SPRI - IMPLEMENTING CISCO SERVICE PROVIDER ADVANCED ROUTING SOLUTIONS V1.1

Course Code: 100508

This course prepares you for the 300-510 Implementing Cisco Service Provider Advanced Routing Solutions (SPRI) exam.

The *SPRI - Implementing Cisco Service Provider Advanced Routing Solutions v1.1* course teaches you theories and practices to integrate advanced routing technologies including routing protocols, multicast routing, policy language, Multiprotocol Label Switching (MPLS), and segment routing, expanding your knowledge and skills in service provider core networks.

This course is eligible for 40 Continuing Education Credits (ILT & ELT Modality).

What You'll Learn

- Gain the high-demand skills to maintain and operate advanced technologies related to Service Provider core networks
- Increase your knowledge and skills for implementing Service Provider core advanced technologies though hands-on application and practical instruction
- Prepare to take the 300-510 SPRI exam
- Describe the main characteristics of routing protocols that are used in Service provider environments
- Implement advanced features of multiarea Open Shortest Path First (OSPFv2) running in Service Provider networks
- Implement advanced features of multilevel Intermediate System to Intermediate System (ISIS) running in Service Provider networks
- Configure route redistribution
- Configure Border Gateway Protocol (BGP) in order to successfully connect the Service Provider network to the customer or upstream Service Provider
- Configure BGP scalability in Service Provider networks
- Implement BGP security options
- Implement advanced features in order to improve convergence in BGP networks
- Troubleshoot OSPF, ISIS, and BGP
- Implement and verify MPLS

- Implement and troubleshoot MPLS traffic engineering
- Implement and verify segment routing technology within an interior gateway protocol
- Describe how traffic engineering is used in segment routing networks
- Implement IPv6 tunneling mechanisms
- Describe and compare core multicast concepts
- Implement and verifying the PIM-SM protocol
- Implement enhanced Protocol-Independent Multicast - Sparse Mode (PIM-SM) features
- Implement Multicast Source Discovery Protocol (MSDP) in the interdomain environment
- Implement mechanisms for dynamic Rendezvous Point (RP) distribution

Who Needs to Attend

This course is for professionals who need knowledge about implementing various Service Provider core technologies and advanced routing technologies:

- Network administrators
- System engineers
- Project managers
- Network designers

Prerequisites

Before taking this course, you should have Service Provider knowledge at the professional level, equivalent to the material in the following Cisco courses:

- Intermediate to advanced knowledge of Cisco Internetwork Operating System (Cisco IOS®) or IOS XE and Cisco IOS XR Software configuration
- Knowledge of IPv4 and IPv6 TCP/IP networking
- Intermediate knowledge of BGP, OSPF, and ISIS routing protocols
- Understanding of MPLS technologies
- Understanding of multicast technologies
- Familiarity with segment routing
- Knowledge at the professional level equivalent to those learned in the following certifications:
- Implementing and Administering Cisco Solutions (CCNA)
- Understanding Cisco Service Provided Network Foundations (SPFNDU)
- Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)

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VIRTUAL CLASSROOM LIVE	$5,585 CAD	5 Day

Virtual Classroom Live Outline

- Implementing and Verifying Open Shortest Path First Multiarea Networks
- Implementing and Verifying Intermediate System to Intermediate System Multilevel Networks
- Introducing Routing Protocol Tools, Route Maps, and Routing Policy Language
- Implementing Route Redistribution
- Influencing Border Gateway Protocol Route Selection
- Scaling BGP in Service Provider Networks
- Securing BGP in Service Provider Networks
- Improving BGP Convergence and Implementing Advanced Operations
- Troubleshooting Routing Protocols
- Implementing and Verifying MPLS
- Implementing Cisco MPLS Traffic Engineering
- Implementing Segment Routing
- Describing Segment Routing Traffic Engineering (SR TE)
- Deploying IPv6 Tunneling Mechanisms
- Implementing IP Multicast Concepts and Technologies
- Implementing PIM-SM Protocol
- Implementing PIM-SM Enhancements
- Implementing Interdomain IP Multicast
- Implementing Distributed Rendezvous Point Solution in Multicast Network

Jun 23 - 27, 2025 | 8:30 AM - 4:30 PM EDT

Aug 25 - 29, 2025 | 8:30 AM - 4:30 PM EDT

Oct 20 - 24, 2025 | 9:00 AM - 5:00 PM EDT

Dec 8 - 12, 2025 | 8:30 AM - 4:30 PM EST

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ON-DEMAND	$1,300 CAD

On-Demand Outline

- Implementing and Verifying Open Shortest Path First Multiarea Networks
- Implementing and Verifying Intermediate System to Intermediate System Multilevel Networks
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