

Course 6425C: Configuring and Troubleshooting Windows Server 2008 Active Directory Domain Services

Course Outline Module 1: Introducing Active Directory Domain Services

This module provides an overview of Active Directory components and concepts and steps through the basics of installing and configuring an Active Directory domain

Lessons

- Lesson 1: Overview of Active Directory, Identity, and Access
- Lesson 2: Active Directory Components and Concepts
- Lesson 3: Install Active Directory Domain Services

Lab : Install an AD DS DC to Create a Single Domain Forest

- Perform Post-Installation Configuration Tasks
- Install a New Windows Server 2008 Forest with the Windows Interface
- Raise Domain and Forest Functional Levels

After completing this module, students will be able to:

- Describe the functionality of AD DS in an enterprise in relation to identity and access.
- Describe the major components of AD DS.
- Install AD DS and configure it as a domain controller.

Module 2: Administering Active Directory Securely and Efficiently

This module explains how to work securely and efficiently in Active Directory using Administration Tools and some best practices as well as use of Windows PowerShell.

Lessons

- Work with Active Directory Administration Tools
- Custom Consoles and Least Privilege
- Find Objects in Active Directory
- Use Windows PowerShell to Administer Active Directory

Lab : Administer Active Directory Using Administrative Tools

- Perform Administrative Tasks by Using Administrative Tools
- Create a Custom Active Directory Administrative Console
- Perform Administrative Tasks with Least Privilege, Run As Administrator, and User Account Control

Lab : Find Objects in Active Directory

- Find Objects in Active Directory
- Use Saved Queries

Lab : Use Windows PowerShell to Administer Active Directory

- Use PowerShell Commands to Administer Active Directory

After completing this module, students will be able to:

- Describe and work with Active Directory administration tools.
- Describe the purpose and functionality of custom consoles and least privilege.
- Locate objects in Active Directory.
- Administer Active Directory by using Windows PowerShell.

Module 3: Managing Users and Service Accounts

This module explains how to create, manage and support user and Managed Service Accounts in Active Directory.

Lessons

- Create and Administer User Accounts
- Configure User Object Attributes
- Automate User Account Creation
- Create and Configure Managed Service Accounts

Lab : Create and Administer User Accounts

- Create User Accounts
- Administer User Accounts

Lab : Configure User Object Attributes

- Examine User Object Attributes
- Manage User Object Attributes
- Create Users from a Template

Lab : Automate User Account Creation

- Export and Import Users with CSVDE
- Import Users with LDIFDE
- Import Users by Using Windows PowerShell

Lab : Create and Administer Managed Service Accounts

- Create and Associate a Managed Service Account

After completing this module, students will be able to:

- Create and administer user accounts.
- Configure user object attributes.
- Automate user account creation.
- Create and configure managed service accounts.

Module 4: Managing Groups

This module explains how to create, modify, delete, and support group objects in Active Directory.

Lessons

- Overview of Groups
- Administer Groups
- Best Practices for Group Management

Lab : Administer Groups

- Implement Role-Based Management by Using Groups
- (Advanced Optional) Explore Group Membership Reporting Tools
- (Advanced Optional) Understand “Account Unknown” Permissions

Lab : Best Practices for Group Management

- Implement Best Practices for Group Management

After completing this module, students will be able to:

- Describe the role of groups in managing an enterprise.
- Administer groups with by using the built-in tools in Windows Server 2008
- Describe the best practices for managing groups.

Module 5: Managing Computer Accounts

This module explains how to create and configure computer accounts.

Lessons

- Create Computers and Join the Domain
- Administer Computer Objects and Accounts
- Perform an Offline Domain Join

Lab : Create Computers and Join the Domain

- Join a computer to the Domain with the Windows Interface
- Secure Computer Joins
- Manage Computer Account Creation

Lab : Administer Computer Objects and Accounts

- Administer Computer Objects Through Their Life Cycle
- Administer and Troubleshoot Computer Accounts

Lab : Perform an Offline Domain Join

- Perform an Offline Domain Join

After completing this module, students will be able to:

- Create computer accounts and join them to a domain.
- Administer computer objects and accounts by using the Windows Interface and command-line tools.
- Describe and perform the Offline Domain Join process.

Module 6: Implementing a Group Policy Infrastructure

This module explains what Group Policy is, how it works, and how best to implement Group Policy in your organization.

Lessons

- Understand Group Policy
- Implement GPOs
- Manage Group Policy Scope
- Group Policy Processing
- Troubleshoot Policy Application

Lab : Implement Group Policy

- Create, Edit, and Link GPOs
- Use Filtering and Commenting

Lab : Manage Group Policy Scope

- Configure GPO Scope with Links
- Configure GPO Scope with Filtering
- Configure Loopback Processing

Lab : Troubleshoot Policy Application

- Perform RSoP Analysis
- Use the Group Policy Modeling Wizard
- View Policy Events

After completing this module, students will be able to:

- Describe the components and technologies that comprise the Group Policy framework.
- Implement GPOs.
- Configure and understand a variety of policy setting types.
- Scope GPOs by using links, security groups, Windows Management Instrumentation filters, loopback processing, and preference targeting.
- Describe how GPOs are processed.
- Locate the event logs containing Group Policy–related events and troubleshoot Group Policy application.

