



"Please note that these files may not be up to date. However, the questions will help you understand the exam format and typical question patterns."

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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 FPolicysolution.

Answer: D

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

Answer: C

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

Answer: A

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

Answer: B

Question: 5

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

Workload	ID	Latency	Network	Cluster	Data	Disk	QoS	NVRAM	Cloud
-total-		110.35ms	327.00us	327.00ns	0ms				
110.02ms	0ms	0ms	0ms						
vs1vo10	111	167.82ms	603.00ns	603.00ns	0ms				
167.22ms	0ms	0ms	0ms						
vo11	1234	117.76ms	191.00ns	191.00ns	0ms				
117.56ms	0ms	0ms	0ms						
vo12	999	44.24ms	190.00us	190.00ns	0ms	44.05ms	0ms	0ms	0ms
-total-		-							
38.89ms	256.00us	256.00us	0ms	38.63ms	0ms	0ms	0ms		
vo12	999	64.47ms	266.00us	266.00ns	0ms	64.20ms	0ms	0ms	0ms
vo11	1234	27.28ms	253.00ns	253.00ns	0ms	27.03ms	0ms	0ms	0ms
vs1vo10	111	23.72ms	249.00ns	249.00ns	0ms	23.47ms	0ms	0ms	0ms
-total-		409.81ms	169.00ns	169.00ns	0ms				
409.65ms	0ms	0ms	0ms						
vo11	1234	816.92ms	120.00ns	120.00ns	0ms				
816.80ms	0ms	0ms	0ms						
vo12	999	407.88ms	219.00ns	219.00ns	0ms				
407.00ms	0ms	0ms	0ms						
vs1vo10	111	3.68ms	193.00ns	193.00ns	0ms	3.49ms	0ms	0ms	0ms

- A. cluster switches
- B. SAS adapter
- C. network interface card
- D. disk

Answer: BD

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

Answer: AC

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
- D. discovery mode

Answer: A

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

Answer: ACE

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.

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.

Answer: C

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, executesldiag.

Answer: B

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.

Answer: A

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: 053709508E (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: C3

```

```

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
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 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
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 0d (PMC-Sierra PM8001 rev. C, SAS, )
Firmware rev: 01.12.09.00
Base WWN: 5:00a098:003a853:1c
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 0e (Mellanox ConnectX MT27518 rev. 0)
Running Firmware: Debug 2.11.534
Firmware: Nd Interconnect

```

```

Port 1: Port Name:
Default GID: Base LID: ib0a
Active MTU: Data Rate: fe80:0000:0000:0000:00a0:9800:0035:3e2c 0xe2c
Link State: 4096
           40 Gb/s (4X) QDR
           ACTIVE

```

```

Interconnect Port 2: Port
Name: Default GID: Base
LID: Active MTU: Data ib0b
Rate: Link State: fe80:0000:0000:0000:00a0:9800:0035:3e2d 0xe2d
           4096
           40 Gb/s (4X) QDR
           ACTIVE

```

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```

slot 0: Intel USB EHCI Adapter u0a (0x47f20000) Oxaf01,
boot0 ATP IG eUSB class 0/0, rev 2.00/11.00, Adapter la addr 2 7676MB 512B/sect (devproto=0x00)
slot 1: FCVI Host (QLogic 8324(2672) rev. 2, F-port)

```

```

Physical link: FC UP
Node Name: Firmware 21:00:00:0e:1e:e9:bc:70
rev: Serial No: Host 8.01.141
Port Id: FC Packet RFE1709S90753
size: 0x80000 2048
SFP Vendor: Part FINISAR CORP.
SFP Number: Serial FTLF8529P3BCV-QL
SFP Number: UVF1X7Y
SFP Capabilities: 4, 8 or 16 Gbit
SFP Wavelength 850nm
Link Data Rate 16 Gbit sw02-02:0 Brocade
Switch Port: Communications, Inc.
Switch Vendor: 109.1
Switch Model: v8.1.2a
Switch FW Version: Adapter 1b (QLogic 8324(2672) rev.

