

ROUTE

Implementing Cisco IP Routing



The ROUTE course is designed for network engineers with at least one year of professional work experience, who are ready to advance their skills and work independently on complex network solutions. Students will learn to plan, configure and verify the implementation of secure enterprise LAN and WAN routing solutions using a range of routing protocols. Course also covers configuration of solutions to support branch offices and mobile workers.

Course Contents

- Module 0: Course Overview
- Module 1: Planning Routing Services
- Module 2: Implementing an EIGRP based Solution
- Module 3: Implementing a Scalable Multiarea Network OSPF based Solution
- Module 4: Implement an IPv4 based redistribution solution
- Module 5: Implement Path Control
- Module 6: Connecting an Enterprise Network to ISP Networks
- E-Learning ROUTE-01 of 3: Implement Path Control
- E-Learning ROUTE-02 of 3: Implementing IPv6
- E-Learning ROUTE-03 of 3: Implementing Routing Facilities for Branch Offices and Mobile Workers

Knowledge Prerequisites

Participants should have basic knowledge about Cisco routers and IP routing.

Course Objectives

Upon completing this course, the student 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 used to implement and verify EIGRP routing in diverse, large-scale internetworks based on requirements.
- Identify, analyze, and match OSPF multiarea routing functions and benefits for routing efficiencies in network operations in order to implement and verify OSPF routing in a complex enterprise network.
- Implement and verify a redistribution solution in a multi-protocol network that uses Cisco IOS 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 needed to provide Layer 3 path control that uses Cisco IOS features to control the path.
- Implement and verify a Layer 3 solution using BGP to connect an enterprise network to a service provider.



Reservation and Registration

We will be glad to make a free and non-binding course reservation for you for the duration of two weeks. On www.experteach-benelux.com under *Registration*, you can conveniently make course reservations, registrations, and hotel reservations. Alternatively, call us under +31 (0)76 52 32 950.

For closed groups of participants, we can modify the course contents according to your requirements. Do not hesitate to contact us!



ROUTE

5 days €2,490 exclusive of V.A.T.

Course date (dd.mm.yy)/Location

06.02.-10.02.12	Brussels	07.05.-11.05.12	Utrecht
12.03.-16.03.12	Utrecht	04.06.-08.06.12	Brussels
02.04.-06.04.12	Brussels		

Up-to-date information: www.experteach-benelux.com ROUT



EXPERTeach



ROUTE – Implementing Cisco IP Routing

- 1. Planning Routing Services to Requirements**
 - 1.1. Assessing Complex Enterprise Network Requirements
 - 1.2. Common Maintenance Processes and Procedures
 - 1.3. Lab 1-1: Assess Skills for Implementing Complex Networks
 - 1.4. Lab 1-1 Debrief
- 2. Implementing an EIGRP based Solution**
 - 2.1. Planning Routing Implementations with EIGRP
 - 2.2. Implementing and Verifying Basic EIGRP for the Enterprise LAN Architecture
 - 2.3. Lab 2-1: Configure and Verify EIGRP Operations
 - 2.4. Lab 2-1 Debrief
 - 2.5. Configuring and Verifying EIGRP for the Enterprise WAN Architecture
 - 2.6. Lab 2-2: Configure and Verify EIGRP Circuit Emulation, and Frame Relay
 - 2.7. Lab 2-2 Debrief
 - 2.8. Implementing and Verifying EIGRP Authentication
 - 2.9. Lab 2-3: Configure and Verify EIGRP Authentication
 - 2.10. Lab 2-3 Debrief
 - 2.11. Advanced EIGRP Features in an Enterprise Network
 - 2.12. Lab 2-4: Implement and Verify EIGRP Operations
 - 2.13. Lab 2-4 Debrief
- 3. Implementing a Scalable Multiarea Network OSPF Based Solution**
 - 3.1. Planning Routing Implementations with OSPF as Scalable Routing Protocol
 - 3.2. How OSPF Packet Processes Work
 - 3.3. Improving Routing Performance in a Complex Enterprise Network
 - 3.4. Configuring and Verifying OSPF Routing
 - 3.5. Lab 3-1: Configure and Verify OSPF to Improve Routing Performance
 - 3.6. Lab 3-1 Debrief
 - 3.7. Lab 3-2: Implement and Verify OSPF Multiarea Routing
 - 3.8. Lab 3-2 Debrief
 - 3.9. Configuring and Verifying OSPF Route Summarization
 - 3.10. Lab 3-3: Configure and Verify OSPF Route Summarization for Interarea and
 - 3.11. Lab 3-3 Debrief
 - 3.12. Configuring and Verifying OSPF Special Area Types
 - 3.13. Lab 3-4: Configure and Verify OSPF Special Area Types
 - 3.14. Lab 3-4 Debrief
 - 3.15. Configuring and Verifying OSPF Authentication
 - 3.16. Lab 3-5: Configure and Verify OSPF Authentication
 - 3.17. Lab 3-5 Debrief
- 4. Implement an IPv4-based Redistribution Solution**
 - 4.1. Assessing Network Routing Performance and Security Issues
 - 4.2. Operating a Network Using Multiple IP Routing Protocols
 - 4.3. Configuring and Verifying Route Redistribution
 - 4.4. Lab 4-1: Configure Route Redistribution Between Multiple IP Routing Protocols
 - 4.5. Lab 4-1 Debrief
- 5. Implementing Path Control**
 - 5.1. Assessing Path Control Network Performance Issues
 - 5.2. Lab 5-1: Configure and Verify Path Control between Multiple IP Routing
 - 5.3. Lab 5-1 Debrief
 - 5.4. References to additional Path Control in E-Learning
- 6. Connection of an Enterprise Network to an ISP Network**
 - 6.1. Planning the Enterprise-to-ISP Connection
 - 6.2. Considering the Advantages of Using BGP
 - 6.3. Comparing the Functions and Uses of EBGp and IBGP
 - 6.4. Configuring and Verifying Basic BGP Operations
 - 6.5. Lab 6-1: Configure BGP Operations
 - 6.6. Lab 6-1 Debrief
 - 6.7. Using the BGP Attributes and Path Selection Process
 - 6.8. Lab 6-2: Manipulate EBGp Path Selections
 - 6.9. Lab 6-2 Debrief
 - 6.10. E-Learning Training on IPv6 and Routing for Branch Offices and Remote Workers



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