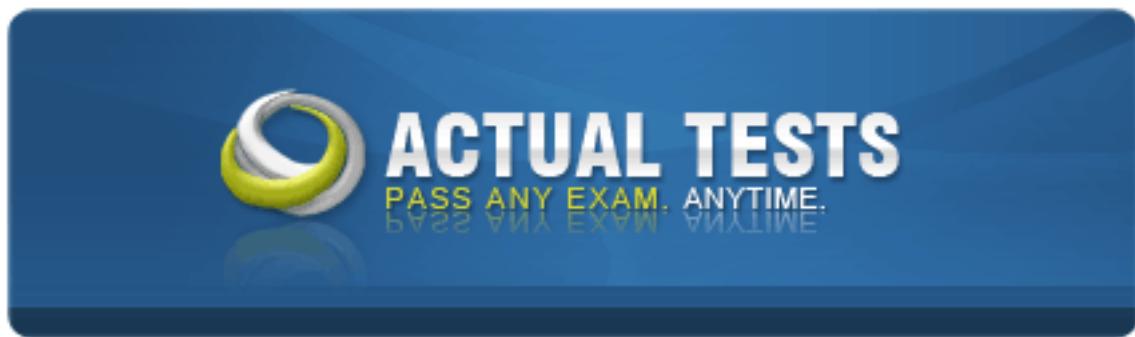


EMC E20-260



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QUESTION NO: 1

Which VPLEX volume contains virtual-to-physical mapping information?

- A.**
Logging volume
- B.**
Metadata volume
- C.**
Virtual volume
- D.**
Repository volume

Answer: B

Explanation:

QUESTION NO: 2

A customer has a VPLEX Metro configuration across two data centers 200 km apart. During an overnight backup, the WAN-COM link between the two data centers fails.

Which volume allows for future incremental re-synchronization with the remote mirror once the link is restored?

- A.**
Logging Volume
- B.**
Storage Volume
- C.**
Metadata Volume
- D.**
Virtual Volume

Answer: A

Explanation:

QUESTION NO: 3

What is the maximum supported latency for a VPLEX Metro implementation?

- A.**
2 ms
- B.**
50 ms
- C.**
5 ms
- D.**
15 ms

Answer: C

Explanation:

QUESTION NO: 4

medium-sized VPLEX clusters are connected via IP with a round-trip latency of approximately 35 ms.

What type of configuration is this?

- A.**
Geo
- B.**
Metro
- C.**
Local
- D.**
Global

Answer: A

Explanation:

QUESTION NO: 5

What is the total number of engines for a small VPLEX Metro configuration?

A.

1

B.

8

C.

4

D.

2

Answer: D

Explanation:

QUESTION NO: 6

A customer wants to implement VPLEX between two datacenters 200 km apart. The latency between the sites is 15 ms.

Which VPLEX topology is recommended?

A.

Metro

B.

Geo

C.

Local

D.

Global

Answer: B

Explanation:

QUESTION NO: 7

When creating logging and metadata volumes, which LUN requirement applies to both volumes?

- A.**
Array LUNs must be zeroed-out.
- B.**
Array LUNs must be RAID 0
- C.**
Array LUNs must be thin.
- D.**
Array LUNs must be RAID 1

Answer: A

Explanation:

QUESTION NO: 8

How much distributed storage can be managed by a 20 GB logging volume?

- A.**
Up to 960 TB
- B.**
Up to 320 TB
- C.**
Up to 640 TB
- D.**
Up to 1.2 PB

Answer: C

Explanation:

QUESTION NO: 9

What is the maximum cache of a single engine in a medium VPLEX VS2 cluster?

A.

72 GB

B.

36 GB

C.

144 GB

D.

78 GB

Answer: A

Explanation:

QUESTION NO: 10

A dual fan failure occurs on a single VPLEX engine.

What will be the result?

A.

The engine will shut down immediately.

B.

Director B only will shut down.

C.

Director A only will shut down.

D.

The engine will shut down after three minutes.

Answer: D

Explanation:

QUESTION NO: 11

What is the purpose of I/O module 2 in a the VPLEX VS2 hardware configuration?

A.

WAN-COM connectivity

B.

Front-end connectivity

C.

Back-end connectivity

D.

Local-COM connectivity

Answer: A

Explanation:

QUESTION NO: 12

You present additional LUNs to VPLEX. Which command must be executed to make them visible to VPLEX?

A.

Array discover

B.

Array re-discover

C.

Array claim

D.

Storage-volume find-array

Answer: B

Explanation:

QUESTION NO: 13

What are key benefits of storage virtualization with VPLEX?

A.

Ease of consolidations; device mobility; simplifying management; provisioning of multiple arrays.

B.
Consolidations; point-in-time backups; simplifying management; third-party array support.

C.
Device performance; point-in-time backups; third party array support; device mobility

D.
Synchronous SAN extension across long distances; device mobility; and third-party array support

Answer: D

Explanation:

QUESTION NO: 14

What three elements are part of the VPLEX Storage View?

A.
VPLEX FE Port

Top-Level Device

Host IP address

B.
VPLEX FE Port

Initiator Port

Virtual Volume

C.
VPLEX BE Port

VPLEX FE Port

Virtual Volume

D.
VPLEX BE Port

Initiator Port

Virtual Volume

Answer: B

Explanation:

QUESTION NO: 15

A host attempted a read from a volume in a VPLEX Metro configuration. The data does not exist in cache at all.

What process does VPLEX use to service the read request?

A.

VPLEX first searches the local cache for the data, then the cache coherency directory before reading from the array.

B.

VPLEX first searches the cache coherency directory for the data before reading from the array.

C.

VPLEX first searches the local cache for the data before reading from the array.

D.

VPLEX first searches the cache coherency directory for the data, and then searches the local cache before reading from the array.

Answer: A

Explanation:

QUESTION NO: 16

In the distributed cache architecture, how much local cache does a VS2 director have?

A.

36GB

B.

64GB

C.

32GB

D.

72GB

Answer: C

Explanation:

QUESTION NO: 17

Which command allows you to navigate vplexcli history by string?

A.

CTRL + R string

B.

history find string

C.

history | grep string

D.

UP arrow key

Answer: A

Explanation:

QUESTION NO: 18

Which command-line option can be invoked within VPlexcli as a task to recognize and use new LUNs provisioned to a cluster?

A.

storage-volume discover

B.

storage-volume resurrect

C.

storage-volume find-array

D.

storage-volume claim

Answer: D

Explanation:

QUESTION NO: 19

In which directory is a session log file created whenever the Management Console is launched?

A.

/var/log/VPLEX/cli/

B.

/var/log/sessions

C.

/diag

D.

/tmp/log/sessions

Answer: A

Explanation:

QUESTION NO: 20

You are using VPLEX Unisphere to perform management functions in your environment. You are tasked with creating several volume migrations to a new storage array.

What tab should you use to perform this migration?

A.

Provision Storage

B.

Mobility Central

C.

System Status

D.

Performance Dashboard

Answer: B

Explanation:

QUESTION NO: 21

Following EMC best practices, what information is required to register a VPLEX on an ESRS portal?

A.

Site ID; cluster TLA serial number; Management server eth3 IP address

B.

License ID; engine serial number; Management server eth3 IP address

C.

Site ID; engine serial number; Management server eth3 IP address

D.

Site ID; cluster TLA serial number; Witness IP address

Answer: A

Explanation:

QUESTION NO: 22

When inspecting a VS1 director's status LEDs, you see that a status LED is blue. What does this indicate?

A.

The VPLEX Standby Power Supply battery is low.

B.

GeoSynchrony code cannot be downloaded from the Management Server

C.

The director is downloading GeoSynchrony code from the Management Server.

D.

The VPLEX cannot connect with the other cluster

Answer: C

Explanation:

QUESTION NO: 23

You are preparing a site for a large Metro VPLEX cluster. The storage administrator wants to prepare the storage network configuration and needs to ensure easy troubleshooting of storage path faults.

How many WAN-COM zones per fabric will need to be created?

A.
16

B.
12

C.
8

D.
32

Answer: A

Explanation:

QUESTION NO: 24

You are preparing a site for a large Metro VPLEX cluster. The storage administrator wants to prepare the storage network configuration and needs to ensure easy troubleshooting of storage path faults.

How many WAN-COM zones will need to be created?

A.
24

B.
16

C.
8

D.

32

Answer: D

Explanation:

QUESTION NO: 25

What can you use to generate a list of VPLEX fabric initiator and target identifiers?

A.

WWN Utility

B.

Procedure Generator

C.

Powerlink

D.

Command Line

Answer: A

Explanation:

QUESTION NO: 26

When configuring a VPLEX local cluster, according to EMC best practices, how many metadata volumes are required?

A.

3

B.

4

C.

2

D.

1

Answer: B

Explanation:

QUESTION NO: 27

You are configuring a single engine VPLEX Metro to support both local and distributed volumes. The VPLEX will utilize 10Gb WAN-COM modules in a routed configuration.

According to EMC best practices, what is the minimum number of subnets and IPs required?

A.

7 subnets; 15 IPs

B.

5 subnets; 15 IPs

C.

3 subnets; 7 IPs

D.

3 subnets; 30 IPs

Answer: A

Explanation:

QUESTION NO: 28

Which VPLEX component is configured with a public IP address during the installation process?

A.

LCOM Switch

B.

Director A

C.

Management Server

D.

Director B

Answer: C

Explanation:

QUESTION NO: 29

You are configuring an FC Switch for a VPLEX implementation using VS2 engines. What is the required speed setting for the switch ports connected to the VPLEX FE ports in order to achieve the maximum throughput of VS2 engines?

A.

8 Gbps

B.

4 Gbps

C.

16 Gbps

D.

10 Gbps

Answer: A

Explanation:

QUESTION NO: 30

What are the recommended protection and disk type when selecting a VPLEX Logging Volume?

A.

RAID6(6+2) and FC Disks

B.

RAID6(14+2) and SATA Disks

C.

RAID1 and SSD Disks

D.

RAID5 and FC Disks

Answer: D

Explanation:

QUESTION NO: 31

In addition to Active Directory, with what other directory service can VPLEX integrate for user authentication?

- A.**
LDAP
- B.**
NIS
- C.**
NDS
- D.**
PAM

Answer: A

Explanation:

QUESTION NO: 32

A customer has ordered a two-engine VPLEX cluster to be installed in a custom rack. A minimal VNX5300 is already installed in the middle of the rack, occupying nine rack unit spaces.

What is the correct approach to deploy the two-engine VPLEX cluster?

- A.**
The engines and SPSs can be placed under the VNX5300 and the other components above the VNX5300 using longer cables.
- B.**
Use a rack with sufficient space to install all the VPLEX cluster components together according to the predefined EMC layout.
- C.**
The installation of a two engine cluster is not supported in a customer rack without a formal EMC RPQ.

D.

The EMC account team must order a factory installed VPLEX two engine configuration and ship the custom install VPLEX back to EMC.

Answer: B

Explanation:

QUESTION NO: 33

What information is required to configure ESRS for VPLEX?

A.

VPLEX model type

Top Level Assembly

Site ID

IP address of the Management Server public port

B.

Top Level Assembly

Site ID

IP address of the Management Server public port

VPLEX Configuration (1, 2 or 4 Engines)

C.

VPLEX model type

Top Level Assembly

Primary customer contact

IP address of the Management Server public port

D.

VPLEX model type

Site ID

IP address of the Management Server public port

Primary Customer contact

Answer: A

Explanation:

QUESTION NO: 34

According to EMC best practices, how many metadata volumes for a VPLEX Metro configuration are required on each cluster?

A.

4 Metadata volumes and 4 Metadata Backup volumes

B.

2 Metadata volumes and 1 Metadata Backup volume

C.

2 Metadata volumes and 2 Metadata Backup volumes

D.

4 Metadata Volumes and no Metadata Backup volumes

Answer: C

Explanation:

QUESTION NO: 35

Which VPLEX management NIC Interface must be connected to customer IP public LAN?

A.

eth3

B.

eth2

C.

eth1

D.

eth0

Answer: A

Explanation:

QUESTION NO: 36

Which VPLEX management interface is used for initial configuration?

A.

eth3

B.

eth2

C.

eth0

D.

eth1

Answer: D

Explanation:

QUESTION NO: 37

Where is the wwn-seed physically located on VS2 engines?

A.

On the back of the engine on the bottom of the chassis

B.

On the front of the management server

C.

On the front of the director

D.

On the front of the director bezel cover

Answer: A

Explanation:

QUESTION NO: 38

A customer has ordered a new VPLEX, and you are on site doing the initial installation. When creating metadata volumes for the VPLEX Local configuration, the customer asks you how much total storage is needed for the VPLEX metadata. According to EMC best practices, what is the total minimum storage needed for this configuration?

- A.**
10 GB
- B.**
312 GB
- C.**
156 GB
- D.**
234 GB

Answer: B

Explanation:

QUESTION NO: 39

You are zoning a dual-engine Local VPLEX cluster to a Symmetrix array to see LUNs 0010 and 0020 for metadata backups.

How many directors in the cluster must be zoned and masked to these LUNs?

- A.**
All of the directors
- B.**
Any two directors
- C.**
One from each engine
- D.**
Only one director

Answer: A

Explanation:

QUESTION NO: 40

A customer has purchased a dual engine VPLEX Metro cluster. During installation, there are not enough free SAN ports to connect all WAN-COM ports to the SAN. What is the recommended approach?

A.

The customer must connect the WAN-COM ports of the first engine only and disable the second engine from the VPLEX CLI.

B.

It is sufficient to connect the WAN-COM ports of either engine 1 or 2 because redundancy is provided by leveraging two separate SAN fabrics.

C.

The customer must provide additional SAN ports or acquire additional SAN ports to connect all WAN-COM ports of both VPLEX engines to the SAN.

D.

The customer must connect the WAN-COM ports of the first engine only and disable the second engine from the Unisphere for VPLEX GUI.

Answer: C

Explanation:

QUESTION NO: 41

What is the EMC best practice for the optimum number of back-end storage paths per director presented to a LUN?

A.

4 paths

B.

2 paths

C.

8 paths

D.

16 paths

Answer: A

Explanation:

QUESTION NO: 42

When configuring a RAID-1 logging volume, what flags must be used in the command line?

A.

-d -n -g -e

B.

-n -d -e

C.

-n -g -e

D.

-d -g -e

Answer: C

Explanation:

QUESTION NO: 43

What is EMC's best practice for fault tolerance when zoning a VPLEX Metro together over fibre channel for successful communication between the sites?

A.

Ensure that all fibre channel WAN-COM ports are zoned to each other in both SAN fabrics (Many-to-Many Zoning).

B.

Ensure that all fibre channel Local-COM ports are zoned to the WAN-COM ports in both SAN fabrics (One-to-Many Zoning).

C.

Ensure that all fibre channel Local-COM ports are zoned to each other in both SAN fabrics (Many-to-Many Zoning).

D.

Ensure that all fibre channel WAN-COM ports are zoned to each other in both SAN fabrics (One-to-Many Zoning).

Answer: D

Explanation:

QUESTION NO: 44

During the installation of a small VPLEX Metro, the command 'configuration continue-system-setup' is issued. What is accomplished by this command?

A.

Back-end array discovery

B.

Host initiator discovery

C.

Second cluster initial setup

D.

Witness configuration

Answer: A

Explanation:

QUESTION NO: 45

You need to claim storage that is presented to VPLEX from a VNX. What is required in order to create the mapping file needed by the VPLEX Claim Storage Wizard?

A.

A host with solutions enabler installed and zoned to SPA and SPB

B.

The user name, password and management address of the VNX

C.

A host with WinSCP installed, with an IP connection to the VPLEX Management Server

D.

The username and password of the VPLEX Management Server

Answer: B

Explanation:

QUESTION NO: 46

When performing an installation you notice DHCP has set your Management Server subnet mask to 255.255.255.252. Based on EMC best practices, what is the appropriate subnet mask value for Management Server network 128.221.252.0?

A.

255.255.255.224

B.

255.255.255.248

C.

255.255.255.192

D.

255.255.255.128

Answer: A

Explanation:

QUESTION NO: 47

After registering Cluster-2 with ESRS during a VPLEX Metro cluster build, what is the next step to perform before the cluster is successfully built?

A.

Complete EZ-Setup Wizard on Cluster-2

B.

Configure WAN connections on Cluster-1

C.

Complete EZ-Setup Wizard on Cluster-1

D.

Configure WAN connections on Cluster-2

Answer: C

Explanation:

QUESTION NO: 48

What VPLEX user account is required to manage user security?

A.

admin

B.

service

C.

root

D.

user

Answer: A

Explanation:

QUESTION NO: 49

What is required of an ESX host for the Witness to be installed?

A.

Promiscuous mode set to Accept

B.

ESX host in Cluster 1 failure domain

C.

MAC address change set to Accept

D.

ESX host in Cluster 2 failure domain

Answer: C

Explanation:

QUESTION NO: 50

A customer has a VPLEX Metro/GEO environment and is requesting that the VPLEX Witness be installed.

