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NS0-509

NetApp Certified Implementation Engineer - SAN, ONTAP



Exam A

QUESTION 1

Question

Exhibit

```
::>network interface show -fields data-protocol
```

vserver	lif	data-protocol
svm-iscsi1	lif1	nfs,cifs
svm-iscsi1	lif2	nfs,cifs

You are asked to serve iSCSI LUNs in an existing SVM on your AFF A220 using ONTAP 9.5. You verified that the iSCSI license is configured on your cluster and that the iSCSI protocol is enabled.

Referring to the exhibit, what is needed to allow hosts to log into the iSCSI target?

- A. Create new LIFs with the iSCSI data protocol.
- B. Create new igroups with the host IQNs.
- C. Add iSCSI to the data protocol of the existing LIFs.
- D. Map LUNs to the igroups.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2 You are testing iSCSI LUN failover across a 4-node FAS9000 fabric-attached MetroCluster configuration.

In this scenario, which front end configuration is required for non-disruptive host LUN failover between sites?

- A. an intercluster LIF
- B. a stretched Layer 2 network
- C. Ipv6
- D. a stretched VSAN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

Question		Exhibit				
cl11:> ucadmin show						
Node	Adapter	Current Mode	Current Type	Pending Mode	Pending Type	Admin Status
01a	0e	cna	target	-	-	online
01a	0f	cna	target	-	-	online
01a	0g	cna	target	-	fc	online
01a	0h	cna	target	-	fc	online
01b	0e	cna	target	-	-	online
01b	0f	cna	target	-	-	online
01b	0g	fc	target	-	-	online
01b	0h	fc	target	-	-	online

Referring to the exhibit, which two pairs of ports are currently configurable as FC SAN LIFs? (Choose two.)

- A. 01b, 0h
- B. 01a, 0g
- C. 01a, 0h
- D. 01b, 0g

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:



QUESTION 4

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 volumes that use under 5000 IOPS are moved to a FAS8200 using the `volume move` command.

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

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

Correct Answer: A

Section: (none)

Explanation

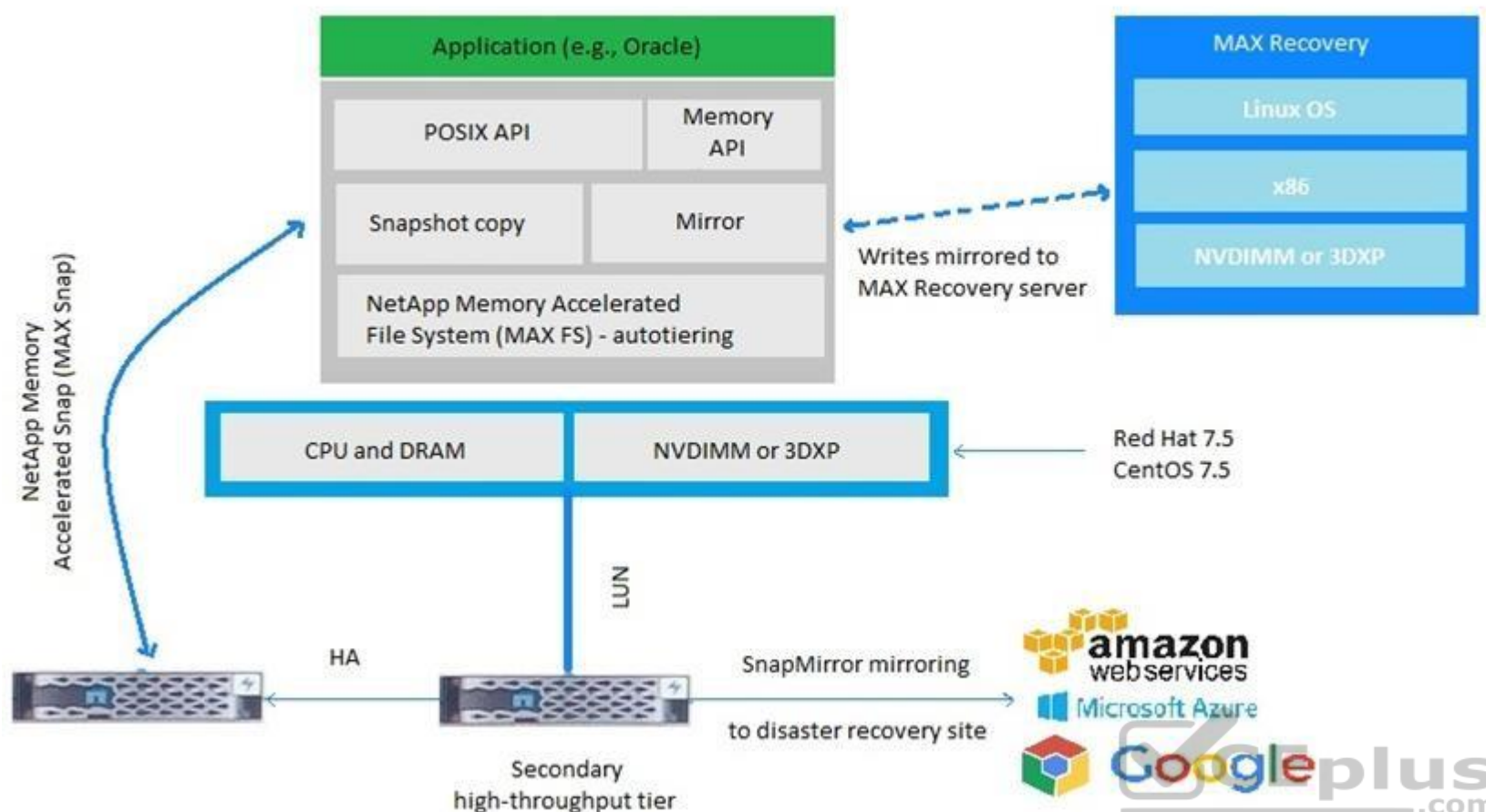
Explanation/Reference:

