Current Technologies

Computer Learning Centers

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Platinum Learning

Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) V1.2

WHERE GREAT TRAINING HAPPENS EVERYDAY!

Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) V1.2

Course Duration

5 Days

Course Price

$4,295.00
43 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

The Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) training expands your knowledge and skills of service provider core networks. You will gain the theoretical and practical knowledge needed to implement and operate service provider networks using technologies such as core architecture, services, networking, automation, quality of service (QoS), security, and network assurance. This training prepares you for the 350-501 SPCOR v1.0 exam. If passed, you earn the Cisco Certified Specialist – Service Provider Core certification and satisfy the core exam requirement for the Cisco Certified Network Professional (CCNP) Service Provider and Cisco Certified Internetwork Expert (CCIE) Service Provider certifications. This training also earns you 64 Continuing Education (CE) credits towards recertification.

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How you will benefit

This class will help you:

- Configure, verify, troubleshoot, and optimize next-generation, service provider internet protocol (IP) network infrastructures
- Deepen your understanding of service provider technologies, including core architecture, services, networking, automation, quality of services, security, and network assurance
- Prepare for the 350-501 SPCOR v1.0 exam
- Earn 64 CE credits towards 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
- Network Engineers
- Network Managers
- System Engineers
- Project Managers
- Network Designers

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Intermediate knowledge of Cisco IOS or IOS XE
- Familiarity with Cisco IOS or IOS XE and Cisco IOS XR software configuration
- Knowledge of IPv4 and IPv6 transmission control protocol (TCP)/IP networking
- Intermediate knowledge of IP routing protocols
- Understanding of MPLS technologies
- Familiarity with VPN technologies

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Objectives

After taking this course, you should be able to:

- Describe the service provider network architectures, concepts, and transport technologies
- Describe the Cisco IOS software architectures, main internetwork operating system (IOS) types, and their differences
- Implement open shortest path first (OSPF) in the service provider network
- Implement integrated intermediate system to intermediate system (IS-IS) in the service provider network
- Implement border gateway protocol (BGP) routing in service provider environments
- Implement route maps and routing policy language
- Describe IPv6 transition mechanisms used in the service provider networks
- Implement high availability mechanisms in Cisco IOS XR software
- Implement traffic engineering in modern service provider networks for optimal resource utilization
- Describe segment routing and segment routing traffic engineering concepts
- Describe the virtual private network (VPN) technologies used in the service provider environment
- Configure and verify multi-protocol label switching (MPLS) L2VPN in service provider environments
- Configure and verify MPLS L3VPN in service provider environments
- Implement IP multicast services
- Describe the QoS architecture and QoS benefits for service provider networks
- Implement QoS in service provider environment
- Implement control plane security in Cisco devices
- Implement management plane security in Cisco devices
- Implement data plane security in Cisco devices
- Describe the YANG data modeling language
- Implement automation and assurance tools and protocols
- Describe the role of Cisco Network Services Orchestrator (NSO) in service provider environments
- Implement virtualization technologies in service provider environment

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Course Outline

Module 1: Describing Service Provider Network Architectures

Module 2: Describing Cisco IOS Software Architectures

Module 3: Implementing OSPF for Cisco IOS XR

Module 4: Implementing IS-IS for Cisco IOS XR

Module 5: Implementing BGP in Service Provider Network

Module 6: Implementing Route Maps and RPL

Module 7: Transitioning to IPv6 for Cisco IOS XR and IOS XE

Module 8: Implementing High Availability in Networking

Module 9: Implementing MPLS for Cisco IOS XR

Module 10: Implementing Cisco MPLS Traffic Engineering

Module 11: Describing Segment Routing

Module 12: Describing VPN Services

Module 13: Configuring L2VPN Services

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Course Outline

Module 14: Configuring L3VPN Services

Module 15: Implementing Multicast for Cisco IOS XR

Module 16: Describing QoS Architecture

Module 17: Implementing QoS for Cisco IOS XR

Module 18: Implementing Control Plane Security

Module 19: Implementing Management Plane Security

Module 20: Implementing Data Plane Security

Module 21: Introducing Network Programmability

Module 22: Implementing Automation and Assurance

Module 23: Introducing Cisco NSO

Module 24: Implementing Virtualization in Service Provider Environments

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Lab Outline

- Lab 1: Deploy Cisco IOS XR and IOS XE Basic Device Configuration
- Lab 2: Implement OSPF Routing
- Lab 3: Implement Integrated IS-IS Routing
- Lab 4: Implement Basic BGP Routing
- Lab 5: Filter BGP Prefixes Using RPL
- Lab 6: Implement MPLS in the Service Provider Core
- Lab 7: Implement Cisco MPLS TE
- Lab 8: Implement Segment Routing
- Lab 9: Implement EoMPLS
- Lab 10: Implement MPLS L3VPN
- Lab 11: Implement BGP Security
- Lab 12: Implement RTBH Filtering