



Implementing Cisco IP Routing v2.0 - ROUTE (Professional)

Course Details

Course Outline

1. Basic Network and Routing Concepts

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

2. EIGRP Implementation

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

3. OSPF Implementation

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

4. Configuration of Redistribution

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

5. Path Control Implementation

- Using Cisco Express Forwarding Switching
- Implementing Path Control

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

7. Routers and Routing Protocol Hardening

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

8. Lab

- Discovery: Configuring RIPng
- Discovery: Configuring and Investigating Basic EIGRP
- Discovery: Building the EIGRP Topology Table
- Discovery: EIGRP Stub Routing
- Discovery: EIGRP Summarization
- Discovery: EIGRP Load Balancing
- Discovery: EIGRP for IPv6 Configuration
- Discovery: Discovering the Named EIGRP Configuration
- Discovery: Basic OSPF Configuration Introduction
- Discovery: Building the Link-State Database
- Discovery: OSPF Path Selection
- Discovery: OSPF Route Summarization
- Discovery: OSPF Stub Areas
- Discovery: Implementing OSPFv3
- Discovery: Basic Redistribution
- Discovery: Manipulate Redistribution
- Discovery: Manipulate Redistribution Using Route Maps
- Discovery: Analyzing Cisco Express Forwarding



- . **Discovery: Implementing PBR**
- a. **Discovery: Configuring NAT Virtual Interface**
- b. **Discovery: Basic IPv6 Internet Connectivity**
- c. **Discovery: Basic BGP Configuration**
- d. **Discovery: Influencing BGP Path Selection**
- e. **Discovery: BGP for IPv6**
- f. **Discovery: Configuring EIGRP Authentication**
- g. **Discovery: OSPF Authentication Configuration**
- h. **Challenge: Configure RIPng**
- i. **Challenge: Configure EIGRP**
- j. **Challenge: Configure and Optimize EIGRP for IPv6**
- k. **Challenge: Implement EIGRP for IPv4 and IPv6 Through Named Configuration**
- l. **Challenge: Configure OSPF**
- m. **Challenge: Optimize OSPF**
- n. **Challenge: Configure OSPFv3**
- o. **Challenge: Implement Redistribution Using Route Filtering**
- p. **Challenge: Implement Path Control**
- q. **Challenge: Configure BGP**
- r. **Challenge: Configure Authentication for EIGRP Routes**
- s. **Challenge: Configure BGP Authentication**