Reference: <https://www.netapp.com/us/media/tr-4476.pdf>

QUESTION 5

Question

Exhibit



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: (none)

Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2495115 (11)

QUESTION 6

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: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanconf%2FGUID-A055B184-0876-4376-9C75-35FE8C9BE832.html>

QUESTION 7

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: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8 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: BCE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9



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: (none)

Explanation

Explanation/Reference:

QUESTION 10

Question

Exhibit

FC/FCoE and NVMe Adapters

Edit	Status	Refresh				
WWNN	Node Name	Slot	Data Protocols	WWPN	Status	Speed
50:0a:09:80:80:83:61:11	AFF_1	0e	fc	50:0a:09:84:80:83:61:11	link not connected	auto
50:0a:09:80:80:83:61:11	AFF_1	0f	fc	50:0a:09:83:80:83:61:11	link not connected	auto
50:0a:09:80:80:83:61:11	AFF_1	0g	fc	50:0a:09:86:80:83:61:11	link not connected	auto
50:0a:09:80:80:83:61:11	AFF_1	0h	fc	50:0a:09:85:80:83:61:11	link not connected	auto
50:0a:09:80:80:83:61:11	AFF_1	1a	fc.fc_nvme	50:0a:09:81:80:83:61:11	online	auto
50:0a:09:80:80:83:61:11	AFF_1	1b	fc.fc_nvme	50:0a:09:82:80:83:61:11	online	auto
50:0a:09:80:80:d3:61:00	AFF_2	0e	fc	50:0a:09:82:80:d3:61:00	online	auto
50:0a:09:80:80:d3:61:00	AFF_2	0f	fc	50:0a:09:81:80:d3:61:00	link not connected	auto
50:0a:09:80:80:d3:61:00	AFF_2	0g	fc	50:0a:09:84:80:d3:61:00	online	auto
50:0a:09:80:80:d3:61:00	AFF_2	0h	fc	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: (none)

Explanation

Explanation/Reference:

QUESTION 11

Question	Exhibit						
cl1::> network fcp adapter show							
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: (none)
Explanation

Explanation/Reference:

QUESTION 12

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: (none)
Explanation



Explanation/Reference:

QUESTION 13

Question	Exhibit					
cluster01::> system hardware unified-connect show -node cluster01-01						
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
6 entries were displayed.						

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: (none)

Explanation

Explanation/Reference:

QUESTION 14

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

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

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://www.netapp.com/us/media/tr-4684.pdf> (16)

QUESTION 15

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: (none)

Explanation

Explanation/Reference:

QUESTION 16

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: (none)

Explanation

Explanation/Reference:

QUESTION 17

You deployed a new SVM for FC access, and you used the `vserver fcr, create -vserver svml - status-admin 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: (none)

Explanation

Explanation/Reference:

QUESTION 18

Question






Exhibit

Supported Adapter Cards - AFF A700 9.5 ONTAP

Adapter Card Help Guide

Platform Configuration: Single Chassis HA Pair

▼

Priority	Category	Bus Type	Mktg Part No	Images	LED	Mig Part No	Description	Optical Module	Cables	Supported Speed (s)	Min ONTAP	MAX Qty ^[1]	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 ^[2]		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 ^[2]	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. 3C. 5
- D. 7

