Juniper JNCIP-DC Certification JN0-680 Exam

- **Vendor: Juniper**
- **Exam Code: JN0-680**
- **Exam Name: Data Center, Professional (JNCIP-DC)**

QUESTION 1
Which EVPN service consists of a single broadcast domain per EVPN instance?

A. a VLAN bundle service interface
B. a VLAN-based service interface
C. a port-based VLAN-aware service interface
D. a port-based service interface

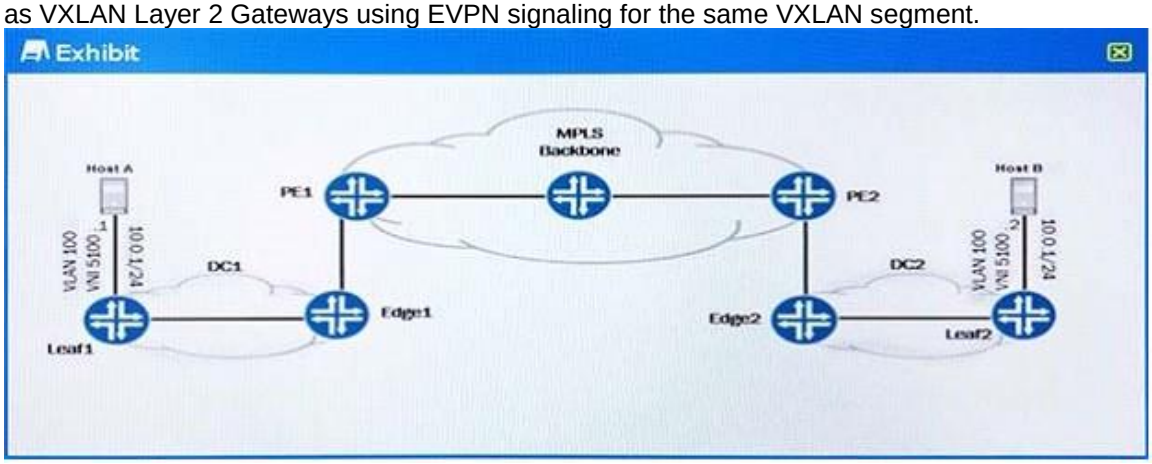
Answer: B
Explanation:
https://tools.ietf.org/html/draft-ietf-l2vpn-evpn-08#section-6.1

QUESTION 2
Which two statements are correct when performing a unified ISSU? (Choose two.)

A. The master Routing Engine and backup Routing Engine must be running the same software version before you can perform a unified ISSU.
B. Unicast RPF-related statistics are not saved across a unified ISSU, and the unicast RPF counters are reset to zero during a unified ISSU.
C. Unicast RPF-related statistics are saved across a unified ISSU, and the unicast RPF counters are not reset to zero during a unified ISSU.
D. The backup Routing Engine must be running the most recent software version before you can perform a unified ISSU.

Answer: AB
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/reference/requirements/issu-system-requirements.html

QUESTION 3
Referring to the exhibit, PE1 and PE2 are acting as MPLS Layer 3 VPN PEs to provide the DCI between DC1 and DC2, which are IP Fabrics. Leaf1 and Leaf2 are QFX5100 Series devices acting as VXLAN Layer 2 Gateways using EVPN signaling for the same VXLAN segment.



Which statement is correct about the Edge1 device in this scenario?

A. Edge1 must be configured for MP-BGP using EVPN signaling.
B. Edge1 must be configured for MP-BGP using L3VPN signaling.
C. Edge1 must be configured for BGP labeled unicast on its PE1-facing interface.
D. Edge1's routing table must contain an IP route to both Leaf1 and Leaf2.

Answer: A
Explanation:
Assumption here that the MPLS backbone network offers EVPN; this is the most fully-featured solution. This could also be achieved via C; BGP-LU shared with the provider, basically extending MPLS down to the Edge1+2 routers; this is less `risky' for the MPLS backbone operator. B and D are ignoring EVPN/ VXLAN components and refer to traditional Layer 3 IP routing.
https://www.juniper.net/documentation/en_US/junos/topics/concept/evpns-overview.html

QUESTION 4
Referring to the exhibit, which two MAC addresses are learned from the local side of the MC-LAG link?

```
Ethernet switching table : 3 entries, 3 learned
Routing instance : default-switch

Vlan name    MAC address           MAC flags  Age      Logical interface
v15          4c:96:14:e8:c6:fd     DR         -        ae0.0
v15          4c:96:14:e8:c6:fe     DL         -        et-0/0/51.0
v15          4c:96:14:e8:f0:21     DR         -        ae0.0
v15          4c:96:14:e8:a6:16     DL         -        et-0/0/51.0
```

A. 4c:96:14:e8:c6:fe and 4c:96:14:e8:a6:16
B. 4c:96:14:e8:c6:fd and 4c:96:14:e8:f0:21
C. 4c:96:14:e8:c6:fd and 4c:96:14:e8:a6:16
D. 4c:96:14:e8:f0:21 and 4c:96:14:e8:a6:16

Answer: A
Explanation:
Flag `DL' means Dynamic, Locally-learned (DR means Dynamic, Remote PE MAC).

QUESTION 5
An EX9200 switch is acting as a Layer 3 VXLAN gateway. In this scenario. which action will allow you to communicate between two VLANs?

A. Configure L3 physical interfaces to connect the VXLANs.
B. Configure IRB interfaces to connect the VXLANs.
C. Configure LAG interfaces to connect the VXLANs.
D. Configure a VPLS instance.

Answer: B
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/example/sdn-vxlan-ovsdb-inter-vxlan-routing-data-center-configuring.html

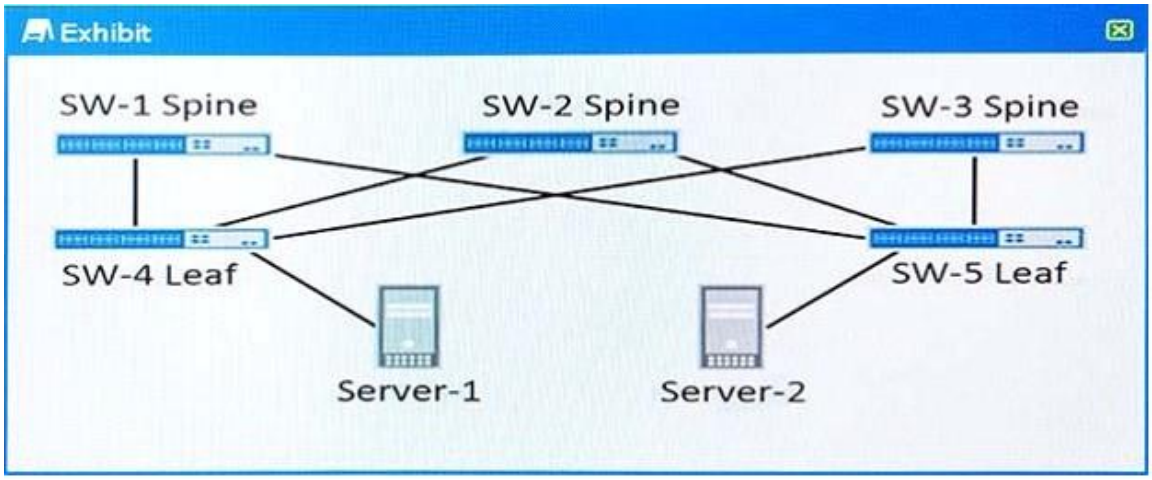
QUESTION 6
You are deploying a spine-and-leaf IP Fabric in your data center using EBGP. In this scenario, which three statements are true? (Choose three.)

A. Each device should you use a different autonomous system number.
B. Each leaf must peer to each spine.

C. Each device should also run an IGP to advertise loopback interfaces.
D. EBGP does not require a next-hop self-policy.
E. Each leaf must peer to every other leaf.

Answer: ABD
Explanation:
http://www.juniper.net/us/en/local/pdf/whitepapers/2000565-en.pdf

QUESTION 7
VMs on Server-1 and Server-2 are on the same Layer 2 domain within a VCF and are sending traffic to each other.

