

CCNA EXPRESS ROUTING & SWITCHING V3 (CI-CCNA v3)

Temario

Interconnecting Cisco Networking Devices: Accelerated (CCNAX), is an instructor-led training course that teaches learners how to install, operate, configure, and verify a basic IPv4 and IPv6 network, including configuring a LAN switch, configuring an IP router, connecting to a WAN, and identifying basic security threats. Also covers topics in more depth and teaches learners how to perform basic troubleshooting steps in enterprise branch office networks, preparing learners for Cisco CCNA certification.

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.

Pre-requisitos

Due to the accelerated nature of this course it is expected that delegates will already possess existing experience working with Cisco Products and should have a strong existing familiarity with the concepts and products covered in the course. In addition, the learner should possess the following skills:

- Basic computer literacy
- Basic PC operating system navigation skills
- Basic Internet usage skills
- Basic IP address knowledge
- Good understanding of network fundamentals

Delegates without this existing experience should consider attending the Interconnecting Cisco Network Devices Part 1 Version 3.0 (ICND1) and Interconnecting Cisco Network Devices Part 2 (ICND2) courses instead.

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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.

Objetivos del curso

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.

Contenido

Building a Simple Network

Exploring the Functions of Networking

Understanding the Host-to-Host Communications Model

Introducing LANs

Operating Cisco IOS Software

Starting a Switch

Understanding Ethernet and Switch Operation

Troubleshooting Common Switch Media Issues

Establishing Internet Connectivity

Understanding the TCP/IP Internet Layer

Understanding IP Addressing and Subnets

Understanding the TCP/IP Transport Layer

Exploring the Functions of Routing

Configuring a Cisco Router

Exploring the Packet Delivery Process

Enabling Static Routing

Learnin Basics of ACL

Enabling Internet Connectivity

Implementing Scalable Medium-Sized Networks

Implementing and Troubleshooting VLANs and Trunks

Building Redundant and Switched Topologies

Improving Redundant Switched Topologies with EtherChannel

Routing Between VLANs

Using a Cisco IOS Network Device as a DHCP Server

Understanding Layer 3 Redundancy

Implementing RIPv2

Introducing IPv6

Introducing Basic IPv6

Understanding IPv6 Operation

Configuring IPv6 Static Routes

Troubleshooting Basic Connectivity

Troubleshooting IPv4 Network Connectivity

Troubleshooting IPv6 Network Connectivity

Implementing Network Device Security

Securing Administrative Access

Implementing Device Hardening

Implementing Advance Security

Implementing an EIGRP-Based Solution

Implementing EIGRP

Implementing EIGRP for IPv6

Troubleshooting EIGRP

Implementing a Scalable OSPF-Based Solution

Understanding OSPF

Multiarea OSPF IPv4 Implementation

Implementing OSPFv3 for IPv6

Implementing Wide Area Networks

Understanding WAN Technologies

Understanding Point-to-Point Protocols

Configuring GRE Tunnels

Configuring Single-Homed EBGp

Network Device Management

Implementing Basic Network Device Management

Evolution of Intelligent Networks

Introducing QoS

Managing Cisco Devices

Licensing