```

```

slot 1: FCVI Host UP 2, F-port)
Physical link: FC 21:00:00:0e:1e:e9:bc:71
Node Name: Firmware 8.01.141
rev: Serial No: Host RFE1709S90753
Port Id: FC Packet 0x70000
size: 2048
SFP Vendor: Part FINISAR CORP.
SFP Part Number: FTLF8529P3BCV-QL
SFP Serial Number: UVF1GC2
SFP Capabilities: 4, 8 or 16 Gbit 850nm
SFP Wavelength: 16 Gbit
Link Data Rate: sw02-01:0
Switch Port: Brocade Communications,
Switch Vendor: 109.1 v8.1.2a Inc.
Switch Model:
Switch FW Version:

```

```

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 0x70200
Host Port Id: FC 2:000:0090fa:e5e2c3
Node Name: FC I:000:0090fa:e5e2c3 EMULEX
Port Name: AFBR-57F5MZ-ELX
SFP Vendor: AC1612J0A1K
SFP Part Number: 4, 8 or 16 Gbit
SFP Serial Number: 16 Gbit sw02-01:2
SFP Capabilities: : NETAPP X447 TPM4V800AMD
Link Data Rate:
Switch Port: sw01-01:8.126L1 NAOI 762.8GB 520B/sect (X6N0A01VT0DE)
sw02-01:8.126L544 : NETAPP X447 TPM4V800AMD NAOI 762.8GB 520B/sect (Z6R0A0RRTODE)

```

FC-to-SAS Bridge:

```

sw02-01:8.126L0 : ATTO FibreBridge7500N 2.96 FB7500N104556
sw01-01:8.126L0 : ATTO FibreBridge7500N 2.96 FB7500N104355

```

```

sw02-01:8.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:8.shelf61: DS2246 Firmware rev. IOM6 Ai 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: Serial 111-02451
Number: Firmware rev: FC62549991
Host Port Id: FC Node 11.4.277.0
Name: FC Port Name: 0x80200
SFP Vendor: SFP Part 2:000:0090fa:e5e2c2
Number: SFP Serial !:000:0090fa:e5e2c2
Number: SFP EMULEX
Capabilities: Link AFBR-57F5MZ-ELX
Data Rate: Switch AC1612J0A1H
Port: sw01-02:8.126L1 4, 8 or 16 Gbit
: 16 Gbit sw02-02:2
NETAPP X447_TPM4V800AMD NAOI 762.8GB 520B/sect (X6N0A01VT0DE)
sw02-02:8.126L544: NETAPP FC- X447TPM4V800AMD NAOI 762.8GB 520B/3sect (Z6R0A0RRT0DE)

```

```

***
to-SAS sw02-Bridge: 126L0 : ATTO
02:8. sw01- 126L0 : ATTO FibreBridge7500N 2.96 FB7500N104556
02:8. FibreBridge7500N 2.96 FB7500N104355
sw02-02:8.shelf60: DS2246 sw02- Firmware rev IOM6 A: 0191 IOM6 B: 0191
02:8.shelf61: DS2246 sw02- Firmware rev IOM6 A: 0191 IOM6 B: 0191
02:8.shelf80: DS2246 sw02- Firmware rev IOM6 A: 0191 IOM6 B: 0191
02:8.shelf81: DS2246 sw01- Firmware rev IOM6 A: 0191 IOM6 B: 0191
02:8.shelf20: DS2246 sw01- i rmwa re rev. IOM6 A: 0191 IOM6 B: 0191
02:8.shelf21: DS2246 sw01- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
02:8.shelf40: DS2246 sw01- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
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
Firmware rev: 11.4.277.0
Host Port Id: 0x70300
FC Node Name: 2:000:0090fa:e5e52d
FC Port Name: 1:000:0090fa:e5e52d
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
Switch Port: sw02-01:3
sw01-01:9.126L27 : NETAPP X447TPM4V800AMD NAOI 762.8GB 520B/sect (X6N0A01VT0DE)

```

```

slot 4: FC Host Adapter 4b (Emulex XE201 rev. 48, N-port, )
Board name: 111-02451
Serial Number: FC62547357
Firmware rev: 11.4.277.0

```

```

sw02-01:9.126L518: NETAPP X447_TPM4V800AMD NAOI 762.8GB 520B/sect (Z6R0A0RRT0DE)
FC-to-SAS Bridge:
sw01-01:9.126L0 : ATTO FibreBridge7500N 2.96 FB7500N104551
sw02-01:9.126L0 : ATTO FibreBridge7500N 2.77 FB7500N104550

```

```

sw02-01:9.shelf60: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191
sw02-01:9.shelf61: 032246 Fi rmwa re rev. IOM6 A: 0191 i one B: 0191
sw02-01:9.shelf80: DS2246 Fi rmware 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 Fi rmwa re rev. IOM6 A: 0191 IOM6 B: 0191
sw01-01:9.shelf41: DS2246 Firmware rev. IOM6 A: 0191 IOM6 B: 0191

