

# Practice Exam Questions



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## Aruba Data Center Network Specialist



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## **Exam HPE2-W09**

### **Aruba Data Center Network Specialist Exam**

**Version: 4.0**

**[ Total Questions: 129 ]**

**Question No : 1**

Switch-1 and Switch-2 are ArubaOS-CX switches, which are part of a Virtual Switching Extension (VSX) fabric. Switch-2 is the primary member. Switch-2 experiences a power failure while Switch-1 remains up. Switch-2's power recovers, and Switch-2 reboots.

Is this one of the things that happens when Switch-2 finishes booting?

**Solution: Switch-2 waits a period called the link-up delay before it enables Switched Virtual Interfaces (SVIs) on its VSX LAGs.**

A. Yes

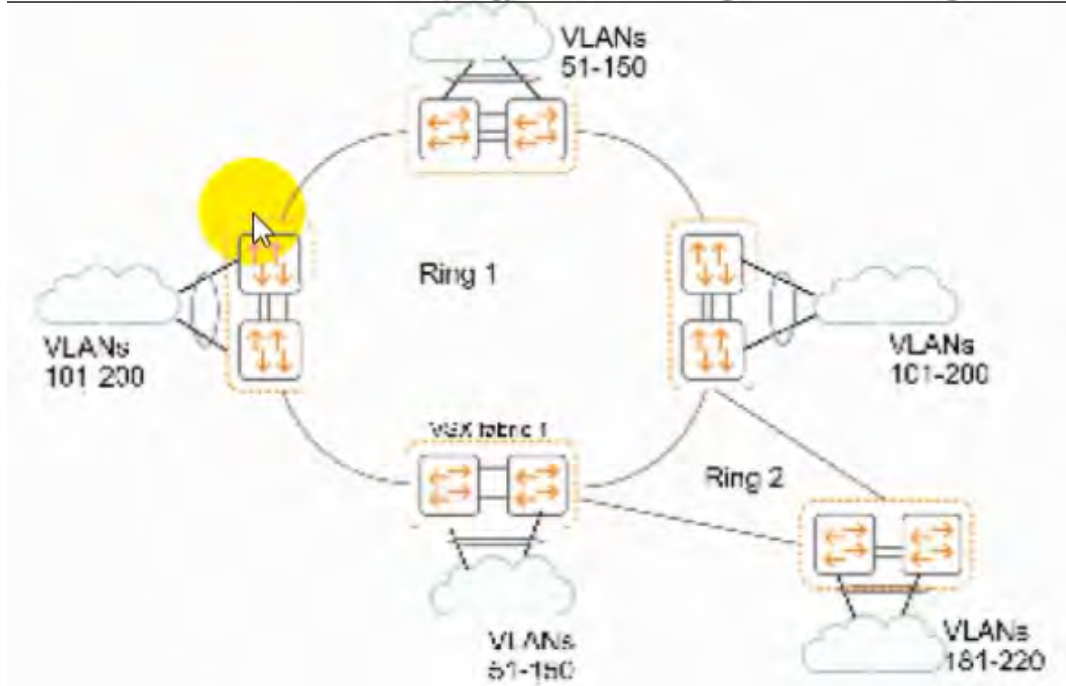
B. No

**Answer: A**

**Explanation:** Switch-2 waits a period called the link-up delay before it enables Switched Virtual Interfaces (SVIs) on its VSX LAGs is a true statement about what happens when Switch-2 experiences a power failure while Switch-1 remains up and then recovers. Switch-1 and Switch-2 are ArubaOS-CX switches, which are part of a Virtual Switching Extension (VSX) fabric. VSX is a feature that provides active-active forwarding and redundancy for ArubaOS-CX switches. The link-up delay timer defines how long a VSX node waits before advertising link state changes to its peer node. This allows the node to synchronize its MAC forwarding, ARP, and routing tables with its peer node before sending or receiving traffic on the newly activated link<sup>1</sup>.

**Question No : 2**

Refer to the exhibit.



which shows the topology for an Ethernet Ring Protection Switching (ERPS) solution.

Is this a valid design for the control and protected VLANs on the VSX fabric 1 switches?