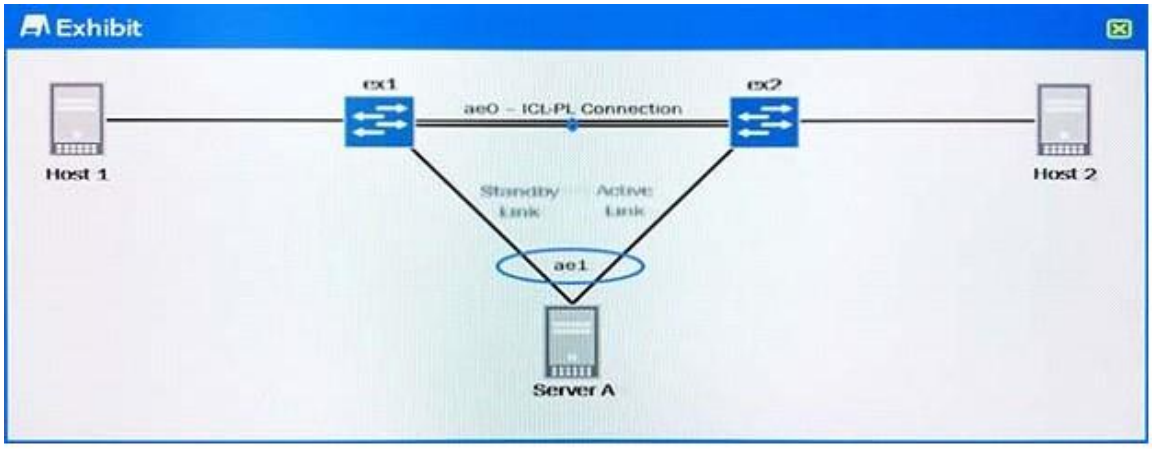


Referring to the exhibit, which three criteria are used when load-balancing traffic? (Choose three.)

A. EtherType
B. source MAC
C. incoming port ID
D. Layer 4 source port
E. destination IP

Answer: ABC
Explanation:
http://nextheader.net/2016/10/28/virtual-chassis-fabric-part-ii-control-and-forwarding-plane/
Layer 2 load-balancing hashing does not involve Layer 3 or Layer 4 header information. I.E.: Layer 2: source MAC, destination MAC, Ethertype, Vlan ID, Incoming Port ID, source member ID.

QUESTION 8
You are deploying MC-LAG as shown in the exhibit.

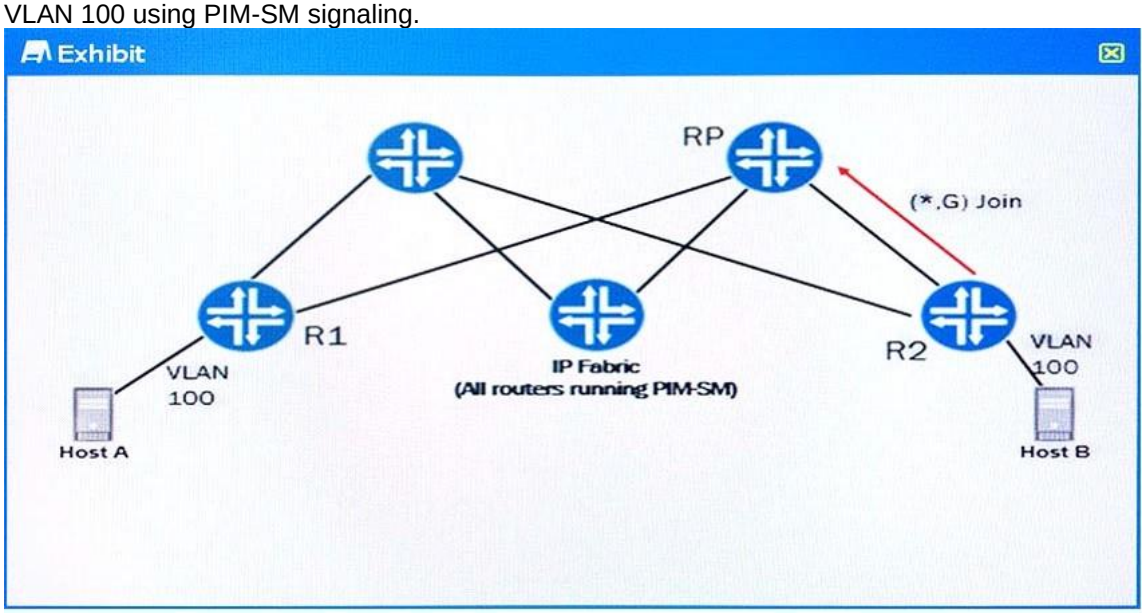


Which statement is correct when using active/standby mode?

A. A spanning tree protocol should be used to avoid Layer 2 loops between Server A and both switches.
B. VCCP is used to exchange MAC addresses between MC-LAG peers.
C. All traffic from Server A to Host 1 will traverse the link between Server A and ex2.
D. Only ICCP control traffic is allowed through the ICL-PL connection.

Answer: D
Explanation:
https://kb.juniper.net/InfoCenter/index?page=content&id=KB21824
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/interfaces-configuring-multi-chassis-link-aggregation.html

QUESTION 9
Referring to the exhibit, R1 and R2 are QFX5100s and are acting as VXLAN Layer 2 Gateways for VLAN 100 using PIM-SM signaling.



What will cause R2 to send a (*.G) PIM Join towards the RP?

A. R2 will send a (*.G) PIM Join when its VLAN 100 configuration is committed.
B. R2 will send a (*.G) PIM Join when it first learns the MAC address of a locally attached host.

C. R2 will send a (*.G) PIM Join when it receives broadcast, multicast, or unknown unicast traffic from Host B.
D. R2 will send a (*.G) PIM Join when it receives broadcast, multicast, or unknown unicast traffic from Host A.

Answer: A
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/multicast-pim-sparse-characteristics.html
It's A because if you consider that Host B may send zero traffic whatsoever, how can Host A find Host B's MAC address? It would have to ARP for it. So, because Host B may lie dormant until Host A initiates communications, it is completely necessary for R2 to (*,G) PIM Join the VXLAN group for VLAN 100. C is impossible before the (*,G), B and D are shades of the same chicken-and-egg scenario that makes A the only viable answer.

QUESTION 10
You are using IBGP to deploy an IP fabric. There are four spine devices, two of which are configured as route reflectors. You notice that the other two spines are not receiving all the possible paths to each leaf, and traffic cannot be load-balanced to the leaf devices. Which two actions will resolve this problem? (Choose two.)

A. Configure the add-path parameter on the leaf devices.
B. Configure the multihop parameter on the route reflectors.
C. Configure the multipath parameter on the route reflectors.
D. Configure the add-path parameter on the route reflectors.

Answer: AD
Explanation:
http://www.juniper.net/us/en/local/pdf/whitepapers/2000565-en.pdf
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/add-path-edit-protocols-bgp.html

QUESTION 11
You are building an EVPN Data Center Interconnect. You must support multiple VLANs in a single EVPN instance. Which parameter provides this functionality?

A. instance-type evpn
B. instance-type no-forwarding
C. instance-type virtual-switch
D. instance-type 12vpn

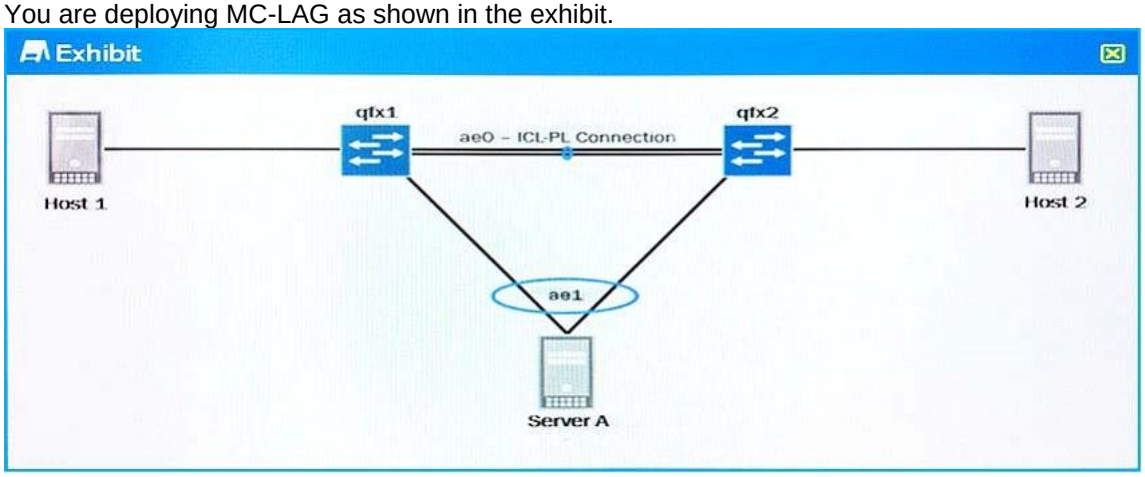
Answer: A
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/evpn-routing-instance-configuring.html

QUESTION 12
Which statement is true about a Data Center Interconnect over an IP network?