Correct Answer: C

Section: (none)

Explanation

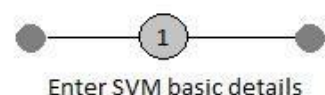
Explanation/Reference:

QUESTION 19

Question

Exhibit

Storage Virtual Machine (SVM) Setup



SVM Details

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

SVM Name:

? IPspace:

? Data Protocols:

☐ CIFS ☐ NFS ☐ iSCSI ☐ FC/FCoE

? Default language:

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:

Root Aggregate:

DNS Configuration

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

? Search Domains:

rtp.openenlab.netapp.com

? Name Servers:

10.193.0.250.10.192.0.250.10.193.0.251



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: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20 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: (none)

Explanation

Explanation/Reference:

Reference: <https://www.computerweekly.com/feature/iSCSI-security-Networking-and-security-options-available>

QUESTION 21

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: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

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: (none)

Explanation

Explanation/Reference:

QUESTION 23 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: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

You want to create an additional SVM from the System Manager GUI to serve data only using block-based 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: (none)

Explanation



Explanation/Reference:

QUESTION 25

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: (none)

Explanation

Explanation/Reference:

QUESTION 26

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: (none)

Explanation

Explanation/Reference:

QUESTION 27 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

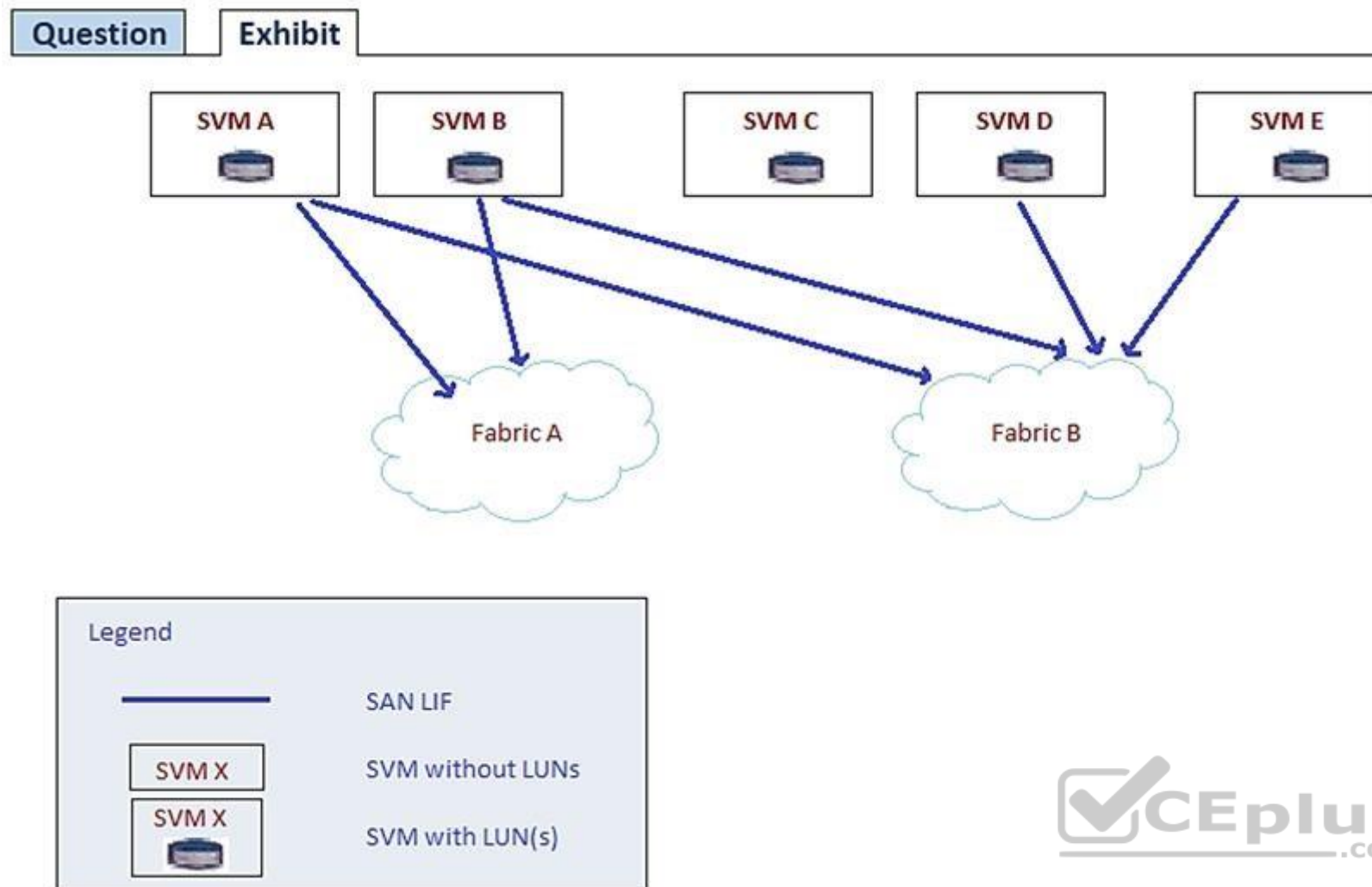
Section: (none)

