

## Cisco CCNA

**Length:** Nine Days

**Course Content:** The Interconnecting Cisco Networking Devices, Part 1 (ICND1) v2.0 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, connecting to a WAN, and identifying basic security threats. This course can be followed by the Interconnecting Cisco Networking Devices, Part 2 (ICND2) v2.0 course, which covers topics in more depth and teaches learners how to perform basic troubleshooting steps in enterprise branch office networks, preparing learners for Cisco CCNA certification.

The Interconnecting Cisco Networking Devices, Part 2 (ICND2) v2.0 course provides entry-level network administrators, network support, and help desk technicians with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. ICND2. ICND2 v2.0 focuses on understanding redundant topologies, troubleshooting common networking issues, configuring EIGRP and multiarea OSPF in both IPv4 and IPv6, understanding WAN technologies, and becoming familiar with device management and Cisco licensing. The student will encounter more troubleshooting and more lab time than with the previous version of ICND2.

## COURSE CONTENT

### BUILDING A SIMPLE NETWORK

- Lesson 1: Exploring the Functions of Networking
- Lesson 2: Understanding the Host-to-Host Communications Model
- Lesson 3: Introducing LANs
- Lesson 4: Operating Cisco IOS Software
- Lesson 5: Starting a Switch
- Lesson 6: Understanding Ethernet and Switch Operation
- Lesson 7: Troubleshooting Common Switch Media Issues

### ESTABLISHING INTERNET CONNECTIVITY

- Lesson 1: Understanding the TCP/IP Internet Layer
- Lesson 2: Understanding IP Addressing and Subnets
- Lesson 3: Understanding the TCP/IP Transport Layer
- Lesson 4: Exploring the Functions of Routing
- Lesson 5: Configuring a Cisco Router

- Lesson 6: Exploring the Packet Delivery Process
- Lesson 7: Enabling Static Routing
- Lesson 8: Managing Traffic Using ACLs
- Lesson 9: Enabling Internet Connectivity

### MANAGING NETWORK DEVICE SECURITY

- Lesson 1: Securing Administrative Access
- Lesson 2: Implementing Device Hardening
- Lesson 3: Implementing Traffic Filtering with ACLs

### BUILDING A MEDIUM-SIZED NETWORK

- Lesson 1: Implementing VLANs and Trunks
- Lesson 2: Routing Between VLANs
- Lesson 3: Using a Cisco Network Device as a DHCP Server
- Lesson 4: Introducing WAN Technologies
- Lesson 5: Introducing Dynamic Routing Protocols
- Lesson 6: Implementing OSPF

## INTRODUCING IPV6

- Lesson 1: Introducing Basic IPv6
- Lesson 2: Understanding IPv6
- Lesson 3: Configuring IPv6 Routing

## ICND1 SUPERLAB

- Lab S-1: ICND1 Superlab
- Task 1: Configure Basic Settings, VLANs, Trunks, and Port Security on Switches
- Task 2: Configure Inter-VLAN Routing
- Task 3: Configure Internet Connectivity
- Task 4: Configure WAN Connectivity and a Dynamic Routing Protocol
- Task 5: Configure IPv6 Connectivity in the LAN
- Task 6: Configure the OSPFv3 Routing Protocol

## IMPLEMENTING SCALABLE MEDIUM-SIZED NETWORKS

- Troubleshooting VLAN Connectivity
- Building Redundant Switched Topologies
- Improving Redundant Switched Topologies with EtherChannel
- Understanding Layer 3 Redundancy
- Module Summary

## TROUBLESHOOTING BASIC CONNECTIVITY

- Troubleshooting IPv4 Network Connectivity
- Troubleshooting IPv6 Network Connectivity
- Module Summary

## IMPLEMENTING AN EIGRP-BASED SOLUTION

- Implementing EIGRP
- Troubleshooting EIGRP
- Implementing EIGRP for IPv6
- Module Summary

## IMPLEMENTING A SCALABLE, MULTIAREA NETWORK, OSPF

- OSPF Overview
- Multiarea OSPF IPv4 Implementation
- Troubleshooting Multiarea OSPF
- Examining OSPFv3
- Module Summary

## WIDE-AREA NETWORKS

- Understanding WAN Technologies
- Configuring Serial Encapsulation
- Establishing a WAN Connection Using Frame Relay
- Introducing VPN Solutions
- Configuring GRE Tunnels
- Module Summary

## NETWORK DEVICE MANAGEMENT

- Configuring Network Devices to Support Network Management Protocols
- Managing Cisco Devices
- Licensing
- Module Summary

## LABS:

- Lab 1-1: Troubleshooting VLANs and Trunks
- Lab 1-2: Optimizing STP
- Lab 1-3: Configuring EtherChannel
- Lab 2-1: Troubleshooting IP Connectivity
- Lab 3-1: Implementing EIGRP
- Lab 3-2: Troubleshooting EIGRP
- Lab 3-3: Implementing EIGRP for IPv6
- Lab 4-1: Configuring Multiarea OSPF
- Lab 4-2: Troubleshooting Multiarea OSPF
- Lab 4-3: Configuring OSPF for IPv6
- Lab 5-1: Configuring and Troubleshooting a Serial Connection
- Lab 5-2: Establishing a Frame Relay WAN
- Lab 5-3: Establishing a GRE Tunnel
- Lab 6-1: SNMP and Syslog Basic Configuration
- Lab 6-2: Analyzing NetFlow Data
- Lab 6-3: Managing Cisco Devices and Licensing
- Lab S-2: ICND2 Superlab