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Implementing Cisco Service Provider Advanced Routing Solutions (SPRI) V2.0

WHERE GREAT TRAINING HAPPENS EVERYDAY!

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI) V2.0

Course Duration

5 Days

Course Price

$4,295.00
44 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

The Implementing Cisco Service Provider Advanced Routing Solutions (SPRI) training 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 training prepares you for the 300-510 SPRI v1.1 exam. If passed, you earn the Cisco Certified Specialist – Service Provider Advanced Routing Implementation certification and satisfy the concentration exam requirement for the Cisco Certified Network Professional (CCNP) Service Provider certification. This training also earns you 37 Continuing Education (CE) credits toward recertification.

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How you will benefit

This class will help you:

- 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 through hands-on application and practical instruction
- Prepare for the 300-510 SPRI v1.1 exam
- Earn 37 CE credits toward recertification

Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The job roles best suited to the material in this course are:

- Network Administrators
- System Engineers
- Project Managers
- Network Designers

Prerequisties

The knowledge and skills you are recommended to have before attending this training are:

- 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

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Objectives

After taking this course, you should be able to:

- Configure multiarea OSPF
- Configure OSPF special area types and optimization features
- Configure IS-IS multilevel networks and optimization features
- Configure BGP to influence outbound and inbound BGP route selection
- Implement BGP route reflectors and confederations
- Describe the main characteristics of routing protocol tools that are used in service provider environments
- Implement the Routing Policy Language
- Configure route redistribution
- Troubleshoot routing protocols in the service provider network
- Describe, implement, and troubleshoot MPLS in service provider network
- Describe and implement segment routing technology
- Introduce and implement segment routing IPv6
- Implement BGP security options
- Implement advanced features to improve convergence in BGP networks
- Implement Topology Independent Loop-Free Alternate (TI-LFA)
- Describe Cisco MPLS traffic engineering
- Describe how traffic engineering is used in segment routing networks
- Implement and configure advanced SR-TE features
- Implement IPv6 tunneling mechanisms
- Describe IP multicast concepts and technologies
- Implement and verifying the PM-SM protocol
- Implement enhanced PIM-SM features
- Implement MSDP in the interdomain environment
- Implement mechanisms for dynamic RP distribution

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Course Outline

Module 1: Configure OSPF Multiarea Networks

Module 2: Configure OSPF Special Area Types

Module 3: Configure OSPF Optimization Features

Module 4: Configure IS-IS Multilevel Networks

Module 5: Configure IS-IS Optimization Features

Module 6: Introducing Routing Protocol Tools

Module 7: Introducing Routing Policy Language

Module 8: Influencing Outbound BGP Route Selection

Module 9: Influencing Inbound BGP Route Selection

Module 10: Scaling BGP in Service Provider Networks

Module 11: Implementing Route Redistribution

Module 12: Troubleshooting Routing Protocols

Module 13: Improving BGP Convergence and Implementing Advanced Operations

Module 14: Multiprotocol Label Switching

Module 15: Cisco MPLS Traffic Engineering

Module 16: Troubleshooting MPLS

Module 17: Segment Routing

Module 18: Implementing Segment Routing

Module 19: Segment Routing for IPv6

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Course Outline

Module 20: Implementing Segment Routing for IPv6

Module 21: Segment Routing TI-LFA

Module 22: Segment Routing Traffic Engineering

Module 23: Advanced Segment Routing Traffic Engineering Features

Module 24: Securing BGP

Module 25: Deploying IPv6 Tunneling Mechanisms

Module 26: IP Multicast Concepts and Technologies

Module 27: Implementing PIM-SM Protocol

Module 28: Implementing PIM-SM Enhancements

Module 29: Implementing Interdomain IP Multicast

Module 30: Implementing MPLS

Module 31: Implementing Distributed Rendezvous Point Solution in Multicast Network

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Lab Outline

Lab 1: Implement OSPF Special Area Types (IPv4 and IPv6)
Lab 2: Implement OSPF Route Summarization (IPv4 and IPv6)
Lab 3: Implement Multiarea IS-IS
Lab 4: Implement IS-IS Route Summarization
Lab 5: Implement Outbound BGP Route Selection
Lab 6: Implement Inbound BGP Route Selection
Lab 7: Implement BGP Route Reflectors
Lab 8: Implement Route Redistribution
Lab 9: Troubleshoot Routing Protocols
Lab 10: Configure and Verify IGP Segment Routing
Lab 11: Configure and Verify SRv6
Lab 12: Configure and Verify SR TI-LFA Using OSPF
Lab 13: Configure and Verify SR TI-LFA Using IS-IS
Lab 14: Configure and Verify SR-TE Using OSPF
Lab 15: Configure and Verify SR-TE Using IS-IS
Lab 16: Configure and Verify ODN and Flexible Algorithm
Lab 17: Implement BGP Security Options
Lab 18: Implement Tunnels for IPv6
Lab 19: Enable and Optimize PIM-SM
Lab 20: Implement PIM-SM Enhancements
Lab 21: Implement MPLS in the Service Provider Core
Lab 22: Implement Rendezvous Point Distribution