The requirements for the Witness are:

- One vCPU
- 512MB ram
- 2.5GB storage space

What platform type is supported?

- A.**
64bit ESX4.0 and above
- B.**
32/64bit ESXi 5.0
- C.**
64bit MS Hyper-V 2012
- D.**
VMware Workstation 9.0 and above

Answer: A

Explanation:

QUESTION NO: 51

Which element does VPLEX Witness require?

- A.**
Virtual Volume
- B.**

Distributed Volume

C.

Distributed Device

D.

Consistency Group

Answer: D

Explanation:

QUESTION NO: 52

A customer has a VPLEX Metro with VPLEX Witness installed and configured. The detach rule for consistency group is "no-automatic-winner".

What will VPLEX Witness do in case of a Site 1 failure?

A.

VPLEX Witness will have no effect.

B.

VPLEX Witness will set the consistency group detach rule.

C.

VPLEX Witness will suspend I/O at Site 1

D.

VPLEX Witness will suspend I/O at Site 2

Answer: A

Explanation:

QUESTION NO: 53

A customer is performing maintenance on their network that might affect their VPLEX Witness VM.

What can be done to ensure there are no adverse effects due to a Witness outage?

A.

Disable the cluster's management server ipsec.

B.

Disable the VPLEX Witness.

C.

Shut down the VPLEX Witness VM.

D.

Shut down the cluster's management server.

Answer: B

Explanation:

QUESTION NO: 54

Which VPLEX component can determine the difference between a partition and a site failure of a VPLEX Metro configuration?

A.

VPLEX Witness

B.

Management Server

C.

Cluster 1 Engine 1

D.

Consistency Group

Answer: A

Explanation:

QUESTION NO: 55

During an installation, the physical equipment inspection reveals an ESX host used for VPLEX Witness is located in the same rack as VPLEX cluster 1 Engine.

What needs to be done?

A.

VPLEX Witness server must be in a separate cabinet in the same data center.

B.

The VPLEX Witness server must be placed in a separate failure domain.

C.

Decrease network delay to reduce effects of equipment proximity.

D.

The ESX host must be placed in a separate cabinet due to cooling requirements.

Answer: B

Explanation:

QUESTION NO: 56

During ndu pre-check, a partner found that metadata-backup is not working. In addition, metadata-backup volume components have been renamed.

How can the problem be resolved?

A.

Provision two new metadata volumes

Re-run configuration metadata-backup

B.

Meta-volume destroy the actual metadata_backup

Re-run configuration metadata-backup

unclaimmetadata_backup

C.

unclaimmetadata_backup

Re-run configuration metadata-backup

D.

Meta-volume destroy the actual metadata_backup

schedule remove actual backup job

unclaimmetadata_backup

re-run configuration metadata-backup

Answer: D

Explanation:

QUESTION NO: 57

A customer is verifying the host environment before scheduling a VPLEX NDU. According to EMC best practices, which PowerPath load-balancing policy is applied by default to all platforms?

A.

Adaptive

B.

RoundRobin

C.

LeastIO

D.

StreamIO

Answer: B

Explanation:

QUESTION NO: 58

Which vplexcli command will ensure that the directors SSD firmware has been upgraded to the correct version after the VPLEX NDU ?

A.

director firmware show-banks

B.

version -a

C.

version -a --verbose

D.

ll /**/internal-disks/*

Answer: C

Explanation:

QUESTION NO: 59

You have attempted to upgrade a VPLEX system to the latest Geosynchrony code. During the upgrade, an error appeared and caused the upgrade to fail.

Which file should you review to gather more information about the failure?

A.

firmware.log_<date>

B.

session.log

C.

Vplexconfiguration-session.txt

D.

ndu-pre-check-stderr.txt

Answer: A

Explanation:

QUESTION NO: 60

How do you verify that the VPLEX upgrade has completed successfully?

A.

Log into the VPLEX Unisphere interface.

B.

Run the cluster-summary command.

C.

Check that the system LED is green on each director.

D.

Run the ndu pre-check command.

Answer: D

Explanation:

QUESTION NO: 61

VPLEX ndu pre-check command reports a time drift between directors and the Management Server. How must the NDU be performed?

A.

The NDU cannot be started. the time drift must be resolved.

B.

The NDU can be started using --skip-confirmations option.

C.

The NDU can be started. the time drift will be automatically fixed during upgrade.

D.

The NDU must be started using the --force option.

Answer: A

Explanation:

QUESTION NO: 62

You are doing a code upgrade on a VPLEX. In which directory do you put the upgrade files in order to execute the code upgrade?

A.

/tmp/vfs

B.

/diags/collect-diagnostics-out

C.

/tmp/VPlexInstallPackages

D.

/tmp/diags

Answer: C

Explanation:

QUESTION NO: 63

You are planning to perform a topology upgrade of VPLEX Local to VPLEX Metro.

What is the process you should follow to complete the upgrade successfully?

A.

1. Upgrade the existing cluster
2. Run the I/O module upgrade script
3. Cable the WAN COM connections
4. Register the cluster
5. Configure the new cluster

B.

1. Run the I/O module upgrade script
2. Cable the WAN COM connections
3. Upgrade the existing cluster
4. Configure the new cluster
5. Register the cluster

C.

1. Upgrade the existing cluster
2. Register the cluster
3. Configure the new cluster
4. Run the I/O module upgrade script
5. Cable the WAN COM connections

D.

1. Cable the WAN COM connections
2. Run the I/O module upgrade script
3. Configure the new cluster

4. Register the cluster

5. Upgrade the cluster

Answer: A

Explanation:

QUESTION NO: 64

What is the purpose of the I/O Module Upgrade Script?

A.

To manage the I/O module change during a Metro to Geo topology upgrade.

B.

To install the I/O load balancer module on the Management Server.

C.

To configure the GbE I/O modules when installing VPLEX Geo.

D.

To automate the installation of I/O modules and configuration of the directors.

Answer: D

Explanation:

QUESTION NO: 65

Which command script must be executed when upgrading a small VPLEX to medium VPLEX?

A.

Vplexadmin add-engines

B.

director add

C.

Vplexadmin set

D.

Vplexadmin add-directors

Answer: A

Explanation:

QUESTION NO: 66

You are preparing to migrate the topology of an installed VPLEX Local system. What is a supported upgrade path?

A.

Local to Geo to Global

B.

Local to Metro

C.

Local to Global

D.

Local to Metro to Geo

Answer: B

Explanation:

QUESTION NO: 67

You created a synchronous consistency group, which contains two distributed volumes configured with the rule "set cluster-1-detaches".

What is the expected behavior of the virtual volumes in the event of a WAN-COM failure?

A.

cluster-2 is declared the winner after 5 seconds and I/O will continue at that cluster.

B.

I/O will continue at both clusters.

C.

I/O will be suspended at both clusters until the WAN-COM is repaired.

D.

cluster-1 is declared the winner after 5 seconds and I/O will continue at that cluster.

Answer: A

Explanation:

QUESTION NO: 68

A new VPLEX cluster has been configured. However, you are unable to register any host initiators. After verifying that the host has been properly zoned to the VPLEX cluster, you still cannot register them. What is a possible cause?

A.

Front end ports have not been enabled.

B.

Back-end ports have not been enabled.

C.

Back-end arrays have not presented any LUNs.

D.

Storage View for host has not been created.

Answer: C

Explanation:

QUESTION NO: 69

A customer is moving some VMAX devices under a VPLEX Local and is using PowerPath as multipath software.

What is the SCSI product ID assigned to VPLEX volumes?

A.

Invista

B.

VPLEX

C.

PowerPath

D.

VMAX

Answer: A

Explanation:

QUESTION NO: 70

What components are required to create a storage view?

- A.**
One or more BE ports; One or more devices; Metadata volume and Logging Volumes
- B.**
One or more Host Initiators; One or more Virtual Volumes; One or more FE ports
- C.**
One or more FE ports; One or more BE ports; One or more Virtual Volumes
- D.**
One or more Host Initiators; One or more extents; One or more BE ports

Answer: B

Explanation:

QUESTION NO: 71

A VPlex administrator claims a 100GB Storage Volume that is thin provisioned on the storage array and has 25GB physically allocated and creates a 1:1 encapsulated virtual volume. After a local data mobility job for that Virtual Volume, the storage array administrator notices that the allocated capacity has increased to 100GB.

Why did this happen?

- A.**
The destination Storage Volume was not claimed with the thin-rebuild parameter in VPLEX.
- B.**
VPLEX does not support thin devices.
- C.**
Neither the source nor the destination Storage Volume were claimed with the thin-rebuild parameter in VPLEX.

- D.**
The source Storage Volume was not claimed with the thin-rebuild parameter in VPLEX.

Answer: A

Explanation:

QUESTION NO: 72

What unique logical identifier is recommended when determining the relationship between a virtual volume and the back-end storage array?

- A.**
WWPN
- B.**
LUN ID
- C.**
VPD ID
- D.**
FCID

Answer: C

Explanation:

QUESTION NO: 73

After an expansion of a RAID-0 device in VPLEX, the customer notices a slight degradation of performance. What could cause this?

- A.**
After the expansion operation is complete, the original mapped device has been converted into type RAID-C.
- B.**
After the expansion operation is complete, the original mapped device has been converted into type RAID-S.
- C.**
The device is striped across mismatched array types.

D.

The device is striped across RAID-S devices.

Answer: A

Explanation:

QUESTION NO: 74

A customer wants to add a mirror to a VPLEX Local RAID-0 device.

Which RAID type is created after the command "device attach-mirror"?

A.

RAID-0

B.

RAID-S

C.

RAID-1

D.

RAID-C

Answer: C

Explanation:

QUESTION NO: 75

What steps must be performed to encapsulate LUNs into virtual volumes?

A.

1. Claim native array LUN with data into VPLEX
2. Create extent, create a device on the extent
3. Create a virtual volume
4. Present virtual volume to the host

B.

1. Present a Virtual volume to the host

2. Create device

3. Create extent on the device

4. Execute storage claim wizard

C.

1. Create a new virtual volume

2. Mirror the virtual volume to native volume with data

3. Create device and create extent

4. Present virtual volume to host

D.

1. Discover new storage

2. Create extent

3. Create device

4. Create virtual volume

Answer: A

Explanation:

QUESTION NO: 76

In addition to HP-UX, RecoverPoint, SUN-VCS, and AIX, which host type option is available when registering a host initiator in VPLEX?

A.

Windows

B.

Linux

C.

Default

D.

VMware

Answer: C

Explanation:

QUESTION NO: 77

Starting in Geosynchrony version 5.1 what are the minimum password requirements?

A.

Fourteen characters, including numbers, upper-case and lower-case letters and special characters

B.

Seven characters, including numbers

C.

Eight characters, including numbers, and special characters

D.

Ten characters, including numbers, upper-case and lower-case letters, and special characters

Answer: A

Explanation:

QUESTION NO: 78

In Unisphere for VPLEX, which storage array does not require a mapping file when claiming storage volumes?

A.

VNX

B.

CLARiiON

C.

Celerra

D.

Symmetrix

Answer: D

Explanation:

QUESTION NO: 79

What are the four basic dm migration commands for moving extents or devices?

A.

Start, commit, clean, and remove

B.

Create, clean, commit, and remove

C.

Start, commit, clean, and terminate

D.

Create, commit, clean, and terminate

Answer: A

Explanation:

QUESTION NO: 80

What device types can be created in a VPLEX environment?

A.

RAID-5, RAID-6, RAID-C

B.

RAID-0, RAID-1, RAID-C

C.

RAID-3, RAID6 (6+2), RAID6 (14+2)

D.

RAID5 (3+1), RAID5 (7+1), RAID-S

Answer: B

Explanation:

QUESTION NO: 81

A customer has a VPLEX Metro installed. They asked you to recommend a method to non-disruptively move Virtual Volumes from a storage array at Cluster 1 to a storage array at Cluster 2.

What would you recommend?

- A.**
Use the Device Mobility feature of VPLEX.
- B.**
Use the Extent Mobility feature of VPLEX.
- C.**
Change the RAID protection to RAID
- D.**
Use array-based features to copy the storage volume.

Answer: C

Explanation:

QUESTION NO: 82

What mobility operation must be performed to defragment storage volumes?

- A.**
Device Mobility
- B.**
Data Mobility
- C.**
Extent Mobility
- D.**
Virtual Volume Mobility

Answer: C

Explanation:

QUESTION NO: 83

A service provider has implemented a VPLEX Metro cluster without the VPLEX Witness, but has implemented a static rule set. The static rule set has been set to "Cluster-2 detaches". A Windows host in the Cluster-1 data center uses a distributed volume. The inter-cluster link fails. What happens?

A.

1. VPLEX Suspends I/O to all distributed devices on both clusters
2. VPLEX starts a delay timer
3. If connectivity is not restored within the timer expiration period, then VPLEX will resume I/O on Cluster-2 and keep I/O suspended on Cluster-1

B.

1. VPLEX starts a delay timer
2. VPLEX suspends I/O to all distributed devices on both clusters
3. If connectivity is not restored within the timer expiration period, then VPLEX resumes I/O on Cluster-2 and keeps I/O suspended on Cluster-1

C.

1. VPLEX starts a delay timer
2. VPLEX suspends I/O to all distributed devices on both clusters
3. If connectivity is not restored within the timer expiration period, then VPLEX resumes I/O on Cluster-1 and keeps I/O suspended on Cluster-2

D.

1. VPLEX suspends I/O to all distributed devices on both clusters
2. VPLEX starts a delay timer
3. If connectivity is not restored within the timer expiration period, then VPLEX resumes I/O on Cluster-1 and keeps I/O suspended on Cluster-2

Answer: A

Explanation:

QUESTION NO: 84

In a customer's VPLEX Metro environment, a host has been provisioned as a single virtual volume from cluster-1. The customer now needs to convert the local virtual volume to a distributed device.

How can the customer accomplish this?

A.

Add an unused virtual volume from cluster-2 as a remote mirror to the virtual volume on cluster-1

B.

Add an unused device from cluster-2 as a remote mirror to the virtual volume on cluster-1

C.

Enable remote access to an unused virtual volume from cluster-2 and add it as a remote mirror.

D.

Enable remote access to an unused device from cluster-2 and add it as a remote mirror.

Answer: B

Explanation:

QUESTION NO: 85

A customer has a database application that has multiple distributed virtual volumes. They want to ensure that in the event that one of their data centers goes offline, the virtual volumes will all be available to the surviving site.

What VPLEX option should they implement?

A.

Data Mobility

B.

Consistency Groups

C.

Distributed Device

D.

Remote Access

Answer: B

Explanation:

QUESTION NO: 86

A customer created a local RAID-0 virtual volume and decided that they require increased data

protection by introducing a distributed virtual volume. What is the best method to convert this virtual volume without introducing any downtime to the host?

A.
Attach a device mirror

B.
Create a data mobility job

C.
Encapsulate the volume

D.
Enable remote access

Answer: A

Explanation:

QUESTION NO: 87

A customer has just introduced a new VPLEX cluster into their storage environment with numerous existing storage arrays. They need to present the host's existing data from the VPLEX cluster.

Which method would you use to perform this operation?

A.
Distribute

B.
Stripe

C.
Concatenate

D.
Encapsulate

Answer: D

Explanation:

QUESTION NO: 88

A customer wants to refresh the underlying array that comprises one-half of their local RAID-1 mirrors. Their intent is to remove the discarded mirror from VPLEX control, but as a rollback procedure, they want to ensure the detached device is a consistent copy of the original data. What is the proper way to perform this operation, meeting the customer's requirements?

A.

Exclude the "--discard" option in VPlexcli when detaching the mirror

B.

Include the "--discard" option in VPlexcli when detaching the mirror

C.

Utilize the GUI to detach the mirror consistently

D.

Utilize the GUI to teardown the virtual volume

Answer: A**Explanation:****QUESTION NO: 89**

What option must be set for a consistency group to continue synchronization without manual intervention, once connectivity is restored?

A.

rule-set-name = cluster-1-detaches

B.

rebuild-allowed = true

C.

auto-resume-at-loser = true

D.

rebuild-type = full

Answer: C**Explanation:**

QUESTION NO: 90

IT security just implemented new security policies at a customer site. When VPLEX Management Server sends SYR reports to an ESRS gateway nothing is received at the gateway.

What action did IT security take that would cause this?

- A.**
Block TCP port 443 and 22
- B.**
Block TCP port 80 and 21
- C.**
Block TCP port 9090 and 5910
- D.**
Block TCP port 21 and 445

Answer: A

Explanation:

QUESTION NO: 91

A customer has asked you to inspect their SAN connectivity before upgrading their Local configuration to a Metro. What will the output of the connectivity validate-be command provide for an analysis of this environment?

- A.**
The number of supported storage-volumes visible to each director
- B.**
The number of supported active paths per storage-volume that have been exceeded
- C.**
The number of supported storage-arrays connected to the cluster
- D.**
The number of supported logical-units per array connected to the cluster

Answer: B

Explanation:

QUESTION NO: 92

What are the three components that a drill-down command can be run against to provide a more detailed analysis?

