

Cisco CCNA: Implementing and Administering Cisco Solutions (40 Hours)

Overview

The Implementing and Administering Cisco Solutions (CCNA) course is the first step into Cisco networking. The goal of this online training course is to provide students with skills like network fundamentals and access, IP connectivity and services, security fundamentals, and more! Students who have attended the CCNA online training course will gain competency with Cisco IOS-based devices. Crucial elements of this course include the coverage of IPv4 subnetting, IPv6, ACLs, VLANs, as well as static and dynamic routing which are all needed for success at all levels of Cisco certification. Exam Number: 200-301 CCNA.

Audience Profile

CCNA is an essential online training course for students preparing for the CCNA certification. This instructor-led training course is also meant for:

- Support technicians involved in the basic installation, operation, and verification of LAN networks
- Entry-level network engineers, network administrators, network support technicians, and help desk technicians

Prerequisites

- Basic computer literacy
- Completion of CompTIA Network+ is highly recommended

Course Outline

1. Network Fundamentals

- Devices
- Topologies
- OSI and TCP Models

2. Switch Fundamentals

- MAC Address Table
- Frame Forwarding

3. Routing Fundamentals

- Routing Table
- Packet Forwarding

4. IPv4 Addressing and Subnetting

- Binary
- IPv4 Addressing
- IPv4 Subnetting

5. Cisco IOS

- Navigating and Using the Cisco Operating System

6. Advanced Routing

- Static Routing
- Dynamic Routing
- OSPF

7. VLANs and Trunks

- Creating and Verifying VLANs
- Creating and Verifying Trunks

8. InterVlan Routing

- Router-On-A-Stick
- SVIs and Routed Ports
- First Hop Redundancy Protocols

9. Spanning Tree Protocol

- Understanding STP
- Configuring RSTP
- Manipulating the STP Topology
- PortFast and BPDU Guard

10. EtherChannel

- Configure and Verify EtherChannel Bundle

11. DHCP and NTP

- Configure a Router as a DHCP Server
- Configure a Router as a DHCP Relay Agent
- Configure a Router as a DHCP Client
- Configuring and Verifying NTP

12. CDP, LLDP, Syslog, and SNMP

- Overview of CDP
- Overview of LLDP
- Overview of Syslog
- Overview of SNMP

13. QoS

- Introduction to QoS

14. Security

- Security Overview
- Securing the Console Port
- Securing the VTY Lines
- Configuring SSH
- VPN Overview

15. Port Security, DHCP Snooping, Dynamic ARP Inspection

- Configuring and Verifying Port Security
- Overview of DHCP Snooping
- Overview of DAI

16. ACLs

- Configuring and Verifying Standard and Extended IPv4 ACLs

17. NAT

- Configuring and Verifying Static NAT
- Configuring and Verifying Dynamic NAT
- Configuring and Verifying PAT
- Configuring and Verifying Dynamic PAT

18. Wireless

- An Introduction to Wireless

19. Automation and Programmability

- An Overview of Automation and Programmability
- Exploring Controller Based Networks
- An Introduction to DNA Center

20. IPv6

- An Introduction to IPv6 address
- An Introduction to IPv6 routing