



## Implementing Cisco IP Routing (ROUTE) 2.0

This course includes major updates and follows an updated blueprint. However, note that this course does not cover all items listed on the blueprint. Some older topics have been removed or simplified, while several new IPv6 routing topics have been added. Course content has been adapted to Cisco IOS Software Release 15 and technically updated. Course also introduces new type of labs, called discovery labs. Discovery labs are instructor guided lab through which student explores new topics in an interactive way. All labs are developed only as virtual labs. To get the full course experience, you should cover everything, including Introduction, Discovery labs, Summary, and Module Self-Check.

### Course Objectives

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

- Describe routing protocols, different remote connectivity options and their impact on routing and implement RIPng
- Configure EIGRP in IPv4 and IPv6 environment
- Configure OSPF in IPv4 and IPv6 environment
- Implement route redistribution using filtering mechanisms
- Implement path control using policy based routing and IP SLA
- Implement enterprise Internet connectivity
- Secure Cisco routers according to best practices and configure authentication for routing protocols

### Who Should Attend

The primary audience for this course is as follows:

- Network engineers and technicians
- Support engineers
- Systems engineers
- Network analysts
- Senior network administrators
- Anyone involved in planning, implementing, verifying, and troubleshooting routing protocols in enterprise networks

### Course Outline

#### Module 1: Basic Network and Routing Concepts

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

#### Module 2: EIGRP Implementation

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

#### Module 3: OSPF Implementation

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

#### Module 4: Configuration of Redistribution

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

### Associated Certifications

Cisco Certified Network Professional (CCNP)

### Required Exam(s)

300-101

### Price

\$3,495.00

### Duration

5 days

### Methods of Delivery

- Instructor Led
- Distance Learning
- On-Site

**Module 5: Path Control Implementation**

- Using Cisco Express Forwarding Switching
- Implementing Path Control

**Module 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

**Module 7: Routers and Routing Protocol Hardening**

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