Module 7: Managing User Desktop with Group Policy

This module explains how to manage and configure desktop environments using Administrative templates and Group Policy Preferences as well as how to deploy software using Group Policy

Lessons

- Implement Administrative Templates
- Configure Group Policy Preferences
- Manage Software with GPSI

Lab : Manage Administrative Templates and Central Store

- Manage Administrative Templates

Lab : Manage Group Policy Preferences

- Configure Group Policy Preferences
- Verify Group Policy Preferences Application

Lab : Manage Software with GPSI

- Deploy Software with GPSI
- Upgrade Applications with GPSI

After completing this module, students will be able to:

- Describe Administrative Templates
- Understand and Configure Group Policy preferences
- Manage software by using GPSI

Module 8: Managing Enterprise Security and Configuration with Group Policy Settings

This module explains how to use Group Policy to manage a variety of components and features of Windows. It will also explain how to audit files and folders and how to restrict access to applications using application control policies.

Lessons

- Manage Group Membership by Using Group Policy Settings
- Manage Security Settings
- Auditing
- Software Restriction Policy and Applocker

Lab : Using Group Policy to Manage Group Membership

- Configure the Membership of Administrators by Using Restricted Group Policies

Lab : Manage Security Settings

- Manage Local Security Settings
- Create a Security Template
- Use the security Configuration Wizard

Lab : Audit File System Access

- Configure Permissions and Audit Settings
- Configure Audit Policy
- Examine Audit Results

Lab : Configure Application Control Policies

- Configure Application Control Policies

After completing this module, students will be able to:

- Manage group membership by using Group Policy Settings
- Manage security settings

- Describe the purpose and functionality of auditing
- Describe the purpose of the Software Restriction Policy and Applocker

Module 9: Securing Administration

This module explains how to administer Active Directory Domain Services Securely.

Lessons

- Delegate Administrative Permissions
- Audit Active Directory Administration

Lab : Delegate Administration

- Delegate Permission to Create and Support User Accounts
- View Delegated Permissions
- Remove and Reset Permissions

Lab : Audit Active Directory Changes

- Audit Changes to Active Directory Using Default Audit Policy
- Audit Changes to Active Directory Using Directory Service Changes Auditing

After completing this module, students will be able to:

- Delegate administrative permissions.
- Audit Active Directory administration.

Module 10: Improving the Security of Authentication in an AD DS Domain

This module explains the domain-side components of authentication, including the policies that specify password requirements and the auditing of authentication-related activities.

Lessons

- Configure Password and Lockout Policies
- Audit Authentication
- Configure Read-Only Domain Controllers

Lab : Configure Password and Account Lockout Policies

- Configure the Domain's Password and Lockout Policies
- Configure a Fine-Grained Password Policy

Lab : Audit Authentication

- Audit Authentication

Lab : Configure Read-Only Domain Controllers

- Exercise 1: Install an RODC
- Exercise 2: Configure Password Replication Policy
- Exercise 3: Manage Credential Caching

After completing this module, students will be able to:

- Configure password and lockout policies.
- Audit authentication.
- Configure read-only domain controllers.

Module 11: Configuring Domain Name System

This module explains how to implement DNS to support name resolution both within your AD DS domain and outside your domain and your intranet.

Lessons

- Install and Configure DNS in an AD DS Domain
- Integration of AD DS, DNS, and Windows
- Advanced DNS Configuration and Administration

Lab : Installing the DNS Service

- Add the DNS Server Role
- Configure Forward Lookup Zones and Resource Records

Lab : Advanced Configuration of DNS

- Enable Scavenging of DNS Zones
- Explore Domain Controller Location
- Configure Name Resolution for External Domains

After completing this module, students will be able to:

- Install and configure DNS in an AD DS domain.
- Describe the integration of AD DS, DNS, and Windows.
- Describe advanced DNS configuration and administration tasks.

Module 12: Administering AD DS Domain Controllers

This module explains how to add Windows Server 2008 domain controllers to a forest or domain, how to prepare a Microsoft Windows Server 2003 forest or domain for its first Windows Server 2008 DC, how to manage the roles performed by DCs, and how to migrate the replication of SYSVOL from the File Replication Service (FRS) used in previous versions of Windows to the Distributed File System Replication (DFS-R) mechanism that provides more robust and manageable replication.

