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VMware vSAN 6.7 Specialist Exam 2019

Exam A

QUESTION 1

A vSAN 5-node cluster has two sets of VMs, each associated with a separate storage policy.

-Group A (Storage Policy: FTT=0)

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-Group B (Storage Policy: FTT=2)



<https://vceplus.com/> What are two

possible results when two hosts in the vSAN cluster fail permanently? (Choose two.)

- A. VMs in Group B will become inaccessible if a third host permanently fails.
- B. vSAN will rebuild data associated with Group A.
- C. VMs in Group A might experience data inaccessibility.
- D. VMs in Group B might experience data loss.
- E. A host can be put into maintenance mode without impacting VMs in either Group A or B.

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

An organization is no longer compliant with security requirements because a vSphere administrator disabled encryption on a vSAN cluster. Which vCenter Server role ensures only authorized vSphere administrators have access to encryption functionality?

- A. Administrator
- B. Read-only
- C. No cryptography administrator
- D. No access

Correct Answer: C

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Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.security.doc/GUID-6C181D08-6650-4AD1-92D1-AAFDA3A3E38C.html>

QUESTION 3

vCenter Server is offline.

What are two ways to check the health of a vSAN cluster? (Choose two.)

- A. ESXi system logs on vSAN datastore
- B. vSphere Host Client
- C. esxcli
- D. HCI Bench
- E. esxtop

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.security.doc/GUID-6C181D08-6650-4AD1-92D1-AAFDA3A3E38C.html>

QUESTION 4

What are two purposes of a vSAN storage policy? (Choose two.)

- A. Determine how storage objects are provisioned
- B. Determine vSAN encryption level
- C. Guarantee the required level of service
- D. Enable deduplication and compression
- E. Enable TRIM/UNMAP

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

Reference: <http://www.vmwarearena.com/understanding-vmware-virtual-san-storage-policies-detailed-view/>

QUESTION 5

Which VM file type resides in the VM home namespace object on a vSAN datastore?

- A. .vswp
- B. .vmsn
- C. .vmx
- D. .vmem

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://vsan-essentials.gitbooks.io/vsan-6-2/content/chapter6.html>

QUESTION 6

In a 10-node hybrid vSAN cluster, each node has seven 4TB magnetic disks and one 2TB SSD.

What is the raw storage capacity of the vSAN datastore?

- A. 140TB
- B. 150TB
- C. 280 TB
- D. 300 TB

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

Refer to the exhibit.



	vSAN Node	vSAN Cluster
Nodes/Arrays Required	1	4
Capacity Disks	15	60
Flash Caching Devices	3	12
Disk Groups	3	12
Capacity disks per Disk Group	5	5
Total Raw Capacity (TB)	36	144
Total Usable Capacity (TB)	18	72
Total Flash Cache Capacity (TB)	1.2	3.6

Components	Qty	Details	Total
CPU	2	Intel "Xeon" Gold 6126 12C 125W 2.6GHz	2
MEM	4	ThinkSystem 32GB TruDDR4 2666 MHz (1Rx1.2V) RDIMM	128
Controller	1	ThinkSystem 430-8I SAS/SATA 12 Gb HBA	1
NIC	1	Intel Dual-Port 100Gbp/s	2
Flash Cache	3	ThinkSystem 2.5" HUSMM32 400GB Performance SAS 12GB Hot Swap SSD	1.2
Persistent Disk	15	ThinkSystem 2.5" 2.4TB 10K SAS 12GB Hot Swap 512e HDD	36

A solution architect is setting up a highly resilient vSAN hybrid cluster.
Why is the cache incorrectly sized in this configuration?

- A. Cache disk needs to meet vSAN Compatibility Guide
- B. Cache-to-capacity ratio needs to be sized lower
- C. Cache-to-capacity ratio needs to be sized higher
- D. Number of cache disks in disk group is insufficient.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

An all-flash vSAN cluster contains four nodes.

Which two storage policies can the cluster satisfy? (Choose two.)

- A. FTT=2 (RAID-1 Mirroring)
- B. FTT=2 (RAID-6 Erasure Coding)
- C. FTT=1 (RAID-1 Mirroring)
- D. FTT=1 (RAID-5 Erasure Coding)
- E. FTT=3 (RAID-1 Mirroring)

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:



QUESTION 9

A company implements a vSAN environment with linked clone virtual desktops and homogeneous desktop operating systems. During the last three months, users have experienced intermittent high latency, degraded performance, and lockout from desktops. Which two methods should an administrator use to monitor and respond to the issues? (Choose two.)