Explanation

Explanation/Reference:

QUESTION 28





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: (none)

Explanation

Explanation/Reference:

QUESTION 29

Question

Exhibit

ONTAP Path: AFF_SAN_DEFAULT_SVM:/vol/OraDev_Vol/OraDev
 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: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-sanag%2FGUID-435489AE-7FB4-4178-BDEB-C6FC528860BD.html>

QUESTION 30 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: (none)

Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2492716 (13)

QUESTION 31 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: (none)

Explanation

Explanation/Reference:

Reference: http://web.stanford.edu/group/storage/dot9/ONTAP_9_Release_Notes.pdf

QUESTION 32

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: BD

Section: (none)

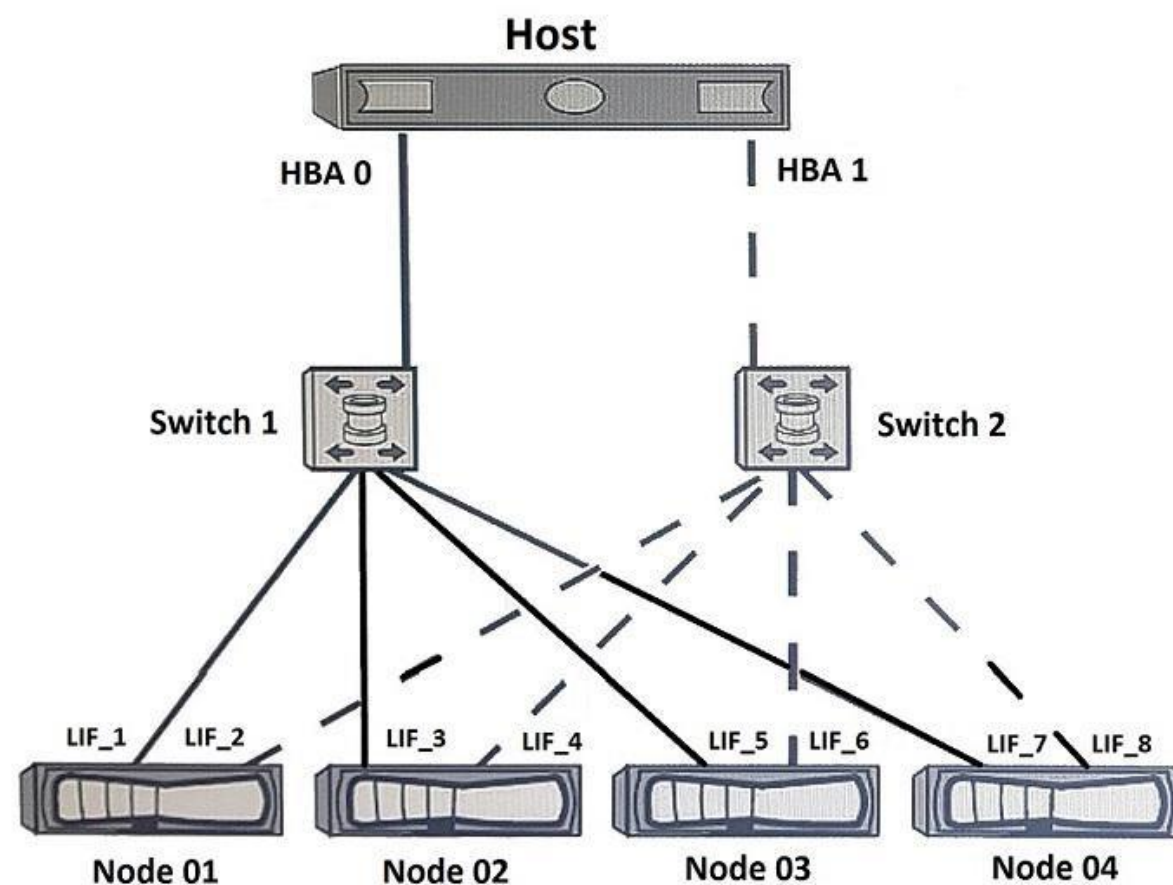
Explanation

Explanation/Reference:

