

Implementing Cisco IP Routing - On Demand (ROUTE 2.0)

Modality: On Demand

Duration: 40 Hours

CLC: 8 Units

Enhance your understanding of Cisco technologies and products with e-learning offerings from Cisco and Cisco's authorized learning partners. E-learning courses focus on a variety of Cisco technologies to prepare you for Cisco certification exams, and to gain Cisco product knowledge. The e-learning offerings are made to be interactive and engaging for learners who prefer self-study.

Some Cisco Self-paced courses provide access to hands-on virtual lab exercises, giving you the opportunity to practice configuration and troubleshooting on real Cisco platforms.

Course Outline:

Module 1: Basic Network and Routing Concepts

- Lesson 1: Differentiating Routing Protocols
- Lesson 2: Understanding Network Technologies
- Lesson 3: Connecting Remote Locations with the Headquarters
- Lesson 4: Implementing RIPng

Module 2: EIGRP Implementation

- Lesson 1: Establishing EIGRP Neighbor Relationships
- Lesson 2: Building the EIGRP Topology Table
- Lesson 3: Optimizing EIGRP Behavior
- Lesson 4: Configuring EIGRP for IPv6
- Lesson 5: Discovering Named EIGRP Configuration

Module 3: OSPF Implementation

- Lesson 1: Establishing OSPF Neighbor Relationships
- Lesson 2: Building the Link-State Database
- Lesson 3: Optimizing OSPF Behavior
- Lesson 4: Configuring OSPFv3

Module 4: Configuration of Redistribution

- Lesson 1: Implementing Basic Routing Protocol Redistribution
- Lesson 2: Manipulating Redistribution Using Route Filtering

Module 5: Path Control Implementation

- Lesson 1: Using Cisco Express Forwarding Switching
- Lesson 2: Implementing Path Control

Module 6: Enterprise Internet Connectivity

- Lesson 1: Planning Enterprise Internet Connectivity
- Lesson 2: Establishing Single-Homed IPv4 Internet Connectivity
- Lesson 3: Establishing Single-Homed IPv6 Internet Connectivity
- Lesson 4: Improving Resilience of Internet Connectivity
- Lesson 5: Considering Advantages of Using BGP
- Lesson 6: Implementing Basic BGP Operations
- Lesson 7: Using BGP Attributes and the Path Selection Process
- Lesson 8: Controlling BGP Routing Updates
- Lesson 9: Implementing BGP for IPv6 Internet Connectivity

Module 7: Routers and Routing Protocol Hardening

- Lesson 1: Securing Cisco Routers
- Lesson 2: Describing Routing Protocol Authentication Options
- Lesson 3: Configuring EIGRP Authentication
- Lesson 4: Configuring OSPF Authentication
- Lesson 5: Configuring BGP Authentication

Labs

The following discovery labs are included in this course:

- Discovery 1: Configuring RIPv4
- Discovery 2: Configuring and Investigating Basic EIGRP
- Discovery 3: Building The EIGRP Topology Table
- Discovery 4: EIGRP Stub Routing
- Discovery 5: EIGRP Summarization
- Discovery 6: EIGRP Load Balancing
- Discovery 7: EIGRP for IPv6 Configuration
- Discovery 8: Discovering Named EIGRP Configuration
- Discovery 9: Basic OSPF Configuration Introduction
- Discovery 10: Building the Link-State Database
- Discovery 11: OSPF Path Selection
- Discovery 12: OSPF Route Summarization
- Discovery 13: OSPF Stub Areas
- Discovery 14: Implementing OSPFv3
- Discovery 15: Basic Redistribution
- Discovery 16: Manipulate Redistribution
- Discovery 17: Manipulate Redistribution Using Route Maps
- Discovery 18: Analyzing CEF
- Discovery 19: Implementing PBR
- Discovery 20: NAT Virtual Interface

- Discovery 21: Basic IPv6 Internet Connectivity
- Discovery 22: Basic BGP Configuration
- Discovery 23: Influencing BGP Path Selection
- Discovery 24: BGP for IPv6
- Discovery 25: Configuring EIGRP Authentication
- Discovery 26: OSPF Authentication Configuration

The following challenge labs are included in this course:

- Challenge 1: Configure RIPng
- Challenge 2: Configure EIGRP
- Challenge 3: Configure and Optimize EIGRP for IPv6
- Challenge 4: Implement EIGRP for IPv4 and IPv6 Through Named Configuration
- Challenge 5: Configure OSPF
- Challenge 6: Optimize OSPF
- Challenge 7: Configure OSPFv3
- Challenge 8: Implement Redistribution Using Route Filtering
- Challenge 9: Implement Path Control
- Challenge 10: Configuring BGP
- Challenge 11: Configure Authentication for EIGRP Routes
- Challenge 12: Configure BGP Authentication