**Solution: Ring 1, instance 1:**

**control VLAN: 1000 protected VLANs: 51-135 Ring 1, Instance 2:**

**control VLAN: 1000 protected VLANs: 136-220 Ring 2, Instance 1: control VLAN: 1001 protected VLANs: 181 -200 Ring 2, Instance 2: control VLAN: 1001 protected VLANs: 201 -220**

- A. Yes
- B. No

**Answer: A**

**Explanation:** Ring 1, instance 1: control VLAN: 1000 protected VLANs: 51-135 Ring 1, Instance 2: control VLAN: 1001 protected VLANs: 136-220 Ring 2, Instance 1: control VLAN: 1002 protected VLANs: 181 -200 Ring 2, Instance 2: control VLAN: 1003 protected VLANs: 201 -220 is a valid design for the control and protected VLANs on the VSX fabric 1 switches for an Ethernet Ring Protection Switching (ERPS) solution. The control VLANs are unique for each ring instance and do not overlap with any protected VLANs. The protected VLANs are also unique for each ring instance and do not overlap with any control VLANs.

Is this a difference between a typical data center network's requirements and a typical campus network's requirements?

**Solution: Data center network traffic flows are typically east-west whereas while campus networks experience more north-south traffic.**

A. Yes

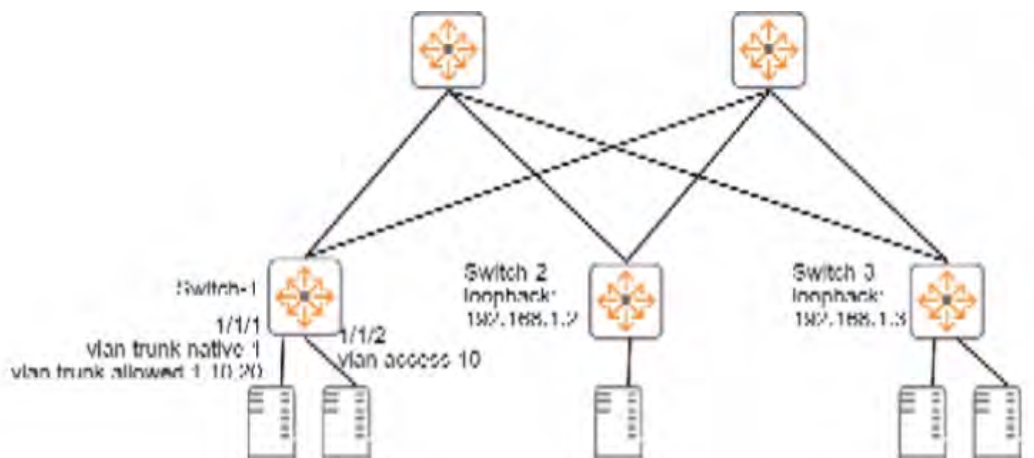
B. No

**Answer: A**

**Explanation:** A data center network is a network that connects servers, storage devices, and other devices within a data center. A campus network is a network that connects buildings and users within a campus area, such as a university or an enterprise. Data center network traffic flows are typically east-west, which means they are between servers or devices within the data center. This is because data center applications often require high-speed communication and data exchange between servers for processing, analysis, or backup. Campus network traffic flows are typically north-south, which means they are between users or devices and external networks, such as the Internet or a wide area network (WAN). This is because campus users often access online services or resources that are hosted outside the campus network<sup>12</sup>. Therefore, this is a valid difference between a typical data center network's requirements and a typical campus network's requirements.

#### Question No : 4

Refer to the exhibits.



```
Switch-1# show interface vxlan1 vteps
```

Source	Destination	Origin	Status	VNI	VLAN
192.168.1.1	192.168.1.2	evpn	Operational	5010	10
192.168.1.1	192.168.1.3	evpn	Operational	5010	10
192.168.1.1	192.168.1.3	evpn	Operational	5020	20

```
Switch-1# show mac-address-table
```

```
MAC age-time : 300 seconds
```

```
Number of MAC addresses : 7
```

MAC Address	VLAN	Type	Port
00:50:56:10:04:25	10	dynamic	1/1/1
00:50:56:11:12:32	10	dynamic	1/1/2
00:50:56:15:16:28	10	evpn	vxlan1(192.168.1.2)

```
[output omitted]
```

Is this how the switch handles the traffic?