Lessons

- Domain Controller Installation Options
- Install a Server Core Domain Controller
- Manage Operations Masters
- Configure Global Catalog
- Configure DFS-R Replication of SYSVOL

Lab : Install Domain Controllers

- Create an Additional DC with the Active Directory Domain Services Installation Wizard
- Add a Domain Controller from the Command Line

- Create a Domain Controller from Installation Media

Lab : Install a Server Core Domain Controller

- Perform Post-Installation Configuration on Server Core
- Create a Domain Controller with Server Core

Lab : Transfer Operations Masters Roles

- Identify Operations Masters
- Transfer Operations Masters Roles

Lab : Configure the Global Catalog and Universal Group Membership Caching

- Configure a Global Catalog
- Configure Universal Group Membership Caching

Lab : Configure DFS-R Replication of SYSVOL

- Observe the Replication of SYSVOL
- Prepare to Migrate to DFS-R
- Migrate SYSVOL Replication to DFS-R
- Verify DFS-R Replication of SYSVOL

After completing this module, students will be able to:

- Identify the domain controller installation options.
- Install a Server Core DC.
- Manage operations masters.
- Configure Global Catalog
- Configure DFS-R replication of SYSVOL.

Module 13: Managing Sites and Active Directory Replication

This module explains how to create a distributed directory service that supports domain controllers in portions of your network that are separated by expensive, slow, or unreliable links and how to configure replication amongst those servers.

Lessons

- Configure Sites and Subnets
- Configure Replication

Lab : Configure Sites and Subnets

- Configure the Default Site
- Create Additional Sites
- Move Domain Controllers into Sites

Lab : Configure Replication

- Create a Connection Object

- Create Site Links
- Designate a Preferred Bridgehead Server
- Configure Intersite Replication

After completing this module, students will be able to:

- Configure sites and subnets.
- Configure replication.

Module 14: Directory Service Continuity

This module explains about the technologies and tools that are available to help ensure the health and longevity of the directory service. You will explore tools that help you monitor performance in real time, and you will learn to log performance over time so that you can keep an eye on performance trends in order to spot potential problems.

Lessons

- Monitor Active Directory
- Manage the Active Directory Database
- Active Directory Recycle Bin
- Back Up and Restore AD DS and Domain Controllers

Lab : Monitor Active Directory Events and Performance

- Monitor AD DS with Performance Monitor
- Work with Data Collector Sets

Lab : Manage the Active Directory Database

- Perform Database Maintenance
- Work with Snapshots and Recover a Deleted User

Lab : Using Active Directory Recycle Bin

- Enable Active Directory Recycle Bin
- Restore Deleted Objects with Active Directory Recycle Bin

Lab : Back Up and Restore Active Directory

- Back Up Active Directory
- Restore Active Directory and a Deleted OU

After completing this module, students will be able to:

- Monitor Active Directory.
- Manage the Active Directory database.
- Describe the purpose of the Active Directory Recycle Bin.
- Back up and restore AD DS and domain controllers.

Module 15: Managing Multiple Domains and Forests

This module explains how to raise the domain and forest functionality levels within your environment, how to design the optimal AD DS infrastructure for your enterprise, how to migrate objects between domains and forests, and how to enable authentication and resources access across multiple domains and forests.

Lessons

- Configure Domain and Forest Functional Levels
- Manage Multiple Domains and Trust Relationships
- Move Objects between Domains and Forests

Lab : Administer Trust Relationships

- Configure Name Resolution between Contoso.com and Tailspintoys.com
- Create a Forest Trust

After completing this module, students will be able to:

- Configure domain and forest functional levels.
- Manage multiple domains and trust relationships.
- Move objects between domains and forests.

Course 6426C: Configuring and Troubleshooting Identity and Access Solutions with Windows Server 2008 Active Directory

Course Outline Module 1: Exploring Identity and Access Solutions

This module introduces Identity and Access Management (IDA Management) solutions. You will learn the fundamental IDA components and Windows Server 2008 and Windows Server 2008 R2 IDA technologies. This module also provides an overview of Microsoft Forefront technologies that further enhance IDA solutions.

Lessons

- Overview of Identity and Access Techniques
- Active Directory Identity and Access Solutions Server Roles
- Additional Identity and Access Management Tools and Solutions

Lab : Identifying IDA Roles to Meet Business Requirements

- Exploring How Active Directory Server Roles Provide IDA Management Solutions

After completing this module, students will be able to:

- Describe IDA techniques
- Describe Windows Server 2008 IDA server roles
- Describe additional IDA tools and solutions

Module 2: Deploying and Configuring Active Directory Certificate Services

This module explains the concepts of public key infrastructure (PKI) and certification authority (CA). You will learn how to deploy a CA hierarchy and install AD CS. This module also describes how to configure AD CS and how to resolve common AD CS issues.

Lessons

- Overview of Public Key Infrastructure
- Overview of Certification Authorities
- Deploying Certification Authorities
- Configuring Certification Authorities
- Troubleshooting Active Directory Certificate Services

Lab : Deploying and Configuring Active Directory Certificate Services

- Deploying an Standalone Root CA
- Deploying and Configuring an Enterprise Subordinate CA

After completing this module, students will be able to:

- Describe Public Key Infrastructure
- Describe Certification Authorities
- Deploy Certification Authorities
- Configure Certification Authorities
- Resolve common Active Directory Certificate Services issues

Module 3: Deploying and Configuring Certificates

This module describes the deployment of certificates by using AD CS. In addition, the module elaborates on managing enrollment to deploy certificates, certificate revocation, and configuration of certificate template and certificate recovery.

