



## Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure

**Course 2279: Five days; Instructor-led**

### ***Introduction***

This five-day instructor-led course includes self-paced and instructor-facilitated components. It provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server™ 2003 Active Directory® directory service infrastructure. The course focuses on a Windows Server 2003 directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

This is the sixth course in the Windows Server 2003 Systems Engineer curriculum.

### ***Audience***

This course is appropriate for individuals who are employed or seeking a position as a systems engineer. This course is also appropriate for individuals who currently support a competitive platform who want to enhance their skills using Windows Server 2003 Active Directory.

Professionals who take this course should meet the following entry criteria:

- New to implementing Windows Server 2003 Active Directory.
- Preparing for MCP exam 70-294: Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure, which is a core requirement for the MCSE certification.

### ***At Course Completion***

After completing this course, students will be able to:

- Describe the logical and physical components of Active Directory.
- Create and configure a forest and domain structure by using an Active Directory infrastructure design.
- Plan and implement an organizational unit structure.
- Plan and implement Active Directory user, group, and computer accounts.
- Plan and implement a Group Policy strategy to centrally manage users and computers in an enterprise.
- Deploy, manage, and troubleshoot software that is deployed using Group Policy.
- Implement sites to manage and monitor Active Directory replication.
- Plan and implement the placement of domain controllers, global catalog servers, and DNS servers that are integrated with Active Directory.
- Plan and manage operations masters.
- Back up, restore, and maintain Active Directory.
- Plan and implement an Active Directory infrastructure that is based on a directory service design that an enterprise architect provides.

### ***Prerequisites***

Before attending this course, students must have completed:

- **Course 2278:** Planning and Maintaining a Windows Server 2003 Network Infrastructure, or have the equivalent knowledge and skills.

### ***Microsoft Certified Professional Exams***

- **Exam 70-294:** Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure

### ***Course Materials***

The student kit includes a comprehensive workbook and other necessary materials for this class.

## Course Outline

### **Module 1: Introduction to Active Directory Infrastructure**

This module introduces students to the Active Directory infrastructure, its logical and physical structure, and its function as a directory service. The module also introduces the command-line tools and snap-ins that you can use to examine the components of Active Directory and the Active Directory design, planning, and implementing process.

#### Lessons

- The Architecture of Active Directory
- How Active Directory Works
- Examining Active Directory
- The Active Directory Design, Planning, and Implementation Processes

After completing this module, students will be able to:

- Describe the architecture of Active Directory.
- Describe how Active Directory works.
- Use command-line tools, scripts, snap-ins, and other methods to examine the components of Active Directory.
- Describe the Active Directory design, planning, and implementation processes.

### **Module 2: Implementing an Active Directory Forest and Domain Structure**

This module discusses Active Directory installation requirements, how to create a forest and domain structure by using the Active Directory Installation Wizard, and the post-installation tasks you must perform. It also explains how to configure DNS in an Active Directory environment, raise forest and domain functional levels, and create trust relationships.

#### Lessons

- Creating a Forest and Domain Structure
- Examining and Configuring Active Directory Integrated DNS
- Raising Forest and Domain Functional Levels
- Creating Trust Relationships

#### Lab A: Implementing Active Directory

After completing this module, students will be able to:

- Create a forest and domain structure.
- Configure DNS in an Active Directory environment.
- Raise the functional level of a forest and a domain.
- Create trust relationships between domains.
- Secure trusts by using SID filtering.

### **Module 3: Implementing an Organizational Unit Structure**

This module discusses how to create organizational units, how to delegate common administrative tasks, how to customize the delegation of administrative tasks for an organizational unit, and how to plan the implementation of an organizational unit structure.

#### Lessons

- Creating and Managing Organizational Units
- Delegating Administrative Control for Organizational Units
- Planning an Organizational Unit Strategy

#### Lab A: Implementing an Organizational Unit Structure

After completing this module, students will be able to:

- Create and manage organizational units.
- Delegate control of an organizational unit.
- Plan an organizational unit strategy.

**Module 4: Implementing User, Group, and Computer Accounts**

This module explains how to plan and implement Active Directory user, group, and computer accounts. It also explains how to create multiple user and computer accounts by using command-line tools such as CSVDE and LDIFDE, and how to manage accounts by using Windows Script Host. The module also explains how to implement User Principle Name (UPN) suffixes.

