

Implementing Cisco Service Provider VPN Services (CPLL-SPVI)

Duration: 180 days

The Implementing Cisco Service Provider VPN Services (SPVI) Learning Path 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 Learning Path 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 Learning Path 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.

Skills You'll Learn

- Understand VPN concepts, benefits, classifications, and MPLS VPN fundamentals in a service provider environment
- Deploy, configure, and verify Layer 3 MPLS VPNs for end-customer environments
- Implement Layer 3 Inter-domain MPLS VPN services traversing multiple service provider domains
- Configure and operate Layer 3 Multicast MPLS VPNs
- Implement and troubleshoot Layer 2 MPLS VPNs, including EVPN and VPWS
- Deploy and troubleshoot MPLS VPN solutions for IPv6 environments, including 6VPE
- Work with VRF instances
- Configure and verify MP-BGP as the PE-CE routing protocol
- Enable and manage shared services VPNs for multiple customers
- Deploy internet access as a VPN service
- Implement multicast VPNs using mLDP
- Troubleshoot common issues in Layer 3 and Layer 2 MPLS VPN environments
- Verify and monitor service provider MPLS VPN backbone operation

Learning Path Objectives

1. SP VPN Services Overview: Explore VPN services and MPLS underlay, troubleshoot common issues, and implement and evaluate peer-to-peer VPN models.
2. IPv4 Layer 3 VPN Services: Develop expertise in Layer 3 MPLS VPN operations by implementing interdomain and multicast services in service provider environments and troubleshooting common Layer 3 MPLS VPN issues.
3. Layer 2 VPN Services: Build knowledge of Layer 2 VPNs by learning to implement Layer 2 VPN operations and troubleshoot issues in a service provider environment.

4. IPv6 Layer 3 VPN Services: Gain insight into VPN solutions for IPv6 environments by learning to implement and troubleshoot MPLS VPN solutions for IPv6.