```

```

Host Port Id: 0x80300
FC Node Name: 2:000:0090fa:e5e52c
FC Port Name: 1s 000:0090fa:e5e52c
SFP Vendor: EMULEX
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 NAOI 762.8GB 520B/sect (X6N0A01VT0DE)
sw02-02:9.126L518: NETAPP X447 TPM4V800AMD NAOI 762.8GB 520B/sect (Z6R0A0RRT0DE)

```

```

FC-to-SASBridge:
sw01-02:9.126L0 : ATTO FibreBridge7500N 2.96 FB7500N104551
sw02-02:9.126L0 : ATTO FibreBridge7500N 2.77 FB7500N104550
sw02-02:9.shelf60: DS2246 sw02- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf61: DS2246 sw02- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf60: DS2246 sw02- Firmware F rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf81: DS2246 sw01- i rmwa re rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf20: DS2246 sw01- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf21: DS2246 sw01- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
02:9.shelf40: DS2246 sw01- Firmware rev. IOM6 A: 0191 IOM6 B: 0191
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

Answer: C

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

Answer: D

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-widl234	1234	12.38ms	74.00us	64.00us	135.00US	3.76ms	0ms	8.49ms
test-widl234	1234	11.92ms	73.00us	73.00ns	143.00us	3.07ms	0ms	8.62ms
test-widl234	1234	12.42ms	73.00ns	59.00ns	173.00us	3.32ms	0ms	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.

Answer: B

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.

Answer: A

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.

Answer: C

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 istaken.

Answer: AB

Question: 18

How many drive bays does a DS4246 shelf have?

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

Answer: D

Reference:

[https://www.insight.com/en_US/shop/product/DS4246074812AQRS6/NETAPP/DS4246-0748-12A-QS-R6/NetAppStorageShelfDS4246-Storageenclosure-24bays\(SAS-2\)-HDD4TBx12-rack-mountable-4U/](https://www.insight.com/en_US/shop/product/DS4246074812AQRS6/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

Answer: BCD

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

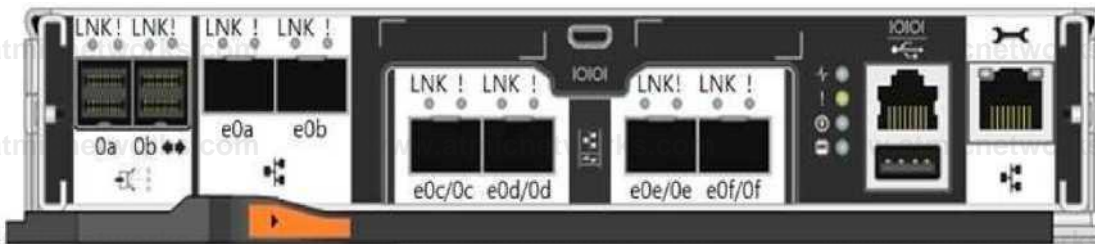
You received the "CLUSTER ERROR: DISK/SHELF COUNT MISMATCH" AutoSupport message from an ONTAP cluster.

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

- A. drive paths
- B. IOM firmware
- C. drive firmware
- D. SAS cabling

Answer: AC

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

Answer: B

Reference: <https://docs.netapp.com/platstor/topic/com.netapp.doc.hw-2700-install->

[setup/GUID-FE4BD3C8-3DB4-438A-A5CE-FEEF74AE8BAF.html](https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/FAQ%3A_Consistency_Point)

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.

Answer: BC

Reference:

https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/FAQ%3A_Consistency_Point

Question: 23

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

- A. KMIP
- B. RADIUS
- C. TLS
- D. TKIP

Answer: A

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

[EAD13D8E-0219-45B6-A2C6-B25B76C9CA1A.html](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. FlexGroup
- D. RAID-TEC

Answer: A

Reference: [https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-](https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-)

[cm-](https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-)

[hacg%2FGUID- 519510F4-AE00-4859-9706-217553D05FB9.html](https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/Overview_of_ONTAP_Logs)

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

Answer: A

Reference:

https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/Overview_of_ONTAP_Logs

Question: 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.

Answer: A

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

Answer: CD

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.

Answer: C

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)

Answer: B

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

Answer: A

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
- C. 1

D. 10

Answer: C

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

Answer: BD

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 HCI
- D. FlashCache

Answer: A

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. vservers security trace filter create -vservers svm1 -index 1 -protocol nfs - unix-name tester - trace- allow no
- B. vservers security trace filter create -vservers svm1 -index 1 -protocol cifs - windows- name LAB\tester -trace-allow no
- C. vservers security trace filter create -vservers svm1 -index 1 -protocol cifs - windows- name

LAB\tester -trace-allow yes

D. vserver security trace filter create -vserver svm1 -index 1 -protocol nfs - unix-name tester - trace- allow yes

Answer: C

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

Answer: D

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.

Answer: B

Question: 37

