Global Knowledge ™

Junos Security

Duration: 5 Days   Course Code: JSEC   Version: 17.a

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 zones, security policies, Network Address Translation (NAT), IPsec VPNs, and chassis clustering. Through demonstrations and hands-on labs, students will gain experience in configuring the Junos OS and monitoring device operations of Junos security devices. This course uses Juniper Networks SRX Series Services Gateways for the primary hands-on component. This course is based on Junos OS Release 17.4R1.16 and the vSRX virtual appliance.

Target Audience:

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

Objectives:

- Describe traditional routing and security

- Provide an overview of SRX Series Services Gateway devices and the Junos OS software architecture

- Describe the logical packet flow and session creation performed by SRX Series Services Gateway devices

- Describe, configure, and monitor zones

- Describe, configure, and monitor security policies

- Troubleshoot security zones and policies

- Describe, configure, 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 route-based IPsec VPNs

- Implement and monitor Hub-and-Spoke VPNs, Group VPNs, and ADVPNs

- Troubleshoot IPsec VPNs

- Describe, configure, and monitor chassis clusters

- Troubleshoot chassis clusters

Prerequisites:

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Content:

1. COURSE INTRODUCTION:

2 .Introduction to Junos Security:

- Traditional Routing and Security
- Architecture Overview of Junos Security Devices
- Logical Packet Flow through Junos Security Devices
- J-Web Overview

3. Zones and Screen Options:

- Zones Overview
- Zone Configuration
- Monitoring Security Zones
- Configuring Screen Options
- Screen Options Case Study
- LAB 1: Zones and Screen Options

- Security Policy Overview
- Policy Components
- Security Policy Configuration in J-Web
- Policy Case Study (CLI)
- Policy Case Study (J-Web)
- LAB 2: Security Policies

5 .Advanced Security Policy:

- Session Management
- Junos ALGs
- Policy Scheduling
- Logging
- Advanced Security Policy
- Lab 3: Advanced Policy Options

6 .Troubleshooting Zones and Policies:

- General Troubleshooting for Junos Devices
- Troubleshooting Tools
- Troubleshooting Zones and Policies
- Zone and Policy Case Studies
- Lab 4: Troubleshooting Security Zones and Policies

- NAT Overview
- Source NAT
- Destination NAT
- Static NAT
- Proxy ARP
- Lab 5: Network Address Translation

8 .Advanced NAT:

- Persistent NAT
- DNS Doctoring
- IPv6 with NAT
- Advanced NAT Scenarios
- Troubleshooting NAT
- Lab 6: Advanced NAT

Day 3 :

- VPN Types
- Secure VPN Requirements
- IPsec Tunnel Establishment
- IPsec Traffic Processing

- IPsec VPN Configuration
- IPsec VPN Case Study
- Proxy IDs and Traffic Selectors
- Monitoring IPsec VPNs
- Lab 7: Implementing IPsec VPNs

11 .Hub-and-Spoke VPNs:

- Hub-and-Spoke VPN Overview
- Hub-and-Spoke Configuration and Monitoring
- Lab 8: Hub-and-Spoke VPNs

12. Group VPNs:

- Group VPN Overview
- Group VPN Configuration and Monitoring
- Lab 9: Group VPNs

Day 4 :

13 .PKI and ADVPNs:

- Public Key Infrastructure Overview
- PKI Configuration
- ADVPN Overview
- ADVPN Configuration and Monitoring
- Lab 10: PKI and ADVPNs

- IPsec Troubleshooting Overview
- Troubleshooting IKE Phase 1 and 2
- IPsec Logging
- IPsec Case Studies
- Lab 12: Troubleshooting IPsec

14 .Advanced IPsec

- NAT with IPsec
- Class of Service with IPsec
- Best Practices
- Routing OSPF over IPsec
- IPsec with Overlapping Addresses
- IPsec with Dynamic Gateway IP Addresses
- Lab 11: Advanced IPsec VPN Solutions

16 ,Chassis Cluster Concepts :

- Chassis Clustering Overview
- Chassis Cluster Components
- Chassis Cluster Operation

- Chassis Cluster Configuration
- Advanced Chassis Cluster Options
- Lab 14: Implementing Chassis Clusters

A SRX Series Hardware :

- Branch SRX Platform Overview
- Mid-Range SRX Platform Overview
- High-End SRX Platform Overview
- SRX Traffic Flow and Distribution

- Troubleshooting Chassis Clusters
- Chassis Cluster Case Studies
- Lab 14: Troubleshooting Chassis Clusters

B Virtual SRX :

- Virtualization Overview
- Network Virtualization and SDN
- Overview of the Virtual SRX
- Deployment Scenarios
- Integration with AWS

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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