**Solution:** A frame with destination MAC address, 00:50:56:15:16:28, arrives with a VLAN 10 tag on 1/1/1 on Switch-1. Switch-1 encapsulates the frame with VXLAN and an IP header destined to 192.168.1.2.

A. Yes

B. No

**Answer: A**

**Explanation:** A frame with destination MAC address, 00:50:56:15:16:28, arrives with a VLAN 10 tag on 1/1/1 on Switch-1. Switch-1 encapsulates the frame with VXLAN and an IP header destined to 192.168.1.2 is a correct explanation of how the switch handles the traffic. Switch-1, Switch-2, and Switch-3 are ArubaOS-CX switches that use VXLAN and EVPN to provide Layer 2 extension over Layer 3 networks. VXLAN is a feature that uses UDP encapsulation to tunnel Layer 2 frames over Layer 3 networks using VNIs. EVPN is a feature that uses BGP to advertise MAC and IP addresses of hosts connected to VTEPs. Switch-1 receives a frame with destination MAC address, 00:50:56:15:16:28, which belongs to VM-2 on Switch-3. Switch-1 learns from EVPN that VM-2 is reachable through VTEP 192.168.1.2, which is Switch-3's loopback interface. Switch-1 encapsulates the frame with VXLAN and an IP header destined to 192.168.1.2 and sends it over the underlay network<sup>1</sup>.

### Question No : 5

Your task is to configure an EVPN solution for a dual-stack IPv4 and IPv6 protocol in the overlay networks. Is this statement about EVPN and IPv6 correct?

**Solution:** IPv6 protocol can be encapsulated in the underlay network's IPv4 packets.

A. Yes

**B. No**

**Answer: B**

**Explanation:** IPv6 protocol cannot be encapsulated in the underlay network's IPv4 packets. EVPN is a protocol that provides layer 2 and layer 3 services over an IP network<sup>1</sup>. It uses VXLAN tunnels to encapsulate Ethernet frames in UDP packets and transport them across the underlay network<sup>1</sup>. The underlay network can use either IPv4 or IPv6 protocol, but it must match the protocol used by the VXLAN tunnels<sup>1</sup>. The statement is false because it implies that IPv6 protocol can be encapsulated in IPv4 packets, which is not possible.

#### Question No : 6

Does this correctly describe Network Analytics Engine (NAE) limitations on ArubaOS-CX switches?

Solution: You can run NAE with VSX, but only the primary VSX member will actually run agents during normal operation.

**A. Yes**

**B. No**

**Answer: A**

**Explanation:** Network Analytics Engine (NAE) is a built-in analytics framework for network assurance and remediation on ArubaOS-CX switches. NAE allows monitoring, troubleshooting, and proactive network management using scripts and agents. Virtual Switching Extension (VSX) is a high-availability technology that allows two ArubaOS-CX switches to operate as a single logical device. You can run NAE with VSX, but only the primary VSX member will actually run agents during normal operation. The secondary VSX member will only run agents if the primary member fails or is rebooted<sup>1</sup>. Therefore, this correctly describes NAE limitations on ArubaOS-CX switches.

#### Question No : 7

ArubaOS-CX switches are acting as Virtual Extensible LAN (VXLAN) Tunnel Endpoints



(VTEPs) WITHOUT Ethernet VPN (EVPN).

Does this correctly describe how the VTEPs handle VXLAN traffic forwarding?

**Solution: VTEPs that use headend replication forward broadcast as multicast to each VTEP in the same VNI.**

A. Yes

B. No

**Answer: A**

**Explanation:** VXLAN is a tunneling protocol that encapsulates layer 2 traffic over an IP network using VXLAN Network Identifiers (VNIs) to identify different layer 2 segments. VXLAN Tunnel Endpoints (VTEPs) are devices that perform the encapsulation and decapsulation of VXLAN packets. VTEPs can use different methods to handle broadcast, unknown unicast, and multicast (BUM) traffic within a VNI. One of these methods is headend replication, which means that the VTEP that receives a BUM packet replicates it and sends it as a unicast to each remote VTEP in the same VNI<sup>1</sup>. This method does not require multicast routing in the underlay network, but it can increase the load on the ingress VTEP. Therefore, this correctly describes how the VTEPs handle VXLAN traffic forwarding without EVPN.