A. Layer 2 data must traverse a point-to-point link.
B. Layer 2 data must traverse an MPLS LSP.
C. Layer 2 data must be encapsulated.
D. Layer 3 data must be encapsulated.

Answer: C

QUESTION 13
You are deploying MC-LAG as shown in the exhibit.

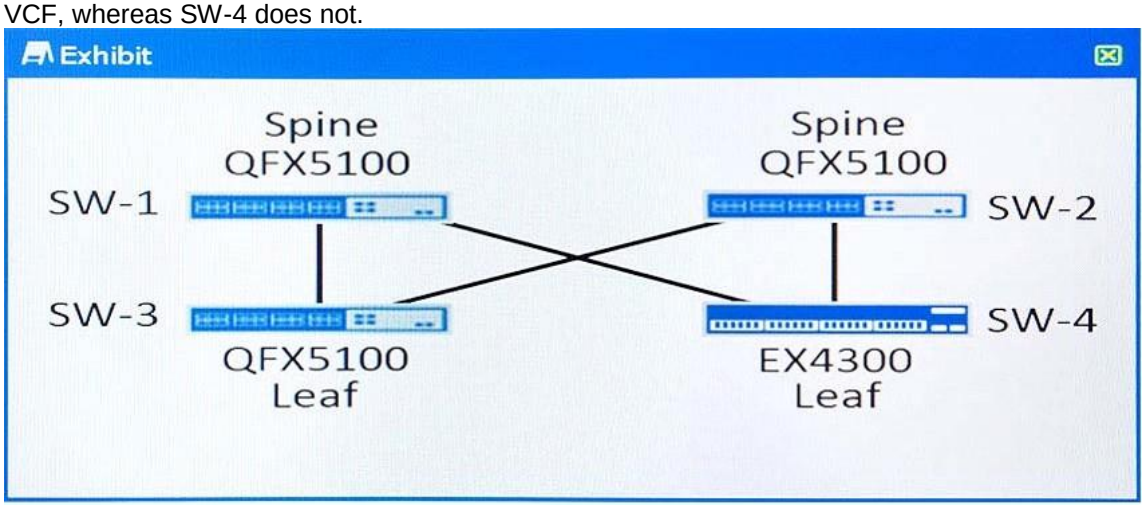


Which statement is correct when using active/active mode?

A. Only ICCP control traffic is allowed through the ICL-PL connection.
B. ICCP and block filters are used to avoid Layer 2 loops.
C. VRRP must be used to ensure MAC addresses are shared between peers.
D. VCCP is used to exchange MAC addresses between MC-LAG peers.

Answer: A
Explanation:
https://kb.juniper.net/InfoCenter/index?page=content&id=KB21824
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/interfaces-configuring-multi-chassis-link-aggregation.html

QUESTION 14
Referring to the exhibit, SW-3 and SW-4 have been configured for mixed-mode VCF and added to the VCF. After cabling the new devices into the VCF, you notice that SW-3 automatically joins the VCF, whereas SW-4 does not.



Why are SW-3 and SW-4 behaving this way? (Choose two.)

A. By default, EX4300 QSFP+ ports are enabled as VCPs.

B. By default, QFX5100 ports are not enabled as VCPs.
C. By default, EX4300 QSPF+ ports are not enabled as VCPs.
D. By default, QFX5100 ports are enabled as VCPs.

Answer: AB
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/virtual-chassis-ex4300-configuring.html
https://www.juniper.net/documentation/en_US/release-independent/junos/topics/reference/specifications/interface-qfx5100-support.html

QUESTION 15
What are three benefits of EVPN that would improve the current E-line, E-LAN, and E-Tree delivery? (Choose three.)

A. greater Multiprotocol Label Switching scale
B. native support for multihoming
C. integrated L2/L3 connectivity
D. network resiliency between edge nodes
E. efficient security provisioning

Answer: ABC
Explanation:
https://www.juniper.net/assets/uk/en/local/pdf/whitepapers/2000596-en.pdf

QUESTION 16
The exhibit shows an output from a QFX5100 Series switch serving as an MC-LAG peer.

```
(master:0)
user@qfx5100-1> show ethernet-switching table

MAC flags (S - static MAC, D - dynamic MAC, L - locally learned, P -
Persistent static
SE - statistics enabled, NM - non configured MAC, R - remote PE MAC)

Ethernet switching table : 3 entries, 3 learned
Routing instance : default-switch

Vlan name  MAC address        MAC flags  Age  Logical interface
v15        4c:96:14:e8:c6:fd  DR         -    ae0.0
v15        4c:96:14:e8:c6:fe  DL         -    et-0/0/51.0
v15        4c:96:14:e8:f0:21  DL         -    ae1.0
```

Which two statements are true in this scenario? (Choose two.)

A. ae0.0 is functioning as an ICL.
B. et-0/0/51.0 is a standalone link and not part of an MC-AE bundle.
C. et-0/0/51.0 is a member link of qfx5100-1 within an MC-AE bundle.
D. ae1.0 is functioning as an ICL.

Answer: AB
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/task/troubleshooting/troubleshooting-

mc-lag-qfx-series-cli.html

QUESTION 17
You are having management connectivity problems with a mixed-mode Virtual Chassis. Which statement is correct in this scenario?

A. The master RE's me0 MAC address should match the MAC address of the vme.
B. Each member's me0 MAC address should match the MAC address on the vme.
C. Each member's me0 MAC address should not match the MAC address of the vme.
D. The current me0 MAC address should match the MAC address of the vme.

Answer: A
Explanation:
https://kb.juniper.net/InfoCenter/index?page=content&id=KB25724

QUESTION 18
Referring to the exhibit, what is the MAC address of the IRB interface on router PE1?

```
user@PE> show route table evpna.evpn.0
2:10.255.0.1:100::0::100::a8:d0:e5:54:0d:10/384 (1 entry, 1 announced)
TSI:
Page 0 idx 0, (group PE type Internal) Type 1 val 0x2736568 (adv_entry)
     Advertised metrics:
          Flags: Nexthop Change
          Nexthop: Self
          Localpref: 100
          AS path: [100] I
          Communities: target:100:100 evpn-default-gateway
```

A. 2.91.223.216:100
B. a8:d0:e5:54:0d:10
C. 1:100::0::100::a
D. 2.10.255.0.1:100

Answer: B

QUESTION 19
You are establishing an IP Fabric where your QFX10002-72Q spine devices are connecting to leaf devices. Each leaf is a Virtual Chassis comprised of ten EX4300s. What is the maximum number of leaf devices supported in this scenario?

A. 36
B. 18
C. 16
D. 10

Answer: D
Explanation:
http://www.juniper.net/assets/uk/en/local/pdf/whitepapers/2000597-en.pdf
"up to 128 satellite devices" -- where each EX4300 VC = 10 devices; 128/10 = 12 max, closest answer is D: 10.

QUESTION 20

You are deploying an IP Fabric in your new data center. You need to ensure that your servers have multiple active/active links for redundancy and load balancing. What are two methods to accomplish this goal? (Choose two.)

A. Use EVPN with ESI at the access switch.
B. Use MSTP to enable multiple links on the access switch.
C. Use MC-LAG at the access switch.
D. Use PIM-SM to enable multicast across multiple links.