<b>Lessons</b>
<ul style="list-style-type: none"> <li>▪ Introduction to Accounts</li> <li>▪ Creating and Managing Multiple Accounts</li> <li>▪ Implementing User Principal Name Suffixes</li> <li>▪ Moving Objects in Active Directory</li> <li>▪ Planning an Account Strategy</li> <li>▪ Planning an Active Directory Audit Strategy</li> </ul>
<b>Lab A: implementing an Account and Audit Strategy</b>
After completing this module, students will be able to:
<ul style="list-style-type: none"> <li>▪ Create and configure GPOs.</li> <li>▪ Manage Group Policy preferences and Group Policy settings.</li> <li>▪ Design the types of Active Directory accounts and groups.</li> <li>▪ Create multiple user and computer accounts.</li> <li>▪ Verify and troubleshoot Group Policy.</li> <li>▪ Delegate administrative control of Group Policy.</li> <li>▪ Move objects within a domain and across domains in a forest.</li> <li>▪ Plan a strategy for user computer and group accounts.</li> <li>▪ Plan an Active Directory audit strategy.</li> </ul>
<b>Module 6: Deploying and Managing Software by Using Group Policy</b>
In this module, students learn how to deploy and manage software by using Group Policy. The module focuses on basic concepts of deploying, configuring, and maintaining software, troubleshooting deployed software, and planning software deployment.
<b>Module 5: Implementing Group Policy</b>
This module explains how to plan and implement a Group Policy strategy to centrally manage users and computers in an enterprise.

- Introduction to Managing Software Deployment
- Deploying Software
- Configuring Software Deployment
- Maintaining Deployed Software
- Troubleshooting Software Deployment
- Planning a Software Deployment Strategy

**Lab A: Deploying and Managing Software Using Group Policy**

After completing this module, students will be able to:

- Explain the basic concepts of software deployment by using Group Policy.
- Deploy software by using Group Policy.
- Configure software deployment by using Group Policy.
- Maintain deployed software by using Group Policy.
- Troubleshoot some common problems with software deployment.
- Plan a software deployment strategy.

**Module 7: Implementing Sites to Manage Active Directory Replication**

This module explains how to implement sites to manage and monitor replication in Active Directory. The module presents basic concepts of replication and sites in Active Directory, specifically: creating, configuring, and managing sites; monitoring and troubleshooting replication failures; and planning a site strategy.

**Lessons**

- Introduction to Active Directory Replication
- Creating and Configuring Sites
- Managing Site Topology
- Troubleshooting Replication Failures
- Planning a Site

**Lab A: Implementing Sites to Manage Active Directory Replication**

After completing this module, students will be able to:

- Explain the components and the process of replication.
- Create and configure sites.
- Manage an Active Directory site topology.
- Monitor and troubleshoot Active Directory replication failures.
- Plan a site strategy.

**Module 8: Implementing the Placement of Domain Controllers**

This module introduces students to the placement of domain controllers. It focuses on the placement and planning of domain controllers, including global catalog servers, and DNS servers that are integrated with Active Directory. The module also discusses guidelines for caching universal group membership for a site.

**Lessons**

- Implementing the Global Catalog in Active Directory
- Determining the Placement of Domain Controllers in Active Directory
- Planning the Placement of Domain Controllers

**Lab A: Implementing the Placement of Domain Controllers**

After completing this module, students will be able to:

- Implement the global catalog in Active Directory.
- Determine the placement of domain controllers in Active Directory.
- Plan for the placement of domain controllers in Active Directory.

### **Module 9: Managing Operations Masters**

This module introduces students to managing operations masters in Active Directory. It explains the purpose of each of the five types of operations masters, how to transfer and seize operations master roles, and how to plan a strategy for placing operations masters.

#### **Lessons**

- Introduction to Operations Master Roles
- Transferring and Seizing Operations Master Roles
- Planning the Placement of Operations Masters

#### **Lab A: Managing Operations Masters**

After completing this module, students will be able to:

- Explain the purpose of each of the five operations master roles in Active Directory.
- Transfer and seize operations master roles in Active Directory.
- Plan for the placement of operations masters in Active Directory.

### **Module 10: Maintaining Active Directory Availability**

This module explains basic concepts about maintaining Active Directory availability, including how to defragment, move, back up, restore, and monitor an Active Directory database.

#### **Lessons**

- Introduction to Maintaining Active Directory
- Moving and Defragmenting an Active Directory Database
- Backing Up Active Directory
- Restoring Active Directory
- Planning for Monitoring Active Directory

#### **Lab A: Maintaining Active Directory**

After completing this module, students will be able to:

- Describe the relationship between data modification and maintenance of the Active Directory database.
- Move and defragment an Active Directory database.
- Back up Active Directory.
- Restore Active Directory by using the primary, normal, or authoritative restore methods.
- Apply guidelines for monitoring Active Directory.

### **Module 11: Planning and Implementing an Active Directory Infrastructure**

This module provides students with the skills to plan and implement an Active Directory service infrastructure based on the business requirements of a fictitious organization.

#### **Lessons**

- Creating an Active Directory Implementation Plan for Tailspin Toys
- Implementing the Active Directory Infrastructure for Tailspin Toys

#### **Lab A: Creating the Active Directory Implementation Plan for Tailspin Toys**

#### **Lab B: Implementing the Active Directory Infrastructure for Tailspin Toys**

After completing this module, students will be able to:

- Review the Active Directory design and create an Active Directory implementation plan for Tailspin Toys.
- Implement the Active Directory infrastructure for Tailspin Toys.