(s): | English |
| Audience(s): | IT Professionals |
| Level: | 200 |
| Technology: | Windows Server 2008 |
| Type: | Course |
| Delivery Method: | Instructor-led (classroom) |

Course OutlineModule 1: Installing and Configuring Servers

This module explains how to identify the appropriate usage scenario and installation type for a server and then install and configure appropriate server roles and features.

Lessons

- › Installing Windows Server 2008
- › Managing Server Roles and Features
- › Overview of the Server Core Installation Option

Lab : Installing and Configuring Servers and Server Roles

- › Exercise 1: Identifying Server Types
- › Exercise 2: Installing and Configuring Server Roles and Features
- › Exercise 3: Configuring Server Core and Performing Basic Management Tasks

After completing this module, students will be able to:

- › Identify the system requirements and process for installing Windows Server 2008.
- › Describe the difference between server roles and features.



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- › Describe the benefits of and roles supported by a Server Core installation.

Module 2: Configuring and Troubleshooting DNS

This module explains how to configure, manage and troubleshoot DNS server and zone properties to be used in a secure environment.

Lessons

- › Installing the DNS Server Role
- › Configuring the DNS Server Role
- › Configuring DNS Zones
- › Configuring DNS Zone Transfers
- › Managing and Troubleshooting DNS

Lab : Configuring and Verifying a DNS Solution

- › Exercise 1: Configuring a DNS Infrastructure
- › Exercise 2: Monitoring and Troubleshooting DNS

After completing this module, students will be able to:

- › Install the DNS Server role.
- › Configure the DNS Server role to support various query types.
- › Configure DNS zones.
- › Configure DNS zone transfers.
- › Manage DNS zone records and troubleshoot DNS using various tools.

Module 3: Configuring and Managing WINS

This module explains how to configure, manage and troubleshoot WINS servers.

Lessons

- › Overview of the Windows Internet Name Service
- › Managing the WINS Server
- › Configuring WINS Replication
- › Migrating from WINS to DNS



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Lab : Configuring a WINS Infrastructu

- › Exercise 1: Installing WINS
- › Exercise 2: Configuring WINS Burst Handling
- › Exercise 3: Configuring WINS Replication
- › Exercise 4: Migrating from WINS to DNS

After completing this module, students will be able to:

- › Install and configure the Windows Internet Name Service.
- › Manage WINS client records.
- › Configure and manage WINS replication.
- › Migrate a WINS infrastructure to DNS.

Module 4: Configuring and Troubleshooting DHCP

This module explains how to configure, manage and troubleshoot a DHCP environment supporting an IPV4 infrastructure.

Lessons

- › Overview of the DHCP Server Role
- › Configuring DHCP Scopes and Options
- › Managing a DHCP Database
- › Monitoring and Troubleshooting DHCP
- › Securing DHCP

Lab : Configuring and Troubleshooting the DHCP Server Role

- › Exercise 1: Installing and Authorizing the DHCP Server Role
- › Exercise 2: Configuring a DHCP Scope
- › Exercise 3: Troubleshooting Common DHCP Issues

After completing this module, students will be able to:

- › Describe how DHCP works.
- › Configure DHCP scopes and options.
- › Manage a DHCP database.



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- › Monitor and troubleshoot DHCP.
- › Secure DHCP.

Module 5: Configuring and Troubleshooting IPv6 TCP/IP

This module explains how to configure and troubleshoot static and dynamic IPv6 addresses, including subnet prefix lengths, gateways and DNS servers.

Lessons

- › Overview of IPv6
- › Coexistence with IPv6
- › IPv6 Tunneling Technologies
- › Transitioning from IPv4 to IPv6
- › Troubleshooting IPv6

Lab : Lab A: Configuring an ISATAP Router

- › Exercise 1: Configuring a New IPv6 Network and Client
- › Exercise 2: Configuring an ISATAP Router to Enable Communication Between an IPv4 Network and an IPv6 Network

Lab : Lab B: Converting the Network

- › Exercise 1: Transitioning to an IPv6-Only Network

After completing this module, students will be able to:

- › Describe the benefits and considerations of IPv6.
- › Describe how IPv6 can coexist with IPv4 environments.
- › Describe IPv6 tunneling technologies used to interoperate with IPv4 networks.
- › Describe the process used to migrate from IPv4 to IPv6.
- › Troubleshoot IPv6 connectivity.

Module 6: Configuring and Troubleshooting Routing and Remote Access

This module explains how to configure and troubleshoot Routing and Remote Access Services.

Lessons



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- › Configuring Network Access
- › Configuring VPN Access
- › Overview of Network Policies
- › Overview of the Connection Manager Administration Kit
- › Troubleshooting Routing and Remote Access

Lab : Configuring and Managing Network Access

- › Exercise 1: Configuring Routing and Remote Access as a VPN Remote Access Solution
- › Exercise 2: Configuring a Custom Network Policy
- › Exercise 3: Configuring Logging
- › Exercise 4: Configuring a Connection Profile

After completing this module, students will be able to:

- › Install and configure the Routing and Remote Access service.
- › Configure VPN access.
- › Configure network policies.
- › Configure a connection profile using the Connection Manager Administration Kit.
- › Troubleshoot Routing and Remote Access.

Module 7: Installing, Configuring, and Troubleshooting the Network Policy Server Role Service

This module explains how to install, configure and troubleshoot the Network Policy Server Role service.