Answer: BC
Explanation:
NOT A: because EVPN is specifically designed to handle multi-homed access redundancy, and mobility, and load-balancing is possible. I would not choose this though because EVPN is primarily a DCI protocol for interconnecting datacenters and is not typically considered an access layer protocol facing the servers. It is possible to use EVPN inside a single datacenter, in which case it would be used between the access switches and the distribution/core switches. In the spirit of the question however, this does not face the servers directly so I exclude it.
B: because MSTP allows for multiple spanning trees, which allows for use of all inter-switch links by, for example, aggregating VLANs into spanning trees, eg: VLANs 1-100 in one tree, 101-200 in another. One spanning tree is active on a given link, the other is inactive. In this way load-balancing is achieved. In case of link failure, all traffic will fall to the remaining link(s).
C: because MC-LAG allows for link aggregation across multiple chasses -> permits load-balancing and provides redundancy.
NOT D: because PIM-SM is a control-plane signaling protocol for multicast which enables routers to join and prune their membership to given multicast distribution trees. It has little directly to do with the redundancy and load-balancing of (multicast) traffic receivers.

QUESTION 21
Which three BGP messages pass EVPN information between devices? (Choose three.)

A. open messages
B. update messages
C. notification messages
D. keepalive messages
E. route-refresh messages

Answer: ABE
Explanation:
A: BGP open messages contain information used to negotiate the establishment of sessions but do not contain route information itself. They may contain information such as I can exchange EVPN AFI/SAFI NLRI with you, but not EVPN information itself.
B: BGP update messages can contain EVPN NLRI information. This is the `routing information' itself.
NOT C: BGP notification messages indicate error conditions and contain basic error codes but no routing information. Technically they could refer to an error relating to EVPN, however this is not a good fit for the question being asked.
NOT D: BGP keepalive messages are always 19 bytes and uniform; no NLRI information.
E: A BGP speaker can send a ROUTE-REFRESH message to request the receiver re-sends their previously-sent BGP updates which, as per C, can include EVPN NLRI information.

QUESTION 22
You created an IP Fabric based on iBGP. You noticed that ECMP load sharing is not working. In this scenario, what is the problem?

A. Each member of the IP Fabric needs a different autonomous system number.
B. BGP route reflectors only reflect the best route.
C. ECMP load sharing is only supported on 40GbE and 100GbE interfaces.
D. A route input policy needs to be added on all non-route reflectors to allow ECMP.

Answer: BD
Explanation:
NOT A: iBGP means by definition the same AS!
B: Because route-reflectors only advertise the best and active route, configuration changes are required to export multiple routes (where applicable); there are a few ways to do this: add path/multipath or multiple RRs or multiple sessions with different policies, etc.
NOT C: ECMP works on any IP path regardless of interface speed.
D: Route reflector clients must also support ECMP in their import policies and their forwarding policies.

QUESTION 23
You have an EBGP-based IP Fabric. Why do you need an export policy on each leaf in this scenario?

A. to accept remote server-facing IP prefixes
B. to ensure a full mesh is formed between peers
C. to advertise local server-facing IP prefix
D. to advertise local routes with the router reflector

Answer: AC
Explanation:
A: remote IP prefixes will not be known inside the local autonomous system unless learned via eBGP with remote peer.
NOT B: full mesh not required; would be required in iBGP without RR.
C: local IP prefix will not be known inside the peer autonomous system unless advertised.
NOT D: RR only used in iBGP.

QUESTION 24
You are configuring VXLAN on a network of QFX5100s, and are using the set vlans vlan100 vxlan command:

```
unreachable-vtep-aging-timer 600
```

What does this command do?

A. This command ages out a remotely learned VTEP address after 600 seconds of inactivity.
B. This command ages out the address of the remote VTEP 600 seconds after the last learned MAC address expires.
C. This command ages out all learned MAC addresses assigned to the VTEP after 600 seconds of inactivity.
D. This command ages out a locally learned MAC address assigned to the VTEP after 600 seconds of inactivity.

Answer: B
Explanation:
NOT A: this answer is ambiguous and vague about which MACs are involved.
B: this answer is most detailed and accurate.
NOT C - the aging timer refers to the remote VTEP MAC, not the MACs learned *via* that VTEP.
NOT D - the aging timer refers to the remote VTEP MAC after MACs learned *via* that VTEP age out; not locally-learned MACs.

QUESTION 25
What are two valid types of VXLAN signaling? (Choose two.)

A. EVPN
B. RSVP
C. RSTP
D. PIM

Answer: AB

QUESTION 26
Which statement is true for an IP Fabric to be called a Clos IP Fabric?

A. Spanning tree must be completely eliminated.
B. The number of uplinks from a leaf device equals the number of spine devices.
C. The protocol used is OSPF, IS-IS, or BGP.
D. Spine devices must be connected in a full mesh.

Answer: D
Explanation:
http://www.juniper.net/us/en/local/pdf/whitepapers/2000565-en.pdf (Page 5)

QUESTION 27
Which protocol replicates forwarding information between MC-LAG peers?

A. VCCP
B. ICCP
C. VRRP
D. LLDP

Answer: B
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/mc-lag-feature-summary-best-practices.html

QUESTION 28
Which two technologies provide Layer 2 services across data centers in two remote locations? (Choose two.)

A. L3VPN
B. VPLS
C. EVPN
D. MSDP

Answer: BC
Explanation:
https://www.juniper.net/assets/jp/jp/local/pdf/whitepapers/2000596-en.pdf

QUESTION 29
Which statement is correct about EVPN Type 2 routers?

A. An EVPN Type 2 route prevents the need to advertise host IP reachability.
B. An EVPN Type 2 route provides local proxy-arp for remote hosts.
C. An EVPN Type 2 route allows data plane-based host MAC learning.

D. An EVPN Type 2 route disables MAC flowing to remote hosts.

Answer: C
Explanation:
https://www.juniper.net/assets/jp/jp/local/pdf/whitepapers/2000596-en.pdf (Page 10)

QUESTION 30
You must manually configure VXLAN on a QFX5100. Which protocol is required to perform this task?

A. DVMRP
B. EBGP
C. PIM
D. MSDP

Answer: C
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/vxlan-qfx-series.html

QUESTION 31
Which two statements about VXLAN are true? (Choose two.)

A. VXLAN uses a UDP destination port 4987.
B. VXLAN adds an additional 32 bytes worth of headers.
C. A VTEP is virtual or physical device that maps end devices to VXLAN segments.
D. Devices that terminate VXLAN tunnels are known as VTEPs.

Answer: CD

QUESTION 32
Which 3 benefits do VXLANs offer to VLANs? (Choose three.)

A. It provide better utilization of available paths in the overlay infrastructure
B. VXLAN uses a 24-bit VNID to overcome the 4094 vlan scale limitation
C. VXLAN uses a 16-bit VNID to overcome the 4094 vlan scale limitation
D. It provide a solution to extent Layer 2 segment over a single Layer 2 VLAN
E. It provides a solution to extent Layer 2 segments over a shared Layer 3 routed network
F. It provides better utilization of available network paths in the underlay infrastructure

Answer: BEF

QUESTION 33
Which two options are network consideration for common VXLAN deployment? (Choose two.)

A. consistent VNI-to-group mapping
B. placement of VXLAN tunnel endpoints
C. multicast group scaling
D. consistent VLAN-to-VN-Segment mapping
E. MTU size in the transport network

Answer: AD

QUESTION 34
You are implementing a Virtual Chassis using QFX5100s and EX4300s in your data center. In this scenario, which two statements are correct? (Choose two.)

A. Only 10GbE VCP connections can be used between the QFX5100s and the EX4300s.
B. The QFX5100 devices cannot assume the line card role in the Virtual Chassis.
C. Some hardware capabilities are limited by the capabilities of the EX4300 switches.
D. The EX4300 devices can only assume a line card role in the Virtual Chassis.

