

# Interconnecting Cisco Networking Devices 2 (ICND2 v2.0)

**Length:** Five Days

**Prerequisites:** Students taking this class should be able to implement local area networks, implement Internet connectivity, manage network device security, implement WAN connectivity, implement basic IPv6 connectivity.

**Course Content:** 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 Objectives:** Upon completion of this course, students will be able to:

- 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

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## Course Content

### 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
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## **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

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