3.0 User Interfaces

3.1 Concepts, operation and functionality of the Junos user interfaces

The JUNOS Command Line Interface (CLI) is a text-based interface for configuring, monitoring, and troubleshooting Juniper network devices running the JUNOS operating system. The JUNOS CLI provides a range of functionality that can be used to manage network devices, including:

1. Configuration: The JUNOS CLI provides a range of configuration commands that can be used to configure various aspects of the network device, such as interfaces, routing protocols, firewall filters, and other features.

2. Monitoring: The JUNOS CLI provides a range of monitoring commands that can be used to view the status and performance of the network device, such as the status of interfaces, the routing table, and other device components.

3. Troubleshooting: The JUNOS CLI provides a range of troubleshooting commands that can be used to diagnose and resolve network issues, such as debugging routing protocols, viewing system logs, and tracing packets.

4. Automation: The JUNOS CLI provides a scripting interface that can be used to automate repetitive tasks, such as configuring multiple devices with a single script, or generating reports on network performance.

The JUNOS CLI can be accessed from a local or remote terminal, or from a serial console connection to the device. The JUNOS CLI provides a comprehensive and flexible interface for managing and operating Juniper network devices.

CLI Functionality: JUNOS CLI is a simple to use, text-based command interface. We give various commands on CLI for configuring, troubleshooting and monitoring the software.

JUNOS primarily supports two types of command modes.

a) Operational Mode
b) Configuration Mode

[JNCIA Exam Sim](#)   [JNCIA NetSim](#)   [CCNA ExamSim](#)   [CCNA NetSim](#)

Please email wm@certexams.com for any suggestions or questions

a) Operational Mode: This mode allows you to monitor and control the device. There are several categories of commands in this mode.

Troubleshooting commands: In operational mode, you can enter commands to monitor and troubleshoot the Junos OS, devices, and network connectivity. The monitor, ping, show, test, and traceroute commands let you display information and test network connectivity for the device.

Restart: The commands in the restart hierarchy restart the various Junos OS processes, including the routing protocol, interface, and SNMP.

Request: Use the command "request" for performing system-level operations, including stopping and rebooting the router or switch and loading Junos OS images.

Start: Use the command "start" to exit the CLI and start a UNIX shell.

Configure: Use the command "configure" for entering configuration mode, which provides a series of commands that configure Junos OS, including the routing protocols, interfaces, network management, and user access.

When we log in to the router and the CLI starts, we are at the top level of the CLI operational mode. In this mode, we enter the commands for

1. Controlling the CLI environment, and
2. Monitor and troubleshoot network connectivity, and
3. Initiating the Configuration Mode.

Frequently used commands in this mode include ping, show, traceroute, configure, etc.

Operational mode is indicated by the > prompt—for

example,
user@switch>

By default "%" character indicated the UNIX shell prompt. In junos devices, '>' character indicates that we are on the operational mode hierarchy whereas, the '#' character indicates that we are on the configuration mode.

b) Configuration Mode:

JNCIA Exam Sim   JNCIA NetSim   CCNA ExamSim   CCNA NetSim

Please email wm@certexams.com for any suggestions or questions

We use the Configuration mode for configuring the JUNOS software by creating a hierarchy of configuration statements. We enter the configuration mode by using the command "configure" as shown below:

user@host>configure
Entering configuration mode
[edit]
user@host#

Issuing the commands one at a time using CLI can configure a JUNOS™ router or alternately, we can configure by creating a text (ASCII) file that contains the statement hierarchy. Remember to activate the configuration by using the command "commit" on the router.

As shown in the above example, the generic configuration prompt is user@host#. Ofcourse, we can change the prompt by using appropriate command.

Statement Hierarchy:

We use the above configuration mode commands to create a statement hierarchy, and then configure the JUNOS software. The term "statement hierarchy" is used to define the sequence of commands used for configuring a particular feature (or features) of the router. An example statement hierarchy is given below:

user@host>configure
Entering configuration mode
[edit] ----Top level
user@host#edit protocols ospf
[edit protocols ospf] ----protocols ospf hierarchy level
user@host#

"set" commands are used to configure specific leaf statements.

Ex: user@host#set hello-interval 14

The command 'set system services web-management' allows us to access our juniper device based on Graphical User Interface (GUI). We can either enable http based and https based web-management on Juniper devices.

CLI Help: The CLI includes several ways to get help about commands. Some examples of how

JNCIA Exam Sim   JNCIA NetSim   CCNA ExamSim   CCNA NetSim

Please email wm@certexams.com for any suggestions or questions

to get help are as below

1. Type ? to show the top-level commands available in operational mode.

root@> ?

Possible completions:

clear - Clear information in the system
configure - Manipulate software configuration information
diagnose - Invoke diagnose script
file - Perform file operations
help - Provide help information monitor
Show - real-time debugging information
mtrace - Trace multicast path from source to receiver
ping - Ping remote target
quit - Exit the management session
request - Make system-level requests
restart - Restart software process
set - Set CLI properties, date/time, craft interface message
show - Show system information
ssh - Start secure shell on another host
start - Start shell
telnet - Telnet to another host
test - Perform diagnostic debugging
traceroute - Trace route to remote host

Please email wm@certexams.com for any suggestions or questions