



CCNA Boot Camp

Length
5 days

Format
Lecture/lab

Version
2.0

Course Description

This intensive course is designed to help you achieve your CCNA certification in the shortest amount of time. Ten hours of pre-class activity provides you with review materials and exercises, including a pre-test assessment. Classroom instruction includes intensive instructor-led training and hands-on labs where you'll learn to install, configure, operate, and troubleshoot medium-sized routed and switched networks. You'll also learn the basics of wireless networking as well as mitigating security threats.

Who Should Attend

This course is designed for individuals who possess a general networking background, have some experience with Cisco IOS, and are seeking a fast-track to CCNA certification.

Recommended Prerequisites

- Familiarity with networking topics such as TCP/IP, IP configuration, peer-to-peer networking, subnetting, building a routing table, and other network protocols, standards, and architecture.

Learning Objectives

After completing this course, you will be able to:

- Describe how networks function, network components and their functions, and the OSI reference model
- Describe binary, decimal, and hexadecimal numbering
- Describe switching operations and theory

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Learning Objectives (continued)

- Describe the packet delivery process, TCP/IP network addressing and routing, and IP subnetting
- Describe how to provide LAN, WAN, and remote access services
- Describe advanced network theory, including VPNs
- Describe CDN, intranets and extranets, and wireless networking
- Describe the Cisco IOS
- Describe the initial configuration of Cisco Catalyst switches and routers
- Describe network discovery and management using CDP, telnet, and TFTP
- Describe how to interconnect networks using TCP/IP
- Describe Spanning Tree concepts of VLANs and trunking
- Describe distance vector routing protocols
- Describe link state routing
- Review how to configure and troubleshoot a switch and router in a small network environment
- Describe how to expand the switched network from a small to medium network environment
- Describe how to implement VLSM
- Describe how to configure, verify, and troubleshoot OSPF and EIGRP
- Describe how to configure, verify, and troubleshoot ACLs
- Describe how to configure NAT, PAT, PPP, CHAP, and PAP
- Describe how to use IPv6 addressing
- Describe Frame Relay operation
- Discuss VPN solutions



Learning
Solutions



CCNA Boot Camp

Course Outline

Lesson 1: Building a Simple Network

Exploring the Functions of Networking
Securing the Network
Host-to-Host Communication Model
TCP/IP's Internet Layer
TCP/IP's Transport Layer
Packet Delivery Process
Understanding Ethernet
Connecting to an Ethernet LAN

Lesson 2: Ethernet LANs

Challenges of Shared LANs
Solving Network Challenges with Switched LAN Technology
Packet Delivery Process
Operating Cisco IOS Software
Starting the Switch
Understanding Switch Security
Maximizing the Benefits of Switching
Troubleshooting Switch Issues

Lesson 3: Wireless Local Area Networks (WLANS)

Exploring Wireless Networking
Understanding WLAN Security
Implementing a WLAN

Lesson 4: LAN Connections

Functions of Routing
Understanding Binary Basics
Constructing a Network Addressing Scheme
Starting a Router
Configuring a Router
Packet Delivery Process
Understanding Router Security
Using Cisco Router and Security Device Manager
Using a Router as a DHCP Server
Accessing Remote Devices

Lesson 5: Network Environment Management

Discovering Neighbors on the Network
Managing Router Startup and Configuration
Managing Cisco Devices

Lesson 6: Small Network Implementation

Review Lab: Review of a Small Network Environment

Lesson 7: Medium-Sized Switched Network Construction

Implementing VLANs and Trunks
Improving Performance with Spanning Tree
Routing Between VLANs
Securing the Expanded Network
Troubleshooting Switched Networks

Lesson 8: Wide Area Networks (WANs)

WAN Technologies
Enabling the Internet Connection
Enabling Static Routing
Configuring Serial Encapsulation
Enabling Routing Information Protocol (RIP)

Lesson 9: LAN Extension into a WAN

Establishing a Point-to-Point WAN Connection with PPP
Establishing a WAN Connection with Frame Relay
Troubleshooting Frame Relay WANs
Introducing VPN Solutions

Lesson 10: Medium-Sized Routed Network Construction

Reviewing Routing Operations
Implementing VLSM

Lesson 11: Single Area OSPF Implementation

Implementing OSPF
Troubleshooting OSPF

Lesson 12: EIGRP Implementation

Implementing EIGRP
Troubleshooting EIGRP

Lesson 13: Access Control Lists (ACLs)

Introducing ACL Operation
Configuring and Troubleshooting ACLs

Lesson 14: Address Space Management

Scaling the Network with NAT and PAT
Transitioning to IPv6



Learning Solutions



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Course Labs

- Lab 1: Using Host-Based Tools
- Lab 2: Observing the TCP Three-Way Handshake
- Lab 3: Observing Extended PC Network Information
- Lab 4: Connecting to Remote Lab Equipment
- Lab 5: Switch Startup and Initial Configuration
- Lab 6: Configuring Expanded Switch Networks
- Lab 7: Troubleshooting Switched Networks
- Lab 8: Enhancing Security of Switch Configuration
- Lab 9: Using CDP
- Lab 10: Managing Router Startup Operations
- Lab 11: Managing Cisco Devices
- Lab 12: Operating and Configuring a Cisco IOS Device
- Lab 13: Converting Decimal to Binary and Binary to Decimal
- Lab 14: Classifying Network Addressing
- Lab 15: Computing Usable Subnetworks and Hosts
- Lab 16: Calculating Subnet Masks
- Lab 17: Initial Router Startup
- Lab 18: Initial Router Configuration
- Lab 19: Enhancing Security of Initial Router Configuration
- Lab 20: Using Security Device Manager (SDM) to Configure DHCP
- Lab 21: Managing Remote Access Sessions
- Lab 22: Connecting to the Internet
- Lab 23: Connecting to the Main Office
- Lab 24: Establishing a Frame Relay WAN
- Lab 25: Troubleshooting Frame Relay WANs
- Lab 26: Enable Dynamic Routing to Main Office
- Lab 27: Implementing OSPF
- Lab 28: Troubleshooting OSPF
- Lab 29: Implementing EIGRP
- Lab 30: Troubleshooting EIGRP
- Lab 31: Implementing and Troubleshooting Access Control Lists (ACLs)
- Lab 32: Configuring NAT and Port Address Translation (PAT)
- Lab 33: Implementing IPv6
- Lab 34: Implementing a Small Network (Review Lab)
- Lab 35: Confirming the Re-Configuration of the Branch Network



Learning Solutions

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