Lessons

- Managing Certificate Templates
- Deploying Certificates and Managing Enrollment
- Managing Certificate Revocation
- Configuring Certificate Recovery

Lab : Deploying Certificates and Managing Enrolment

- Configuring Certificate Templates
- Configuring Autoenrollment
- Managing Certificate Revocation
- Configuring Key Recovery

After completing this module, students will be able to:

- Manage certificate templates
- Deploy certificates and manage enrollment
- Manage certificate revocation
- Configure certificate recovery

Module 4: Deploying and Configuring Active Directory Lightweight Directory Services

This module explains the concept of AD LDS. You will learn how to install AD LDS, configure AD LDS instances and partitions, and configure AD LDS replication. This module also describes how to resolve common AD LDS issues.

Lessons

- Overview of Active Directory Lightweight Directory Services
- Deploying and Configuring Active Directory Lightweight Directory Services
- Configuring AD LDS Instances and Partitions
- Configuring Active Directory Lightweight Directory Services Replication
- Troubleshooting Active Directory Lightweight Directory Services

Lab : Deploying and Configuring Active Directory Lightweight Directory Services

- Configuring AD LDS Instances and Partitions
- Configuring AD LDS Replication
- Identifying AD LDS Solution Tools and Troubleshooting Steps

After completing this module, students will be able to:

- Describe Active Directory Lightweight Directory Services
- Deploy and configure Active Directory Lightweight Directory Services
- Configure Active Directory Lightweight Directory Services instances and partitions
- Configure Active Directory Lightweight Directory Services replication
- Resolve common Active Directory Lightweight Directory Services issues

Module 5: Deploying and Configuring Active Directory Federation Services

This module presents the concept of AD FS 2.0 and its deployment scenarios. You will learn how to deploy AD FS 2.0 and implement AD FS claims. This module also describes how to resolve common AD FS issues.

Lessons

- Overview of Active Directory Federation Services 2.0
- Deploying Active Directory Federation Services
- Configuring Active Directory Federation Services Partner Organizations and Claims
- Troubleshooting Active Directory Federation Services

Lab : Deploying and Configuring Active Directory Federation Services

- Installing the PKI Infrastructure and Preparing for Federated Collaboration with ADFS 2.0
- Installing and Configuring Active Directory Federation Services (ADFS) 2.0
- Configuring AD FS 2.0 for Internal Users to Access an Internal Claim Aware Application
- Configuring AD FS 2.0 for Internal Users to Access a Partner's Claim Aware Application

After completing this module, students will be able to:

- Describe Active Directory Federation Services
- Deploy Active Directory Federation Services
- Configure Active Directory Federation Services partner organizations and claims
- Resolve common Active Directory Federation Services issues

Module 6: Deploying and Configuring Active Directory Rights Management Services

This module explains the concept of AD RMS. You will learn how to install and configure AD RMS server components, administer AD RMS rights policy templates, and implement AD RMS trust policies. This module also describes how to resolve common AD RMS issues.

Lessons

- Overview of Active Directory Rights Management Services
- Deploying and Configuring Active Directory Rights Management Services
- Configuring AD RMS Rights Policy Templates and Exclusion Policies
- Configuring Active Directory Rights Management Services Trust Policies
- Troubleshooting Active Directory Rights Management Services

Lab : Deploying and Configuring Active Directory Rights Management Services

- Installing and Configuring AD RMS
- Configuring AD RMS Templates
- Configuring AD RMS Trust Policies
- Testing AD RMS Functionality
- Generating AD RMS Reports

After completing this module, students will be able to:

- Describe Active Directory Rights Management Services
- Deploy and configure Active Directory Rights Management Services
- Configure Active Directory Rights Management Services rights policy templates and exclusion policies
- Configure Active Directory Rights Management Services trust policies

- Resolve common Active Directory Rights Management Services issues

Module 7: Maintaining Windows Server 2008 Active Directory Identity and Access Solutions

This module explains the maintenance of AD CS, AD LDS, AD FS 2.0, and AD RMS.

Lessons

- Maintaining Active Directory Certificate Services
- Maintaining Active Directory Lightweight Directory Services
- Maintaining Active Directory Federation Services
- Maintaining Active Directory Rights Management Services

Lab : Maintaining Windows Server 2008 Active Directory Identity and Access Solutions

- Configuring CA Event Auditing
- Backing up Active Directory Certificate Services
- Backing up and Restoring an Active Directory Lightweight Directory Services Instance
- Configuring AD RMS Logging

After completing this module, students will be able to:

- Maintain Active Directory Certificate Services
- Maintain Active Directory Lightweight Directory Services
- Maintain Active Directory Federation Services
- Maintain Active Directory Rights Management Services

Course 6421B: Configuring and Troubleshooting a Windows Server 2008 Network Infrastructure

Course Outline
Module 1: Planning and Configuring IPv4
This module explains how to deploy and configure networking services in your organization. This module explains how to implement an IPv4 addressing scheme, determine which name services to deploy, and troubleshoot network-related problems.
Lessons

- Implementing an IPv4 Network Infrastructure
- Overview of Name Resolution Services in an IPv4 Network Infrastructure
- Configuring and Troubleshooting IPv4

Lab : Planning and Configuring IPv4

- Selecting an IPv4 Addressing scheme for branch offices
- Implementing and Verifying IPv4 in the branch office

After completing this module, students will be able to:

- Plan an IPv4 addressing scheme.
- Determine which name services you must deploy.
- Configure and troubleshoot an IPv4 network.

