

# HP

## Exam HP0-J67

### Architecting Multi-site HP Storage Solutions

Version: 6.4

[ Total Questions: 107 ]

**Question No : 1**

You are tuning a customer HP StoreOnce Backup System and notice they are running backups 20 hours a day. As a result, backup jobs are running during the same time as replication jobs. What can you do to limit the available bandwidth and not saturate the link with replication traffic?

- A. Enable multiplexing and set concurrency to 1.
- B. Enable concurrency control.
- C. Map multiple source libraries into a single target library.
- D. Enable compression.

**Answer: B**

**Explanation:**

Hewlett-Packard StoreOnce B6000 Configuration Manual Page 40: "7. The use of "concurrency control" is not necessary if replication is run at separate times from backups and housekeeping. However, if the customer wants to run replication at the same time as backups or housekeeping, they can use concurrency control to limit the available bandwidth so as not to saturate the link with replication traffic"

**Question No : 2**

Your customer is migrating to VMware vSphere 5. Your solution includes HP 3PAR StoreServ Storage with licenses for Remote Copy and sub-LUN tiering. The customer is interested in implementing VMware Storage I/O Control and asks if there are any interoperability concerns with your solution.

How does the inclusion of VMware Storage I/O Control impact your solution?

- A. VMware Storage I/O Control integrates into the proposed solution with no changes.
- B. HP 3PAR Application Software Suite for VMware must be added to the solution
- C. HP 3PAR Adaptive Optimization cannot be used in the solution.
- D. VMware Adaptive Queue Depth Throttling must be enabled.

**Answer: A**

**Question No : 3**

A customer with a B-Series fabric needs to establish FC-IP connectivity between their primary data center fabric and DR data center fabric to enable replication. However, they are concerned that fabric instability issues in the DR fabric will cause issues in their production fabric.

Which HP storage solution should you recommend?

- A. HP C-Series MDS 9222i Multiservice Modular Fabric Switch
- B. HP 1606 Extension SAN Switch
- C. HP SN6000 FC Switch
- D. HP MPX200 Multifunction Routed

**Answer: D**

**Question No : 4**

A customer has an environment spanning two data centers in a campus environment. The primary storage is an HP 3PAR StoreServ 10400 Storage System. Data is replicated between sites with an RPO of zero. The customer is questioning whether they have adequate protection. You suggest creating a DR site and actively replicate the data to it.

What are the implications of adding the third data center to the data network?

- A. 10GbE links are needed to interconnect the HP StoreServ 3PAR arrays.
- B. The data network must support Converged Enhanced Ethernet.
- C. The data network must support OpenStack.
- D. A dedicated subnet must be added to interconnect the 3PAR arrays.

**Answer: D**

**Question No : 5**

You are performing a demo of an HP StoreOnce 2620i Backup System solution in combination with HP Data Protector. All best practice guidelines for the VTL and Data Protector have been adhered to. However, you receive the following error when formatting a cartridge in a previously-created VTL.

[Normal] From: MMA@demo.local "Drive\_Demo" Time: 4/23/2013 10:26:09 PM

Tape0:0:0:0C

Initializing new medium: "[4E94F289] 4E94F289"

[Major] From: MMA@demo.local "Drive\_Demo" Time: 4/23/2013 10:26:10 PM [90:51]

Tape0:0:0:0C

Cannot write to device ([87] Wrong parameter. )

[Major] From: MMA@demo.local "Drive\_Demo" Time: 4/23/2013 10:26:10 PM

Initialization of medium failed.

[Normal] From MMA@demo.local "Drive\_Demo" Time: 4/23/2013 10:26:14 PM

Ejecting medium Tape0:0:0:0C".

What must you do to perform a successful demo?

- A.** Add an iSNS-Server in the media Server iSCSI configuration, and restart the iSCSI service.
- B.** Disable "Automatically discover changed SCSI address" for the VTL drives, and rescan the library.
- C.** Disable "SCSI Reserve /Release (drive)" for all of the drives and robotics in the environment and rescan the library.
- D.** Change the maximum transfer length of the iSCSI initiator in regedit. and restart the media server.

**Answer: C**

### Question No : 6

Your customer wants to replicate backup data from branch offices to a primary data center where an HP StoreOnce 4430 Backup System using HP StoreOnce Catalyst is located. The main backup application is HP Data Protector 7.01. The file and application servers have Windows 2003, Windows 2008, and SUSE Linux 9 and 10 installed. The file and application servers are a mixture of 32 and 64 bit Windows and Linux operating systems. As a long-term strategy, the customer wants to migrate all services to the primary data center. No additional hardware can be purchased for the branch offices, and complexity should be minimized.

