Juniper Introduction to the Junos Operating System (IJOS)

Course Summary

This three-day course provides students with the foundational knowledge required to work with the Junos operating system and to configure Junos devices. The course provides a brief overview of the Junos device families and discusses the key architectural components of the software. Key topics include user interface options with a heavy focus on the command-line interface (CLI), configuration tasks typically associated with the initial setup of devices, interface configuration basics with configuration examples, secondary system configuration, and the basics of operational monitoring and maintenance of Junos devices. The course then delves into foundational routing knowledge and configuration examples including general routing concepts, routing policy, and firewall filters. Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos OS and monitoring basic device operations.

Topics

Course Introduction
Junos Operating System Fundamentals
User Interface Options
Initial Configuration
Secondary System Configuration
Operational Monitoring and Maintenance
Interface Configuration Examples
Routing Policy
Firewall Filters
Class of Service

Audience

This course benefits individuals responsible for configuring and monitoring devices running the Junos OS.

Prerequisites

Before taking this course, students should have basic networking knowledge and an understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite.

Duration

3 days

Course Outline

I.Course Introduction

II.Junos Operating System Fundamentals

A.The Junos OS
B.Traffic Processing
C.Overview of Junos Devices

III.User Interface Options

A.User Interface Options
B.The Junos CLI: CLI Basics
C.The Junos CLI: Operational Mode
D.The Junos CLI: Configuration Mode
Lab: The Junos CLI

IV.Initial Configuration

A.Factory-Default Configuration
B.Initial Configuration
C.Interface Configuration
Lab: Initial System Configuration

V.Secondary System Configuration

A.User Configuration and Authentication
B.System Logging and Tracing
C.Network Time Protocol
D.Archiving Configurations
E.SNMP
Lab: Secondary System Configuration

VI.Operational Monitoring and Maintenance

A.Monitoring Platform and Interface Operation
B.Network Utilities
C.Maintaining the Junos OS
D.Password Recovery
E.System Clean-Up
Lab: Operational Monitoring and Maintenance

VII.Interface Configuration Examples

A.Review of the Interface Configuration Hierarchy
B.Interface Configuration Examples
C.Using Configuration Groups
Lab:Configuring Interfaces

VIII.Routing Policy

A.Routing Policy Overview
B.Case Study: Routing Policy
Lab:Routing Policy

IX.Firewall Filters

A.Firewall Filters Overview
B.Case Study: Firewall Filters
C.Unicast Reverse-Path-Forwarding Checks
Lab: Firewall Filters

X.Class of Service

A.CoS Overview
B.Traffic Classification
C.Traffic Queueing
D.Traffic Scheduling