Reference: <https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-vsmg%2FGUID-9C88C1A6-990A-4826-83F8-0C8EAD6C3613.html>

QUESTION 33





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: (none)

Explanation

Explanation/Reference:

QUESTION 34

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

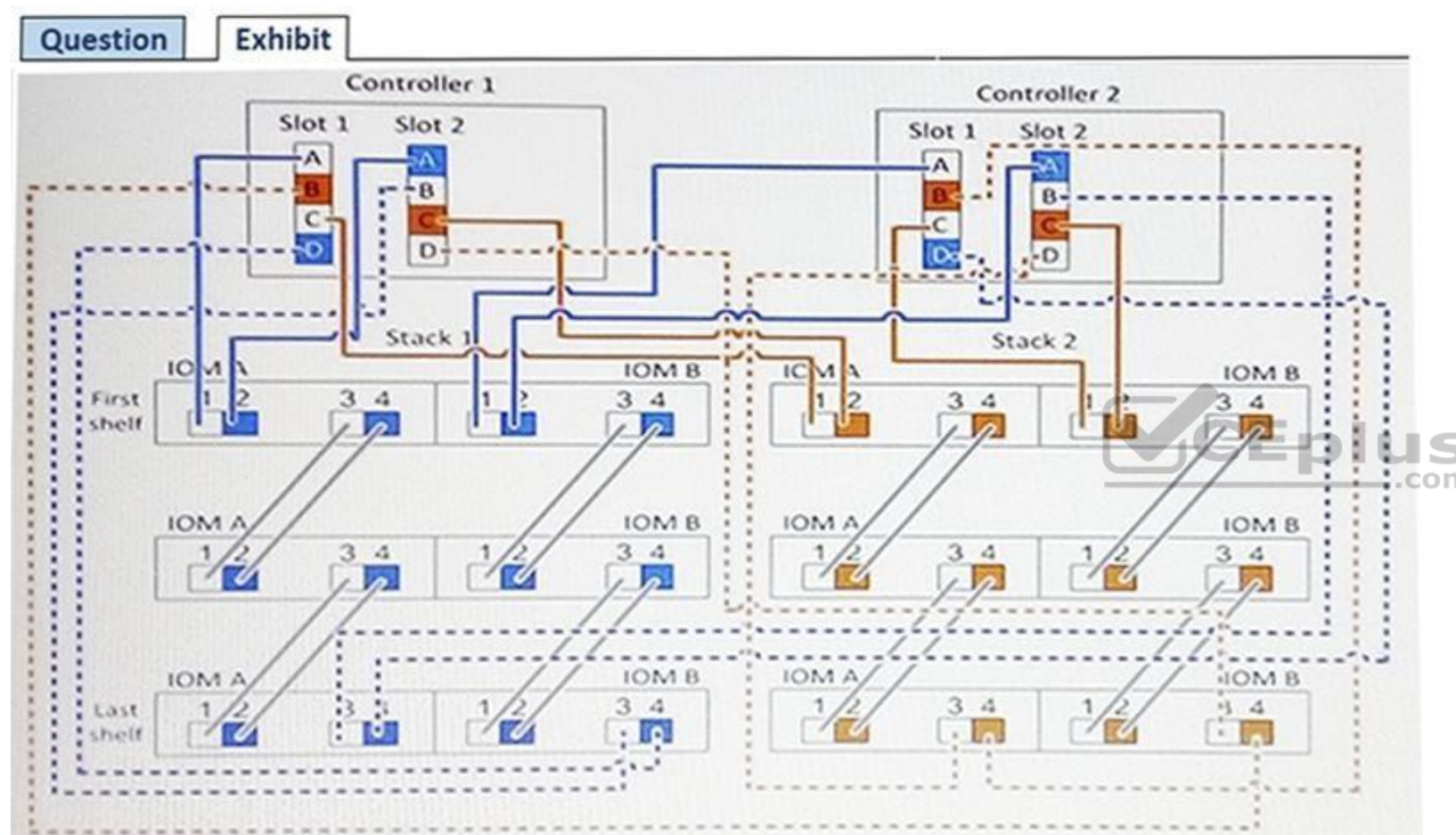
Correct Answer:
A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35



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: (none)

Explanation

Explanation/Reference:

QUESTION 36

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: (none)

Explanation

Explanation/Reference:

QUESTION 37

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.



