Juniper Networks Certified Associate Junos (JNCIA-Junos) JN0-102 Certification

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