Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure – 5 days

Course Objectives

This five-day instructor-led course provides students with the knowledge and skills to design a Microsoft 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.

Prerequisites

To get the most benefit from the course, it is recommended that students have a good understanding of the topics within the following course:

- Microsoft Windows Server 2003 Active Directory® – Planning Implementing and Maintaining.

The course is also designed to help prepare candidates for the Microsoft Certified Professional Exam No. 70-297.

Exercises

This course is instructor led, involving the utilisation of examples and exercises in a workshop environment.

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

This module introduces general design principles and the process of designing a Windows Server 2003 Active Directory infrastructure.

After completing this module students will be able to:

- Explain basic design principles
- Describe the process of and the tasks involved in designing an Active Directory infrastructure

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.

After completing this module students will be able to:

- Gather and analyse the information that you need to design a forest and domain infrastructure
- Create a logical forest design
- Create a domain design
- Design a DNS namespace strategy for forests and domains
- Create a trust strategy 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 organise the Windows Server 2003 network in your organisation and optimise the exchange of data and directory information.

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 the Administrative Structure

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

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 organisational unit structure
- Design an account strategy

Module 5 – Designing for Group Policy

This module describes how to gather and analyse business requirements and other data and then use that data to design a Group Policy structure and integrate the structure into an organisational 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.

After completing this module students will be able to:

- Determine the information needed to design for Group Policy
- Design a Group Policy structure
- Create an organisation unit (OU) structure for Group Policy
- Create a Group Policy management design

Module 6 – Designing the Physical Network

This module describes how to gather business requirements and other data and then analyse 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.

Also covering 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.

After completing this module students will be able to:

- Explain the preparation necessary to design a network infrastructure
- Create an IP addressing scheme
- Design a DHCP infrastructure
- 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 organisations. Also, describing networking solutions that establish a network foundation, provide access to public networks and support network-based applications and authentication methods.

After completing this module students will be able to:

- Determine the information that you need to design for network connectivity
- Evaluate connectivity infrastructure
- Create a design for Internet connectivity

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.

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, 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 then analysing and using that data to design for network access security, remote access and wireless access. Including strategies for authentication, administration, access monitoring, interoperability and user education.

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