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NS0-194

NetApp Certified Support Engineer



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Exam A

QUESTION 1 For security reasons, you must track the access of files of a specific folder.

In this scenario, what should you do to accomplish this task from the storage side?

A. Implement a Vscan solution.

B. Use a cron job to save the audit log.

C. Use role-based access control to track access.

D. Implement an FPolicy solution.

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecmdocs/ECMP1196993/html/GUID-07D368C8-F4DD-4F14-9E68-99C63881EBE7.html

QUESTION 2 You need to provide a customer an action plan to update an ONTAP system after a security bulletin has been issued.

In this scenario, how do you accomplish this task?

- A. Use the Interoperability Matrix Tool.
- B. Review the ONTAP 9 product page.
- C. Download the target version and do a pre-check.
- D. Use Upgrade Advisor on Active IQ.

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 3 What is the minimum number of compute nodes required to run the NetApp Deployment Engine for NetApp HCI?

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

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/us-en/hci/docs/task hci getstarted.html#:~:text=The%20minimum%20cluster%20for%20NetApp,to%20all%20NetApp%20HCl%20networks.

QUESTION 4 Which NetApp technology enables you to perform block-based replication from NetApp Element software to Cloud Volumes ONTAP?

- A. SyncMirror
- B. SnapMirror
- C. Cloud Sync
- D. MetroCluster

Correct Answer: B



Section: (none) Explanation

Explanation/Reference:

QUESTION 5

Workload		<u>ID</u>	Latency	_Network	Cluster	Data	Disk	QoS	NVRAM	Cloud
-total-			110.35ms	327.00us	327.00us	Oms				
110.02ms	Om	3	0ms	0ms						
vslvol0		111	167.82ms	603.00us	603.00us	0ms				
167.22ms	Om	3	0ms	0ms						
vol1		1234	117.76ms	191.00us	191.00us	0ms				
117.56ms	Om	3	0ms	Oms						
vol2		999	44.24ms	190.00us	190.00us	0ms	44.05ms	0ms	0ms	Oms
-total-										
38.89ms	256	5.00us	256.00us	0ms	38.63ms	0ms	0ms	0ms		
vol2		999	64.47ms	266.00us	266.00us	0ms	64.20ms	0ms	0ms	0ms
vol1		1234	27.28ms	253.00us	253.00us	0ms	27.03ms	0ms	0ms	Oms
vslvol0		111	23.72ms	249.00us	249.00us	0ms	23.47ms	Oms	Oms	0ms
-total-		-	409.81ms	169.00us	169.00us	0ms				
409.65ms	Om	.3	0ms	Oms						
vol1		1234	816.92ms	120.00us	120.00us	0ms				
816.80ms	Om	S	0ms	0ms						
vol2		999	407.88ms	219.00us	219.00us	0ms				
407.66ms	Om	S	0ms	Oms						
vs1vol0		111	3.68ms	193.00us	193.00us	0ms	3.49ms	Oms	Oms	0ms

Referring to the exhibit, which two components should be examined? (Choose two.)

A. cluster switches

B. SAS adapter

C. network interface card

D. disk

Correct Answer: BD Section: (none) Explanation



QUESTION 6 What are two reasons to use VLANs in a NetApp storage solution? (Choose two.)

A. to isolate UDP traffic from TCP traffic

B. to isolate management traffic from other IP traffic

C. to isolate iSCSI traffic from NAS traffic

D. to isolate FC traffic from other IP traffic

Correct Answer: AC Section: (none) Explanation

Explanation/Reference:

QUESTION 7 Which CIFS server configuration determines the domain controllers that a CIFS server uses?

A. site membership

B. enabled SMB versions





C.	trusted	domains	
◡.	uactoa	aomamo	

D. discovery mode

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 8 Which three techniques are used in ONTAP to improve storage efficiencies? (Choose three.)

A. compression

B. encryption

C. compaction

D. ADP

E. thin provisioning

Correct Answer: ACE Section: (none) **Explanation**

Explanation/Reference:

Reference: https://cloud.netapp.com/blog/storage-efficiency-success-stories-with-cloud-volumes-ontap

QUESTION 9

You are working on a fabric MetroCluster. After a site failure, the plex starts to resync automatically to the aggregate mirror of Aggr1. The plex now shows a status of resyncing. During this process, you experience a slow resync of the SyncMirror plex. **Y**CEplus

In this scenario, how do you solve the problem?

- A. Add more disks to the aggregate to add more I/O capacity.
- B. Destroy and re-create plex, then run a baseline sync.
- C. Tune the resync speed by adding a QoS policy and limit the concurrent I/O to the aggregate.
- D. Tune the resync speed using the storage raid-options command.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecmdocs/ECMP1368831/html/GUID-F3E1536B-0C54-4D4F-B985-3D839032234D.html

QUESTION 10 When you replace a motherboard, which step will completely test the newly installed component?

A. From ONTAP, execute sldiag.

B. From the LOADER prompt, type boot ontap maint, then execute sldiag.

C. From the LOADER prompt, type boot diags, then execute sldiag.

D. From the LOADER prompt, execute sldiag.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:



Reference: https://library.netapp.com/ecm/ecm_download_file/ECMP1199896 (36)

QUESTION 11 A disaster causes a FlexGroup volume to be unrecoverable, but it was protected by a SnapMirror relationship. You solve the issue, and the source is operational. Now, you want to return to serving the data from the original source.

In this scenario, what do you do next?