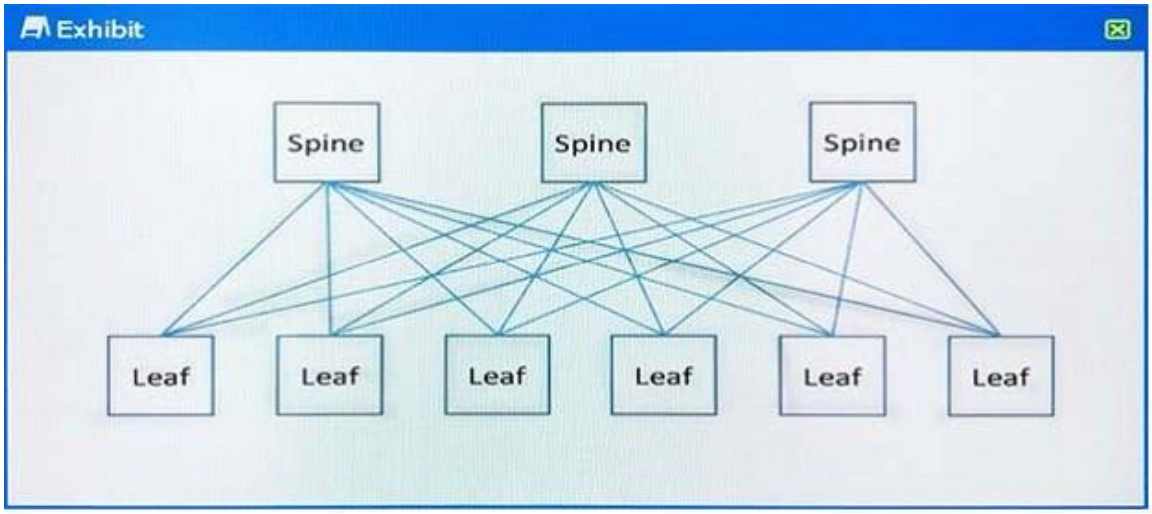
Answer: CD
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/virtual-chassis-ex-qfx-series-mixed-understanding.html (EX4300s are only line cards, QFX5100 can be line card)
https://www.juniper.net/documentation/en_US/junos/topics/concept/virtual-chassis-ex4300-virtual-chassis-understanding.html (Supports 40GE VCPs)

QUESTION 35
A customer notices that all traffic is traveling over a single link within their partially meshed IP Fabric using IBGP. While troubleshooting, the customer notices that the configuration is missing a configuration parameter. Which parameter would the customer use to solve this problem?

A. accept-remote-nexthop
B. advertise-peer-as
C. add-path
D. multihop

Answer: C
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/add-path-edit-protocols-bgp.html

QUESTION 36
A customer has a 3-stage Clos architecture with three spine devices as shown in the exhibit. If a single spine device fails, what percentage of the remaining bandwidth will be available from leaf node to leaf node?

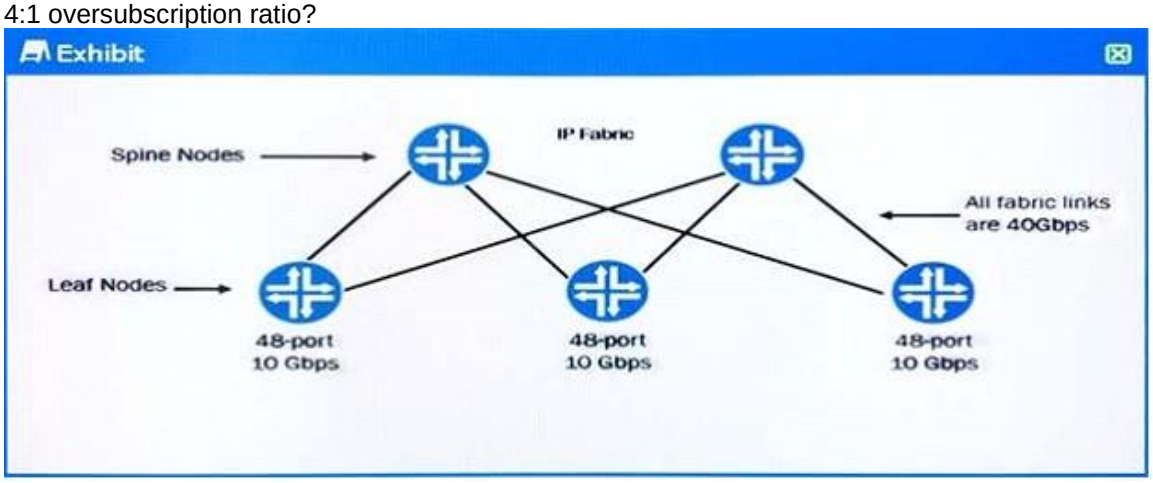


A. approximately 25%

B. approximately 75%
C. approximately 33%
D. approximately 66%

Answer: D
Explanation:
Leaf-to-leaf communication has 3 paths via each Spine node; lose 1 Spine, lose 1 path, i.e. 33%.

QUESTION 37
Referring to the exhibit, which hardware change would be made to the IP Fabric to ensure an exact 4:1 oversubscription ratio?



A. Upgrade the fabric links to 100GbE.
B. Add two leaf nodes to the IP Fabric.
C. Add three leaf nodes to the IP Fabric.
D. Add a spine node to the IP Fabric.

Answer: D
Explanation:
Leaf = 480 Gbps southbound, 80 Gbps northbound; 480/80 = 6:1. Add a spine and northbound capacity is 120 Gbps; 480/120 = 4:1.
http://www.brocade.com/content/html/en/solution-design-guide/brocade-dc-fabric-architectures-sdg/GUID-A0E2AF7F-C47A-458D-989A-35EC97E262DD.html

QUESTION 38
A customer has built a VXLAN using an EVPN signaling infrastructure with remote facilities with VXLAN using EVPN signaling connected to the Internet. The customer notices that the network is completely stable with no protocol errors in the underlay or overlay. The customer, however, cannot pass any application data across the network. Which statement would explain the intermittent loss?

A. There is an LACP key mismatch.
B. The MTU is exceeded.
C. The routing protocol authentication has failed.
D. The BPDU protection is invoked.

Answer: D

QUESTION 39

You have deployed a multicast server attached to a QFX5100 Series device serving as a VTEP. Which two statements are correct in this scenario? (Choose two.)

A. By default, the QFX5100 will send copies of the multicast packets to all locally attached devices in the same VLAN.
B. By default, the QFX5100 will send copies of the multicast packets to locally attached devices in the same VLAN that are interested receivers only.
C. By default, the QFX5100 will encapsulate the multicast packets in VXLAN and forward them to all remotely connected VTEPs.
D. By default, the QFX5100 will encapsulate the multicast packets in VXLAN and forward them to remotely connected VTEPs with interested receives only.

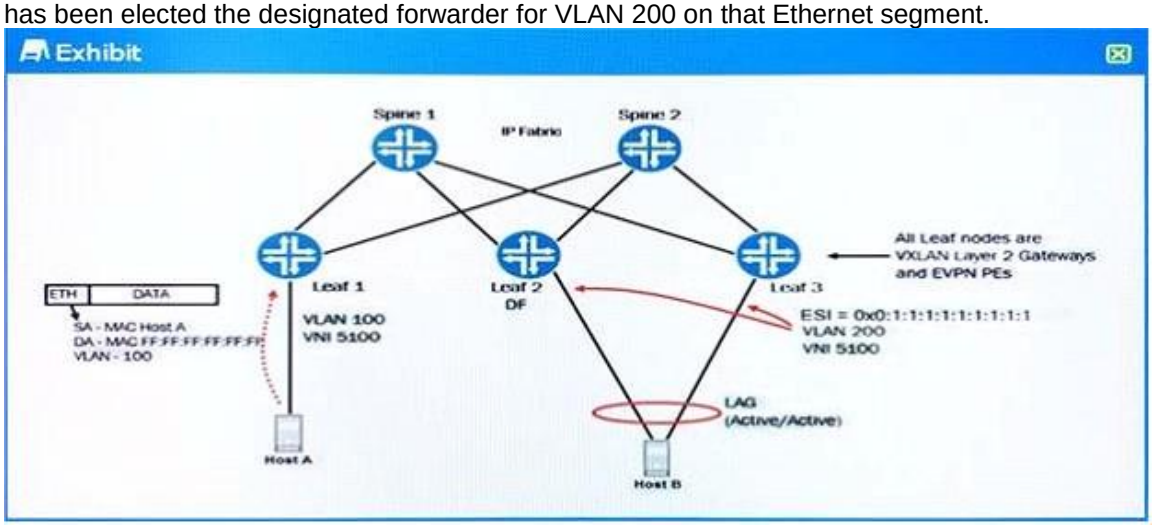
Answer: AC
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/sdn-vxlan.html#jd0e168

QUESTION 40
Which protocol is used between VCF member devices to create a loop-free topology?