Module 2: Configuring and Troubleshooting DHCP
This module introduces you to Dynamic Host Configuration Protocol (DHCP), which plays an important role in the Windows Server 2008 R2 infrastructure. It is the primary means of distributing important network configuration information to network clients, and it provides configuration information to other network-enabled services, including Windows Deployment Services (WDS) and Network Access Protection (NAP). To support and troubleshoot a Windows Server-based network infrastructure, it is important that you understand how to deploy, configure, and troubleshoot the DHCP Server Role.
Lessons

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

Lab : Configuring and Troubleshooting the DHCP Server Role

- Selecting a Suitable DHCP Configuration
- Implementing DHCP
- Reconfiguring DHCP in the Head Office
- Testing the Configuration
- Troubleshooting DHCP Issues

After completing this module, students will be able to:

- Describe the function of the DHCP Server Role.
- Configure DHCP scopes.

- Configure DHCP options.
- Manage a DHCP database.
- Monitor and troubleshoot the DHCP Server Role.
- Configure security the DHCP Server Role.

Module 3: Configuring and Troubleshooting DNS This module introduces you to Domain Name System (DNS), which is the foundation name service in Windows Server 2008 R2. It is vital that you understand how to deploy, configure, manage, and troubleshoot this critical service. 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 Troubleshooting DNS

- Selecting a DNS Configuration
- Deploying and Configuring DNS
- Troubleshooting DNS

After completing this module, students will be able to:

- Install the DNS server role.
- Configure the DNS server role.
- Create and configure DNS zones.
- Configure zone transfers.
- Manage and troubleshoot DNS.

Module 4: Configuring and Troubleshooting IPv6 TCP/IP This module introduces you to IPv6, a technology that will help ensure that the Internet can support a growing user base and the increasingly large number of IP-enabled devices. The current Internet Protocol Version 4 (IPv4) has served as the underlying Internet protocol for almost thirty years. Its robustness, scalability, and limited feature set is now challenged by the growing need for new IP addresses, due in large part to the rapid growth of new network-aware devices. Lessons

- Overview of IPv6
- IPv6 Addressing
- Coexistence with IPv6
- IPv6 Transition Technologies
- Transitioning from IPv4 to IPv6

Lab : Configuring an ISATAP Router

- Configuring a New IPv6 Network and Client
- Configuring an ISATAP Router to Enable Communication Between an IPv4 Network and an IPv6 Network

Lab : Converting the Network to Native IPv6

- Transitioning to a Native IPv6 Network

After completing this module, students will be able to:

- Describe the features and benefits of IPv6.
- Implement IPv6 addressing.
- Implement an IPv6 coexistence strategy.
- Describe and select a suitable IPv6 transition solution.
- Transition from IPv4 to IPv6.
- Troubleshoot an IPv6-based network.

Module 5: Configuring and Troubleshooting Routing and Remote Access To support your organization's distributed workforce, you must become familiar with technologies that enable remote users to connect to your organization's network infrastructure. These technologies include virtual private networks (VPNs) and DirectAccess. It is important that you understand how to configure and secure your remote access clients by using network policies. This module explores these remote access technologies. Lessons

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

Lab : Configuring and Managing Network Access

- Configuring Routing and Remote Access as a VPN Remote Access Solution
- Configuring a Custom Network Policy
- Create and distribute a CMAK Profile

Lab : Configuring and Managing DirectAccess

- Configure the AD DS Domain Controller and DNS
- Configure the PKI Environment
- Configure the DirectAccess Clients and Test Intranet Access
- Configure the DirectAccess Server
- Verify DirectAccess Functionality

After completing this module, students will be able to:

- Configure network access.
- Create and configure a VPN solution.
- Describe the role of network policies.
- Use the Connection Manager Administration Kit to create and configure client connection profiles.
- Troubleshoot routing and remote access.
- Implement DirectAccess.

Module 6: Installing, Configuring, and Troubleshooting the Network Policy Server Role Service NPS provides support for the Remote Authentication Dial-In User Service (RADIUS) protocol, and can be configured as a RADIUS server or proxy. Additionally, NPS provides functionality that is essential for the implementation of Network Access Protection (NAP). This module explains how to install, configure, and troubleshoot NPS. 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

- Installing and Configuring the Network Policy Server Role Service
- Configuring a RADIUS Client
- Configuring Certificate Auto-Enrollment
- Configuring and Testing the VPN

After completing this module, students will be able to:

- Install and configure NPS.
- Configure RADIUS clients and servers.
- Describe NPS authentication methods.
- Monitor and troubleshoot NPS.

