Interconnecting Cisco Networking Devices, Part 1 (ICND1) v3.0

COURSE OVERVIEW:
Interconnecting Cisco Networking Devices, Part 1 (ICND1) v3.0 is a five-day, instructor-led training course that teaches learners how to install, operate, configure, and verify a basic IPv4 and IPv6 network, including configuring a LAN switch, configuring an IP router, managing network devices, and identifying basic security threats.

Optionally, this course can be followed by the Interconnecting Cisco Networking Devices, Part 2 (ICND2) v3.0 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.

Several topics have been added including: understanding the interactions and network functions of firewalls, wireless controllers and access points, along with additional focus on IPv6 and basic network security.

All configuration commands are introduced through examples and supported with lab exercises. A full suite of labs have been developed using the virtual IOS environment with flexible topologies that reinforce concepts with hands-on, guided discovery and challenge labs that align to each lesson module.

WHO WILL BENEFIT FROM THIS COURSE?
Target candidates: Individuals seeking the Cisco CCENT certification, or Cisco CCNA Routing and Switching certification. The course is also appropriate for support technicians involved in the basic installation, operation, and verification of LAN networks.

Target Jobs: 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

PREREQUISITES:
The knowledge and skills that a learner must have before attending this course are as follows:
- Basic computer literacy
- Basic PC operating system navigation skills
- Basic Internet usage skills
- Basic IP address knowledge
COURSE OBJECTIVES:
The goal of the course is to provide learners with the knowledge and skills necessary to install, configure, and operate a small- to medium-sized network

- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage and secure network devices
- Expand small to medium sized networks
- Describe IPv6 basics

COURSE OUTLINE:

Module 1: 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

Module 2: 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: Learning the Basics of ACL
- Lesson 9: Enabling Internet Connectivity

Module 3: Summary Challenge
- Lesson 1: Establish Internet Connectivity
- Lesson 2: Troubleshoot Internet Connectivity

Module 4: Building a Medium-Sized Network
- Lesson 1: Implementing VLANs and Trunks
- Lesson 2: Routing Between VLANs
- Lesson 3: Using a Cisco IOS Network Device as a DHCP Server
- Lesson 4: Implementing RIPv2

Module 5: Network Device Management and Security
- Lesson 1: Securing Administrative Access
- Lesson 2: Implementing Device Hardening
- Lesson 3: Configuring System Message Logging
- Lesson 4: Managing Cisco Devices
- Lesson 5: Licensing

Module 6: Summary Challenge
- Lesson 1: Implementing a Medium-Sized Network
- Lesson 2: Troubleshooting a Medium-Sized Network
Module 7: Introducing IPv6

- Lesson 1: Introducing Basic IPv6
- Lesson 2: Understanding IPv6 Operation
- Lesson 3: Configuring IPv6 Static Routes

Labs:

- Discovery 1: Get Started with Cisco CLI
- Discovery 2: Perform Basic Switch Configuration
- Discovery 3: Observe How a Switch Operates
- Discovery 4: Troubleshoot Switch Media and Port Issues
- Discovery 5: Inspect TCP/IP Applications
- Discovery 6: Start with Cisco Router Configuration
- Discovery 7: Configure Cisco Discovery Protocol
- Discovery 8: Configure Default Gateway
- Discovery 9: Exploration of Packet Forwarding
- Discovery 10: Configure and Verify Static Routes
- Discovery 11: Configure and Verify ACLs
- Discovery 12: Configure a Provider-Assigned IP Address
- Discovery 13: Configure Static NAT
- Discovery 14: Configure Dynamic NAT and PAT
- Discovery 15: Troubleshoot NAT
- Discovery 16: Configure VLAN and Trunk
- Discovery 17: Configure a Router on a Stick
- Discovery 18: Configure a Cisco Router as a DHCP Server
- Discovery 19: Troubleshoot DHCP Issues
- Discovery 20: Configure and Verify RIPv2
- Discovery 21: Troubleshoot RIPv2
- Discovery 22: Enhance Security of Initial Configuration
- Discovery 23: Limit Remote Access Connectivity
- Discovery 24: Configure and Verify Port Security
- Discovery 25: Configure and Verify NTP
- Discovery 26: Configure Syslog
- Discovery 27: Configure Basic IPv6 Connectivity
- Discovery 28: Configure IPv6 Static Routes

Challenges

- Challenge 1: Implementing the Initial Switch Configuration
- Challenge 2: Implementing the Initial Router Configuration
- Challenge 3: Implementing Static Routing
- Challenge 4: Implementing Basic Numbered and Named ACLs
- Challenge 5: Implementing PAT
- Challenge 6: Summary Challenge Lab: 1
- Challenge 7: Summary Challenge Lab: 2
- Challenge 8: Troubleshooting VLANs and Trunk
- Challenge 9: Implement Multiple VLANs and Basic Routing Between the VLANs
- Challenge 10: Implementing a DHCP Server in on a Cisco IOS Device
- Challenge 11: Implementing RIPv2
- Challenge 12: Securing Device Administrative Access
- Challenge 13: Implementing Device Hardening
- Challenge 14: Configuring System Message Logging
• Challenge 15: Summary Challenge Lab: 3
• Challenge 16: Summary Challenge Lab: 4
• Challenge 17: Implement IPv6 Static Routing

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Premiere World Class Instruction Team
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• Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

Enhanced Learning Experience
• The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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