

NetApp.NS0-520.by.KienHoa.120q

Number: NS0-520  
Passing Score: 800  
Time Limit: 120  
File Version: 4.0

**Exam Code: NS0-520**



## Exam A

### QUESTION 1

An administrator needs to determine the maximum volume size that is supported per operating system.

Which resource has this information?

- A. Config Advisor
- B. OneCollect
- C. Interoperability Matrix Tool (IMT)
- D. Hardware Universe (HWU)

**Correct Answer: C**

**Section:**

### QUESTION 2

You upgraded your Linux hosts to SUSE Enterprise Linux 15. In this scenario, which two actions should you perform before you test asymmetric namespace access (ANA)? (Choose two)

- A. Verify if the NVMe service has started
- B. Verify if the LUNs and namespaces are in the same volume.
- C. Verify if the version of Netapp ONTAP software is 9.5 or later
- D. Verify if there is only one LIF in the SVM

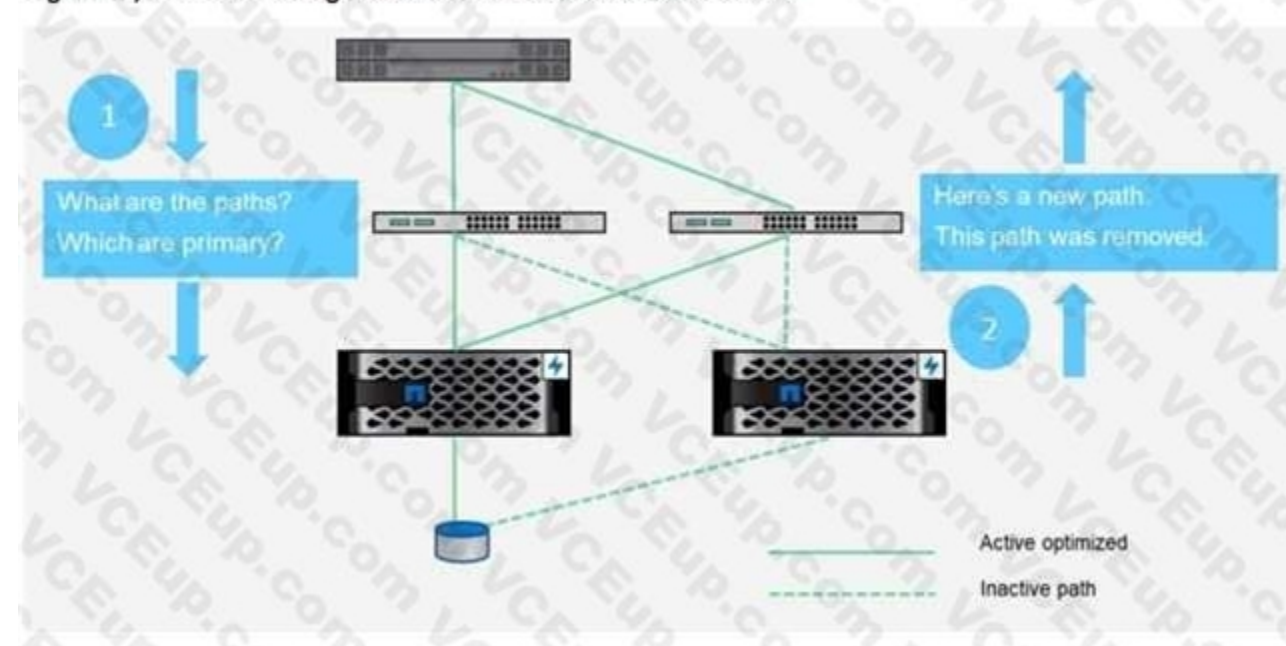
**Correct Answer: A, C**

**Section:**

**Explanation:**

ONTAP 9.5 Introduces ANA

Figure 12) NVMe/FC Storage Failover: ONTAP 9.5 introduces ANA.



<https://www.netapp.com/de/media/10681-tr4684.pdf>



### QUESTION 3

You want to move a SAN LIF and preserve its configuration information and avoid rezoning the switch fabric. In this scenario, which two steps must be performed to fulfill this goal? (Choose two)

- A. Move the SAN LIF to another node in a cluster on a different storage virtual machine (SVMs)
- B. Keep the SAN LIF online before it is moved
- C. Take the SAN LIF offline before it is moved
- D. Move the SAN LIF to another node in a cluster on existing storage virtual machine (SVMs)

**Correct Answer: C, D**

**Section:**

**Explanation:**

Moving SAN LIFs If a node needs to be taken offline, you can move a SAN LIF to preserve its configuration information, such as its WWPN, and avoid rezoning the switch fabric. Because a SAN LIF must be taken offline before it is moved, host traffic must rely on host multipathing software to provide nondisruptive access to the LUN. You can move SAN LIFs to any node in a cluster, but you cannot move the SAN LIFs between storage virtual machines (SVMs).

You can find more information on this link:

<https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanag%2FGUID-09F5C2A3-FA66-4252-BEEF-D556A143CD30.html>

### QUESTION 4

During testing, an administrator notices that the wrong subsystem was returned using the NVMe discover command. The administrator was expecting test0\_subsystem as the subsystem Referring to the exhibit, what would cause the discrepancy?

```
>vserver nvme subsystem show
Vserver Subsystem      Target NQN
-----
test0  test0_subsystem nqn.1992-08.com.netapp:sn.87b3c578feeb1e794f200a098b3f653:subsystem.test0_subsystem
test1  test1_subsystem nqn.1992-08.com.netapp:sn.5b584a86fa6411e794f200a098b3f653:subsystem.test1_subsystem
test2  test2_subsystem nqn.1992-08.com.netapp:sn.12fea223fa6411e794f200a098b3f653:subsystem.test2_subsystem
test3  test3_subsystem nqn.1992-08.com.netapp:sn.288aa4f6feeb1e794f200a098b3f653:subsystem.test3_subsystem

# nvme discover --transport=fc -traddr=nn-0x203f00a098b3f7a7:pn0x204000a098b3f7a7 --host-traddr=nn-0x200000109b1c0f8f:pn-0x100000109b1c0f8f
Discovery Log Number of Records 1, Generation counter 17
====Discovery Log Entry 0====
trtype: fibre-channel
adrfam: fibre-channel
subtype: nvme subsystem
treq: not specified
portid: 0
trsvcid: none
subnqn: nqn.1992-08.com.netapp:sn.5b584a86fa6411e794f200a098b3f653:subsystem.test1_subsystem
traddr: nn-0x203f00a098b3f7a7:pn-0x204000a098b3f7a7
```

- A. The wrong NQN was mapped to the subsystem
- B. The wrong WWPN was used in the discovery command
- C. Asymmetric Namespace Access (ANA) was not properly configured
- D. The NVMe was not configured on the test0 SVM

**Correct Answer: A**

**Section:**

**Explanation:**

We can discard that ANA was not properly configured because this is not a problem about multipathing.

We can discard WWPN because this is an NVMe configuration where WWPN is not involved We can discard that NVMe was not configured because we wouldn't be able to even run that command if that's true Configure the NQN correctly is one of the steps when we configure NVMe You can find more information on this link: <http://senthil-it-infrastructure.blogspot.com/2020/05/netapp-ontap-97-nvme-configurationand.html>

#### QUESTION 5

An administrator is adding new hosts to a vSphere cluster. The cluster uses the FC protocol to connect to a NetApp cluster. The administrator wants to configure the multipathing for the ESXi host. Which NetApp tool should be used to accomplish this task?

- A. OnCommand System Manager (OCSM)
- B. Host Utilities
- C. SnapCenter plug-in
- D. NetApp Virtual Storage Console (VSC)

Answer: D

**Correct Answer: D**

**Section:**

#### QUESTION 6

An administrator is asked to configure NVMe on an ONTAP 9.5 cluster for host access. Which three steps must the administrator perform to accomplish this task? (Choose three.)

- A. Create a namespace.
- B. Provision a subsystem.
- C. Configure the FC port.
- D. Gather the IQN from the host initiator software.
- E. Gather the NQN from the host system.

Answer: ABE

Reference:

**Correct Answer: A, B, E**

**Section:**

#### QUESTION 7

A user cannot add more than one NVMe data LIF in ONTAP 9.4 on an SVM with a data protocol parameter set to nvme. In this scenario, what is the problem?

- A. The SVM data protocol should be set to FC.
- B. The NVMe namespace is not created.
- C. A demo license is used.
- D. Only one NVMe data LIF can be configured per SVM.

**Correct Answer: B**

**Section:**

#### QUESTION 8

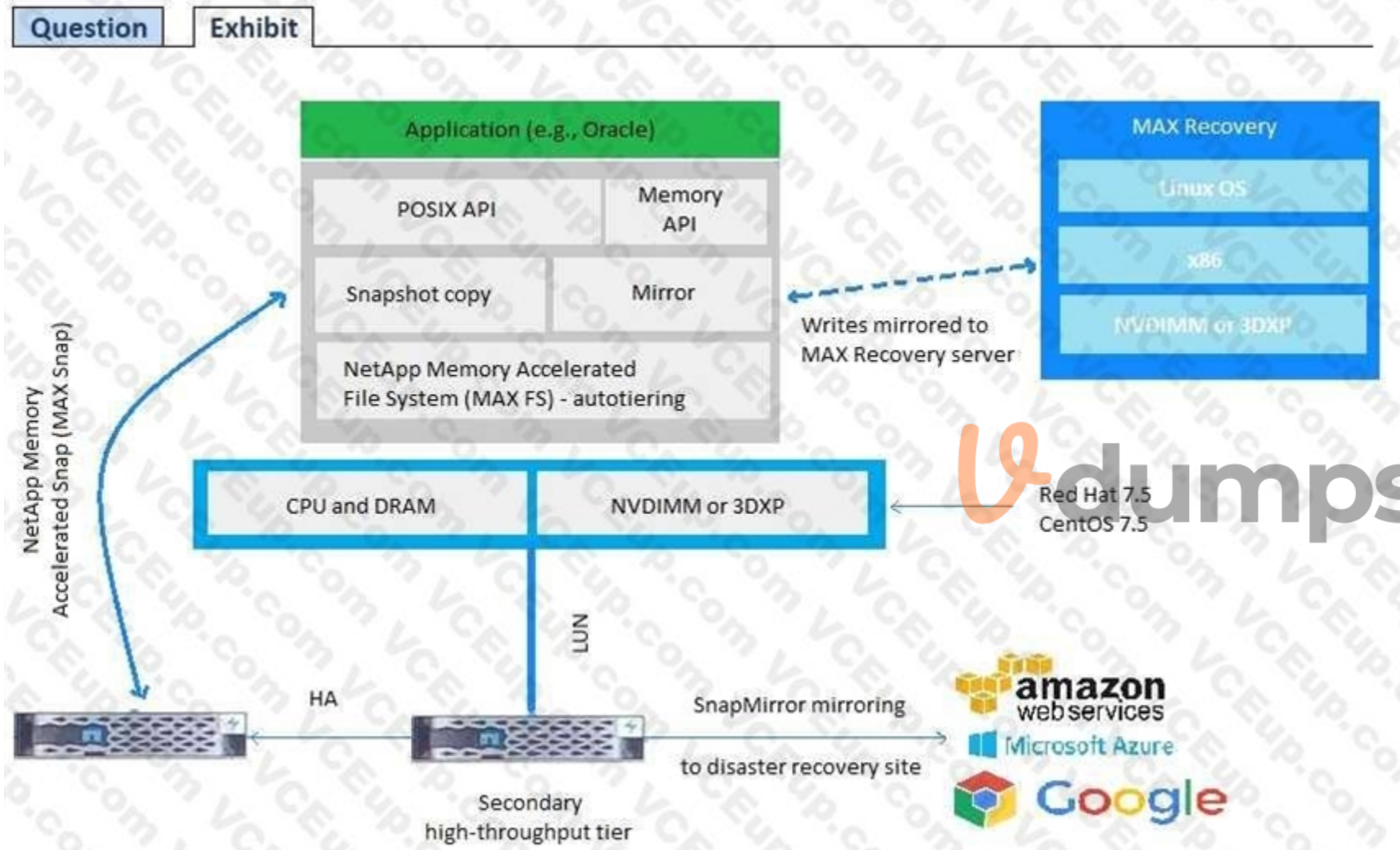
An administrator has six VMware hosts, each with dual HBAs that are connected to a dual fabric using single initiator multiple target zoning. Four nodes are being added to the existing 4-node ONTAP cluster. In this scenario, what is the minimum number of FC zones that need to be updated on each fabric switch?



- A. 6
- B. 8
- C. 4
- D. 2

Correct Answer: B  
Section:

QUESTION 9



You have a requirement to serve LUNs with under 200 microsecond latency using local server lass memory. You also are required to use a shared SAN. Using MAX Data as shown in the exhibit, which two LUN access protocols are supported with this solution? (Choose two.)

- A. iSCSI
- B. FCoE
- C. FC
- D. NVMe

Correct Answer: D  
Section:

QUESTION 10



A company has 20 ESX hosts. Ten of the hosts are connected using FC, and the rest are connected over iSCSI. The FC host HBA queue depth is set to 32, and the iSCSI LUN queue depth is set to 64. The FC hosts are now experiencing random connectivity issues.

In this scenario, what would be the reason for the disconnects?

- A. The FC host has a lower queue depth.
- B. According to the IMT, unsupported HBA firmware is in use.
- C. All of the hosts are part of the same cluster.
- D. The queue depth is not consistent across the cluster.

**Correct Answer: A**

**Section:**

#### QUESTION 11

You want to ensure maximum performance of iSCSI LUNs on an AFF A220.

In this scenario, which two actions will accomplish this task? (Choose two.)

- A. Disable flow control.
- B. Configure virtual LAN (VLAN).
- C. Enable flow control.
- D. Enable jumbo frames.

**Correct Answer: C, D**

**Section:**

#### QUESTION 12

You are provisioning storage to an ESX host that uses iSCSI.

According to NetApp best practice, which three actions accomplish this task? (Choose three.)

- A. Enable the iSCSI service.
- B. Bind the iSCSI ports to the software iSCSI adapter.
- C. Install Virtual Storage Console (VSC) for VMware.
- D. Enable BGP on the switch.
- E. Configure MTU 1500 on the switch.