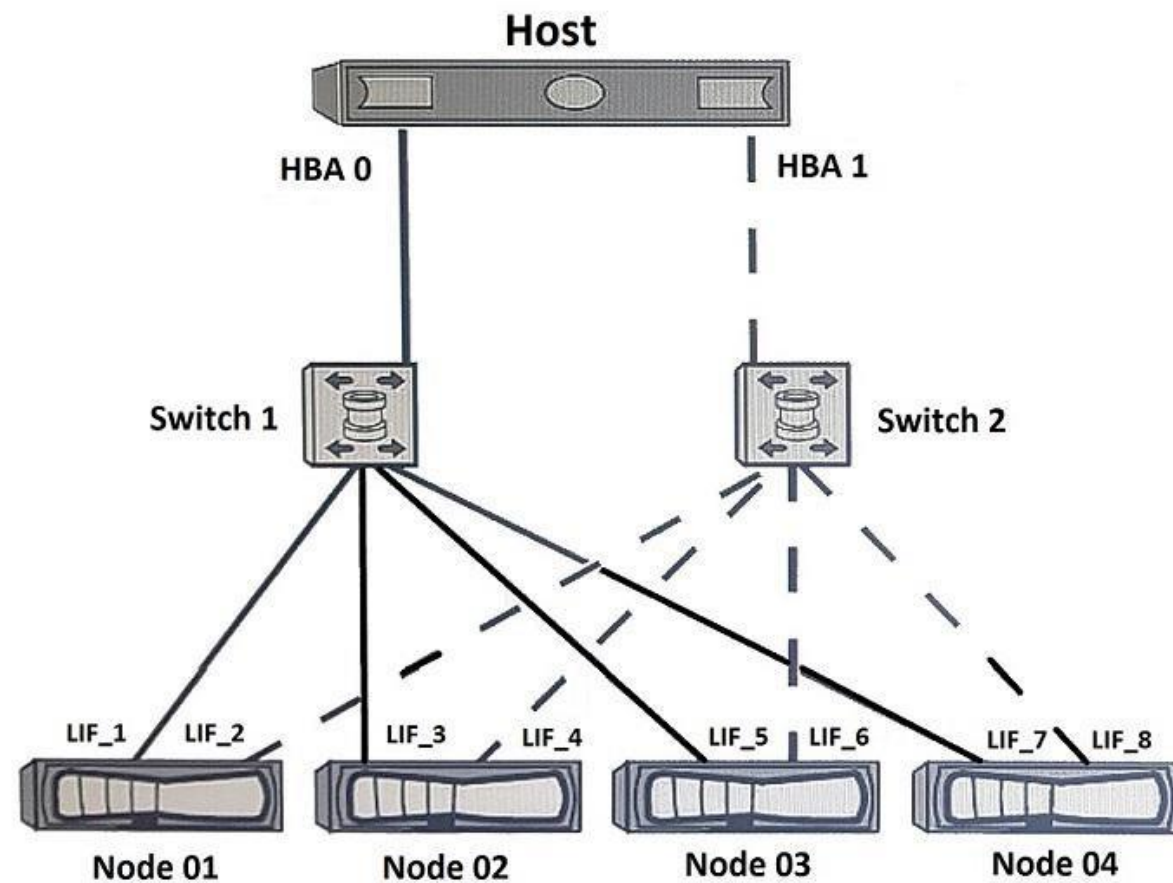
Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38



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: (none)

Explanation

Explanation/Reference:

QUESTION 39 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: (none)

Explanation

Explanation/Reference:

Reference: <https://library.netapp.com/ecmdocs/ECMP1307349/html/GUID-29CBF302-D78C-4A38-900D-9F1E8DDB0D6A.html>

QUESTION 40 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: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

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: (none)

Explanation

Explanation/Reference:

Reference: <https://library.netapp.com/ecmdocs/ECMP1392339/html/GUID-BD43C5D6-0952-4B62-8EEC-CF6642FEC9AC.html>

QUESTION 42

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: (none)

Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2485106 (45)

QUESTION 43

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: ACE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44 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: (none)

Explanation



Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2842667

QUESTION 45

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: (none)

Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2495115

QUESTION 46

Question

Exhibit

Volume: ESX2_NVMe_volume_944

[Back to all volumes](#)

[Edit](#)

[Delete](#)

[More actions](#)

[Refresh](#)

