

---

## Advanced Junos Security

**Duration: 5 Days    Course Code: AJSEC    Version: 20.1R**

---

### Overview:

This four-day course, which is designed to build off the current Juniper Security (JSEC) offering, delves deeper into Junos security, next-generation security features, and ATP supporting software. Through demonstrations and hands-on labs, you will gain experience in configuring and monitoring the advanced Junos OS security features with advanced coverage of advanced logging and reporting, next generation Layer 2 security, next generation advanced anti-malware with Juniper ATP On-Prem and SecIntel. This course uses Juniper Networks SRX Series Services Gateways for the hands-on component. This course is based on Junos OS Release 20.1R1.11, Junos Space Security Director 19.4, Juniper ATP On-Prem version 5.0.7.

---

### Target Audience:

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

---

### Objectives:

- Demonstrate understanding of concepts covered in the prerequisite Juniper Security courses.
  - Describe the various forms of security supported by the Junos OS.
  - Describe the Juniper Connected Security model.
  - Describe Junos security handling at Layer 2 versus Layer 3.
  - Implement next generation Layer 2 security features.
  - Demonstrate understanding of Logical Systems (LSYS).
  - Demonstrate understanding of Tenant Systems (TSYS).
  - Implement virtual routing instances in a security setting.
  - Describe and configure route sharing between routing instances using logical tunnel interfaces.
  - Describe and discuss Juniper ATP and its function in the network.
  - Describe and implement Juniper Connected Security with Policy Enforcer in a network.
  - Describe firewall filters use on a security device.
  - Implement firewall filters to route traffic.
  - Explain how to troubleshoot zone problems.
  - Describe the tools available to troubleshoot SRX Series devices.
  - Describe and implement IPsec VPN in a hub-and-spoke model.
  - Describe the PKI infrastructure.
  - Implement certificates to build an ADVPN network.
  - Describe using NAT, CoS and routing protocols over IPsec VPNs.
  - Implement NAT and routing protocols over an IPsec VPN.
  - Describe the logs and troubleshooting methodologies to fix IPsec VPNs.
  - Implement working IPsec VPNs when given configuration that are broken.
  - Describe Incident Reporting with Juniper ATP On-Prem device.
  - Configure mitigation response to prevent spread of malware.
  - Explain SecIntel uses and when to use them.
  - Describe the systems that work with SecIntel.
  - Describe and implement advanced NAT options on the SRX Series devices.
  - Explain DNS doctoring and when to use it.
  - Describe NAT troubleshooting logs and techniques.
- 

### Prerequisites:

- Strong level of TCP/IP networking and security knowledge
- Complete the Juniper Security (JSEC) course prior to attending this class
- IJSEC - Introduction to Junos Security
- JSEC - Junos Security

## Content:

Day 1	6 Advanced NAT	Day 4
1 COURSE INTRODUCTION	<ul style="list-style-type: none"> <li>■ Configuring Persistent NAT</li> <li>■ Demonstrate DNS Doctoring</li> <li>■ Configure IPv6 NAT Operations</li> <li>■ Troubleshooting NAT</li> </ul>	11 Juniper Connected Security
2 Junos Layer 2 Packet Handling and Security Features	LAB: 5: Implementing Advanced NAT Features	<ul style="list-style-type: none"> <li>■ Security Models</li> <li>■ Enforcement on Every Network Device</li> </ul>
<ul style="list-style-type: none"> <li>■ Transparent Mode Security</li> <li>■ Secure Wire</li> <li>■ Layer 2 Next Generation Ethernet Switching</li> <li>■ MACsec</li> </ul>	7 Logical and Tenant Systems	12 SecIntel
LAB 1: Implementing Layer 2 Security	<ul style="list-style-type: none"> <li>■ Overview</li> <li>■ Administrative Roles</li> <li>■ Differences Between LSYS and TSYS</li> <li>■ Configuring LSYS</li> <li>■ Configuring TSYS</li> </ul>	<ul style="list-style-type: none"> <li>■ Security Feed</li> <li>■ Encrypted Traffic Analysis</li> <li>■ Use Cases for SecIntel</li> </ul>
3 Firewall Filters	LAB 6: Implementing TSYS	LAB 10: Implementing SecIntel
<ul style="list-style-type: none"> <li>■ Using Firewall Filters to Troubleshoot</li> <li>■ Routing Instances</li> <li>■ Filter-Based Forwarding</li> </ul>	Day 3	13 Advanced Juniper ATP On-Prem
LAB 2: Implementing Firewall Filters	8 PKI and ADVPNs	<ul style="list-style-type: none"> <li>■ Collectors</li> <li>■ Private Mode</li> <li>■ Incident Response</li> <li>■ Deployment Models</li> </ul>
4 Troubleshooting Zones and Policies	<ul style="list-style-type: none"> <li>■ PKI Overview</li> <li>■ PKI Configuration</li> <li>■ ADVPN Overview</li> <li>■ ADVPN Configuration and Monitoring</li> </ul>	LAB 11: Implementing Advanced ATP On-Prem
<ul style="list-style-type: none"> <li>■ General Troubleshooting for Junos Devices</li> <li>■ Troubleshooting Tools</li> <li>■ Troubleshooting Zones and Policies</li> <li>■ Zone and Policy Case Studies</li> </ul>	LAB 7: Implementing ADVPNs	14 Automated Threat Mitigation
LAB 3: Troubleshooting Zones and Policies	9 Advanced IPsec	<ul style="list-style-type: none"> <li>■ Identify and Mitigate Malware Threats</li> <li>■ Automate Security Mitigation</li> </ul>
Day 2	<ul style="list-style-type: none"> <li>■ NAT with IPsec</li> <li>■ Class of Service with IPsec</li> <li>■ Best Practices</li> <li>■ Routing OSPF over VPNs</li> </ul>	LAB 12: Identifying and Mitigating Threats
5 Hub-and-Spoke VPN	LAB 8: Implementing Advanced IPsec Solutions	A Group VPNs
<ul style="list-style-type: none"> <li>■ Overview</li> <li>■ Configuration and Monitoring</li> </ul>	10 Troubleshooting IPsec	<ul style="list-style-type: none"> <li>■ Overview</li> <li>■ Implementing Group VPNs</li> </ul>
LAB 4: Implementing Hub-and-Spoke VPNs	<ul style="list-style-type: none"> <li>■ IPsec Troubleshooting Overview</li> <li>■ Troubleshooting IKE Phase 1 and 2</li> <li>■ IPsec Logging</li> <li>■ IPsec Case Studies</li> </ul>	
	LAB 9: Troubleshooting IPsec	

---

### Further Information:

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

[training@globalknowledge.com.eg](mailto:training@globalknowledge.com.eg)

[www.globalknowledge.com/en-eg/](http://www.globalknowledge.com/en-eg/)

Global Knowledge, 16 Moustafa Refaat St. Block 1137, Sheraton Buildings, Heliopolis, Cairo