**Correct Answer: B, C, E**

**Section:**

#### QUESTION 13



**Question****Exhibit**

```
scaling::> run -node scaling-01 -command fcp topology show
Switches connected on adapter 0c:
Switch Name:      switch
Switch Vendor:    Cisco Systems, Inc.
Switch Release:   4.2(1)N1(1)
Switch Domain:    75
Switch WWN:       23:e9:00:0d:ec:b4:94:01
```

Port	Port	WWPN	State	Type	Attached WWPN
vfc1	20:00:00:0d:ec:b4:94:3f		Offline	none	
vfc2	20:01:00:0d:ec:b4:94:3f		Offline	none	
vfc3	20:02:00:0d:ec:b4:94:3f		Offline	none	
vfc4	20:03:00:0d:ec:b4:94:3f		Offline	none	
vfc5	20:04:00:0d:ec:b4:94:3f		Offline	none	
2/1	20:41:00:0d:ec:b4:94:00		Offline	none	
2/2	20:42:00:0d:ec:b4:94:00		Online	F-port	50:0a:09:80:00:05:a2:40
2/3	20:43:00:0d:ec:b4:94:00		Online	F-port	50:0a:09:85:8d:9d:bf:ce
2/4	20:44:00:0d:ec:b4:94:00		Online	F-port	50:0a:09:85:8d:ad:c0:02

A customer has an AFF A700 connected to a Cisco switch and has verified connectivity but cannot see any LUNs. The customer issued the run -node scaling-01 -command fcp topology show command to verify the connection. Referring to the exhibit, what needs to be enabled on the Cisco switch?

- A. Trunking needs to be enabled.
- B. VSAN needs to be enabled.
- C. NPIV needs to be enabled.
- D. VFC needs to be enabled.

**Correct Answer: D**

**Section:**

#### QUESTION 14

**Question****Exhibit**

FC/FCoE and NVMe Adapters						
WWNN	Node Name	Slot	Data Protocols	WWPN	Status	Speed
50:0a:09:80:83:61:11	AFF_1	0e	fcp	50:0a:09:84:80:83:61:11	link not connected	auto
50:0a:09:80:83:61:11	AFF_1	0f	fcp	50:0a:09:83:80:83:61:11	link not connected	auto
50:0a:09:80:83:61:11	AFF_1	0g	fcp	50:0a:09:86:80:83:61:11	link not connected	auto
50:0a:09:80:83:61:11	AFF_1	0h	fcp	50:0a:09:85:80:83:61:11	link not connected	auto
50:0a:09:80:83:61:11	AFF_1	1a	fcp.fc_nvme	50:0a:09:81:80:83:61:11	online	auto
50:0a:09:80:83:61:11	AFF_1	1b	fcp.fc_nvme	50:0a:09:82:80:83:61:11	online	auto
50:0a:09:80:83:d3:61:00	AFF_2	0e	fcp	50:0a:09:82:80:d3:61:00	online	auto
50:0a:09:80:83:d3:61:00	AFF_2	0f	fcp	50:0a:09:81:80:d3:61:00	link not connected	auto
50:0a:09:80:83:d3:61:00	AFF_2	0g	fcp	50:0a:09:84:80:d3:61:00	online	auto
50:0a:09:80:83:d3:61:00	AFF_2	0h	fcp	50:0a:09:83:80:d3:61:00	link not connected	auto

A customer is using both FC and NVMe in a cluster. The customer needs to do some work on AFF\_1.

Referring to the exhibit, what will happen?

- A. The NVMe namespaces on AFF\_2 will be available after takeover of AFF\_1.
- B. The FC LUNs that use cluster interconnect to access the LUNs on AFF\_1 will be unavailable after failover.
- C. The FC LUNs on node AFF\_2 will be unavailable after failover of AFF\_1.
- D. The NVMe namespaces on AFF\_1 will be unavailable after takeover by AFF\_2.

**Correct Answer: C**

**Section:**

#### QUESTION 15

Node	Adapter	Connection Established	Port Address	Admin Status	Operational Status
node1	0e	false	0	up	link not connected
node1	0f	false	0	up	link not connected
node1	0g	false	0	up	link not connected
node1	0h	false	0	up	link not connected
node2	0e	false	0	up	link not connected
node2	0f	false	0	up	link not connected
node2	0g	false	0	up	link not connected
node2	0h	false	0	up	link not connected

You have an existing 2-node AFF A300 cluster with premium bundle licensing applied. You need to have consistently low front end latency, and have determined that NVMe satisfies this requirement. Referring to the exhibit, which two actions would accomplish this task? (Choose two.)

- A. Add a UTA2 adapter to each of the two AFF A300 nodes.
- B. Add a 32 GB FC HBA to each of the two AFF A300 nodes.
- C. Apply the license for FCP.
- D. Apply the license for NVMe.

**Correct Answer: B**

**Section:**

#### QUESTION 16

You have a thin-provisioned LUN that was created by using the `lun create -vserver vs1 -path /vol/vol1/lun1 -size 500G -ostype windows 2008 -space-reserve disabled -space-allocation disabled` command. You verify that your Windows 2016 host reports 200 GB free on lun1. However, lun1 shows 0 bytes free on the storage cluster. What should you do to solve this problem?

- A. Change the LUN `-space-allocation` parameter to enabled.
- B. Change the LUN `-ostype` parameter to `windows_gpt`.
- C. Change the LUN `-space-reserve` parameter to enabled.
- D. Rescan the LUN disk in your Windows host so that it will notify NetApp about the free space.



**Correct Answer: D**

**Section:**

**QUESTION 17**

Question	Exhibit																																																	
<pre>cluster01::&gt; system hardware unified-connect show -node cluster01-01</pre>																																																		
	<table border="1"><thead><tr><th>Node</th><th>Adapter</th><th>Current Mode</th><th>Current Type</th><th>Pending Mode</th><th>Pending Type</th><th>Admin Status</th></tr></thead><tbody><tr><td>cluster01-01</td><td>0c</td><td>can</td><td>target</td><td>-</td><td>-</td><td>online</td></tr><tr><td>cluster01-01</td><td>0d</td><td>can</td><td>target</td><td>-</td><td>-</td><td>online</td></tr><tr><td>cluster01-01</td><td>1a</td><td>fc</td><td>target</td><td>-</td><td>-</td><td>offline</td></tr><tr><td>cluster01-01</td><td>1b</td><td>fc</td><td>target</td><td>-</td><td>-</td><td>offline</td></tr><tr><td>cluster01-01</td><td>1c</td><td>fc</td><td>initiator</td><td>-</td><td>-</td><td>online</td></tr><tr><td>cluster01-01</td><td>1d</td><td>fc</td><td>initiator</td><td>-</td><td>-</td><td>online</td></tr></tbody></table>	Node	Adapter	Current Mode	Current Type	Pending Mode	Pending Type	Admin Status	cluster01-01	0c	can	target	-	-	online	cluster01-01	0d	can	target	-	-	online	cluster01-01	1a	fc	target	-	-	offline	cluster01-01	1b	fc	target	-	-	offline	cluster01-01	1c	fc	initiator	-	-	online	cluster01-01	1d	fc	initiator	-	-	online
Node	Adapter	Current Mode	Current Type	Pending Mode	Pending Type	Admin Status																																												
cluster01-01	0c	can	target	-	-	online																																												
cluster01-01	0d	can	target	-	-	online																																												
cluster01-01	1a	fc	target	-	-	offline																																												
cluster01-01	1b	fc	target	-	-	offline																																												
cluster01-01	1c	fc	initiator	-	-	online																																												
cluster01-01	1d	fc	initiator	-	-	online																																												
<pre>6 entries were displayed.</pre>																																																		

Referring to the exhibit, what happens when you change the type for port 1a from target to initiator?

- A. The port type for 1a changes to initiator, and you must reboot the controller for the changes to take effect.
- B. You receive an error message that you must take ports 1a and 1b offline before you can change the type.
- C. B. You receive an error message that you must take the port 1a offline before you can change the type.
- D. The port type for 1a and 1b changes to initiator, and you must reboot the controller for the changes to take effect.

**Correct Answer: A**

**Section:**

**QUESTION 18**

Which two features does Asymmetric Namespace Access (ANA) support? (Choose two.)

- A. multipathing
- B. LUN masking
- C. LUN hosting
- D. path management

**Correct Answer: A, D**

**Section:**

**QUESTION 19**

A customer that is using an AFF A220 has a problem with a host for a new FC LUN. Other LUNs on the same SVM are working properly. This LUN is not visible on the host. Which configuration does the customer need to verify in their solution?

- A. LUN mapping with igroup
- B. host HBA speed settings
- C. FC target port setting on NetApp node
- D. FC switch zoning

**Correct Answer: C**

**Section:**

**QUESTION 20**



A customer has an existing 8-node cluster that consists of six FAS2650 nodes and two FAS2554 nodes. The customer wants to expand the cluster by adding two AFF A220 nodes. Which resource would be used to determine whether this configuration is supported?

- A. Interoperability Matrix Tool (IMT)
- B. Config Advisor
- C. OneCollect
- D. Hardware Universe (HWU)

**Correct Answer: B**

**Section:**

#### QUESTION 21

You deployed a new SVM for FC access, and you used the `vserver fcr, create -vserver svm1 -statusadmin up` command to enable FC service on the SVM. You then created the LIFs for the FC protocol. When you review the status of the LIFs, they show that the admin status is up, but the operational status is down. You have already verified that the ports are physically connected. In this scenario, what is the next step to bring the LIFs up?






- A. Use the `network interface modify` command to change the operational status of the LIFs.
- B. Create at least one zone that contains your SVM LIF WWPNs and an initiator.
- C. Verify that an FC license is applied on your system.
- D. Disable the SAN switch port where your NetApp storage is connected.

**Correct Answer: B**

**Section:**

#### QUESTION 22



Priority	Category	Bus Type	Mktg Part No	Images	LED	Mig Part No	Description	Optical Module	Cables	Supported Speed (s)	Min ONTAP	MAX Qty <sup>[1]</sup>	Priority Slot Assegment
1	NVRAM	IO Module	X93140A		View	111-03190	NVRAM10 32GB	Not Supported	View		9,1RC2, 9,2RC1, 9,3RC1, 9,4RC1, 9,5RC1	1	6
2	Networking	IO Module	X91440A <sup>[2]</sup>		View	111-02590	2p 40GbE NIC Cu/Op	QSFP Optional	View	ETH: 10/40 Gbps	9,1RC2, 9,2RC1, 9,3RC1, 9,4RC1, 9,5RC1	6 <sup>[2]</sup>	4,6,9,1,10,2,11,3,7,6
3	Block Access	IO Module	X91135A		View	111-03789	4p 32Gb FC SFP - Op	SFP + Included	View	FC:8/16/32 Gbps FC:16/32 Gbps	9,3RC1, 9,4RC1, 9,5RC1	6	9,1,10,2,11,3,7,6
4	Block Access	IO Module	X91134A		View	111-03431	2p 32Gb FC Op	SFP + Included	View	FC:8/16/32 Gbps FC:16/32 Gbps	9,1RC2, 9,2RC1, 9,3RC1, 9,4RC1, 9,5RC1	6	9,1,10,2,11,3,7,6,8
5	Block Access	IO Module	X91143A		View	111-02397	4p 16Gb 10Gb UTA2 Cu/Op	SFP + Optional	View	ETH: 1/10 Gbps FC:4/8/16 Gbps	9,1RC2, 9,2RC1, 9,3RC1, 9,4RC1, 9,5RC1	6	9,1,10,2,11,3,7,6,8

A customer wants to add a 2-port, 32 Gb FC card to support NVMe in an AFF A700 2-node cluster. Currently, there are cards in slots 1, 2, 4, 6, 8, and 9. Referring to the exhibit, what is the number of the slot that should be used?

- A. 10
- B. 3
- C. 5
- D. 7

**Correct Answer: C**  
**Section:**

**QUESTION 23**



**Question** **Exhibit**

Storage Virtual Machine (SVM) Setup

1  
Enter SVM basic details

---

**SVM Details**

? Specify a unique name and the data protocols for the SVM

SVM Name:

? IPspace:  v

? Data Protocols:  CIFS  NFS  iSCSI  FC/FCoE

? Default language:  v  
The language of the SVM specifies the default language encoding setting for the SVM and its volumes. Using a setting that incorporates UTF-8 character encoding is recommended.

? Security Style:  v

Root Aggregate:  v

---

**DNS Configuration**

Specify the DNS domain and name servers. DNS details are required to configure the CIFS protocol.

? Search Domains:

? Name Servers:

Referring to the exhibit, which two elements are required for NVMe host access with ONTAP 9.5 and using supported AFF nodes? (Choose two.)

- A. You need 16 Gb FC HBAs installed in the AFF nodes.
- B. You must have the license installed for NVMe support in the cluster.
- C. You must have the license installed for FC support in the cluster.
- D. You need 32 Gb FC HBAs installed in the AFF nodes.

**Correct Answer: C, D**

**Section:**



**QUESTION 24**

A customer is required to encrypt iSCSI traffic across their public network. In this scenario, which method will accomplish this task?

- A. dot1q
- B. IPsec
- C. NVMe
- D. CHAP

**Correct Answer: B**

**Section:**

**QUESTION 25**

You use iSCSI to present a LUN to a newly installed Windows 2016 Server. You have created the volume and LUN on the NetApp cluster. When you perform a hardware rescan on the Windows host, you cannot see the newly presented storage.

What are three reasons for this problem? (Choose three.)

- A. The protocol has not been enabled on the NetApp cluster.
- B. You need to add the IQN of the Windows host to the newly created LUN.
- C. The IQN of the Windows host is not included in the igroup for the new LUN.
- D. The wrong igroup has been associated with the new LUN.
- E. The volume has not been enabled for iSCSI access.

**Correct Answer: A, B, D**

**Section:**

**QUESTION 26**

As a system administrator, you perform a routine check of available storage space on your FAS2750.

You notice that the vol\_1 volume is approaching 100% capacity. The volume is configured with the space guarantee set to volume and the LUN reservation is disabled. You want to free up space in the volume without increasing its size.

Which action would accomplish this task?

- A. Increase the size of the LUN.
- B. Increase the Snapshot Reserve.
- C. Increase the aggregate size.
- D. Use deduplication.

**Correct Answer: C**

**Section:**

**QUESTION 27**

An administrator reviews the Upgrade Advisor before performing an upgrade of their ONTAP cluster.

What information is detailed in the report? (Choose two.)

- A. pre-upgrade checks
- B. performance metrics
- C. risk exposures

D. cluster interconnect checks

**Correct Answer: A, D**

**Section:**

**QUESTION 28**

You want to create an additional SVM from the System Manager GUI to serve data only using blockbased protocols. You know the SVM name, the aggregate containing the root volume, and the required protocols. What other information is required to successfully create this SVM?

- A. name servers
- B. SVM Management LIF network details
- C. search domains
- D. root volume security style

**Correct Answer: D**

**Section:**

**QUESTION 29**

An administrator is configuring their Ethernet switches to support an AFF A300 cluster that will be providing iSCSI LUNs to servers. The switches are also used for other traffic from various hosts. In this scenario, which statement about the switch configuration is correct?

- A. Use a larger MTU size at the SAN connection rather than the host connections to allow for greater SAN bandwidth.
- B. Use network ports as access ports only.
- C. Use multiple VLANs to segregate iSCSI traffic from other traffic types
- D. Use a single VLAN to consolidate all data traffic on the switches.



**Correct Answer: A**

**Section:**

**QUESTION 30**

You are implementing a new AFF A800 HA pair and are required to migrate NetApp E-Series E2624 data to the AFF A800 controllers. You do not have a host server that is available for the migration. In this scenario, which NetApp migration method is supported?