#### Question No : 8

Does this correctly describe the ArubaOS-CX architecture?

**Solution:** The ArubaOS-CX software is based on the ArubaOS-Switch software and adds data center features.

A. Yes

B. No

**Answer: B**

**Explanation:** The ArubaOS-CX software is based on the ArubaOS-Switch software and adds data center features is not a correct description of the ArubaOS-CX architecture. The ArubaOS-CX software is a new operating system that is designed for data center and campus networks. It is not based on the ArubaOS-Switch software, which is used for legacy campus switches. The ArubaOS-CX software provides advanced features such as VSX, EVPN, NAE, REST APIs, etc<sup>1</sup>.



**Question No : 9**

Your task is to configure an EVPN solution for a dual-stack IPv4 and IPv6 protocol in the overlay networks. Is this statement about EVPN and IPv6 correct?

**Solution: Different virtual MAC must be used for IPv4 and IPv6 Active Gateway.**

- A. Yes
- B. No

**Answer: B**

**Explanation:** Different virtual MAC must be used for IPv4 and IPv6 Active Gateway is not a true statement about EVPN and IPv6 for configuring an EVPN solution for a dual-stack IPv4 and IPv6 protocol in the overlay networks. Active Gateway is a feature that provides first-hop redundancy for hosts connected to VTEPs using anycast gateway addresses. Active Gateway can use the same virtual MAC address for both IPv4 and IPv6 protocols on the same VNI<sup>2</sup>.

**Question No : 10**

Is this a guideline for establishing a Virtual Switching Extension (VSX) Inter-Switch Link (ISL) between two ArubaOS-CX switches?

**Solution: Reserve the ISL for control plane traffic only.**

- A. Yes
- B. No

**Answer: B**

**Explanation:** Virtual Switching Extension (VSX) is a high-availability technology that allows two ArubaOS-CX switches to operate as a single logical device. VSX Inter-Switch Link (ISL) is a link between the two VSX switches that is used for both data plane and control plane traffic. It is not recommended to reserve the ISL for control plane traffic only, as this would limit the benefits of VSX and create suboptimal traffic forwarding<sup>1</sup>. Therefore, this is not a valid guideline for establishing a VSX ISL between two ArubaOS-CX switches.

**Question No : 11**

You want to use NetEdit to configure an ArubaOS-CX switch.

Is this a minimum requirement for setting up communications between the switch and NetEdit?

**Solution: Enable the REST interface in read-only mode.**

**A. Yes**

**B. No**

**Answer: B**

**Explanation:** The solution is incorrect because enabling the REST interface in read-only mode is not a minimum requirement for setting up communications between the switch and NetEdit. NetEdit uses the REST interface to configure the switch, so it needs write access as well as read access. Therefore, enabling the REST interface in read-write mode is a minimum requirement for setting up communications between the switch and NetEdit.

**Question No : 12**

You are using NetEdit to manage ArubaOS-CX switches. You want to deploy a standard config to the switches, but need the config to include a few device-specific settings such as hostname and IP address.

Is this what you should do?

**Solution: Instead of using a standard configuration plan to deploy the configuration, create an auto config plan that uses scripts.**

