Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Junos Enterprise Switching (JEX)

CODE:	LENGTH:	PRICE:
JUN_JEX	16 Hours (2 days)	£1,495.00

Description

This two-day course is designed to provide students with intermediate switching knowledge and configuration examples using Junos Enhanced
Layer 2 Software. This course includes an overview of switching concepts and operations, virtual LANs (VLANs), the Rapid Spanning Tree Protocol (RSTP), 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 OS and in monitoring device
operations. This course uses Juniper Networks EX4300-24T Series Ethernet Switches for the hands-on components, 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 Junos OS
Release 21.4R3.
Course Level
Junos Enterprise Switching (JEX) is an intermediate-level course.
Relevant Juniper Product
• EX Series • QFX Series

Objectives

• List the benefits of implementing switched LANs.
• Describe transparent bridging concepts and operations.
• Describe terms and design considerations for switched LANs.
• List enterprise platforms that support Layer 2 switching.
• Configure interfaces for Layer 2 switching operations.
• Display and interpret the Ethernet switching table.
• Explain the concept of a VLAN.
• Describe access and trunk port modes.
• Configure and monitor VLANs.
• Describe voice VLAN and native VLAN concepts.
• Explain inter-VLAN routing operations.
• Configure and monitor inter-VLAN routing.
• Explain when a spanning tree is required.
• Describe STP and Rapid Spanning Tree Protocol (RSTP) operations.
• List some advantages of using RSTP over STP.
• Configure and monitor RSTP.
• Describe the bridge protocol data unit (BPDU), loop, and root protection features.
• Configure and monitor the BPDU, loop, and root protection features.
• List and describe various port security features.
• Configure and monitor port security features.
• Describe the storm control feature.
• Configure and monitor storm control.
• Describe firewall filter support for EX Series Ethernet Switches.
• Implement and monitor the effects of a firewall filter.
• List and describe some features that promote high availability.
• Configure and monitor high availability features.
• Describe the basic concepts and operational details of a virtual chassis.
• Implement a virtual chassis with multiple EX4300 switches.
• Explain the concepts of Multiple Spanning Tree Protocol (MSTP).
• Configure and monitor MSTP.
• Discover, configure, and troubleshoot EX Series switches using Junos Space Network Director.

Audience

Individuals responsible for configuring and monitoring EX Series switches running Junos OS.

Prerequisites

- Basic networking knowledge and an understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite
- Complete the Introduction to the Junos Operating System (IJOS) course, or equivalent knowledge

Programme

DAY 1
Module 1 Layer 2 Switching
• Describe Ethernet bridging basics
• Configure and monitor Layer 2 switching operations
Lab 1: Implementing Layer 2 Switching
Module 2 Switching Design Considerations
• Explain switching terminologies and design considerations
• Describe various Enterprise Switching platforms
Module 3 Implementing VLANs
• Provide an overview of VLANs
• Configuring and monitoring VLANs
Module 4 Implementing VLAN Features
• Describe voice LAN concepts and operations
• Describe native LAN concepts and operations
• Describe and implement IRB interfaces
Lab 2: Implementing Virtual Networks
Module 5 Spanning Tree Overview
• Explain the operations of spanning tree protocol
• Explain the operations of rapid spanning tree protocol
Module 6 Deploy Spanning Tree
• Configure and monitor STP and RSTP
Module 7 Spanning Tree Protection Features
• Explain and configure BPDU protection on spanning tree
• Explain and configure root protection on spanning tree
• Explain and configure loop protection on spanning tree
Lab 3: Implementing Spanning Tree
DAY 2
Module 8 LAGs and RTGs
• Describe, configure, and monitor LAGs
• Describe, configure, and monitor RTGs
Lab 4: Implementing High Availability Features
Module 9 Device Security
• Describe, configure, and monitor the storm control security features
Module 10 Firewall Filters
• Describe, implement, and monitor the firewall filters
Lab 5: Implementing Storm Control and Firewall Filters
Module 11 Port Security—MAC Limiting, MAC Learning, and MACsec
• Describe, configure, and monitor MAC limiting
• Explain and configure persistent MAC learning
• Describe, configure, and monitor MACsec
Module 12 Port Security—DHCP Snooping, Dynamic ARP Inspection, and IP Source Guard
• Describe, configure, and monitor DHCP snooping
• Explain and configure persistent dynamic ARP inspection
• Describe, configure, and monitor IP source guard
Lab 6: Implementing Port Security
Module 13 High Availability—GRES, NSR, and NSB
• Overview of high availability networks
• Describe graceful Routing Engine switchover
• Explain nonstop active routing
• Describe nonstop bridging
Module 14 Virtual Chassis
• Describe the operational details of Virtual Chassis

Module 15 Deploy Virtual Chassis
• Configure and monitor a Virtual Chassis
Lab 7: Implementing Virtual Chassis Systems
SELF-STUDY MODULES
Module 16 Juniper Mist Wired Assurance—Overview
• Provide an overview of Juniper Mist wired assurance
• Describe the provisioning options and how they work
Module 17 Juniper Mist Wired Assurance, Day One—Deployment and Configuration
• Describe the deployment options and how they work
• Describe the configuration process
• List wired assurance SLEs

Follow on courses

Recommended Next Course

- Advanced Junos Enterprise Switching (AJEX)

Test and Certification

JNCIS-ENT exam topics are based on the content of the recommended instructor-led training courses, as well as the additional resources.

- Exam code: JN0-348
- Written exam
- Administered by Pearson VUE
- Exam length: 90 minutes
- Exam type: 65 multiple-choice questions
- Pass/fail status is available immediately
- Software Release:
  - Junos 18.4
  - Junos Space Network Director 3.1

The JNCIS-ENT certification is valid for three years.
Exams can be purchased and scheduled at
https://home.pearsonvue.com/junipernetworks/

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
01 Mar 2027	Virtual Classroom	GMT	English	Instructor Led Online		£1,495.00
10 May 2027	Virtual Classroom	BST	English	Instructor Led Online		£1,495.00
28 Jun 2027	Virtual Classroom	BST	English	Instructor Led Online		£1,495.00
27 Sep 2027	Virtual Classroom	BST	English	Instructor Led Online		£1,495.00
22 Nov 2027	Virtual Classroom	GMT	English	Instructor Led Online		£1,495.00

Additional Information

This training is also available as onsite training. Please contact us to find out more.