- A. OnCommand Unified Manager (OCUM)
- B. NetApp Data Availability Services (NDAS)
- C. SnapMirror Synchronous (SM-S)
- D. Foreign LUN Import (FLI)

**Correct Answer: D**

**Section:**

**QUESTION 31**

You have three Windows servers and one Linux server, each with dual-ported HBAs that are connected into a dual fabric. In this scenario, what is the minimum number of zones that you need to create within each fabric switch?

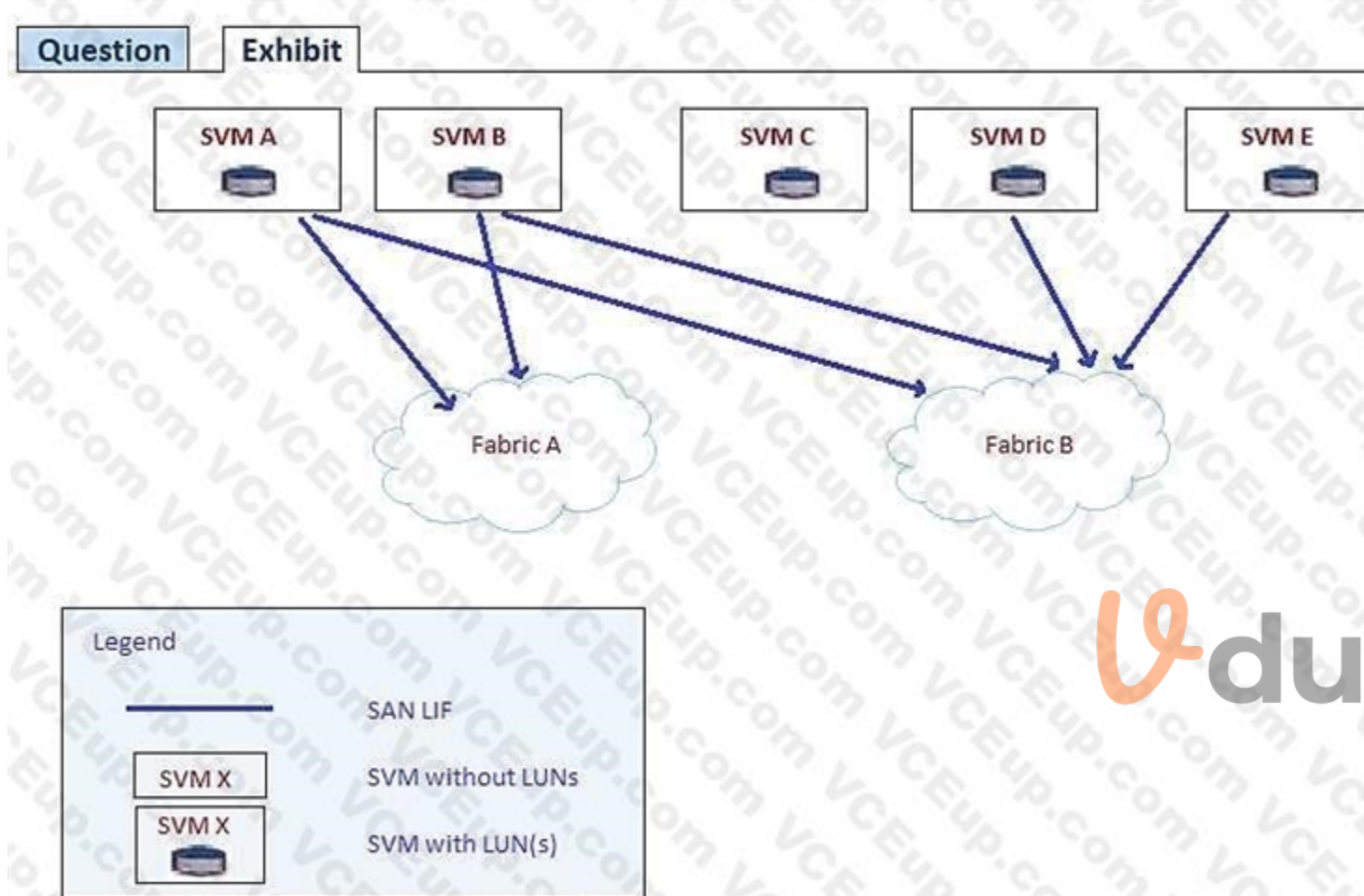
- A. 8
- B. 1

- C. 4
- D. 2

Correct Answer: A

Section:

QUESTION 32



dumps

An administrator has an ONTAP cluster with SVMs and LUNs as shown in the exhibit. Hosts attempting to connect to LUNs mapped from SVM "C" are unable to see their LUNs. The hosts are not configured to connect to any other SVM. Which action should be performed to restore multi-path connectivity to the LUNs in this scenario?

- A. Create LIFs on SVM "C" for host connectivity.
- B. Move the LUN to a different volume within SVM "C".
- C. Move the LUN to SVM "E" to restore connectivity.
- D. Move the LUN to SVM "A" to restore connectivity.

Correct Answer: A

Section:

QUESTION 33

Question

Exhibit

ONTAP Path: AFF\_SAN\_DEFAULT\_SVM:/vol/OraDev\_Vol/CraDev  
LUN: 0  
LUN Size: 65g  
Product: cDOT  
Host Device: 3600a09803830374a645d4933616f5275  
Multipath Policy: service-time 0  
Multipath Provider: Native

host path state	vserver path type	/dev/ node	host adapter	vserver LIF
up	primary	sdf	host2	aff_node-01_0e_A
up	primary	sdb	host1	aff_node-01_0g_A
up	secondary	sdd	host1	aff_node-02_0g_A
	secondary	sdh	host2	aff_node-02_0e_A

Referring to the exhibit, which two LIFs would be optimized paths to LUN /vol/OraDev\_Vol/OraDev?  
(Choose two.)

- A. aff\_node-01\_0g\_A
- B. aff\_node-02\_0e\_A
- C. aff\_node-02\_0g\_A
- D. aff\_node-01\_0e\_A

**Correct Answer: A**

**Section:**

**QUESTION 34**

Automatic host-side space management with SCSI T10 thin-provisioned LUNs is achieved by which feature of ONTAP?

- A. fractional reserve
- B. space allocation
- C. space reservation
- D. volume auto-grow

**Correct Answer: B**

**Section:**

**QUESTION 35**

You are planning to expand a SAN-only ONTAP 9.5 cluster that consists of eight AFF A700 nodes. In this scenario, what is the maximum number of additional AFF A700 nodes that would be added?

- A. 2





- B. 4
- C. 8
- D. 0

**Correct Answer: B**

**Section:**

**QUESTION 36**

You have a 4 node cluster with an AFF A300 HA pair and a FAS8200 HA pair. You plan on using the default storage efficiency settings. With inline data compaction, you estimate that you can save 6% of storage space. AFF A300 LUNs that use under 5000 IOPS are moved to a FAS8200 using the lun move command.

In this scenario, what happens to the data after the LUN is moved? (Choose two.)

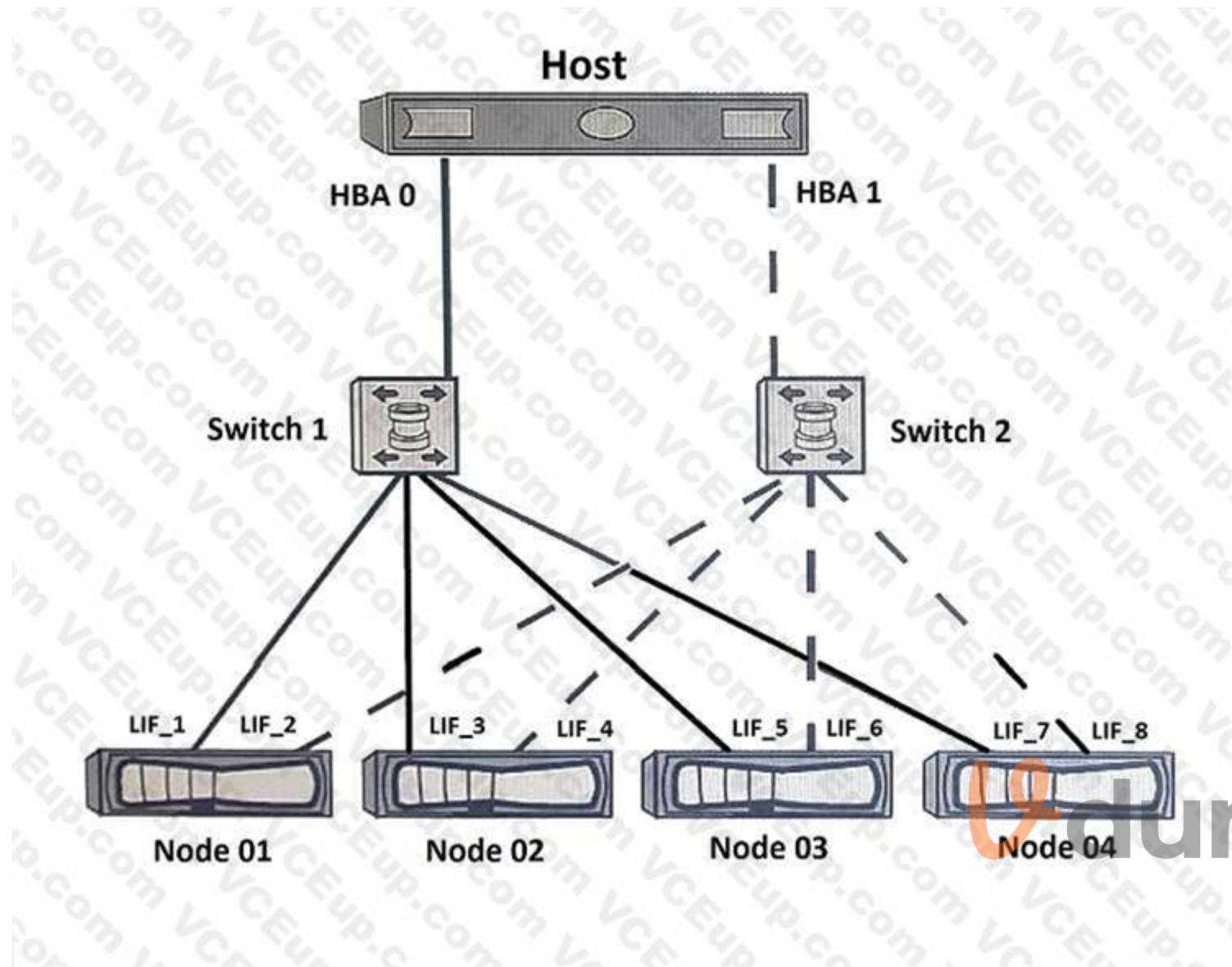
- A. The new written data is not compacted.
- B. The new written data is compacted.
- C. The existing data is compacted.
- D. The existing data is not compacted.

**Correct Answer: B, D**

**Section:**

**QUESTION 37**





You configured a SAN host with a 4-node ONTAP 9.5 cluster that uses default settings. All paths are available from the host to the four nodes. You have a requirement to see only two paths to each LUN. One path is optimized and the other is non-optimized. In this scenario, which NetApp SAN feature supports this requirement?

- A. portsets
- B. SLM
- C. VLANs
- D. igroups

**Correct Answer: C**

**Section:**

**QUESTION 38**

You are planning to implement a 32 Gb FC SAN on a 2-node AFF A700 ONTAP 9.5 cluster. You need to create 112 FC LIFs across the HA pair with a limit of 20 FC LIFs per physical HBA port. In this scenario, how many 2-port 32 Gb HBA cards do you need per storage controller?

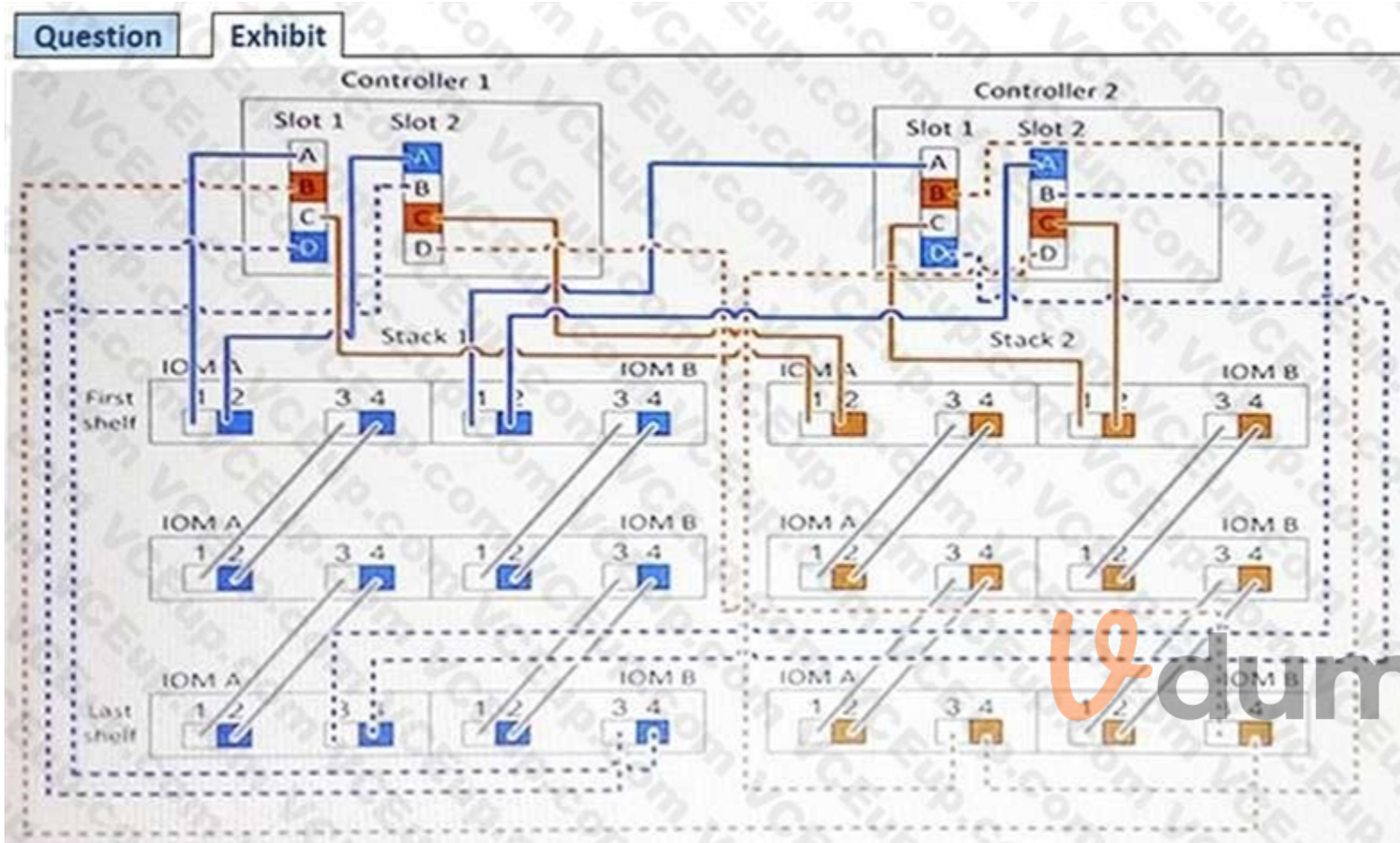
- A. 2
- B. 1
- C. 4

D. 3

Correct Answer: A

Section:

QUESTION 39



Referring to the exhibit, you have SAN LUNs on an AFF A700s and are asked to test an SSD shelf stack failure. What is the maximum allowed number of failed paths per controller to shelf stack before a storage failover occurs?