- A. Initialize the SnapMirror relationship.
- B. Restore data from a backup copy.
- C. Perform a SnapMirror update.
- D. Delete the SnapMirror relationship.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.pow-fg-mgmt%2FGUID-576192B0-18B8-40D3-AA3E-FC34415DC4F7.html

QUESTION 12





```
NetApp Release 9.6P3: Sun Sep 22 04:30:45 EDT 2019
System ID: 0537095047 (netapp02n1); partner ID: 0537095086 (netapp02n2)
System Serial Number: 721717000030 (netapp02n1)
System Rev: C3
System Storage Configuration: Quad-Path HA
System ACP Connectivity: Inband Active
All-Flash Optimized: true
Capacity Optimized: false
Backplane Part Number: 111-01459
Backplane Rev: E2
Backplane Serial Number: 021648023564
slot 0: System Board 2.1 GHz (System Board XX C3)
               Model Name:
                                   AFF8040
                Machine Type:
                                    FAS8040
               Part Number:
                                   111-01209
                Revision:
slot 0: SAS Host Adapter 0a (PMC-Sierra PM8001 rev. C, SAS, <OFFLINE (hard)>)
Firmware rev:
                    01.12.09.00
Base WWN:
                    5:00a098:003a853:10
                    [0] Disabled
Phy State:
                    [1] Disabled
                    [2] Disabled
                    [3] Disabled
QSFP Vendor:
                    not available
QSFP Part Number:
                   not available
QSFP Type:
                    not available
QSFP Serial Number: not available
slot 0: SAS Host Adapter 0b (PMC-Sierra PM8001 rev. C, SAS, <OFFLINE (hard)>)
Firmware rev:
                    01.12.09.00
Base WWN:
                    5:00a098:003a853:14
Phy State:
                    [4] Disabled
                    [5] Disabled
                    [6] Disabled
                    [7] Disabled
QSFP Vendor:
                    not available
QSFP Part Number: not available
QSFP Type:
                    not available
QSFP Serial Number: not available
slot 0: SAS Host Adapter 0c (PMC-Sierra PM8001 rev. C, SAS, <OFFLINE (hard)>)
Firmware rev:
                    01.12.09.00
Base WWN:
                    5:00a098:003a853:18
Phy State:
                    [0] Disabled
                    [1] Disabled
                    [2] Disabled
                    [3] Disabled
QSFP Vendor:
                    not available
QSFP Part Number:
                   not available
QSFP Type:
                    not available
QSFP Serial Number: not available
slot 0: SAS Host Adapter Od (PMC-Sierra PM8001 rev. C, SAS, )
Firmware rev:
                    01.12.09.00
                    5:00a098:003a853:1c
Base WWN:
                    [4] Disabled
Phy State:
                    [5] Disabled
                    [6] Disabled
                    [7] Disabled not available
QSFP Vendor:
QSFP Part Number:
                   not available
                    not available
QSFP Type:
QSFP Serial Number: not available
slot 0: IB Host Adapter i0 (Mellanox ConnectX MT27518 rev. 0)
Running Firmware:
                        2.11.534
Debug Firmware: No
Interconnect Port 1:
Port Name:
Default GID:
                    fe80:0000:0000:0000:00a0:9800:0035:3e2c
Base LID:
                    0xe2c
Active MTU:
                    4096
Data Rate:
                    40 Gb/s (4X) QDR
Link State:
                    ACTIVE
Interconnect Port 2:
Port Name:
Default GID:
                    fe80:0000:0000:0000:00a0:9800:0035:3e2d
Base LID:
                    0xe2d
Active MTU:
                    4096
                    40 Gb/s (4X) QDR
Data Rate:
Link State:
                    ACTIVE
```





```
slot 0: Intel USB EHCI Adapter u0a (0x47f20000)
boot0 ATP IG eUSB 0xaf01, class 0/0, rev 2.00/11.00, addr 2 7676MB 512B/sect (devproto=0x00)
slot 1: FCVI Host Adapter 1a (QLogic 8324(2672) rev. 2, F-port)
Physical link:
FC Node Name:
                    21:00:00:0e:1e:e9:bc:70
Firmware rev:
                    8.01.141
Serial No:
                    RFE1709S90753
                    0x80000
Host Port Id:
FC Packet size:
                    2048
SFP Vendor:
                    FINISAR CORP.
                    FTLF8529P3BCV-OL
SFP Part Number:
SFP Serial Number: UVF1X7Y
SFP Capabilities:
                    4, 8 or 16 Gbit
SFP Wavelength:
                    850nm
Link Data Rate:
                    16 Gbit
Switch Port:
                    sw02-02:0
Switch Vendor:
                    Brocade Communications, Inc.
Switch Model:
                    109.1
Switch FW Version: v8.1.2a
slot 1: FCVI Host Adapter 1b (QLogic 8324(2672) rev. 2, F-port)
Physical link:
                    21:00:00:0e:1e:e9:bc:71
FC Node Name:
Firmware rev:
                    8.01.141
Serial No:
                    RFE1709S90753
                    0x70000
Host Port Id:
FC Packet size:
                    2048
SFP Vendor:
                    FINISAR CORP.
SFP Part Number:
                    FTLF8529P3BCV-QL
SFP Serial Number: UVF1GCZ
SFP Capabilities:
                    4, 8 or 16 Gbit
SFP Wavelength:
                    850nm
Link Data Rate:
                    16 Gbit
Switch Port:
                    sw02-01:0
                    Brocade Communications, Inc.
Switch Vendor:
Switch Model:
                    109.1
Switch FW Version: v8.1.2a
slot 3: FC Host Adapter 3a (Emulex XE201 rev. 48, N-port, )
Board name:
                    111-02451
Serial Number:
                    FC62549991
Firmware rev:
                    11.4.277.0
Host Port Id:
                    0x70200
FC Node Name:
                    2:000:0090fa:e5e2c3
                    1:000:0090fa:e5e2c3
FC Port Name:
SFP Vendor:
