

JunosAssociate (JNCIA-Junos) Junos OS 21.2

Juniper JN0-106

Version Demo

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Topic Break Down

Topic	No. of Questions
Topic 1, Networking Fundamentals	19
Topic 2, Junos OS Fundamentals	18
Topic 3, Junos OS Configuration Basics	27
Topic 4, Junos OS Operational Monitoring and Maintenance	21
Topic 5, Routing Fundamentals	19
Topic 6, Routing Policy and Firewall Filters	11
Total	115

QUESTION NO: 1

You issue the `show interfaces terse ge-0/0/3` command and receive the following output:

```
ge-0/0/3                up        down
```

Which condition does this output indicate?

- A. The interface is administratively disabled.
- B. The interface has an operational physical link but no IP address.
- C. The interface is enabled but the physical link is not operational.
- D. The interface is operational but has no active route.

ANSWER: C

Explanation:

The physical interface is administratively enabled because the administrative status is `up`. However, the link status is `down`, which indicates that Junos is not detecting an operational physical connection on the interface. Common causes include an unplugged cable, a disabled remote port, an incompatible optic, or a fault on the connected device.

An administratively disabled interface would show `down down`. A fully operational physical interface would show `up up`. The output does not by itself indicate an IP addressing or routing problem; it identifies a physical-link condition.

QUESTION NO: 2

Which two statements are examples of exception traffic? (Choose two.)

- A. An IP packet with the Router Alert option set in the IP options field.
- B. SSH traffic to the local Junos OS device.
- C. An IP packet that has the IP precedence CoS bits of 111 in the ToS field.
- D. SSH traffic to a remote server on the Internet.

ANSWER: A B

Explanation:

“An IP packet with the Router Alert option set in the IP options field.” is exception traffic because the Router Alert IP option signals that each router along the path must examine the packet more closely. This special handling cannot be performed solely as ordinary high-speed transit forwarding, so the packet is sent from the Packet Forwarding Engine to the Routing Engine for processing. Router Alert is commonly associated with control-related functions such as RSVP and IGMP processing.

“SSH traffic to the local Junos OS device.” is also exception traffic because the packet is addressed to the router itself rather than being forwarded through it. The Routing Engine must process the TCP session, invoke the SSH service, authenticate the user, and provide management access to the Junos CLI. Packets requiring Routing Engine involvement traverse the internal interface between the forwarding and control planes and are subject to protections intended to prevent excessive control-plane load.

Junos separates the Routing Engine’s control and management functions from Packet Forwarding Engine forwarding functions, allowing ordinary transit traffic to remain in the forwarding plane while locally significant or specially handled packets are delivered for Routing Engine processing. See Juniper’s [Junos OS architecture overview](#) and its [routing architecture overview](#).

QUESTION NO: 3

A network administrator must set up the initial configuration of the out-of-band management interface on a new Juniper router to ensure management traffic is isolated from the default routing table (inet.0). In this scenario, which configuration step is required to accomplish this task in Junos OS?

- A. Configure an IP address on interface ge-0/0/0.0 and enable ethernet-switching family.
- B. Configure the lo0.0 loopback interface with a management IP and apply it to the [edit system services] hierarchy.
- C. Assign an IP address to the me0.0 interface and set the routing-options to instance-type virtual-router.
- D. Assign an IP address to interface fxp0.0 or em0.0 and use the command set system management-instance to enable the management routing instance.

ANSWER: D

Explanation:

Assign an IP address to interface fxp0.0 or em0.0 and use the command set system management-instance to enable the management routing instance. Enabling `system management-instance` instructs Junos OS to use the dedicated `mgmt_junos` routing instance for the device's management interface. This keeps out-of-band management routing separate from the default routing instance and its `inet.0` table. The management instance has its own IPv4 routing table, `mgmt_junos.inet.0`, so an administrator can configure management addressing and routes, including a management default route, independently of production forwarding and control-plane routing. After the feature is enabled, the appropriate dedicated Ethernet management interface is configured with its address; platform hardware determines whether that interface is named `fxp0` or `em0`. This separation is particularly useful when the management network must remain reachable independently of the in-band network's routing design. Juniper documents the `management-instance` statement as the mechanism for placing the management interface into the management routing instance: [Juniper CLI Reference: management-instance](#). Additional configuration context is available in [Juniper documentation for management interfaces in a nondefault routing instance](#).