- A. 1
- B. 3
- C. 2
- D. 4

Correct Answer: C

Section:

QUESTION 40

You have an SVM that serves LUNs to your hosts in an FC SAN environment. This SVM runs on a 4- node cluster and has two data LIFs on each node, according to best practices. You just created a LUN and mapped it to your initiators group. The LUN is owned by node01.

In this scenario, what would be an appropriate test for LUN mobility?

- A. Move the LUN to node02.
- B. Mirror the LUN to another node in your cluster.
- C. Physically disconnect the SAN ports, and verify if the SAN data LIFs automatically move to other hosts.

D. Copy the LUN to another node and create a new LUN map.

**Correct Answer: A**

**Section:**

**QUESTION 41**

While expanding a 200 GB LUN in an ONTAP 9.4 system, the following error is observed:

```
cluster1::*> lun resize -path /vol/lun_vol/lun -size +3T
```

```
Error: command failed: New size exceeds this LUN's initial geometry
```

What is the cause of this error?

- A. The volume auto-grow is disabled.
- B. The LUN reached maximum capacity.
- C. The LUN can be expanded up to 10 times its original size.
- D. Space reservation is enabled.

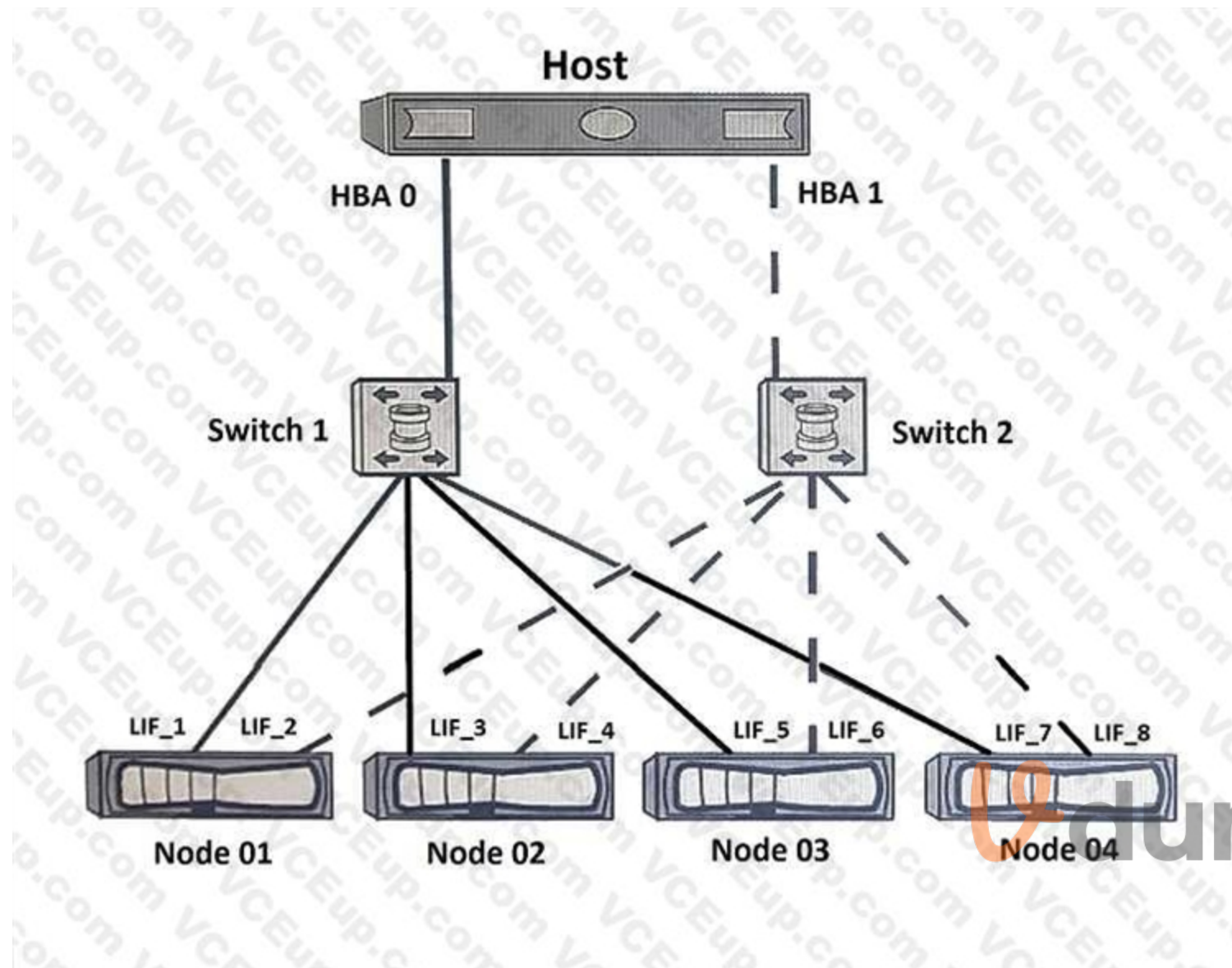
**Correct Answer: A**

**Section:**

**QUESTION 42**







You have a LUN owned by Node 01 and mapped using the default Selective LUN Map (SLM) configuration. You want to enable your host to access this LUN and facilitate future maintenance. Which best-practice zone configuration accomplishes this task?

- A. Zone 1: HBA 0, LIF\_1, LIF\_3, LIF\_5 and LIF\_7 Zone 2: HBA 1, LIF\_2, LIF\_4, LIF\_6 and LIF\_8
- B. Zone 1: HBA 0, HBA 1, LIF\_1, LIF\_2, LIF\_3, LIF\_4, LIF\_5, LIF\_6, LIF\_7, LIF\_8
- C. Zone 1: HBA 0, LIF\_1, LIF\_3 Zone 2: HBA 1, LIF\_2, LIF\_4
- D. Zone 1: HBA 0, HBA 1, LIF\_1, LIF\_2, LIF\_3, LIF\_4

**Correct Answer: D**

**Section:**

**QUESTION 43**

Which path selection policy is used by Windows Servers using NetApp LUNs that are greater than 2 TB?

- A. Least Queue Depth
- B. Round Robin
- C. Round Robin with Subset Policy
- D. Least Weighted Paths

**Correct Answer: C**

**Section:**

**QUESTION 44**

Which two are supported in ONTAP 9.5? (Choose two.)

- A. an NVMe LIF and an FC LIF in the same SVM
- B. an NVMe LIF associated with an FC Direct Connect port
- C. a NVMe LIF and an FC LIF associated with the same port
- D. multiple NVMe LIFs in the same SVM

**Correct Answer: C, D**

**Section:**

**QUESTION 45**

An administrator who is using the Virtual Storage Console (VSC) creates a new FC datastore on an existing volume. While the datastore was provisioned, two hosts were in maintenance mode. When the maintenance was completed, the two hosts do not have access to the new datastore, but they have access to other datastores on the same volume.

In this scenario, what caused this result?

- A. The VSC cannot create datastores while hosts are in maintenance mode.
- B. During host maintenance, the FC HBAs were replaced with different FC HBAs.
- C. The VSC created a new igroup that contains only the hosts that were online during the datastore creation.
- D. After creation using the VSC, the administrator needs to create a LUN mapping.

**Correct Answer: C**

**Section:**



**QUESTION 46**

An administrator is configuring a SAN-only cluster. The data room that houses four AFF A220 controllers is small and not able to house the DS224C shelves. The administrator proposes to rack the shelves in a separate room that is 40 meters away from the controllers.

In this situation, how would you properly cable the controllers to the shelves?

- A. Use multimode passive optical cables.
- B. Use multimode active copper cables.
- C. Use multimode active optical cables.
- D. Use multimode passive copper cables.

**Correct Answer: C**

**Section:**

**QUESTION 47**

Which three components are required for NetApp iSCSI LUN access on Linux servers? (Choose three.)

- A. device-mapper-multipath
- B. NetApp SnapDrive
- C. scsi-target-utils
- D. iscsi-initiator-utils

E. NetApp Host Utilities

**Correct Answer: A, C, E**

**Section:**

**QUESTION 48**

An administrator has a new AFF A220 system with two DS224C disk shelves and wants to validate if the shelf cabling is correct. Which resource would be used to accomplish this task?

- A. Config Advisor
- B. OnCommand Unified Manager (OCUM)
- C. OneCollect
- D. Interoperability Matrix Tool (IMT)

**Correct Answer: A**

**Section:**

**QUESTION 49**

You currently have a FAS8200 with ONTAP 9.5. You want to expand the front end FC I/O capabilities. However, you are unsure which target adapters are supported. What would you use to confirm which adapters are supported with your current configuration?

- A. Hardware Universe (HWU)
- B. Upgrade Advisor
- C. OneCollect
- D. Interoperability Matrix Tool (IMT)

**Correct Answer: A**

**Section:**

**QUESTION 50**





Question Exhibit

Volume: ESX2\_NVMe\_volume\_944 [Back to all volumes](#) [Edit](#) [Delete](#) [More actions](#) [Refresh](#)

Overview **Snapshots Copies** Data Protection **Storage efficiency** Performance

---

Before 

After 

**Details**

Deduplication	Enabled (inline)
Deduplication Mode	none
Status	idle
Type	regular
Compression	Enabled (inline)

153.93 Gb of 166.25 G available space

156.71 Gb of 166.25 G available space

**Last Details**

Last Run	Aug/24/2018 23:56:57
Total Savings	2.77 GB (22%)
1.14 GB (9%) - Deduplication Savings	
1.63 GB (13%) - Compression Savings	
Start Time	Aug/24/2018 23:56:57
End Time	Aug/24/2018 23:56:57

Which two storage efficiencies have been enabled on the NVMe namespace that is shown in the exhibit? (Choose two.)

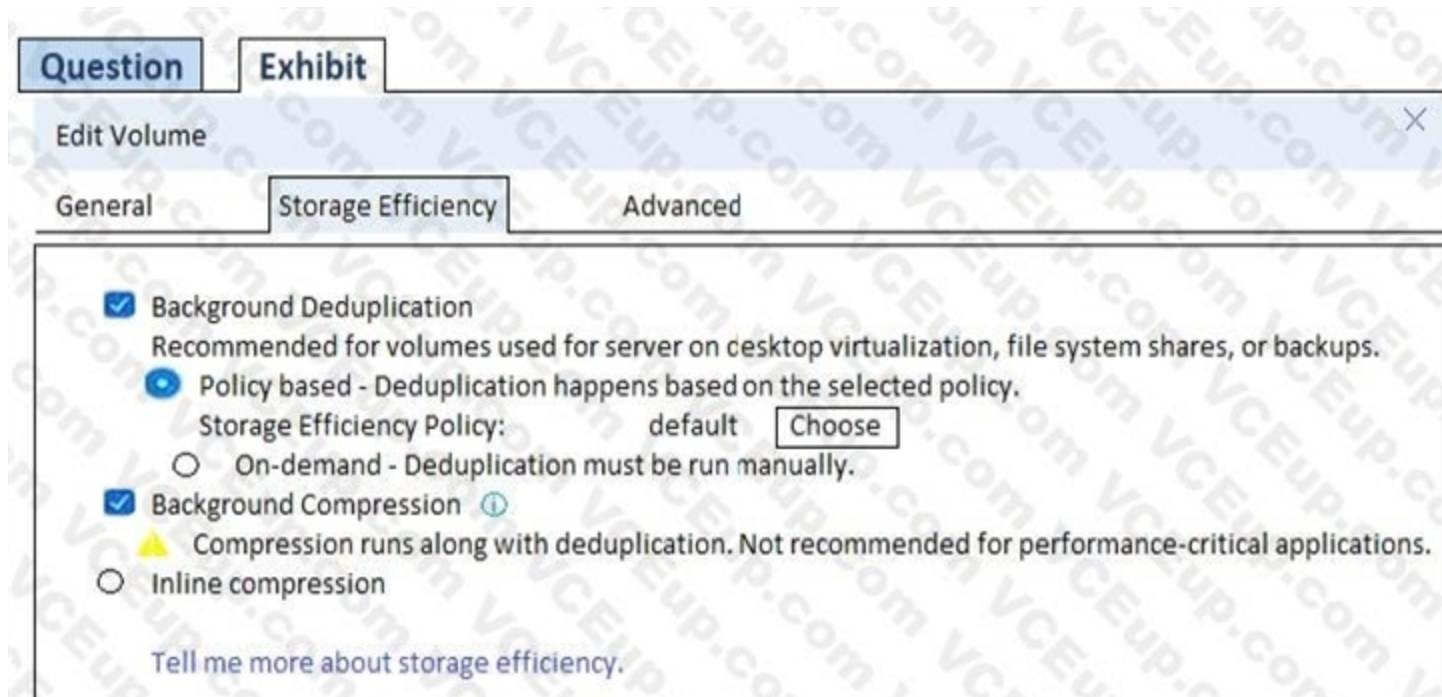
- A. deduplication
- B. compaction
- C. compression
- D. thin provisioning

**Correct Answer: B**  
**Section:**

**QUESTION 51**







You have a performance critical database application that is running on a FAS9000 controller that uses FC. As shown in the exhibit, volume efficiency is enabled. If you follow the performance recommendation, what are two results to the data in the volume?  
(Choose two.)

- A. The new written data is compressed.
- B. The new written data is uncompressed.
- C. The existing data is uncompressed.
- D. The existing data is compressed.

**Correct Answer: A, C**

**Section:**

#### QUESTION 52

Which resource would you use to verify whether a specific SAN configuration is supported by NetApp?

