

SRX BOOTCAMP

Length: Five days

Course Overview

This five-day bootcamp discusses the basic operations Junos Software, Junos Routing Essentials, Junos Security Platforms. Key topics include user interface options with a heavy focus on the command-line interface (CLI), configuration tasks typically associated with the initial setup of devices, interface configuration basics with configuration examples, secondary system configuration, and the basics of operational monitoring and maintenance of devices running Junos OS. Foundational routing knowledge and configuration examples and includes an overview of general routing concepts, routing policy and firewall filters, and class of service (CoS). This course also includes configuration, operation, and implementation of Junos security platforms in a typical network environment.

Objectives

After successfully completing this course, you should be able to:

- Describe the basic design architecture of Junos OS;
- Identify and provide a brief overview of devices running Junos OS;
- Navigate within the Junos OS CLI;
- Perform tasks within the CLI operational and configuration modes;
- Restore a device running Junos OS to its factory-default state;
- Perform initial configuration tasks;
- Configure and monitor network interfaces;
- Describe user configuration and authentication options;
- Perform secondary configuration tasks for features and services such as syslog and tracing, Network Time Protocol (NTP), configuration archival, and SNMP;
- Monitor basic operation for Junos OS and devices;
- Identify and use network utilities;
- Upgrade the Junos OS; and
- Perform file system maintenance and password recovery on a device running Junos OS.
- Explain basic routing operations and concepts;
- View and describe routing and forwarding tables;
- Configure and monitor static routing;
- Configure and monitor OSPF;
- Describe the framework for routing policy and firewall filters;
- Explain the evaluation of routing policy and firewall filters;
- Identify instances where you might use routing policy;
- Write and apply a routing policy;
- Identify instances where you might use firewall filters;
- Write and apply a firewall filter;
- Describe the operation and configuration for unicast reverse path forwarding (RPF);
- Explain the purpose and benefits of class of service (CoS);
- List and explain the various components of CoS; and
- Implement and verify proper operation of CoS.
- Describe traditional routing and security and the current trends in internetworking;
- Provide an overview of Junos security platforms and software architecture;

- More Information at <http://www.nexuminc.com/training/juniper/srx-bootcamp->



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- Describe the logical packet flow and session creation performed by Junos security platforms;
- Describe, configure, and monitor zones;
- Describe, configure, and monitor security policies;
- Describe, configure, and monitor firewall user authentication;
- Describe various types of network attacks;
- Configure and monitor SCREEN options to prevent network attacks;
- Explain, implement, and monitor NAT on Junos security platforms;
- Explain the purpose and mechanics of IPsec VPNs;
- Implement and monitor policy-based and route-based IPsec VPNs;
- Utilize and update the IDP signature database on JUNOS security platforms;
- Configure and monitor IDP policy with policy templates; and
- Describe, configure, and monitor high availability chassis clusters.

Intended Audience

This course benefits individuals responsible for configuring and monitoring devices running Junos OS and SRX Series Services Gateways. These operators include network engineers, administrators, support personnel, and reseller support personnel.

Prerequisites

- Students should have basic networking knowledge and an understanding of the OSI model and the TCP/IP protocol suite. Students should also either attend the Introduction to Junos OS (IJS) and JUNOS Routing Essentials (JRE) courses prior to attending this class, or have equivalent experience with Junos OS..

Course Contents

Day 1

Chapter 1: Course Introduction

Chapter 2: Junos OS Fundamentals

- Junos OS
- Traffic Processing
- Overview of Junos Platforms

Chapter 3: User Interface Options

- User Interface Options
- The Junos OS CLI
- The J-Web GUI
- Lab 1: User Interface Options

Chapter 4: Initial Configuration

- Factory-Default Configuration
- Initial Configuration

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- Interface Configuration
- Lab 2: Initial Configuration

Chapter 5: Secondary System Configuration

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

Chapter 6: Operational Monitoring and Maintenance

- Monitoring Platform and Interface Operation
- Network Utilities
- Maintaining Junos OS
- Password Recovery
- Lab 4: Operational Monitoring

Day 2

Chapter 1: Course Introduction

Chapter 2: Routing Fundamentals

- Routing Concepts
- Static Routing
- Dynamic Routing
- Lab 1: Routing Fundamentals

Chapter 3: Routing Policy and Firewall Filters

- Routing Policy Overview
- Case Study: Routing Policy
- Lab 2: Routing Policy
- Firewall Filters Overview
- Case Study: Firewall Filters
- Unicast Reverse-Path-Forwarding Checks
- Lab 3: Firewall Filters

Chapter 4: Class of Service

- CoS Overview
- Traffic Classification
- Traffic Queuing
- Traffic Scheduling
- Case Study: CoS

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- Lab 4: Class of Service

Day 3

Chapter 1: Course Introduction

Chapter 2: Introduction to Junos security platforms

- Traditional Routing
- Traditional Security
- Breaking the Tradition
- Junos OS Architecture

Chapter 3: Zones

- The Definition of Zones
- Zone Configuration
- Monitoring Security Zones
- Lab 1: Configuring and Monitoring Zones

Chapter 4: Security Policies

- Security Policy Overview
- Policy Components
- Verifying Policy Operation
- Policy Scheduling and Rematching
- Policy Case Study
- Lab 2: Security Policies

Day 4

Chapter 5: Firewall User Authentication

- Firewall User Authentication Overview
- Pass-Through Authentication
- Web Authentication
- Client Groups
- Using External Authentication Servers
- Verifying Firewall User Authentication
- Lab 3: Configuring Firewall Authentication

Chapter 6: SCREEN Options

- Multilayer Network Protection
- Stages and Types of Attacks
- Using Junos OS SCREEN Options
- Applying and Monitoring SCREEN Options
- Lab 4: Implementing SCREEN Options

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Chapter 7: Network Address Translation

- NAT Overview
- Destination NAT Operation and Configuration
- Source NAT Operation and Configuration
- Proxy ARP
- Monitoring and Verifying NAT Operation
- Lab 5: Network Address Translation

Day 5

Chapter 8: IPsec VPNs

- VPN Types
- Secure VPN Requirements
- IPsec Details
- Configuration of IPsec VPNs
- IPsec VPN Monitoring
- Lab 6: Implementing IPsec VPNs

Chapter 9: Introduction to Intrusion Detection and Prevention

- Introduction to Junos OS IDP
- IDP Policy Components and Configuration
- Attack and Signature Database
- Case Study: Applying the Recommended IDP Policy
- Monitoring IDP Operation
- Lab 7: Implementing IDP

Chapter 10: High Availability Clustering

- High Availability Overview
- Chassis Cluster Components
- Chassis Cluster Operation
- Chassis Cluster Configuration
- Chassis Cluster Monitoring
- Lab 8: Implementing Chassis Clustering