                    EMULEX
SFP Part Number:
                    AFBR-57F5MZ-ELX
SFP Serial Number: AC1612J0A1K
SFP Capabilities:
                   4, 8 or 16 Gbit
Link Data Rate:
                    16 Gbit
Switch Port:
                    sw02-01:2
sw01-01:8.126L1 : NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (X6N0A01VTODE)
sw02-01:8.126L544 : NETAPP X447 TFM4V800AMD NA01 762.8GB 520B/sect (Z6R0AORRTODE)
               FC-to-SAS Bridge:
               sw02-01:8.126L0 : ATTO
                                          FibreBridge7500N 2.96 FB7500N104556
                                         FibreBridge7500N 2.96 FB7500N104355
               sw01-01:8.126L0 : ATTO
sw02-01:8.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:8.shelf61: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:8.shelf80: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:8.shelf81: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:8.shelf20: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:8.shelf21: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:8.shelf40: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:8.shelf41: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
slot 3: FC Host Adapter 3b (Emulex XE201 rev. 48, N-port, <UP>)
```





```
Board name:
                  111-02451
Serial Number:
                  FC62549991
Firmware rev:
                  11.4.277.0
Host Port Id:
                  0x80200
                  2:000:0090fa:e5e2c2
FC Node Name:
                  1:000:0090fa:e5e2c2
FC Port Name:
SFP Vendor:
                  EMULEX
SFP Part Number: AFBR-57F5MZ-ELX
SFP Serial Number: AC1612J0A1H
SFP Capabilities: 4, 8 or 16 Gbit
Link Data Rate: 16 Gbit
Switch Port:
                  sw02-02:2
sw01-02:8.126L1 : NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (X6N0A01VT0DE)
sw02-02:8.126L544: NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (Z6R0AORRTODE)
               FC-to-SAS Bridge:
               sw02-02:8.126L0 : ATTO
                                         FibreBridge7500N 2.96 FB7500N104556
               sw01-02:8.126L0 : ATTO
                                         FibreBridge7500N 2.96 FB7500N104355
sw02-02:8.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:8.shelf61: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:8.shelf80: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:8.shelf81: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:8.shelf20: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:8.shelf21: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:8.shelf40: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:8.shelf41: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
slot 4: FC Host Adapter 4a (Emulex XE201 rev. 48, N-port, )
Board name:
                  111-02451
Serial Number:
                  FC62547357
                  11.4.277.0
Firmware rev:
Host Port Id:
                  0x70300
                  2:000:0090fa:e5e52d
FC Node Name:
                  1:000:0090fa:e5e52d
FC Port Name:
SFP Vendor:
                  EMULEX
SFP Part Number: AFBR-57F5MZ-ELX
SFP Serial Number: AA1612J0B4T
SFP Capabilities: 4, 8 or 16 Gbit
Link Data Rate: 16 Gbit
                  sw02-01:3
Switch Port:
sw01-01:9.126L27 : NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (X6N0A01VTODE)
sw02-01:9.126L518: NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (Z6R0A0RRTODE)
               FC-to-SAS Bridge:
               sw01-01:9.126L0 : ATTO
                                          FibreBridge7500N 2.96 FB7500N104551
                                         FibreBridge7500N 2.77 FB7500N104550
               sw02-01:9.126L0 : ATTO
sw02-01:9.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:9.shelf61: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:9.shelf80: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:9.shelf81: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:9.shelf20: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:9.shelf21: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:9.shelf40: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:9.shelf41: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
slot 4: FC Host Adapter 4b (Emulex XE201 rev. 48, N-port, )
                  111-02451
Board name:
Serial Number:
                  FC62547357
                  11.4.277.0
Firmware rev:
Host Port Id:
                  0x80300
FC Node Name:
                  2:000:0090fa:e5e52c
FC Port Name:
                  1:000:0090fa:e5e52c
                  EMULEX
SFP Vendor:
SFP Part Number: AFBR-57F5MZ-ELX
SFP Serial Number: AA1612J0B43
SFP Capabilities: 4, 8 or 16 Gbit
Link Data Rate: 16 Gbit
Switch Port:
                  sw02-02:3
sw01-02:9.126L27 : NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (X6N0A01VTODE)
sw02-02:9.126L518: NETAPP X447 TPM4V800AMD NA01 762.8GB 520B/sect (Z6R0A0RRT0DE)
               FC-to-SAS Bridge:
               sw01-02:9.126L0 : ATTO
                                         FibreBridge7500N 2.96 FB7500N104551
                                         FibreBridge7500N 2.77 FB7500N104550
               sw02-02:9.126L0 : ATTO
sw02-02:9.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:9.shelf61: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:9.shelf80: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-02:9.shelf81: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:9.shelf20: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:9.shelf21: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw01-02:9.shelf40: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
```

