



# Interconnecting Cisco Networking Devices, Part 1 (ICND1) v3.0

Duration: 5 Days

Method: Instructor-Led Training (ILT) | Live Online Training

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**Certification:** Cisco Certified Network Associate (CCNA®) Routing and Switching —  
**Exam 1 of 2: 100-105 ICND1**

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## Course Description

This training course teaches learners how to install, operate, configure, and verify a basic IPv4 and IPv6 network, including configuring a LAN switch, configuring an IP router, managing network devices, and identifying basic security threats. It also provides the foundational understanding of network layers 1-3 that are applicable to core routing and switching, plus other advanced technologies. Several topics have been added in the latest version of this CCNA networking course, including understanding the interactions and network functions of firewalls, wireless controllers and access points, along with an additional focus on IPv6 and basic network security. All configuration commands are introduced through examples and supported with lab exercises.

## Target Audience

This course is intended for:

- Network Engineers
- Network Administrators
- Network Support Technicians
- Help Desk Technicians
- Persons looking to achieve the *Cisco Certified Network Associate (CCNA)* certification

## Prerequisites

To attend this course, participants must have:

- Basic computer literacy
- Basic PC operating system navigation skills
- Basic Internet usage skills
- Basic IP address knowledge



## Course Objectives

Upon successful completion of this course, attendees will be able to:

- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage and secure network devices
- Expand small to medium sized networks
- Describe IPv6 basics
- Install, configure, and operate a small-to-medium-sized network

## Course Topics

### Module 1: Building a Simple Network

- Exploring the Functions of Networking
- Understanding the Host-to-Host Communications Model
- Introducing LANs
- Operating Cisco IOS Software
- Starting a Switch
- Understanding Ethernet and Switch Operation
- Troubleshooting Common Switch Media Issues

### Module 2: Establishing Internet Connectivity

- Understanding the TCP/IP Internet Layer
- Understanding IP Addressing and Subnets
- Understanding the TCP/IP Transport Layer
- Exploring the Functions of Routing
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Enabling Static Routing
- Learning the Basics of ACL
- Enabling Internet Connectivity

### Module 3: Summary Challenge 1

- Establish Internet Connectivity
- Troubleshoot Internet Connectivity

### Module 4: Building a Medium-Sized Network

- Implementing VLANs and Trunks
- Routing Between VLANs
- Using a Cisco IOS Network Device as a DHCP Server
- Implementing RIPv2



## Course Topics *Continued*

### Module 5: Network Device Management and Security

- Securing Administrative Access
- Implementing Device Hardening
- Configuring System Message Logging
- Managing Cisco Devices
- Licensing

### Module 6: Summary Challenge 2

- Implement a Medium-Sized Network
- Troubleshoot a Medium-Sized Network

### Module 7: Introducing IPv6

- Introducing Basic IPv6
- Understanding IPv6 Operation
- Configuring IPv6 Static Routing

## LABS INCLUDED