Lessons

- › Installing and Configuring a Network Policy Server
- › Configuring RADIUS Clients and Servers
- › NPS Authentication Methods
- › Monitoring and Troubleshooting a Network Policy Server

Lab : Configuring and Managing Network Policy Server



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- › Exercise 1: Installing and Configuring the Network Policy Server Role Service
- › Exercise 2: Configuring a RADIUS Client
- › Exercise 3: Configuring Certificate Auto-Enrollment

After completing this module, students will be able to:

- › Install and configure the Network Policy Server role.
- › Configure a RADIUS client and server.
- › Describe NPS authentication methods.
- › Monitor and troubleshoot a Network Policy server.

Module 8: Configuring Network Access Protection

This module explains how to configure and manage NAP for DHCP, VPN, and 802.1X.

Lessons

- › Overview of Network Access Protection
- › How NAP Works
- › Configuring NAP
- › Monitoring and Troubleshooting NAP

Lab : Configuring NAP for DHCP and VPN

- › Exercise 1: Configuring NAP for DHCP Clients
- › Exercise 2: Configuring NAP for VPN Clients

After completing this module, students will be able to:

- › Describe the benefits and uses of NAP.
- › Describe how NAP works in various access scenarios.
- › Configure NAP.
- › Monitor and troubleshoot NAP.

Module 9: Configuring IPsec

This module explains how to configure and test IPsec.



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Lessons

- › Overview of IPsec
- › Configuring Connection Security Rules
- › Configuring IPsec NAP Enforcement

Lab : Configuring IPsec NAP Enforcement

- › Exercise 1: Preparing the Network Environment for IPsec NAP Enforcement
- › Exercise 2: Configuring and Testing IPsec NAP Enforcement

After completing this module, students will be able to:

- › Describe the benefits and uses of IPsec.
- › Configure Connection Security rules.
- › Configure IPsec NAP enforcement.

Module 10: Monitoring and Troubleshooting IPsec

This module explains how to monitor and troubleshoot IPsec.

Lessons

- › Monitoring IPsec Activity
- › Troubleshooting IPsec

Lab : Monitoring and Troubleshooting IPsec

- › Exercise 1: Monitoring IPsec Connectivity
- › Exercise 2: Configuring Connection Security
- › Exercise 3: Troubleshooting IPsec

After completing this module, students will be able to:

- › Monitor IPsec activity.
- › Troubleshoot IPsec.

Module 11: Configuring and Managing Distributed File System



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This module explains how to configure and manage Distributed File System.

Lessons

- › DFS Overview
- › Configuring DFS Namespaces
- › Configuring DFS Replication

Lab : Configuring DFS

- › Exercise 1: Installing the Distributed File System Role Service
- › Exercise 2: Creating a DFS Namespace
- › Exercise 3: Configuring Folder Targets and Folder Replication
- › Exercise 4: Viewing Diagnostic Reports for Replicated Folders

After completing this module, students will be able to:

- › Describe the Distributed File System.
- › Manage DFS namespaces.
- › Configure DFS replication.

Module 12: Configuring and Managing Storage Technologies

This module explains how to configure and troubleshoot file system storage technologies included with Windows Server 2008.

Lessons

- › Windows Server 2008 Storage Management Overview
- › Managing Storage Using File Server Resource Manager
- › Configuring Quota Management
- › Implementing File Screening
- › Managing Storage Reports

Lab : Configuring and Managing Storage Technologies

- › Exercise 1: Installing the FSRM Role Service
- › Exercise 2: Configuring Storage Quotas
- › Exercise 3: Configuring File Screening



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- › Exercise 4: Generating Storage Reports

After completing this module, students will be able to:

- › Describe storage management solutions included in Windows Server 2008.
- › Manage storage using File Server Resource Manager (FSRM).
- › Configure quota management using FSRM.
- › Implement file screening using FSRM.
- › Manage storage reports.

Module 13: Configuring Availability of Network Resources and Content

This module explains how to describe and configure backup and recovery methods.

Lessons

- › Backing Up Data
- › Configuring Shadow Copies
- › Providing Server and Service Availability

Lab : Configuring Availability of Network Resources

- › Exercise 1: Configuring Windows Server Backup and Restore
- › Exercise 2: Configuring Shadow Copying
- › Exercise 3: Configuring Network Load Balancing

After completing this module, students will be able to:

- › Back up data.
- › Configure shadow copies.
- › Provide server and service availability.

Module 14: Configuring Server Security Compliance

This module explains how to configure and analyze server security and security update compliance.

Lessons

- › Securing a Windows Infrastructure



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- › Using Security Templates to Secure Servers
- › Configuring an Audit Policy
- › Overview of Windows Server Update Services
- › Managing WSUS

Lab : Configuring Server Security Compliance

- › Exercise 1: Configuring and Analyzing Security
- › Exercise 2: Analyzing Security Templates
- › Exercise 3: Configuring Windows Software Update Services

After completing this module, students will be able to:

- › Secure a server role within a Windows infrastructure.
- › Secure servers using security templates.
- › Configure an audit policy.
- › Describe the use of Windows Server Update Services.
- › Manage updates using WSUS.

Before attending this course, students must have:

- › Working experience with Windows Server 2003.
- › Basic knowledge of Active Directory.
- › An understanding of security concepts and methodologies (for example, corporate policies).
- › Basic knowledge of DHCP.
- › Basic knowledge of IPsec.