Module 7: Implementing Network Access ProtectionIn this module, you will learn about Network Access Protection (NAP). NAP enables you to create customized health-requirement policies to validate computer health before allowing access or communication. NAP also automatically updates compliant computers to ensure on-going compliance and can limit the access of noncompliant computers to a restricted network until they become compliant.Lessons

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

Lab : Implementing NAP into a VPN Remote Access Solution

- Configuring NAP Components
- Configuring Client Settings to Support NAP

After completing this module, students will be able to:

- Describe how NAP can help protect your network.
- Describe the various NAP enforcement processes.
- Configure NAP.
- Monitor and troubleshoot NAP.

Module 8: Increasing Security for Windows ServersSecurity is an essential consideration for networking with Windows Server 2008. In this module, you will learn how to implement various methods to increase security. Windows Firewall with Advanced Security is one of the features in Windows Server 2008 that is used to increase security. You can also use Windows Server Update Services to ensure that approved security updates are applied to servers in a timely way.Lessons

- Windows Security Overview
- Configuring Windows Firewall with Advanced Security

- Deploying Updates with Windows Server Update Services

Lab : Increasing Security for Windows Servers

- Deploying a Windows Firewall Rule
- Implementing WSUS

After completing this module, students will be able to:

- Describe a process for increasing the security of Windows Server 2008.
- Configure Windows Firewall with Advanced Security.
- Describe Windows Server Update Services and how to use it.

Module 9: Increasing Security for Network Communication Internet Protocol security (IPsec) is a framework of open standards for protecting communications over IP networks through cryptographic security services. IPsec supports network-level peer authentication, data-origin authentication, data integrity, data confidentiality (encryption), and replay protection. The Microsoft IPsec implementation is based on standards that the Internet Engineering Task Force (IETF) IPsec working group developed. In this module, you will learn how to implement, configure, and troubleshoot IPsec. Lessons

- Overview of IPsec
- Configuring Connection Security Rules
- Configuring NAP with IPsec Enforcement
- Monitoring and Troubleshooting IPsec

Lab : Increasing Security for Network Communication

- Selecting a Network Security Configuration
- Configuring IPsec to Authenticate Computers
- Testing IPsec Authentication

After completing this module, students will be able to:

- Describe when and how to use IPsec.
- Configure Connection Security rules.
- Configure IPsec with NAP Enforcement.
- Describe how to monitor and troubleshoot IPsec.

Module 10: Configuring and Troubleshooting Network File and Print Services File and print services are some of the most commonly implemented network services for end users. Unlike infrastructure services like DNS, file and print services are highly visible to the end users. In this module, you will learn how to configure and troubleshoot file and print services to provide high quality service to end users. In addition, you will see how both EFS and BitLocker can be used to increase the security of files that are located in file shares. Lessons

- Configuring and Troubleshooting File Shares
- Encrypting Network Files with EFS
- Encrypting Partitions with BitLocker
- Configuring and Troubleshooting Network Printing

Lab : Configuring and Troubleshooting Network File and Print Services

- Creating and Configuring a File Share
- Encrypting and Recovering Files
- Creating and Configuring a Printer Pool

After completing this module, students will be able to:

- Describe how to manage file share security.
- Explain how to encrypt network files with EFS.
- Describe how to encrypt partitions with BitLocker.
- Discuss how to configure and troubleshoot network printing.

Module 11: Optimizing Data Access for Branch Offices

Many organizations maintain a large number of file resources that need to be organized and made highly available to users. These file resources are often stored on servers and provided to users who are distributed geographically in widespread locations. In this module, you will learn how to provide efficient access to network resources with minimal traffic over a WAN link.

Lessons

- Branch Office Data Access
- DFS Overview
- Overview of DFS Namespaces
- Configuring DFS Replication
- Configuring BranchCache

Lab : Implementing DFS

- Installing the DFS Role Service
- Configuring the Required Namespace
- Configuring DFS Replication

Lab : Implementing BranchCache

- Performing Initial Configuration Tasks for BranchCache
- Configuring BranchCache Clients
- Configuring BranchCache on the Branch Server
- Monitoring BranchCache

After completing this module, students will be able to:

- Describe the challenges experienced when providing data access to branch offices.
- Identify the basic components of DFS.
- Describe DFS namespaces.
- Explain how to configure DFS replication.
- Discuss how to configure BranchCache.

Module 12: Controlling and Monitoring Network Storage Network storage for users is a finite resource that must be managed appropriately to ensure that it remains available for all users. If network storage is not monitored and managed, it can become filled with irrelevant data, such as personal music or movies. Irrelevant data increases network storage costs and in some cases can prevent useful data from placement on the network storage. In this module, you will learn how to monitor and manage network storage. Lessons

- Monitoring Network Storage
- Controlling Network Storage Utilization
- Managing File Types on Network Storage

Lab : Controlling and Monitoring Network Storage

- Configuring FSRM Quotas
- Configuring File Screening
- Configuring File Classification and File Management

After completing this module, students will be able to:

- Describe how to monitor network storage by using FSRM.
- Explain how to manage quotas by using FSRM.
- Describe how to implement file screening, classification management, and file management tasks by using FSRM.

