Implementing Converged SDN Transport Solutions

Duration: 180 Days **Course Code: SPSDNTXP** **Version: 1.0** **Delivery Method: Elearning (Self-paced)**

Overview:

The Implementing Converged SDN Transport Solutions (SPSDNTXP) 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.

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

Target Audience:

Anyone deploying a converged SDN Transport solution

Objectives:

- **After completing 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:

Attendees should meet the following prerequsites:

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

Testing and Certification

Recommended as preparation for the following exams:

- No exams are currently aligned to this course

Content:

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

Labs

- 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

Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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