- A. vRealize Log Insight
- B. vRealize Automation
- C. Live Optics
- D. HCI Bench
- E. vRealize Operations Manager

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

An administrator has discovered that space utilized by VMs does not decrease after deleting files and folders within the VMs. The administrator needs to be able to reclaim this space.

Which action could the administrator perform to accomplish this task?

- A. Enable Storage I/O Control.
- B. Enable TRIM/UNMAP for the vSAN cluster.
- C. Reboot the VM to recreate the swap file.
- D. Assign a storage policy with thin provisioning.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

End-users are complaining that an application running on an all-flash vSAN datastore is not performing well.

Which performance chart should an administrator view to troubleshoot this issue?

- A. Recovery Write IOPS
- B. Resync Latency
- C. Read Cache Read IOPS
- D. Write Buffer Free Percentage

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.7/vsan-673-monitoring-troubleshooting-guide.pdf>

QUESTION 12

vCenter reports a number of vSAN network alarms on a 2-node vSAN Direct Connect cluster. The test pings show irregularities in the ping results.

Using vSAN Health service, which two checks should be used to identify the network root cause? (Choose two.)

- A. Physical disk operation health
- B. Network latency

- C. vSAN extended configuration
- D. vSAN disk balance
- E. vSAN basic unicast connectivity

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://vsan-essentials.gitbooks.io/vsan-6-2/content/chapter10.html>

QUESTION 13

A vSAN administrator is designing a new all-flash vSAN cluster. The cluster will host read intensive applications. Which factor should be included in the design to improve read performance?

- A. Multiple disk groups
- B. Large capacity disks
- C. Large cache disks
- D. Large controller cache

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://vsan-essentials.gitbooks.io/vsan-6-2/content/chapter4.html>

QUESTION 14

Which storage policy action results in a component resync?

- A. Enabling object checksum
- B. Changing object space reservation to thick provisioning
- C. Adding an IOPS Limit rule to a storage policy
- D. Changing the failure tolerance method

Correct Answer: D

Section: (none)

Explanation



Explanation/Reference:

QUESTION 15

vSAN is configured with a storage policy with a Failures To Tolerate (FTT) set to three.
Which type of redundancy is being used?

- A. RAID-0 (Striping)
- B. RAID-1 (Mirroring)
- C. RAID-6 (Erasure Coding)
- D. RAID-5 (Erasure Coding)

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Reference: https://www.sbarjatiya.com/notes_wiki/index.php/About_VSAN_6.6

QUESTION 16

Which default VMware vSphere High Availability cluster setting must be changed when using a vSAN stretched cluster?

- A. Datastore with All Paths Down
- B. Datastore with Permanent Device Loss
- C. Response for Host IsolationD. Enable Host Monitoring



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Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.virtualsan.doc/GUID-D68890D8-841A-4BD1-ACA1-DA3D25B6A37A.html>

QUESTION 17

The cluster level backend IOPS performance graph shows a higher-than-average number of IOPS.

What is a possible reason for this?

- A. Data resynchronizations
- B. Low volume of vSAN vital memory pools
- C. DRS invoking multiple vMotion migrations
- D. Destaging congestion

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://kb.vmware.com/s/article/2144493>



QUESTION 18

An administrator of a vSAN 6.5 environment is planning a path to move to unicast for the vSAN network.

How will the administrator achieve this?

- A. Enable LACP on vSAN switch ports.
- B. Upgrade vCenter and vSAN nodes to vSAN 6.6 or later.
- C. Enable unicast on the vSAN interfaces.
- D. Disable multicast for vSAN using ESXCLI commands.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

When using vSAN Encryption, where does the Key Encryption Key persistently reside?

- A. in /etc/vmware/ssl on each vSAN host
- B. in the KMS server
- C. in a VM configuration file on vSAN
- D. in the vCenter Server cache

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://blogs.vmware.com/virtualblocks/2018/07/13/understanding-ve-booting-w-vc-unavailable/>

QUESTION 20

What is a mandatory requirement for a vSAN stretched cluster?

