

# JNCIA-JUNOS Exam Prep Course

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## Course Details

### Course Outline

#### 1. Practice Labs

- Guided practice labs to reintroduce the lab environment

#### 2. Real-World Scenario Labs

- Labs that emulate real-world application of JNCIA-level knowledge, configurations, operations, and functionality. These labs will challenge students to complete scenario-based problems to accomplish specific network goals.

#### 3. Networking Fundamentals

- 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

#### 4. Junos OS Fundamentals

- 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

## **5. 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

## **6. Junos Configuration Basics**

- 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

## **7. Operational Monitoring and Maintenance**

- 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

## **8. Routing Fundamentals**

- Packet forwarding concepts
- Routing tables
- Routing vs. forwarding tables
- Route preference
- Routing instances
- Static routing
- Advantages of / use cases for dynamic routing protocols

## **9. Routing Policy and Firewall Filters**

- 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)

## **10. JNCIA-JUNOS Certification Exam**

- The exam voucher is included in the price of the course
- DWWTC is a certified PearsonVUE Testing Center