

INTERCONNECTING CISCO NETWORK DEVICES PART 2

ICND2 (200-105)

Who Should Attend

Individuals seeking the Cisco CCENT certification, or Cisco CCNA Routing and Switching certification. The course is also appropriate for pre- and post-sales network engineers involved in the installation and support of enterprise branch office networks.

Jobs that use ICND2 include entry-level network engineer, network administrator, network support technician, and help desk technician

Certifications Associated With This Class:

- Cisco CCENT
- Cisco CCNA Routing and Switching
- Cisco CCDA
- Cisco CCNA Security
- Cisco CCNA Wireless

Before taking the ICND2 course, learners should be familiar with:

- Understand network fundamentals
- Implement local area networks
- Implement Internet connectivity
- Manage network devices
- Secure network devices
- Implement basic IPv6 connectivity

Course Objectives

Upon completing this course, you will be able to meet these objectives:

- Install, operate, and troubleshoot a medium-sized network, including connecting to a WAN and implementing network security.
- Describe the effects of new technologies such as IoE, IoT, IWAN, and SDN on network evolution.
- Operate a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Troubleshoot IP connectivity
- Describe how to 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 how device management can be implemented using the traditional and intelligent ways.

Course Outline

Module 1: Implementing Scalable Medium-Sized Networks

- Lesson 1: Troubleshooting VLAN Connectivity
- Lesson 2: Building Redundant Switched Topologies
- Lesson 3: Improving Redundant Switched Topologies with EtherChannel
- Lesson 4: Understanding Layer 3 Redundancy

Module 2: Troubleshooting Basic Connectivity

- Lesson 1: Troubleshooting IPv4 Network Connectivity
- Lesson 2: Troubleshooting IPv6 Network Connectivity

Module 3: Implementing an EIGRP-Based Solution

- Lesson 1: Implementing EIGRP
- Lesson 2: Implementing EIGRP for IPv6
- Lesson 3: Troubleshooting EIGRP

Module 4: Summary Challenge

- Lesson 1: Implementing and Troubleshooting Scalable Medium-Sized Network -1
- Lesson 2: Implementing and Troubleshooting Scalable Medium-Sized Network -2

Module 5: Implement a Scalable OSPF-Based Solution

- Lesson 1: Understanding OSPF
- Lesson 2: Implementing Multiarea OSPF IPv4
- Lesson 3: Implementing OSPFv3 for IPv6
- Lesson 4: Troubleshooting Multiarea OSPF

Module 6: Wide-Area Networks

- Lesson 1: Understanding WAN Technologies
- Lesson 2: Understanding Point-to-Point Protocols
- Lesson 3: Configuring GRE Tunnels
- Lesson 4: Configuring Single-Homed EBGp

Module 7: Network Device Management

- Lesson 1: Implementing Basic Network Device Management and
- Lesson 2: Evolution of Intelligent Networks
- Lesson 3: Introducing QoS

Module 8: Summary Challenge

- Lesson 1: Implementing and Troubleshooting Scalable Multiarea
- Lesson 2: Implementing and Troubleshooting Scalable Multiarea Network -2

Labs:

- Challenge 1: Troubleshooting VLANs and Trunks
- Challenge 2: Building Redundant Switched Topologies
- Challenge 3: Improving Redundant Switched Topologies with EtherChannel
- Challenge 4: Implementing and Troubleshooting HSRP
- Challenge 5: Troubleshooting IPv4 Connectivity
- Challenge 6: Troubleshooting IPv6 Connectivity
- Challenge 7: Implementing EIGRP
- Challenge 8: Troubleshooting EIGRP
- Challenge 9: Summary Challenge Lab : 1
- Challenge 10: Summary Challenge Lab : 2
- Challenge 11: Implementing Multiarea OSPF
- Challenge 12: Implementing OSPFv3 for IPv6
- Challenge 13: Troubleshooting OSPF
- Challenge 14: Implementing WAN Using Point-to-Point Protocols
- Challenge 15: Implementing GRE Tunnel
- Challenge 16: Implementing Single-Homed EBGP
- Challenge 17: Implementing Device Management and Security
- Challenge 18: Summary Challenge Lab : 3
- Challenge 19: Summary Challenge Lab : 4
- Discovery 1: Troubleshoot VLANs and Trunks
- Discovery 2: Configure Root Bridge and Analyze STP Topology
- Discovery 3: Troubleshoot STP Issues
- Discovery 4: Configure and Verify EtherChannel
- Discovery 5: Configure and Verify HSRP
- Discovery 6: Troubleshoot HSRP
- Discovery 7: Use Troubleshooting Tools
- Discovery 8: Configure and Verify IPv4 Extended Access Lists
- Discovery 9: Troubleshoot IPv4 Network Connectivity

- Discovery 10: Configure and Verify IPv6 Extended Access Lists
- Discovery 11: Troubleshoot IPv6 Network Connectivity
- Discovery 12: Configure and Verify EIGRP
- Discovery 13: Configure and Verify EIGRP for IPv6
- Discovery 14: Troubleshoot EIGRP
- Discovery 15: Configure and Verify Single-Area OSPF
- Discovery 16: Configure and Verify Multiarea OSPF
- Discovery 17: Configure and Verify OSPFv3
- Discovery 18: Troubleshoot Multiarea OSPF
- Discovery 19: Configure Serial Interface and PPP
- Discovery 20: Configure and Verify MLP
- Discovery 21: Configure and Verify PPPoE Client
- Discovery 22: Configure and Verify GRE Tunnel
- Discovery 23: Configure and Verify Single Homed EBGP
- Discovery 24: Configure External Authentication Using RADIUS and TACACS+
- Discovery 25: Configure SNMP