

## Juniper SRX (JNCIA-Junos -JN0-102)

### Networking Fundamentals

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

### Junos OS Fundamentals

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

### User Interfaces

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

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

## Junos Configuration Basics

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

## Operational Monitoring and Maintenance

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

## Routing Fundamentals

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