A.

Storage-View, Virtual-Volume, Device

B.

Storage-View, Virtual-Volume, Storage-Volume

C.

Storage-View, Consistency-Group, Device

D.

Storage-View, Virtual-Volume, Extent

Answer: A

Explanation:

QUESTION NO: 93

A customer wants to collect performance data for specific virtual-volumes and has created the performance monitor.

What step needs to be performed to enable data capture?

A.

The customer needs to utilize the "-capture" flag when creating the monitor

B.

Virtual-volumes cannot have any performance data collected against them

C.

The customer needs to create an associated sink for data collection

D.

The customer needs to enable performance collection through the VPLEX GUI

Answer: C

Explanation:

QUESTION NO: 94

A customer has a quad-engine VPLEX Metro configuration and has stated they want to review their performance metrics from the past 4 hrs on the entire cluster. How many performing log files will they need to pull from the management server in order to analyze all of their components?

A.

16 performance log files

B.

8 performance log files

C.

2 performance log files

D.

None, all metrics are displayed in the Unisphere GUI

Answer: A

Explanation:

QUESTION NO: 95

Which protocols are required for a service laptop to communicate with and maintain a VPLEX environment?

A.

SNMP and FTP

B.

SSH and SCP

C.

SCP and Telnet

D.

SSH and SSL

Answer: B

Explanation:

QUESTION NO: 96

What is the role of the port with the WWN 5000144270061010 on a VS2 engine?

A.

Back-end

B.

Front-end

C.

Local-COM

D.

WAN-COM

Answer: A

Explanation:

QUESTION NO: 97

Which type of statistics is used to track latencies, determine median, mode, percentiles, minimums and maximums?

A.

Counters

B.

Readings

C.

Buckets

D.

Monitors

Answer: C

Explanation:

QUESTION NO: 98

The monitor report is added to the scheduler with the command schedule add "0 1 * * * --c report poll-monitors

When is task scheduled to execute?

A.

1 AM every day

B.

First day of the month

C.

First day of the week

D.

Once every hour

Answer: A

Explanation:

QUESTION NO: 99

What function does the SNMP agent on the Management Server provide?

A.

Cluster Management

B.

Director Management

C.

Cluster Statistics

D.

User Management

Answer: C

Explanation:

QUESTION NO: 100

You have a perpetual performance monitor running on director 1-1-A. The data being monitored is growing at a rate of 2 MB per minute. At the current data rate, how far back in time will this monitor be able to reach?

- A.**
5 minutes
- B.**
5 hours
- C.**
50 hours
- D.**
50 minutes

Answer: D

Explanation:

QUESTION NO: 101

What is the recommendation when executing collect-diagnostics command on a VPLEX Metro/GEO?

- A.**
Do not run simultaneously on both Management servers
- B.**
Always use the --local-only option
- C.**
Always use the --noextended option
- D.**
Always use the --minimum option

Answer: A

Explanation:

QUESTION NO: 102

A logging volume needs to be migrated to a new array.

Which command must be used to associate the distributed devices to the new logging volume?

- A.**
logging activate
- B.**
ds dd set-log
- C.**
logging volume move
- D.**
dm migration

Answer: B

Explanation:

QUESTION NO: 103

In a VPLEX Metro with Witness, which command returns the remote VPLEX management IP address and the witness public IP address?

- A.**
shell command sudo /usr/sbin/ipsec status
- B.**
vplexcli command cluster status
- C.**
shell command /sbin/ifconfig
- D.**
vplexcli command VPlexadmin show

Answer: A

Explanation:

QUESTION NO: 104

In a VPLEX Metro/Geo, which vplexcli command can help to troubleshoot directors latency and routing issues to other Cluster directors?

- A.**
director fc-port-stats
- B.**
connectivity director
- C.**
director tracepath
- D.**
VPlexadmin show

Answer: C

Explanation:

QUESTION NO: 105

What should be the maximum latency between a VPLEX Management Server and the Cluster Witness?

- A.**
1 sec
- B.**
50 ms
- C.**
5 ms
- D.**
1 ms

Answer: A

Explanation:

QUESTION NO: 106

Which command would you execute to perform basic system checks to ensure that the VPLEX cluster is working properly?

- A.**
health-check
- B.**
cluster config-dump
- C.**
validate-system-configuration
- D.**
cluster summary

Answer: C**Explanation:****QUESTION NO: 107**

You have added a new storage array into VPLEX, but it does not see it. Which VPLEX command will display the new storage array?

- A.**
vplexcli:/clusters/cluster-<Cluster ID>/storage-elements/storage-arrays/array re-discover
- B.**
vplexcli:/array claim -s
- C.**
vplexcli:/clusters/cluster-<Cluster ID>//storage-elements/storage-arrays>array used-by-array
- D.**
vplexcli:/connectivity validate-be

Answer: A**Explanation:****QUESTION NO: 108**

How does VPLEX access back-end arrays?

A.

Through Virtual Targets

B.

Through Virtual Initiators

C.

Through the front-end ports on the Management station

D.

VPLEX provides storage through its own DAE(s)

Answer: B

Explanation:

QUESTION NO: 109

Do virtual volumes need to be taken off-line prior to upgrading VPLEX software, and why or why not?

A.

Yes, to preserve data integrity

B.

Yes, because the host-based multi-pathing software provides direct access during the upgrade

C.

No, because VPLEX software can be upgraded non-disruptively

D.

No, because the upgrading can be undone

Answer: C

Explanation:

QUESTION NO: 110

How can you throttle the migration rate for VPLEX?

- A.**
By configuring the maximum copy speed
- B.**
By setting the copy policy
- C.**
This is done automatically without any user action
- D.**
By dynamically changing the I/O write size for copying

Answer: D

Explanation:

QUESTION NO: 111

Which is the best way to identify the root cause of long read latencies using monitors?

- A.**
Check if the %CPU Busy is above 50%
- B.**
Check to see if all volumes are in at least 1 Consistency Group
- C.**
Check the ratio of cache.rhit to cache.miss
- D.**
Check the difference between fe-director.read-lat and storage-volume.read-latency

Answer: D

Explanation:

QUESTION NO: 112

What is the maximum number of Virtual Volumes that can be created in a VPLEX Version 5 Cluster?

- A.**
2000

B.

4000

C.

8000

D.

16000

Answer: C

Explanation:

QUESTION NO: 113

Which is a best practice recommended for VPLEX Metro inter-cluster WAN settings?

A.

Allow auto-negotiation to select the optimal transmission rate

B.

Always use the defaults

C.

Always set the MTU to 9000

D.

Tune the network parameters according to the specifics of the configuration

Answer: B

Explanation:

QUESTION NO: 114

Refer to the exhibit.

```
service@VPLEX_260:~> cat /var/log/VPlex/cli/connections
128.221.252.36:5988|128.221.253.36:5988,director-1-1-B
128.221.252.37:5988|128.221.253.37:5988,director-1-2-A
128.221.252.38:5988|128.221.253.38:5988,director-1-2-B
128.221.252.69:5988|128.221.253.69:5988,director-2-2-A
128.221.252.70:5988|128.221.253.70:5988,director-2-2-B
128.221.252.35:5988|128.221.253.35:5988,director-1-1-A
128.221.252.67:5988|128.221.253.67:5988,director-2-1-A
128.221.252.68:5988|128.221.253.68:5988,director-2-1-B
```

Which VPLEX configuration is shown?

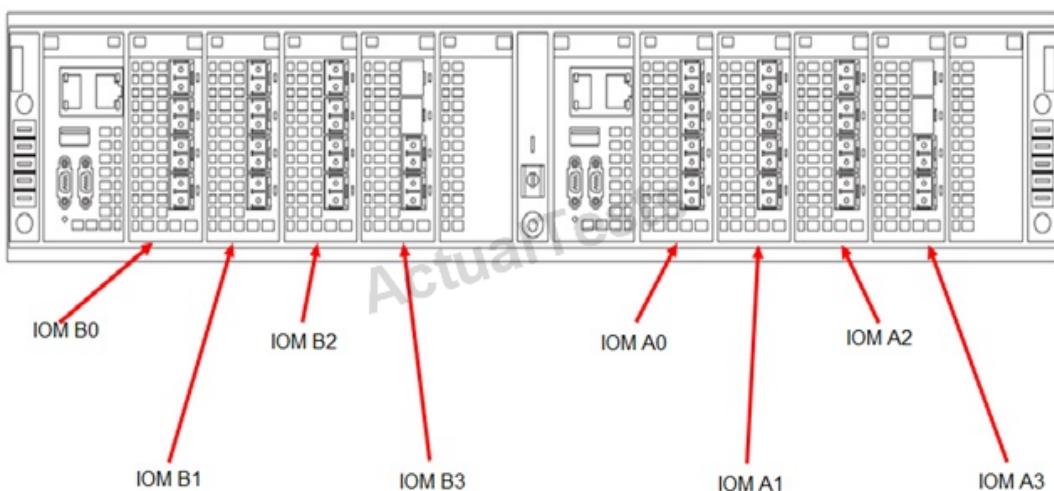
- A.**
VPLEX Metro/GEO dual engine
- B.**
VPLEX Local quad engine
- C.**
VPLEX Metro/GEO quad engine
- D.**
VPLEX Local dual engine

Answer: A

Explanation:

QUESTION NO: 115

Refer to the exhibit.



What is the module at IOM A0 used for?

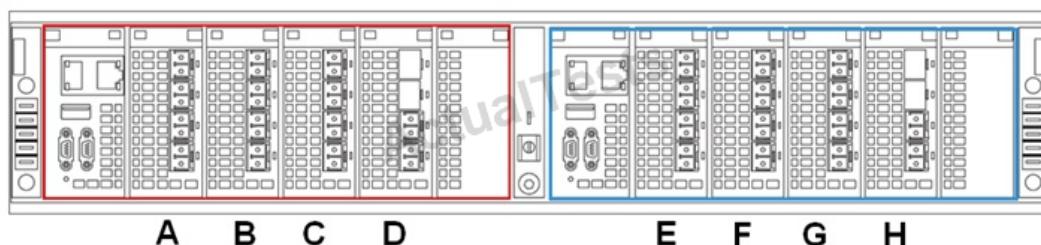
- A.**
Director A Back-end Connectivity
- B.**
Director A WAN COM Connectivity
- C.**
Director A Front-end Connectivity
- D.**
Director A Local Com Connectivity

Answer: C

Explanation:

QUESTION NO: 116

Refer to the exhibit:



Which two modules are used for back-end connectivity?

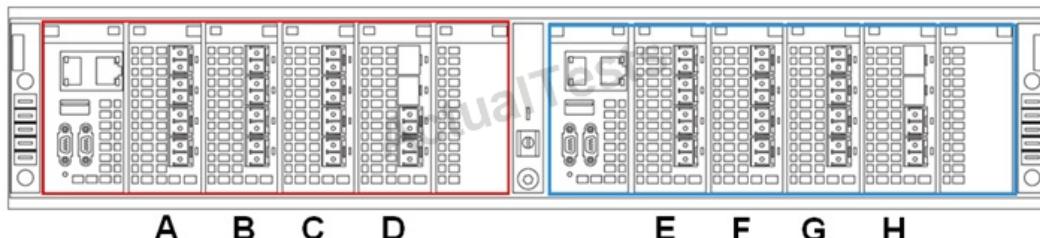
- A.**
A and E
- B.**
D and E
- C.**
B and F
- D.**
C and F

Answer: C

Explanation:

QUESTION NO: 117

Refer to the exhibit:



Which two modules are used for WAN-COM connectivity?

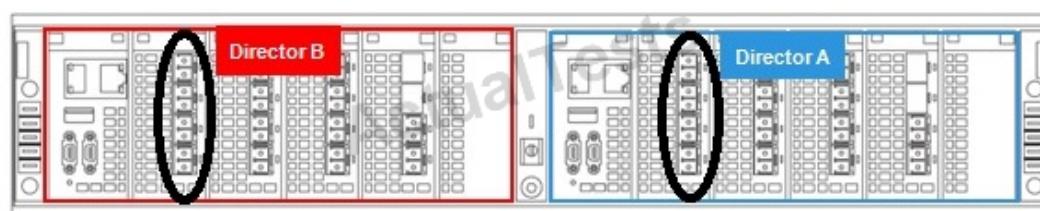
- A.**
C and G
- B.**
A and E
- C.**
D and E
- D.**
C and F

Answer: A

Explanation:

QUESTION NO: 118

Refer to the exhibit.



What is the function of the two highlighted VPLEX VS2 modules?

- A.**
Back-end connectivity
- B.**
Front-end connectivity

C.

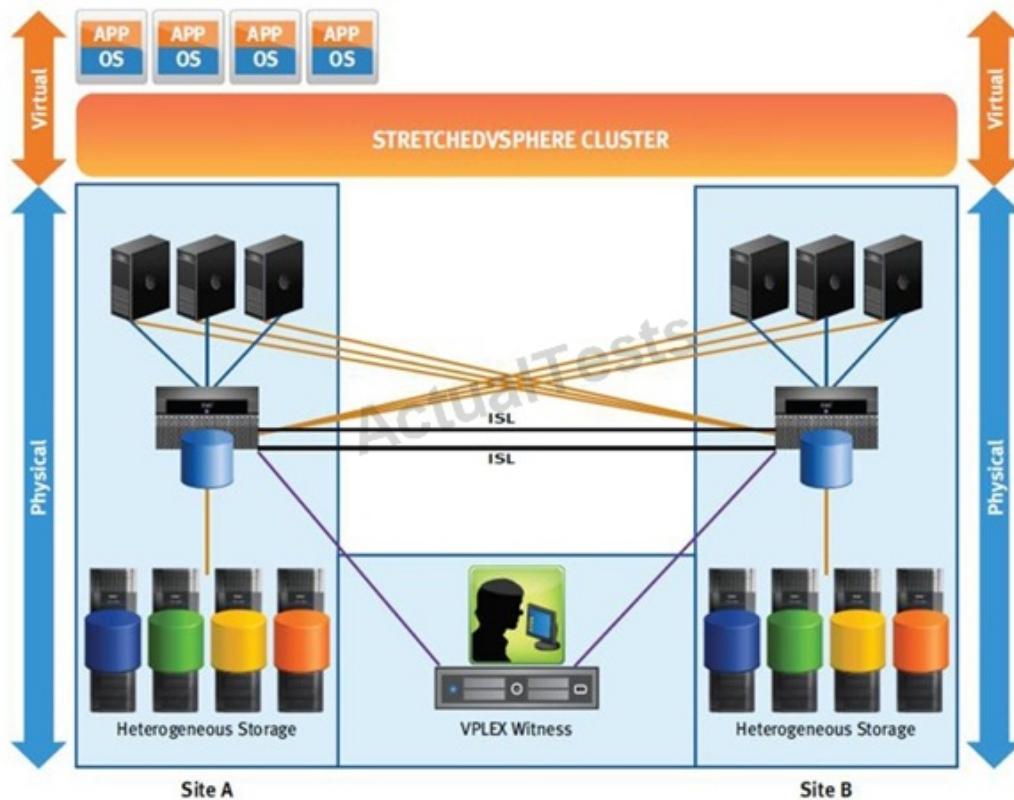
WAN-COM connectivity

D.

Local-COM connectivity

Answer: B**Explanation:****QUESTION NO: 119**

Refer to the exhibit.



A customer wants to implement a VPLEX Metro High Availability Cross Connect implementation between their two campus sites. What round-trip latency time requirement must be met between Site A and Site B?

A.

< 3 ms

B.

< 5 ms

C.

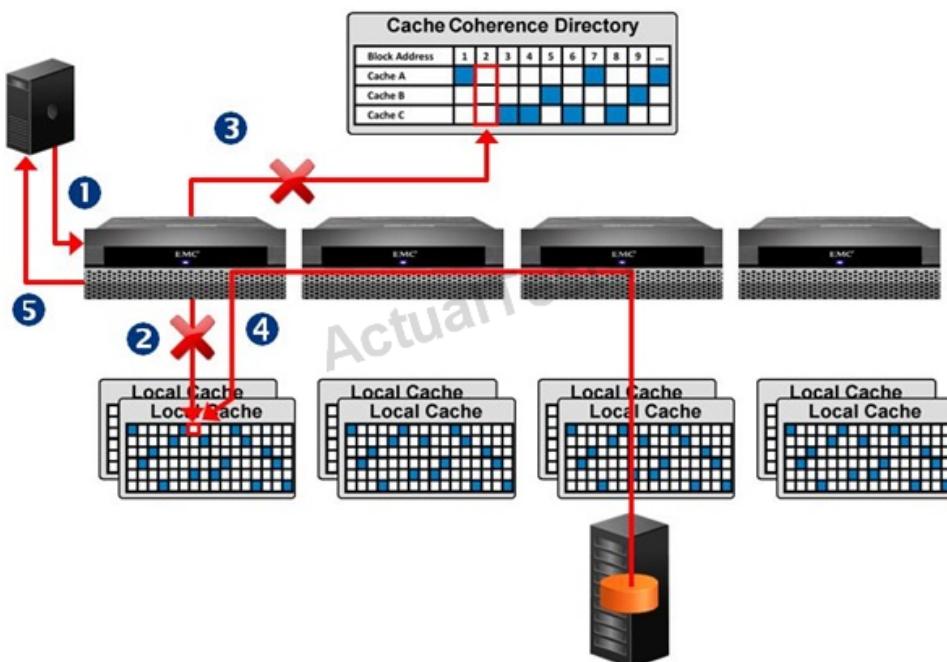
< 1 ms

D.

