

CCNA Boot Camp (8 day course)

Learn via: **Classroom/AFA**

Duration: **8 Day**

Overview

The CCNA R&S curriculum includes CCNA Bootcamp Version 3.0, which is a composite course derived from ICND1 and ICND2 content merged into a single course and delivered over 8 days. Overlapping content between ICND1 and ICND2 is eliminated and some content is rearranged for the purpose of the course flow. This course teaches learners how to install, operate, configure, and troubleshoot basic IPv4 and IPv6 networks, including configuring a LAN switch, configuring an IP router, identifying basic security threats, understanding redundant topologies, troubleshooting common network issues, connecting to a WAN, configuring EIGRP and OSPF in both IPv4 and IPv6, understanding wide-area network technologies, and getting familiar with device management and Cisco licensing.

Key additions to this latest revision include an understanding of Quality of Service (QoS) elements and their applicability, how virtualized and cloud services will interact and impact enterprise networks, and an overview of network programmability with the related controller types and tools that are available to support software defined network architectures.

Also included is the understanding the interactions and network functions of firewalls, wireless controllers and access points, along with additional focus on IPv6 and basic network security.

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.

Certifications

This course is part of the following Certifications:

Cisco Certified Network Associate Routing and Switching (CCNA)

Please note - the exam is not included in the cost of the course, but is available to book separately.

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

Who Should Attend

Individuals seeking the Cisco CCNA Routing and Switching certification. The course is also appropriate for pre-sales and post-sales network engineers involved in the installation and support of enterprise branch office networks.

Key Job Tasks:

Configure: Implement the identified solution by applying the planned implementation processes using Cisco IOS commands and applications in the correct order to the selected devices and portions of the network.

Verify: Use the appropriate show and debug commands and applications to ensure that the solution was correctly implemented and is performing as desired.

Troubleshoot: Use the appropriate show and debug commands and applications to identify the cause of basic level network issues and correctly implement a solution that ensures the network is performing as desired.

Job roles: Entry Level Network Engineer, Network Administrator, Network Support Technician or Help Desk Technician.

What You Will Learn

Upon completing this course, the learner will be able to meet these overall objectives:

- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage and secure network devices
- 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.
- Understand QoS, virtualization and cloud services, and network programmability related to WAN, access and core segments

Training 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 Basics of ACL
- Lesson 9: Enabling Internet Connectivity

Module 3: Summary Challenge

- Lesson 1: Establish Internet Connectivity
- Lesson 2: Troubleshoot Internet Connectivity

Module 4: Implementing Scalable Medium-Sized Networks

- Lesson 1: Implementing and Troubleshooting VLANs and Trunks
- Lesson 2: Building Redundant Switched Topologies
- Lesson 3: Improving Redundant Switched Topologies with EtherChannel
- Lesson 4: Routing Between VLANs
- Lesson 5: Using a Cisco IOS Network Device as a DHCP Server
- Lesson 6: Understanding Layer 3 Redundancy
- Lesson 7: Implementing RIPv2

Module 5: Introducing IPv6

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

Module 6: Troubleshooting Basic Connectivity

- Lesson 1: Troubleshooting IPv4 Network Connectivity
- Lesson 2: Troubleshooting IPv6 Network Connectivity

Module 7: Implementing Network Device Security

- Lesson 1: Securing Administrative Access
- Lesson 2: Implementing Device Hardening
- Lesson 3: Implementing Advance Security

Module 8: Implementing an EIGRP-Based Solution

- Lesson 1: Implementing EIGRP
- Lesson 2: Implementing EIGRP for IPv6
- Lesson 3: Troubleshooting EIGRP

Module 9: Summary Challenge

- Lesson 1: Troubleshooting a Medium-Sized Network
- Lesson 2: Troubleshooting Scalable Medium-Sized Network

Module 10: Implementing a Scalable OSPF-Based Solution

- Lesson 1: Understanding OSPF
- Lesson 2: Multiarea OSPF IPv4 Implementation
- Lesson 3: Implementing OSPFv3 for IPv6
- Lesson 4: Troubleshooting Multiarea OSPF

Module 11: Implementing Wide-Area Networks

- Lesson 1: Understanding WAN Technologies
- Lesson 2: Understanding Point-to-Point Protocols
- Lesson 3: Configuring GRE Tunnels
- Lesson 4: Configuring Single-Homed EBGP

Module 12: Network Device Management

- Lesson 1: Implementing Basic Network Device Management
- Lesson 2: Evolution of Intelligent Networks
- Lesson 3: Introducing QoS
- Lesson 4: Managing Cisco Devices
- Lesson 5: Licensing

Module 13: Summary Challenge

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

Labs:

- Establish internet connectivity
- Troubleshoot internet connectivity
- Implement RIPv2
- Configure IPv6 static routes
- Troubleshoot IPv4 network connectivity
- Troubleshoot IPv6 network connectivity
- Secure administrative access
- Implement device hardening
- Troubleshoot EIGRP
- Troubleshoot a medium-sized network

- Troubleshoot a scalable medium-sized network
- Troubleshoot multiarea OSPF
- Configure single-homed EBGP
- Troubleshoot a scalable multiarea network
- Implement and troubleshoot a scalable multiarea network