Implementing Cisco Service Provider VPN Services (SPVI)

Description

The **Implementing Cisco Service Provider VPN Services (SPVI)** training prepares network professionals to implement and support Virtual Private Network (VPN) solutions on top of an MPLS network infrastructure. The goal is to prepare you to deploy, configure, monitor, operate, and troubleshoot end customer VPN environments built over a common Service Provider MPLS backbone. This training also includes labs to reinforce concepts including MPLS VPN fundamentals, benefits, classifications, components, control plane and data plane operations, VPN routing using Virtual Routing and Forwarding (VRF), Layer 3 MPLS VPNs, Layer 2 MPLS VPNs, IPv6 MPLS VPN implementations, IP Multicast VPNs, shared services VPNs, and solutions for deploying MPLS VPN traversing multiple service providers domains.

This training prepares you for the 300-515 SPVI v1.1 exam. If passed, you earn the Cisco Certified Specialist - Service Provider VPN Services Implementation certification and satisfy the concentration exam requirement for the Cisco Certified Network Professional (CCNP) Service Provider certification. This training also earns you 40 Continuing Education (CE) credits toward recertification.

How you'll benefit

This training will help you:

- Gain valuable skills in reinforcing MPLS VPN fundamental concepts, benefits, and classifications
- Learn to configure optional paths for traffic to avoid network congestion
- Prepare for the 300-515 SPVI v1.1 exam
- Earn 40 CE credits toward recertification

Who should enroll

- Network Administrators
- Network Engineers
- Network Supervisors
- Network Managers
- Network Operations Center (NOC) Personnel
- Network Designers

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- Network Architects
- Channel Partners

Technology areas

- Service Provider

Objectives

- Describe VPN concepts and operation in a service provider environment
- Implement Layer 3 MPLS VPN operations in a service provider environment
- Implement Layer 3 Inter-domain MPLS VPN services traversing multiple service providers
- Implement Layer 3 Multicast MPLS VPN operations in a service provider environment
- Troubleshoot typical issues in Layer 3 MPLS VPN environments
- Implement Layer 2 VPN operations in a service provider environment
- Troubleshoot Layer 2 VPN issues in a service provider network
- Implement MPLS VPN solutions for IPv6 environments
- Troubleshoot MPLS VPN solutions for IPv6 environments

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are found in the follow Cisco Learning Offerings:

- Implementing and Administering Cisco Solutions (CCNA)
- Understanding Cisco Service Provider Network Foundations (SPFNDU)
- Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)

Outline

- Introducing VPN Services
- Troubleshooting MPLS VPN Underlay
- Implementing Layer 3 MPLS VPNs
- Implementing Layer 3 Interdomain MPLS VPNs
- Implementing Layer 3 Multicast MPLS VPNs
- Troubleshooting Intra-AS Layer 3 VPNs
- Implementing Layer 2 VPNs
- Troubleshooting Layer 2 VPNs
- Implementing Layer 3 IPv6 MPLS VPNs
- Troubleshooting Layer 3 IPv6 MPLS VPNs

Lab Outline

- Verify the Service Provider Backbone Operation for MPLS VPN
- Work with VRF Instances
- Troubleshoot the MPLS VPN Backbone
- Configure MP-BGP as the PE-CE Routing Protocol
- Configure and Verify PE-to-CE Routing Requirements
- Enable Shared Services VPN

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- Deploy Internet Access as a VPN Service
- Implement Multicast VPN with mLDP
- Troubleshoot Layer 3 MPLS VPN End-Customer Connectivity
- Implement Different EVPN Solutions
- Troubleshoot EVPN VPWS
- Implement 6VPE

What to expect on the exam

Implementing Cisco Service Provider VPN Services (300-515 SPVI) v1.1 is a 90-minute exam associated with the Cisco Certified Specialist – Service Provider VPN Services Implementation certification and satisfies that concentration exam requirement for the CCNP Service Provider certification.

This exam tests your knowledge of implementing service provider VPN services, including:

- Layer 2
- Layer 3
- IPv6

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Links

- Cisco U. Learning Path
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