sw01-02:9.shelf41: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191





Which type of MetroCluster is shown in the exhibit?

A. 2-node stretch MetroCluster

B. 4-node MetroCluster IP

C. 4-node Fabric-Attached MetroCluster

D. 4-node stretch MetroCluster

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 13 You have determined that an SFP+ has failed on one of your storage controllers.

In this scenario, what do you use to determine which SFP+ should be replaced by NetApp Support?

A. NetApp Active IQ

B. Interoperability Matrix Tool

C. NetApp Documentation Center

D. Hardware Universe

Correct Answer: D Section: (none) Explanation

Explanation/Reference:



QUESTION 14

You have an ONTAP 2-node cluster. You run a read/write test workload against an SMB share, and it is slower than you expected. You run the same test again, but this time you monitor the storage using a QoS command.

Workload	ID	Latency	Network	Cluster	Data	Disk	QoS	NVRAM
test-wid1234	1234	12.38ms	74.00us	64.00us	135.00us	3.76ms	Oms	8.49ms
test-wid1234	1234	11.92ms	73.00us	73.00us	143.00us	3.07ms	Oms	8.62ms
test-wid1234	1234	12.42ms	73.00us	59.00us	178.00us	3.32ms	Oms	8.89ms

Referring to the exhibit, what is the problem?

A. There is a disk bottleneck.

B. An HA interconnect problem is present.

C. The SMB read sizes should be increased.

D. The NVRAM needs to be replaced.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 15

You have a 4-node MetroCluster system. A node needs to be taken down for maintenance, but all data needs to remain online.

In this scenario, what should you do to bring down a single node?

A. Perform an HA takeover of the node.

B. Perform a MetroCluster switchover.



- C. Disable HA on each side of the MetroCluster.
- D. Perform an aggregate relocation of the CFO aggregates on the node.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 16

What is the consequence of a loss of connectivity between a Cloud Volumes ONTAP (CVO) instance and Cloud Manager for four or more days?

- A. The CVO instance sends an AutoSupport message.
- B. The CVO instance must be added back manually to Cloud Manager.
- C. Cloud Manager removes the CVO instance from its inventory.
- D. The CVO instance is stopped.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 17 What are two conditions that would cause writes in memory to be written to disk? (Choose two.)

- A. The NVRAM (NVLog) fills up.
- B. A user presses "Save".
- C. Drive capacity becomes available.
- D. A Snapshot copy is taken.

Correct Answer: AB Section: (none) Explanation

Explanation/Reference:

QUESTION 18

How many drive bays does a DS4246 shelf have?

- A. 42
- B. 12
- C. 46
- D. 24

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

Reference: https://www.insight.com/en US/shop/product/DS4246074812AQSR6/NETAPP/DS4246-0748-12A-QS-R6/NetAppStorageShelfDS4246-Storageenclosure-24bays(SAS-2)-HDD4TBx12-rack-mountable-4U/

QUESTION 19

On an AFF system, which three storage efficiencies are enabled by default? (Choose three.)

A. reallocation B. compaction





C. deduplication

D. compression

E. encryption

Correct Answer: BCD Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-vsmg%2FGUID-C1E3029E-1514-4579-939B-67160E849632.html

QUESTION 20

You received the "CLUSTER ERROR: DISK/SHELF COUNT MISMATCH" AutoSupport message from an ONTAP cluster.

When analyzing this message, which two should be inspected? (Choose two.)

A. drive paths

B. IOM firmware

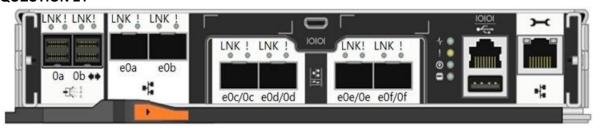
C. drive firmware

D. SAS cabling

Correct Answer: AC Section: (none) Explanation

Explanation/Reference:

QUESTION 21





In the AFF A200 shown in the exhibit, which port is a CNA port?

A. |0|0|

B. e0c/0c

C. e0a

D. 0a

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/platstor/topic/com.netapp.doc.hw-2700-install-setup/GUID-FE4BD3C8-3DB4-438A-A5CE-FEEF74AE8BAF.html

QUESTION 22

Which two statements describe ONTAP NVRAM? (Choose two.) A.

ONTAP NVRAM is used as read cache.

- B. ONTAP NVRAM stores uncommitted writes.
- C. ONTAP NVRAM is used as write cache.



D. ONTAP NVRAM is battery backed.

Correct Answer: BC Section: (none) Explanation

Explanation/Reference:

Reference: https://kb.netapp.com/Advice and Troubleshooting/Data Storage Software/ONTAP OS/FAQ%3A Consistency Point

QUESTION 23 When using NetApp Volume Encryption (NVE) which type of server is needed to keep encryption keys separate from encrypted data?

A. KMIP

B. RADIUS

C. TLS

D. TKIP

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: http://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.pow-nve%2FGUID-EAD13D8E-0219-45B6-A2C6-B25B76C9CA1A.html

QUESTION 24 A customer will need to perform an upgrade

from 9.0 to 9.4.

Which feature of ONTAP enables nondisruptive hardware maintenance for this upgrade?

A. aggregate relocation

B. FlexVol

C. FlexGroupD. RAID-TEC

Correct Answer: A Section: (none) Explanation



Explanation/Reference:

Reference: https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-hacg%2FGUID-519510F4-AE00-4859-9706-217553D05FB9.html

QUESTION 25 In ONTAP 9.6, activity on the command line is found

in which log?

A. audit.log

B. messages.log

C. command-history.log

D. mgwd.log

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: https://kb.netapp.com/Advice and Troubleshooting/Data Storage Software/ONTAP OS/Overview of ONTAP Logs

OUESTION 26

Your Windows clients were able to access your CIFS SVM yesterday. Today they are no longer able to access the CIFS SVM on your NetApp cluster. Your IT security team just pushed out a new group policy to enhance security.