Which deduplication type is optimal for this customer?

- A. source-side
- B. application-side
- C. target-side
- D. server-side

**Answer: D**

**Explanation:**

Target-side NOT: "Target-side Deduplication can be used for conventional B2D environments where full bandwidth links are used between the media server and the Deduplicated Data Store." Application-side NOT exist.

Source-side NOT: Limited agents for OS to use Source-side. 32bits not compatible. "Note that the backed up system must support deduplication (64-bit Windows systems or 64-bit Linux systems only, for details, see the support matrices)."

Server-side: "Note that the Media Agent client must support deduplication (64-bit Windows systems or 64-bit Linux systems only, for details, see the support matrices). Server-side deduplication enables you to deduplicate data from clients on which deduplication is not supported locally."

**Question No : 7**

You are designing a storage solution for a customer concerned about storage availability during code upgrades. Which HP 3PAR Port Persistence node identity handles host I/O requests, thus providing greater resiliency during code upgrades?

- A. Guest
- B. Master
- C. Slave
- D. Native

**Answer: A**

**Explanation:**

Persistent Ports

This is a really cool feature as well - it gives the ability to provide redundant connectivity to multiple controllers on a 3PAR array without having to have host-based multipathing software. How is this possible? Basically it is NPIV for the array. Peer controllers can assume the world wide names for the ports on their partner controller.

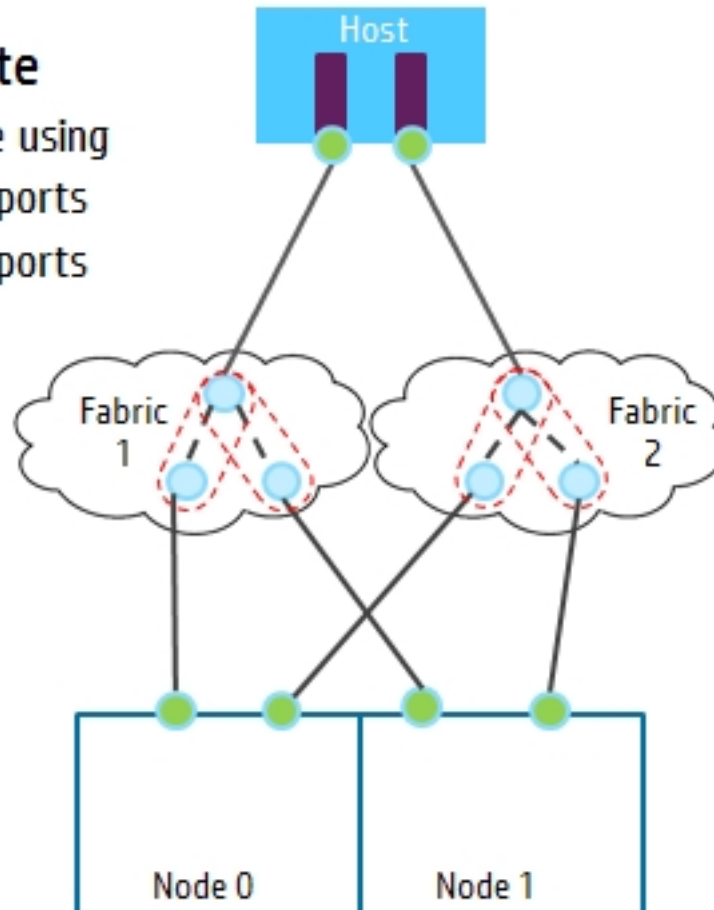
If a controller goes down, its peer assumes the identities of that controller's ports, instantaneously providing connectivity for hosts that were (not directly) connected to the ports on the downed controller. This eliminates pauses for MPIO software to detect faults and fail over, and generally makes life a better place.