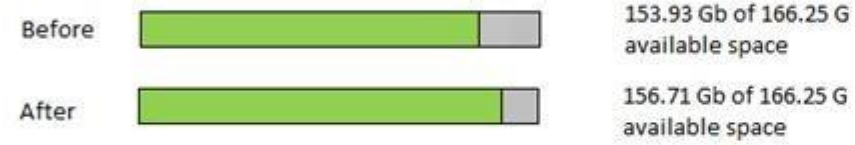
Overview

Snapshots Copies

Data Protection

Storage efficiency

Performance



Details

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

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: (none)

Explanation

Explanation/Reference:



QUESTION 47

QuestionExhibit

Edit Volume

General

Storage Efficiency


Advanced

☒ Background Deduplication
Recommended for volumes used for server on desktop virtualization, file system shares, or backups.

☒ Policy based - Deduplication happens based on the selected policy.
Storage Efficiency Policy: default

Choose

☐ On-demand - Deduplication must be run manually.

☒ Background Compression ⓘ
 Compression runs along with deduplication. Not recommended for performance-critical applications.

☐ Inline compression

[Tell me more about storage efficiency.](#)

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: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

You are configuring both NVMe and FC on the same AFF A800 2-node ONTAP 9.5 cluster. You are configuring both protocols on the same Cisco FC network switches.

In this scenario, which configuration on the cluster is supported?

- A. a volume with both LUNs and namespaces
- B. an SVM with both `nvme` and `fcp` allowed protocols
- C. an AFF A800 node HBA with both NVMe/FC and FC on the same port
- D. a LIF with both `fc-nvme` and `fcp` data protocols

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

Question**Exhibit**

```
slot 0: Fibre Channel Target Host Adapter 0e
      OLogic CNA 8324 (8362) rev. 2, <LINK NOT CONNECTED>
      Firmware rev:      8.5.1
      Flash rev:         4.1.0
      Host Port Addr:    000000
      FC Nodename:       50:0a:09:80:80:c1:72:4b (500a098080c1724b)
      FC Portname:       50:0a:09:84:80:c1:72:4b (500a098480c1724b)
      Connection:        No link
      Switch Port:        Unknown
      SFP Vendor Name:    AVAGO
      SFP Vendor P/N:     ArBR-7038mz-NA3
      SFP Vendor Rev:     G2.3
      SFP Serial No.:     AD1405A0628
      SFP Connector:      LC
      SFP Capabilities:   10 Gbit/Sec
```

You connected your FAS8200 to a Brocade SAN switch. As shown in the exhibit, port 0e is not available.

In this scenario, which statement is correct?

- A. The incorrect SFP+ module is installed.
- B. The switch zoning is using the FC nodename.
- C. The incorrect firmware revision is installed.
- D. The switch port is configured for mode E_Port.



Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

An administrator wants to design an NVMe solution to connect Linux hosts to an ONTAP cluster. The proposed solution uses two Cisco MDS 9396T switches for each fabric in a top-of-rack design.

In this scenario, which statement is true?

- A. Asymmetric Namespace Access requires ONTAP 9.4 and higher.
- B. NVMe solutions require heterogeneous multiple switch fabrics.
- C. N_Port ID virtualization (NPIV) must be enabled on all switches.
- D. A middle-of-rack design is required.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

On your ONTAP 9.5 cluster, you need to set up the onboard key manager with hardware-based security and volume encryption. Which two licenses are required in this situation? (Choose two.)

- A. FDE
- B. TPM
- C. VE
- D. RSA

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

A customer is planning to connect a Linux server to a FAS8200 using Brocade FC switches. During the initial configuration, the SVM does not log in to the fabric. Which two statements are correct in this scenario? (Choose two.)

- A. NPIV has not been enabled on the switches.
- B. The switch port topology is set incorrectly to the E_Port.
- C. ALUA has not been set up on the FAS8200.
- D. Zoning is incorrectly configured between the Linux server and the ONTAP cluster.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:



QUESTION 53

You need to configure iSCSI on your existing ONTAP cluster in a new SVM. The iSCSI LUNs will be served over a new Layer 2 network using the same physical ports that also use the CIFS protocol on a different SVM. Which two actions should you perform to accomplish this task? (Choose two.)

