



# Interconnecting Cisco Networking Devices (ICND) Course Syllabus:

Entertaining talk-show style format presented by industry leading experts.

- 40+ hours of virtual training, practice exams, labs, and study.
- Receive a Certificate of completion.
- Presented by highly qualified, industry leading experts.
- 12 Months Access (*Unless indicated otherwise*)
- Self-paced





## Description

ICND1 is an exam associated with the Cisco CCENT exam and is a first step to ultimately achieving the CCNA Routing and Switching Certification. Skills developed assist the student in installing, configuring, and troubleshooting small networks as well as working with Cisco routers and switches. The ICND2 course teaches topics related to LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure services, and infrastructure maintenance.

## Objectives

- Compare and contrast OSI and TCP/IP models.
- Compare and contrast TCP and UDP protocols.
- Describe the impact of infrastructure components in an enterprise network. ...
- Compare and contrast collapsed core and three-tier architectures.
- Compare and contrast network topologies.
- Configure, verify, and troubleshoot VLANs (normal/extended range) spanning multiple switches.
- Configure, verify, and troubleshoot Interswitch connectivity.
- Configure, verify, and troubleshoot STP protocols.
- Configure, verify, and troubleshoot STP-related optional features.

## Prerequisites

- Basic Windows navigation and keyboard literacy skills.
- Basic Internet usage skills.
- Basic IP addressing knowledge.
- Implement local area networks.
- Implement Internet connectivity.
- Manage network devices.
- Secure network devices.
- Implement basic IPv6 connectivity.

## Target Audience

This course is intended for network engineers and administrators who will install, operate, and troubleshoot a small branch office Enterprise network. This is an entry level course and is ideal for those individuals new to networking and looking to start their Cisco Career Certification accreditation.



## Syllabus

Prepare for the Cisco ICND exams with the excellent practice performance-based learning tool. Practice performance-based learning enables you to practice on test questions and assess your skill and knowledge of the material.

- Includes multiple questions to test performance-and understanding.
- Requires Windows, macOS, Chrome OS, or Linux (iOS and Android not supported)
- Single-user license

## Cisco 100-105: ICND1 - Interconnecting Cisco Networking Devices Part 1

### Description

ICND1 is an exam associated with the Cisco CCENT exam and is a first step to ultimately achieving the CCNA Routing and Switching Certification. Skills developed assist the student in installing, configuring, and troubleshooting small networks as well as working with Cisco routers and switches.

<b>Module 1 Networking Fundamentals</b>	Introduction to TCP/IP networking as the primary dominant networking model on modern Ethernet networks	Learn the fundamentals of data transfer on Ethernet LANs
Understanding basic WAN connectivity options	Identify the purpose and structure of IPv4 addresses	Identify the purpose of routing processes
Understanding Transport layer and application protocols	<b>Module 2 Basic Ethernet LAN Implementation</b>	Understanding basic command line administration using the Cisco IOS on routers and switches
Understanding the fundamental purpose of an Ethernet switch	Identifying Switch management capabilities	Accessing and configuring switch interfaces
<b>Module 3 Designing Ethernet LANS</b>	Identifying LAN topology options	Understanding the basics of LAN communication
Implementing and configuring VLANs	Implementing and configuring VLAN trunking	<b>Module 4 Understanding IPv4</b>
Learn the purpose and structure of an IPv4 address	Learn the purpose and structure of an IPv4 subnet mask	Understand the purposes of subnetting
Identify key facts about an IPv4 address	Configure routers using the CLI	Configuring router interfaces with IPv4 addresses



