CISCO
The bridge to possible

Implementing Converged SDN Transport Solutions (SPSDNTXP) v1.0

What you'll learn in this course

The **Implementing Converged SDN Transport Solutions (SPSDNTXP)** v1.0 course introduces you to Software-Defined Networking (SDN)-ready architecture. This architecture evolves traditional Metro network design into an SDN-enabled programmable network capable of delivering all services (residential, business, 5G mobile backhauling, video, and IoT) on the premise of simplicity, full programmability, and cloud integration with guaranteed service level agreements (SLAs).

You will examine the evolution of service provider design principles such as Unified Multiprotocol Label Switching, Evolved Programmable Networks, and the Cisco® Compass Metro Fabric. Additionally, you'll explore and configure individual components of the design including segment routing and its supporting features.

Course duration

- Instructor-led training: 4 days in the classroom with hands-on practice
- Instructor-led virtual classroom: 4 days of web-based classes with hands-on lab practice

How you'll benefit

This course will help you:

- Describe the Converged SDN Transport solution
- Describe the basic implementation of SDN component features
- Establish a foundation to take a deeper dive into SDN solutions

Who should enroll

This course is suited for the following audiences:

- Network architects
- Network engineers
- Network consulting engineers
- Customer support engineers

How to enroll

Instructor-led training

- Find a class at the Cisco Learning Locator.
- Arrange training at your location through Cisco Private Group Training.

Technology areas

- Software-defined networking

Course details

Objectives

After taking this course, you should be able to:

- Introduce and examine the evolution of service provider design principles
- Introduce and review the basic building blocks of segment routing and its place within the service provider infrastructure
- Implement various technologies within segment routing to provide additional availability or to meet the Service Level Agreements (SLAs)
- Identify and deploy an SDN controller to support a multidomain segment routing for traffic engineering (SR-TE) network
- Describe different VPNs and services
- Explain how to configure and verify Ethernet VPN (EVPN) Native and EVPN Virtual Private Wire Service (VPWS)
- Describe how to configure and verify the Layer 3 VPN
- Explain network operation simplification and automation foundation
- Describe how to automate service provider network configurations with Cisco Network Services Orchestrator (NSO)
- Describe how to automate the service provider WAN with Cisco WAN Automation Engine (WAE)
- Explore different converged SDN transport use cases

Prerequisites

To fully benefit from this course, you should have:

- Knowledge of general networking concepts
- Experience working with CLI-based network devices

Outline

- Converged SDN Transport Fundamentals
- Introducing Segment Routing
- Segment Routing Topology-Independent Loop-Free Alternative (TI-LFA) and Traffic Engineering (TE)
- Multidomain SR-TE
- VPN and Services Overview
- EVPN Layer 2 Basics
- Layer 3 VPNs
- Operation Simplification and Automation Foundation
- Network Orchestration Using NSO
- Network Automation Using Cisco WAE

Lab outline

- Configure and Verify Segment Routing
- Configure and Verify SR TI-LFA
- Configure and Verify SR-TE
- Configure and Verify Multidomain SR-TE
- Configure and Verify Basic EVPN
- Configure and Verify Layer 3 VPN
- Cisco NSO Overview
- Cisco WAE Overview

CISCO

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