< 10 ms

Answer: C**Explanation:****QUESTION NO: 120**

Refer to the exhibit.



What does this VPLEX cache operation represent?

A.

Local Read Hit

B.

Global Read Hit

C.

Local Read Miss

D.

Global Read Miss

Answer: D

Explanation:**QUESTION NO: 121**

Refer to the exhibit.

```
Vplexcli:/clusters/cluster-1> vault status
=====
Cluster level summary
=====
Cluster:/clusters/cluster-1
Cluster is not vaulting/unvaulting
=====
Director level summary
=====
/engines/engine-1-1/directors/director-1-1-B:
    state: Vault Inactive
/engines/engine-1-1/directors/director-1-1-A:
    state: Vault Inactive
/engines/engine-1-2/directors/director-1-2-B:
    state: Vault Inactive
/engines/engine-1-2/directors/director-1-2-A:
    state: Vault Inactive
```

After a power disruption of 20 seconds in a VPLEX environment, the output of the "vault status" command shows no vaulting processes.

Why did this occur?

A.

The cache vaulting did not exceed the timer period.

B.

It is the expected output, because the command "vault status" doesn't show information on cache process at all.

C.

Cache vaulting process has already completed.

D.

Cache vaulting process is still running in background and it is not shown until completed.

Answer: A

Explanation:**QUESTION NO: 122**

Refer to the exhibit.

System Status: EMC VPLEX™ Metro

Get a quick overall status and a summary of components in each cluster of your VPLEX™ Metro. [Learn more...](#)

cluster-1

- Storage Views: 1 OK
- Directors: 4 OK
- Arrays: 2 OK

cluster-2

- Storage Views: 1 OK
- Directors: 4 OK
- Arrays: 2 OK

Operational Status: ✓ OK
Status Details: ✓

View Details

VPLEX Witness: ✓ enabled

- cluster-1: ✓ in contact
- cluster-2: ✓ in contact
- server: ✓ clusters in contact

View Details

On which cluster is the GUI connected?

- A.
Cluster-2
- B.
Cluster-1
- C.
Cluster IP alias
- D.
VPLEXCLI must be used to determine which cluster is supporting the GUI

Answer: B

Explanation:

QUESTION NO: 123

Refer to the exhibit.

Name	Date modified	Type	Size
director-1-1-A_PERPETUAL_vplex_sys_perf_mon.log	3/27/2013 11:12 AM	LOG File	5,278 KB
director-1-1-B_PERPETUAL_vplex_sys_perf_mon.log	3/27/2013 11:12 AM	LOG File	8,178 KB

A customer is requesting a performance analysis for their distributed volumes in a Metro

configuration to ensure there are no issues with a recent implementation.

What additional files should be collected?

A.
Perpetual log files from Cluster-2

B.
firmware.log from Cluster-1

C.
Health-Check output from Cluster-2

D.
VPLEX Performance GUI export from both clusters

Answer: A

Explanation:

QUESTION NO: 124

Refer to the exhibit.

Unisphere for VPLEX v5.1

System Status: EMC VPLEX™ Metro

Get a quick overall status and a summary of components in each cluster of your VPLEX™ Metro. [Learn more...](#)

cluster-1

Storage Views	
2	OK
Directors	2 OK
Arrays	1 OK

cluster-2

Storage Views	
2	OK
Directors	2 OK
Arrays	1 OK

Operational Status: ! **Status Details:** ! [View Details](#)

VPLEX Witness: ✓ enabled

- cluster-1: ✓ in contact
- cluster-2: ✓ in contact
- server: ✓ clusters in contact

[View Details](#)

You have opened the VPLEX Unisphere Manager to validate the health of the system.

What is the most likely reason for the Operational Status indicator?

A.

The VPLEX Witness has detected a WAN link failure.

B.

A component is in a degraded state in the cluster.

C.

Cluster-1 has lost management IP connection to cluster-2

D.

The cluster-1 management server has failed.

Answer: B**Explanation:****QUESTION NO: 125**

Refer to the exhibit.

System Status: EMC VPLEX™ Metro

Get a quick overall status and a summary of components in each cluster of your VPLEX™ Metro. [Learn more...](#)

cluster-1

- Storage Views: 2 OK
- Directors: 2 OK
- Arrays: 1 OK

cluster-2

- Storage Views: 2 OK
- Directors: 2 OK
- Arrays: 1 OK

Operational Status: ! [Status Details](#)

VPLEX Witness: ! **enabled**

- cluster-1: ! in contact
- cluster-2: ! in contact
- server: ! clusters in contact

Which tab of the VPLEX Unisphere Management Console GUI contains a link to VPLEX product documentation?

A.

Support

B.

Provision Storage

C.

Mobility Central

D.

System Status

Answer: A**Explanation:****QUESTION NO: 126**

Refer to the exhibit.

```
Vplexcli:/> configuration show-meta-volume-candidates
Name          Capacity  Vendor  IO      Type      Array Name
-----        -----    -----  -----  -----
-----        -----    -----  -----  -----
1.) VPD83T3:60000970000194901160533030314539 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901160
2.) VPD83T3:60000970000194901160533030314541 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901160
3.) VPD83T3:60000970000194901160533030314542 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901245
4.) VPD83T3:60000970000194901160533030314543 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901245
5.) VPD83T3:60000970000194901160533030314544 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901328
6.) VPD83T3:60000970000194901160533030314545 78.7G  EMC   alive   traditional  EMC-SYMMETRIX-194901328
Vplexcli:/> meta-volume create -n Pod7Meta -d
```

Which two metavolume candidates should be used to complete the displayed command?

A.

1 and 2

B.

5 and 6

C.

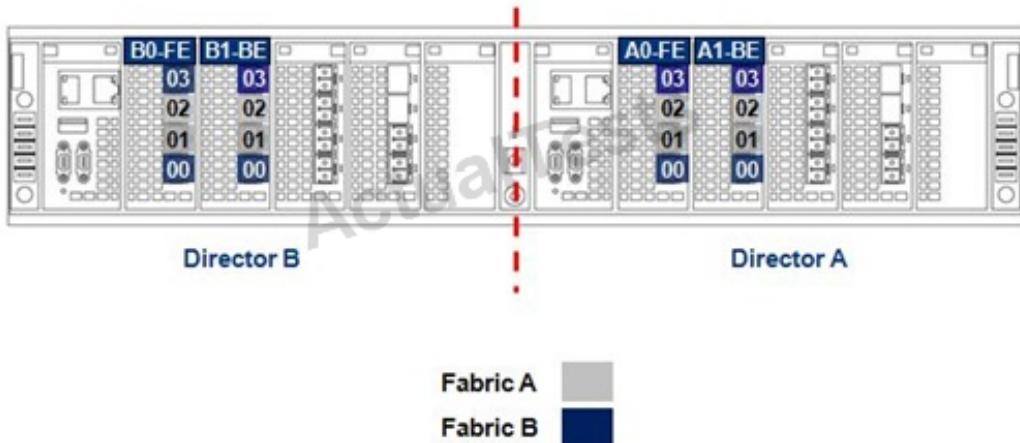
1 and 3

D.

3 and 4

Answer: C**Explanation:****QUESTION NO: 127**

Refer to the exhibit.



The customer has not followed EMC best practices when cabling their VS2 VPLEX engine. You are asked how to re-cable the engine to adhere to best practices. What is your response?

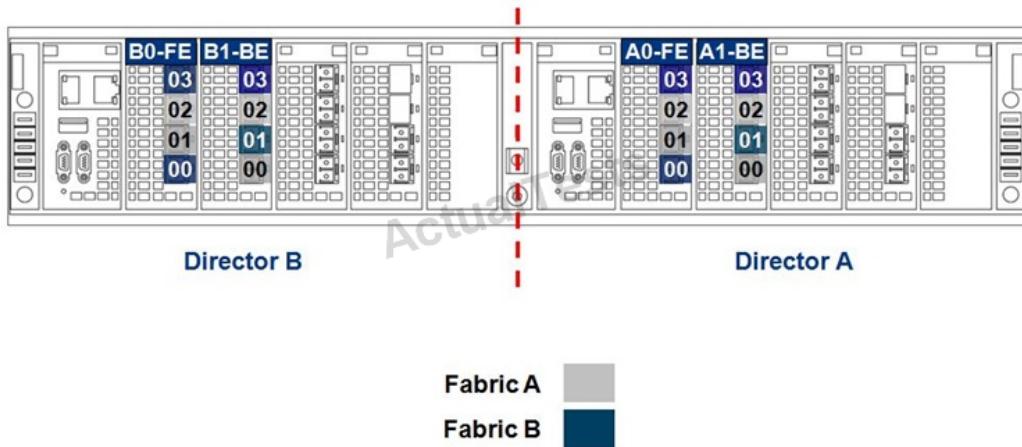
- A.**
Swap port 00 with port 01 of both director A and director B.
- B.**
Swap port 02 with port 03 of both director A and director B.
- C.**
Swap port 00 with port 01 of director B.
- D.**
Swap port 00 with port 01 of director A.

Answer: A

Explanation:

QUESTION NO: 128

Refer to the exhibit.



A customer has not followed EMC best practices when cabling their VS2 VPLEX engine. You are asked how to re-cable the engine to adhere to best practices. What is your response?

- A.**
Swap port 00 with port 01 of module A1-BE and B1-BE.
- B.**
Swap port 02 with port 03 of module A0-FE and B0-FE.
- C.**
Swap port 00 with port 01 of module A0-FE and B0-FE.
- D.**
Swap port 02 with port 03 of module A1-BE and B1-BE.

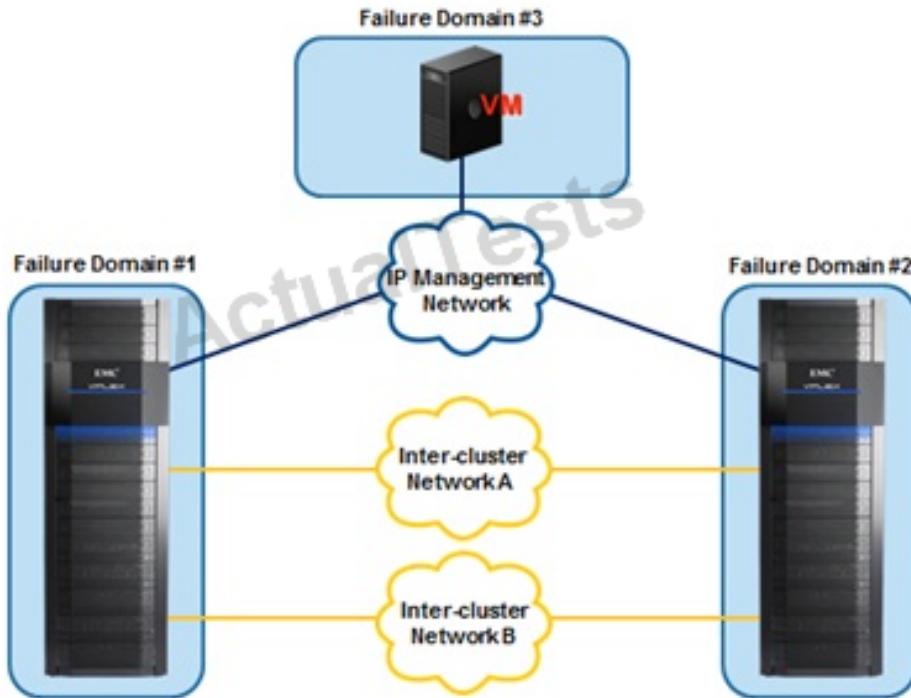
Answer: C

Explanation:

QUESTION NO: 129

Refer to the exhibit.

VPLEX Witness



What is the purpose of VPLEX Witness in a Metro environment?

A.

Prevent cluster link failure and stop I/O transfer.

Split consistency groups and failover consistency groups.

B.

Send notifications and pause I/O transfer.

Initiate vault dump and failover consistency groups.

C.

Observe state of the clusters and suspend I/O.

Execute health check and resume I/O.

D.

Observe the state of the clusters and distinguish link outages.

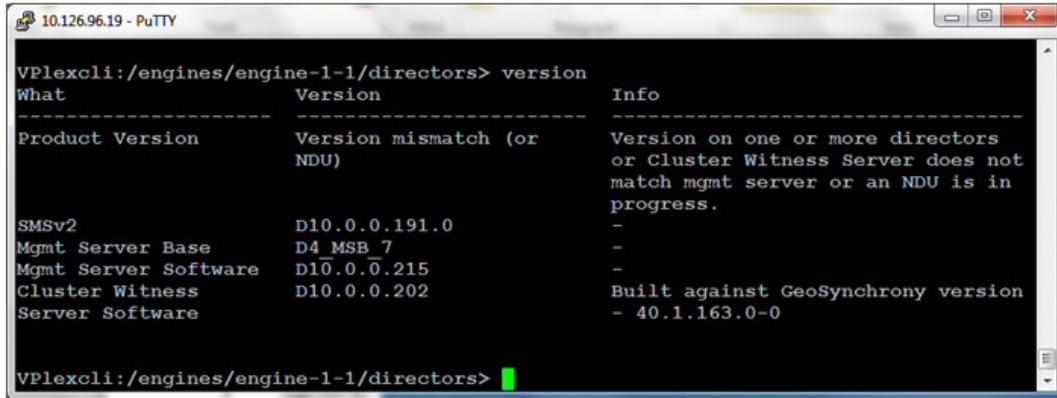
Intercluster failures and resume or suspend I/O.

Answer: D

Explanation:

QUESTION NO: 130

Refer to the exhibit.



Vplexcli:/engines/engine-1-1/directors> version

What	Version	Info
Product Version	Version mismatch (or NDU)	Version on one or more directors or Cluster Witness Server does not match mgmt server or an NDU is in progress.
SMSv2	D10.0.0.191.0	-
Mgmt Server Base	D4 MSB 7	-
Mgmt Server Software	D10.0.0.215	-
Cluster Witness Server Software	D10.0.0.202	Built against GeoSynchrony version - 40.1.163.0-0

Vplexcli:/engines/engine-1-1/directors>

You are preparing to upgrade a VPLEX Metro system. You ran the version command to begin the verification process and received the output shown.

What is the most likely reason for the warning?

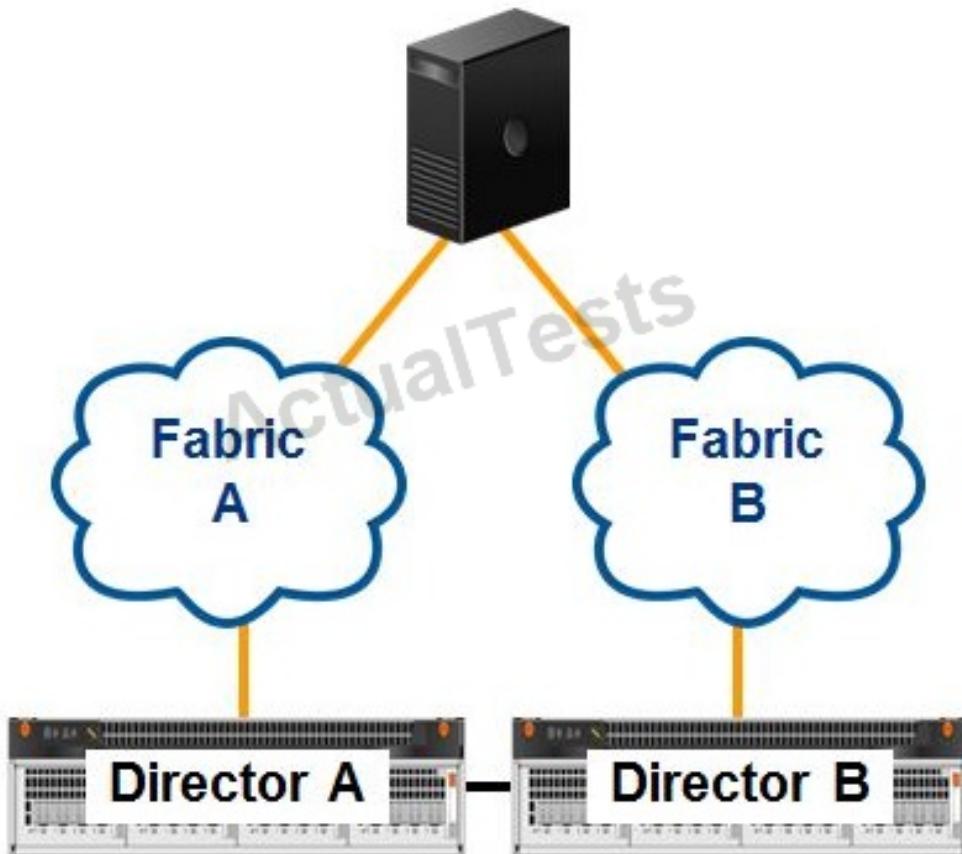
- A.**
The Metadata volume is in an NDU state.
- B.**
The Cluster Witness is at the wrong version.
- C.**
The Management Server is at the wrong version.
- D.**
The directors are in an NDU state.