**Training Center**

Understanding routing protocols	Configuring static routes	Configuring clients with IPv4 addresses using DHCP
<b>Module 5 Working with Cisco Routers</b>	Understanding Transport layer and application protocols	Implementing and configuring VLAN trunking
Design the appropriate subnet mask based on requirements	Identify network IDs and subnet IDs	Utilizing Variable Length Subnet Masks when subnetting
Troubleshooting IPv4 client connectivity and routing issues	<b>Module 6 IPv4 Design and Troubleshooting</b>	Creating and configuring Access Control Lists
Working with Named Access Control Lists	Understanding Network Address Translation Concepts	Configuring Network Address Translation on Routers
<b>Module 7 IPv4 Services</b>	Creating and configuring Access Control Lists	Working with Named Access Control Lists
Understanding Network Address Translation Concepts	Configuring Network Address Translation on Routers	<b>Module 8 Implementing IPv6</b>
Understand the fundamentals of IPv6	Understand the structure of IPv6 Addresses	Identify the different types of IPv6 Addresses
Configuring IPv6 Addresses	Configuring IPv6 Routing	Creating IPv6 Subnets
Assigning IPv6 Addresses to clients		

## Cisco 200-105: ICND2 – Interconnecting Cisco Networking Devices Part 2

### Description

The ICND2 course teaches topics related to LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure services, and infrastructure maintenance.

<b>Module 1 – Configuring Ethernet LANs</b>	Configuring Ethernet VLANs	Understand Spanning Tree Protocol Concepts
Implement STP and RSTP on Cisco Switches	Configure and implement the VLAN Trunking Protocol	Configure AAA Authentication for Switches



**Training Center**

Identify the need and implementation of switch stacking and chassis aggregation	Configure DHCP Snooping	Use the Simple Network Management Protocol
Configure and use IP SLA	<b>Module 2 - Configuring IPv4 Routing Protocols</b>	Understand the concepts of the OSPF Routing Protocol
Identify the function of LSAs, LSDB, Neighbor Relationships, and the flooding of data	Implement the OSPF routing protocol on Cisco Routers	Understand the concepts of the EIGRP Routing Protocol
Implement EIGRP for IPv4	Troubleshooting Routing Protocols	<b>Module 3 - Implementing Wide Area Networks</b>
Implementing Point-to-Point WANs	Utilize HDLC and PPP data link protocols	Implement Ethernet and MPLS WANs
Implement Private WANs using Virtual Private Networks	<b>Module 4 - Configuring IPv4 Services</b>	Creating and configuring Access Control Lists
Working with Named Access Control Lists	Configuring Extended Access Control Lists	Understand the need for Quality of Service
Implementing QoS	<b>Module 5 - IPv4 Routing and Troubleshooting</b>	Identify different configuration methods for VLANs and ROAS
Understand Layer 3 Switching with routed ports	Configure and use Layer 3 EtherChannel	Implement HSRP for First-Hop Routing
Configure and verify redundancy using HSRP	Troubleshooting common IPv4 Routing Issues	<b>Module 6 - IPv6 Routing and Troubleshooting</b>
Configuring IPv6 Routing and Troubleshooting	Implement OSPFv3 for IPv6	Implementing EIGRP for IPv6
Understand and use Access Control Lists in IPv6	<b>Module 7 - Understanding Cloud Based Networking</b>	Basic Concepts of Cloud Computing
Identify the Cloud Computing Models	Understand the need for SDN	Implementing SDN



## Practice, Labs, Flash Cards, Quizzes etc.

Practice for the Accounting and Business certification exams include flashcards, quizzes, games and learning modules. Prepare for Accounting and Business performance-based certification exam questions.

- *Click!* interactive graphical exercises.
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- *Challenge!* interactive identification exercises.

Prepare for the Accounting and Business exam with excellent practice tests. The 450+ questions mirror the questions you will see on the real exam; enabling you to practice on test questions and assess your skill and knowledge of the material.

- Includes over 495 questions.
- Requires Windows, macOS, Chrome OS, or Linux (iOS and Android not supported)
- Single-user license

## Testing Features

Quiz and Testing Modes

- Practice Mode: quizzes for each module.
- Exam Mode: just like the real thing, no help, just you and the questions.

Quiz and Test History

- See the date you took each test.
- View final score for each test.
- Review each question, see your answer and the correct answer.



## Sample Certificate upon completions of each course



To learn more, contact us at 877-732-6772 or [info@lionfishcybersecurity.com](mailto:info@lionfishcybersecurity.com)

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