

Advanced Junos Security (AJSEC)

COURSE OVERVIEW:

This five-day course, which is designed to build off the current Junos Security (JSEC) offering, delves deeper into Junos security.

Through demonstrations and hands-on labs, you will gain experience in configuring and monitoring the advanced Junos OS security features with advanced coverage of virtualization, AppSecure, advanced Network Address Translation (NAT) deployments, Layer 2 security, and Sky ATP. This course uses Juniper Networks SRX Series Services Gateways for the hands-on component. This course is based on Junos OS Release 15.1X49-D70.3 and Junos Space Security Director 16.1.

WHO WILL BENEFIT FROM THIS COURSE?

This course benefits individuals responsible for implementing, monitoring, and troubleshooting Junos security components.

PREREQUISITES:

Students should have a strong level of TCP/IP networking and security knowledge. Students should also attend the Introduction to the Junos Operating System (IJOS) and Junos Security (JSEC) courses prior to attending this class.

COURSE OBJECTIVES:

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

- Demonstrate understanding of concepts covered in the prerequisite Junos Security course.
- Describe the various forms of security supported by the Junos OS.
- Implement features of the AppSecure suite, including AppID, AppFW, AppTrack, AppQoS, and SSL Proxy.
- Configure custom application signatures.
- Describe Junos security handling at Layer 2 versus Layer 3.
- Implement next generation Layer 2 security features.
- Demonstrate understanding of Logical Systems (LSYS).
- Use Junos debugging tools to analyze traffic flows and identify traffic processing patterns and problems.
- Describe Junos routing instance types used for virtualization.
- Implement virtual routing instances in a security setting.
- Describe and configure route sharing between routing instances using logical tunnel interfaces.
- Utilize Junos tools for troubleshooting Junos security implementations.
- Perform successful troubleshooting of some common Junos security issues.
- Describe and discuss Sky ATP and its function in the network.
- Describe and configure UTM functions.
- Discuss IPS and its function in the network.
- Implement IPS policy.
- Describe and implement SDSN in a network.
- Describe and implement user role firewall in a network.
- Demonstrate the understanding of integrated user firewall.

COURSE OUTLINE:

Day 1

Chapter 1: Course Introduction

Chapter 2: Junos Layer 2 Packet Handling and Security Features

- Transparent Mode Security
- Secure Wire
- Layer 2 Next Generation Ethernet Switching
- MACsec
- Lab 2: Implementing Layer 2 Security

Chapter 3: Virtualization

- Virtualization Overview
- Routing Instances
- Logical Systems
- Lab 3: Implementing Junos Virtual Routing

Chapter 4: AppSecure Theory

- AppSecure Overview
- AppID Overview
- AppID Techniques
- Application System Cache
- Custom Application Signatures

Day 2

Chapter 5: AppSecure Implementation

- AppTrack
- AppFW
- AppQoS
- APBR
- SSL Proxy
- Lab 4: Implementing AppSecure

Chapter 6: Working with Log Director

- Log Director Overview
- Log Director Components
- Installing and setting up Log Director
- Clustering with the Log Concentrator VM
- Administrating Log Director
- Lab 5: Deploying Log Director

Day 3

Chapter 7: Sky ATP Theory

- Sky ATP Overview
- Monitoring Sky ATP
- Analysis and Detection of Malware

Chapter 8: Sky ATP Implementation

- Configuring Sky ATP
- Installing Sky ATP
- Analysis and detection of Malware
- Infected Host Case Study
- Lab 6: Instructor Led Sky ATP Demo

Chapter 9: Implementing UTM

- UTM Overview
- AntiSpam
- AntiVirus
- Content and Web Filtering
- Lab 7: Implementing UTM

Day 4

Chapter 10: Introduction to IPS

- IPS Overview
- Network Asset Protection
- Intrusion Attack Methods
- Intrusion Prevention Systems
- IPS Inspection Walkthrough

Chapter 11: IPS Policy and Configuration

- SRX IPS Requirements
- IPS Operation Modes
- Basic IPS Policy Review
- IPS Rulebase Operations
- Lab 8: Implementing Basic IPS Policy

Day 5

Chapter 12: SDSN

- SDSN Overview
- SDSN Components
- SDSN Configuration
- Policy Enforcer Troubleshooting
- SDSN Use Cases
- Lab 9: Implementing SDSN

Chapter 13: Enforcement, Monitoring, and Reporting

- User Role Firewall and Integrated User Firewall Overview
- User Role Firewall Implementation
- Monitoring User Role Firewall
- Integrated User Firewall Implementation
- Monitoring Integrated User Firewall
- Lab 10: Configure User Role Firewall and Integrated User Firewall

Chapter 14: Troubleshooting Junos Security

- Troubleshooting Methodology
- Troubleshooting Tools
- Identifying IPsec Issues
- Lab 11: Performing Security Troubleshooting Techniques
- Appendix A: SRX Series Hardware and Interfaces
- Branch SRX Platform Overview
- High End SRX Platform Overview
- SRX Traffic Flow and Distribution
- SRX Interfaces

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