- A. Two witness hosts protected by vSphere Fault Tolerance
- B. Minimum of two guaranteed lines of 10Gbps bandwidth
- C. vSphere Replication configured between the data sites
- D. Latency between data sites must be less than or equal to 5ms

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://vsan-essentials.gitbooks.io/vsan-6-2/content/chapter8.html>

QUESTION 21

An architect is asked to design a vSAN cluster with these requirements:

- Supports erasure coding storage policy
- Minimized inaccessibility from single device failures
- Ability to re-protect data after a failure

The desired configuration should be able to survive a single failure.

Which configuration satisfies the design requirements?

- A. 3-node hybrid vSAN cluster
- B. 4-node hybrid vSAN cluster
- C. 4-node all-flash vSAN cluster
- D. 5-node all-flash vSAN cluster

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

A new vSAN cluster needs to run 900 VMs and protect against one failure.
What is the minimum number of nodes needed to meet the requirement?

- A. 3
- B. 4
- C. 5
- D. 6



Correct Answer: A

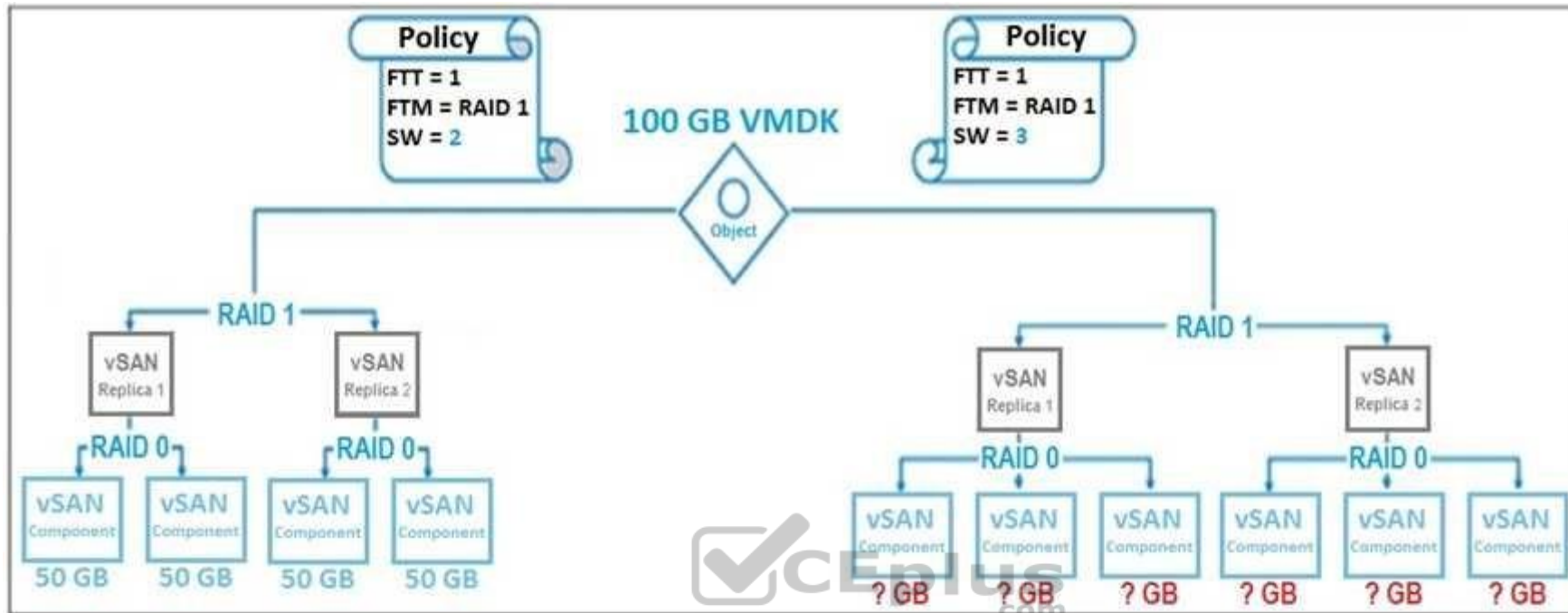
Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

Refer to the exhibit.



In a 2-node vSAN environment, a storage administrator has setup a vSAN storage policy. When the stripe width is changed to three, what is the approximate component size of each replica marked in red?