In this scenario, which statement is true?



A. Your CIFS SVM is not using DNS.

B. Your CIFS SVM is configured to use SMBv1 and SMBv2.

C. Your CIFS SVM is configured for NFSv3 access.

D. Your CIFS SVM is configured for the wrong domain.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 27 You observe cyclic redundancy check (CRC) errors on a network port from a node in the cluster.

Which two components would you consider reseating or replacing before you perform actions on the physical port where the errors are reported from the node? (Choose two.)

A. SFP

B. cluster interconnect switch

C. up-stream switch

D. cable

Correct Answer: CD Section: (none) Explanation

Explanation/Reference:

QUESTION 28 A volume was accidentally deleted two hours ago by another administrator. No backups exist.



In this scenario, what do you do to restore the data?

- A. Use the ONTAP System Manager to recover the volume.
- B. Use a volume snapshot to return the data to the active file system.
- C. Use the volume recovery queue to restore the volume.
- D. Use an aggregate snapshot to revert the aggregate to an earlier state.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

Reference: http://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-vsmg%2FGUID-D4E85AB5-EEBB-44B4-A648-5B1B04FD5F85.html

QUESTION 29 You are using AFF storage with the NVMe storage protocol on your

Linux clients.

In this scenario, which NVMe feature must be present and enabled for the client to see storage failover happen?

- A. Asymmetric Namespace Access (ANA)
- B. Multi-Path I/O (MPIO)
- C. Asymmetric Logical Unit Access (ALUA)
- D. NVMe Qualified Name (NQN)

Correct Answer: B Section: (none) Explanation

CEplus

Explanation/Reference:

QUESTION 30 You are asked to replicate 15 of 20 volumes and the network configuration of your storage virtual machine to your other data center.

In this scenario, which NetApp technology should you use?

- A. SnapMirror Synchronous
- B. SVM DR
- C. MetroCluster
- D. SVM peering

Correct Answer: A

 Section: (none) ExplanationC
 2

 D
 2

Explanation/Reference:

Reference: https://www.netapp.com/pdf.html?item=/media/19369-tr-4832.pdf

QUESTION 31

How many data-serving SVMs are supported with Cloud Volumes ONTAP that is running ONTAP 9.5?

A. 128 B. 1024

Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/us-en/cloud-volumes-ontap/reference limitations 95.html

QUESTION 32 You want to set up a FabricPool between an ONTAP cluster and Google Cloud Storage.

In this scenario, which two components are required to accomplish this task? (Choose two.)

A. a service account access key

B. a Certificate Authority (CA) certificate

C. an Express Route

D. intercluster LIFs

Correct Answer: BD Section: (none) Explanation

Explanation/Reference:

Reference: https://www.netapp.com/pdf.html?item=/media/17239-tr4598pdf.pdf

QUESTION 33

You have an AFF platform and want to use object storage to provide a cloud-based capacity tier. In this scenario, which NetApp technology would you use to accomplish this task?

A. FabricPool

B. Flash Pool

C. NetApp HCID. FlashCache





Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: https://www.netapp.com/pdf.html?item=/media/17239-tr4598pdf.pdf

QUESTION 34

Test user "LAB\tester" can perform an operation in the CIFS share "HR" from the SVM "svm1". However, the rest of the users from the HR department cannot perform the same operation. You want to determine why only "LAB\tester" can perform the operation.

In this scenario, which security trace filter accomplishes this task?

A. vserver security trace filter create -vserver svml -index 1 -protocol nfs -unix-name tester -trace-allow no
B. vserver security trace filter create -vserver svml -index 1 -protocol cifs -windows- name LAB\tester -trace-allow no
C. vserver security trace filter create -vserver svml -index 1 -protocol cifs -windows- name LAB\tester -trace-allow yes D. vserver security trace filter create -vserver svml index 1 -protocol nfs -unix-name tester -trace-allow yes

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 35

Which NetApp technology enables a volume to span across one or more aggregates and one or more NetApp nodes?

A. FlexVol

B. Flash Pool

C. Flash Cache

D. FlexGroup

Correct Answer: D Section: (none) Explanation



Reference: https://www.netapp.com/pdf.html?item=/media/17251-tr4571apdf.pdf (3)

QUESTION 36 A customer asks what is the correct way to configure an ONTAP system for multi-tenancy. The customer wants to serve data and also protect data using SnapMirror from tenant A using network A and from tenant B using network B.

In this scenario, which statement is correct?

- A. The customer must use different VLANs for the two tenants.
- B. This setup can only work if tenant A and tenant B use a shared network infrastructure.
- C. The customer must set up two different IPspaces for the two tenants.
- D. Each node can only communicate with tenant A or tenant B, but not with both at the same time.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 37





cluster1::> vserver services name-service ns-switch show -vserver svm1

		Source
Vserver	Database	Order
svm1	hosts	files,
		dns
svm1	group	files,
		ldap
svm1	passwd	files,
		ldap
svm1	netgroup	files
svm1	namemap	files
5 entries were di	isplayed.	

Referring to the exhibit, the UNIX user "prof1" will be looked up in which source first?

A. nis

B. dns

C. ldap

D. files

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 38

While troubleshooting client access issues to a CIFS share, you notice that the issue only occurs when the data LIF that the clients are accessing is on a specific node in the cluster.

In this scenario, which configuration should you review to determine why this issue is happening?