A. LLDP
B. MSTP
C. RSTP
D. VCCP

Answer: D
Explanation:
http://www.juniper.net/documentation/en_US/release-independent/vcf/information-products/pathway-pages/vcf-best-practices-guide.pdf

QUESTION 41
Referring to the exhibit, each leaf node is a QFX5100 acting as a VXLAN Layer 2 Gateway using EVPN signaling. Leaf 2 and Leaf 3 are both attached to the same EVPN Ethernet segment. Leaf 2 has been elected the designated forwarder for VLAN 200 on that Ethernet segment.



In this scenario, which two actions will Leaf 1 perform with the broadcast Ethernet frame received from Host A? (Choose two.)

A. Leaf 1 will strip the VLAN tag from the Ethernet frame before encapsulating it in VXLAN.
B. Leaf 1 will send a VXLAN encapsulated copy of the Ethernet frame to both Leaf 2 and Leaf 3.

C. Leaf 1 will change the VLAN tag of the Ethernet frame to 200 before encapsulating it in VXLAN.
D. Leaf 1 will send a VXLAN encapsulated copy of the Ethernet frame to Leaf 2 only.

Answer: AD
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/sdn-vxlan.html

QUESTION 42
You have built a mixed-mode VCF consisting of two QFX5100-24Qs as spines, two QFX5100-48S as leaf nodes, and one EX4300 as a leaf node. The VCF is working for all devices, except the EX4300 40GbE fabric links will not join the VCF. In this scenario, what must be corrected to solve the connectivity problem?

A. Reboot all of the VCF members.
B. Power off all of the VCF members and power up the spines before powering up the leafs.
C. Zeroize the EX4300, cleat all the tables with the clear ethernet-switching tables command on all members, and reissue the request virtual-chassis mixed-mode command.
D. Turn off authonegotiation on the EX4300 and the attached spine interfaces, and then use the request virtual-chassis vc-port set command on the spine ports connected to the EX4300.

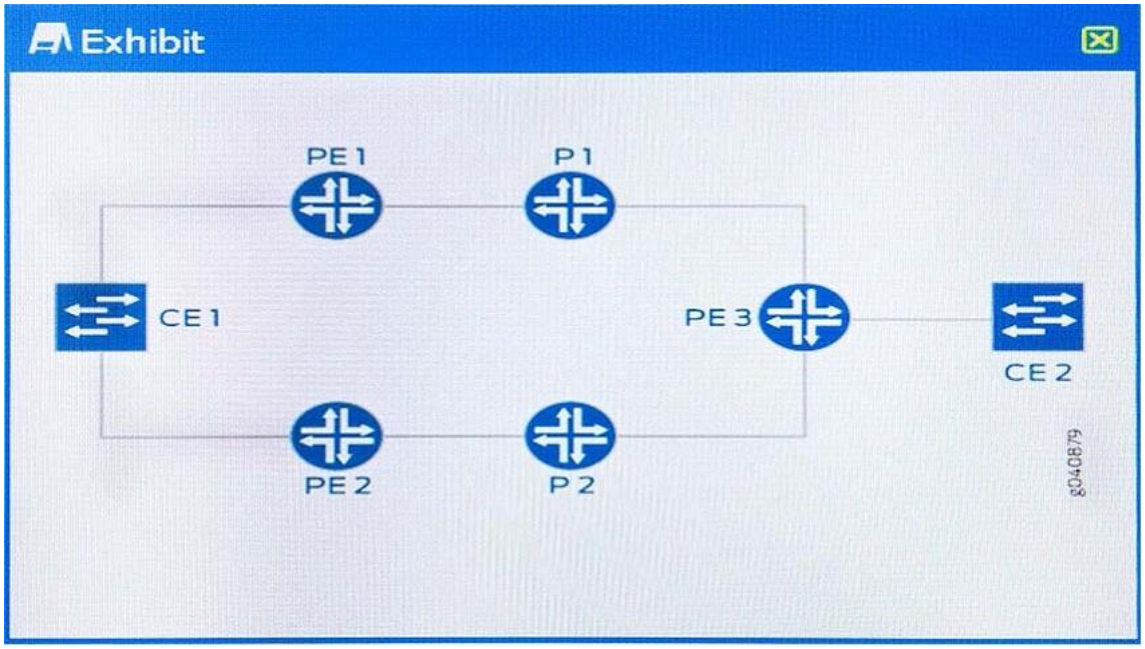
Answer: A
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/vcf-adding-device.html (Required only if you are adding a device that turns a non-mixed VCF into a mixed VCF)

QUESTION 43
Your server administrator asks you to preserve the inner VLAN tags of the frames coming from a Layer 2 VXLAN Gateway of the EVPN-enabled segment. Which two parameters must you add to the configuration to allow the VLAN tag to be passed? (Choose two.)

A. layer2-protocol-tunneling
B. decapsulate-accept-inner-vlan
C. dotlq-tunneling
D. encapsulate-inner-vlan

Answer: BD
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/encapsulate-inner-vlan.html
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/decapsulate-accept-inner-vlan.html

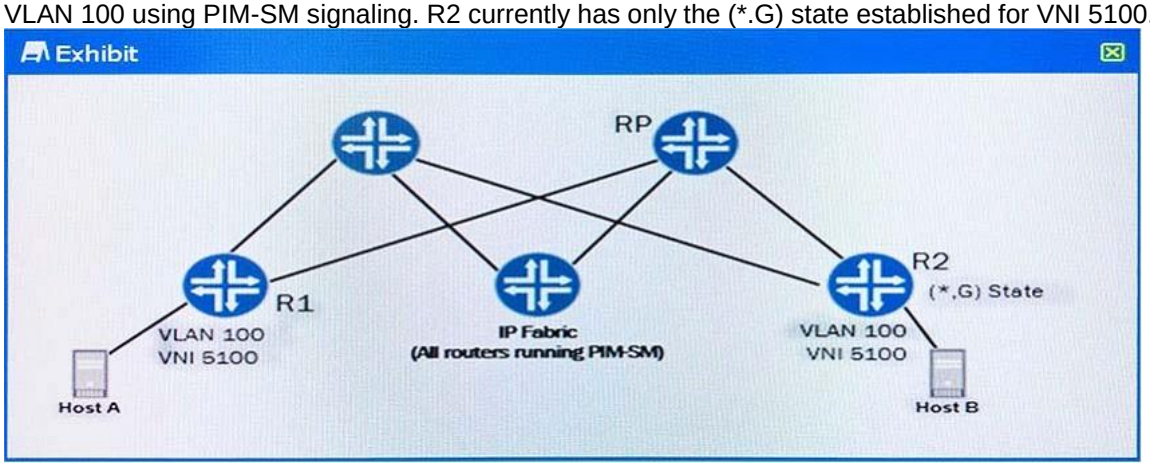
QUESTION 44
Which statement is valid for EVPN multihoming CE1 to PE1 and PE2 as shown in the exhibit?



A. CE1 must have LACP enabled on the interfaces attached to the PEs.
B. The PEs must be manually configured for the ESI value on the interfaces attached to the CEs.
C. The PEs use BPDU autodiscovery by enabling STP on the interfaces attached to CE1.
D. CE1 must have the MAC mobility extended community enabled in BGP on both the CE and PEs.

Answer: A
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/evpn-bgp-multihoming-overview.html
https://tgregory.org/2016/06/21/evpn-all-active-multihoming/

QUESTION 45
Referring to the exhibit, R1 and R2 are QFX5100s and are acting as VXLAN Layer 2 Gateways for VLAN 100 using PIM-SM signaling. R2 currently has only the (*.G) state established for VNI 5100.