- A. 33GB
- B. 50GB
- C. 66GB
- D. 100GB

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

Which two factors should be considered when planning usable vSAN datastore capacity? (Choose two.)

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- A. Flash Read Cache Reservation percentage
- B. Failure tolerance method
- C. Stripe width
- D. IOPS limit for object
- E. Failures To Tolerate

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.7/vsan-671-planning-deployment-guide.pdf> (23)

QUESTION 25

An ESXi host is being re-purposed from a 4-node cluster. The default policy is in use and storage utilization is low. Which maintenance mode should be used to avoid storage policy non-compliance?

- A. Ensure accessibility B. No data migration
- C. Proactive rebalance
- D. Full data migration



Correct Answer: A

Section: (none)

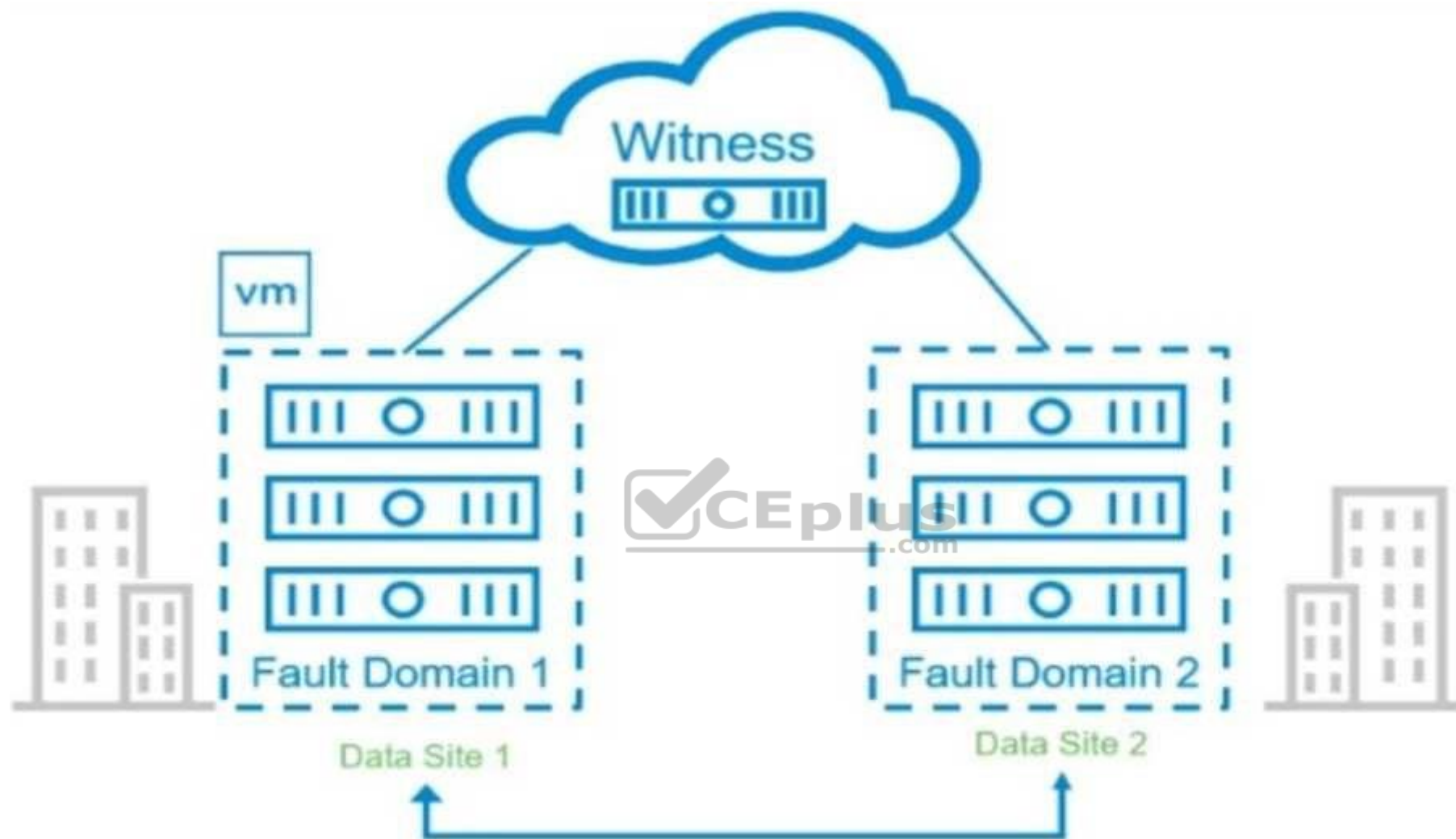
Explanation

Explanation/Reference:

Reference: <https://storagehub.vmware.com/t/vmware-vsan/vsan-2-node-guide/maintenance-mode-consideration-9/>

QUESTION 26

Refer to the exhibit.



