

## Maintaining Cisco Service Provider Routing Protocols

Duration: 5 Days Course Code: MSPRP

### Overview:

The Maintaining Service Provider Routing Protocols (MSPRP) course provides learners with the knowledge needed to provide support in a service-provider environment using an Interior Gateway Protocol (IGP) such as Open Shortest Path First (OSPF) or Intermediate System-to-Intermediate System (IS-IS) and Border Gateway Protocol (BGP). It also provides learners with an understanding of advanced routing policies using route maps with Cisco IOS® Software and Routing Policy Language (RPL) with Cisco IOS XR Software. The course focuses on monitoring and troubleshooting these technologies in service provider environments. The course is also intended to help prepare students for the CCNP SP Operations certification exam

### Target Audience:

This course is designed for: Support staff Service provider network operations center (NOC) personnel Service provider engineers Service provider partners

### Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Identify the typical routing requirements in service provider networks; list the routing solutions; and describe the change, performance, and fault management procedures
- Change the routing configuration based on designs and implementation templates, as well as change management processes and procedures based on Information Technology Infrastructure Library (ITIL®)
- Gather and interpret performance statistics for routing protocols using various tools such as show commands and monitoring tools based on Simple Network Management Protocol (SNMP)
- Perform fault management for routing protocols using various tools such as show commands and monitoring tools

### Prerequisites:

The knowledge and skills that a learner must have before attending this course are as follows:

- IP networking skills and experience using Cisco IOS Software commandline interface (CLI)
- Operations process knowledge and ability to use NMS tools to monitor networks and network devices.
- Ability to implement service provider change management procedures and configuration management procedures.
- Understanding of and ability to identify the critical factors for availability, scalability and manageability of OSPF, IS-IS, and BGP.
- Ability to implement Cisco IOS Software and Cisco IOS XR Software configuration and monitoring commands.
- UNIX and/or Linux operating system experience as applied to IP network environments

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

- Supporting Cisco Service Provider IP NGN Operations (SSPO)
- Operational Foundations of Cisco Service Provider Core Networks (OFCN)

### Testing and Certification

Recommended as preparation for:

- 642-775 - Maintaining Cisco Service Provider Routing Protocols MSPRP is one of four courses required for **Cisco Certified Network Professional Service Provider Operations (CCNP SPOPS)** Certification

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### Follow-on-Courses:

- Maintaining Cisco Service Provider VPNs and MPLS Networks (MSPVM)
- Maintaining Cisco Service Provider Quality of Service (MSPQS)

All the above courses are part of the **Cisco Certified Network Professional Service Provider Operations (CCNP SPOPS)** Certification

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### Content:

#### Service Provider Routing Operation Processes

- Understanding Service Provider Routing Protocols
- Using Routing Protocol Tools
- Using Management and Monitoring Tools
- Applying Service Provider Routing Operation Processes Based on ITIL®

#### Change Management for Routing Protocols

- Understanding Routing Protocol Requirements
- Adding Routers to the Core Network
- Modifying Core Routing Parameters
- Connecting Single-Homed Customers to the Network
- Connecting Multihomed Customers to the Network
- Modifying Routing Paths

#### Performance Management for Routing Protocols

- Auditing Internal Routing
- Auditing External Routing
- Testing Internal Routing
- Testing External Routing

#### Fault Management for Routing Protocols

- Troubleshooting Routing Issues in the Network
  - Troubleshooting External Routing
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### Further Information:

For More information, or to book your course, please call us on +254 713 027 191

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