Enterprise Computing Solutions - Education Services

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Juniper Service Provider Edge Security (JSPES)

CODE:	LENGTH:	PRICE:
JUN_JSPES	24 Hours (3 dage)	kr 21,200.00

Description

This three-day course discusses edge security concepts for the service provider network.
It discusses security for 5G networks on the main GPRS interfaces.
Key topics include deploying an SRX Series device in different parts of the service provider network, implementing CGNAT, DDoS, malware inspection, command-and-control prevention, IPsec tunnels, 5G security, control plane hardening, and BGP hardening.
Students will gain experience in configuring, testing, and troubleshooting the Junos OS through demonstrations and hands-on labs.
This course is based on Junos OS 21.1R1.11.
The Juniper Service Provider Edge Security (JSPES) is an intermediate-level course.
Relevant Juniper Product
• Junos OS • SRX Series

Objectives

• Define the general security architecture for 4G and 5G networks.
• Configure data plane security protections.
• Explain DoS and DDoS attacks.
• Describe BGP Flowspec in protecting against DDoS attacks.
• Explain the Corero solution for DDoS attacks.
• Describe the use of stateful firewalls.
• Explain the use of ALGs in stateful security firewalls.
• Explain how to secure BGP on Junos devices.
• Describe how to use IPsec to secure traffic.
• Explain the new IoT threat to networks.
• Describe AutoVPN IPsec architectures.
• Explain the use and configuration of CGNAT on SRX Series devices.

Audience

This course benefits those responsible for implementing, monitoring, and troubleshooting Juniper security components.

Prerequisites

• Intermediate level of TCP/IP networking and security knowledge.
• Attend the Introduction to Juniper Security (IJSEC) course before attending this class.

Programme

Day 1
Course Introduction
Security Challenges for Service Providers
• Describe limitations of security devices
• Describe DDoS attack threats
• Describe BGP security threats
• Explain IP address depletion challenges
• Describe 5G security challenges
Juniper Networks Solutions for Service Providers
• Describe Juniper Networks' security solutions for the service provider challenges
Stateful Firewalls
• Describe stateless firewall filters

• Describe stateful firewall policies
• Describe screens and ALGs
• Explain asymmetrical routing
Lab 1: Configure Stateful Firewalls
5G Architecture using SRX Series Devices
• Describe security insertion points
• Describe 5G network evolution
DDoS Protection
• Explain DDoS history and common protections
• Describe SRX DDoS protection
• Describe BGP FlowSpec
• Describe Corero with MX DDoS protection
Lab 2: DDoS Protection
Day 2
Carrier-Grade NAT
• Explain IPv4 address exhaustion
• Describe Source NAT
• Describe CGNAT
• Describe NAT64
Lab 3: CGNAT
Juniper Connected Security for Service Providers
• Explain Juniper Connected Security
• Describe SecIntel feeds
• Describe a use case for IoT protection
Lab 4: Implementing Juniper Connected Security
IPsec Overview
• Describe the IPsec and IKE protocols
• Configure site-to-site IPsec VPNs
• Describe and configure Proxy IDs and Traffic selectors
• Monitor site-to-site IPsec VPNs
• Describe IPsec use with gNodeB devices
Lab 5: Site-to-Site IPsec VPN
Scaling IPsec
• Describe and implement PKI certificates in Junos OS
• Describe AutoVPN
• Describe SecGW firewall use case for scaling IPsec
Lab 6: Configuring AutoVPN
Day 3
GPRS and GTP
• Describe how to secure GTP tunnels
• Describe the GPRS protocol
• Describe the GTP
• Explain how Roaming Firewall secures GTP
SCTP
• Describe the SCTP
Lab 7: Video about Implementing the Roaming Firewall (Demo)
Securing the Control Plane
• Explain how to secure the control plane on Junos devices
• Describe how the loopback filter works to secure the control plane
• Explain how to protect the control plane from DDoS attacks
• Describe how to secure the IGP against attacks
Lab 8: Configure Control Plane Protections
Securing the BGP
• Describe how to secure the BGP
• Describe BGP security features
• Describe BGP dampening
Lab 9: Configure BGP protections

Session Dates

På anmodning. Kontakt os venligst

Yderligere Information

Denne træning er også tilgængelig som træning på stedet. Kontakt os for at finde ud af mere.