

## Implementing a Microsoft Windows Server 2003 Network Infrastructure: Network Hosts

### Introduction

This course combines five days of instructor-led training with additional e-Learning content to provide students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server 2003 environment.

This is the first course in the Systems Administrator and Systems Engineer tracks for Windows Server 2003 and serves as the entry point for other courses in the Windows Server 2003 curriculum.

### Pre-Requisites

Before attending this course, students must have:

- A+ certification, or equivalent knowledge and skills.
- Course 2274, Managing a Microsoft Windows Server 2003 Environment, or equivalent knowledge and skills.

### Outcomes

At the end of this course, students will be able to:

- Describe the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol architecture.
- Convert Internet Protocol (IP) addresses between decimal and binary.
- Calculate a subnet mask.
- Create subnets using Variable-Length Subnet Mask (VLSM) and Classless Inter-Domain Routing (CIDR).
- Configure a host to use a static IP address.
- Assign IP addresses in a multiple subnet network.
- Describe the IP routing process.
- Configure a host to obtain an IP address automatically.
- Configure a host so that automatic private IP address configuration is disabled.
- Configure a host to use name servers.
- Isolate common connectivity issues.

### Course Details

Course code: MS 2276

Duration: 5 days

Starting time: 9.00 am

Finishing time: 4.30 pm

Lunch and refreshments are provided.

### Booking guidelines

Contact our Learning Consultants on 1300 86 87246 and we will assist you with your booking.



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1300 TO TRAIN

# Course Outline

## Ø **Module 1: Reviewing the Suite of TCP/IP Protocols**

This module reviews the suite of TCP/IP protocols. By understanding the function of each of the protocols and how the protocols relate to each other, you have the context for understanding network administration tasks and network troubleshooting.

### **Lessons**

- Overview of the OSI Model
- Overview of the TCP/IP Protocol Suite
- Viewing Frames Using Network Monitor

After completing this module, students will be able to:

- Describe the architecture of the OSI reference model and the function of each layer.
- Describe the four layers of the TCP/IP protocol suite.
- Capture and view frames by using Network Monitor.

## Ø **Module 2: Assigning IP Addresses in a Multiple Subnet Network**

This module explains how to construct and assign IP addresses and how to isolate addressing issues associated with the IP routing process.

### **Lessons**

- Configuring IP Addressing for Simple Networks
- Configuring IP Addressing for Complex Networks
- Using IP Routing Tables
- Overcoming Limitations of the IP Addressing Scheme

After completing this module, students will be able to:

- Explain how to configure IP addressing for simple TCP/IP networks.

- Explain how to configure IP addressing for complex TCP/IP networks.
- Describe routing protocols and how they are used.
- Overcome limitations that are caused by class-based routing.

## Ø **Module 3: Configuring a Client IP Address**

This module describes how to configure an IP address for a client computer running Microsoft Windows Server 2003.

### **Lessons**

- Configuring a Client to Use a Static IP Address
- Configuring a Client to Obtain an IP Address Automatically
- Using Alternate Configuration

After completing this module, students will be able to:

- Configure a client to use a static IP address.
- Configure a client to obtain an IP address automatically by using DHCP.
- Configure a client to obtain an IP address automatically by using Alternate Configuration

## Ø **Module 4: Configuring a Client for Name Resolution**

This module describes the various types of name resolution mechanisms provided by the Windows operating systems and how to use and configure them for clients on your network.

### **Lessons**

- Overview of Name Resolution
- Resolving Host Names

Resolving NetBIOS Names  
After completing this module, students will be able to:

- Describe how name resolution occurs.
- Describe how host names are used and resolved.
- Describe how NetBIOS names are used and resolved.

## Ø **Module 5: Isolating Common Connectivity Issues**

This module explains how to isolate common connectivity issues and describes how to use utilities as part of this process.

### **Lessons**

- Analysing Client Start up Communication
- Determining the Causes of Connectivity Issues
- Using Network Utilities and Tools to Isolate Connectivity Issues

After completing this module, students will be able to:

- Determine the causes of connectivity issues.
- Describe utilities and tools to resolve connectivity issues.
- Describe the client start up communication process.