Module 13: Recovering Network Data and Servers. This module explains how to recover network data and servers. There are a variety of scenarios where a network data or a server that provides networks services can be lost. Volume shadow copies can be used to restore previous versions of files when a file is accidentally deleted or modified on a computer that is running Windows Server 2008. Windows Server Backup can be used to back up and restore data files or an entire server. Lessons

- Recovering Network Data with Volume Shadow Copies
- Recovering Network Data and Servers with Windows Server Backup

Lab : Recovering Network Data and Servers

- Configuring Shadow Copies
- Configuring a Scheduled Backup

After completing this module, students will be able to:

- Describe how to configure and use volume shadow copies.
- Describe how to configure and use Windows Server Backup.

Module 14: Monitoring Windows Server 2008 Network Infrastructure Servers

When a system failure or an event that affects system performance occurs, you need to be able to repair the problem or resolve the issue quickly and efficiently. With so many variables and possibilities in the modern network environment, the ability to determine the root cause quickly often depends on having an effective performance monitoring methodology and toolset. In this module, you will learn to use performance-monitoring tools to identify components that require additional tuning and troubleshooting. By identifying components that require additional tuning, you can improve the efficiency of your servers.

Lessons

- Monitoring Tools
- Using Performance Monitor
- Monitoring Event Logs

Lab : Monitoring Windows Server 2008 Network Infrastructure Servers

- Establishing a Performance Baseline
- Identifying the Source of a Performance Problem
- Centralizing Events Logs

After completing this module, students will be able to:

- Describe monitoring tools for Windows Server 2008 R2.
- Describe how to use performance monitor.
- Describe how to monitor event logs.

Course 6433A: Planning and Implementing Windows Server 2008

Course Outline Module 1: Planning Server Deployment and Upgrade. This module explains how to plan Windows Server 2008 and Windows Server 2008 R2 deployments and upgrades. Lessons

- Developing a Deployment Strategy
- Virtualization Considerations
- Selecting an Automation Strategy
- Implementing an Automation Strategy

Lab : Planning and Implementing Server Deployment

- Planning a Windows Server 2008 R2 Deployment
- Modifying a Windows Server 2008 R2 Image
- Preparing to Deploy the Windows Server 2008 R2 Image

After completing this module, students will be able to:

- Develop a deployment strategy.
- Determine factors that affect the implementation of virtualization within your organization.
- Select a strategy for deployment automation.
- Implement the selected automation strategy.

Module 2: Planning Server Management and Delegated Administration. This module explains how to plan for server management and delegated administration on Windows Server 2008 and Windows Server 2008 R2 environments. Lessons

- Remote Server Management Tools
- Decentralizing Systems Administration

Lab : Implementing Role-Based Systems Administration

- Create an administrative-level role group
- Creating an account management group
- Enable and configure auditing for sensitive groups

After completing this module, students will be able to:

- Plan for the implementation and use of Windows Server 2008 and Windows Server 2008 R2 remote management tools.
- Plan and Implement decentralized systems administration.

Module 3: Planning Network Addressing and Name Resolution. This module explains how to plan for IPv4 and IPv6 addressing in your network and to plan and implement DNS and DHCP in a Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- Provisioning IPv4 Addresses on Enterprise Networks
- Provisioning IPv6 Addresses on Enterprise Networks
- Transitioning to IPv6
- Provisioning DNS Services on Enterprise Networks

Lab : Planning and Implementing DHCP and DNS

- Planning the Deployment of DHCP and DNS Servers
- Implementing DNS
- Implementing DHCP

After completing this module, students will be able to:

- Provision an IPv4 addressing scheme within your organization.
- Provision an IPv6 addressing scheme within your organization.
- Plan the transition to IPv6.
- Plan and implement DNS name resolution services within your organization's network.

Module 4: Planning and Provisioning Active Directory Domain Services. This module explains how to plan and provision Active Directory Domain Services in Windows Server 2008 and Windows Server 2008 R2 environments. Lessons

- Deploying Domain Controllers in Multi-Site Organizations
- Planning Administrative and Management Structures for AD DS
- Planning a Maintenance Strategy for AD DS
- Planning a Backup and Restore Strategy for AD DS

Lab : Planning for Active Directory Domain Services

- Planning an Active Directory Structure
- AD DS Backup and Recovery
- Configuring Active Directory Recycle Bin

After completing this module, students will be able to:

- Identify considerations for deploying domain controllers in multi-site organizations.
- Plan administrative and management structures for AD DS
- Plan a maintenance strategy for AD DS
- Plan a backup and recovery strategy for AD DS.

Module 5: Planning Group Policy Strategy. This module explains how to plan and implement Group Policy strategy in Windows Server 2008 and Windows Server 2008 R2 environments. Lessons

- Planning Group Policy Settings
- Planning the Assignment of Group Policies
- Planning the Management of Group Policy Objects

Lab : Planning and Implementing Group Policy

- Planning Group Policy
- Implementing the Proposed GPO Plan

After completing this module, students will be able to:

- Plan GPO settings.

