

## Maintaining Cisco Service Provider VPNs and MPLS Networks

**Duration: 5 Days**    **Course Code: MSPVM**

### Overview:

The Maintaining Service Provider VPNs and MPLS Networks (MSPVM) course provides learners with the knowledge needed to provide support in a service-provider environment using Multiprotocol Label Switching (MPLS). It provides learners with understanding of MPLS and the associated technologies used in service provider environments, and it provides them with the guidelines on how to monitor and troubleshoot these technologies. 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 MPLS and MPLS VPN requirements in service provider networks and list the solutions and describe the change, performance, and fault management procedures for MPLS and MPLS VPNs.
- Perform changes in the routing configuration based on designs and implementation templates as well as ITIL®-based change management processes and procedures.
- Gather and interpret performance statistics for MPLS and MPLS VPNs using various tools such as show commands and SNMP-based monitoring tools.
- Perform fault management for MPLS and MPLS VPNs using various tools such as show commands and SNMP-based 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 Open Shortest Path First (OSPF), Intermediate System-to-Intermediate System (IS-IS), and Border Gateway Protocol
  - 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:

- 642-780 - Maintaining Cisco Service Provider VPNs and MPLS Networks
- MSPVM is one of four courses required for **Cisco Certified Network Professional Service Provider Operations (CCNP SPOPS)** Certification

## Follow-on-Courses:

- Maintaining Cisco Service Provider Routing Protocols (MSPRP)
- Maintaining Cisco Service Provider Quality of Service (MSPQS)

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

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## Content:

### Service Provider VPN Operation Processes

- Service Provider MPLS and MPLS VPN Overview
- Service Provider Routing Operation Processes Based on ITIL®

### Change Management for MPLS and MPLS VPNs

- MPLS, MPLS VPN, and MPLS Traffic Engineering Requirements
- Adding MPLS-Enabled Routers to SP Network
- Adding Layer 3 MPLS VPN Customers
- Adding Layer 2 MPLS VPN Customers

### Performance Management for MPLS and MPLS VPNs

- Audit MPLS-Related Control Protocols
- Monitor MPLS Performance
- Improve Availability and Resource Utilization Using MPLS Traffic Engineering Tunnels

### Fault Management for MPLS and MPLS VPNs

- Troubleshoot Core MPLS Issues
  - Troubleshoot Layer 3 MPLS VPN Customer Connectivity Issues
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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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