A. cluster health

B. Kerberos

C. share path

D. export policies

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm_download_file/ECMLP2426787

QUESTION 39

Source Path Destination Path Relationship ID Relationship Type msgld: msragld: 78e304e0-9781-1234-abcd-00a098d771bd XDP msxpgld: msraxpgld: 3ca42ab4-9782-1234-abcd-00a098d771bd XDP na_docavgld: ndradocavgld: a4b233b2-9783-1234-abcd-00a098d771bd XDP na_dr: ndradr: c97d36a0-6d7c-11e8-83fb-00a098d771bd XDP na_gld: ndragld: 9e7e034d-9782-1234-abcd-00a098d771bd XDP na_mpgld: ndrampgld: 16e52e0d-9783-1234-abcd-00a098d771bd XDP na_opengld: ndraopengld: dabb1813-9780-1234-abcd-00a098d771bd XDP na_poc: ndrapoc: c1d632d7-977b-1234-abcd-00a098d771bd XDP na_pubgld: ndrapubgld: 1a3f866c-9780-1234-abcd-00a098d771bd XDP

Referring to the output, which type of SnapMirror destination relationship is being used?



- A. Single Volume SnapMirror Asynchronous
- B. Single Volume SnapMirror Synchronous
- C. SnapVault
- D. Storage Virtual Machine DR

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 40 A customer receives the message shown below in

their EMS logs.

```
Tue Jun 27 18:34:18 CEST
[netapp-ct1: cp_worker: wafl.cp.toolong:error]: Aggregate AG1_NTAP_PROD experienced a long CP.
Tue Jun 27 18:37:10 CEST
```

Which two data sources do you use to explain this message? (Choose two.)

- A. ONTAP System Manager
- B. Performance Archive
- C. Active IQ Unified Manager
- D. mgwd.log

Correct Answer: AB Section: (none) Explanation



Explanation/Reference:

Reference: https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/First_steps_troubleshooting_waff_exempt10%3A_waff.cp.toolong%3Aerror

QUESTION 41 What are two reasons to use HTTPS as the transport method for AutoSupport delivery for Active IQ? (Choose two.)

- A. Only HTTPS transfers are compressed.
- B. AutoSupport OnDemand (AOD) is supported.
- C. HTTPS is encrypted.
- D. HTTPS does not use a standard port.

Correct Answer: BC Section: (none) Explanation

Explanation/Reference:

Reference: https://www.netapp.com/media/10438-tr-4444.pdf

QUESTION 42

You want to use the supported method to upgrade the ONTAP version of a Cloud Volumes ONTAP instance from ONTAP 9.5 to ONTAP 9.6.

In this scenario, which NetApp tool accomplishes this task?

- A. Cloud Manager
- B. Cloud Insights
- C. Active IQ Unified Manager
- D. ONTAP System Manager



Correct Answer: D Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/us-en/occm/task updating ontap cloud.html#suspending-snapmirror-transfers

QUESTION 43

Which NetApp HCl component communicates with activeig solidfire.com and the Cloud Data Services portal?

A. the NetApp Element software vSphere plug-in

B. the management node (mNode)

C. the NetApp Trident software

D. the NetApp Element software Management Interface

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

Reference: http://docs.netapp.com/hci/index.jsp?topic=%2Fcom.netapp.doc.hci-ude-170%2FGUID-87FD2BD4-1C4C-4491-9A66-D2C5EA8C1B88.html

QUESTION 44

Several clients are accessing an ONTAP SnapMirror DP destination volume. Some clients frequently access the newest SnapMirror volume data. Accessing this data is much slower when compared to clients that directly access data on the source. You use the wafl scan status command against the destination.

What is a symptom of the problem in this scenario?

A. blocks used summary update

B. active bitmap rearrangement

C. container block reclamation

D. volume deswizzling

Correct Answer: A Section: (none) Explanation



Explanation/Reference:

Reference: https://kb.netapp.com/Advice and Troubleshooting/Data Storage Software/ONTAP OS/What is the "wafl scan status" command%3F

QUESTION 45

A customer is trying to enable NVMe and wants to use the FC adapters in the controllers but cannot enable the protocol.



aff::> fcp adapter show -fields node, adapter, physical-protocol, max-speed, statusadmin, media-type, speed (network fcp adapter show)

node	adapter	physical-protocol	max-speed	status-admin	media-type	speed
aff-01	0e	fibre-channel	16	up	ptp	auto
aff-01	0g	fibre-channel	16	up	ptp	auto
aff-01	0h	fibre-channel	16	up	ptp	auto
aff-01	1a	fibre-channel	16	up	ptp	auto
aff-01	1b	fibre-channel	16	up	ptp	auto
aff-01	2a	fibre-channel	16	up	ptp	16
aff-01	2b	fibre-channel	16	up	ptp	16
aff-01	3a	fibre-channel	16	up	ptp	auto
aff-01	3b	fibre-channel	16	up	ptp	auto
aff-01	4a	fibre-channel	16	up	ptp	auto
aff-01	4b	fibre-channel	16	up	ptp	auto
aff-02	0e	fibre-channel	16	up	ptp	auto
aff-02	0f	fibre-channel	16	up	ptp	auto
aff-02	0g	fibre-channel	16	up	ptp	auto
aff-02	Oh	fibre-channel	16	up	ptp	auto
aff-02	1a	fibre-channel	16	up	ptp	auto
aff-02	1b	fibre-channel	16	up	ptp	auto
aff-02	2a	fibre-channel	16	up	ptp	auto
aff-02	2b	fibre-channel	16	up	ptp	auto
aff-02	3a	fibre-channel	16	up	ptp	auto
aff-02	3b	fibre-channel	16	up	ptp	auto
aff-02	4a	fibre-channel	16	up	ptp	auto
aff-02	4b	fibre-channel	16	up	ptp	auto

Referring to the exhibit, what is causing the problem?

