Implementing Cisco IP Routing v2.0

Course ID#: 1575-942-ZZ-W

Hours: 35

Course Content

Course Description:

In this course, you will gain the knowledge and skills needed to plan, implement, and monitor a scalable routed network. You will focus on routing protocols for both IPv4 and IPv6: EIGRP and OSPF for an enterprise and BGP for enterprise Internet connectivity. You will also learn how to redistribute routes, implement path control, and secure Cisco routers.

Prerequisites:

- Taking ICND1 v2.0 and ICND2 v2.0 (or CCNAX v2.0) is highly recommended

Know how to:

- Configure network fundamentals, including the ability to establish Internet, LAN, and
- WAN connectivity using both IPv4 and IPv6
- Operate and support a medium-sized LAN that has multiple switches, including VLANs, trunking, and spanning tree functionality
- Troubleshoot IPv4 and IPv6 connectivity issues
- Configure and troubleshoot EIGRP and OSPF, for both IPv4 and IPv6
- Configure devices for SNMP, Syslog, and NetFlow
- Manage network device security, Cisco device configurations, Cisco IOS images, and licenses
- ICND1 v2.0 - Interconnecting Cisco Networking Devices, Part 1
- ICND2 v2.0 - Interconnecting Cisco Networking Devices, Part 2
- CCNAX v2.0 - CCNA Routing and Switching Boot Camp

Topics:

Lesson 1. Basic Network and Routing Concepts

- Differentiating Routing Protocols
- Understanding Network Technologies
- Connecting Remote Locations with the Headquarters
- Implementing RIPng

Lesson 2. EIGRP Implementation

- Establishing EIGRP Neighbor Relationships
- Building the EIGRP Topology Table
- Optimizing EIGRP Behavior
- Configuring EIGRP for IPv6
- Discovering Named EIGRP Configuration

Lesson 3. OSPF Implementation

- Establishing OSPF Neighbor Relationship
- Building the Link State Database
- Optimizing OSPF Behavior
- Configuring OSPFv3

Lesson 4. Configuration of Redistribution

- Implementing Basic Routing Protocol Redistribution
- Manipulating Redistribution Using Route Filtering

Lesson 5. Path Control Implementation

- Using Cisco Express Forwarding Switching
- Implementing Path Control

Implementing Cisco IP Routing v2.0

Course ID#: 1575-942-ZZ-W

Hours: 35

Lesson 6. Enterprise Internet Connectivity

- Planning Enterprise Internet Connectivity
- Establishing Single-Homed IPv4 Internet Connectivity
- Establishing Single-Homed IPv6 Internet Connectivity
- Improving Resilience of Internet Connectivity
- Considering Advantages of Using BGP
- Implementing Basic BGP Operations
- Using BGP Attributes and Path Selection Process
- Controlling BGP Routing Updates
- Implementing BGP for IPv6 Internet Connectivity

Lesson 7. Routers and Routing Protocol Hardening

- Securing Cisco Routers
- Describing Routing Protocol Authentication Options
- Configuring EIGRP Authentication
- Configuring OSPF Authentication
- Configuring BGP Authentication

Implementing Cisco IP Routing v2.0

Course ID#: 1575-942-ZZ-W

Hours: 35