Availability	Advanced Policy Rules	Tags
Site disaster tolerance ⓘ		Dual site mirroring (stretched cluster) ▾
Failures to tolerate ⓘ		1 failure - RAID-1 (Mirroring) ▾

A storage administrator is designing a vSAN stretched cluster with production workload running on a preferred site. A VM has been deployed on the preferred site. How does the VM read I/O?

- A. 50 percent from preferred site and 50 percent from non-preferred site
- B. 70 percent from preferred site and 30 percent from non-preferred site
- C. 100 percent from preferred site
- D. 100 percent from non-preferred site

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

What is the minimum recovery point objective (RPO) that can be achieved using vSphere Replication with vSAN?

- A. 5 minutes
- B. 15 minutes
- C. 30 minutes
- D. 60 minutes



Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/vSphere-Replication/8.1/com.vmware.vsphere.replication-admin.doc/GUID-9E17D567-A947-49CD-8A848EA2D676B55A.html>

QUESTION 28

In a vSAN Stretched Cluster configuration, when is the non-preferred site determined to be isolated?

- A. When the master node is unable to communicate with any non-preferred site nodes
- B. When the nodes in the non-preferred site are unable to communicate with the vSAN Witness
- C. When the backup node is unable to communicate with the preferred site
- D. When the master node is unable to communicate with the backup node

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

In a vSAN all-flash configuration, which two design tasks influence the selection of flash and capacity disks? (Choose two.)

- A. Reserving 10 percent of cluster CPU
- B. Reserving 8 vCPU and 32GB vRAM for controller VM
- C. Determining workload type
- D. Selecting appropriate flash device endurance
- E. Sizing two flash drives for every disk group

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:



QUESTION 30

A vSAN Witness has connectivity to a vSAN cluster with supported maximum latency of 500 milliseconds round-trip time (RTT). Which vSAN cluster type is the vSAN Witness a member of?

- A. vSAN stretched cluster with 4 nodes in each site
- B. vSAN 2-node direct connected cluster
- C. 4-node vSAN cluster using erasure coding
- D. 16-node vSAN cluster with nested fault domains

Correct Answer: B

Section: (none)

