

COURSE OVERVIEW:

Interconnecting Cisco Networking Devices, Part 2 (ICND2) v3.0 is a five-day, instructor-led training course that teaches learners how to perform basic troubleshooting steps in enterprise branch office networks, preparing learners for Cisco CCNA certification. This high-impact, instructor-led training, includes a full year of an exclusive digital learning self-paced CCNA course with many benefits that IT training companies who are not an authorized Cisco learning partner simple can't offer.

ICND 2 v 3.0 provides network administrators with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. Key additions to this latest revision of this ICND2 training course include; understanding of Quality of Service (QoS) elements and their applicability, how virtualized and cloud services will interact and impact enterprise networks, along with an overview of network programmability and the related controller types and tools that are available to support software defined network architectures.

Objectives of Interconnecting Cisco Networking Devices, Part 2 v3.0 include:

- 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.

This new live online Instructor-led training, plus 1-year access to a self-paced CCNA training course, is designed to be the most effective official Cisco IT training Course on the market today. The content is presented in easily-consumable segments via live online instructor-led training, Instructor video and searchable text, and interactivity as enabled through hands-on labs, discovery labs, content review questions, and graded challenge labs and tests. This makes the learning experience hands-on, increasing course effectiveness, and provides students direct feedback on how well they have mastered the material. Gamification features are built in, including earning badges and a leader board, to encourage better performance. Recommended prerequisites

Interconnecting Cisco Networking Devices, Part 2 (ICND2) 3.0

include ICND1, understanding network fundamentals and network devices, and additional information listed below.

WHO SHOULD ATTEND:

- Network Engineers
- Network Administrators
- Network Support Technicians
- Help Desk Technicians

PREREQUISITES:

- ICND1
- Understand network fundamentals
- Implement local area networks
- Implement Internet connectivity
- Manage network devices
- Secure network devices
- Implement basic IPv6 connectivity

COURSE OBJECTIVES:

Upon completing the course, students will be able to meet the following 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.

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 Networks-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: Configure GRE Tunnels
- Lesson 4: Configuring Single-Homed EBGP

Module 7: Network Device Management

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

Module 8: Summary Challenge

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

LAB OUTLINE:

- Discovery 1: Troubleshooting VLANs and Trunks
- Challenge 1: Troubleshooting VLANs and Trunks
- Discovery 2: Configure Root Bridge and Analyze STP Topology
- Discovery 3: Troubleshoot STP Issues
- Challenge 2: Building Redundant Switched Topologies
- Discovery 4: Configure and Verify EtherChannels
- Challenge 3: Improving Redundant Switched Topologies with EtherChannel
- Discovery 5: Configure and Verify HSRP
- Discovery 6: Troubleshoot HSRP
- Challenge 4: Implementing and Troubleshooting HSRP
- Discovery 7: Use Troubleshooting Tools
- Discovery 8: Configure and Verify IPv4 Extended Access Lists
- Discovery 9: Troubleshoot IPv4 Network Connectivity
- Challenge 5: Troubleshooting IPv4 Connectivity
- Discovery 10: Configure and Verify IPv6 Extended Access Lists
- Discovery 11: Troubleshoot IPv6 Network Connectivity
- Challenge 6: Troubleshooting IPv6 Network Connectivity
- Discovery 12: Configure and Verify EIGRP
- Challenge 7: Implementing EIGRP
- Discovery 13: Configure and Verify EIGRP for IPv6
- Discovery 14: Troubleshoot EIGRP
- Challenge 8: Troubleshooting EIGRP
- Challenge 9: Summary Challenge: 1
- Challenge 10: Summary Challenge: 2
- Discovery 15: Configure and Verify Single-Area OSPF
- Discovery 16: Configure and Verify Multiarea OSPF
- Challenge 11: Implementing Multiarea OSPF
- Discovery 17: Configure and Verify OSPFv3

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- Challenge 12: Implementing OSPFv3 for IPv6
- Discovery 18: Troubleshoot Multiarea OSPF
- Challenge 13: Troubleshooting OSPF
- Discovery 19: Configure Serial Interface and PPP
- Discovery 20: Configure and Verify MLP
- Discovery 21: Configure and Verify PPPoE Client
- Challenge 14: Implementing WAN using Point-to-Point Protocols
- Discovery 22: Configure and Verify GRE Tunnel
- Challenge 15: Implementing GRE Tunnels
- Discovery 23: Configure and Verify Single Homes EBGp
- Challenge 16: Implementing Single-Homed EBGp
- Discovery 24: Configure External Authentication Using RADIUS and TACAS+
- Discovery 25: Configure SNMP
- Challenge 17: Implementing Device Security and Management
- Challenge 18: Summary Challenge: 3
- Challenge 19: Summary Challenge: 4