JUNOS SERVICE PROVIDER SWITCHING (JSPX)

Course Code: 100557

Gain switching knowledge and configuration examples that are most common in a service provider implementation.

The Junos Service Provider Switching course is a two-day course that provides students with intermediate switching knowledge and configuration examples that are most common in a service provider implementation. The course includes an overview of switching concepts such as LANs, Layer 2 address learning, bridging, virtual LANs (VLANs), provider bridging, provider backbone bridging, VLAN translation, spanning-tree protocols, and Ethernet Operation, Administration, and Maintenance (OAM).

This course also covers Junos operating system-specific implementations of Integrated Routing and Bridging (IRB) interfaces, routing instances, virtual switches, load balancing, and port mirroring. Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos Software and device operations.

What You'll Learn

- Introduction to carrier Ethernet
- Describe the function of an Ethernet LAN
- Describe Ethernet frame filtering
- Implement VLAN tagging
- Implement IRB
- Implement a virtual switch
- Describe interconnecting routing instances
- Describe provider bridging
- Configure and monitor provider bridging
- Configure and monitor provider backbone bridging
- Explain the purpose of the Spanning Tree Protocol (STP)
- Configure and monitor the STP, the RSTP, the MSTP, and the VSTP
- Explain the purpose of bridge protocol data unit (BPDU), loop, and root protection
- Describe the basic operation of link fault management (LFM)
- Describe the basic operation of connectivity fault management (CFM)
- Configure and monitor Ethernet OAM
- Describe and configure Ethernet Ring Protection (ERP)

Who Needs to Attend

Network engineers, technical support personnel, reseller support engineers, and others responsible for implementing and/or maintaining the Juniper Networks products covered in this course.

Prerequisites

Students must have basic networking knowledge and an understanding of the OSI model and the TCP/IP protocol suite.

Students should also have attended the Introduction to the Junos Operating System(IJOS) and the Junos Routing Essentials (JRE) courses or have equivalent experience prior to attending this class.

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CLASSROOM LIVE	$1,595 USD	2 Day

Classroom Live Outline

Chapter 1: Course Introduction

Chapter 2: Carrier Ethernet

- Ethernet in the WAN
- Ethernet Standards Organizations
- MX Series Layer 2 Features

Chapter 3: Ethernet Switching and Virtual LANs

- Ethernet LANs
- Bridging
- Configuring and Monitoring VLANs
- Configuring and Monitoring IRB
- Layer 2 Address Learning and Forwarding
- Layer 2 Firewall Filtering

Chapter 4: Virtual Switches

- Routing Instances Overview
- Configuring and Monitoring Virtual Switches
- Interconnecting Routing Instances

Chapter 5: Provider Bridging

- Expanding the Bridged Network
- Provider Bridging
- Configuring and Monitoring Provider Bridging
- Provider Backbone Bridging
- Configuring and Monitoring Provider Backbone Bridging

Chapter 6: Spanning-Tree Protocols

- Overview of STP
- Overview of RSTP
- Overview of MSTP
- Overview of VSTP

- Configuring and Monitoring Spanning-Tree Protocols
- Understanding BPDU, Loop, and Root Protection

Chapter 7: Ethernet OAM

- OAM Overview
- LFM
- CFM
- Configuring and Monitoring OAM

Chapter 8: Ethernet Ring Protection

- ERP Overview
- Configuring and Monitoring ERP
- LAG Overview
- Configuring and Monitoring a LAG

JUNOS SERVICE PROVIDER SWITCHING (JSPX)

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VIRTUAL CLASSROOM LIVE	$1,900 USD	2 Day

Virtual Classroom Live Outline

Chapter 1: Course Introduction

Chapter 2: Carrier Ethernet

- Ethernet in the WAN
- Ethernet Standards Organizations
- MX Series Layer 2 Features

Chapter 3: Ethernet Switching and Virtual LANs

- Ethernet LANs
- Bridging
- Configuring and Monitoring VLANs
- Configuring and Monitoring IRB
- Layer 2 Address Learning and Forwarding
- Layer 2 Firewall Filtering

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- ERP Overview
- Configuring and Monitoring ERP
- LAG Overview
- Configuring and Monitoring a LAG

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