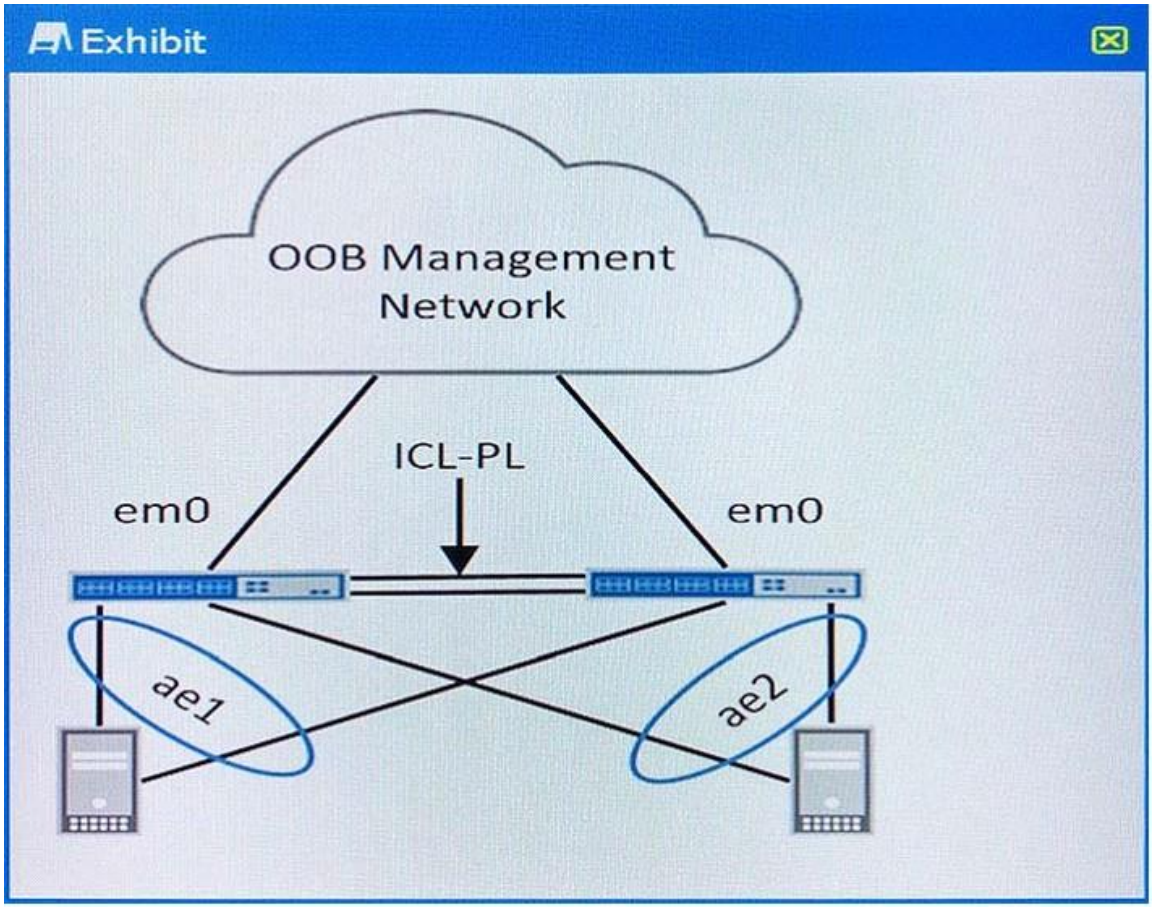
Which event will cause R2 to establish the (S,G) state for VNI 5100 using R1 as the multicast source?

A. when R2 receives broadcast, multicast, or unknown unicast from Host A

B. when R2 first learns the MAC address of a locally attached host
C. when R2's VNI 5100 configuration is committed
D. when R1 receives a known unicast Ethernet frame from Host A

Answer: D

QUESTION 46
The MC-LAG group shown in the exhibit is providing high availability services for the directly connected servers.



Where does Juniper Networks recommend you provide the backup liveness detection?

A. on the ae2 interface
B. on the ICL-PL connection
C. on the ae1 interface
D. on the management interfaces

Answer: B
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/backup-liveness-detection-edit-protocols-iccp-peer-qfx-series.html
https://kb.juniper.net/InfoCenter/index?page=content&id=KB21824

QUESTION 47
You are deploying a VXLAN using EVPN signaling overlay network. PE1 and PE2 are multihomed

to the connected CE device. You notice that the traffic is not load-balancing as expected.

```
user@PE1# show interfaces
interfaces {
     ae0 {
          flexible-vlan-tagging;
          mtu 9192;
          encapsulation flexible-ethernet-services;
          esi {
               00:11:11:11:11:11:11:11:11:11;
               all-active;
          }
          aggregated-ether-options {
               lacp {
                    system-id 00:00:00:00:00:01;
               }
          }
...
}

user@PE1# show routing-instances
routing-instances {
     evpn-instance {
          instance-type virtual-switch;
          interface ae0.100;
          route-distinguisher 11.11.11.11:100;
          vrf-target target:65000:1;
...
     }
}


user@PE2# show interfaces
interfaces {
     ae0 {
          flexible-vlan-tagging;
          mtu 9192;
          encapsulation flexible-ethernet-services;
          esi {
               00:22:22:22:22:22:22:22:22:22;
               all-active;
          }
          aggregated-ether-options {
               lacp {
                    system-id 00:00:00:00:00:02;
               }
          }
...
     }
}

user@PE2# show routing-instances
routing-instances {
     evpn-instance {
          instance-type virtual-switch;
          interface ae0.100;
          route-distinguisher 22.22.22.22:100;
          vrf-target target:65000:1;
...
     }
}
```

Referring to the exhibit, which two actions will solve this problem? (Choose two.)

A. Set the route distinguisher on PE2 to 11.11.11.11:100.
B. Set the LACP system ID on PE2 to 00:00:00:00:00:01.
C. Set the ESI on both devices to 00:00:00:00:00:00:00:00:00:00.
D. Set the ESI on PE2 to 00:11:11:11:11:11:11:11:11:11.

Answer: BD
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/evpn-bgp-multihoming-overview.html
https://tgregory.org/2016/06/21/evpn-all-active-multihoming/

QUESTION 48
In a preprovisioned mixed Virtual Chassis, which statement is correct about converting a 40Gbps QSFP+ to a Virtual Chassis port in an EX4300?

A. LLDP is enabled on that interface.
B. LLDP is disabled on that interface.
C. One end of the link is configured as a Virtual Chassis port.
D. Both ends of the link have the default configuration.

Answer: D
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/virtual-chassis-qfx-series-cli.html

QUESTION 49
You are implementing a Virtual Chassis using QFX5100s and EX4300s in your data center. In this scenario, which three hardware capabilities are affected? (Choose three.)

A. usable VCP connections limited to 10GbE
B. MAC table size
C. number of usable ports per member
D. number of supported routing instances
E. maximum number of firewall filters

Answer: BDE
Explanation:
http://africa.westcon.com/documents/54080/ex-series-qfx-series-switching-product-comparison-matrix.pdf

QUESTION 50
You are developing an EVPN service between your data centers to enable Layer 2 stretch and Virtual Machine Traffic Optimization (VMTO) operations. In this scenario, which action must be performed on the IRB interface to accomplish this task?

A. Configure the same IP address and let the MAC address be dynamically assigned on each PE.
B. Configure the same IP address and the same MAC address on each PE.
C. Configure different IP addresses but the same MAC address on each PE.
D. Configure different IP addresses and different MAC addresses on each PE.

Answer: B
Explanation:
https://www.juniper.net/documentation/en_US/release-independent/solutions/information-products/pathway-pages/solutions/l3gw-vmto-evpn-vxlan-mpls.pdf

QUESTION 51
What are two methods used to scale an IBGP IP Fabric? (Choose two.)

A. spanning tree
B. redundant trunk groups
C. route reflection
D. confederations

Answer: CD

QUESTION 52
You are building a mixed-mode Virtual Chassis with two QFX5100-24Qs, four QFX3500-48s, two EX4600-40Fs and two EX4300-48Ts. The Virtual Chassis will not provision. In this scenario, which statement is correct?

A. QFX3500s are not allowed in mixed mode.
B. EX4600s are only allowed with EX4300s.
C. EX4600s must be preprovisioned as the master and backup.
D. Mixed-mode Virtual Chassis only allows for eight members.