Answer: B

Explanation:

QUESTION NO: 131

Refer to the exhibit.



NDU pre-check failed because minimal topology is in use. Which parameter can be added to the ndu start command that will allow the NDU to proceed without error in this situation?

- A.**
Only the --force option
- B.**
Only the --skip-view-config-check option
- C.**
Both the --skip-sysconfig-check and --skip-view-config-check options
- D.**
Both the --skip-sysconfig-check and --force options

Answer: C

Explanation:

QUESTION NO: 132

Refer to the exhibit.

```

IPSEC is UP
Remote Management Server at IP Address 10.31.25.27 is
reachable
Remote Internal Gateway addresses are reachable

Verifying the VPN status between the management server and
the cluster witness server...
IPSEC is UP
Cluster Witness Server at IP Address 128.221.254.3 is
reachable

```

Which command must be used to generate this output?

- A.**
vpn status
- B.**
ndu pre-check
- C.**
health-check
- D.**
ifconfig -a eth3

Answer: A

Explanation:

QUESTION NO: 133

Refer to the exhibit.

```

C:\>powermt display dev=harddisk4
Pseudo name=harddisk4
----- ID=FNM00121800313
Logical device ID=6000144000000010E00C2ECB3C5914FB
state=alive; policy= ----- ; priority=0; queued-IOS=1
=====
----- Host ----- Stor - -- I/O Path - -- Stats ---
### HW Path           I/O Paths   Interf. Mode   State Q-IOS Errors
=====
2 port2\path0\tgt1\lun0    c2t1d0    01      active  alive     1     1
2 port2\path0\tgt2\lun0    c2t2d0    04      active  alive     0     0
3 port3\path0\tgt0\lun0    c3t0d0    00      active  alive     0     1
3 port3\path0\tgt1\lun0    c3t1d0    05      active  alive     0     0

```

A customer is moving some VMAX devices under a VPLEX Local and is using PowerPath as multipath software. What is the preferred PowerPath load balancing policy assigned to VPLEX

volumes?

A.
Fixed

B.
Adaptive

C.
Round Robin

D.
SymOpt

Answer: B

Explanation:

QUESTION NO: 134

Refer to the exhibit.

```
Vplexcli:/clusters/cluster-1/devices> device detach-mirror -d clusterdevice  
-m clustermirror
```

What is the result of the command?

- A.
clustermirror becomes a top-level device but without any virtual volume created or guarantees about its data.
- B.
clustermirror becomes a top-level device, and a virtual volume is created for the device if the parent had a virtual volume.
- C.
clustermirror is broken down to its base extents.
- D.
clustermirror is detached and discarded.

Answer: B

Explanation:

QUESTION NO: 135

Refer to the exhibit.

```
Vplexcli:/clusters/cluster-1/devices/device_VNX0506_CSE_6_1/components/device_VNX0506_CSE_6_1@03Apr03_184408> device attach-mirror --device=device_VNX0506_CSE_6_1 -m device_VNX0506_CSE_7_1
Vplexcli:/clusters/cluster-1/devices/device_VNX0506_CSE_6_1/components/device_VNX0506_CSE_6_1@03Apr03_184408> rebuild status
[1] storage_volumes marked for rebuild

Global rebuilds:
  No active global rebuilds.

cluster-1 local rebuilds:
device          rebuild type   rebuilder director  rebuilt/total percent finished throughput ETA
-----  -----  -----  -----  -----
device_VNX0506_CSE_6_1 full      s1_led9_spd        463M/5G    9.05%    77.2M/s  imin
```

After the "attach-mirror" command is successfully executed on device "device_VNX0506_CSE_6_1", the command "rebuild-status" shows an ongoing rebuild process on the same device.

What is a possible cause?

A.

It is a normal behavior. when attaching a mirror, a rebuild process starts.

B.

The device "device_VNX0506_CSE_6_1" has an ongoing rebuild process for a previous failure.

C.

The rebuild process is related to a director failure.

D.

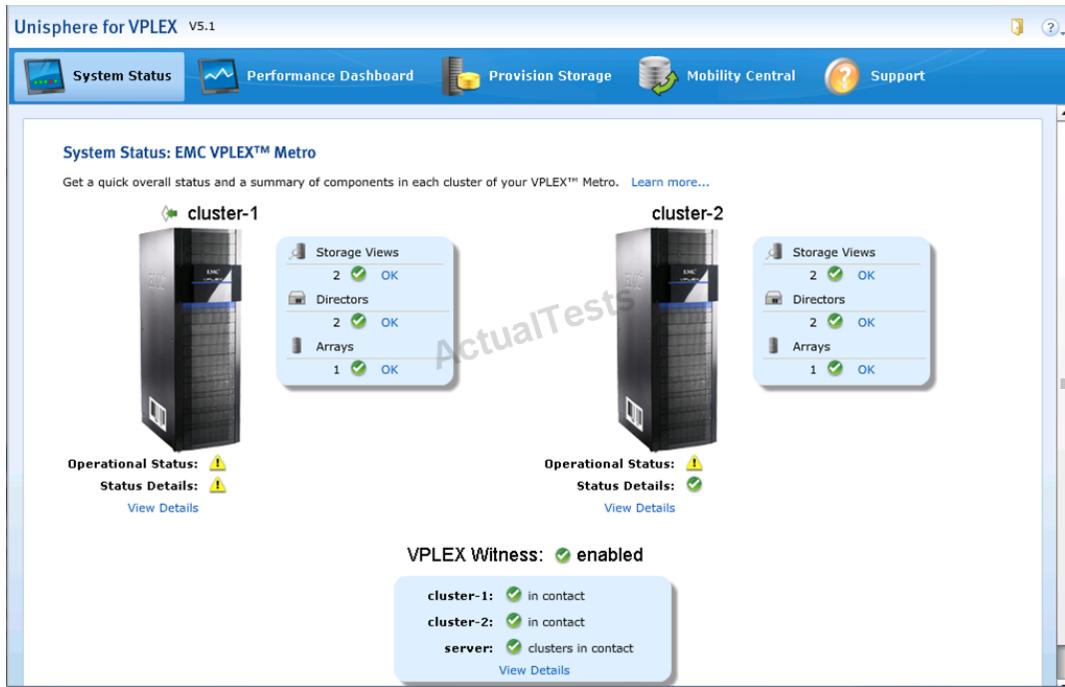
The device mirror will start only after the rebuild process is completed.

Answer: A

Explanation:

QUESTION NO: 136

Refer to the exhibit.



You are planning to perform data mobility between VPLEX Clusters using the GUI. What mobility job options do you have?

A.

create, stop, activate, monitor, pause, throttle and terminate

B.

create, activate, fracture, resync, monitor, pause, and commit

C.

create, cancel, suspend, monitor, pause, throttle, and terminate

D.

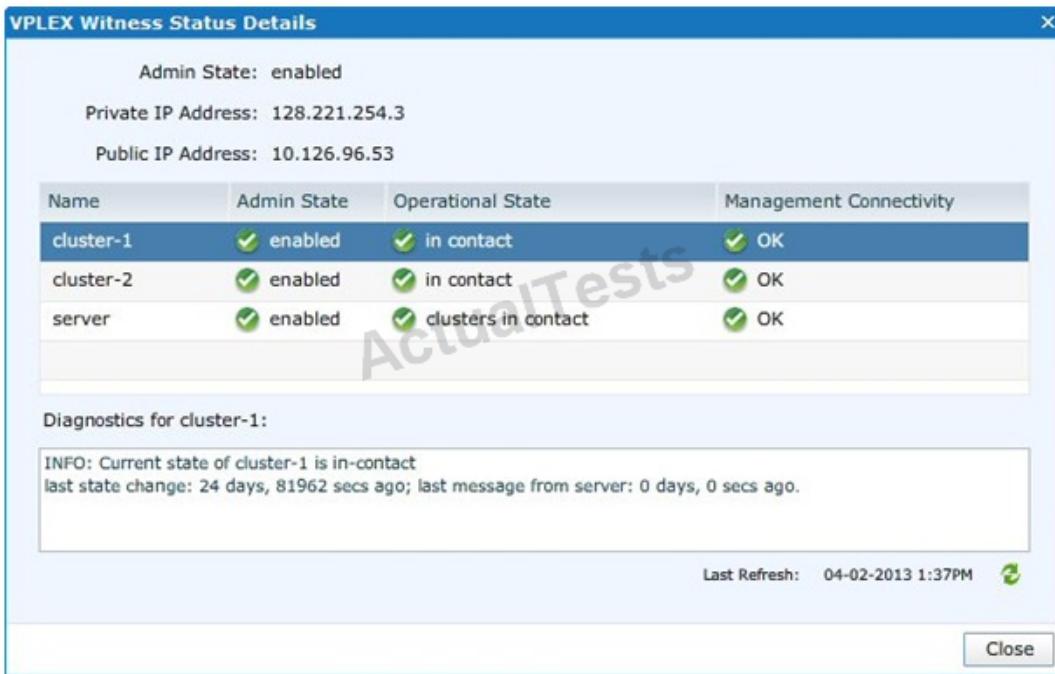
create, remove, cancel, monitor, pause, throttle, and commit

Answer: D

Explanation:

QUESTION NO: 137

Refer to the exhibit.



After 6 months of operation, you are monitoring the health of the VPLEX system from the Unisphere Manager for VPLEX.

What is the most likely reason for a state change of the VPLEX Witness?

A.

TheESXi host was rebooted.

B.

The WAN switch ports failed.

C.

The Management Server was restarted.

D.

TheMetaVolume was restored.

Answer: A

Explanation:

QUESTION NO: 138

Refer to the exhibit.

```

10.126.96.19 - PuTTY
VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> ll
Attributes:
Name          Value
-----
active-clusters []
cache-mode    synchronous
detach-rule   winner cluster-2 after 5s
operational-status [(cluster-1,{ summary:: ok, details:: [] }), (cluster-2,{ summary:: ok, details:: [] })]

passive-clusters []
recoverpoint-enabled false
storage-at-clusters [cluster-1, cluster-2]
virtual-volumes [DD_8_3.vol, DD_8_4.vol]
visibility     [cluster-1, cluster-2]

Contexts:
Name      Description
-----
advanced  -
recoverpoint  -

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> drill-down -o DD_8_3.vol
virtual-volume: DD_8_3.vol (cluster-1)
  distributed-device: DD_8_3
    distributed-device-component: DD_7_3 (cluster-1)
      extent: extent_Symm0841_03A7_1
        storage-volume: Symm0841_03A7 (blocks: 0 - 1295999)
    distributed-device-component: DD_8_32012Nov26_183659 (cluster-2)
      extent: extent_VNX_LUN102_1
        storage-volume: VNX_LUN102 (blocks: 0 - 1295999)

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2>

```

You have created a Distributed Device in a VPLEX Metro. You want to confirm you have chosen the correct volumes before performing a mobility job across clusters. You will be moving the device to cluster 1.

Which object will be the source for this operation?

- A.**
extent_Symm0841_03A7_1
- B.**
DD_8_32012Nov26_183659
- C.**
Symm0841_03A7
- D.**
DD_7_3

Answer: B

Explanation:

QUESTION NO: 139

Refer to the exhibit.

```

10.126.96.19 - PuTTY
VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> ll
Attributes:
Name          Value
-----
active-clusters []
cache-mode    synchronous
detach-rule   winner cluster-2 after 5s
operational-status [(cluster-1,{ summary:: ok, details:: [] }), (cluster-2,{ summary:: ok, details:: [] })]

passive-clusters []
recoverpoint-enabled false
storage-at-clusters [cluster-1, cluster-2]
virtual-volumes  [DD_8_3.vol, DD_8_4.vol]
visibility      [cluster-1, cluster-2]

Contexts:
Name          Description
-----
advanced      -
recoverpoint  -

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> drill-down -o DD_8_3.vol
virtual-volume: DD_8_3.vol (cluster-1)
  distributed-device: DD_8_3
    distributed-device-component: DD_7_3 (cluster-1)
      extent: extent_Symm0841_03A7_1
        storage-volume: Symm0841_03A7 (blocks: 0 - 1295999)
  distributed-device-component: DD_8_32012Nov26_183659 (cluster-2)
    extent: extent_VNX_LUN102_1
      storage-volume: VNX_LUN102 (blocks: 0 - 1295999)

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2>

```

You have created a Distributed Device in a VPLEX Metro. You want to confirm the volumes before performing a mobility job within the cluster. You will be moving the device to cluster 1.

Which object will be the source for this operation?

- A.**
extent_Symm0841_03A7_1
- B.**
DD_8_32012Nov26_183659
- C.**
Symm0841_03A7
- D.**
DD_7_3

Answer: A

Explanation:

QUESTION NO: 140

Refer to the exhibit.



The customer deleted ext_2 on a 20 GB LUN in order to make an extent of 10 GB. Why is the customer unable to create a 10 GB extent?

A.
Storage array must be re-discovered.

B.
ext_2 cannot be deleted.

C.
Chunks of the storage need to be contiguous.

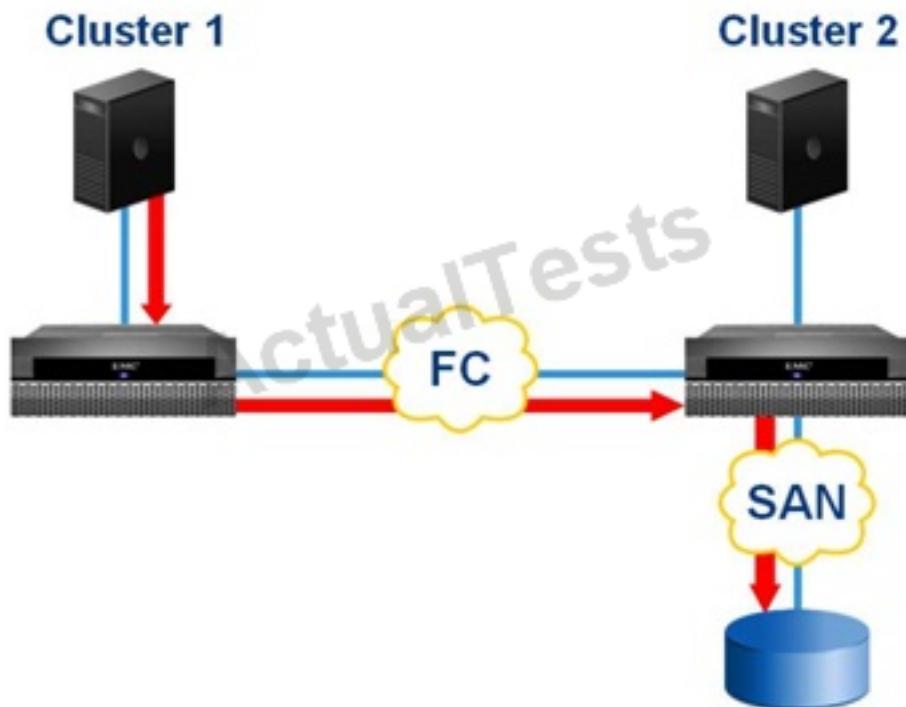
D.
The defrag property is set to false.

Answer: C

Explanation:

QUESTION NO: 141

Refer to the exhibit.



A customer needs to provision storage to a host on Cluster 1, but there is no additional local array capacity to allocate. How could the customer facilitate assigning storage to the Cluster 1 host from an array locally connected to Cluster 2?

- A.**
Enable remote access for a Cluster 2 virtual volume.
- B.**
Add a remote mirror to a Cluster 2 virtual volume.
- C.**
Create a distributed device from a virtual volume on Cluster
- D.**
Add a virtual volume from Cluster 2 to a distributed consistency group.

Answer: A

Explanation:

QUESTION NO: 142

Refer to the exhibit.

```
vPlexcli:/> ndu pre-check
Warning:
During the NDU process, multiple directors will be offline for a
portion of the time. This is non-disruptive but is dependent on
a host-based multipathing solution being installed, configured,
and operating on all connected hosts.

Warning:
Please run the "health-check --full" command to verify that the VPLEX hardware
is healthy.
Analyzing system configuration: .DONE
No first upgraders
=====
The output for 'ndu pre-check' has been captured in /var/log/vPlex/cli/capture/ndu-pre-check-session.txt
ndu pre-check: Evaluation of <<ndu pre-check>> failed.
Cause:   Command execution failed.
Cause:   No first upgraders

vPlexcli:/> version -a
What          Version      Info
-----
Product Version -           couldn't retrieve director software version(s)
SMSV2          D10.0.0.193.0 -
Mgmt Server Base D4_MS8.7  -
Mgmt Server Software D10.0.0.218 -
```

You are preparing to perform an upgrade on an unconfigured VPLEX Metro. When you run the ndu pre-check command, it indicates that it has failed and there are no first upgraders. In your troubleshooting, you run the version -a command.

