

Soft-Train



*At Soft-Train
Technology Works*

Interconnecting Cisco Network Devices Part 1 (ICND1) (5 Days) ST21007

COURSE GOAL: To prepare students for Cisco Certified Network Associate (CCNA) Certification 640-882 or 640-802, while providing them with comparable and applicable skills.

PREREQUISITES: None.

LEARNING OBJECTIVES:

Upon completion of this course the student will be able to:

- Describe how networks function
- Describe issues related to increasing traffic on an Ethernet LAN
- Identify switched LAN technology solutions to Ethernet networking issues
- Describe the reasons for extending the reach of a LAN & the methods that can be used
- Describe the reasons for connecting networks with routers & how routed networks transmit data
- Describe the function of WANs & configure PPP, encapsulation, & static & dynamic routing
- Use the command-line interface to manage the router's startup & configuration

KEY TOPICS:

I. Building a Simple Network

- A. Exploring the Functions of Networking
- B. Securing the Network
- C. Understanding the Host-to-Host Communications Model
- D. IP Network Addressing
- E. Understanding TCP/IP's Transport and Application Layers
- F. Exploring the Packet Delivery Process
- G. Understanding the Ethernet
- H. Connecting to an Ethernet LAN

II. Ethernet LANs

- A. Understanding the Challenges of Shared LANs
- B. Exploring the Packet Delivery Process
- C. Operating Cisco IOS Software
- D. Starting Switch
- E. Understanding Switch Security
- F. Maximizing the Benefits of Switching
- G. Troubleshooting Switch Issues

III. Wireless LANs

- A. Exploring Wireless Networking
- B. Understanding WLAN Security
- C. Implementing a WLAN
- D. 802.11 Topology Building Blocks

IV. LAN Connections

- A.** Exploring the Functions of Routing
- B.** Understanding Binary Numbering
- C.** Constructing a Network Addressing Scheme
- D.** Starting a Cisco Router
- E.** Configuring a Cisco Router
- F.** Exploring the Packet Delivery Process
- G.** Understanding a Cisco Router Security
- H.** Using the Cisco SDM
- I.** Using a Cisco Router as a DHCP server
- J.** Accessing Remote Devices

V. WAN Connections

- A.** Understanding WAN Technologies
- B.** Enabling the Internet Connection
- C.** Enabling Static Routing
- D.** Configuring Serial Encapsulation
- E.** Enabling RIP

VI. Network Environment Management

- A.** Discovering Neighbors on the Network
- B.** Managing Cisco Router Startup and Configuration
- C.** Managing Cisco Devices
- D.** Cisco IOS File System and Devices
- E.** Managing Cisco IOS Images