ICND2 V3.0 - INTERCONNECTING CISCO NETWORKING DEVICES, PART 2

Course Code: 4549

Continue to build core routing and switching skills to successfully operate a small to medium-size enterprise branch network and prepare for the CCNA Routing and Switch certification (200-105 ICND2).

In this course, you will learn how to install, configure, operate, and troubleshoot a small enterprise network.

This course will enable you to:

- Prepare for the CCNA Routing and Switching certification
- Operate a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Develop core routing and switching networking skills to configure, monitor, and troubleshoot Cisco networks for increased effectiveness and optimal performance within SMB and Enterprise settings
- Understand how device management can be implemented using the traditional and intelligent ways
- Support Cisco network deployments and maintain these services in an on-going operational network

Why take ICND2?

Advance your career and learn how to manage an enterprise network. ICND2 helps you understand 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. ICND2 is also a requirement for the traditional path of the CCNA Routing and Switching certification.

Course exclusives

- Lab time:
  - 70 hours total over 180 days.
  - Labs are one to one and on virtual machines.
  - Be sure to logout of labs during class. Any remaining lab time can be used after class for additional practice and review.
What You’ll Learn

- 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
- Characteristics, functions, and components of a WAN
- How device management can be implemented using the traditional and intelligent ways

Who Needs to Attend

- Network administrators
- Network support engineers
- Network engineer associate
- Network specialist
- Network analyst
- Cisco channel partners
- Individuals pursuing the CCNA Routing and Switching certification

Prerequisites

- An understanding of networking fundamentals
- Experience implementing local area networks and Internet connectivity
- Experience managing network devices and network device security
- Experience implementing WAN and basic IPv6 connectivity
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CLASSROOM LIVE   $4,674 CAD   5 days

Classroom Live Outline

1. Implementing Scalable Medium-Sized Networks
   • Troubleshooting VLAN Connectivity
   • Building Redundant Switched Topologies
   • Improving Redundant Switched Topologies with Layer 3 Redundancy

2. Troubleshooting Basic Connectivity
   • Troubleshooting IPv4 Network Connectivity
   • Troubleshooting IPv6 Network Connectivity

3. Implementing an EIGRP-Based Solution
   • Implementing EIGRP
   • Implementing EIGRP for IPv6
   • Troubleshooting EIGRP

4. Summary Challenge
   • Implementing and Troubleshooting Scalable Medium-Sized Network

5. Implement a Scalable OSPF-Based Solution
   • OSPF
   • Implementing Multi-area OSPF IPv4
   • Implementing OSPFv3 for IPv6
   • Troubleshooting Multi-area OSPF

6. Wide-Area Networks
   • WAN Technologies
   • Understanding Point-to-Point Protocols
   • Configuring GRE Tunnels
   • Configuring Single-Homed EBGP

7. Network Device Management
Implementing Basic Network Device Management and Security
Evolution of Intelligent Networks
Introducing QoS

8. Summary Challenge
Implementing and Troubleshooting Scalable Multi-area Network

Classroom Live Labs
Discovery Lab 1: Troubleshoot VLANs and Trunks
Discovery Lab 2: Configure Root Bridge and Analyze STP Topology
Discovery Lab 3: Troubleshoot STP Issues
Discovery Lab 4: Configure and Verify EtherChannel
Discovery Lab 5: Configure and Verify HSRP
Discovery Lab 6: Troubleshoot HSRP
Discovery Lab 7: Use Troubleshooting Tools
Discovery Lab 8: Configure and Verify IPv4 Extended Access Lists
Discovery Lab 9: Troubleshoot IPv4 Network Connectivity
Discovery Lab 10: Configure and Verify IPv6 Extended Access Lists
Discovery Lab 11: Troubleshoot IPv6 Network Connectivity
Discovery Lab 12: Configure and Verify EIGRP
Discovery Lab 13: Configure and Verify EIGRP for IPv6
Discovery Lab 14: Troubleshoot EIGRP
Discovery Lab 15: Configure and Verify Single-Area OSPF
Discovery Lab 16: Configure and Verify Multi-Area OSPF
Discovery Lab 17: Configure and Verify OSPFv3
Discovery Lab 18: Troubleshoot Multi-Area OSPF
Discovery Lab 19: Configure Serial Interface and PPP
Discovery Lab 20: Configure and Verify MLP
Discovery Lab 21: Configure and Verify PPPoE Client
Discovery Lab 22: Configure and Verify GRE Tunnel
Discovery Lab 23: Configure and Verify Single Homed EBGP
Discovery Lab 24: Configure External Authentication Using RADIUS and TACACS+
Discovery Lab 25: Configure SNMP

Challenge Lab 1: Troubleshooting VLANs and Trunks
Challenge Lab 2: Building Redundant Switched Topologies
Challenge Lab 3: Improving Redundant Switched Topologies with EtherChannel
Challenge Lab 4: Implementing and Troubleshooting HSRP
Challenge Lab 5: Troubleshooting IPv4 Connectivity
Challenge Lab 6: Troubleshooting IPv6 Connectivity
Challenge Lab 7: Implementing EIGRP
Challenge Lab 8: Troubleshooting EIGRP
Challenge Lab 9: Summary Challenge Lab 1
Challenge Lab 10: Summary Challenge Lab 2
Challenge Lab 11: Implementing Multi-Area OSPF
Challenge Lab 12: Implementing OSPFv3 for IPv6
Challenge Lab 13: Troubleshooting OSPF
Challenge Lab 14: Implementing WAN Using Point-to-Point Protocols
Challenge Lab 15: Implementing GRE Tunnel
Challenge Lab 16: Implementing Single-Homed EBGP
Challenge Lab 17: Implementing Device Management and Security
Challenge Lab 18: Summary Challenge Lab 3
Challenge Lab 19: Summary Challenge Lab 4