Based on the output, what is the reason for the failure?

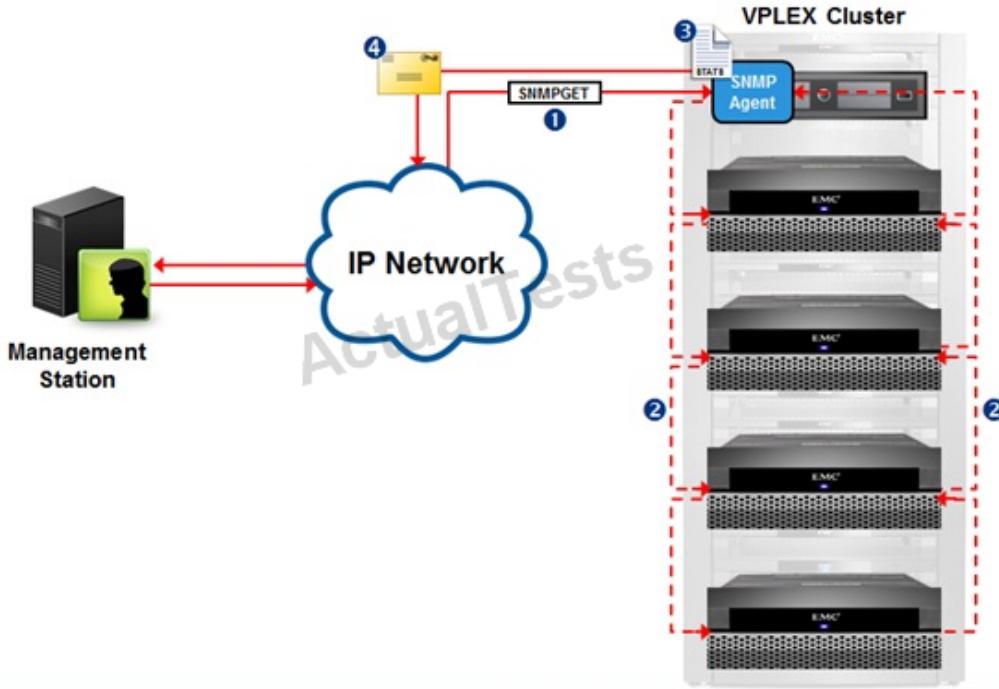
- A.
health-check --full was not run
- B.
Directors are at incompatible code levels
- C.
ndu pre-check --force flag was not used
- D.
Directors are not connected.

Answer: D

Explanation:

QUESTION NO: 143

Refer to the exhibit.



Reference the message type shown at point "1".

What type of response will be sent back to the SNMP management server from the SNMP Agent?

- A.**
A poll response containing requested data
- B.**
A trap response containing requested data
- C.**
A poll response that initiates a trap response
- D.**
A trap response containing all MIB data

Answer: A

Explanation:

QUESTION NO: 144

Refer to the exhibit.

```
Vplexcli:/clusters/cluster-2> vault status
=====
Cluster level summary
=====
Cluster:/clusters/cluster-2
Cluster is not vaulting/unvaulting
```

During a short power disruption to cluster 2, director-2-1-A had failed. Power was restored after 5 minutes. In examining the output of the vault status command, you note that cluster-2's status reads "Cluster is not vaulting/unvaulting".

Why did this message appear?

A.

There was no power disruption at cluster-1

B.

The power disruption affected a single director only.

C.

The power disruption did not affect all "A" directors.

D.

The vaulting process runs on cluster-1

Answer: B

Explanation:

QUESTION NO: 145

Refer to the exhibit.

```
Vplexcli:/engines/engine-1-2/directors/director-1-2-A/hardware/ports/A1-FC01> ll
Name          Value
-----
address       0x500014xxxxxxxx11
current-speed 8Gbits/s
enabled        true
max-speed     8Gbits/s
node-wwn      0x500014xxxxxxxxd9
operational-status ok
port-status    up
port-wwn      0x500014xxxxxxxx11
protocols      [fc]
role           back-end
target-port   -
topology      loop
```

You are implementing a VPLEX Metro configuration, and some BE ports are not logged into the fabric.

Which VPLEX command should be performed?

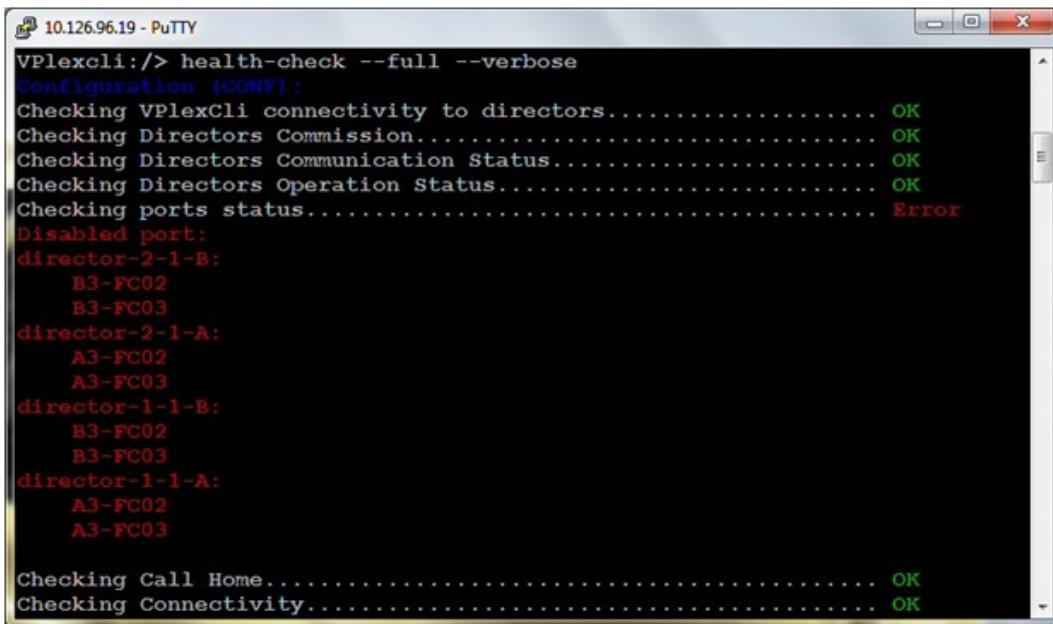
- A.
set topology p2p
- B.
set enabled=true
- C.
set topology loop
- D.
set port speed

Answer: A

Explanation:

QUESTION NO: 146

Refer to the exhibit.



Vplexcli:/> health-check --full --verbose
Configuration (CONF):
Checking VplexCli connectivity to directors..... OK
Checking Directors Commission..... OK
Checking Directors Communication Status..... OK
Checking Directors Operation Status..... OK
Checking ports status..... Error
Disabled port:
director-2-1-B:
 B3-FC02
 B3-FC03
director-2-1-A:
 A3-FC02
 A3-FC03
director-1-1-B:
 B3-FC02
 B3-FC03
director-1-1-A:
 A3-FC02
 A3-FC03

Checking Call Home..... OK
Checking Connectivity..... OK

You are performing a health-check on a VPLEX VS2 Metro system. After running several commands, you notice port errors on the VPLEX directors.

What does the information listed under Checking ports status indicate?

- A.
Not all Local-COM ports have been enabled.
- B.

Not all BE ports have been enabled.

C.

Not all FE ports have been enabled.

D.

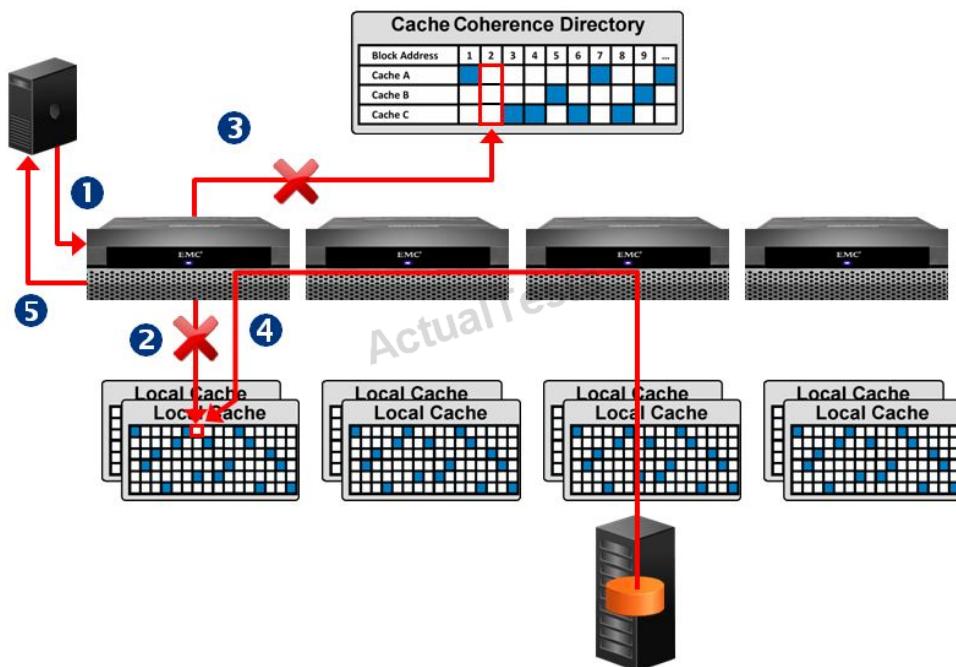
Not all WAN-COM ports have been enabled.

Answer: D

Explanation:

QUESTION NO: 147

Exhibit:



Which VPLEX object contains virtual-to-physical mapping information and must be stored on multiple arrays?

A.

Metadata volume

B.

Logging volume

C.

Virtual volume

D.

Director volume

Answer: A

Explanation:

QUESTION NO: 148

What aspect of VPLEX assigns and remembers chunk ownership?

A.

Meta-Directory

B.

Repository

C.

Share Groups

D.

Consistency Groups

Answer: A

Explanation:

QUESTION NO: 149

Which type of volume has complete synchronized copies of data (mirrors) in more than one cluster?

A.

Distributed Device

B.

Extent

C.

Device

D.

Virtual Volume

Answer: A

Explanation:

QUESTION NO: 150

What is a group of VPLEX directors that participate in the cache coherence protocol for a virtual volume?

A.

Share Group

B.

Consistency Group

C.

Storage View

D.

Administrative Domain

Answer: A

Explanation:

QUESTION NO: 151

What is the total number of available engines in the smallest VPLEX Metro configuration?

A.

2

B.

1

C.

8

D.

4

Answer: A

Explanation:

QUESTION NO: 152

What is the maximum supported latency for a VPLEX Metro implementation?

A.

5 ms

B.

2 ms

C.

50 ms

D.

15 ms

Answer: A

Explanation:

QUESTION NO: 153

Click on the calculator icon in the upper left corner of the screen. A customer has ordered a new VPLEX, and you are on site doing the initial installation. When creating metadata volumes for the VPLEX Local configuration, the customer asks you how much total storage is needed for the VPLEX metadata.

According to EMC best practices, what is the total minimum storage needed for this configuration?

A.

312 GB

B.

78 GB

C.

156 GB

D.

234 GB

Answer: A

Explanation:

QUESTION NO: 154

What is a key advantage of integrating VPLEX into a VMware environment?

A.

If VM data is shared across arrays or across data centers it becomes problematic, VPLEX solves these problems.

B.

Without VPLEX, Motion can only migrate to other disks within the same array.

C.

VMware HA can only replicate across data centers to same-type arrays. VPLEX allows data stores to live on any array-type.

D.

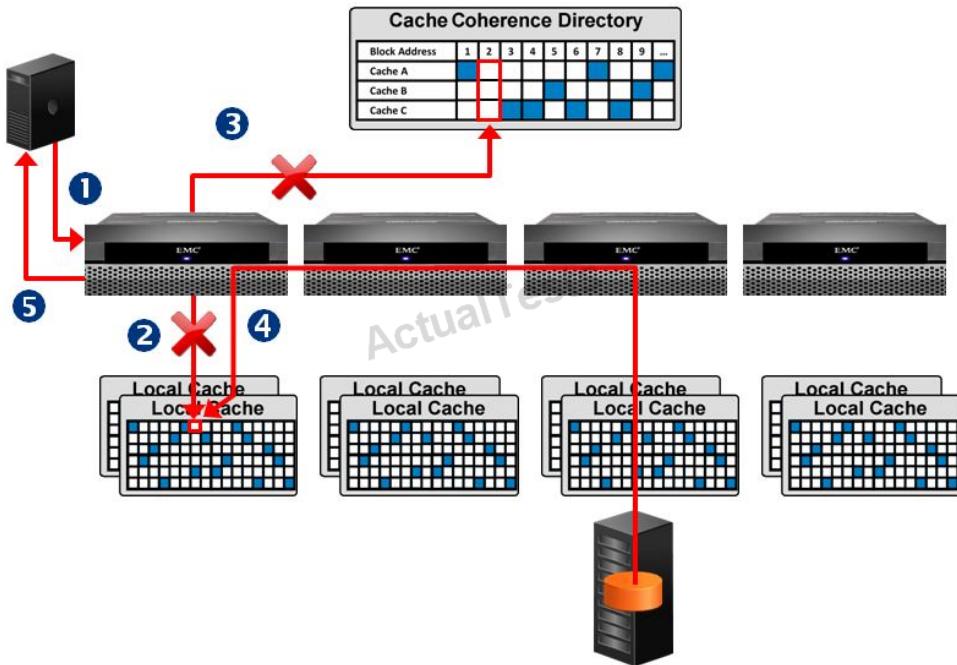
Without VPLEX, all of an ESX server's data must reside on the same array.

Answer: A

Explanation:

QUESTION NO: 155

Refer to the exhibit.



What does this 4-step VPLEX cache operation represent?

- A.**
Global Read Miss
- B.**
Local Read Hit
- C.**
Global Read Hit
- D.**
Local Read Miss

Answer: A

Explanation:

QUESTION NO: 156

In which asynchronous Consistency Group Operation stage are the delta sets written to the storage arrays?

- A.**
Commit
- B.**
Closed

C.
Exchange

D.
Open

Answer: A

Explanation:

QUESTION NO: 157

What is true about VPLEX CLI?

- A.
User can press the tab key to display all valid commands within the current context.
- B.
“Storage-volume claim” command can be used in root context VPlexcli.
- C.
Command syntax option –d is short for –default.
- D.
Command “Connectivity validate-be” shows which ports can communicate with each other.

Answer: A

Explanation:

QUESTION NO: 158

Which command can provide information on connections between storage volumes and back-end ports?

- A.
Connectivity director
- B.
Connectivity show
- C.

Connectivity validate-be

- D.
Export storage-view summary

Answer: A

Explanation:

QUESTION NO: 159

A customer has purchased a dual engine VPLEX Metro cluster. During installation, there are not enough free SAN ports to connect all WAN-COM ports to the SAN. What is the recommended approach?

A.

The customer must provide additional SAN ports or acquire additional SAN ports to connect all WAN-COM ports of both VPLEX engines to the SAN.

B.

The customer must connect the WAN-COM ports of the first engine only and disable the second engine from the VPLEX CLI.

C.

It is sufficient to connect the WAN-COM ports of either engine 1 or 2 because redundancy is provided by leveraging two separate SAN fabrics.

D.

The customer must connect the WAN-COM ports of the first engine only and disable the second engine from the Unisphere for VPLEX GUI.

Answer: A

Explanation:

QUESTION NO: 160

Which information is required to configure ESRS for VPLEX?

A.

VPLEX model type Top Level Assembly Site ID IP address of the Management Server public port

B.

Top Level Assembly Site ID IP address of the Management Server public port Configuration (1, 2 or 4 Engines)

C.

VPLEX model type Level Assembly customer contact IP address of the Management Server public port

D.

VPLEX model type Site ID IP address of the Management Server public port Primary Customer contact

Answer: A

Explanation:

QUESTION NO: 161

What is the recommended protection to be used when creating a VPLEX Logging Volume?

A.

RAID-1

B.

Raid-C

C.

RAID-0

D.

Mapping

Answer: A

Explanation:

QUESTION NO: 162

According to EMC best practices, how many storage volumes are required for metadata when configuring a VPLEX local cluster?

A.

4

B.

3

C.

2

D.

1

Answer: A

Explanation:

QUESTION NO: 163

Following EMC best practices, which information is required to register a VPLEX on an ESRS portal?

A.

Site ID; cluster TLA serial number; Management server eth3 IP address

B.

License ID; engine serial number; Management server eth3 IP address

C.

Site ID; engine serial number; Management server eth3 IP address

D.

Site ID; cluster TLA serial number; Witness IP address

Answer: A

Explanation:

QUESTION NO: 164

What can you use to generate a list of VPLEX fabric initiator and target identifiers?

A.

Atlas WWN Tool

B.

Solve Desktop

C.