- A. SAN Configuration Guide
- B. Hardware Universe (HWU)
- C. Active IQ
- D. Interoperability Matrix Tool (IMT)

Answer: A

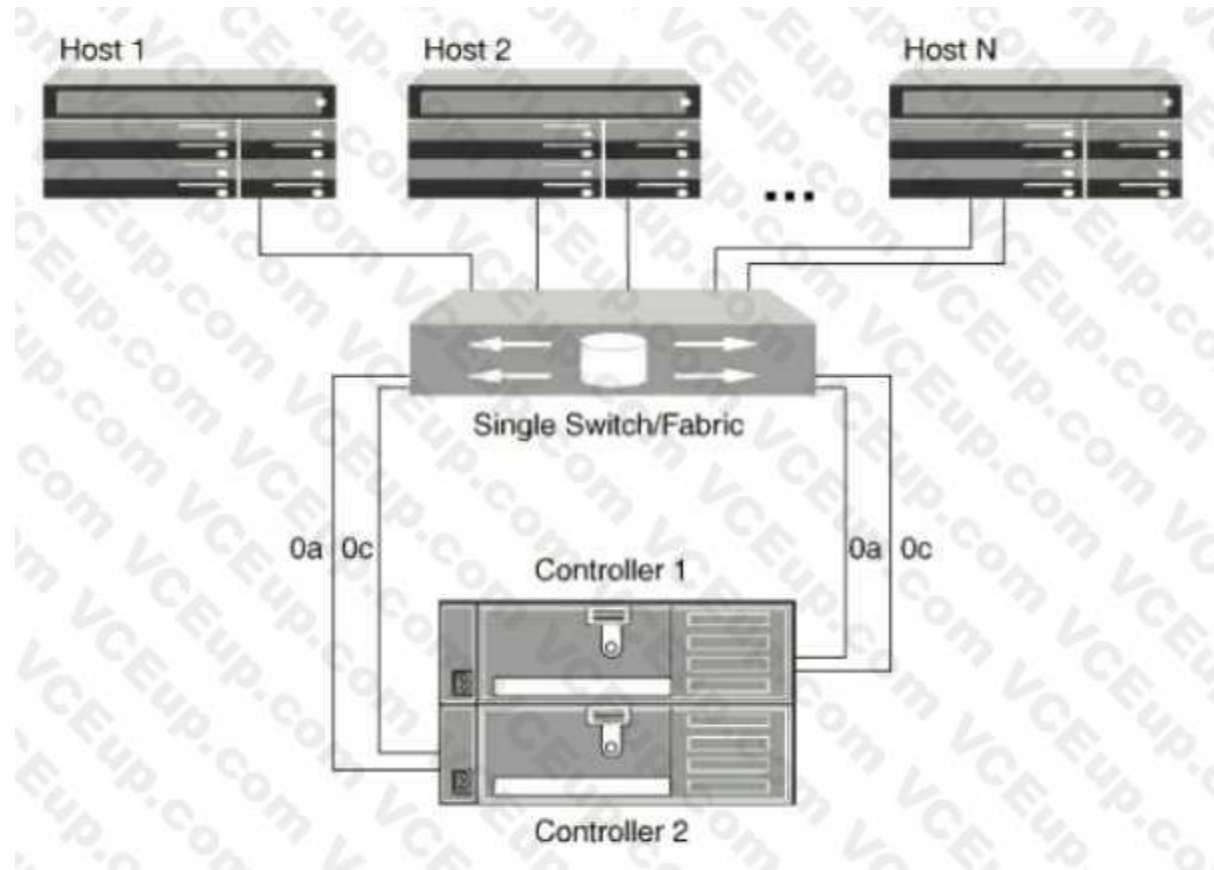
**Correct Answer: A**

**Section:**

#### QUESTION 53

Click the Exhibit button.





You have a 2-node cluster in a single-fabric SAN. Host 1 and Host 2 are part of a VMware cluster and access the same LUNs that reside in your NetApp storage. Referring to the exhibit, what would be a way to test whether the multipathing is properly configured in your environment?

- A. Verify whether all destination storage target ports are contained in the same zone as Host 1.
- B. Administratively set ports 0a and 0c on Controller 1 to the offline setting.
- C. Power off the SAN switch.
- D. Disconnect Host 1 port and verify whether Host 2 is still able to run the VMs.

**Correct Answer: B**

**Section:**

**QUESTION 54**

An administrator configures NVMe within an SVM for a test environment. The administrator creates an NVMe namespace and an NVMe subsystem. The administrator then maps the namespace to the subsystem. However, when the administrator establishes a connection to a supported host, the following error message appears: No discovery log entries to fetch.

What is the solution to this error?

- A. Add the host WWPN to the subsystem.
- B. Disable the host HBA and re-enable it to clear the buffers.
- C. Add the host NQN to the subsystem.
- D. Use the `nvme ns-rescan /dev/nvme0` command to rescan the bus.

Answer: C

**Correct Answer: C**

**Section:**

**QUESTION 55**

After the addition of extra DS224C disk shelves, you notice that the output of the system node run - node node\_1 sysconfig command shows Mixed-path. You need to investigate why the additional shelves are providing this

error.

In this scenario, which two tools would help diagnose this issue? (Choose two.)

- A. Config Advisor
- B. Active IQ
- C. Hardware Universe (HWU)
- D. Interoperability Matrix Tool (IMT)

**Correct Answer: A, D**

**Section:**

#### QUESTION 56

A customer's NetApp infrastructure is reaching end-of-life (EOL), and they want to inventory their NetApp cluster. The customer wants to make sure that the proposed technical refresh satisfies their growing data demands. Which two tools would you use to help with this recommendation? (Choose two.)

- A. Upgrade Advisor
- B. OneCollect
- C. Config Advisor
- D. Active IQ

**Correct Answer: A, C**

**Section:**

#### QUESTION 57

A customer is expanding an ONTAP 9.4 switchless 2-node FAS2750 cluster. Two AFF A220 nodes will be added to the cluster. In addition to the cluster nodes, what else is required to perform the cluster expansion?

- A. Additional management switches are required.
- B. An upgrade to ONTAP 9.5 is required.
- C. Cluster switches are required.
- D. Additional DS224C shelves are needed.

**Correct Answer: A**

**Section:**

#### QUESTION 58

What is the recommended minimum of data LIFs per node for iSCSI in a dual-fabric configuration with four SVMs?

- A. 8
- B. 12
- C. 16
- D. 4

Answer: A

**Correct Answer: A**

**Section:**

The logo for Vdumps.com, featuring a stylized orange 'V' followed by the word 'dumps' in a grey, lowercase, sans-serif font.

### QUESTION 59

Click the Exhibit button.

```
Question Exhibit
Vserver Name: AFF_SAN_DEFAULT_SVM
  LUN Path: /vol/OraFinProd_oradata_OraFinProd_1/oradata_OraFinProd_1
  Volume Name: OraFinProd_oradata_OraFinProd_1
  Qtree Name: ""
  LUN Name: oradata_OraFinProd_1
  LUN Size: 2.50GB
  OS Type: linux
  Space Reservation: disabled
  Serial Number: 807Jd]I3aoSX
  Serial Number (Hex): 3830374a645d4933616f5358
  Comment:
Space Reservations Honored: false
  Space Allocation: disabled
  State: online
  LUN UUID: 6b328b3e-889e-4512-a62b-6e830a22861b
  Mapped: mapped
  Block Size: 512
  Device Legacy ID: -
  Device Binary ID: -
  Device Text ID: -
  Read Only: false
  Fenced Due to Restore: false
```

The LUN that is shown in the exhibit is mounted by a Windows 2016 server. In this scenario, which two statements are correct? (Choose two.)

- A. The LUN has misaligned I/O.
- B. The LUN has aligned I/O.
- C. The LUN's space is reserved.
- D. The LUN's space is not reserved.

**Correct Answer: B, D**

**Section:**

### QUESTION 60

A customer recently added two nodes with FC ports to a 4-node cluster.

Which SVM configuration is needed before the customer creates LUNs on the new nodes?

- A. The FC service needs to be enabled on the data SVM.
- B. The existing LIFs need to be migrated to the new nodes.
- C. New FC LIFs need to be created on the cluster SVM.
- D. New FC LIFs need to be created on the new nodes.

Answer: D

**Correct Answer: D**

**Section:**

### QUESTION 61



Click the Exhibit button.

Vserver	Logical Interface	Status Admin/Oper	Network Address/Mask	Current Node	Current Port	Is Home
SVM1	LIF_bot-0e	up/up	20:17:00:a0:98:5a:5c:af	cl1-02	0e	true
	LIF_bot-0f	up/up	20:19:00:a0:98:5a:5c:af	cl1-02	0f	true
	LIF_top-0e	up/up	20:16:00:a0:98:5a:5c:af	cl1-01	0e	true
	LIF_top-0f	down/down	20:18:00:a0:98:5a:5c:af	cl1-01	0f	true

During pre-deployment testing, you want to ensure that all FC paths are available to your host. You use the network interface modify -vserver SVM1 -lif LIF\_top-0f -admin-state up command to correct the configuration shown in the exhibit. What happens when using this command?

- A. It creates a new LIF on SVM2 named up.
- B. It creates a new LIF on SVM1 named LIF\_top-0f.
- C. It changes the administrative state from "down" to "up".
- D. It changes the operational state from "down" to "up".

**Correct Answer: C**

**Section:**



**QUESTION 62**

Click the Exhibit button.

Vserver	igroup	Protocol	ostype	portset
svml	ps2	fc	windows	ps2

Vserver	Portset	Protocol	Port Names	Igroups
svml	ps2	fc	lif_node01_0f, lif_node01_0g, lif_node02_0f, lif_node02_0g, lif_node03_0f, lif_node03_0g, lif_node04_0f, lif_node04_0g	ps2

1 entries were displayed.

Zone Name	Zone Member(s)
node01_0f_0g	10:00:00:00:c9:b8:9d:2c 50:0a:09:81:98:7a:91:7b 50:0a:09:8a:88:7a:91:7b
node02_0f_0g	10:00:00:00:c9:b8:9d:2c 50:0a:09:82:98:7a:91:7b 50:0a:09:8b:88:7a:91:7b
node03_0f_0g	10:00:00:00:c9:b8:9d:2c 50:0a:09:83:98:7a:91:7b 50:0a:09:8c:88:7a:91:7b
node04_0f_0g	10:00:00:00:c9:b8:9d:2c 50:0a:09:84:98:7a:91:7b 50:0a:09:8d:88:7a:91:7b
node05_0f_0g	10:00:00:00:c9:b8:8c:63 50:0a:09:85:88:7a:91:7b 50:0a:09:8e:88:7a:91:7b
node06_0f_0g	10:00:00:00:c9:b8:8c:64 50:0a:09:86:88:7a:91:7b 50:0a:09:8f:88:7a:91:7b

A 4-node cluster was expanded with two news nodes (Nodes 5 and 6). You are now attempting to set up four FC LUNs on the two new nodes that use the ps2 igroup name, although FC ping works. LUNs on the previous four nodes are

discoverable, but the four new LUNs on the new controllers are not discoverable. Referring to the exhibit, what is the problem?

- A. The zones between the hosts and LIFs are from node-05 and node-06.
- B. Selective LUN Mapping (SLM) is not configured for this HA pair.
- C. The portset must be configured to reflect Nodes 5 and 6.
- D. Igroup ps2 has the portset configured with the LIFs.

**Correct Answer: C**

**Section:**

#### QUESTION 63

You are configuring both NVMe and FC on the same AFF A700 2-node ONTAP 9.5 cluster. You are also configuring both protocols on the same FC fabric using the same A700 HBA ports. In this scenario, which three configurations are supported? (Choose three.)

- A. 16 GB HBAs
- B. 8 GB HBAs
- C. 16 GB fabrics
- D. 32 GB HBAs
- E. 32 GB fabrics

**Correct Answer: B, C, D**

**Section:**

#### QUESTION 64

An administrator has an AFF A200 cluster at their primary site that is used for FC connectivity to servers. For disaster recovery purposes they want to start replicating their data to another AFF A3Q0 cluster in a secondary location. The AFF A300 is in a site that has no FC or FCoE capable switches, and is currently only used for CIFS data. A cluster peering relationship already exists between the two clusters. Which three additional actions are needed for the data to be ready for access from hosts at the secondary site? (Choose three.)

- A. Create zones with the appropriate initiators and targets for the secondary site.
- B. Enable the iSCSI service on the SVM at the secondary site.
- C. Replicate the data from the primary site to the secondary site with SnapMirror.
- D. Create new iSCSI igroups for LUN mapping.
- E. Enable the iSCSI service on the SVM at the primary site.

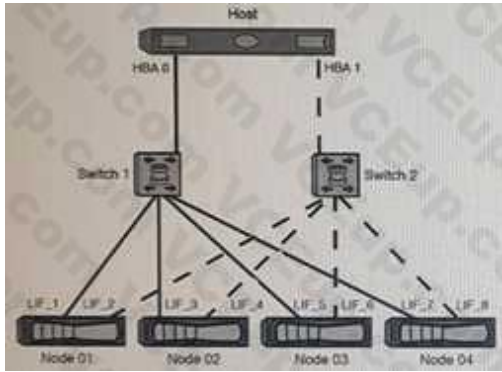
**Correct Answer: B, C, D**

**Section:**

#### QUESTION 65

Exhibit.





Referring to the exhibit, which type of zoning should be used?

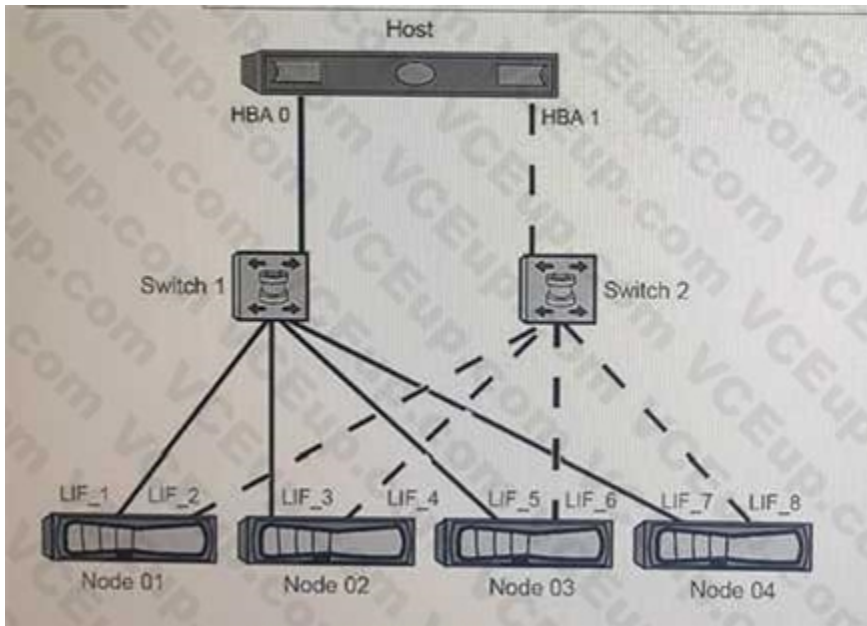
- A. a WWPN with a single initiator and multiple targets
- B. a WWPN with a single initiator and a single target
- C. a WWNN with a single initiator and multiple targets
- D. a WWNN with a single Initiator and a single target

**Correct Answer: B**

**Section:**

**QUESTION 66**

Exhibit.