- A. There are no FC adapters installed with the speed set to 32Gbps.
- B. There are no FC adapters installed with a physical protocol set to NVMe.
- C. There are no FC adapters installed with a max-speed of 32Gbps.
- D. There are no FC adapters installed with a media type of NVMe.

Correct Answer: B Section: (none) Explanation



Explanation/Reference:

QUESTION 46

Your customer's MetroCluster has generated a "DISK REDUNDANCY FAILED" message.

Netapp-EmA:

```
Tue Jan 14 04:12:12 CET [netapp-EmA:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv' failed.

Tue Jan 14 04:12:13 CET [netapp-EmA:rv.connection.torndown:info]: HA interconnect: cfo_rv1 is torn down on NIC 1.

Tue Jan 14 04:12:13 CET [netapp-EmA:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv'1 failed.

Tue Jan 14 04:12:15 CET [netapp-EmA:rv.connection.torndown:info]: HA interconnect: cfo_rv2 is torn down on NIC 1.

Tue Jan 14 04:12:18 CET [netapp-EmA:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv'2 failed.

Tue Jan 14 04:12:19 CET [netapp-EmA:bridge.removed:info]: FC-to_SAS bridge siteB_2:13.126L0 [ATTO FibreBridge6500N 1.61] S/N [FB7500N111161] was removed

Tue Jan 14 04:12:19 CET [netapp-EmA:bridge.removed:info]: FC-to_SAS bridge siteB_2:5.126L0 [ATTO FibreBridge6500N 1.61] S/N [FB7500N111160] was removed
```

Netapp-EmB:

```
Tue Jan 14 04:12:12 CET [netapp-EmB:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv' failed.

Tue Jan 14 04:12:12 CET [netapp-EmB:rv.connection.torndown:info]: HA interconnect: cfo_rv2 is torn down on NIC 1.

Tue Jan 14 04:12:13 CET [netapp-EmB:rv.connection.torndown:info]: HA interconnect: cfo_rv1 is torn down on NIC 1.

Tue Jan 14 04:12:13 CET [netapp-EmB:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv'1 failed.

Tue Jan 14 04:12:18 CET [netapp-EmB:cf.rv.notConnected:error]: HA interconnect: Connection for 'cfo_rv'2 failed.

Tue Jan 14 04:12:19 CET [netapp-EmB:bridge.removed:info]: FC-to SAS bridge siteA 2:13.126L0 [ATTO FibreBridge6500N 1.61] S/N [FB7500N111167] was removed
```



Tue Jan 14 04:12:19 CET [netapp-EmB:bridge.removed:info]: FC-to_SAS bridge siteA_2:5.126L0 [ATTO FibreBridge6500N 1.61] S/N [FB7500N111164] was removed Referring to the messages shown in the exhibit for each node, which component is causing the problem?

A. the ATTO bridge on siteB_2

B. the SAN switch siteA 2

C. the SAN switch siteB 2

D. the ISL between siteA and site B

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 47

A customer has reported an unexplained reboot of an ONTAP node that did not generate a panic string or a core file.

In this scenario, which two sets of logs do you collect to further diagnosis the issue? (Choose two.)

A. system core

B. sp status

C. events all

QUESTION 48

D. sp status -d

Correct Answer: AC Section: (none) Explanation

Explanation/Reference:



You want to update your storage system and are concerned about the compatibility of the SAN components and the host environment. In

this scenario, which two actions should you take to verify compatibility? (Choose two.)

A. Use the Interoperability Matrix Tool.

B. Use Active IQ Interop Advisor.

C. Upload AutoSupports to Active IQ.

D. Use the Active IQ Config Advisor.

Correct Answer: AD Section: (none) Explanation

Explanation/Reference:

QUESTION 49

A customer ordered a FAS2720 cluster with 8 TB SATA drives. The customer wants to use the Advanced Drive Partitioning (ADP) feature to avoid consuming the high capacity drives for the root aggregate. Before you use the cluster setup, you issue the aggr status command and notice that ADP is not being used.

In this scenario, what would you use to implement ADP?

A. loader prompt

B. special boot menu

C. nodeshell



D. SP prompt
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50

After a network card was replaced in an ONTAP node, you see the output shown in the exhibit.

cluster1::> network port ifgrp show -node cluster1-01 -instance

cluster1::> network port show -node cluster1-01

Node: cluster1-01

ister1-01				Speed (Mbps)	Health
IPspace	Broadcast Domain	Link	MTU	Admin/Oper	Status
Default	Default	up	1500	auto/-	healthy
Default	Default	up	1500	auto/1000	healthy
Cluster	Cluster	up	9000	1000/10000	healthy
Cluster	Cluster	up	9000	1000/10000	healthy
Default	_	down	1500	1000/-	-
Default	2.1	down	1500	1000/-	_
Default	-	up	1500	auto/10000	healthy
Default	-	up	1500	auto/10000	healthy
	IPspace Default Default Cluster Cluster Default Default Default Default	IPspace Broadcast Domain Default Default Cluster Cluster Cluster Cluster Default - Default - Default -	IPspace Broadcast Domain Link	IPspace	Speed (Mbps) IPspace Broadcast Domain Link MTU Admin/Oper



What is the problem?