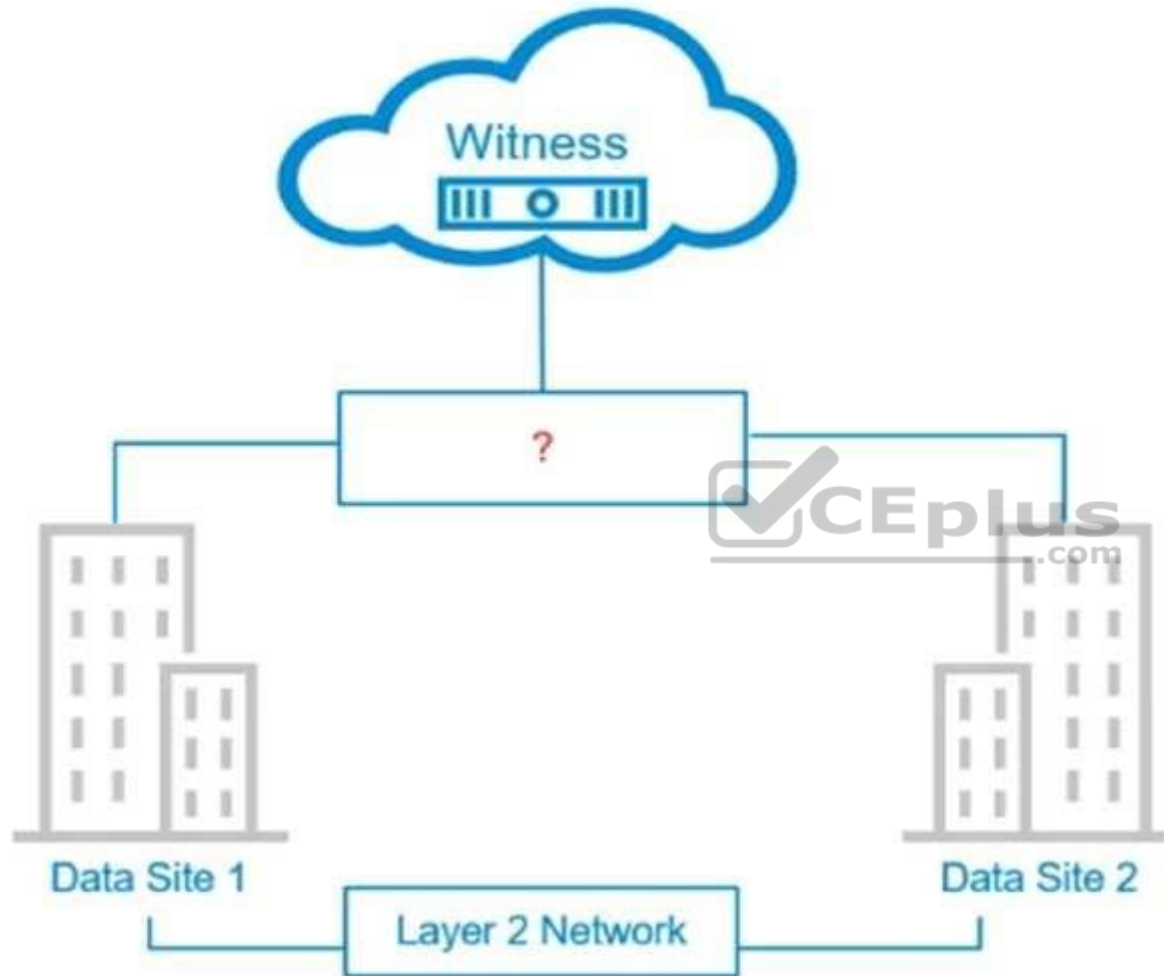
Explanation

Explanation/Reference:

Reference: [https://book.akij.net/eBooks/2018/March/5ab76ee97f532/SAnet.cd.EssentialVirtualSAN\(VSAN\).pdf](https://book.akij.net/eBooks/2018/March/5ab76ee97f532/SAnet.cd.EssentialVirtualSAN(VSAN).pdf) (56)

QUESTION 31

Refer to the exhibit.



Which networking requirement fulfills the connectivity between the Data Sites and the Witness node?

- A. Extended Data Site network
- B. vMotion network
- C. Direct Connect network
- D. Layer 3 network

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://storagehub.vmware.com/t/vmware-vsan/vsan-2-node-guide/network-design-considerations-7/>

QUESTION 32

Which type of encryption is used for the data encryption key on the vSAN datastore?

- A. TLS 1.1
- B. TLS 1.2
- C. AES-XTS 256
- D. AES-XTS 128



Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://searchvmware.techtarget.com/tip/VSAN-Encryption-What-it-is-what-it-does-and-how-to-use-it>

QUESTION 33

An administrator is implementing deduplication and compression on a vSAN all-flash cluster. -

There are 4 nodes in the vSAN cluster.

-Existing VMs use a RAID-5 storage policy

How can deduplication and compression be enabled while permitting the VMs to remain operational?

- A. Enable vSAN datastore encryption.
- B. Use explicit fault domains.
- C. Use the Allow Reduced Redundancy option.
- D. Enable TRIM/UNMAP.