```
cluster1::> vserver services name-service ns-switch show -vserver svml
Source
Vserver      Database  Order
-----
svml         hosts    files,
              dns
svml         group    files,
              Idap
svml         passwd   files,
              Idap
svml         netgroup files
svml         namemap  files
5 entries were displayed.
```

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

- A. nis
- B. dns
- C. ldap
- D. files

Answer: B

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

Answer: B

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

Question: 39

Source Path Destination Path Relationship ID Relationship Type msgId: msragId: 78e304e0-9781-1234-abcd-00a098d771bd XDP msxpgId: msrxpgId: 3ca42ab4-9782-1234-abcd-00a098d771bd XDP na_docavId: ndrdocavId: a4b233b2-9783-1234-abcd-00a098d771bd XDP na_dr: ndradr: c97d36a0-6d7c-11e8-83fb-00a098d771bd XDP na_gId: ndragsId: 9e7e034d-9782-1234-abcd-00a098d771bd XDP na_mpgId: ndrampgId: 16e52e0d-9783-1234-abcd-00a098d771bd XDP na_opengId: ndrappengId: dabb1813-9780-1234-abcd-00a098d771bd XDP na_poc: ndrappoc: c1d632d7-977b-1234-abcd-00a098d771bd XDP

na_pubgId: ndrappubgId: 1a3f866c-9780-1234-abcd-00a098d771bd XDP

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

- A. Single Volume SnapMirrorAsynchronous
- B. Single Volume SnapMirrorSynchronous
- C. SnapVault
- D. Storage Virtual Machine DR

Answer: A

Question: 40

A customer receives the message shown below in their EMS logs.

Tue Jun 27 18:34:18 CEST

[netapp-ct1: cp_worker: waf1.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

Answer: AB

Reference:

https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/First_steps_troubleshooting_waf1_exempt10%3A_waf1.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.

Answer: BC

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

Answer: D

Reference: https://docs.netapp.com/us-en/occm/task_updating_ontap_cloud.html#suspending-snapmirror- transfers

Question: 43

Which NetApp HCI component communicates with activeiq.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

Answer: B

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 dat
a. Accessing this data is much slower when compared to clients that directly access data on the source. You use the waf 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

Answer: A

Reference:

[https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/What_is_the_"waf_scan_status"_command%3F](https://kb.netapp.com/Advice_and_Troubleshooting/Data_Storage_Software/ONTAP_OS/What_is_the_)

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, status admin, media-type, speed
(network fcp adapter show)
```

node	adapter	physical-protocol	max-speed	status-admin	media-type	speed
aff-01	Oe	fibre-channel	16	UP	ptp	auto
aff-01	og	fibre-channel	16	up	Ptp	auto
aff-01	Oh	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	Oe	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	0h	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.

Answer: B

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

Answer: D

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
- D. sp status -d

Answer: AC

Question: 48

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

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

- A. Use the Interoperability MatrixTool.
- B. Use Active IQ Interop Advisor.
- C. Upload AutoSupports to Active IQ.
- D. Use the Active IQ ConfigAdvisor.

Answer: AD

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

Answer: A

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

Node: cluster1-01
Interface Group Name: a0a
Distribution Function: ip
Create Policy: multimode_lacp MAC Address: 02:a0:98:f8:91:14
Port Participation: partial Network Ports: e0g, e0h Up Ports: e0g
Down Ports: e0h

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

Node: cluster1-01
```

Port	IPspace	Broadcast	Domain	Link	MTU	Speed (Mbps)		Health Status
						Admin	Oper	
a0a	Default	Default		up	1500	auto	-	healthy
e0m	Default	Default		up	1500	auto	1000	healthy
e0a	Cluster	Cluster		up	9000	1000	10000	healthy
e0b	Cluster	Cluster		Up	9000	1000	10000	healthy
e0c	Default	-		down	1500	1000	-	-
e0d	Default	-		down	1500	1000	-	-
e0g	Default	-		UP	1500	auto	10000	healthy
e0h	Default	-		UP	1500	auto	10000	healthy

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.

Answer: D

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 svml

Vserver: svml
```

Node	Index	Filter	Details	Reason
cluster1-01	1	Security	Style: NTFS and Access is denied. The NT ACL 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: LABXdomusr1 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.

Answer: A

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.

disk	ut %	xfers	ureads—chain-usecs	writes—chain-usecs
/aggrO/plexO/rgO:				
6b. 34	1	2.18	0.17	1.00 10700 0.98 13.49 490
6a.19	1	2.35	0.17	1.00 36600 1.15 11.83 504
6a.45	13	17.98	16.88	2.13 5810 0.53 8.81 887
6b. 18	13	17.57	16.55	2.17 5357 0.42 11.00 1189
6a.29	12	16.70	15.30	2.15 5820 0.60 6.75 1996
6b. 25	13	18.31	17.13	2.17 5611 0.48 7.59 1709
6b. 39	100	15.44	15.07	2.22 191927 0.00 •••■
6a.17	12	16.75	15.52	2.10 6126 0.50 8.63 1475
6b. 38	12	16.98	15.95	2.09 5614 0.43 9.92 1349

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.

Answer: C

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

Answer: BC

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

Answer: A

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. bcmd.log
- D. mgwd.log

Answer: B

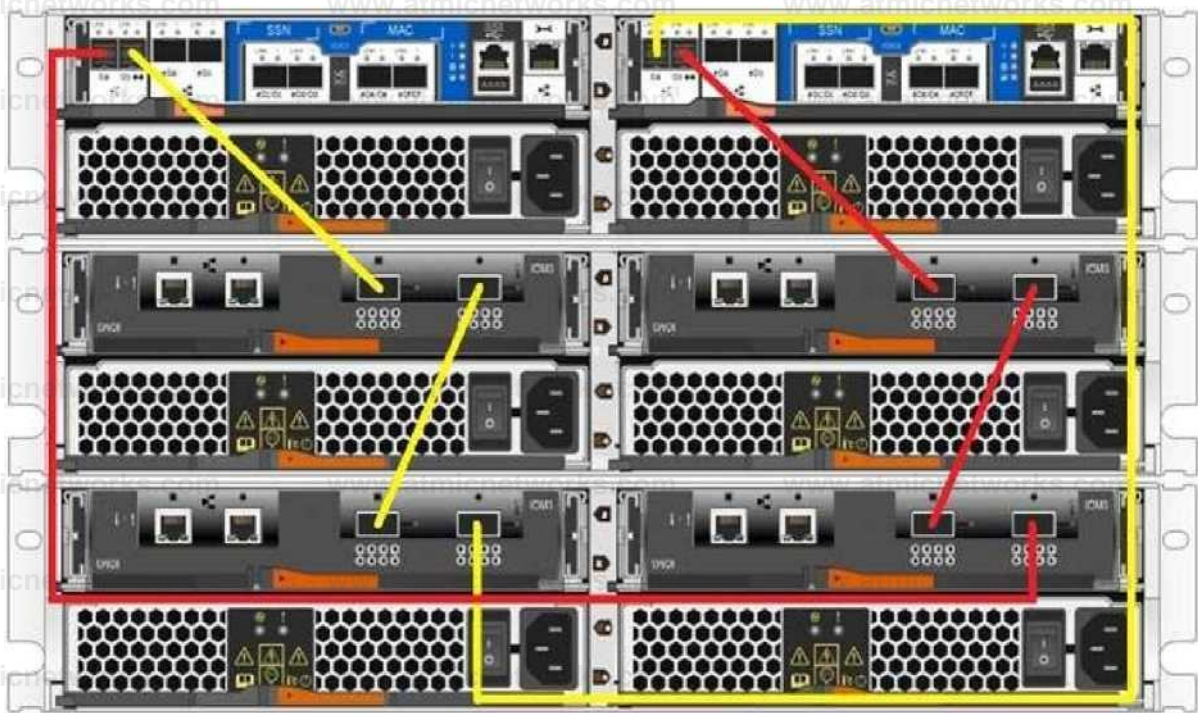
Reference: <https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-cmpr-930%2Feventlogshow.html>

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.

Answer: C

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.

Answer: B

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

Answer: ABC

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