

Implementing Cisco IP Routing

Duration: 5 Days Course Code: ROUTE

Overview:

In the Implementing Cisco IP Routing (ROUTE) course, administrators of medium-to-large network sites will learn to use advanced routing to provide scalability for Cisco routers that are connected to LANs and WANs. Networking professionals will learn to dramatically increase the number of routers and sites using these techniques instead of redesigning the network when additional sites or wiring configurations are added. Hands-on labs ensure you thoroughly understand how to implement advanced routing within your network.

Target Audience:

This course is designed for: Network professionals, such as network engineers, network operations center (NOC) technical support personnel, and help desk technicians, who want to correctly implement routing-based solutions given a network design using Cisco IOS services and features, where implementation of routing includes planning, configuration, and verification. Any individual involved in implementation and verification of routing protocols in enterprise networks.

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Plan and document the configuration and verification of routing protocols and their optimization in enterprise networks
- Identify the technologies, components, and metrics of EIGRP that are used to implement and verify EIGRP routing in diverse, large-scale internetworks that are based on requirements
- Identify, analyze, and match OSPF multiarea routing functions and benefits for routing efficiencies in network operations to implement and verify OSPF routing in a complex enterprise network
- Implement and verify a redistribution solution in a multiprotocol network that uses Cisco IOS Software features to control path selection and provides a loop-free topology according to a given network design and requirements
- Evaluate common network performance issues and identify the tools that are needed to provide Layer 3 path control that uses Cisco IOS Software features to control the path
- Implement and verify a Layer 3 solution using BGP to connect an enterprise network to a service provider

Prerequisites:

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
- Interconnecting Cisco Networking Devices Part 2 (ICND2)
- OR
- Cisco CCNA Certification Fast Track Programme

Testing and Certification

Recommended as preparation for:

- 642-902 - Implementing Cisco IP Routing
- ROUTE is one of the courses required for the **Cisco Certified Network Professional (CCNP)** Certification

Follow-on-Courses:

- Implementing Cisco Switched Networks (SWITCH)
- Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

Content:

Planning Routing Services to Requirements

- Assessing Complex Enterprise Network Requirements
- Creating an Implementation Plan and Documenting the Implementation

Implementing an EIGRP-Based Solution

- Planning Routing Implementations with EIGRP
- Implementing and Verifying Basic EIGRP for the Enterprise LAN Architecture
- Configuring and Verifying EIGRP for the Enterprise WAN Architecture
- Implementing and Verifying EIGRP Authentication
- Advanced EIGRP Features in an Enterprise Network

Implementing a Scalable Multiarea Network OSPF-Based Solution

- Planning Routing Implementations with OSPF as Scalable Routing Protocol
- How OSPF Packet Processes Work
- Improving Routing Performance in a Complex Enterprise Network
- Configuring and Verifying OSPF Routing
- Configuring and Verifying OSPF Route Summarization
- Configuring and Verifying OSPF Special Area Types
- Configuring and Verifying OSPF Authentication

Implement an IPv4-Based Redistribution Solution

- Assessing Network Routing Performance and Security Issues
- Operating a Network Using Multiple IP Routing Protocols
- Configuring and Verifying Route Redistribution

Implementing Path Control

- Assessing Path Control Network Performance Issues
- References to Additional Path Control in E-Learning

Connection of an Enterprise Network to an ISP Network

- Planning the Enterprise-to-ISP Connection
- Considering the Advantages of Using BGP
- Comparing the Functions and Uses of EBGp and IBGP
- Configuring and Verifying Basic BGP Operations
- Using the BGP Attributes and Path Selection Process

E-Learning Training on IPv6 and Routing for Branch Offices and Remote Workers

- Implementing IPv6
- Implementing Routing Facilities for Branch Offices and Mobile Workers
- Analyzing Mobile Workers Designs and Planning for Mobile Workers Installations
- Directed Demo: Implement Special Facilities for Mobile Workers

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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