QUESTION NO: 4

Which two statements about IPv6 address notation are correct? (Choose two.)

- A. Leading zeros can be omitted from an individual hexadecimal field.
- B. The double-colon notation can replace one contiguous sequence of all-zero fields.
- C. The double-colon notation can be used multiple times in the same address.
- D. IPv6 addresses are written as four decimal octets separated by periods.

ANSWER: A B

Explanation:

IPv6 addresses consist of eight 16-bit hexadecimal fields when written in their full notation. Consecutive fields containing only zeros can be compressed once in an address by using the double-colon notation. For example, `2001:db8::1` is a valid shortened representation of an address containing intervening all-zero fields.

Leading zeros within an individual 16-bit field can be omitted. However, the double-colon notation cannot be used more than once in the same address because doing so would make the number of omitted zero fields ambiguous. IPv6 addresses use colons, not the dotted-decimal notation used by IPv4.

QUESTION NO: 5

Which two statements about route preference in Junos OS are correct? (Choose two.)

- A. Higher route preference values indicate higher priority.

- B. Route preference is considered after evaluating the longest prefix match.
- C. Lower route preference values indicate higher priority.
- D. Route preference determines the forwarding table size.

ANSWER: B C

Explanation:

Route preference in Junos OS is the value used to select the active route when the device has multiple routes to the same destination prefix from different routing sources. A lower numerical preference is more desirable, meaning it has higher priority during route selection. For example, Junos assigns a default preference of 0 to direct routes, 5 to static routes, and 10 to OSPF internal routes. Therefore, when equivalent destination prefixes are learned through static routing and OSPF, the static route is selected because its preference is lower.

Longest-prefix matching is fundamental to forwarding decisions: a packet is matched to the most-specific route prefix available. Route preference then determines which route is active when competing route entries exist for the same prefix length and destination. This distinction allows a more-specific prefix to be used for traffic matching while still allowing Junos to choose predictably among routes advertising an identical prefix. Juniper documents route preference as a primary route-selection criterion and states that lower preference values are preferred. See [Juniper static routing documentation](#) and [Juniper routing policy overview](#).

QUESTION NO: 6

Referring to the exhibit, you are configuring a Junos router to provide connectivity to a building across town on the network 10.10.10.0/24. The next-hop router is at 10.10.1.1, which is reachable using interface ge-0/0/1. After committing the configuration in the exhibit, users report they still cannot reach the 10.10.10.0/24 network, and the route does not appear as active in the routing table. In this scenario, which statement is correct?

- A. The next-hop address 10.1.1.1 is not directly connected or reachable through another route.
- B. Static routes must include the outgoing interface as the next hop.
- C. The static route requires a preference value to be specified or it will not install.
- D. The static route requires the retain keyword to remain active in the routing table.

ANSWER: A

Explanation:

The next-hop address 10.1.1.1 is not directly connected or reachable through another route. Junos installs a static route as active only when its configured next hop can be resolved in the routing table. Resolution means that the router knows how to reach the next-hop IP address, normally through a directly connected route or through another usable route. In this scenario, the intended gateway is 10.10.1.1 and is reachable through ge-0/0/1, but the configured static route uses 10.1.1.1 instead. Because these are different addresses, the router has no stated route to resolve 10.1.1.1. Consequently, the static route for 10.10.10.0/24 cannot become active or be installed for forwarding. Correcting the next hop to 10.10.1.1 allows Junos to resolve it through the connected network on ge-0/0/1 and activate the route. Junos static-route configuration and route resolution behavior are documented in [Juniper's Static Routing documentation](#) and the [next-hop routing-options reference](#).

