



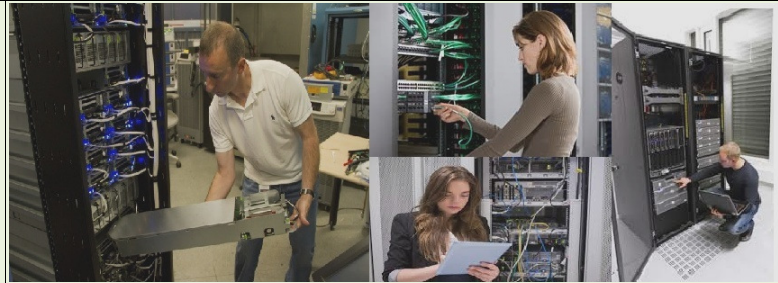
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## Juniper Networks Certified Associate JNCIA-Junos (Exam: JN0-102)

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

### Course Content

#### 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

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#### 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

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## 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

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## 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

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## 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

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