A customer has an AFF A200 with a LUN residing in a volume by Node 4. The default Selection Mapping settings are effect. During a planned takeover cluster test, Node 3 performs a take over of Node 4. Referring to the exhibit, what is the expected number of paths seen from the host?

- A. 6
- B. 8
- C. 4
- D. 2

**Correct Answer: A**

**Section:**



### QUESTION 67

You have inherited a small FC SAN infrastructure that consists of 15 servers (hosts), two Cisco MDS 9148s switches, and a 4-node NetApp AFF A300 cluster. You suspect that your predecessor did not configure zoning according to best practices.

In this scenario, what information is necessary to audit your SAN zoning? (Choose two.)

- A. SVM WWNNs
- B. SVN LIF WWPNs
- C. Controller port WWPNs
- D. Host GBA WWPNs

**Correct Answer: B, D**

**Section:**

### QUESTION 68

Exhibit.

```
svml> lun show -vserver svml
-----
Vserver Path State Mapped Type Size
-----
svml /vol/luns/lun online mapped linux 10GB

svml> igroup show -vserver svml
-----
Vserver Igroup Protocol OS Type Initiators
-----
svml linuxhost mixed linux iqn.1999-01.com.localhost:71f9e0a481d3

svml> lun mapping show -vserver svml -path /vol/luns/lun
-----
Vserver Path Igroup LUN ID Protocol
-----
svml /vol/luns/lun linuxhost 10 mixed

svml> vserver iscsi initiator show -vserver svml
-----
Vserver Name TSM Name Initiator ISID Igroup Name
-----
svml iscsi0 1 iqn.2016-09.com.localhost:matt 00:02:3d:06:00:00

# iscsiadm -m node -L all
Logging in to [iface: default, target: iqn.1992-08.com.netapp:en.a350acf8fbc311e390a400a0981e2c74, portal: 10.61.84.123,3260]
Logging in to [iface: default, target: iqn.1992-08.com.netapp:en.a350acf8fbc311e390a400a0981e2c74, portal: 10.61.84.122,3260]

# echo "- - -" > /sys/class/iscsi_host/host8/scan
# echo "- - -" > /sys/class/iscsi_host/host9/scan

# multipath
(no output)
```

A Linux host cannot discover a newly provisioned LUN. Referring to the exhibit, what would be the cause of the problem?

- A. The IUN ID Is Incorrect.
- B. The host's MPIIO feature is not enabled.
- C. The Initiator group is misconfigured.
- D. The host's IP address is misconfigured.

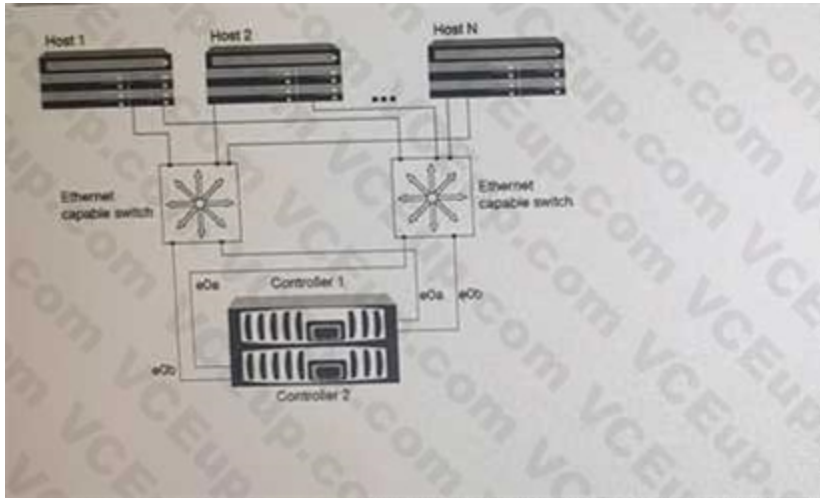
**Correct Answer: C**

**Section:**

### QUESTION 69

Exhibit.





Referring to the exhibit. What are two viable scenarios to test LUN multipathing on Host 1?  
(Choose two.)

- A. Reboot one of the switches.
- B. Disable one of the FC LIFs on Controller 1.
- C. Disconnect one of the host cables.
- D. Reboot Host 1.

**Correct Answer: A, C**

**Section:**

#### QUESTION 70

Which formula is appropriate for calculating target port Queue Depth?

- A. The number of LIFs using a physical port \* 256
- B. The sum of the Queue Depth setting for all hosts using a physical port
- C. The number of LIFs using the physical port \* Maximum Host HBA Queue Depth setting
- D. The number of physical ports \* 2048

**Correct Answer: C**

**Section:**

#### QUESTION 71

When planning out a new FC SAN implementation for a AFF cluster, which two variables should be considered for a highly-available, resilient solution? (Choose two.)

- A. Length of LC/LC optic cables
- B. Multiple disk shelves
- C. Multiple PDUs connected to separate circuits
- D. Data-fabric zones using multiple switches

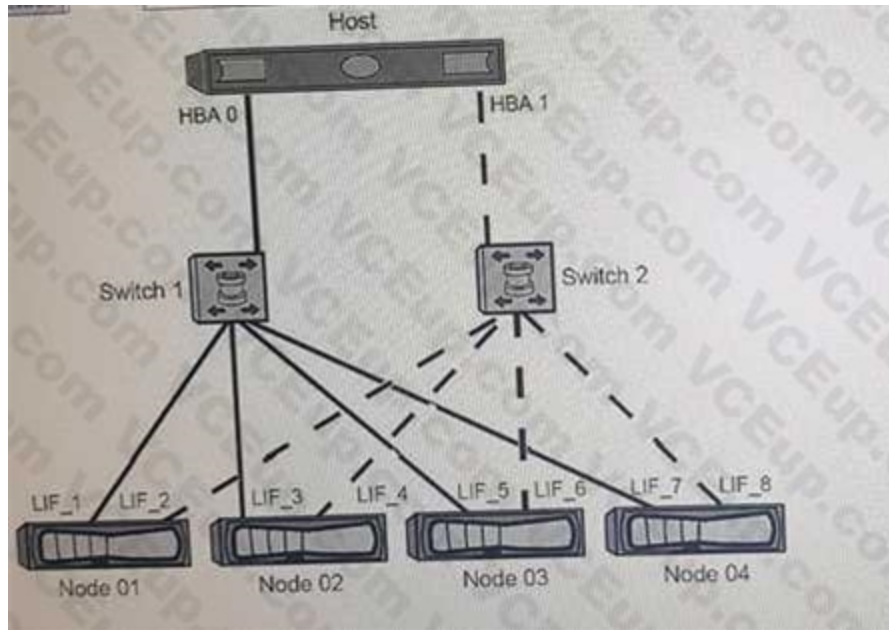
**Correct Answer: C, D**

**Section:**

#### QUESTION 72

Exhibit.





A customer is testing a dual-fabric FC SAN configuration as shown in the exhibit and the zones are implemented on the switches shown below.

Switch 1 / Zone 1: HBA 0, LIF\_1, LIF\_3, LIF\_5, and LIF\_7  
 Switch 2 / Zone 2: HBA 1, LIF\_2, LIF\_4, LIF\_6, and LIF\_8

If all the nodes are in the SLM reporting nodes list, how many paths per LUN should the customer expect when simulating an FC SFP failure by bringing LIF\_3 offline?

- A. 15 paths
- B. 3 paths
- C. 4 paths
- D. 7 paths

**Correct Answer: D**

**Section:**

**QUESTION 73**

An administrator has a 2node AFF ONTAP cluster named cl1. A Windows 2016 server has 10 FC LUNs mapped from the cluster, and the administrator can multiple paths to each LUN, During a scheduled storage failover, node cl1-02 took over cl1-01, and Windows server lost connectivity to all mapped LUNs but reestablished connectivity after the giveback operation finished. In the scenario, what would cause the LUN connectivity outage?

- A. Multipathing software is not installed on the host.
- B. Switch zoning does not exist between the host initiator ports and the data LIFs that reside on node cl-01.
- C. NPIV is not enabled on the switches.
- D. Switch zoning does not exist between the host initiator ports and the data LIFs that reside on node cl1-02.

**Correct Answer: A**

**Section:**

**QUESTION 74**

Exhibit.



```
root@server:~# volume show -fields space-guarantee
volume space-guarantee
-----
svml          voll none

root@server:~# lun show -fields space-reserve
path          space-reserve
-----
svml          /vol/voll/lun1 enabled
```

Referring to the exhibit, which two statements are true? (Choose two.)

- A. The volume guarantee has no effect.
- B. LUN overwrites are guaranteed.
- C. The LUN might run out of space.
- D. The LUN space reservation has no effect.

**Correct Answer: B, C**

**Section:**

#### QUESTION 75

You want to provision an iSCSI LUN.

Which two steps are required to accomplish this task? (Choose two.)

- A. Add the initiator IP address to the igroup.
- B. Map the LUN to the igroup.
- C. Add the target WWPN to the igroup.
- D. Add the initiator IQN to the igroup.

**Correct Answer: B, D**

**Section:**

#### QUESTION 76

Which NetApp tool views automated, schedule configuration, and performance data for a customer's SAN from a Web browser?

- A. Virtual Storage Console
- B. OnCommand Workflow Analyzer
- C. Config Advisor
- D. Active IQ

**Correct Answer: B**

**Section:**

#### QUESTION 77

A storage administrator created a LUN using two ports on a storage system. Later, additional LUNs were added to the same node as the original LUN. After a while, the performance of the original LUN dropped beyond an acceptable level.

What would you advise to remedy the Issue?

- A. Add an additional switch between the hosts and cluster.
- B. Add new LIFs on unused ports.
- C. Add new LIFs on the used ports.







- B. The igroup does not contain the WWPN of one initiator.
- C. The fabric name server is disabled.
- D. The initiator HBA is not connected to the fabric.

**Correct Answer: D**

**Section:**

#### QUESTION 81

A customer wants to use both Cisco FC and FCoE switches in their ONTAP environment. According to NetApp best practices, what are two requirements in this scenario? (Choose two.)

- A. You must use single initiator zoning.
- B. You must create interface groups to isolate FC and FCoE LIFs.
- C. You must create a trunk with multiple virtual LANs.
- D. You must not have more than one target UF for the same physical port in a single fabric zone.

**Correct Answer: A, D**

**Section:**

#### QUESTION 82

You are provisioning a LUN using an iSCSI initiator on an ESX host. You disable Ethernet flow control for all ports but are experiencing Performance issues. In this scenario, which two actions would improve the performance issue? (Choose two.)

- A. Set the MTU settings 1500 for optimal performance.
- B. Dedicate your ports to iSCSI traffic.
- C. Enable jumbo frames across the entire data path.
- D. Confirm that your host .mil storage polls are connected to a different network.



**Correct Answer: B, C**

**Section:**

#### QUESTION 83

Exhibit.

A screenshot of a terminal window showing NetApp CLI commands for configuring zoning. The text is as follows:

```
zone name z_fab2 vsan 500
member pwn 20:00:00:25:b5:e0:ee:22
member pwn 50:0a:09:84:8d:56:7c:ef

zoneset name zs_fab2 vsan 500
member z_fab2

zoneset activate name zs_fab2 vsan 500
```

You are adding a boot LUN for a new server. The server uses FCP attached through a CN

- A. The ONTAP cluster is also attached to the same fabric by way of UTA2. You configure the zoning for the fabric as shown in the exhibit. You discover that the server cannot see its boot LUN. What is the problem with your zoning configuration?
- B. The zone set must have the same name as the zone.
- C. The zone was not activated.
- D. The zone used a wrong zone ID.
- E. The WWPN for the NetApp LIF is incorrect.

**Correct Answer: D**

**Section:**

**QUESTION 84**

An administrator needs to connect a new VMware 6.5 cluster to an ONTAP cluster for iSCSI connectivity. Which two steps would accomplish this task? (Choose two.)

- A. Enable iSCSI adapters on the ESXi hosts.
- B. Install the Virtual Storage Console for VMware vSphere.
- C. Configure zoning for the HBAs and the ONTAP data LIFs.
- D. Configure ALUA on the ONTAP SVM.

**Correct Answer: A, D**

**Section:**

**QUESTION 85**

You will be purchasing two high availability NetApp AFF A700s systems. You want to set up a 4-node cluster. Which switch would you use for the cluster interconnect switches?

- A. NetApp CN1610
- B. Cisco Nexus 3132Q-V
- C. Cisco Nexus 5548UP
- D. Cisco Nexus 5020

**Correct Answer: B**

**Section:**

**QUESTION 86**

What does the space allocation argument in a lun create command do?

- A. It thick provisions the LUN.
- B. It only disables space reclamation (or the LUN).
- C. It thin provisions the LUN,
- D. It enables or disables space reclamation for the LUN

**Correct Answer: D**

**Section:**

**QUESTION 87**

An enterprise customer has both a NetApp FAS8200 4-node cluster and a third-party storage array in a shared SAN environment. The host servers connect to both storage vendors' arrays in the fabric. Regarding (he hosts in this scenario, what are- two NetApp best practices when performing this task? (Choose two.)

- A. Set the default timeout values and storage parameters for the host system.
- B. Provide isolation between storage systems using NetApp's multitenancy feature.
- C. Always use the same adapter for heterogeneous storage systems.
- D. Use separate adapters to connect to each vendors' storage system.

**Correct Answer: A, D**



Section:

### QUESTION 88

Exhibit.

```
switch-01# show feature
Feature Name      Instance  State
-----
Flexlink          1         disabled
amt               1         disabled
bgp               1         disabled
cts               1         disabled
dhcp              1         disabled
dot1x             1         disabled
eigrp             1         disabled
eigrp             2         disabled
eigrp             3         disabled
eigrp             4         disabled
eth_port_sec     1         disabled
fabric-binding   1         disabled
fc-port-security 1         disabled
fcoe              1         enabled
fcoe-npv         1         disabled
fcsp              1         disabled
fex               1         disabled
fport-channel-trunk 1         enabled
glbp              1         disabled
harp_engine      1         disabled
http-server      1         disabled
interface-vlan   1         disabled
lACP              1         disabled
ldap              1         disabled
lldp              1         enabled
mads              1         disabled
npiv              1         disabled
npv               1         disabled
oim               1         disabled
osnf              1         disabled
```



You are working on a project to install a new AFF A300 storage array. You use a pair of Nexus 3596 switches for FC connectivity between your VMware ESXi servers and the AFF A300. Which SAN switch feature must be enabled to accomplish this task?

- A. N\_Port ID visualization (NP1V)
- B. Open Shortest Path First (OSPF)
- C. Link Aggregation Control Protocol (LACP)
- D. N\_Port Visualization (NPV)

**Correct Answer: A**

Section:

### QUESTION 89

You are deploying an 8-node FAS8200 ONTAP cluster and attaching to an existing FC fabric.

Which two ONTAP features would be used to restrict or limit the available paths seen from the host?

(Choose two.)