- A. The interface group is configured in single mode.
- B. One physical port is not cabled.
- C. One physical interface is broken.
- D. One physical interface is mis-cabled.

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 51

You perform a security trace when troubleshooting a data access problem for a user. The results are shown in the exhibit.



cluster1::> vserver security trace trace-result show -vserver svm1

Vserver: svm1

Node Index Filter Details Reason cluster1-01 1 Security Style: NTFS and Access is denied. The NT ACL requested permissions are not granted by the ACE while opening existing file or directory. Access is not granted for: "Read Attributes" Protocol: cifs Volume: -Share: dept Path: /list.xlsx Win-User: LAB\domusr1 UNIX-User: pcuser Session-ID: 14249952170953675090

What should you do to solve this issue?

A. Grant the user Read Attributes access to the path.

B. Add the user to the BUILTIN\power Users group.

C. Add the user to the BUILTIN\Users group.

D. Grant the user Execute access to the path.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

Reference: https://www.reddit.com/r/netapp/comments/dm90iv/change_ownership_failing/

QUESTION 52

A customer is showing disk utilization is at 100% in Active IQ even though there are low protocol operations on the controller. You review the data shown in the exhibit.



In this situation, what should you do?

- A. Replace disks 6b.34 and 6a.19.
- B. Add disks to the aggregate to bring down the average utilization.
- C. Replace disk 6b.39.
- D. Reseat shelf module B.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:





QUESTION 53

You are using FCP and iSCSI protocols from your clients with ONTAP as the target. You want to ensure that storage failover (SFO) works correctly for your clients.

In this scenario, which two features on the initiator and the target will accomplish this task? (Choose two.)

A. LACP

B. MPIO

C. ALUA

D. SCSI

Correct Answer: BC Section: (none) Explanation

Explanation/Reference:

Reference: https://www.netapp.com/media/10680-tr4080.pdf

QUESTION 54

A customer must store physical hard copies of transaction data off site to meet regulatory requirements.

Which NetApp technology enables the customer to accomplish this task?

A. SnapVault

B. NDMP

C. SVM DR

D. FlexCache

Correct Answer: A Section: (none) Explanation



Explanation/Reference:

Reference: https://library.netapp.com/ecmdocs/ECMP1635994/html/GUID-74F9AB84-BF01-4F0F-9197-7C4D8C3F8002.html

QUESTION 55 In ONTAP 9.5, the event log show command queries and displays entries

from which file?

A. messages.log

B. ems.log

C. bcomd.log

D. mgwd.log

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

Reference: https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-cmpr-930%2Fevent log show.html

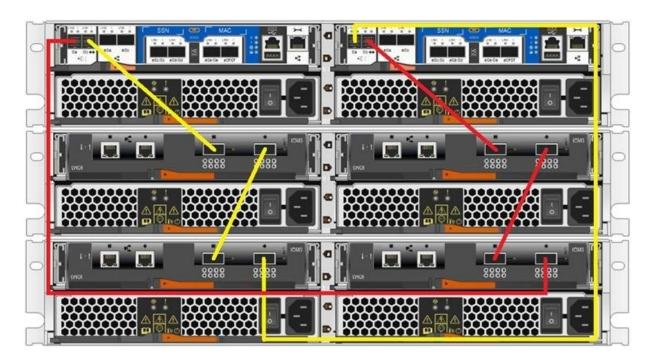
QUESTION 56 You receive the error shown below on a

FAS2750 HA pair.

Mon Jun 24 00:27:30 UTC [NetappA: scsi_cmdblk_strthr_admin: scsi.cmd.checkCondition:error]: Unknown device 0a.00.99: Check Condition: CDB 0x12: Sense Data SCSI:hardware error (0x4 - 0x44 0x0 0x0) (0).

The system is cabled as shown in the exhibit.





What should you do to clear the error?

- A. Replace the cable connected to controller A's 0a port.
- B. Replace the controller of controller B.
- C. Replace the controller of controller A.
- D. Re-cable the system per the FAS2750 installation guide.

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 57

For testing purposes, your customer decides to use FC on a single-node ONTAP cluster. There is only one host that the customer expects to use. High availability is not a concern for this test. The customer connects the host directly to the ONTAP node. The LUN is set up, and the igroup is configured. When the customer tries to attach to the LUN from the host, the LUN is not seen by the host.

Which statement is correct in this scenario?

- A. Multipathing must be used and connected to another FC path.
- B. NPV must be enabled on the host before trying to attach to the LUN.
- C. NPIV must be enabled on the host before trying to attach to the LUN.
- D. An FC switch must be used with ONTAP.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 58

The details from within Active IQ Cluster Viewer are downloadable in which three file formats? (Choose three.)

A. PDF

B. CSV



C. XLS

D. DOC E. HTML

Correct Answer: ABC Section: (none) Explanation

Explanation/Reference:

QUESTION 59 A user can read and write some files on an NFS volume, but the user is unable to read all of the files in the volume.

In this scenario, which command will help you troubleshoot this problem?

A. security login create

B. security audit show

C. vserver security trace filter create

D. vserver export-policy check-access

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 60 What are two supported cabling methods for a NetApp HCl compute node? (Choose two.)



- A. 1-cable configuration
- B. 2-cable configuration
- C. 6-cable configuration
- D. 4-cable configuration

Correct Answer: BC Section: (none) Explanation

Explanation/Reference:

Reference: https://library.netapp.com/ecm/ecm download file/ECMLP2856899 (11)