QUESTION NO: 7

Which two tasks should be performed when creating a new user account on a Junos device? (Choose two.)

- A. Assign the user to a login class.
- B. Enable SSH for the user explicitly.
- C. Configure a password for the user.

D. Configure the user to bypass authentication.

ANSWER: A C

Explanation:

Assigning the user to a login class and configuring a password for the user are the standard tasks for creating a local Junos OS user account. Local accounts are configured under the `[edit system login]` hierarchy. The login class establishes the user's authorization level: it supplies the permissions that determine which operational commands, configuration statements, and system functions the account may access. Junos provides predefined classes such as `super-user`, `operator`, `read-only`, and `unauthorized`; administrators can also define custom classes when more tailored permissions are required.

The account must also have an authentication mechanism. For password authentication, the administrator configures `authentication plain-text-password` beneath the user definition and is prompted to enter the password. Junos stores a protected encrypted form of the password rather than the plaintext value. A public key can alternatively be configured for SSH authentication, but setting a password is an appropriate and expected task for the local user-account workflow described here. For example, the basic configuration is `set system login user alice class operator`, followed by configuration of Alice's authentication password. Juniper documents local user definitions, login classes, and authentication settings in its [Junos OS User Accounts documentation](#) and the [user configuration statement reference](#).

QUESTION NO: 8

You must add a large hierarchical configuration to your Junos device. You also want to completely replace the existing candidate configuration with a new configuration file. Which command would allow you to accomplish these tasks?

- A. load merge terminal
- B. load override terminal
- C. load factory default
- D. load set terminal

ANSWER: B

Explanation:

`load override terminal` is the appropriate configuration-mode command because it accepts a hierarchical configuration pasted directly into the terminal and replaces the candidate configuration in its entirety. The `terminal` keyword instructs Junos OS to read the configuration text from standard input, making it suitable for pasting a large configuration template without first placing it in a file on the device. Input is completed with the end-of-file key sequence, typically Ctrl+D.

The `override` action is specifically intended for a full candidate-configuration replacement. Junos OS discards the current candidate contents and loads the supplied hierarchical configuration as the new candidate. This behavior is useful when restoring a known-good full configuration, deploying a complete standardized template, or replacing a staged configuration before committing it. The resulting candidate configuration is still subject to normal syntax and semantic validation, and it does not become active until the operator runs `commit`.

Juniper documents the available `load` actions and terminal input behavior in the [Junos OS load command reference](#). Additional background on candidate and active configuration handling is available in the [Junos OS configuration overview](#).

QUESTION NO: 9

Which Junos tool should you use to identify the path that packets take through the network to a destination?

- A. monitor interface traffic
- B. traceroute

C. SNMP

D. ping

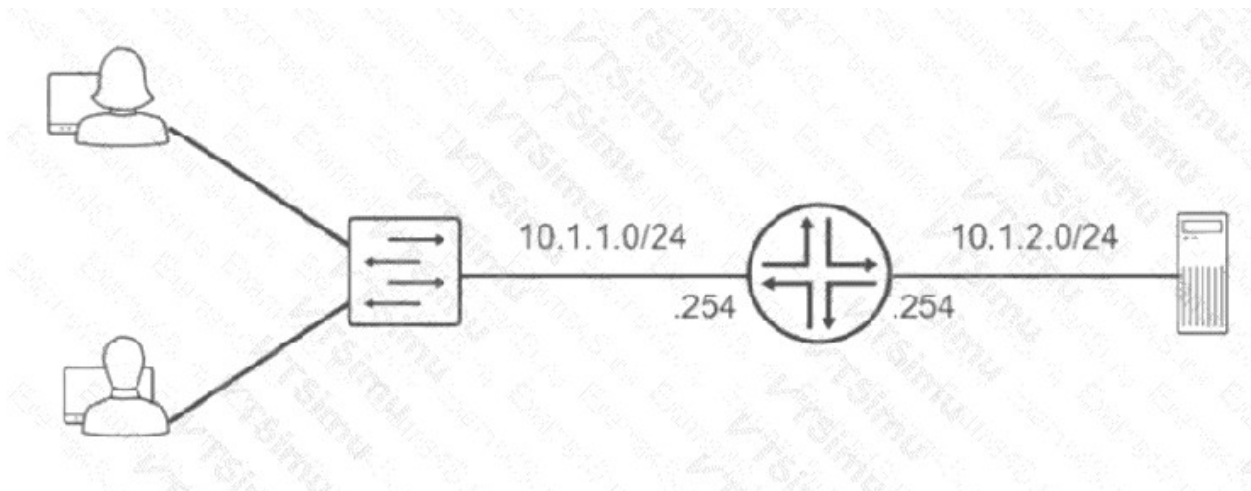
ANSWER: B

Explanation:

The correct tool is **traceroute**. In Junos OS operational mode, the `traceroute` command discovers the Layer 3 path to a destination by sending probes with progressively larger time-to-live values. Each routed hop that expires a probe returns an ICMP Time Exceeded response, allowing the device running the command to list the intermediate hops in sequence. This makes traceroute particularly useful when validating the forwarding path selected by routing, locating where connectivity stops, or identifying an unexpected transit router on the way to a remote destination. The command continues its probes until it receives a response from the destination or reaches its configured maximum hop count. Junos supports operational options such as selecting a source address, changing probe parameters, and specifying the routing instance, which helps test the exact path relevant to a particular service or forwarding context. Juniper documents traceroute as an operational command for tracing the route that packets take to a network host; see the [Junos traceroute command reference](#). For additional operational troubleshooting context, review Juniper's [Ping and Traceroute overview](#).

QUESTION NO: 10

Exhibit:



Referring to the exhibit, which routing configuration is required for these two users to access the remote server?

- A. Users and the server require a default gateway.
- B. Trunk ports must be enabled on the switch.
- C. Users must connect directly to the router.
- D. A routing protocol must be enabled on the router.

ANSWER: A

Explanation:

Users and the server require a default gateway. A host can send traffic directly only to destinations on its own local IP subnet. When either user sends traffic to the remote server, the server address is outside the user's local IP subnet, so the user's host must forward the packet to a configured default gateway. That gateway is the router interface on the host's local LAN. The router then forwards the packet toward the server using its routing table. For return traffic to reach the users, the remote server must likewise use the router interface on its own subnet as its default gateway, unless it has an equivalent specific route for the users' networks. In the depicted routed design, the router learns its directly connected networks automatically; no dynamic routing exchange is needed merely to route between interfaces that are directly connected. This is the fundamental purpose of a default route on an end host: it provides the next-hop destination used for traffic whose

destination is not local. Junos routing documentation describes how routes are selected from the routing table and how static default routes can direct traffic when no more-specific route exists. See Juniper's [Static Routing documentation](#) and [Routing Protocols Overview](#).

QUESTION NO: 11

Which two statements correctly describe Ethernet access and trunk interfaces on a Junos switch? (Choose two.)

- A. An access interface carries traffic for one VLAN.
- B. A trunk interface can carry traffic for multiple VLANs.
- C. An access interface tags all frames for every configured VLAN.
- D. A trunk interface can forward traffic for only one VLAN.

ANSWER: A B

Explanation:

An access interface carries traffic for one VLAN. Frames received from the attached endpoint are normally untagged, and the switch associates them with the VLAN configured on that access interface.

A trunk interface carries traffic for multiple VLANs. VLAN tagging identifies the VLAN membership of frames traversing the trunk, allowing a single physical connection to transport traffic for more than one VLAN between switching devices or to a VLAN-aware endpoint.

An access interface is not intended to carry traffic for multiple VLANs, and a trunk interface is not limited to a single untagged VLAN in the same way as an access interface.