- A. port sets
- B. igroup
- C. VIAN

D. Selective IUN Map

**Correct Answer: A, D**

**Section:**

**QUESTION 90**

A customer experiences intermittent connectivity problems between an ESXi server and FC LUNs in an SVM. The customer has examined the nodes hosting the LUNs and both the disk and CPU performance are below 50% utilization.

The customer examined the switch ports connected to the storage array, and they are also below 50% utilization.

Which two steps would you perform next in this scenario? (Choose two.)

- A. Verify that the host is using SnapDrive.
- B. Verify that the host Ethernet interfaces are using jumbo frames.
- C. Verify that the host recommended settings were applied by Virtual Storage Console.
- D. Verify that the HBA queue depth is set properly.

**Correct Answer: C, D**

**Section:**

**QUESTION 91**

Exhibit.



Name	Container Path	Space Reservation	Available Size	Total Size	% Used
test_lun	/vol/vol_01_01	Enabled	100.01 GB	100.01 GB	0.0%
lun_sanluns01_prod01	/vol/vol_sanluns01dev_02	Enabled	10 GB	10 GB	0.0%
lun_sanluns1_prod_01	/vol/vol_sanluns01prod_03	Enabled	100.01 GB	100.01 GB	0.0%
lun_sanluns1_prod_02	/vol/vol_sanluns01prod_03	Enabled	200.03 GB	200.03 GB	0.0%
lun_sanluns1_prod_03	/vol/vol_sanluns01prod_03	Disabled	300.04 GB	300.04 GB	0.0%
lun_sanluns1_prod_04	/vol/vol_sanluns01prod_03	Disabled	2 TB	2 TB	0.0%



Referring to the exhibit, what is the total amount of space that is guaranteed for the LUNs in the /vol1/vol1\_sanlunsprod\_03 volume?

- A. 0 GB
- B. 300 GB
- C. 600 GB
- D. 2600 GB

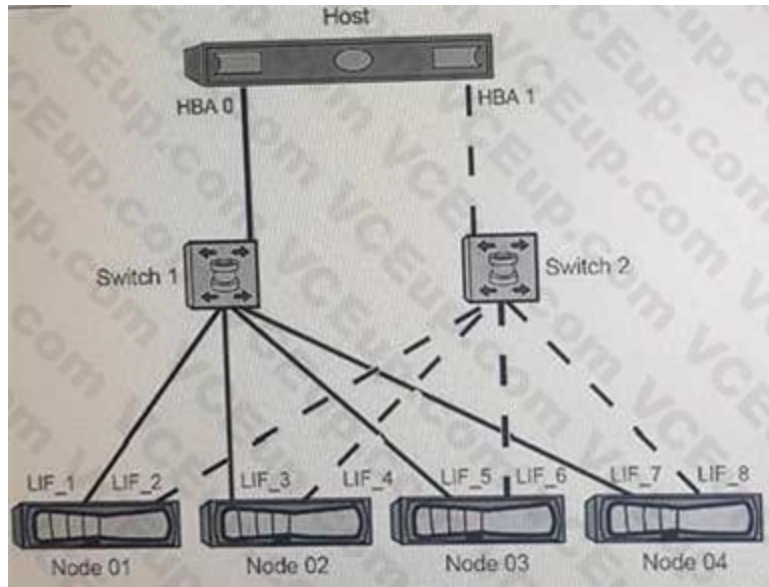
**Correct Answer: A**

**Section:**

**QUESTION 92**

Exhibit.





A customer is testing a dual-fabric FC SAN configuration as shown in the exhibit. The zones are implemented on the switches shown below.

Switch 1 / Zone 1: HBA 0, LIF\_1, LIF\_3, LIF\_5, and LIF\_7  
 Switch 2 / Zone 2: HBA 1, LIF\_2, LIF\_4, LIF\_6, and LIF\_8

If all the nodes are in the SLM reporting nodes list, how many paths per LUN should the customer expect when simulating a node failure by powering off Node 04?

- A. 4 paths
- B. 6 paths
- C. 8 paths
- D. 2 paths

**Correct Answer: B**

**Section:**



**QUESTION 93**

You have a 4-node cluster with a FAS8200 HA pair and an AFF A300 HA pair. You need to migrate a LUN from a FAS8200 node to an AFF A300 node for faster performance. Which method will non-disruptively migrate the LUN to the AFF A300 while retaining snapshots of the LUN on the FAS8200?

- A. You move the LUN.
- B. You relocate the aggregate.
- C. You move the volume.
- D. You copy the LUN.

**Correct Answer: D**

**Section:**

**QUESTION 94**

Exhibit.

```

>> network interface show -vservers svml -fields data-protocol
vservers lif      data-protocol
-----
svml    fc_lif1    fcp
svml    iscsi_lif1 iscsi
2 entries were displayed.
  
```

You need to configure the SnapCenter Plug-in for VMware vSphere to back up and restore VMware datastores. Referring to the exhibit, which additional LIF type should you create before you configure the plugin?

- A. intercluster
- B. node management
- C. SVM management
- D. cluster management

**Correct Answer: C**

**Section:**

**QUESTION 95**

You are setting up FC ports and must configure the speeds for both the SAN and the host ports. In this scenario, which statement is correct?

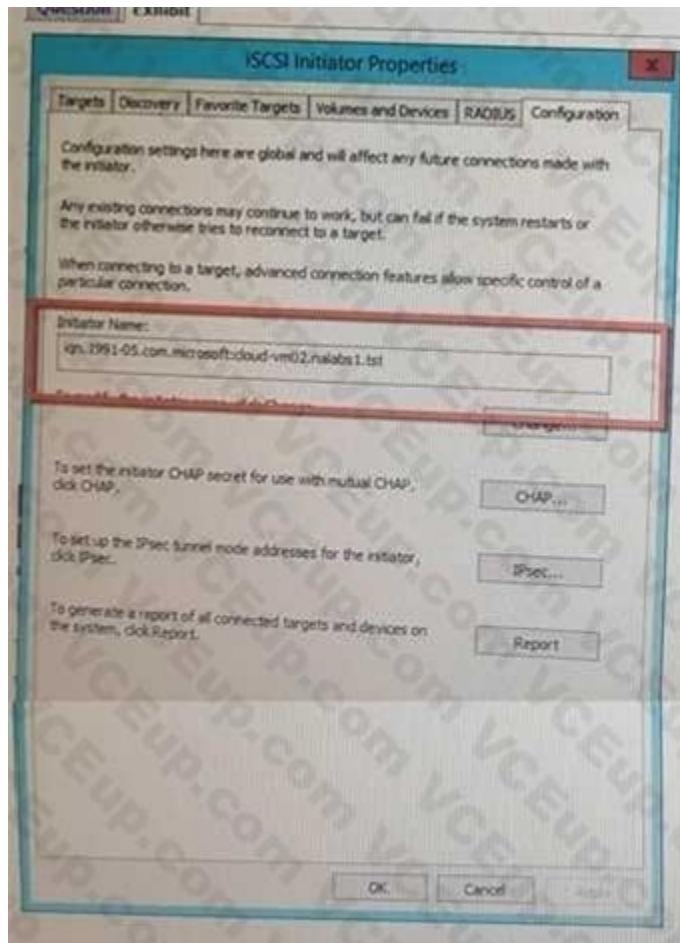
- A. Set the target port speed higher than the switch port speed.
- B. Set the target port speed to auto-negotiation.
- C. Set the target port speed to match the switch port speed.
- D. Set the target port speed lower than the switch port speed.

**Correct Answer: B**

**Section:**

**QUESTION 96**

Exhibit.



You want to map a LUN to a server.

To which SAN object is the highlighted value in the exhibit added?



- A. LUN
- B. fabric zone
- C. FlexClone
- D. igroup

**Correct Answer: D**

**Section:**

**QUESTION 97**

You must relocate a LUN from one AFF A700 HA pair to another AFF A300 HA pair while preserving all storage efficiencies. What are two ways to accomplish this task? (Choose two.)

- A. Copy the volume.
- B. Copy the LUN.
- C. Move the volume.
- D. Move the LUN.

**Correct Answer: A, B**

**Section:**

**QUESTION 98**

An SVM's LUN setup needs to have LIFs that are configured for FC access and iSCSI access. The administrator will also be using NetApp Virtual Storage Console.

In this scenario, which three types of LIFs are required? (Choose three.)

FC LIFs

- A. management LIFs
- B. iSCSI data LIFs
- C. NAS data LIFs
- D. intercluster LIFs



**Correct Answer: A, B, C**

**Section:**

**QUESTION 99**

A customer's Red Hat Linux 7.0 server's Linux native DM-MP settings for multi pathing have not been set correctly. In this scenario, what would cause this problem?

- A. The multi path, conf file contains the blacklist stanza.
- B. Challenge-Handshake Authentication Protocol (CHAP) is not enabled.
- C. The rdloaddriver=scsi\_dh\_alua was not added to the end of the boot loader file.
- D. The incorrect WWID was added to the multipath.conf file.

**Correct Answer: D**

**Section:**

**QUESTION 100**

A4-node ONTAP FAS9000 cluster was used to serve I/O from six RedHat 7.3 servers. The servers were configured with maximum, queue depth.

For production purposes, an additional 60 similarly configured hosts were added to the environment.

Later, the hosts started reporting random QFull errors, and the aggregated performance degraded.

Which two solutions would alleviate the QFull errors and performance problems? (Choose two.)

- A. Remove Selective LUN Mapping (SIM) from the 4-node FAS9000 cluster.
- B. Download the latest FC HBA driver, firmware, and BIOS, and deploy them on the hosts.
- C. Configure and use additional FC target HBAs in the FAS9000 cluster.
- D. Reduce FC HBA queue depth on the hosts.

**Correct Answer: C, D**

**Section:**

#### QUESTION 101

A customer wants to move its iSCSI SAN data from the edge locations into the cloud for data analytics, while keeping the ability to access modify the data.

Which two combined solutions meet the customer's requirements in this scenario? (Choose two.)

- A. Use Microsoft Azure compute resources to access the near cloud AFF SnapMirror data for analytics.
- B. Deploy ONTAP Cloud at edge locations and use SnapVault to move the data into an AFF onpremises data center.
- C. Deploy ONTAP Select at edge locations and use SnapMirror to move the data to AFF near cloud with the NetApp Private Storage (NPS) service.
- D. Use Amazon Web Services (AWS) compute resources to access ONTAP Select data at the edge office locations for analytics.

**Correct Answer: A, D**

**Section:**

#### QUESTION 102

You need to move a LUN non-disruptively from an AFF A200 HA pair to an AFF A700 HA pair within the same 4-node cluster using the steps shown below.

- A. Scan the host OS to discover all paths to the LUN.
- B. Execute the lun move command to move the LUN to the AFF A/00 HA pair.
- C. Remove the AFF A200 HA pair from the reporting-nodes list.
- D. Add the AFF A700 HA pair to the reporting-nodes list.

What is the correct sequence in performing, these steps?

- E. 1, 2, 3, 4
- F. 4, 1, 2, 3
- G. 4, 3, 2, 1
- H. 3, 2, 1, 4

**Correct Answer: B**

**Section:**

#### QUESTION 103

Which two components must be verified for a supported NetApp SAN configuration? (Choose two.)

- A. host memory
- B. host GPU
- C. host multipath
- D. host bus adapter



**Correct Answer: C, D**

**Section:**

**QUESTION 104**

You want to access and mount a Linux LUN using only iSCSI. In the past, the LUN has been accessed using FC. What must you do to accomplish this task?

- A. Change the LUN protocol type to iSCSI.
- B. Create a new iSCSI igroup and change the LUN mapping from the original to the new igroup.
- C. Create a new iSCSI igroup and map the LUN to both the new and existing FC igroup.
- D. Add an iSCSI protocol type to the existing igroup so that the LUN can be accessed by both FC and iSCSI hosts.

**Correct Answer: B**

**Section:**

**QUESTION 105**

Exhibit.

```
c101::> system hardware unified-connect show
```

Node	Adapter	Current Mode	Current Type	Pending Mode	Pending Type	Admin Status
c101-01	3a	fc	target	-	-	online
c101-01	3b	fc	target	-	-	online
c101-02	3a	fc	target	-	-	online
c101-02	3b	fc	target	-	-	online

4 entries were displayed.

```
c101::>
```



You want to configure a UTA2 port as an FCoE target. Referring to the exhibit, which action must be performed?

- A. Configure the port mode as CNA.
- B. Configure the port mode as Ethernet.
- C. Configure the port type as initiator.
- D. Configure the port mode as FC.

**Correct Answer: A**

**Section:**

**QUESTION 106**

You are planning for a new AFF A700 2-node switchless FC solution with two Cisco 9100 switches.

Each AFF A700 will have one 16 Gb port connected to each Cisco 9100 switch and four FC LIKs per physical port. You want to guarantee recovery from connection loss on a NetApp physical port and you are using single initiator to multiple target zoning.

What is the minimum number of zones required to accomplish this task?

- A. 8
- B. 4
- C. 2
- D. 1

**Correct Answer: C**

**Section:**

**QUESTION 107**

An administrator is migrating from a third-party's SAN to a newly purchased FAS9000. The administrator decides to use the NetApp Foreign LUN Import (FL1) process. What must the administrator do for this process to work properly?

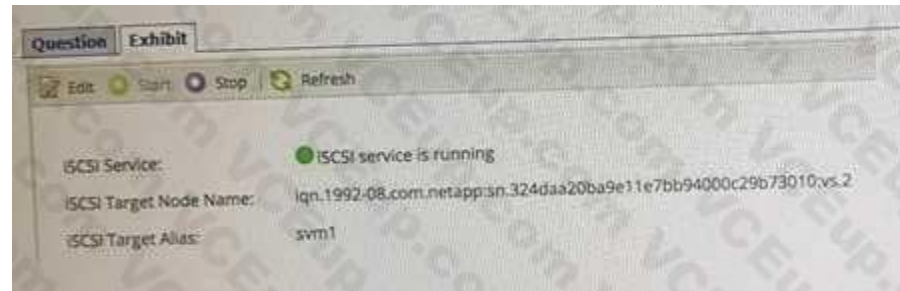
- A. Create multiple igroups for the Initiator ports.
- B. Create six distinct zones that include specific ports within each zone.
- C. Zone target ports of source storage with initiator ports of destination storage.
- D. Make the destination LUN larger than the foreign LUN.

**Correct Answer: C**

**Section:**

**QUESTION 108**

Exhibit.



You are asked to change the iSCSI Target Node Name of an SVM named SVM1 that is serving data. Referring to the exhibit, which two statements are correct? (Choose two.)

- A. Reconnect all the LUNs after renaming the target node.
- B. Disable Selective LUN Mapping (SIM) and create port sets.
- C. Unmap and re-map the LUNs.
- D. Stop and start the iSCSI service.

