

Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure

Course 2282: Five days; Instructor-led

- Introduction
- Audience
- At Course Completion
- Prerequisites
- Microsoft Certified Professional Exams
- Course Materials
- Course Outline

Introduction

This five-day instructor-led course provides students with the knowledge and skills to design an Active Directory® directory service and network infrastructure for a Microsoft Windows Server™ 2003 environment. The course is intended for systems engineers who are responsible for designing directory service and/or network infrastructures.

Audience

This course is intended for individuals who are employed as or seeking employment as a systems engineer in a Windows Server 2003-based environment.

At Course Completion

After completing this course, students will be able to:

- Describe the process of designing an Active Directory infrastructure and a network infrastructure that supports Active Directory.
- Design a forest and domain infrastructure that meets the needs of an organization.
- Design a site infrastructure that meets the needs of an organization.
- Design a Group Policy structure that meets the needs of an organization.
- Design an administrative structure that meets the needs of an organization.
- Design a physical network structure that supports Active Directory and meets the needs of an organization.
- Create a design for network connectivity that supports Active Directory and meets the needs of an organization.
- Design a name resolution strategy that supports Active Directory and meets the needs of an organization.
- Design a Dynamic Host Configuration Protocol (DHCP) structure that supports Active Directory and meets the needs of an organization.
- Design a network access infrastructure that supports Active Directory and meets the needs of an organization.

Prerequisites

This course requires that students:

Have taken Course 2279: Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure or have equivalent knowledge and experience.

Microsoft Certified Professional Exams

This workshop will help students prepare for this Microsoft Certified Professional exam:

- Exam 70-297: Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure

Course Materials

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

Course Outline

Module 1: Introduction to Designing an Active Directory and Network Infrastructure

This module describes the components of Active Directory, its role in an organization, and the phases in an Active Directory life cycle. The module describes each element of an Active Directory design and a network infrastructure design, stressing the relationship between the network infrastructure and the Active Directory infrastructure. Finally, it outlines the basic principles and tasks that are part of creating an overall design.

Module Objectives

After completing this module, students will be able to:

- Describe the role of Active Directory in an organization.
- Describe the role of design in the Active Directory life cycle.
- Describe the role of a network infrastructure and the elements crucial to the successful interaction between network components and Active Directory
- Describe the network life cycle and how design tasks fit into that life cycle.
- Describe basic design principles.

Module 2: Designing a Forest and Domain Infrastructure

This module covers the first major design decisions when creating an Active Directory and network infrastructure. The Active Directory logical structure and the design of forests and domains. Key elements of the forest and domain design are naming and, in the case of a multiple-forest design, trusts. These decisions must take into account any existing structure and provide a migration solution from the existing structure to the new design.

Module Objectives

After completing this module, students will be able to:

- Determine the information needed to design a forest and domain infrastructure.
- Create a conceptual forest design.
- Create a conceptual domain design.
- Establish a Domain Name System (DNS) namespace strategy for the forests and domains.
- Establish a trust strategy for the forests.
- Determine a migration path for the existing infrastructure.
- Design a schema management policy.

Module 3: Designing a Site Infrastructure

This module explains how to design a site topology to organize the Windows Server 2003 network in your organization and optimize the exchange of data and directory information.

Module Objectives

After completing this module, students will be able to:

- Determine the information needed to design a site infrastructure.
- Create a site design.
- Modify the site design for replication.
- Determine the placement of domain controllers in the site design.
- Determine the placement of Global Catalog servers in the site design.
- Determine the placement of Single Operations Masters in the site design.

Module 4: Designing for Group Policy

This module describes how to gather and analyze business requirements and other data and then use that data to design a Group Policy structure and integrate the structure into an organizational unit design. It describes the role of Group Policy in the Active Directory infrastructure and factors in choosing particular implementations, such as security, software deployment, and administrative requirements. The module also covers why and how to design a change management structure.

Module Objectives

After completing this module, students will be able to:

- Gather Group Policy requirements.
- Design a Group Policy structure.
- Create an organizational unit structure for Group Policy.
- Create a Group Policy management design.

Module 5: Designing the Administrative Structure

This module explains how to design your administrative structure to delegate authority and simplify administrative overhead and design an organizational unit structure in a Windows Server 2003 environment.

Module Objectives

After completing this module, students will be able to:

- Determine the information needed to design an administrative structure.
- Design a network administration model.
- Design an organizational unit structure.
- Design an account strategy.

Module 6: Designing the Physical Network

This module describes how to gather business requirements and other data and then analyze and use that data to design the physical network. It explains how to design a connectivity infrastructure, with considerations for intrasite and intersite connectivity, router placement, connection types, and virtual private networks (VPNs). It also describes how to design a domain controller structure and how to use the Active Directory Sizer tool.

The module also covers why and how to design a change management structure for networking, including monitoring. Finally, the students will create a physical network according to a scenario.

Module Objectives

After completing this module, students will be able to:

- Gather data about a physical network.
- Design a connectivity infrastructure.
- Design a connectivity infrastructure for Active Directory communications.
- Evaluate connection types.
- Design a change management structure for networking.

Module 7: Designing for Network Connectivity

This module describes how to design networking services for connectivity and protocol requirements for organizations. Also, this module describes networking solutions that establish a network foundation, provide access to public networks, and support network-based applications and authentication methods.

Module Objectives

After completing this module, students will be able to:

- Determine the information needed to design for network connectivity.
- Design an IP addressing scheme.
- Design a security strategy for connectivity.
- Create an extranet design.
- Create an intranet design.
- Design a DHCP infrastructure.
- Design a DHCP scope strategy.

Module 8: Designing a Name Resolution Strategy

This module describes the relationship between Active Directory and DNS domain names, Windows Internet Name Service (WINS), and other name resolution strategies.

Module Objectives

After completing this module, students will be able to:

- Determine the information needed to design a name resolution strategy.
- Design a strategy for interoperability with Active Directory, Berkeley Internet Name Domain (BIND), WINS, and DHCP.
- Design a WINS replication strategy.
- Design a name resolution strategy for clients.

Module 9: Designing the Network Access Infrastructure

This module describes how to design a network access infrastructure by gathering relevant data and analyzing and using that data to design for network access security, remote access, and wireless access. The module includes strategies for authentication, administration, access monitoring, interoperability, and user education. Finally, students will design a network access infrastructure according to a scenario.

Module Objectives

After completing this module, students will be able to:

- Gather data for network access design.

- Design network access security.
- Choose remote access methods.
- Design a remote access infrastructure.
- Design a wireless access infrastructure