



JUNIPER SWITCHING – ENTERPRISE SWITCHING

Juniper Networks Educational Services helps ensure that you have the knowledge and skills to deploy and maintain cost-effective, high-performance networks, as well as demonstrate your technical expertise and keep you ahead of the technology curve. Our technical education courses are designed to give you the technical detail and capabilities you require to ensure that your network operates securely and at peak performance.

Operating Juniper Networks Switches in the Enterprise (OJXE)

JNCIA-EX = OJXE

Operating Juniper Networks Switches in the Enterprise

Course Overview

This four-day course discusses the configuration of Juniper Networks EX-series switches in a typical network environment. Key topics include a platform overview, user configuration interfaces, initial and secondary system configuration tasks, operational monitoring of an EX-series switch, Ethernet switching concepts, spanning tree protocol, inter-VLAN routing, switching security protocols and features, IP telephony features, and design and implementation considerations.

Objectives

- Describe common deployment options for the EX-series switches.
- Perform operational monitoring tasks typically associated with EX-series switches.
- Install and configure an EX-series switch in a network.
- Form a Virtual Chassis system by connecting multiple EX-4200 switches.
- Configure and monitor virtual local area networks (VLANs).
- Create a loop-free network environment using the spanning tree protocol (STP).
- Implement inter-VLAN routing using static and dynamic methods.
- Define and apply routing policy and firewall filters.
- Secure a switch port using available port access security features.
- Configure and monitor IP telephony features such as PoE, voice VLAN, and LLDP.
- Design and implement a Layer 2 network using EX-series switches.

Prerequisites

- The OJXE prerequisite is a basic understanding of the TCP/IP protocols.
- While not required, familiarity with the command-line interface of a switching platform or UNIX system is helpful.

Intended Audience

The primary audiences for this course are end users of EX-series switches, which include the following:

- Network engineers;
- Support personnel;
- Reseller support; and
- Others responsible for implementing Juniper Networks enterprise switching products.

Course Level

This is an introductory-level course

Course Contents

Chapter 1: Course Introduction

Chapter 2: Introduction to Juniper Networks Enterprise Switches

- Overview of Enterprise Switching Platforms
- Architecture and Packet Flow
- Network Management Options

Chapter 3: User Interface Options

- User Interface Options
- Active and Candidate Configurations
- Using the J-Web Graphical User Interface
- Using the JUNOS Software Command-Line Interface
- Lab 1: User Interface Options

Chapter 4: Installation and Initial Configuration

- Installation Guidelines
- Rescue and Factory-Default Configurations
- Configuration Checklist
- Initial Configuration Options
- Lab 2: Initial Configuration

Chapter 5: Secondary System Configuration

- User Configuration and Authentication
- System Logging and Tracing
- Network Time Protocol
- Archiving Configurations User Configuration and Authentication



- System Logging and Tracing
- Network Time Protocol
- Archiving Configurations
- Dynamic Host Configuration Protocol
- Simple Network Management Protocol
- Lab 3: Secondary System Configuration
- Dynamic Host Configuration Protocol
- Simple Network Management Protocol
- Lab 3: Secondary System Configuration

Chapter 6: Operational Monitoring and Maintenance

- Monitoring Platform Operation
- Network Utilities
- Maintaining JUNOS Software
- File System Maintenance and Password Recovery
- Lab 4: Operational Monitoring

Chapter 7: Virtual Chassis

- Virtual Chassis Overview
- Deployment Options and Installation
- Management and Operation
- Lab 5: Virtual Chassis

Chapter 8: Interface Support, Configuration, and Monitoring

- Interface Support and Configuration
- Monitoring Interface Operation
- Interface Features
- Lab 6: Interface Configuration

Chapter 9: Ethernet Switching and Virtual LANs

- Ethernet LANs
- Bridging Basics
- VLANs
- Configuring and Monitoring VLANs
- Routed VLAN Interface
- Lab 7: Ethernet Switching and VLANs

Chapter 10: Spanning Tree Protocol

- Overview of Spanning Tree Protocol
- Overview of Rapid Spanning Tree Protocol
- Overview of Multiple Spanning Tree Protocol
- Configuring and Monitoring STP, RSTP, and MSTP
- Overview of Redundant Trunk Group
- Configuring and Monitoring Redundant Trunk Group
- Lab 8: Spanning Tree

Chapter 11: Inter-VLAN Routing

- Overview of Inter-VLAN Routing
- Routing Support on EX-series Switches
- Routing Table and Route Preference
- Static Routing
- Lab 9a: Static Routing
- OSPF
- Lab 9b: OSPF
- Virtual Router Redundancy Protocol
- Lab 9c: VRRP

Chapter 12: Routing Policy and Firewall Filters

- Policy Framework
- Routing Policy Overview
- Configuring and Monitoring Routing Policy
- Firewall Filter Overview
- Configuring and Monitoring Firewall Filters
- Lab 10: Routing Policy and ACLs

Chapter 13: Switching Security

- MAC Limiting
- DHCP Snooping
- Dynamic ARP Inspection
- 802.1X
- Lab 11: Switching Security

Chapter 14: IP Telephony Services

- Power over Ethernet
- Voice VLAN
- LLDP
- LLDP-MED
- Lab 12: IP Telephony Services
- Chapter 15: Design and Implementation of Layer 2 Networks
- Network Development Life Cycle
- Network Design Assistance
- Implementation Examples
- Case Study
- Lab 13: Design and Implementation

Cost AUD \$2,499 inc. GST



Certification: (JNCIA-EX)

Juniper Networks Certified Internet Associate

Exam code: JNO-400

Exam: Prometric testing www.2test.com

Exam length: 90 minutes

Exam type: 60 multiple-choice questions

Passing grade: 70%

Recommended Training: OJXE

Available Dates: www.crystalecho.com

Terms and Conditions

- Students will be required to supply their own notebook PC with network card and serial port
- 50% refunded if cancelled in less than 10 working days before course
- 25% refunded if cancelled in less than 5 working days before course

