

JNCIA-Junos Exam Objectives (Exam: JN0-102)

This list provides a general view of the skill set required to successfully complete the specified certification exam. Topics listed are subject to change.

Networking Fundamentals

- Identify the concepts and functionality of various fundamental elements of networking
 - o Collision domains and broadcast domains
 - o Function of routers and switches
 - o Optical network fundamentals – SONET/SDH, OTN
 - o Ethernet networks
 - o Layer 2 addressing, including address resolution
 - o IPv4 and IPv6 fundamentals
 - o Layer 3 / IP addressing, including subnet masks
 - o Subnetting and supernetting
 - o Decimal to binary conversion
 - o Longest match routing
 - o Connection-oriented vs. connectionless protocols

Junos OS Fundamentals

- Identify the concepts, benefits and functionality of the core elements of the Junos OS
 - o Junos device portfolio – product families, general functionality
 - o Software architecture
 - o Control and forwarding planes
 - o Routing Engine and Packet Forwarding Engine
 - o Protocol daemons
 - o Transit traffic processing
 - o Exception traffic

User Interfaces

- Identify the concepts, operation and functionality of the Junos user interfaces
 - o CLI functionality
 - o CLI modes
 - o CLI navigation
 - o CLI Help
 - o Filtering output
 - o Active vs. candidate configuration
 - o Reverting to previous configurations

- o Modifying, managing, and saving configuration files
- o Viewing, comparing, and loading configuration files
- o J-Web – core/common functionality

Junos Configuration Basics

- Identify the main elements for configuring Junos devices
 - o Factory-default state
 - o Initial configuration
 - o User accounts
 - o Login classes
 - o User authentication methods
 - o Interface types and properties
 - o Configuration groups
 - o Additional initial configuration elements – NTP, SNMP, syslog, etc.
 - o Configuration archival
 - o Logging and tracing
 - o Rescue configuration
- Describe how to configure basic components of a Junos device

Operational Monitoring and Maintenance

- Identify methods of monitoring and maintaining Junos devices
 - o Show commands
 - o Monitor commands
 - o Interface statistics and errors
 - o Network tools – ping, traceroute, telnet, SSH, etc.
 - o Real-time performance monitoring (RPM)
 - o Junos OS installation
 - o Software upgrades
 - o Powering on and shutting down Junos devices
 - o Root password recovery
- Describe monitoring and maintenance procedures for a Junos device

Routing Fundamentals

- Identify basic routing concepts and functionality for Junos devices
 - o Packet forwarding concepts
 - o Routing tables
 - o Routing vs. forwarding tables
 - o Route preference
 - o Routing instances
 - o Static routing

- o Advantages of / use cases for dynamic routing protocols
- Describe how to configure and monitor basic routing elements for a Junos device

Routing Policy and Firewall Filters

- Identify the concepts and functionality of routing policy and firewall filters on Junos devices
 - o Default routing policies
 - o Import and export policies
 - o Routing policy flow
 - o Effect of policies on routes and routing tables
 - o Policy structure and terms
 - o Policy match criteria, match types, and actions
 - o Firewall filter concepts
 - o Firewall filter concepts
 - o Filter match criteria and actions
 - o Effect of filters on packets
 - o Unicast reverse-path-forwarding (RPF)
- Describe how to configure and monitor routing policies and firewall filters on a Junos device