

Course Outline: Interconnecting Cisco Network Devices Part 1 (ICND1)

Learning Method: Instructor-led Classroom Learning

Duration: 5.00 Day(s)/ 40 hrs

Overview:

This comprehensive 5-day Authorized Cisco course, develop a practical understanding of operation of modern CP/IP networks built with Cisco hardware. Learn the commands and techniques used to troubleshoot host connections, interact with Cisco switches and routers, back up and restore configuration files, and manage network equipment. If you are new to networking, need a good understanding for management or sales responsibilities, or are starting along the path to achieve CCNA certification, this is the right course for you.

Who Should Attend:

- Network technicians who configure and support internetworks
- Individuals seeking CCNA certification
- Management and salespeople who need a working knowledge of modern networking

At Course Completion:

After completing this course, students should have learnt:

- How networks function.
- Network components and their functions
- Open Systems Interconnection (OSI) reference model
- Binary, decimal, and hexadecimal numbering
- Switching operations and theory
- Host-to-Host packet delivery process
- TCP/IP network addressing and routing
- IP subnetting
- Providing Local Area Network (LAN), Wide Area Network (WAN), and remote access services
- Advanced network theory, including Virtual Private Networks (VPN), Content Delivery Networks (CDN), Intranets and extranets, and wireless networking
- Introduction to Cisco Internet Operating System (IOS)
- Initial configuration of Cisco Catalyst Switches and Routers
- Network discovery and management using Cisco Discovery Protocol (CDP), telnet, and Trivial FTP (TFTP).

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Pre-requisite(s): Be familiar with a windows based computer.

Outline:

Module 1: Building a Simple Network

- Exploring the Functions of Networking
- Securing the Network
- Host-to-Host Communication Model
- TCP/IP's Internet Layer
- TCP/IP's Transport Layer
- Packet Delivery Process
- Understanding Ethernet
- Connecting to an Ethernet LAN

Module 2: Ethernet LANs

- Challenges of Shared LANs
- Solving Network Challenges with Switched LAN Technology
- Packet Delivery Process
- Operating Cisco IOS Software
- Starting the Switch
- Understanding Switch Security
- Maximizing the Benefits of Switching
- Troubleshooting Switch Issues

Module 3: Wireless Local Area Networks (WLANs)

- Exploring Wireless Networking
- Understanding WLAN Security
- Implementing a WLAN

Module 4: LAN Connections

- Functions of Routing
- Understanding Binary Basics
- Constructing a Network Addressing Scheme
- Starting a Router
- Configuring a Router
- Packet Delivery Process
- Understanding Router Security
- Using Cisco Router and Security Device Manager
- Using a Router as a DHCP Server
- Accessing Remote Device

Module 5: Wide Area Networks (WANs)

- WAN Technologies

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- Enabling the Internet Connection
- Enabling Static Routing
- Configuring Serial Encapsulation
- Enabling Routing Information Protocol (RIP)

Module 6: Network Environment Management

- Discovering Neighbors on the Network
- Managing Router Startup and Configuration
- Managing Cisco Devices

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