Correct Answer: A

Section: (none)

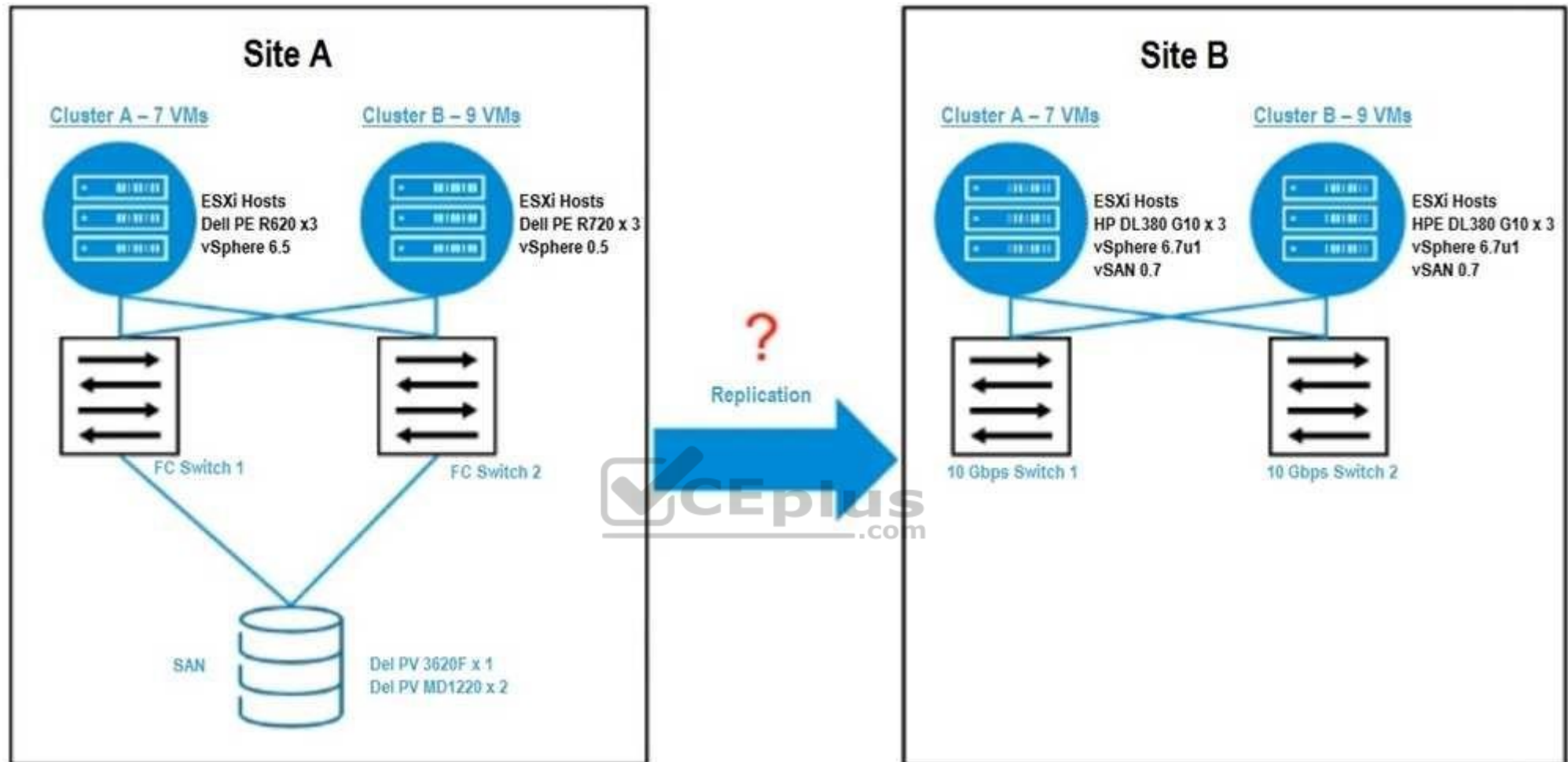
Explanation

Explanation/Reference:

QUESTION 34

Refer to the red question mark in the exhibit.





Which VMware solution provides automated interoperability to failover and re-protect VMs from Site A to Site B, and Site B to Site A?

- A. vSphere Integrated Containers
- B. NSX SD-WAN by VeloCloud
- C. vRealize Operations
- D. Site Recovery Manager

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

To fail back from site B to site A (after failover from site A to site B), Site Recovery Manager licenses are required for the “re-protected” virtual machines at Site B. The “per virtual machine” licenses originally used at site A can be used at site B for this purpose, as long as the licenses are no longer in use at site A

Reference: <http://media.zones.com/images/pdf/vmware-site-recovery-manager-faq.pdf>

QUESTION 35

What are two reasons why a vCenter UI can show a **Noncompliant** status for a VM storage object? (Choose two.)