Oct 28 - Nov 1, 2019 | 8:30 AM - 4:30 PM | WINNIPEG, MB
Virtual Classroom Live Outline

1. Implementing Scalable Medium-Sized Networks
   • Troubleshooting VLAN Connectivity
   • Building Redundant Switched Topologies
   • Improving Redundant Switched Topologies with Layer 3 Redundancy

2. Troubleshooting Basic Connectivity
   • Troubleshooting IPv4 Network Connectivity
   • Troubleshooting IPv6 Network Connectivity

3. Implementing an EIGRP-Based Solution
   • Implementing EIGRP
   • Implementing EIGRP for IPv6
   • Troubleshooting EIGRP

4. Summary Challenge
   • Implementing and Troubleshooting Scalable Medium-Sized Network

5. Implement a Scalable OSPF-Based Solution
   • OSPF
   • Implementing Multi-area OSPF IPv4
   • Implementing OSPFv3 for IPv6
   • Troubleshooting Multi-area OSPF

6. Wide-Area Networks
   • WAN Technologies
   • Understanding Point-to-Point Protocols
   • Configuring GRE Tunnels
   • Configuring Single-Homed EBGP

7. Network Device Management
• Implementing Basic Network Device Management and Security
• Evolution of Intelligent Networks
• Introducing QoS

8. Summary Challenge
• Implementing and Troubleshooting Scalable Multi-area Network

Virtual Classroom Live Labs

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Challenge Lab 19: Summary Challenge Lab 4
On-Demand Outline

1. Implementing Scalable Medium-Sized Networks
   • Troubleshooting VLAN Connectivity
   • Building Redundant Switched Topologies
   • Improving Redundant Switched Topologies with Layer 3 Redundancy

2. Troubleshooting Basic Connectivity
   • Troubleshooting IPv4 Network Connectivity
   • Troubleshooting IPv6 Network Connectivity

3. Implementing an EIGRP-Based Solution
   • Implementing EIGRP
   • Implementing EIGRP for IPv6
   • Troubleshooting EIGRP

4. Summary Challenge
   • Implementing and Troubleshooting Scalable Medium-Sized Network

5. Implement a Scalable OSPF-Based Solution
   • OSPF
   • Implementing Multi-area OSPF IPv4
   • Implementing OSPFv3 for IPv6
   • Troubleshooting Multi-area OSPF

6. Wide-Area Networks
   • WAN Technologies
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7. Network Device Management
• Implementing Basic Network Device Management and Security
• Evolution of Intelligent Networks
• Introducing QoS

8. Summary Challenge
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BLENDED LIVE $4,264 CAD

Blended Live Outline
[This delivery format includes both instructor-led sessions and on-demand sessions]

Week 1 – Course Kick-off
Class session:
  • Introduction to course
  • Overview of blended learning methodology
  • Introduction to the Boson Exam Environment

On-Demand modules to complete by next week’s class:
  • Troubleshooting VLAN Connectivity
  • Building Redundant Switched Topologies
  • Improving Redundant Switched Topologies with EtherChannel
  • Troubleshooting IPv4 Connectivity
  • Troubleshooting IPv6 Connectivity

Reminder: To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

Week 2 – LAN Switching Technologies
Class session:
  • Review: LAN Switching Technologies
  • Challenge: LAN Switching Technologies practice exam

On-Demand modules to complete by next week’s class:
  • Implementing EIGRP
  • Implementing EIGRP for IPv6
  • Troubleshooting EIGRP
• Understanding OSPF
• Implementing Multi-area OSPF IPv4
• Implementing OSPFv3 for IPv6
• Troubleshooting Multi-area OSPF

Reminder: To maximize your time and participation in next week’s lab exercises, please complete the above modules prior to class.

Week 3 – Routing Technologies

Class session:
• Review: Routing Technologies
• Challenge: Routing Technologies practice exam

On-Demand modules to complete by next week’s class:
• Understanding WAN Technologies
• Understanding Point-to-Point Protocols
• Configuring GRE Tunnels
• Configuring Single-Homed EBGP

Reminder: To maximize your time and participation in next week’s lab exercises, please complete the above modules prior to class.

Week 4 – WAN Technologies

Class session:
• Review: WAN Technologies
• Challenge: WAN Technologies practice exam

On-Demand modules to complete by next week’s class:
• Understanding Layer 3 Redundancy
• Implementing Basic Network Device Management and Security
• Learning About the Evolution of Intelligent Networks
• Introducing QoS

Reminder: To maximize your time and participation in next week’s lab exercises, please complete the above modules prior to class.

Week 5 – Infrastructure Services and Management

Class session:
• Review: Infrastructure Services and Management
• Challenge: Infrastructure Services and Management practice exam

On-Demand modules to complete by next week’s class:
• Implementing and Troubleshooting Scalable Medium-Sized Networks, Part 1
• Implementing and Troubleshooting Scalable Medium-Sized Networks, Part 2
• Implementing and Troubleshooting a Scalable Multi-area Network, Part 1
• Implementing and Troubleshooting a Scalable Multi-area Network, Part 2
Reminder: To maximize your time and participation in next week’s lab exercises, please complete the above modules prior to class.

Week 6 – Network Troubleshooting and Tools

Class session:
• Review: Infrastructure Implementation and Troubleshooting
• Challenge: ICND2 practice exam
• Course review and wrap-up
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PRIVATE GROUP TRAINING 5 days

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