Junos Layer 2 VPNs

Duración: 2 Días   **Código del Curso: JL2V**   **Método de Impartición: Curso Remoto (Virtual)**

Temario:

This two-day course is designed to provide students with MPLS-based Layer 2 virtual private network (VPN) knowledge and configuration examples. The course includes an overview of MPLS Layer 2 VPN concepts, such as BGP Layer 2 VPNs, LDP Layer 2 circuits, FEC 129 BGP autodiscovery, virtual private LAN service (VPLS), Ethernet VPN (EVPN), and Inter-AS Layer 2 VPNs. These concepts are put into practice with a series of in-depth hands-on labs, which will allow participants to gain experience in configuring and monitoring Layer 2 VPNs, VPLS, and EVPNs on Junos OS devices utilizing the Junos OS Release 16.2R1.6.

Dirigido a:

Individuals responsible for configuring and monitoring devices running the Junos OS.

Objetivos:

- **After you complete this course you will be able to:**

- Define the term virtual private network

- Describe the business drivers for MPLS VPNs

- Describe the differences between Layer 2 VPNs and Layer 3 VPNs

- List advantages for the use of MPLS Layer 3 VPNs and Layer 2 VPNs

- Describe the roles of a CE device, PE router, and P router in a BGP Layer 2 VPN

- Explain the flow of control traffic and data traffic for a BGP Layer 2 VPN

- Configure a BGP Layer 2 VPN and describe the benefits and requirements of over-provisioning

- Monitor and troubleshoot a BGP Layer 2 VPN

- Explain the BGP Layer 2 VPN scaling mechanisms and route reflection

- Describe the Junos OS BGP Layer 2 VPN CoS support

- Describe the flow of control and data traffic for an LDP Layer 2 circuit

- Configure an LDP Layer 2 circuit

- Monitor and troubleshoot an LDP Layer 2 circuit

- Describe the operation of FEC 129 BGP autodiscovery for Layer 2 VPNs

- Configure a FEC 129 BGP autodiscovery Layer 2 VPN

- Monitor and troubleshoot a FEC 129 BGP autodiscovery for

- Describe the difference between Layer 2 MPLS VPNs and VPLS

- Explain the purpose of the PE device, the CE device, and the P device

- Explain the provisioning of CE and PE routers

- Describe the signaling process of VPLS

- Describe the learning and forwarding process of VPLS

- Describe the potential loops in a VPLS environment

- Configure BGP, LDP, and FEC 129 BGP autodiscovery VPLS

- Troubleshoot VPLS

- Describe the purpose and features of Ethernet VPN

- Configure Ethernet VPN

- Monitor and troubleshoot Ethernet VPN

- Describe the Junos OS support for hierarchical VPN models

- Describe the Junos OS support for Carrier-of-Carriers VPN Option C

- Configure the interprovider VPN Option C

- Describe the Junos OS support for multisegment pseudowire for FEC 129

- Describe and configure circuit cross-connect (CCC)

Layer 2 VPNs

Prerequisitos:

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- Intermediate-level networking knowledge and an understanding of OSPF, IS-IS, BGP, and Junos policy
- Experience configuring MPLS label-switched paths using Junos
- Introduction to the Junos Operating System (IJOS)
- Junos Routing Essentials (JRE)
- Junos Service Provider Switching (JSPX)
- Junos Intermediate Routing (JIR)
- Junos MPLS Fundamentals (JMF)
- JMF - Junos MPLS Fundamentals

Siguientes cursos recomendados:
- JL3V - Junos Layer 3 VPNs

Contenido:

Course Introduction

MPLS VPNs

- MPLS VPNs
- Provider-Provisioned VPNs

BGP Layer 2 VPNs

- Overview of Layer 2 Provider-Provisioned VPNs
- BGP Layer 2 VPN Operational Model: Control Plane
- BGP Layer 2 VPN Operational Model: Data Plane
- Preliminary BGP Layer 2 VPN Configuration
- BGP Layer 2 Configuration
- Monitoring and Troubleshooting BGP Layer 2 VPNs
- Lab: BGP Layer 2 VPNs

Layer 2 VPN Scaling and CoS

- Review of VPN Scaling Mechanisms
- Layer 2 VPNs and CoS
- Lab: Layer 2 VPN Scaling

LDP Layer 2 Circuits

- LDP Layer 2 Circuit Operation
- LDP Layer 2 Circuit Configuration
- LDP Layer 2 Circuit Monitoring and Troubleshooting
- FEC 129 BGP Autodiscovery Layer 2 Circuit Operation
- FEC 129 BGP Autodiscovery Layer 2 Circuit Configuration
- FEC 129 BGP Autodiscovery Monitoring and Troubleshooting
- Lab: LDP Layer 2 Circuit and FEC 129 BGP Autodiscovery

Virtual Private LAN Services

- Layer 2 MPLS VPNs Versus VPLS
- BGP VPLS Control Plane
- BGP VPLS Data Plane
- Learning and Forwarding Process
- Loops

VPLS Configuration

- VPLS Configuration
- VPLS Troubleshooting
- Lab: VPLS

Ethernet VPN (EVPN)

- EVPN Overview
- EVPN Control Plane
- EVPN Operation
- EVPN Configuration
- EVPN Troubleshooting
- Lab: EVPN

Appendix A: Interprovider Backbones for Layer 2 VPNs

- Hierarchical VPN Models
- Carrier-of-Carriers VPN Option C
- Interprovider VPN Option C
- Multisegment Pseudowires
- Lab: Interprovider L2VPNs

Appendix B: Circuit Cross-Connect

- Circuit Cross-Connect

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

info.cursos@globalknowledge.es

www.globalknowledge.com/es-es/

Global Knowledge Network Spain, C/ Retama 7, 6ª planta, 28045 Madrid

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