**Correct Answer: C, D**

**Section:**

**QUESTION 109**

You are configuring a VMware sphere host for FC access to a Netapp ONTAP cluster. In this scenario, which two tasks does Netapp recommend performing on the Vsphere host? (choose two)

- A. Set the queue depth on the host to 8
- B. Update the HBA driver
- C. Zone the host by using the host WWNNs
- D. Use the Netapp Virtual Storage Console to configure the host settings

**Correct Answer: B, D**

**Section:**

**Explanation:**

Zoning the host using WWNNs is not recommended. Netapp always recommends to use WWPN to zone correctly.

We can not establish a queue depth value because we don't have the amount of ports and hosts to calculate the recommended queue depth Installing VSC and updating the HBA driver are best practices recommended by

Netapp You can find more information on this link:

<https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.exp-iscsi-esx-cpg%2FGUIDC751F905-04B4-4DE6-ADC4-A47EA9076078.html>

<https://docs.netapp.com/ontap-9/topic/com.netapp.doc.exp-fc-esxcp/FC%20express%20configuration%20for%20ESXi%20using%20VSC.pdf> (page 7)

#### QUESTION 110

An administrator has migrated an iSCSI LUN with Foreign LUN Import (FLI) tool. The migrated LUN is presented on the new system, but it is not visible to the host. In this scenario which additional action must be completed to make the LUN visible?

- A. Bind the igroup to a port set
- B. Install ANA software on the host
- C. Stop the FCP service
- D. Map the LUN to an iSCSI igroup

**Correct Answer: D**

**Section:**

**Explanation:**

Installing ANA is related with NVMe protocol

Binding an igroup to a port set will only limit our paths

Stopping the FCP service will not affect at anything, because this is an iSCSI LUN When you migrate iSCSI using FLI, you need to map the LUNs to an igroup where the destination arrays is added, after the LUN has been imported, you can create a new iSCSI igroup and add the hosts to the igroup You can find more information on this link:

<https://www.netapp.com/pdf.html?item=/media/17060-tr4380pdf.pdf> (page 71)

#### QUESTION 111

What are two benefits of implementing VLANs for iSCSI configuration? (choose two)

- A. Reduced number of broadcast domains
- B. Increased performance
- C. Increased security
- D. Increased resiliency

**Correct Answer: A, C**

**Section:**

**Explanation:**

When you implement VLANs in large IP network infrastructures, you derive the following benefits:

Increased security.

VLANs enable you to leverage existing infrastructure while still providing enhanced security because they limit access between different nodes of an Ethernet network or an IP SAN.

You can find more information on this link:

<https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanconf%2FGUIDC5288E55-DAED-4050-84A2-71BF13BC6556.html>

#### QUESTION 112

Referring to the exhibit, which two actions would you perform to ensure that each host has valid multipathing? (choose two)



```

node      port  link broadcast-domain
-----
Cluster1-01 a1a-10 up Storage
Cluster1-02 a2a-10 up Storage

Vserver   Logical   Status   Network   Current   Current   Is
Interface Admin/Oper Address/Mask Node       Port      Home
-----
Storage_iSCSI
Storage_iSCSI_lif1 up/up 10.10.10.30/24 Cluster1-01 a1a-10 true
Storage_iSCSI_lif2 up/up 10.10.10.31/24 Cluster1-02 a2a-10 true

Vserver   Igroup   Protocol OS Type   Initiators
-----
Storage_iSCSI vmware   iscsi    vmware   iqn.1998-01.com.vmware:5dfa0d08-9a33-fbc6-abac-94c691140409-59a59ccf
iqn.1998-01.com.vmware:5dfa0efa-8c55-5a44-a125-94c6911407fd-5972503d

Vserver   Tpgroup Name   TSIH Initiator Name
-----
Storage_iSCSI Storage_iSCSI_lif1 1 iqn.1998-01.com.vmware:5dfa0efa-8c55-5a44-a125-94c6911407fd-5972503d
Storage_iSCSI Storage_iSCSI_lif1 2 iqn.1998-01.com.vmware:5dfa0efa-8c55-5a44-a125-94c6911407fd-5972503d
Storage_iSCSI Storage_iSCSI_lif2 1 iqn.1998-01.com.vmware:5dfa0efa-8c55-5a44-a125-94c6911407fd-5972503d
Storage_iSCSI Storage_iSCSI_lif2 2 iqn.1998-01.com.vmware:5dfa0efa-8c55-5a44-a125-94c6911407fd-5972503d
Storage_iSCSI Storage_iSCSI_lif2 3 iqn.1998-01.com.vmware:5dfa0d08-9a33-fbc6-abac-94c691140409-59a59ccf
Storage_iSCSI Storage_iSCSI_lif2 4 iqn.1998-01.com.vmware:5dfa0d08-9a33-fbc6-abac-94c691140409-59a59ccf
6 entries were displayed.

```

- A. Verify that the VLANs are properly configured on the switches
- B. Verify that the VLANs are properly configured on the ONTAP cluster
- C. Verify that ALUA is enabled on the switches
- D. Verify that iSCSI service is started on the ONTAP cluster



**Correct Answer: A, B**

**Section:**

**Explanation:**

iSCSI is already started, we can not run those commands successfully if the protocol is not started ALUA is enabled on hosts, It is not enabled on switches VLANs are configured on the Netapp and switches, they need to be properly configured on both sides to work correctly You can find more information on this link:

<https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-nmg%2FGUID-52AE6E9C-13B6-49BA-B030-545C1C7647AC.html>

**QUESTION 113**

You are designing a new 4-node AFF A400 SAN cluster with 20 iSCSI hosts. Each AFF A400 node will have four data LIFs. Each iSCSI host needs to access every LUN over two LIFs per node on every SAN node. In this scenario, which Netapp SAN feature enable this connectivity?

- A. Port sets
- B. HBA queue depth
- C. Selective LUN mapping
- D. Asymmetric namespace

**Correct Answer: A**

**Section:**

**Explanation:**

SLM will choose 4 LIFs per node, being 8 LIF total (owner and HA partner), enabling portsets will help to limit the ports per node... that way we can establish only 2 LIF per node.



Creating port sets and binding igroups to port sets

In addition to using Selective LUN Map (SLM), you can create a port set and bind the port set to an igroup to further limit which LIFs can be used by an initiator to access a LUN. If you do not bind a port set to an igroup, then all of the initiators in the igroup can access mapped LUNs through all of the LIFs on the node owning the LUN and the owning node's HA partner.

You can find more information on this link:

<https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanag%2FGUID-5CC27202-A43F-429F-AB13-C70E7CD58E09.html>

#### QUESTION 114

You install an ASA AFF A400 system with 32 GB FC SFP+ modules in port 0e and 0f. After creating the SVM and configuring the FCP protocol, the physical port stays offline. Referring to the exhibit which statement is correct?

```
cluster1::> system hardware unified-connect show
```

Node	Adapter	Current Mode	Current Type	Pending Mode	Pending Type	Admin Status
cluster1-01	0e	cna	target	-	-	offline
cluster1-01	0f	cna	target	-	-	offline

- A. The current type of the ports must be configured as an initiator
- B. The current mode to the ports must be configured as an FC port
- C. The current mode for the ports must be set as an NVMe/FC port
- D. The admin status is manually set to down

**Correct Answer: B**

**Section:**

**Explanation:**

Before using your UTA ports on a FC infrastructure, you need to modify the current mode from CNA to FC. You need to set the ports offline before you modify that parameter.

You can find more information on this link: <http://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanag%2FGUIDE2CD31BE-28EC-468E-AF49-83A641575799.html>

#### QUESTION 115

In an NVMe/FC environment, the host cannot discover the namespace on the AFF system. Referring to the exhibit, what is the problem?

```
# cat /etc/nvme/hostnqn
nqn.2014-08.org.nvmexpress:uuid:75953f3b-77fe-4e03-bf3c-09d5a156fbcd

*> vservers nvme subsystem host show -vservers vs_nvme_10
Vserver Subsystem Host NQN
-----
rhel_141_nvme_ss_10_0
nqn.2014-08.org.nvmexpress:uuid:3ca559e1-5588-4fc4-b7d6-5ccfb0b9f054
```

- A. The host MPIO drivers are not installed
- B. NVMe is not supported on the FC adapter
- C. The NQN is not correct
- D. The NVMe service is not running on the SVM

**Correct Answer: C**

**Section:**

**Explanation:**

We would not be able to run that command if NVMe is not enabled  
 NVMe is supported on the same SVM along with FC protocol  
 The multipath tool on NVMe is called ANA  
 NQN needs to be correctly declared on the subsystem to map the new NVMe resources

**QUESTION 116**

You have an existing 8-node Netapp Cluster serving NFS data, and you want to expand your cluster by an additional four nodes to serve ISCSI. In this scenario, where would you validate this configuration?

- A. Active IQ Upgrade Advisor
- B. Interoperability Matrix Tool
- C. SAN Administration Guide
- D. Hardware Universe

**Correct Answer: D**

**Section:**

**Explanation:**

Hardware Universe shows how many nodes and which filers are compatible to mix between them

**QUESTION 117**

After performing failover testing on a newly deployed MetroCluster configuration, some aggregates remain in a degraded state. Referring to the exhibit, which statement is true?

```
cluster_A::> storage aggregate show
Aggregate      Size Available Used% State  #Vols  Nodes      RAID Status
-----
node_A_1data01_mirrored
  4.15TB      3.40TB    18% online   3 node_A_1  raid_dp,mirrored,normal
node_A_1root
  707.7GB    34.29GB   95% online   1 node_A_1  raid_dp,mirrored,normal
node_A_2_data01_mirrored
  4.15TB      4.12TB    1% online   2 node_A_2  raid_dp,mirror,degraded
node_A_2_data02_unmirrored
  2.18TB      2.18TB    0% online   1 node_A_2  raid_dp,normal
node_A_2_root
  707.7GB    34.27GB   95% online   1 node_A_2  raid_dp,mirror,degraded

cluster_A::> storage aggregate show-status -node node_A_2 !*root
Owner Node: node_A_2
Aggregate: node_A_2_data01_mirrored (online, raid_dp, mirror degraded) (block checksums)
  Plex: /node_A_2_data01_mirrored/plex0 (online, normal, active, pool0)
  RAID Group /node_A_2_data01_mirrored/plex0/rg0 (normal, block checksums)
  ...
  Plex: /node_A_2_data01_mirrored/plex4 (offline, failed, inactive, pool1)
  RAID Group /node_A_2_data01_mirrored/plex4/rg0 (partial, none checksums)
  ...
  Position Disk      Pool Type      RPM      Usable Physical
  -----
  dparity  FAILED          - -          - 827.7GB      - (failed)
  parity   FAILED          - -          - 827.7GB      - (failed)
  data     FAILED          - -          - 827.7GB      - (failed)
  data     FAILED          - -          - 827.7GB      - (failed)
  data     FAILED          - -          - 827.7GB      - (failed)
Aggregate: node_A_2_data02_unmirrored (online, raid_dp) (block checksums)
  Plex: /node_A_2_data02_unmirrored/plex0 (online, normal, active, pool0)
  RAID Group /node_A_2_data02_unmirrored/plex0/rg0 (normal, block checksums)
  ...
15 entries were displayed.
```

- A. The MetroCluster Tiebreaker software is misconfigured
- B. The ONTAP Mediator service is misconfigured

- C. A cluster switch is powered off
- D. A disk shelf is powered off

**Correct Answer: D**

**Section:**

**Explanation:**

The aggregate with drives on the powered-off shelf should have a degraded RAID status, and drives on the affected plex should have a failed status You can find more information on this link:

[https://docs.netapp.com/us-en/ontap-metrocluster/installip/task\\_test\\_the\\_mcc\\_configuration.html#verifying-operation-after-loss-of-a-single-storage-shelf](https://docs.netapp.com/us-en/ontap-metrocluster/installip/task_test_the_mcc_configuration.html#verifying-operation-after-loss-of-a-single-storage-shelf)

#### QUESTION 118

While changing the network connections on your ONTAP cluster from twinax to fiber, the ports experience network connectivity issues. You want to verify which speeds the ports support and ensure that you have supported transceivers. In this scenario which two actions would accomplish this task (choose two)

- A. Use hardware universe to determine the supported transceivers
- B. Use the interoperability matrix tool to determine the supported port speeds
- C. Use hardware universe to determine the supported port speeds
- D. Use the interoperability matrix tool to determine the supported transceivers

**Correct Answer: A, C**

**Section:**

**Explanation:**

Hardware universe will show information about port speeds and transceiver compatibility You can find more information on this link:

[https://hwu.netapp.com/Resources/hwu\\_ug.pdf](https://hwu.netapp.com/Resources/hwu_ug.pdf) (page 73)

#### QUESTION 119

You are testing FCP paths failures on a 2-node Netapp AFF All SAN Array and verify that persistent ports are correctly enabled. Before testing, a host sees four optimized paths to a LUN. You perform a node takeover and re-check the host.

Which statement is true after the node takeover?

- A. The host sees four optimized paths to the LUN
- B. The host sees two non-optimized paths and two dead paths to the LUN
- C. The host sees two optimized paths and two non-optimized paths to the LUN
- D. The host sees two optimized paths and two dead paths to the LUN

**Correct Answer: A**

**Section:**

**Explanation:**

Support for persistent ports

Beginning in ONTAP 9.8, persistent ports are enabled by default on All SAN Arrays (ASAs) that are configured to use the FC protocol. Persistent ports are only available for FC and require zone membership identified by World Wide Port

Name (WWPN).

Persistent ports reduce the impact of takeovers by creating a shadow LIF on the corresponding physical port of the HA partner. When a node is taken over, the shadow LIF on the partner node assumes the identity of the original LIF, including the WWPN. Before the status of path to the taken over node is changed to faulty, the shadow LIF appears as an Active/Optimized path to the host MPIO stack, and I/O is shifted. This reduces I/O disruption because the host always sees the same number of paths to the target, even during storage failover operations.

You can find more information on this link:

<https://docs.netapp.com/allsan/index.jsp?topic=%2Fcom.netapp.doc.dot-asa-config%2FGUID-646B3CFD-9E00-491A-A02E-F1668C5C9DBA.html>

#### QUESTION 120

A storage administrator needs to ensure that an ONTAP FC LUN is accessible for a remote data center.

```
switch01:admin> trunkshow 1: 10-> 10 10:00:50:eb:1a:20:83:96 5 deskew 15 MASTER 2: 11-> 11 10:00:50:eb:1a:20:83:96 5  
deskew 16 MASTER
```

The ISL ports are reporting errors. The trunkshow command output from a Brocade switch is shown below.

- A. Set the ISL ports as FL\_Ports
- B. Set the ISL ports as N\_Ports
- C. Set the ISL ports as F\_Ports
- D. Set the ISL ports as E\_Ports

**Correct Answer: D**

**Section:**

**Explanation:**

On each switch fabric, you must configure the switch ports that connect the Inter-Switch Link (ISL).

These ISL ports are otherwise known as the E-ports.

You can find more information on this link:

<https://library.netapp.com/ecmdocs/ECMP1636017/html/GUID-B2BBB025-02A9-442C-9910-00FEF253CE52.html>

