

Junos Troubleshooting (JT)

Duration: 2 Days Course Code: JUN_JT Delivery Method: Virtual Learning

Overview:

This two-day course provides foundational troubleshooting skills. In this course, students will learn to use common Junos troubleshooting commands and tools.

This course will help students to acquire the skills needed to perform basic troubleshooting on Juniper devices.

Students will learn to troubleshoot the control plane, the forwarding plane, and the secure the connection between the two planes from DDoS attacks.

Students will also learn to troubleshoot common network services such as DHCP, DNS, and authentication services.

Students will get hands-on practice using vMX Series, vSRX Series, and vQFX Series devices in the lab.

The course is based on Junos OS Release 22.3R1.

Note: For those who have previously taken the Juniper Troubleshooting in the NOC (JTNOC) course, we recommend moving to the next course in the learning path, Advanced Junos Troubleshooting.

This is an Intermediate level course.

Related Juniper Product

Junos OS • vSRX Series • vMX Series • vQFX Series

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

This course is for people who troubleshoot Juniper devices running the Junos OS, which includes network operators, engineers, administrators, support personnel, and reseller support personnel.

Objectives:

- Describe Junos products and related information and recovery options.
- Explain various tools that can be used to troubleshoot Junos devices.
- Explain Junos CLI commands used in troubleshooting.
- Identify and isolate hardware issues.
- Troubleshoot problems with the control plane.
- Describe control plane protection features.
- Troubleshoot problems with interfaces and other data plane components.
- Describe the staging and acceptance methodology.
- Troubleshoot networking services.
- Troubleshoot high availability features.
- Describe how to monitor your network with SNMP, RMON, Junos Telemetry Interface, Junos Traffic Vision (formerly known as JFlow), and port mirroring.

Prerequisites:

The prerequisite knowledge includes the following courses, or equivalent knowledge:

- Juniper Technical Support Fundamentals
- Introduction to the Junos Operating System

Follow-on-Courses:

Advanced Junos Troubleshooting (AJT)

Content:

Day 1	Control Plane Protection	<ul style="list-style-type: none">• Explain authentication issues
Course Introduction	<ul style="list-style-type: none">• Describe DDoS attacks	<ul style="list-style-type: none">• Discuss MACsec issues
Junos Product Families	<ul style="list-style-type: none">• Explain and configure the DDoS protection feature	<ul style="list-style-type: none">• Discuss LLDP issues
<ul style="list-style-type: none">• Describe the architectural philosophy of devices that run the Junos OS and understand how this relates to troubleshooting	<ul style="list-style-type: none">• Outline using firewall filters to protect the control plane	Lab 8: Troubleshooting Network Services
<ul style="list-style-type: none">• Describe traffic processing for transit and exception traffic	Lab 5: Protecting the Control Plane	Troubleshooting High Availability Features
<ul style="list-style-type: none">• Describe the function and components of the RE and PFE within a device running the Junos OS	Day 2	<ul style="list-style-type: none">• Discuss LACP, BFD, NSR, and NSB issues
<ul style="list-style-type: none">• Describe FRUs	Data Plane: Interfaces	<ul style="list-style-type: none">• Explain graceful routing engine switchover
<ul style="list-style-type: none">• Describe current Junos product families and understand where to go for detailed information about your hardware	<ul style="list-style-type: none">• Describe physical and logical interface properties	<ul style="list-style-type: none">• Explain graceful restart
Lab 1: Identifying Hardware Compon	<ul style="list-style-type: none">• Deactivate and disable interfaces	<ul style="list-style-type: none">• Discuss Aggregated Ethernet issues
Troubleshooting Toolkit	<ul style="list-style-type: none">• Perform loopback testing	<ul style="list-style-type: none">• Discuss MC-LAG issues
<ul style="list-style-type: none">• Describe various tools that can be used to troubleshoot devices that run the Junos operating system	<ul style="list-style-type: none">• Use operational mode commands to monitor and troubleshoot Ethernet interfaces	<ul style="list-style-type: none">• Discuss VRRP issues
<ul style="list-style-type: none">• Explain JTAC recommendations for current best-practices that facilitate troubleshooting	Lab 6: Monitoring and Troubleshooting Ethernet Interfaces	Network Monitoring
Lab 2: Using Monitoring Tools and Establishing a Baseline	Data Plane: Other Components	<ul style="list-style-type: none">• Explain how to configure and monitor SNMP
Hardware and Environmental Conditions	<ul style="list-style-type: none">• Recognize data plane problems and components	<ul style="list-style-type: none">• Discuss how to configure and monitor RMON
<ul style="list-style-type: none">• Describe the key commands and features used to monitor storage and memory issues	<ul style="list-style-type: none">• Monitor and troubleshoot data plane forwarding	<ul style="list-style-type: none">• Describe how to use the Junos telemetry interface
<ul style="list-style-type: none">• Describe the key commands and features that you can use to monitor software installations	<ul style="list-style-type: none">• Monitor load balancing	<ul style="list-style-type: none">• Describe how to use flow monitoring
<ul style="list-style-type: none">• Determine how to find potential hardware problems using system logs	<ul style="list-style-type: none">• Troubleshoot firewall filter and policer issues	Lab 9: Monitoring the Network
	Lab 7: Isolating and Troubleshooting PFE Issues	Appendix A: Junos RPM
	Staging and Acceptance Testing	<ul style="list-style-type: none">• Explain the purpose of the Junos RPM
		<ul style="list-style-type: none">• Describe the components of the Junos RPM
		<ul style="list-style-type: none">• Implement Junos RPM Probes

<ul style="list-style-type: none"> • Describe the key commands that you can use to monitor hardware and environmental issues 	<ul style="list-style-type: none"> • Perform a Junos device initial inspection and power-on 	<ul style="list-style-type: none"> • Monitor the deployed Probes
Lab 3: Monitoring Hardware and Environmental Conditions	<ul style="list-style-type: none"> • Perform general system checks recommended for a newly deployed Junos device 	
Control Plane	<ul style="list-style-type: none"> • Determine the status of new interface connections by performing loopback testing and monitoring 	
<ul style="list-style-type: none"> • Monitor and troubleshoot system processes that reside in the control plane 		
<ul style="list-style-type: none"> • Utilize a logical approach to troubleshooting routing issues that reside in the control plane 	Troubleshooting Network Services	
<ul style="list-style-type: none"> • Monitor and troubleshoot basic bridging and ARP functionalities 	<ul style="list-style-type: none"> • Discuss DNS, DHCP, NTP, SSH, SNMP, and telemetry 	
Lab 4: Control Plane Monitoring and Troubleshooting		

Additional Information:

Delegates will receive e-kit courseware.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

info@globalknowledge.co.uk

www.globalknowledge.com/en-gb/

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK