



---

## Junos Security

**Duration: 5 Days**    **Course Code: JSEC**

---

### Overview:

This five-day course covers the configuration, operation, and implementation of SRX Series Services Gateways in a typical network environment. Key topics within this course include security technologies such as security zones, security policies, Network Address Translation (NAT), IP Security (IPsec), and high availability clusters, as well as details pertaining to basic implementation, configuration, management, and troubleshooting.

Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos OS and monitoring device operations. This course uses Juniper Networks SRX Series Services Gateways and Security Director for the hands-on component. This course is based on Junos OS Release 15.1X49-D70.3 and Junos Space Security Director 16.1.

---

### Target Audience:

The course benefits operators of SRX Series devices. These operators include network engineers, administrators, support personnel, and reseller support personnel.

---

### Objectives:

- **After successfully completing this course, you should be able to perform the following:**
  - Describe traditional routing and security and the current trends in internetworking.
  - Provide an overview of SRX Series devices and software architecture.
  - Describe the logical packet flow and session creation performed by SRX Series devices.
  - Describe, configure, and monitor zones.
  - Describe, configure, and monitor security policies.
  - Describe, configure, and monitor user firewall authentication
  - Describe various types of network attacks.
  - Configure and monitor Screen options to prevent network attacks.
  - Explain, implement, and monitor NAT, as implemented on Junos security platforms.
  - Explain the purpose and mechanics of IP Security (IPsec) virtual private networks (VPNs).
  - Implement and monitor policy-based and route-based IPsec VPNs.
  - Describe, configure, and monitor high availability chassis clusters.
  - Describe how to deploy and manage vSRX.
  - Describe and configure Group VPNs
  - Describe and configure ADVPNs.
  - Troubleshoot chassis clusters, IPsec VPNs, zones, and Security Policies
- 

### Prerequisites:

Students should have basic networking knowledge and an 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) course, or have equivalent experience prior to attending this class.

---

## Content:

### Chapter 1: Course Introduction

### Chapter 2: Introduction to Junos Security

- Traditional Routing
- Traditional Security
- The Junos OS Architecture

### Chapter 3: Zones

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

### Chapter 4: Security Policies

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

### Chapter 5: Advanced Policy Options

- Session Management
- Junos ALGs
- Policy Scheduling
- Logging

### Chapter 6: Troubleshooting Security Zones and Policies

- Troubleshoot Security Zones
- Troubleshoot Security Policies
- Case Studies
- Lab 3: Troubleshooting Security Zones and Policies

### Chapter 7: Network Address Translation

- NAT Overview
- Source NAT Operation and Configuration
- Destination NAT Operation and Configuration
- Static NAT Operation and Configuration
- Proxy ARP
- Monitoring and Verifying NAT Operation
- Lab 4: Network Address Translation

### Chapter 8: Advanced NAT Concepts

- NAT Interaction with Policy and ALGs
- DNS Doctoring
- Cone NAT
- Multi-Tenant NAT
- IPv4-to-IPv6 NAT
- Advanced NAT Scenarios
- Lab 5: Advanced NAT Implementations

### Chapter 9: IPsec VPN Concepts

- VPN Types
- Secure VPN Requirements
- IPsec Overview
- IPsec Details

### Chapter 10: IPsec VPN Implementation

- Configuration of IPsec VPNs
- IPsec VPN Case Studies
- Monitoring IPsec VPN
- Traffic Selectors
- Lab 6: Implementing IPsec VPNs

### Chapter 11: Group VPNs

- Group VPN Overview
- GDOI Protocol
- Group VPN Configuration and Monitoring
- Lab 7: Implementing Group VPNs

### Chapter 12: ADVPNs

- ADVPN Overview
- ADVPN Member Roles
- Shortcut Termination
- Routing with ADVPNs
- IKEv2
- ADVPN Implementation
- Lab 8: Implementing ADVPNs

### Chapter 13: IPsec VPN Case Studies and Solutions

- Routing over VPNs
- NAT with IPsec
- Enterprise VPN Deployment Best Practices
- Lab 9: Implementing Routing over VPN Tunnels and IPsec Best Practices

### Chapter 14: Troubleshooting IPsec

- IKE Phase 1 Troubleshooting
- IKE Phase 2 Troubleshooting
- Case Studies
- Lab 10: Troubleshooting IPsec

### Chapter 15: Virtualized SRX

- vSRX Overview
- Installation of vSRX
- Chassis Clustering
- Deployment Scenarios and Use Cases
- Automated Deployments Options
- AWS Deployment Scenarios

### Chapter 16: High Availability Clustering Theory

- High Availability Overview
- Chassis Cluster Components
- Advanced Chassis Cluster Topics

### Chapter 17: High Availability Clustering Implementation

- Chassis Cluster Configuration
- Chassis Cluster Monitoring
- Advanced Chassis Cluster Topics
- Lab 12: Implementing High Availability Techniques

### Chapter 18: Troubleshooting Chassis Clusters

- Chassis Cluster Troubleshooting
- Case Studies
- IDP Policy Components and Configuration
- Lab 13: Troubleshooting Chassis Clusters

### Appendix A: SRX Series Hardware and Interfaces

- Branch SRX Platform Overview
- High-End SRX Platform Overview
- SRX Traffic Flow and Distribution
- SRX Interfaces

## Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

[training@globalknowledge.ae](mailto:training@globalknowledge.ae)

[www.globalknowledge.ae](http://www.globalknowledge.ae)

Global Knowledge, Dubai Knowledge Village, Block 2A, First Floor, Office F68, Dubai, UAE