Deploying Cisco Service Provider Network Routing

Duration: 5 Days   Course Code: SPROUTE

Overview:

This 5-day course is designed to provide service provider professionals with the knowledge and skills required to implement advanced routing when providing scalability on Cisco routers connected to LANs and WANs.
Use of these techniques should reduce the need to redesign the network when additional sites or wiring configurations are added. Hands-on labs provide the practice required to underline the advance routing concepts and methodologies, as well as providing practical experience with the Ciso IOS/IOS XE and IOS XR features required to support a Service Provider network.

This course is worth 40 Credits in the Continuing Learning Program

Target Audience:

This course is designed for network administrators, network engineers, network managers, and systems engineers who are involved in the implementation and configuartion of IP routing in a service provider environment as well as individuals looking for CCNP Service Provider accreditation.

Objectives:

- **After you complete this course you will be able to:**

- Identify the typical routing requirements and list the routing protocols that are used in service provider networks

- Describe the steps needed to implement OSPF in a service provider network

- Describe the importance of the Integrated IS-IS routing protocol for internal routing and list the steps to follow when you are implementing Integrated IS-IS into a service provider network

- Implement BGP to connect an enterprise to a service provider and to connect a service provider to an upstream service provider

- Describe the tools that are used for routing protocol manipulation, route redistribution, and BGP route selection

Prerequisites:

Attendees should meet the following prerequisites:

- Intermediate knowledge of Cisco IOS/IOS XE and Cisco IOS XR Software configuration.
- **SPNGN1** and **SPNGN2 recommended**

Testing and Certification

Recommended Preparation for exam(s):

- **642-883 - SPROUTE** - Deploying Cisco Service Provider Network Routing
This exam is one of the four exams required for delegates looking to achieve the Cisco Certified Network Professional for Service Providers.

Follow-on-Courses:

The following courses are recommended for further study:

- **SPADVROUTE -** Deploying Cisco Service Provider Network Advanced Routing
- **SPCORE -** Implementing Cisco Service Provider Next Generation Core Network Services
- **SPEDGE -** Implementing Cisco Service Provider Next Generation Edge Network Services

Content:

Service Provider Routing

- Understanding Service Provider Routing Protocols

Implement OSPF in the Service Provider Network

- Introducing OSPF Routing
- Understanding OSPF Operation
- Implementing OSPF Routing
- Implementing OSPF Special Area Types

Implement Integrated IS-IS in the Service Provider Network

- Introducing IS-IS Routing
- Implementing Integrated IS-IS Routing

Implement BGP in the Service Provider Network

- Enterprise Connectivity to Service Providers
- Introducing BGP Routing
- Implementing Basic BGP Routing

Routing Protocol Tools and Route Manipulation

- Introducing Routing Protocol Tools
- Introducing Route Maps and Routing Policy Language
- Implementing Route Redistribution
- Influencing BGP Route Selection

Labs:

- Hardware Lab 1: Implement OSPF Routing
- Hardware Lab 2: Implement OSPF Special Area Types
- Hardware Lab 3: Implement Integrated IS-IS Routing
- Hardware Lab 4: Implement Basic BGP Routing
- Hardware Lab 5: Implement Route Redistribution
- Hardware Lab 5: Influence BGP Route Selection

Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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