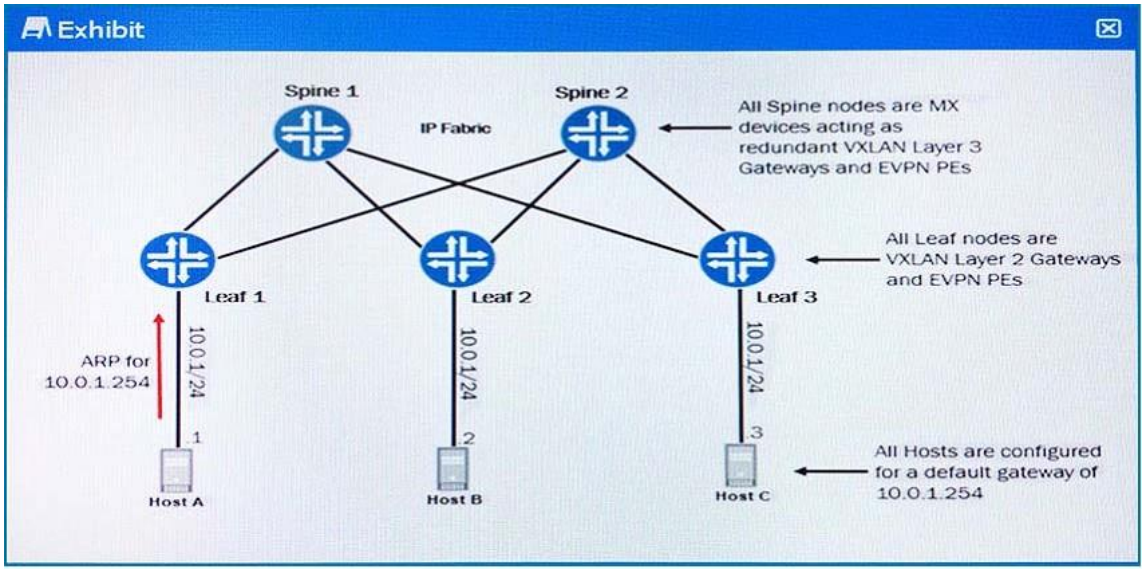
Answer: B
Explanation:
https://www.juniper.net/documentation/en_US/junos/topics/concept/virtual-chassis-ex-qfx-series-mixed-understanding.html#jd0e133

QUESTION 53
You are building a DCI solution and need both a Layer 2 solution and a Later 3 solution for different workloads within your data centers. What are two reasons why MPLS would be used a transport for this DCI solution? (Choose two.)

A. The fast failover capabilities of MPLS nodes can be accomplished in a recovery time that is equivalent to 50 ms or better.
B. MPLS allows you to natively runnel your own Layer 2 traffic through the service provided L3VPN.
C. MPLS allows you to interconnect multiple data centers over a public IP network.
D. MPLS allows for any-to-any connectivity allowing for both Layer 2 and Layer 3 DCIs.

Answer: BD

QUESTION 54
Spine 1 and Spine 2 are MX Series devices configured to act as redundant VXLAN Layer 3 Gateways using the virtual-gateway-address 10.0.1.254 statement.

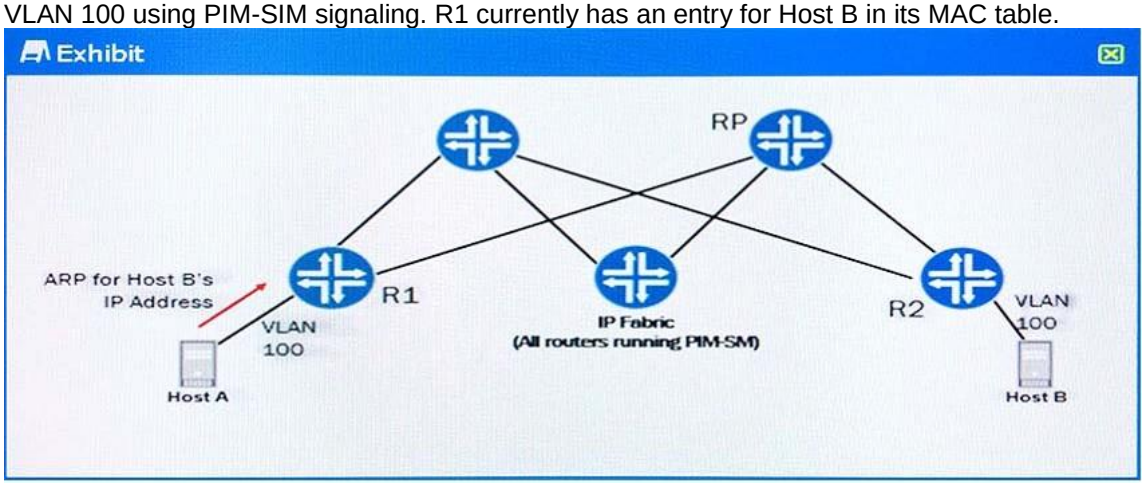


Referring to the exhibit, how will a spine node react to receiving the ARP request from Host A?

A. The spine node will send an ARP reply specifying the MAC address of its IRB interface.
B. The spine node will send an ARP reply specifying a virtual MAC address of 00:00:5e:00:01:01.
C. The spine node will send an ARP reply specifying the MAC address of its LT interface.
D. The spine node will send an ARP reply specifying the MAC address of its leaf-facing interface.

Answer: A
Explanation:
https://www.juniper.net/documentation/en_US/release-independent/solutions/information-products/pathway-pages/solutions/l3gw-vmto-evpn-vxlan-mpls.pdf
There will be an inner MAC which is the virtual MAC for the gateway; the IRB MAC is treated as equivalent.

QUESTION 55
Referring to the exhibit, R1 and R2 are QFX5100s and are acting as VXLAN Layer 2 Gateways for VLAN 100 using PIM-SIM signaling. R1 currently has an entry for Host B in its MAC table.



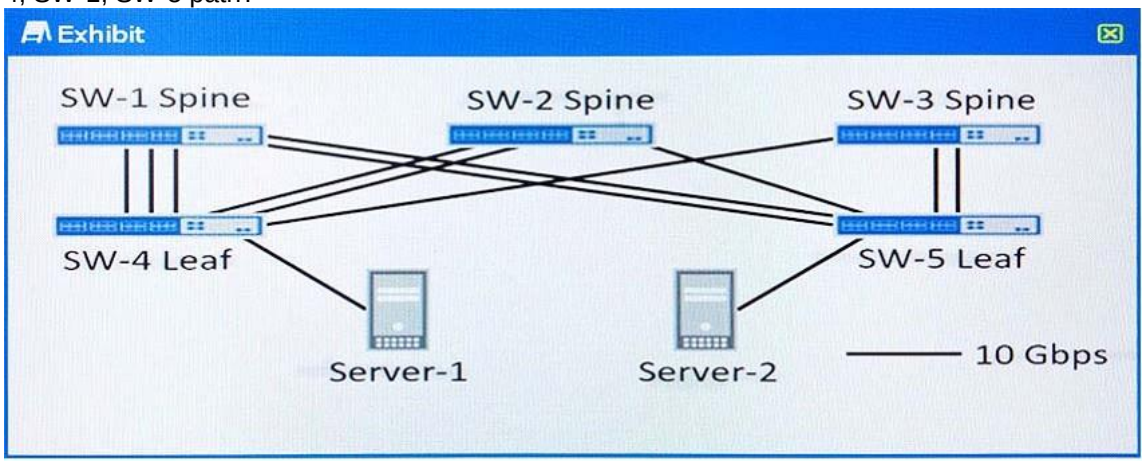
What will R1 do in response to receiving the ARP packet from Host A?

A. R1 will send a VXLAN packet over the (S,G) tree built to R2.
B. R1 will send a VXLAN packet over the RP-based multicast tree.

C. R1 will send an (S,G) PIM Join message to R2.
D. R1 will send a (*.G) PIM Join message to the RP.

Answer: A
Explanation:
It can only have learned Host B MAC via an established tree with R2, meaning A or B is the answer. Answer is A, (S,G) tree, because the RP-based tree transitioned to (S,G) tree once the Host B MAC was learned.

QUESTION 56
Referring to the VCF shown in the exhibit, what is the remote destination trunk weight for the SW-4, SW-1, SW-5 path?



A. 40/40
B. 10/40
C. 30/40
D. 20/40

Answer: .....