**A. Yes**

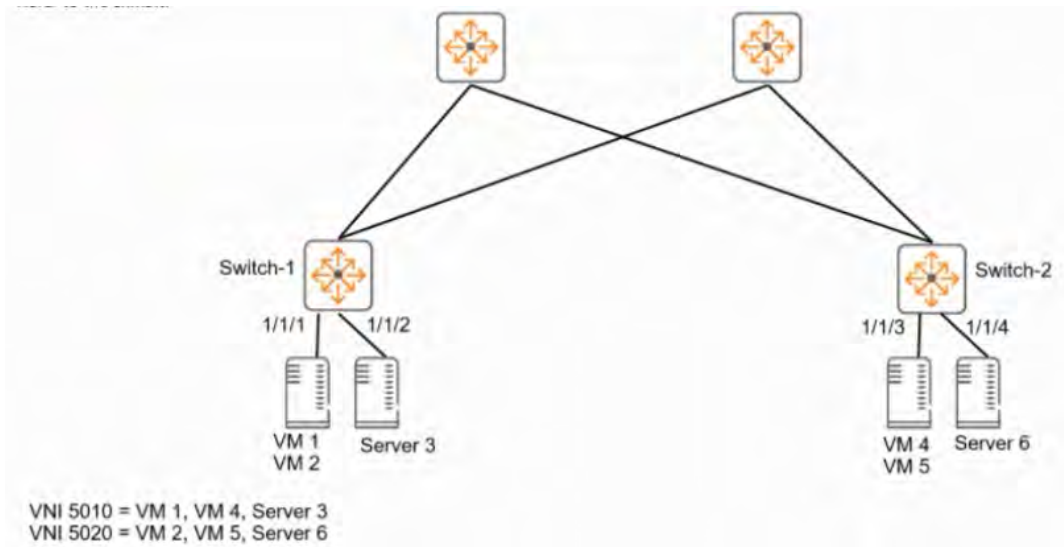
**B. No**

**Answer: A**

**Explanation:** Instead of using a standard configuration plan to deploy the configuration, create an auto config plan that uses scripts is what you should do if you want to use NetEdit to manage ArubaOS-CX switches and deploy a standard config to the switches, but need the config to include a few device-specific settings such as hostname and IP address. An auto config plan is a type of plan that allows you to use scripts to customize the configuration for each switch based on variables such as serial number, MAC address, or user-defined parameters<sup>1</sup>.

**Question No : 13**

Refer to the exhibit.



: The company wants ArubaOS-CX switches to provide VXLAN services for several VMs and servers, as shown in the exhibit. Hypervisors will not run VXLAN for this solution. Is this part of a valid configuration to meet the requirements?

**Solution:** Attach VNIs 5010 and 5020 to interface 1/1/3 on Switch-2.

A. Yes

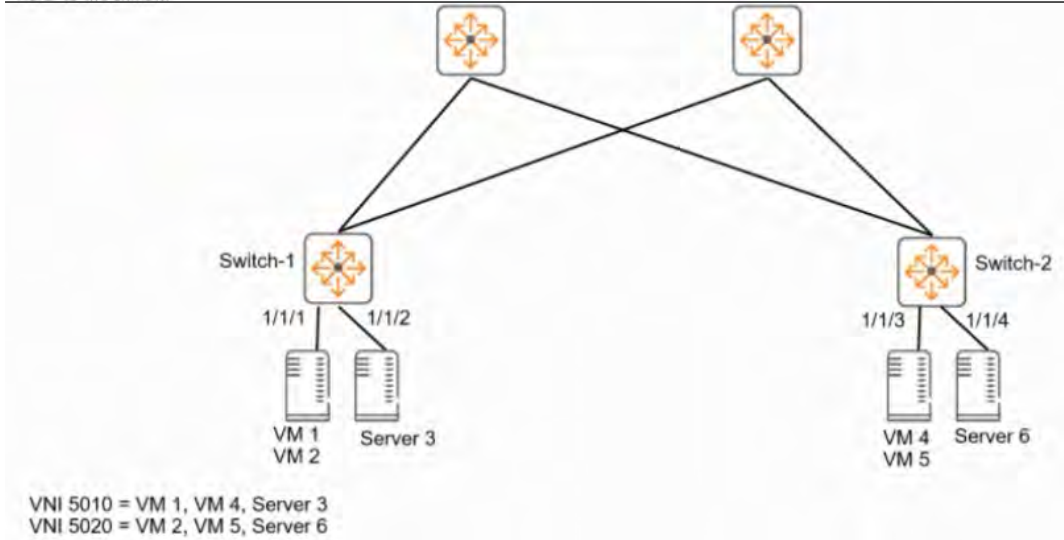
B. No

**Answer: B**

**Explanation:** Attach VNIs 5010 and 5020 to interface 1/1/3 on Switch-2 is not part of a valid configuration to meet the requirements for providing VXLAN services for several VMs and servers using ArubaOS-CX switches. VNIs are virtual network identifiers that are used to identify VXLAN segments. A VNI can only be attached to a VLAN interface, not a physical interface, on an ArubaOS-CX switch1.

