

# Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)

- **Formato do curso:** Presencial e Live Training
- **Preço:** sob consulta€
- **Duração:** 35 horas

The **Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)** course teaches you how to configure, verify, troubleshoot, and optimize next-generation, Service Provider IP network infrastructures. It provides a deep dive into Service Provider technologies including core architecture, services, networking, automation, quality of services, security, and network assurance.

This course also helps you prepare to take the **350-501 Implementing and Operating Cisco® Service Provider Network Core Technologies (SPCOR)** exam, which is part of the new **CCNP® Service Provider** certification and the **Cisco Certified Specialist - Service Provider Core** certification.

This course will help you:

- Configure, verify, troubleshoot, and optimize next-generation, Service Provider IP network infrastructures
- Deepen your understanding of Service Provider technologies including core architecture, services, networking, automation, quality of services, security, and network assurance
- Prepare to take the **350-501 Implementing and Operating Cisco® Service Provider Network Core Technologies (SPCOR)** exam.

## Destinatários

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

## Pré-requisitos

- 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 TCP/IP networking
  - Intermediate knowledge of IP routing protocols
  - Understanding of MPLS technologies
  - Familiarity with VPN technologies
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## Objetivos

After taking this course, you should be able to:

- Describe the Service Provider network architectures, concepts, and transport technologies
  - Describe the Cisco Internetwork Operating System (Cisco IOS®) software architectures, main 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 VPN technologies used in the Service Provider environment
  - Configure and verify Multiprotocol Label Switching (MPLS) L2VPN in Service Provider environments
  - Configure and verify MPLS L3VPN in Service Provider environments
  - Implement IP multicast services
  - Describe the Quality of Service (QoS) architecture and QoS benefits for SP networks
  - Implement QoS in Service Provider environments
  - Implement control plane security in Cisco devices
  - Implement management plane security in Cisco devices
  - Implement data plane security in Cisco devices
  - Describe the Yet Another Next Generation (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 environments
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## Metodologia

- Instructor-led training: 5 days in the classroom with hands-on lab practice, plus the equivalent of 3 days of self-study material

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# Programa

## Labs

- Deploy Cisco IOS XR and IOS XE Basic Device Configuration
- Implement OSPF Routing
- Implement Integrated IS-IS Routing
- Implement Basic BGP Routing
- Filter BGP Prefixes Using RPL
- Implement MPLS in the Service Provider Core
- Implement Cisco MPLS Traffic Engineering (TE)
- Implement Segment Routing
- Implement Ethernet over MPLS (EoMPLS)
- Implement MPLS L3VPN
- Implement BGP Security
- Implement Remotely Triggered Black Hole (RTBH) Filtering