Support.EMC.com

D.

Unisphere for VPLEX

Answer: A

Explanation:

QUESTION NO: 165

What is the EMC best practice for the optimum number of active back-end storage paths per director for each LUN presented to VPLEX?

A.

4 paths

B.

2 paths

C.

8 paths

D.

16 paths

Answer: A

Explanation:

QUESTION NO: 166

You are administering a VPLEX Metro configuration. When is it necessary to create a logging volume?

A.

Before creating a distributed device

B.

After creating a local device

C.

After creating a mobility job

D.

Before performing an NDU

Answer: A

Explanation:

QUESTION NO: 167

When do you enable the front-end ports during VPLEX installation?

A.

After create meta-volumes and backup

B.

Before create meta-volumes and backup

C.

Before launch EZ-Setup wizard

D.

After expose storage to hosts

Answer: A

Explanation:

QUESTION NO: 168

During the installation of a VPLEX Local, the command ‘configuration system-setup’ is issued. What is accomplished by this command?

A.

Launches EZ-setup Wizard

- B.**
Configures EMC system reports
- C.**
Exposes back-end storage to cluster
- D.**
Creates a logging volume

Answer: A

Explanation:

QUESTION NO: 169

After registering Cluster-2 with ESRS during a VPLEX Metro cluster build, what is the next step to perform before the cluster is successfully built?

- A.**
Complete EZ-Setup Wizard on Cluster-1
- B.**
Complete EZ-Setup Wizard on Cluster-2
- C.**
Configure WAN connections on Cluster-1
- D.**
Configure WAN connections on Cluster-2

Answer: A

Explanation:

QUESTION NO: 170

When creating logging and metadata volumes, which LUN requirement applies to both?

- A.**
Array LUNs must be zeroed-out.
- B.**

Array LUNs must be RAID-need a number here

C.

Array LUNs must be thin.

D.

Array LUNs must be RAID-need a number here

Answer: A

Explanation:

QUESTION NO: 171

What is the purpose of VPLEX Witness in a Metro environment?

A.

Observe the state of the clusters, Distinguish link outages, Intercluster failures, Resume or suspend I/O

B.

Prevent cluster link failure, Stop I/O transfer, Split consistency groups, Failover consistency groups

C.

Send notifications, Pause I/O transfer, Initiate vault dump, Failover consistency groups

D.

Observe state of the clusters, Suspend I/O, Execute health-check, Resume I/O

Answer: A

Explanation:

QUESTION NO: 172

During an installation, the physical equipment inspection reveals an ESX host used for VPLEX Witness is located in the same rack as VPLEX cluster 1 Engine. What needs to be done?

A.

The VPLEX Witness server must be placed in a separate failure domain.

B.

VPLEX Witness server must be in a separate cabinet in the same data center.

C.

VPLEX Witness must exist on an HA ESX Host

D.

VPLEX Witness must exist on an FT ESX Host

Answer: A

Explanation:

QUESTION NO: 173

What is required of an ESX host for the Witness to be installed?

A.

MAC address change set to Accept

B.

Promiscuous mode set to Accept

C.

ESX host in Cluster 1 failure domain

D.

ESX host in Cluster 2 failure domain

Answer: A

Explanation:

QUESTION NO: 174

Which vplexcli command will ensure that the directors SSD firmware has been upgraded to the correct version after the VPLEX NDU?

A.

version -a --verbose

B.

director firmware show-banks

C.

version -a

D.

ll /**/internal-disks/*

Answer: A

Explanation:

QUESTION NO: 175

Which three elements are part of the VPLEX Storage View?

A.

VPLEX FE Port, Initiator, Virtual Volume

B.

VPLEX FE Port, Top-Level Device, Storage Volume

C.

VPLEX BE Port,VPLEX FE Port, Virtual Volume

D.

VPLEX BE Port, Initiator, Virtual Volume

Answer: A

Explanation:

QUESTION NO: 176

Which unique logical identifier is used when determining the relationship between a virtual volume and the back-end storage array?

A.

VPD ID

B.

WWPN

C.
LUN ID

D.
FCID

Answer: A

Explanation:

QUESTION NO: 177

A customer has a VPLEX Metro installed. They asked you to recommend a method to non-disruptively move Virtual Volumes from a storage array at Cluster 1 to a storage array at Cluster 2. What would you recommend?

- A.**
Use the Device Mobility feature of VPLEX.
- B.**
Use the Extent Mobility feature of VPLEX.
- C.**
Change the RAID protection to RAID 0
- D.**
Use array-based features to copy the storage volume, then rediscover the array.

Answer: A

Explanation:

QUESTION NO: 178

In a customer's VPLEX Metro environment, a host has been provisioned as a single virtual volume from cluster-1. The customer now needs to convert the local virtual volume to a distributed device.

How can the customer accomplish this?

- A.**
Add an unused device from cluster-2 as a remote mirror to the virtual volume on cluster-1

B.

Add an unused virtual volume from cluster-2 as a remote mirror to the virtual volume on cluster-1

C.

Enable remote access to an unused virtual volume from cluster-2 and add it as a remote mirror.

D.

Enable remote access to an unused device from cluster-2 and add it as a remote mirror.

Answer: A

Explanation:

QUESTION NO: 179

You created a synchronous consistency group, which contains two distributed volumes configured with the rule "set cluster-1-detaches".

What is the expected behavior of the virtual volumes in the event of a WAN-COM failure?

A.

cluster-1 is declared the winner after 5 seconds and I/O will continue at that cluster.

B.

I/O will continue at both clusters.

C.

I/O will be suspended at both clusters until the WAN-COM is repaired.

D.

cluster-2 is declared the winner after 5 seconds and I/O will continue at that cluster.

Answer: A

Explanation:

QUESTION NO: 180

Click on the calculator in the upper left corner. How much distributed storage can be managed by a 20 GB logging volume?

A.

Up to 640 TB

B.

Up to 20 TB

C.

Up to 320 TB

D.

Up to 200 TB

Answer: A

Explanation:

QUESTION NO: 181

A customer has a VPLEX Metro configuration across two data centers 200 km apart. During an overnight backup, the WAN-COM link between the two data centers fails. What VPLEX object allows for future incremental re-synchronization with the remote mirror once the link is restored?

A.

Logging Volumes

B.

VPLEX Witness

C.

Metadata Volumes

D.

Management Server

Answer: A

Explanation:

QUESTION NO: 182

A VPLEX administrator claims a 100GB Storage Volume that is thin provisioned on the storage array and has 25GB physically allocated and creates a 1:1 encapsulated virtual volume. After a local data mobility job for that Virtual Volume, the storage array administrator notices that the

allocated capacity has increased to 100GB. Why did this happen?

- A.**
The destination Storage Volume was not claimed with the thin-rebuild parameter in VPLEX.
- B.**
VPLEX does not support thin devices.
- C.**
Neither the source nor the destination Storage Volume were claimed with the thin-rebuild parameter in VPLEX.
- D.**
The source Storage Volume was not claimed with the thin-rebuild parameter in VPLEX.

Answer: A

Explanation:

QUESTION NO: 183

Which type of statistics are used to track latencies, determine median, mode, percentiles, minimums and maximums?

- A.**
Buckets
- B.**
Counters
- C.**
Readings
- D.**
Monitors

Answer: A

Explanation:

QUESTION NO: 184

Click on the calculator in the upper left corner. You have a perpetual performance monitor running on director 1-1-A. The data being monitored is growing at a rate of 2 MB per minute. At the current data rate, how far back in time will this monitor be able to reach?

- A.**
50 minutes
- B.**
5 minutes
- C.**
5 hours
- D.**
50 hours

Answer: A

Explanation:

QUESTION NO: 185

In a VPLEX Metro with Witness, which command checks the status and uptime of VPN, and returns the remote VPLEX management IP address and the witness public IP address?

- A.**
shell command sudo /usr/sbin/ipsec statusall
- B.**
vplexcli command cluster status
- C.**
shell command /sbin/ifconfig
- D.**
vplexcli command VPlexadmin show

Answer: A

Explanation:

QUESTION NO: 186

You have added a new storage array to your environment, but VPLEX, does not see it. Which VPlexcli command will display the new storage array?

- A.**
clusters/cluster-/storage-elements/storage-arrays/array re-discover
- B.**
/array claim -s
- C.**
/clusters/cluster-//storage-elements/storage-arrays>array used-by-array
- D.**
connectivity validate-be

Answer: A

Explanation:

QUESTION NO: 187

Do virtual volumes need to be taken off-line prior to upgrading VPLEX software, and why or why not?

- A.**
Yes, to preserve data integrity
- B.**
Yes, because the host-based multi-pathing software provides direct access during the upgrade
- C.**
No, because VPLEX software can be upgraded non-disruptively
- D.**
No, because the upgrading can be undone

Answer: C

Explanation:

QUESTION NO: 188

Which is a best practice recommended for VPLEX Metro inter-cluster WAN settings?

A.

Always use the defaults

B.

Allow auto-negotiation to select the optimal transmission rate

C.

Always set the MTU to 9000

D.

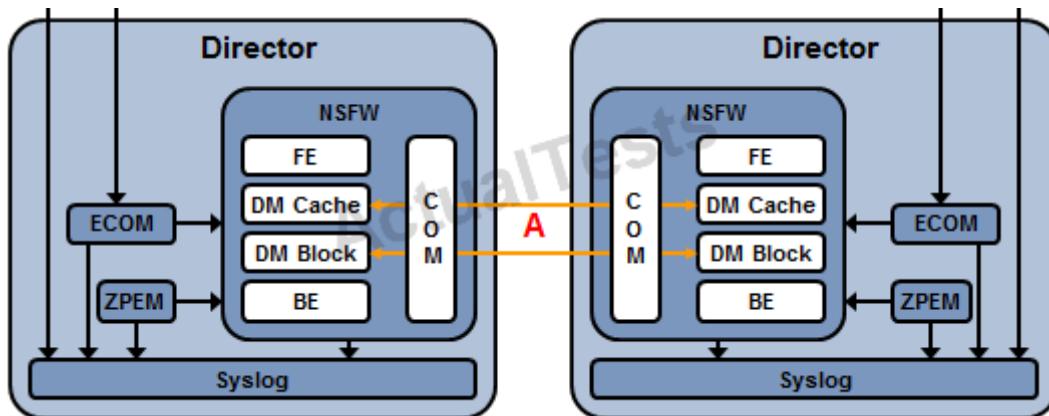
Tune the network parameters according to the specifics of the configuration

Answer: D

Explanation:

QUESTION NO: 189

Refer to the Exhibit.



Based on this diagram of a single VPLEX engine, which protocol is represented by "A"?

A.

FC

B.

IP

C.

ISCSI

D.
FCIP

Answer: A

Explanation:

QUESTION NO: 190

Refer to the exhibit.

System Status: EMC VPLEX™ Metro

Get a quick overall status and a summary of components in each cluster of your VPLEX™ Metro. [Learn more...](#)

The screenshot shows the EMC VPLEX Metro system status interface. It displays two clusters, cluster-1 and cluster-2, each with a summary of its components: Storage Views, Directors, and Arrays. Both clusters show all components as 'OK'. Below the clusters, there is a summary section for the VPLEX Witness, which is enabled. It indicates that both cluster-1 and cluster-2 are in contact, and there is one server listed as having clusters in contact.

cluster-1		cluster-2	
Storage Views	1 ✓ OK	Storage Views	1 ✓ OK
Directors	4 ✓ OK	Directors	4 ✓ OK
Arrays	2 ✓ OK	Arrays	2 ✓ OK

VPLEX Witness: ✓ enabled

- cluster-1: ✓ in contact
- cluster-2: ✓ in contact
- server: ✓ clusters in contact

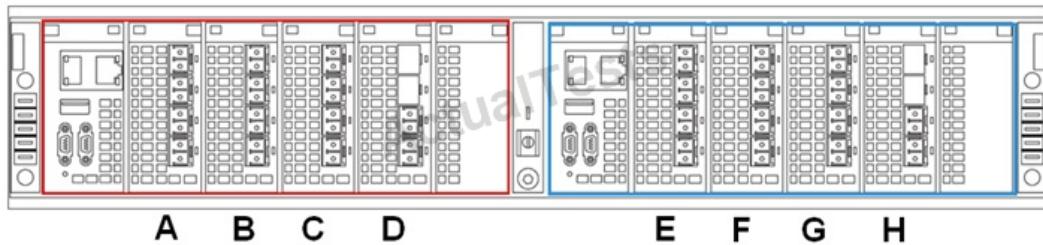
On which cluster is the GUI connected?

- A.**
Cluster-1
- B.**
Cluster-2
- C.**
Cluster IP alias
- D.**
VPLEXCLI must be used to determine which cluster is supporting the GUI

Answer: A

Explanation:**QUESTION NO: 191**

Refer to the exhibit.



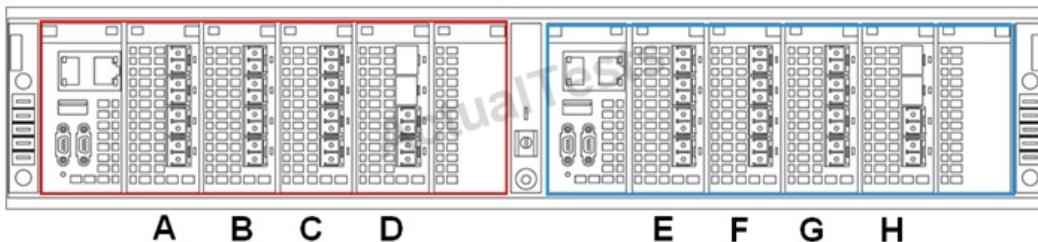
What is the function of the Module in slot "A"?

- A.**
Front-end connectivity
- B.**
Back-end connectivity
- C.**
WAN-COM connectivity
- D.**
Local-COM connectivity

Answer: A

Explanation:**QUESTION NO: 192**

Refer to the exhibit.



Which two modules are used for WAN-COM connectivity?

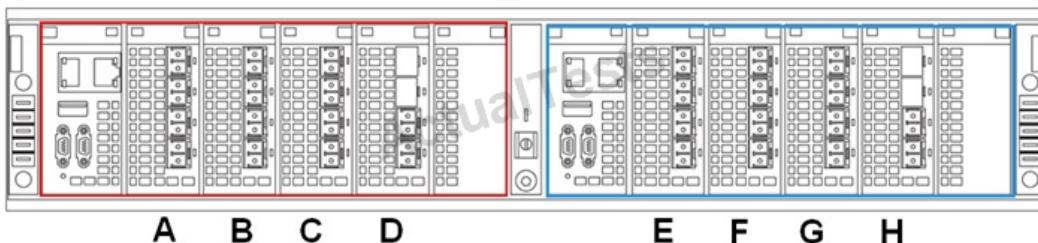
- A.**
C and G
- B.**
C and D
- C.**
D and E
- D.**
G and H

Answer: A

Explanation:

QUESTION NO: 193

Refer to the exhibit.



For what is the module labeled "E" used?

- A.**
Director A Front-end Connectivity
- B.**
Director A Back-end Connectivity

C.

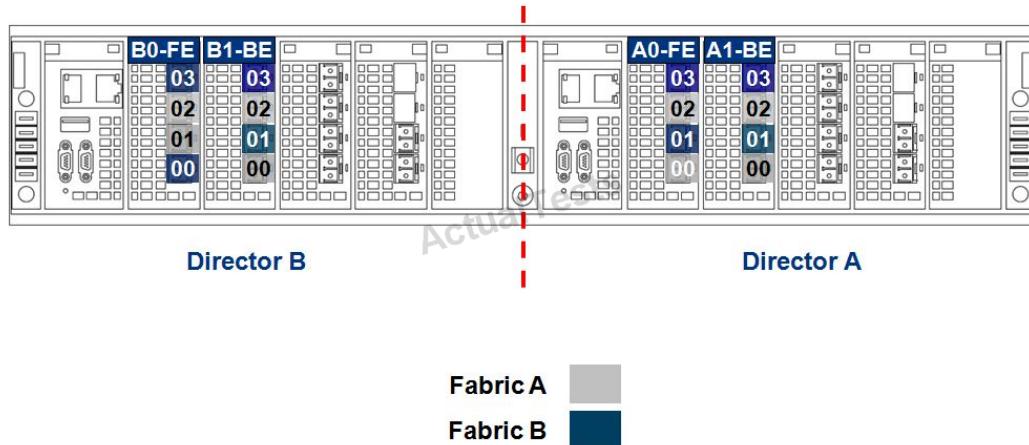
Director A WAN COM Connectivity

D.

Director A Local Com Connectivity

Answer: A**Explanation:****QUESTION NO: 194**

Refer to the exhibit.



The customer has not followed EMC best practices when cabling their VS2 VPLEX engine. You are asked how to re-cable the engine to adhere to best practices. What is your response?

A.

Swap port 00 with port 01 of module A0-FE and B0-FE.

B.

Swap port 00 with port 01 of module A1-BE and B1-BE.

C.

Swap port 02 with port 03 of module A0-FE and B0-FE.

D.