**Question No : 14**

Refer to the exhibit.



**: The company wants ArubaOS-CX switches to provide VXLAN services for several VMs and servers, as shown in the exhibit. Hypervisors will not run VXLAN for this solution. Is this part of a valid configuration to meet the requirements?**

**Solution:** Work with the server admins to assign a consistent VLAN for VMs 1 and 4. Assign interface 1/1/2 on Switch-1 to the same VLAN.

- A. Yes
- B. No

**Answer: A**

**Explanation:** Work with the server admins to assign a consistent VLAN for VMs 1 and 4. Assign interface 1/1/2 on Switch-1 to the same VLAN is part of a valid configuration to meet the requirements for providing VXLAN services for several VMs and servers using ArubaOS-CX switches. VMs 1 and 4 belong to the same VXLAN segment (VNI 5010), so they should be assigned to the same VLAN on their respective hypervisors. Interface 1/1/2 on Switch-1 should also be assigned to the same VLAN as VMs 1 and 4, so that Switch-1 can act as a VTEP for them<sup>1</sup>.

### Question No : 15

A customer's servers use iSCSI, and they send data and storage traffic on the same pair of 10GbE links. Is this a best practice for supporting the iSCSI requirements?

**Solution:** Use Virtual Routing and Forwarding (VRF) to tunnel iSCSI traffic through the network spine on the same links that data traffic uses.

- A. Yes
- B. No

**Answer: B**

**Explanation:** iSCSI is a protocol that allows storage devices to communicate over IP networks. iSCSI traffic has different requirements than data traffic, such as low latency, high throughput, and reliability. Therefore, it is not a best practice to send data and storage traffic on the same pair of 10GbE links, as this can cause congestion and performance degradation. It is also not a best practice to use Virtual Routing and Forwarding (VRF) to tunnel iSCSI traffic through the network spine on the same links that data traffic uses. VRF is a technology that creates multiple isolated Layer 3 domains on a physical network, each with its own routing table. VRF does not provide any benefits for iSCSI traffic, as it does not guarantee bandwidth, priority, or quality of service. VRF also adds overhead and complexity to the network configuration<sup>1</sup>. Therefore, this is not a valid way to support the iSCSI requirements.

**Question No : 16**

Your customer is using Nutanix AHV and they need a network orchestration tool to simplify network provisioning. Is this operation supported when Aruba Fabric Composer (AFC) is integrated with Nutanix?

Solution: Automated provisioning of LAGs Between AHV and VSX

- A. Yes
- B. No

**Answer: A**

**Explanation:** Automated provisioning of LAGs between AHV and VSX is an operation supported when Aruba Fabric Composer (AFC) is integrated with Nutanix. AFC is a tool that provides automation and orchestration for managing data center networks composed of ArubaOS-CX switches. AFC can integrate with various data center software such as VMware vSphere, Nutanix AHV, Microsoft Hyper-V, etc. AFC can discover, monitor, and configure Nutanix AHV clusters and hosts using REST APIs. AFC can also automate the provisioning of LAGs between AHV and VSX by creating VSX LAGs or MC-LAGs on the ArubaOS-CX switches and configuring the corresponding LAGs on the AHV hosts<sup>1</sup>.

**Question No : 17**

Is this part of a valid strategy for load sharing traffic across the links in an Ethernet Ring Protection Switching (ERPS) ring?

Solution: Combine multiple links between two data centers into link aggregations (but not multi-chassis ones).

- A. Yes
- B. No

**Answer: A**

**Explanation:** Combine multiple links between two data centers into link aggregations (but not multi-chassis ones) is part of a valid strategy for load sharing traffic across the links in an Ethernet Ring Protection Switching (ERPS) ring. ERPS is a feature that provides loop prevention and fast convergence for Layer 2 networks that use ring topologies. ERPS can support link aggregation groups (LAGs) between two nodes in a ring as long as they are not multi-chassis LAGs (MC-LAGs). MC-LAGs are not supported by ERPS because they can create loops in the ring topology.