- Plan the assignment of group policy objects to AD DS containers.
- Plan how to manage GPOs within your organization.

Module 6: Planning Active Directory Certificate Services. This module explains how to plan Active Directory Certificate Services in Windows Server 2008 and Windows Server 2008 R2 environments. Lessons

- Enterprise PKI Deployment and Administration
- Managing Certificate Templates
- Planning Certificate Enrollment and Revocation

Lab : Configuring Certificate Services

- Planning Certificate Services Deployment
- Configure Stand-alone Root and Enterprise Subordinate CA
- Configure Key Archiving and Recovery
- Configure Online Certificate Status Protocol Array

After completing this module, students will be able to:

- Plan enterprise PKI deployment and administration
- Manage Certificate templates
- Plan certificate enrollment and revocation

Module 7: Planning and Provisioning Application Servers. This module explains how to plan and provision application servers in Windows Server 2008 and Windows Server 2008 R2 environments. Lessons

- Planning and Provisioning Web Services
- Planning and Provisioning Presentation Virtualization
- Planning and Provisioning Application Virtualization

Lab : Planning and Provisioning Application Servers

- Planning Application Deployment
- Configuring Remote Desktop Policies
- Installing and Configuring a Remote Desktop Gateway

After completing this module, students will be able to:

- Plan and provision web application servers.
- Plan and provision remote desktop services
- Plan and provision application virtualization servers.

Module 8: Planning File and Print Services. This module explains how to plan and implement File and Print services in your Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- Provisioning File Services
- Provisioning and Managing Storage
- Provisioning and Managing Network Print Services
- Migrating File and Print Services

Lab : Planning and Implementing File and Print Services

- Planning File Services
- Implementing File Services in the Branch Office
- Implementing Print Services in the Branch Office

After completing this module, students will be able to:

- Plan and implement the file service role.
- Plan and manage storage.
- Plan and manage shared printers.

- Plan the migration of file and print services to Windows Server 2008 R2

Module 9: Planning Network Access. This module explains how to plan and implement your network infrastructure components in your Windows Server 2008 and Windows server 2008 R2 environment. Lessons

- Planning Network Security
- Planning Virtual Private Networks
- Planning Network Access Protection
- Planning Direct Access

Lab : Planning and Implementing Network Access

- Planning Network Access
- Implementing Network Access

After completing this module, students will be able to:

- Plan network infrastructure components to improve network security
- Plan and implement VPNs
- Plan and implement NAP
- Plan Direct Access

Module 10: Provisioning Data and Storage. This module explains how to provision data and storage in your Windows Server 2008 and Windows server 2008 R2 environment. Lessons

- Planning and Implementing Distributed File System
- Planning and Implementing Branch Cache
- Provisioning Storage

Lab : Planning and Implementing Data Access

- Planning Data Access
- Installing and Configuring DFS
- Enabling and Configuring Branch Cache

After completing this module, students will be able to:

- Plan and implement the Distributed File System.
- Plan and implement Branch Cache.
- Provision an appropriate storage solution.

Module 11: Planning Update Deployment. This module explains how to plan and implement a Windows Server Update Service topology and how to deploy and manage updates in your Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- WSUS Topologies
- Update Management

Lab : Multi-Site WSUS Deployment

- Analyze WSUS Deployment Plan
- Configure a Replica WSUS Server
- Configure WSUS for Branch Cache

After completing this module, students will be able to:

- Plan an appropriate Windows Server Update Services (WSUS) topology
- Deploy and manage updates

Module 12: Planning High Availability. This module explains how to plan and implement High Availability in your Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- Planning Network Load Balancing
- Planning Failover Clustering
- Planning for Service Availability

Lab : Planning and Implementing High Availability

- Planning High Availability
- Implementing High Availability

After completing this module, students will be able to:

- Plan and deploy network load balancing.
- Plan and deploy failover clustering.
- Plan for high service availability.

Module 13: Planning Performance and Event Monitoring. This module explains how to plan for performance and event monitoring in your Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- Monitoring and Analyzing Server Performance
- Managing Events

Lab : Planning and Implementing Event Log Management

- Planning Enterprise Event Log Management

- Configuring Event Subscriptions
- Creating Custom Views
- Creating Event Tasks

After completing this module, students will be able to:

- Monitor and analyze server performance.
- Manage events.

Module 14: Enterprise Backup and Recovery. This module explains how to plan for backups and disaster recovery in your Windows Server 2008 and Windows Server 2008 R2 environment. Lessons

- Disaster Recovery Concepts
- Planning Windows Server Backup
- Planning Recovery of Data and servers

Lab : Backing Up and Restoring from VHD

- Creating a Disaster Recovery Plan
- Configure network backup with Windows Server Backup
- Mount Backup VHD and Extract Data
- Configure a Windows Server 2008 server to boot from backup VHD

After completing this module, students will be able to:

- Understand Disaster Recovery Concepts
- Plan Windows Server Backup
- Plan recovery of data and servers