Swap port 02 with port 03 of module A1-BE and B1-BE.

Answer: A**Explanation:**

QUESTION NO: 195

Refer to the exhibit.

Name	Capacity	Vendor	IO	Type	Array Name
			Status		
A) VPD83T3:60000970000195901057533030344344	80G	EMC	alive	traditional	EMC-SYMMETRIX-195901057
B) VPD83T3:60000970000195901057533030344345	80G	EMC	alive	traditional	EMC-SYMMETRIX-195901057
C) VPD83T3:60000970000195901057533030344346	80G	EMC	alive	traditional	EMC-SYMMETRIX-195901040
D) VPD83T3:60000970000195901057533030344430	10G	EMC	alive	traditional	EMC-SYMMETRIX-195901057
E) VPD83T3:60000970000195901057533030344431	10G	EMC	alive	traditional	EMC-SYMMETRIX-195901057
F) VPD83T3:60000970000195901057533030344346	10G	EMC	alive	traditional	EMC-SYMMETRIX-195901040

```
Vplexcli:/> meta-volume create -n Pod9_meta -d
```

Which two volumes should be used to complete the displayed command?

- A.**
- B and C
- B.**
- A and B
- C.**
- D and F
- D.**
- D and E

Answer: A

Explanation:

QUESTION NO: 196

Refer to the exhibit.

```
IPSEC is UP  
Remote Management Server at IP Address 10.31.25.27 is  
reachable  
Remote Internal Gateway addresses are reachable
```

```
Verifying the VPN status between the management server and  
the cluster witness server...
```

```
IPSEC is UP  
Cluster Witness Server at IP Address 128.221.254.3 is  
reachable
```

Which VPlexcli command generated this output?

- A.**
vpn status
- B.**
ndu pre-check
- C.**
health-check
- D.**
ifconfig -a eth3

Answer: A

Explanation:

QUESTION NO: 197

Refer to the exhibit.

```
vplexcli:/> ndu pre-check
Warning:
During the NDU process, multiple directors will be offline for a
portion of the time. This is non-disruptive but is dependent on
a host-based multipathing solution being installed, configured,
and operating on all connected hosts.

Warning:
Please run the "health-check --full" command to verify that the VPLEX hardware
is healthy.
Analyzing system configuration: .DONE
No first upgraders
=====
The output for 'ndu pre-check' has been captured in /var/log/vplex/cli/capture/ndu-pre-check-session.txt
ndu pre-check: Evaluation of <> failed.
cause: Command execution failed.
cause: No first upgraders

vplexcli:/> version -a
what          version      Info
-----
Product Version   -        couldn't retrieve director software version(s)
SMSV2           D10.0.0.193.0  -
Mgmt Server Base  D4_MS8_7    -
Mgmt Server Software D10.0.0.218  -
```

You are preparing to perform an upgrade on an unconfigured VPLEX Metro. When you run the `ndu pre-check` command, it indicates that it has failed and there are no first upgraders. In your troubleshooting, you run the `version -a` command.

Based on the output, what is the reason for the failure?

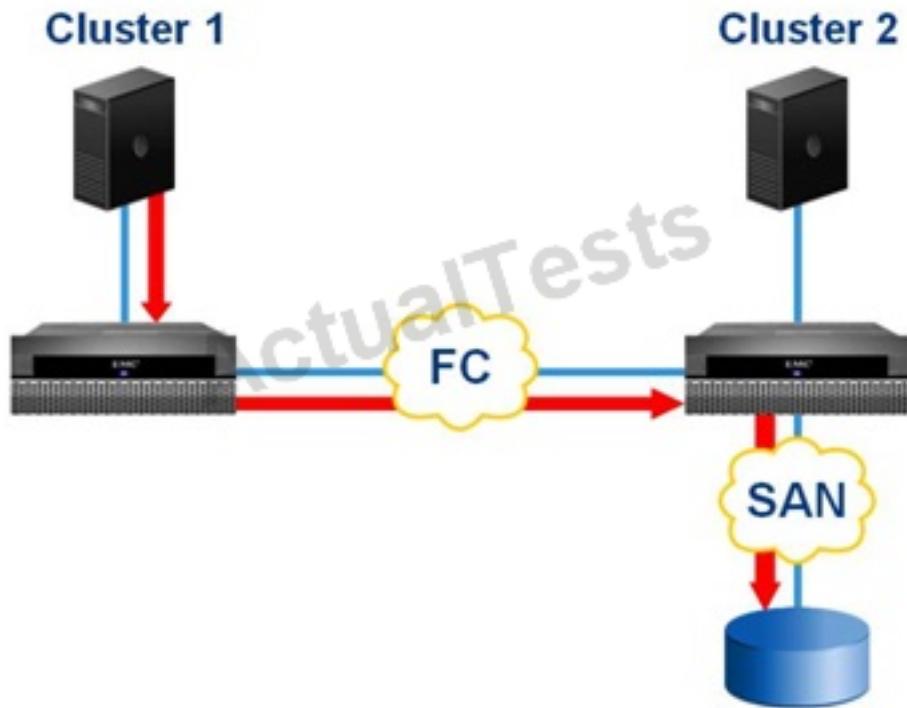
- A.**
Directors are not connected.
- B.**
`health-check --full` was not run
- C.**
Directors are at incompatible code levels
- D.**
`ndu pre-check --force` flag was not used

Answer: A

Explanation:

QUESTION NO: 198

Refer to the exhibit.



A customer needs to provision storage to a host on Cluster 1, but there is no additional local array capacity to allocate. How could the customer facilitate assigning storage to the Cluster 1 host from an array locally connected to Cluster 2?

- A.**
Enable remote access for a Cluster 2 virtual volume.
- B.**
Add a remote mirror to a Cluster 2 virtual volume.
- C.**
Create a distributed device from a virtual volume on Cluster 2
- D.**
Add a virtual volume from Cluster 2 to a distributed consistency group.

Answer: A

Explanation:

QUESTION NO: 199

Refer to the exhibit.

```

10.126.96.19 - PuTTY
VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> ll
Attributes:
Name          Value
-----
active-clusters []
cache-mode    synchronous
detach-rule   winner cluster-2 after 5s
operational-status [(cluster-1,{ summary:: ok, details:: [] }), (cluster-2,{ summary:: ok, details:: [] })]

passive-clusters []
recoverpoint-enabled false
storage-at-clusters [cluster-1, cluster-2]
virtual-volumes  [DD_8_3_vol, DD_8_4_vol]
visibility      [cluster-1, cluster-2]

Contexts:
Name      Description
-----
advanced  -
recoverpoint  -

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> drill-down -o DD_8_3_vol
virtual-volume: DD_8_3_vol (cluster-1)
  distributed-device: DD_8_3
    distributed-device-component: DD_7_3 (cluster-1)
      extent: extent_Symm0841_03A7_1
        storage-volume: Symm0841_03A7 (blocks: 0 - 1295999)
    distributed-device-component: DD_8_32012Nov26_183659 (cluster-2)
      extent: extent_VNX_LUN102_1
        storage-volume: VNX_LUN102 (blocks: 0 - 1295999)

VPlexcli:/clusters/cluster-1/consistency-groups/DD(CG)_2>

```

You have created a Distributed Device in a VPLEX Metro system. Which VPLEX Object can be placed in a Storage View for Cluster-1?

- A.**
DD_8_3_vol
- B.**
DD_8_32012Nov26_183659
- C.**
Symm0841_03A7
- D.**
extent_Symm0841_03A7_1

Answer: A

Explanation:

QUESTION NO: 200

Refer to the exhibit.



The customer deleted ext_2 on a 20 GB LUN in order to make an extent of 10 GB. Why is the customer unable to create a 10 GB extent?

A.

Chunks of the storage need to be contiguous.

B.

Storage array must be re-discovered.

C.

ext_2 cannot be deleted.

D.

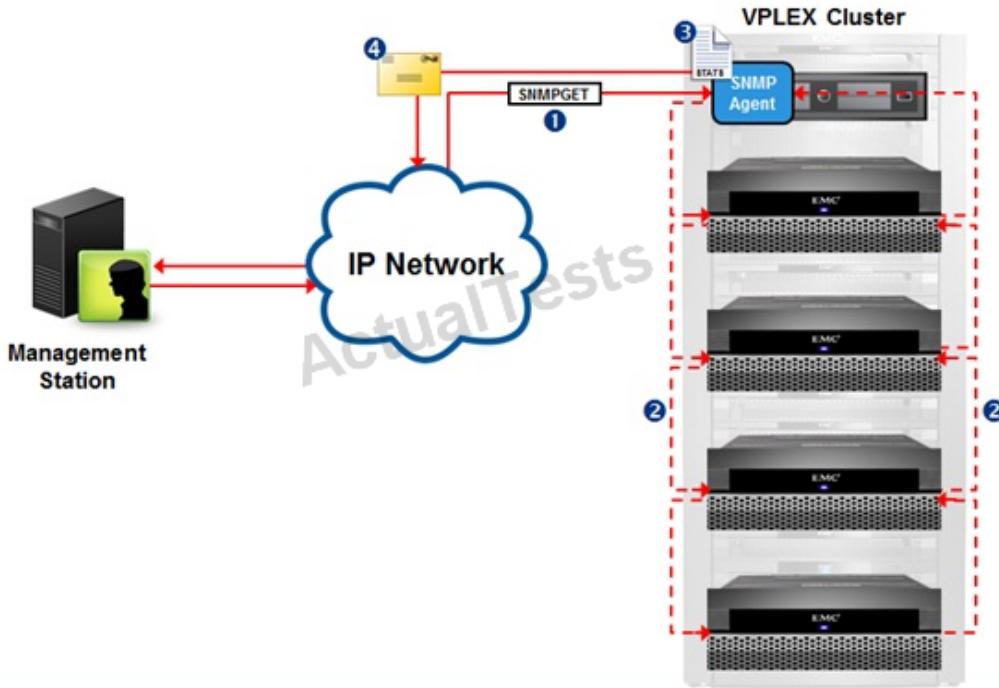
The defrag property is set to false.

Answer: A

Explanation:

QUESTION NO: 201

Refer to the exhibit.



Reference the message type shown at point "1". What type of response will be sent back to the SNMP management server from the SNMP Agent?

- A.**
A poll response containing requested data
- B.**
A trap response containing requested data
- C.**
A poll response that initiates a trap response
- D.**
A trap response containing all MIB data

Answer: A

Explanation:

QUESTION NO: 202

Refer to the exhibit.

```
VPlexcli:/clusters/cluster-2> vault status  
-----  
Cluster level summary  
-----  
Cluster:/clusters/cluster-2  
Cluster is not vaulting/unvaulting
```

During a short power disruption to cluster 2, director-2-1-A failed. Power was restored after 5 minutes. In examining the output of the vault status command, you note that cluster-2's status reads "Cluster is not vaulting/unvaulting".

Why did this message appear?

A.

The power disruption affected a single director only.

B.

There was no power disruption at cluster-1

C.

The power disruption did not affect all "A" directors.

D.

The vaulting process runs on cluster-1

Answer: A

Explanation:

QUESTION NO: 203

Refer to the exhibit.

```
Vplexcli:/clusters/cluster-1> vault status
=====
Cluster level summary
=====
Cluster:/clusters/cluster-1
Cluster is not vaulting/unvaulting
=====
Director level summary
=====
/engines/engine-1-1/directors/director-1-1-B:
    state: Vault Inactive
/engines/engine-1-1/directors/director-1-1-A:
    state: Vault Inactive
/engines/engine-1-2/directors/director-1-2-B:
    state: Vault Inactive
/engines/engine-1-2/directors/director-1-2-A:
    state: Vault Inactive
```

After a power disruption of 20 seconds in a VPLEX environment, the output of the "vault status" command shows no vaulting processes. Why did this occur?

- A.**
The cache vaulting did not exceed the timer period.
- B.**
It is the expected output, because the command "vault status" doesn't show information on cache process at all.
- C.**
Cache vaulting process has already completed.
- D.**
Cache vaulting process is still running in background and it is not shown until completed.

Answer: A

Explanation:

QUESTION NO: 204

Refer to the exhibit.

```

10.126.96.19 - PuTTY
VPLEXcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> ll

Attributes:
Name          Value
-----
active-clusters []
cache-mode    synchronous
detach-rule   winner cluster-2 after 5s
operational-status [(cluster-1,{ summary:: ok, details:: [] }), (cluster-2,{ summary:: ok, details:: [] })]

passive-clusters []
recoverpoint-enabled false
storage-at-clusters [cluster-1, cluster-2]
virtual-volumes [DD_8_3_vol, DD_8_4_vol]
visibility     [cluster-1, cluster-2]

Contexts:
Name      Description
-----
advanced  -
recoverpoint  -

VPLEXcli:/clusters/cluster-1/consistency-groups/DD(CG)_2> drill-down -o DD_8_3_vol
virtual-volume: DD_8_3_vol (cluster-1)
  distributed-device: DD_8_3
    distributed-device-component: DD_7_3 (cluster-1)
      extent: extent_Symm0841_03A7_1
        storage-volume: Symm0841_03A7 (blocks: 0 - 1295999)
    distributed-device-component: DD_8_32012Nov26_183659 (cluster-2)
      extent: extent_VNX_LUN102_1
        storage-volume: VNX_LUN102 (blocks: 0 - 1295999)

VPLEXcli:/clusters/cluster-1/consistency-groups/DD(CG)_2>

```

You have created a Distributed Device in a VPLEX Metro. You want to confirm you have chosen the correct volumes before performing a device mobility job within cluster-2. Which object will be the source for this operation?

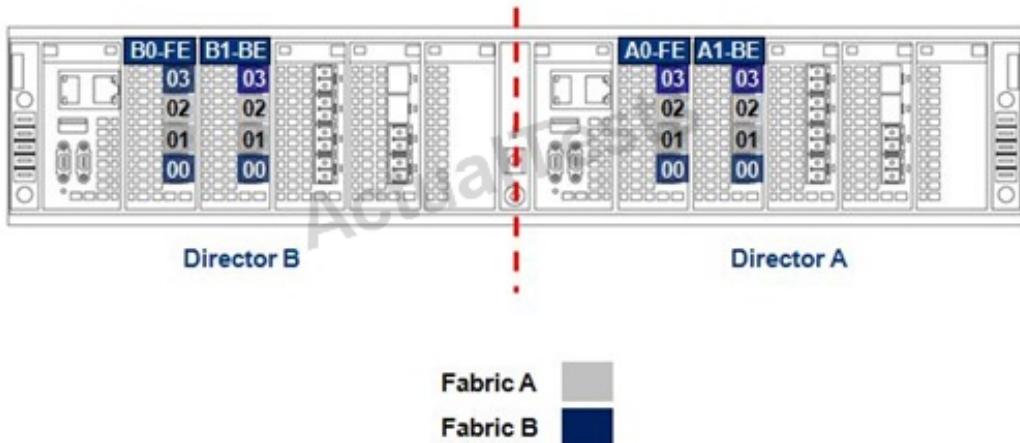
- A.**
DD_8_32012Nov26_183659
- B.**
extent_Symm0841_03A7_1
- C.**
Symm0841_03A7
- D.**
DD_7_3

Answer: A

Explanation:

QUESTION NO: 205

Refer to the exhibit.



The customer has not followed EMC best practices when cabling their VS2 VPLEX engine. What action would you recommend to fix this issue?

- A.**
Swap ports 00 with ports 01 of both director A and director B.
- B.**
Swap port 02 with port 03 of both director A and director B.
- C.**
Add two more additional fabrics and place each director in its own fabric.
- D.**
Separate all FE and BE ports into their own fabric.

Answer: A

Explanation:

QUESTION NO: 206

How many management Ethernet connections exist between the management server and the engines?

- A.**
2
- B.**
4

- C.
- 6
- D.
- 8

Answer: A

Explanation:

QUESTION NO: 207

What is an EMC best practice for fault tolerance when zoning a VPLEX Metro together over Fibre Channel for successful communication between the sites?

- A.
Zone each WAN-COM port to all WAN-COM ports in the other fabric.
- B.
Zone all WAN-COM ports to each other in both SAN fabrics within a single zone.
- C.
Zone each WAN-COM port to all WAN-COM ports in the other fabric.
Zone one Local-COM port to all WAN-COM ports in the other fabric for VPLEX Witness.
- D.
Zone all WAN-COM ports to each other in both SAN fabrics within a single zone.
Zone one Local-COM port to all WAN-COM ports in the other fabric for VPLEX Witness.

Answer: A

Explanation:

QUESTION NO: 208

When should front-end ports be enabled during a VPLEX installation?

- A.
After creating the meta-volumes and backup

B.

Before creating the meta-volumes and backup

C.

Before launching the VPLEX EZ-Setup Wizard

D.

After exposing storage to the hosts

Answer: A

Explanation:

QUESTION NO: 209

An EMC customer wants to add a mirror to a VPLEX Local RAID 0 device. Which RAID type is created after the device attach-mirror command is issued?

A.

RAID 1

B.

RAID 0

C.

RAID S

D.

RAID C

Answer: A

Explanation: