
Junos Enterprise Switching

Duration: 2 Days Course Code: JEX

Overview:

Junos Enterprise Switching is a two-day course that provides students with introductory switching knowledge and configuration examples. This course includes an overview of switching concepts and operations, virtual LANs (VLANs), the Spanning Tree Protocol (STP), port and device security features, and high availability (HA) features.

Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos operating system and in monitoring device operations. This course uses Juniper Networks EX Series Ethernet Switches for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running the Junos OS. This course is based on the Junos OS Release 12.2R1.8.

Target Audience:

This course benefits individuals responsible for configuring and monitoring EX Series switches.

Objectives:

After you complete this course you will be able to:

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| ■ List the benefits of implementing switched LANs. | ■ List some advantages of using RSTP over STP. |
| ■ Describe transparent bridging concepts and operations. | ■ Configure and monitor RSTP. |
| ■ Describe terms and design considerations for switched LANs. | ■ Describe the bridge protocol data unit (BPDU), Loop, and Root protection features. |
| ■ List enterprise platforms that support Layer 2 switching. | ■ Configure and monitor the BPDU, Loop, and Root protection features. |
| ■ Configure interfaces for Layer 2 switching operations. | ■ List and describe various port security features. |
| ■ Display and interpret the Ethernet switching table. | ■ Configure and monitor port security features. |
| ■ Explain the concept of a VLAN. | ■ Describe the storm control feature. |
| ■ Describe access and trunk port modes. | ■ Configure and monitor storm control. |
| ■ Configure and monitor VLANs. | ■ Describe firewall filter support for EX Series Ethernet Switches. |
| ■ Describe voice VLAN and native VLAN concepts. | ■ Implement and monitor the effects of a firewall filter. |
| ■ Explain inter-VLAN routing operations. | ■ List and describe some features that promote high availability. |
| ■ Configure and monitor inter-VLAN routing. | ■ Configure and monitor high availability features. |
| ■ Explain when a spanning tree is required. | ■ Describe the basic concepts and operational details of a virtual chassis. |
| ■ Describe STP and Rapid Spanning Tree Protocol (RSTP) operations. | ■ Implement a virtual chassis with multiple EX4200 switches. |
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Prerequisites:

Attendees should meet the following prerequisites:

Students should have basic networking knowledge and an

Testing and Certification

recommended preparation for exam(s):

- Exam code: JN0-343 -Juniper Networks Certified Internet Specialist

understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite. Students should also attend the Introduction to the Junos Operating System (IJOS) and the Junos Routing Essentials (JRE) courses prior to attending this class.

(JNCIS-ENT)

Follow-on-Courses:

The following courses are recommended for further study:

- Advanced Junos Enterprise Routing (AJER)
- Advanced Junos Enterprise Switching (AJEX)

Content:

Layer 2 Switching

- Ethernet Bridging Basics
- Terminology and Design Considerations
- Overview of Enterprise Switching Platforms
- Enabling and Monitoring Layer 2 Switching Operations
- Lab 1: Implementing Layer 2 Switching

Virtual Networks

- Overview of VLANs
- Configuring and Monitoring VLANs
- Voice VLAN
- Native VLAN
- Routed VLAN Interfaces
- Lab 2: Implementing Virtual Networks

Spanning Tree

- Spanning Tree Protocol
- Rapid Spanning Tree Protocol
- Configuring and Monitoring STP and RSTP
- Protection Features: BPDU Protection
- Protection Features: Loop Protection
- Protection Features: Root Protection
- Lab 3: Implementing Spanning Tree

Port Security

- MAC Limiting
- DHCP Snooping
- Dynamic ARP Inspection (DAI)
- IP Source Guard
- Lab 4: Implementing Port Security

Device Security and Firewall Filters

- Storm Control
- Firewall Filters
- Lab 5: Implementing Storm Control and Firewall Filters

High Availability

- Overview of High Availability Networks
- Link Aggregation Groups
- Redundant Trunk Groups
- Lab 6: Configuring LAGs and RTG
- Overview of Virtual Chassis
- Configuring and Monitoring a Virtual Chassis
- Lab 7: Implementing a Virtual Chassis System

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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