**Question No : 18**

Is this a difference between a typical data center network's requirements and a typical campus network's requirements?

**Solution: Data center networks are typically less oversubscribed than campus networks.**

- A. Yes
- B. No

**Answer: A**

**Explanation:** Data center networks are typically less oversubscribed than campus networks is a difference between a typical data center network's requirements and a typical campus network's requirements. Oversubscription is the ratio of potential maximum demand to available capacity on a network link or device. Data center networks typically have higher bandwidth and lower latency requirements than campus networks, so they need to minimize oversubscription as much as possible<sup>1</sup>.

**Question No : 19**

Is this a guideline for establishing a Virtual Switching Extension (VSX) Inter-Switch Link

(ISL) between two ArubaOS-CX switches?

**Solution: Use the same speed on every link in the ISL.**

A. Yes

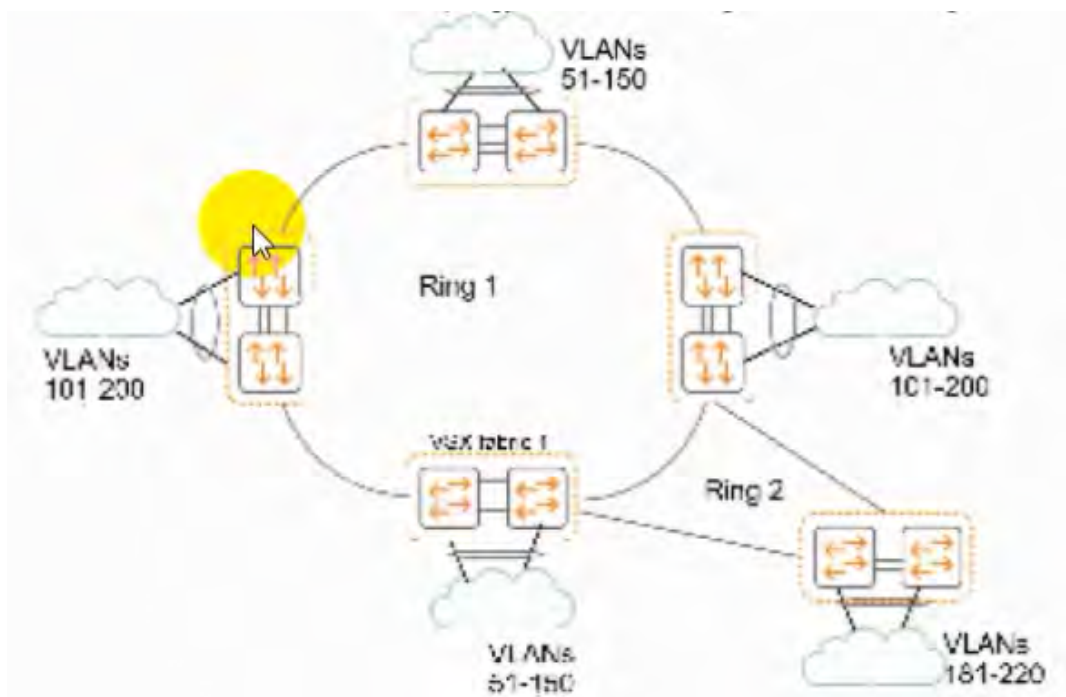
B. No

**Answer: A**

**Explanation:** The solution is correct because using the same speed on every link in the ISL is a guideline for establishing a VSX ISL between two ArubaOS-CX switches. Using the same speed on every link in the ISL ensures consistent performance and avoids potential issues with link aggregation. Therefore, using the same speed on every link in the ISL is a good practice for establishing a VSX ISL.

### Question No : 20

Refer to the exhibit.



which shows the topology for an Ethernet Ring Protection Switching (ERPS) solution.

Is this a valid design for the control and protected VLANs on the VSX fabric 1 switches?

**Solution: Ring 1, Instance 1:**

**control VLAN: 51 protected VLANs: 51-100 Ring 1, Instance 2:**

**control VLAN: 51 protected VLANs: 101-150 Ring 2, Instance 1: control VLAN: 181**