Juniper Technical Support Fundamentals

COURSE OVERVIEW

This two-day course provides students with the foundational knowledge required to work in a Technical Support Engineer role. This course is for those with no Junos experience and are new to, or interested in pursuing, a Technical Support role. The course summarizes technical support concepts and provides a basic introduction to Juniper products and software. Key topics within this course include technical support concepts, networking, Linux fundamentals, troubleshooting process, soft skills, and basic introduction to Juniper products and software.

This course uses the Juniper cSRX Container Firewall and Containerized Routing Protocol Daemon (cRPD) devices in the lab and is based on Junos OS Release 22.1R1. Also included in the lab is a student desktop (running Ubuntu 20.04.4 LTS).

Looking for troubleshooting training? Check out our *Junos Troubleshooting* course.

COURSE LEVEL

Introductory

AUDIENCE

- Individuals who want a basic understanding of Technical Support skill set
- Individuals who want to learn Junos OS and support Juniper networking technologies and products

PREREQUISITES

- Basic networking knowledge and an understanding of the OSI reference model and the TCP/IP protocol suite; and
- *Getting Started with Networking* e-learning course

RECOMMENDED NEXT COURSE

Introduction to the Junos Operating System

RELATED JUNIPER PRODUCT

All Juniper products

CONTACT YOUR REGIONAL EDUCATION SERVICES TEAM:

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OBJECTIVES

- Describe Juniper hardware and software products.
- Describe the job of a Technical Support Engineer.
- Describe Linux administration fundamentals.
- Describe networking device fundamentals.
- Describe Linux networking concepts.
- Describe Junos OS architecture, Juniper hardware components, and J-Web.
- Perform Junos OS administration tasks using the CLI.
- Perform process-based troubleshooting tasks.
- Perform basic network troubleshooting tasks.
- Describe the Juniper Technical Assistance Center (JTAC) organization structure and support model.
- Demonstrate effective customer communication skills.

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COURSE CONTENTS

DAY 1

1 Course Introduction

2 Introduction to Juniper Products
- Describe Juniper products, solutions, and services

3 Requirements of a Technical Support Engineer
- List the expected technical capabilities
- Identify the expected behaviors

4 Linux System Administration Fundamentals
- Identify the components of an OS
- Manage users and permissions
- Explain the Linux filesystem and file permissions
- Manage Linux processes
- Manage software packages

  Lab 1: Using the CloudShell Lab Environment (Optional)

  Lab 2: Linux Administration Fundamentals

5 Networking Device Fundamentals
- Explain ARP protocol and identify the various fields in the header
- Explain the working of DHCP protocol
- Explain the working of DNS protocol
- Differentiate between HTTP and HTTPS protocols
- Describe the traffic flow through a Switch
- Describe the traffic flow through a Router
- Describe the traffic flow through a Firewall
- Explain ping, traceroute, and tcpdump utilities

  Lab 3: Capturing and Analyzing Network Traffic

6 Linux Networking Fundamentals
- Configure IP addresses
- Describe Linux networking basics: bridging, routing, and security
- Describe name resolution (DNS)

  Lab 4: Exploring Linux Networking Basics

DAY 2

7 Introduction to Junos OS Architecture
- Describe the Junos OS architecture
- Identify the major hardware components in Juniper products
- Explore the Junos J-Web user interface

8 Introduction to Junos OS CLI
- Explore the Junos CLI operational mode
- Explore the Junos CLI configuration mode
- Configure basic system settings, interfaces, and static routes
- Configure and analyze system logging, traceoptions, and packet captures

  Lab 5: Introduction to Junos OS CLI

9 Troubleshooting as a Process
- Describe process-based methodology
- Describe common troubleshooting steps

10 Basic Network Troubleshooting
- Troubleshoot a communication flow between two PCs connected by a switch, a router, and a firewall

  Lab 6: Basic Network Troubleshooting

11 Overview of JTAC
- Identify the Global Support Organization structure
- Describe the JTAC support model
- Navigate Juniper Support Portal and other tools
- Describe the RMA process

  Lab 7: Walk-Through of JTAC Support Portals

A Appendix: Effective Customer Communication
- Demonstrate effective use of phones for audio communication
- Demonstrate effective use of e-mails for business writing

  Lab: Identify the principles of time and priority management

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