



Microsoft Office

866-963-4440

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## **2276– Implement MS Windows Server 2003 Infrastructure Network Host**

**2 Day**

### **PREREQUISITES**

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.

### **AT COURSE COMPLETION**

After completing 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.

### **LESSON TOPICS**

#### **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.



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### 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.

### 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

### Lab : Assigning IP Addresses in a Multiple Subnet Network

- Defining the Subnet Mask for a WAN
- Defining the Subnet Mask for Supernetting Four Class C Networks

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.

### 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



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

### **Lab : Configuring Hosts to Connect to a Network Running the TCP/IP Protocol Suite**

- Viewing DHCP Packets

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

### **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

### **Lab : Configuring a Client for Name Resolution**

- Viewing DNS Packets

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.

### **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**



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- Analyzing Client Startup Communication
- Determining the Causes of Connectivity Issues
- Using Network Utilities and Tools to Isolate Connectivity Issues

**Lab : Isolating Common Connectivity Issues**

- Documenting Your Current Environment
- Resolving 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 startup communication process.