- A. The object is no longer fully compliant with the associated storage policy.
- B. A storage hardware failure has caused permanent data loss for the object.
- C. The VM storage compliance alarm has been triggered for that object.
- D. The object is not associated with a guest VM.
- E. The object is not associated with a storage policy.

Correct Answer: AE

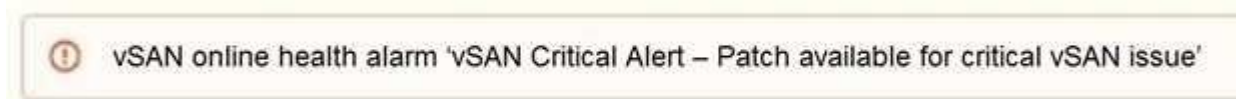
Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Refer to the exhibit.



A vSAN cluster has recently prompted an online health alarm.

What can the system administrator do to resolve the issue?

- A. Disable Customer Experience Improvement Program feature.
- B. Upgrade the ESXi host.

- C. Suppress warning on the alarm.
- D. Move VMs on affected host to other host(s).

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

Which two pre-checks should be taken prior to starting a vSAN upgrade? (Choose two.)

- A. disable deduplication/compression
- B. upgrade VMware Tools
- C. verify vSAN Health
- D. upgrade vCenter Server
- E. upgrade virtual hardware

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://kb.vmware.com/s/article/2146381>

QUESTION 38

How are components marked on a capacity device that is inaccessible?

- A. reduced availability
- B. active-stale
- C. degraded
- D. absent

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



Explanation:

The vSAN components that reside on the magnetic disk or flash capacity device are marked as degraded.

Reference: <https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.virtualsan.doc/GUID-9A2DCE0B-CFA1-41C1-97CE-DA56A55426EA.html>

QUESTION 39

What is the formula for determining the minimum number of vSAN hosts in a cluster necessary to support a Failures To Tolerate (FTT) policy, where $FTT=n$?

- A. $n+1$
- B. $n+2$
- C. $2n+1$
- D. $2n+2$

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

To tolerate n failures, you need $2n + 1$ ESXi host in the vSAN cluster.

Reference: <https://searchvmware.techtarget.com/answer/How-can-a-VM-storage-policy-improve-vSAN-cluster-redundancy>

QUESTION 40

A virtual machine is unable to access one of its virtual disks.

Which vSAN Health check should an administrator view to troubleshoot the issue?

- A. Data > vSAN Object Health
- B. Cluster > vSAN CLOMD Liveness
- C. Cluster > Disk Format Version
- D. Limits > vSAN Component Limit

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

Which two group types are used to determine capacity breakdown in a vSAN datastore? (Choose two.)

- A. network
- B. CPU
- C. data
- D. memory
- E. object

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

Reference: <http://www.virtualizationblog.com/vmware-vsan-capacity-management-and-utilization/>

QUESTION 42

Where are the performance metrics for Write Buffer Free percentage located?

- A. host level vSAN performance metrics
- B. vSAN capacity graphs
- C. vSAN Health Check
- D. cluster level vSAN performance metrics



Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.vmware.com/en/vRealize-Operations-Manager/8.0/com.vmware.vcom.core.doc/GUID-97A69368-F085-451B-A53C-2210C1554A9D.html>

QUESTION 43

How do vSAN stretched clusters protect against entire site failures?

- A. asynchronous data transfer
- B. online witness replacement
- C. virtual machine data copied from the witness site
- D. redundant components placed at both sites

Correct Answer: D

Section: (none)

Explanation

<https://vceplus.com/>

Explanation/Reference:

QUESTION 44

Which fault tolerance method protects business data and achieves storage space efficiency?

- A. RAID-0
- B. RAID-1
- C. RAID-5
- D. RAID-10

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://www.prepressure.com/library/technology/raid>

QUESTION 45

A 100GB virtual disk object has this storage policy assigned to it:

- Site disaster tolerance: None – standard cluster
 - Failures To Tolerate: 1 failure – RAID-1 (Mirroring) ▪
- Number of disk stripes per object: 1

What is the maximum amount of raw vSAN storage capacity consumed by the virtual disk?

- A. 100GB
- B. 133GB
- C. 200 GB
- D. 255GB

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <http://www.vmwarearena.com/understanding-vmware-virtual-san-storage-policies-detailed-view/>



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