

## Course Specifications

### Interconnecting Cisco® Networking Devices Part 1 (ICND1)

**Course number:** ICND-1

**Course length:** 5 days

## Registration:

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## Interconnecting Cisco® Networking Devices Part 1 (ICND1)

### Course Description

“What do I need to know to support my network?” The answer to this question depends on the size and complexity of your network. Fortunately, regardless of the size and complexity of the network, the starting point for leaning to support a network is the same. This course is intended to be that starting point. It focuses on providing the skills and knowledge necessary to implement and support a small switched and routed network.

**Delivery Method:** Instructor-led training

### Performance-Based Objectives

- Describe how networks function, identifying major components, functions of network components, and the OSI reference model
- Using the host-to-host packet delivery process, describe issues related to increasing traffic on an Ethernet LAN and identify switched LAN technology solutions to Ethernet networking issues
- Describe the reasons for extending the reach of a LAN, and the methods that can be used, with a focus on RF wireless access
- Describe the reasons for connecting networks with routers, and how routed networks transmit data through using TCP/IP
- Describe the function of WANs and the major devices of WANs, and configure PPP encapsulation, static and dynamic routing, and PAT and RIP routing
- Use the CLI to discover neighbors on the network and manage router startup and configuration

### Course Content

#### Lesson 1: Course Introduction

#### Lesson 2: Building a Simple Network

Topic 2A: Exploring the Functions of Networking

Topic 2B: Securing the Network

Topic 2C: Understanding the Host-to-Host Communications Model

Topic 2D: Understanding the TCP/IP Internet Layer

Topic 2E: Understanding the TCP/IP Transport Layer

Topic 2F: Exploring the Packet Delivery Process

Topic 2G: Understanding Ethernet

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Topic 2H: Connecting to an Ethernet LAN

### Lesson 3: Ethernet LANs

Topic 3A: Understanding the Challenges of Shared LANs  
Topic 3B: Solving Network Challenges with Switched LAN Technology  
Topic 3C: Exploring the Packet Delivery Process  
Topic 3D: Operating Cisco IOS Software  
Topic 3E: Starting a Switch  
Topic 3F: Understanding Switch Security  
Topic 3G: Maximizing the Benefits of Switching  
Topic 3H: Troubleshooting Switch Issues

### Lesson 4: Wireless LANs

Topic 4A: Exploring Wireless Networking  
Topic 4B: Understanding WLAN Security  
Topic 4C: Implementing a WLAN

### Lesson 5: LAN Connections

Topic 5A: Exploring the Functions of Routing  
Topic 5B: Understanding Binary Basics  
Topic 5C: Constructing a Network Addressing Scheme  
Topic 5D: Starting a Cisco Router  
Topic 5E: Configuring a Cisco Router  
Topic 5F: Exploring the Packet Delivery Process  
Topic 5G: Understanding Cisco Router Security  
Topic 5H: Using Cisco SDM  
Topic 5I: Using a Cisco Router as a DHCP Server  
Topic 5J: Accessing Remote Devices

### Lesson 6: WAN Connections

Topic 6A: Understanding WAN Technologies  
Topic 6B: Enabling the Internet Connection  
Topic 6C: Enabling Static Routing  
Topic 6D: Configuring Serial Encapsulation  
Topic 6E: Enabling RIP

### Lesson 7: Network Environment Management

Topic 7A: Discovering Neighbors on the Network  
Topic 7B: Managing Cisco Router Startup and Configuration  
Topic 7C: Managing Cisco Devices

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