## Interconnecting Cisco Networking Devices: Accelerated (CCNAX) 2.0(80 Hs)

## 1-Interconnecting Cisco Networking Devices Part 1 (40 Hs)

## 2-Interconnecting Cisco Networking Devices Part 2 (40 Hs)

# 1-Interconnecting Cisco Networking Devices Part 1

## Overview

This course focuses on providing the skills and knowledge required 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. At the end of this course students should be able to complete the configuration, implementation and troubleshooting of a small branch network under supervision.

**Pre-request:** The knowledge and skills that a learner must have before attending this course are as follows:

- Basic Windows navigation and keyboard literacy skills
- Basic Internet usage skills
- Basic IP addressing knowledge

**Course duration**: 40 Hours

## Objective

Upon completing this course, the learner will be able to meet these overall objectives:

- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage network device security
- Expand small- to medium-sized networks with WAN connectivity
- Describe IPv6 basics

## Course Content:

### 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

### 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
- Managing Traffic Using ACLs
- Enabling Internet Connectivity

## Managing Network Device Security

- Securing Administrative Access
- Implementing Device Hardening
- Implementing Traffic Filtering with ACLs

## Building a Medium-Sized Network

- Implementing VLANs and Trunks
- Routing between VLANs
- Using a Cisco Network Device as a DHCP Server
- Introducing WAN Technologies
- Introducing Dynamic Routing Protocols
- Implementing OSPF

## Introducing IPv6

- Introducing Basic IPv6
- Understanding IPv6
- Configuring IPv6 Routing

## Target Audience

This course is designed for:

- Network engineers and administrators who will install, operate and troubleshoot a small branch office Enterprise network. This is an entry level course and is ideal for those individuals new to networking and looking to start their Cisco Career Certification accreditation.

## 2-Interconnecting Cisco Networking Devices Part 2

### Overview

This 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 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. There are more labs and troubleshooting scenarios included in this version of ICND2.

**Pre-request:** The knowledge and skills that a learner must have before attending this course are as follows:

Understand network fundamentals and be able to :

- Implement local area networks
- Implement Internet connectivity
- Manage network device security
- Implement WAN connectivity
- Implement basic IPv6 connectivity

All of these requirements can be met by attending ICND1 v2.0

**Course duration**: 40 Hours

## Objective

Upon completing this course, the learner will be able to meet these overall objectives:

- Operate a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Troubleshoot IP connectivity
- Configure and troubleshoot EIGRP in an IPv4 environment, and configure EIGRP for IPv6
- Configure and troubleshoot OSPF in an IPv4 environment, and configure OSPF for IPv6
- Define characteristics, functions, and components of a WAN
- Describe SNMP, syslog, and NetFlow, and manage Cisco device configurations, Cisco IOS images, and licenses

## Course Content:

### Implementing Scalable Medium-Sized Networks

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

### Troubleshooting Basic Connectivity

- Troubleshooting IPv4 Network Connectivity
- Troubleshooting IPv6 Network Connectivity

### Implementing an EIGRP-Based Solution

- Implementing EIGRP
- Troubleshooting EIGRP
- Implementing EIGRP for IPv6

## Implementing a Scalable, Multiarea Network, OSPF Based Solution

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

## Wide-Area Networks

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

## Network Device Management

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

## Target Audience

This course is designed for:

- Individuals seeking the CCNA Routing and Switching certification and for pre and post sales engineers involved in the installation and support of enterprise branch office networks.