- A. Create a new portset.
- B. Create a new VLAN.
- C. Create a new broadcast domain.
- D. Create a new AD object.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

Question

Exhibit

```
1-rtp:admin> porterrshow
```

	frames	enc	crc	crc	too	too	bad	enc	disc	link	loss	loss	frj:
	tx	rx	in	err	g_eof	shrt	long	eof	out	c3	fail	sync	sig
0:	2m	10	0	1.1m	0	0	0	0	1k	0	2	0	2
1:	2.5g												
542.3m	0	0	0	0	0	0	0	0	0	0	2	0	0
2:	4.0g												
563.1m	0	0	0	0	0	0	8	0	0	0	2	0	0
3:	0	0	0	0	0	0	0	0	0	0	0	0	0
4:	1.8g	3.9g	0	0	0	0	0	0	0	0	0	0	0

Referring to the exhibit, what is the problem with switch port 0?

- A. The transmit and receive links were switched.
- B. The SFP+ is faulty.
- C. The receive power is lower.
- D. The link is not connected.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



QUESTION 55

An administrator has expanded a 2-node ONTAP cluster to a 4-node ONTAP cluster. The cluster is using FC LUNs with all of the default settings. You must rebalance the LUNs to the new nodes.

Which configuration must be made to achieve this requirement?

- A. The new nodes must be added to the reporting nodes list.
- B. All nodes must be removed from the reporting nodes list.
- C. The original nodes must be added to the reporting nodes list.
- D. The original nodes must be removed from the reporting nodes list.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

Question

Exhibit

```
::> volume show -vserver svm1 -fields space-guarantee
vserver  volume space-guarantee
```

```
-----
svm1     vol1    volume
```

```
::> tun show -fields space-reserve
vserver path                      space-reserve
```

```
-----
svm1     /vol/vol1/qtreel/lun1 disabled
```

Referring to the exhibit, which container gains space savings from deduplication, compression and compaction?

- A. the aggregate
- B. the qtree
- C. the volume
- D. the LUN

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



QUESTION 57

Question

Exhibit

```
AFF::> uadmin show
```

Node	Adapter	Current Mode	Current Type	Rending Mode	Rending Type	Admin Status
AFF_1	0e	cna	target	-	-	online
AFF_1	0f	cna	target	-	-	online
AFF_1	0g	cna	target	-	-	online
AFF_1	0h	cna	target	-	-	online
AFF_1	1a	fc	target	-	-	online
AFF_1	1b	fc	target	-	-	online
AFF_2	0e	fc	target	-	-	online
AFF_2	0f	fc	target	-	-	online
AFF_2	0g	fc	target	-	-	online
AFF_2	0h	fc	target	-	-	online

10 entries were displayed.

A customer needs to change ports 0e and 0f on AFF_1 to support FC.

Referring to the exhibit, which three steps are required to accomplish this task? (Choose three.)

- A. Issue the `ucadmin modify -node AFF_1 -adapter 0e -mode FC -type target` command.
- B. Issue the `ucadmin modify -node AFF_1 -adapter 0e -mode FC -type initiator` command.
- C. Restart the FC service.
- D. Take ports 0e and 0f offline.
- E. Reboot the node.

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58 You want to connect a NetApp AFF A700 to a 32 Gb FC switch. The ports need to connect at 32 Gb speed.

In this scenario, which statement is correct?

- A. The AFF A700 includes FC ports natively on the controller.
- B. The AFF A700 includes an additional FC I/O module that is already populated in each controller.
- C. You need to purchase a two-port or four-port unified I/O module that enables FC and Ethernet connectivity.
- D. You need to purchase a two-port or four-port FC I/O module.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



QUESTION 59

Question

Exhibit

```

::> volume efficiency show -inst

Vserver Name: svm1
Volume Name: vol1
Volume Path: /vol/vol1
State: Enabled
Status: Idle
Progress: Idle for 06:12:36
Type: Regular
Schedule: -
Efficiency Policy Name: inline-only
. . .
. . .
Compression: true
Inline Compression: true
Constituent Volume: false
Inline Dedupe: true
Data Compaction: false
Cross Volume Inline Deduplication: false
Cross Volume Background Deduplication: false

::> df -s -vserver svm1 -volume voll
Filesystem      used      total-saved    %total-saved  deduplicated    %
deduplicated    compressed    %compressed
/vol/vol1/      29524919032  14762459516    50%           14762459516    50%
0               0

```

You are troubleshooting high CPU use on a FAS8200 with all SAS HDDs. You have SAN hosts with LUNs in a volume named vol1. You want to reduce CPU use and maintain storage efficiencies. Referring to the exhibit which three actions will accomplish this task? (Choose three.)

- A. Disable compression.
- B. Enable cross-volume deduplication.
- C. Disable inline deduplication.
- D. Enable post process deduplication.
- E. Enable data compaction.

Correct Answer: CDE

Section: (none)

Explanation

Explanation/Reference: