Dumps Planet

2025

Data Center Associate (JNCIA-DC)

Juniper

JN0-281 Exam

Juniper Data Center Certification

Questions & Answers

(Demo Version - Limited Content)

Thank you for Downloading JN0-281 exam PDF Demo

Get Full File:

https://www.dumpsplanet.com/jn0-281-dumps/

Question: 1

What is the primary purpose of an IRB Layer 3 interface?

A. to provide load balancing
B. to provide a default VLAN ID
C. to provide inter-VLAN routing
D. to provide port security

Answer: C
Explanation:

The primary purpose of an IRB (Integrated Routing and Bridging) interface is to enable inter-VLAN routing in a Layer 3 environment. An IRB interface in Junos combines the functionality of both Layer 2 bridging (switching) and Layer 3 routing, allowing devices in different VLANs to communicate with each other.
Step-by-Step Breakdown:
VLANs and Layer 2 Switching:
Devices within the same VLAN can communicate directly through Layer 2 switching. However, communication between devices in different VLANs requires Layer 3 routing.

IRB Interface for Inter-VLAN Routing:
The IRB interface provides a Layer 3 gateway for each VLAN, enabling routing between VLANs. Without an IRB interface, devices in different VLANs would not be able to communicate.
Configuration:
In Juniper devices, the IRB interface is configured by assigning Layer 3 IP addresses to it. These IP addresses serve as the default gateway for devices in different VLANs.
Example configuration:

set interfaces irb unit 0 family inet address 192.168.1.1/24 set vlans vlan-10 l3-interface irb.0
This allows VLAN 10 to use the IRB interface for routing.
Juniper Reference:
IRB Use Case: Inter-VLAN routing is essential in data centers where multiple VLANs are deployed, and Juniper's EX and QFX series switches support IRB configurations for this purpose.

Question: 2

Which two statements describe an IP fabric? (Choose two.)

A. An IP fabric allows devices to always be one hop away.
B. An IP fabric depends on Layer 2 switching.
C. An IP fabric uses spine and leaf devices.
D. An IP fabric provides traffic load sharing.

Answer: C, D
Explanation:

An IP fabric is a network topology designed to provide a scalable, low-latency architecture that is typically implemented in modern data centers. It uses spine and leaf switches and enables efficient traffic

load sharing across the network.
Step-by-Step Breakdown:
Spine-Leaf Architecture:
Leaf Devices: These switches connect to servers and edge devices within the data center. Each leaf switch connects to every spine switch.
Spine Devices: These high-performance switches interconnect all the leaf switches. There are no direct connections between leaf switches or spine switches. This architecture ensures that any two endpoints within the fabric are only one hop away from each other, minimizing latency.
Traffic Load Sharing:
An IP fabric leverages Equal-Cost Multipath (ECMP) to distribute traffic evenly across all available paths between leaf and spine switches, providing effective load balancing. This ensures that no single link becomes a bottleneck and that traffic is distributed efficiently across the network.
Juniper Reference:
Juniper provides QFX Series switches optimized for IP fabric topologies, allowing for scalable deployments in modern data centers.
EVPN-VXLAN: Often used in IP fabrics to extend Layer 2 services across the fabric with Layer 3 underlay, enabling both efficient routing and bridging.

Question: 3

What information in the Ethernet header is used to populate the bridging table?

A. destination address
B. source address
C. type
D. protocol

Answer: B
Explanation:

The source MAC address in the Ethernet header is used to populate the bridging table (also called the MAC address table) on a switch. When a frame arrives at a switch, the switch examines the source MAC address and records it along with the ingress port in its MAC address table.
Step-by-Step Breakdown:
Learning Process:
When an Ethernet frame arrives on a switch port, the switch looks at the source MAC address and adds this MAC address to the MAC table along with the port it was received on. This process is called MAC learning.
Purpose:
The switch uses this information to determine the correct port to send frames destined for that MAC address in future transmissions, thus ensuring efficient Layer 2 forwarding.
Juniper Reference:
Ethernet Switching: Juniper switches use source MAC addresses to build and maintain the MAC address table, which is essential for Layer 2 switching.

Question: 4

Which three technologies improve high availability and convergence in a data center network? (Choose three.)

A. graceful restart (GR)
B. Bidirectional Forwarding Detection (BFD)
C. link loss adjacency
D. Failover Group (FG)
E. link aggregation group (LAG)

Answer: A, B, E
Explanation:

High availability and fast convergence are critical in data center networks to minimize downtime and maintain optimal performance. The following technologies contribute to achieving these goals: Graceful Restart (GR):
GR allows routers to maintain forwarding state during control plane restarts, ensuring continuous packet forwarding while minimizing network disruptions.
Bidirectional Forwarding Detection (BFD):
BFD provides fast detection of path failures, allowing routing protocols to converge quickly by detecting link failures much faster than traditional timers.
Link Aggregation Group (LAG):
LAG increases both redundancy and bandwidth by combining multiple physical links into one logical link, providing load balancing and fault tolerance.
Juniper Reference:

High Availability Techniques: These technologies are fundamental in ensuring rapid recovery and failover within Juniper-based data center environments.

Question: 5

Which static routing parameter will silently drop the packet if it is set as the next hop?

A. Reject
B. Resolve
C. Readvertise
D. Discard

Answer: D
Explanation:

When the discard option is configured as the next hop for a static route, it silently drops any packets that match the route without sending any notification to the sender.
Step-by-Step Breakdown:
Discard Behavior:
If a route uses the discard next hop, the router drops the packet without generating any ICMP message or error back to the sender. This is useful for creating null routes to prevent routing loops or blackhole traffic intentionally.
Reject vs. Discard:
The reject next hop, in contrast, drops the packet but sends an ICMP Destination Unreachable message

back to the source.
Juniper Reference:
Static Route Behavior: In Junos, the discard option ensures packets matching a static route are dropped silently, providing a way to discard traffic without alerting the source.

Question: 6

In an IP fabric architecture with spine and leaf switches, which layer handles the forwarding of traffic within the fabric?

A. Leaf switches
B. Spine switches
C. Core switches
D. Access switches

Answer: A
Explanation:

In a spine/leaf architecture, leaf switches handle traffic forwarding within the fabric. The spine switches are responsible for connecting all leaf switches but do not perform direct traffic forwarding between end devices.

Question: 7

Which of the following best describes an advantage of using an underlay network in a data center?

A. Simplified configuration and management of network overlays
B. Faster IP address allocation
C. Support for the use of virtual network functions (VNFs)
D. Simplified troubleshooting due to a well-defined physical layer

Answer: D
Explanation:

An underlay network simplifies troubleshooting because it involves the physical network infrastructure, which is well-defined and less abstract compared to the overlay network that uses virtualized resources.

Question: 8

Which architecture is more suitable for environments where rapid scaling and low latency are critical?

A. Traditional multitier architecture
B. IP fabric (spine/leaf) architecture
C. Hybrid architecture with both Layer 2 and Layer 3
D. Single-tier architecture

Answer: B
Explanation:

IP fabric (spine/leaf) architecture is designed to provide rapid scaling and low latency by ensuring that all leaf switches are directly connected to spine switches, allowing for efficient and resilient data flow.

Question: 9

How does VXLAN support large-scale data center networks?

A. It allows Layer 3 routing over Layer 2 networks
B. It limits broadcast traffic to a single data center
C. It provides Layer 2 isolation across a Layer 3 infrastructure
D. It integrates directly with legacy network protocols

Answer: C
Explanation:

VXLAN provides Layer 2 isolation over a Layer 3 network, allowing for better segmentation and scalability. It extends Layer 2 domains across different data centers while leveraging the underlay's Layer 3 infrastructure.

Question: 10

Which of the following is a key benefit of using Overlay networks in data center architectures?

A. Isolation of virtualized networks from the underlying physical infrastructure
B. Simplification of IP address allocation and management across virtual networks
C. Improved management of broadcast traffic and reduced network congestion
D. Easier configuration and management of physical network devices in the data center

Answer: A
Explanation:

Overlay networks provide isolation of virtualized networks from the physical infrastructure, allowing for greater flexibility in network design and scalability. This abstraction helps to manage traffic and resources independently of the underlying physical hardware.

Question: 11

Which of the following are key differences between traditional multitier architectures and IP fabric (spine/leaf) architectures? (Choose two)

A. IP fabric architectures support faster scaling by adding more leaf switches
B. Traditional multitier architectures are typically more scalable than IP fabric architectures
C. IP fabric architectures offer better redundancy and lower latency due to their meshed design
D. Traditional multitier architectures have a flat topology that simplifies routing

Answer: A, C
Explanation:

IP fabric architectures offer faster scaling by adding more leaf switches without significant design changes. They also provide better redundancy and lower latency because of the fully meshed spine/leaf topology, ensuring efficient data forwarding.

Question: 12

What is the function of Integrated Routing and Bridging (IRB) in a Layer 2 network?

A. To isolate broadcast traffic from the VLANs
B. To segregate different types of traffic in the same VLAN
C. To prevent loops in the Layer 2 network
D. To enable Layer 3 routing for VLAN traffic within the same switch

Answer: D
Explanation:

IRB allows routing between VLANs while maintaining Layer 2 bridging functionality. It enables communication between VLANs using Layer 3 routing without needing external routers.

Question: 13

Which Layer 2 protocol is used to prevent loops in a network by dynamically blocking redundant paths?

A. ARP (Address Resolution Protocol)
B. OSPF (Open Shortest Path First)
C. STP (Spanning Tree Protocol)
D. VRRP (Virtual Router Redundancy Protocol)

Answer: C
Explanation:

Spanning Tree Protocol (STP) is used to prevent loops in a network by dynamically blocking redundant paths and ensuring there is only one active path for data to flow through the network.

Question: 14

Which of the following are correct methods for configuring VLANs on a Junos OS switch? (Choose two)

A. Using the set vlans command to assign an IP address to the VLAN
B. Using the set interfaces command to assign a port to a specific VLAN
C. Using the show interfaces command to configure VLANs
D. Using the set interfaces command to configure the VLAN ID for the interface

Answer: B, D
Explanation:

The set interfaces command is used to assign ports to specific VLANs and configure the VLAN ID on the interface. The set vlans command is used to define and configure VLAN settings but not to assign IP

addresses directly.

Question: 15

Which of the following is true regarding load balancing in protocol-independent routing?

A. Load balancing can only be applied to multicast traffic
B. Load balancing is not supported in protocol-independent routing configurations
C. Load balancing is only effective for static routes in a routing table
D. Load balancing allows traffic to be distributed across multiple routes to the same destination

Answer: D
Explanation:

Load balancing in protocol-independent routing enables traffic to be distributed across multiple routes to the same destination, improving bandwidth utilization and network performance.

About dumpsplanet.com

dumpsplanet.com's free demo will give you a complete product idea. We provide latest & high quality IT / Business Certification Training Exam Questions in PDF Format.

We help you pass any IT / Business Certification Exams with 100% Pass Guaranteed. Especially Microsoft, Cisco, CompTIA, Citrix, EMC, HP, Oracle, VMware, Juniper, Check Point, LPI, Nortel, EXIN and so on.

View list of all certification exams: **All Exams**

Start Your JN0-281 Preparation

https://www.dumpsplanet.com/jn0-281-dumps/

[Limited Time Offer] Use Coupon 'dp25%' for extra 25% discount on the purchase of PDF Dumps. Test your JN0-281 preparation with actual JN0-281 exam questions.

We prepare state-of-the art practice tests Questions for All IT certification exams. You can reach us with from Contact Us Page. Any problems about IT certification or our products, you can write us back and we will get back to you within 24 hours.