

**Course Name:** SOHO Networking Fundamentals

**Course Overview:**

This course will provide the necessary knowledge to design, implement and maintain and small office/home office network or a home network. It will cover deployment and configuration of the equipment, software and security.

**Course Length:** 3 Days

**Who should attend?**

- Anyone who works from home
- Remote VPN users
- SOHO users
- Residential/Small Business Technicians
- Cable Field Technicians
- Telephone Field Technicians
- Utility Communications Technicians

**You will learn:**

- The fundamentals of networking
- The fundamentals of IP Addressing
- How to set up a small scale LAN
- How to implement security on the network
- How to deploy and secure a Wireless Network
- How to configure and use VPN software
- How to Troubleshooting Network Problems

**Prerequisites:** none

**Customizable Course:** Yes



## **Course Content:**

### **Introduction to Small Office/Home Office Networking**

#### What is a SOHO Network

- Components of the network
- Network Topologies
- Advantages of a SOHO network
- How the SOHO network will be used

### **Planning the SOHO Network**

#### Network Planning

- Wired SOHO Networks
- Wireless SOHO Networks
- Combining Wired and Wireless SOHO Networks
- WAN or Internet connection options
- Will the SOHO network deploy VoIP

#### Hardware and Software

- Hardware and Software Choices
- Security options
- Number of Users
- AC/DC power requirements or PoE

#### User Considerations

- How Many users
- Bandwidth Requirements
- Email Requirements

### **Networking Basics**

#### TCP/IP Networking

- Basic Networking Primer
- Networking Topologies
- The OSI Model
- IP Addressing
- TCP/IP

### **SOHO Hardware and Software Installation**

#### Basic Hardware Installation

- PC and Laptop installation and configuration
- Network Interface Adapters
- Cables
- Routers, Switches, Access Points, PoE devices



- Printers and Peripherals
- Servers
- VoIP Phones

#### Software Installation

- Networking Software
- Email Application and configuration
- Security and Firewalls
- Anti-virus and Spyware Removal Tools
- VPN deployment for Remote Users

#### Configuring Hardware and Software

- Connecting and Configure Wired Devices
- Deploy and configure Wireless Devices
- Connection to WAN access – Cable, DSL, T1, etc.

### **Configuring Security and Network Applications**

#### Security

- Setup Firewalls
- Creating User Accounts, Privileges and Restrictions
- Configure Anti-virus and Spyware Removers
- Port Forwarding Considerations
- Manage Bandwidth usage and Analyze User Data

#### Applications

- Sharing Files and Folders
- Sharing Printers and Copiers and other resources
- Using Remote Desktop
- Setting up Network Messaging software
- Configure Email Programs
- Hardware and Software Choices
- Mapping Network Drives
- Configuring a network server for file sharing and storage

### **Testing and Troubleshooting SOHO Installation and Setup**

#### Network Troubleshooting

- Configuration Problems
- Replacing Hardware
- Software installation issues
- IP Addressing and Routing issues
- Virus Removal
- Spyware Removal
- Wireless Interference Problems
- Slow throughput and Bandwidth issues



- Network connection problems
- Network Resource Sharing issues

