



## Workshop on Networking Fundamentals Course Overview

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#### Course Duration:

14 Hours / 2 Days

#### 1 Understanding Networking

- Bus Topology
- Star Topology
- Ring Topology
- Token Passing
- Mesh Topology
- Hybrid Topologies
- Star-Bus
- Star-Ring
- OSI Networking Model

#### 2 Understanding Network Hardware

- Network Interface Card
- Repeaters
- Hubs
- Bridges
- MAC Addresses
- Switches
- Routers

#### 3 Understanding Network Cabling

- Network Cables
- Twisted-Pair Cable
- Coaxial Cable
- Fiber-Optic Cable
- Selecting Cables
- Characteristics of a Category 5 UTP Cabling System
- Ethernet (CSMA/CD) History
- Collision Detection Overview
- Crossover & Straight Cable

- When to use Crossover Cable

#### 4 Understanding Network Protocols

- Transmission Control Protocol (TCP)
- Data Transmission Using TCP
- Three-Way Handshake
- User Datagram Protocol (UDP)
- Internet Protocol (IP)
- Activities Performed by IP
- Internet Control Message Protocol (ICMP)
- Internet Group Management Protocol (IGMP)
- Managing IP Multicasting
- Address Resolution Protocol (ARP)
- NetBEUI
- IP Addressing

#### 5 Securing Your Network

- Internal Security
- External Security
- Types of Common Computer Virus
- Virus Prevention

#### 6 Network Troubleshooting Tools

- Testing Cables
- Diagnostic Utilities
- Ping
- Telnet
- FTP and TFTP
- Analyzers
- Network monitors

#### 7 Understanding Windows 2000 Server Network Infrastructure

- DHCP Server
- Domain Name Server (DNS)
- Internet Information Services (IIS)
- Windows Terminal Services

- Sharing a Folder
- Adding a Printer
- Configuring a Network Printer