## Normal state

All paths online using

Node 0 Native ports

Node 1 Native ports

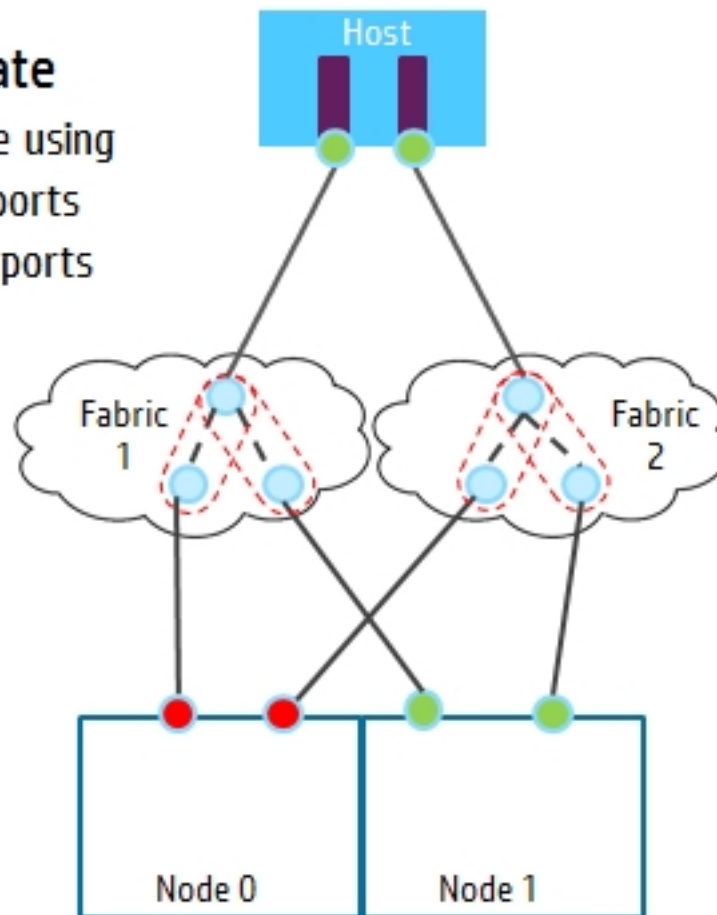


## Failover state

All paths online using

Node 0 Guest ports

Node 1 Native ports



### Question No : 8

The customer has two HP 3PAR StoreServ 7000 Storage systems split between two data centers. Used capacity of each storage system is 10 TB of data. The replication between data centers is performed via Ethernet/IP, and the replication technology used will be asynchronous. The maximum RPO is 30 minutes, and the daily change rate of the customer data is a maximum of 0.5%, which is created evenly throughout the day.

What is the required minimum bandwidth between the data centers for replication?

- A. 40 Mb half-duplex
- B. 20 Mb full-duplex
- C. 5 Mb half-duplex
- D. 10 Mb full-duplex

Answer: D

**Question No : 9**

A customer asks you to architect a new SAN fabric infrastructure comprised of redundant fabrics for a test/dev server environment. They need to provide selective connectivity for array-based snapshots from disk arrays hosted on the existing Cisco MDS 9506 Multilayer director-based production fabric, to hosts on the test/dev fabric. A customer requirement is to utilize a different vendor for the test/dev fabric, Which SAN technology enables the test/dev SAN fabric to maintain interoperability between the two fabrics and meet the stated requirements?

- A. HP B-Series with Transparent Router (TR)
- B. HP H-Series with Transparent Router (TR)
- C. HP B Series with Inter-VSAN Routing (iVR)
- D. HP H-Series with Inter-Fabric Routing (IFR)

Answer: B

**Question No : 10**

During an HP customer assessment workshop, the Alinean report shown in the exhibit is created. Which cost saving should you highlight in your presentation when positioning the value of HP 3PAR StoreServ Thin Technologies?

Three year TCO Current (As-Is) Vs. New HP 3PAR New HP 3PAR	Details	Existing	HP - 3PAR	Alternate Solution	Savings: HP 3PAR Vs. Existing
<input checked="" type="checkbox"/> Hardware Cost	Details	16.527€	54.749€	110.110€	(38.222€)
<input checked="" type="checkbox"/> Software Cost	Details	115.387€	23.690€	33.242€	91.696€
<input checked="" type="checkbox"/> Service and Support Cost	Details	434.403€	22.746€	40.253€	411.656€
<input checked="" type="checkbox"/> Total Capacity Cost	Details	248.215€	72.613€	101.187€	175.602€
<input checked="" type="checkbox"/> Incremental Infrastructure Cost	Details	7.323€	0€	7.323€	7.323€
<input checked="" type="checkbox"/> Storage Administration and Management Cost	Details	211.132€	21.113€	116.123€	190.019€
<input checked="" type="checkbox"/> Other Services (Professional, Consulting etc.)	Details	0€	0€	0€	0€
<input checked="" type="checkbox"/> Power and Cooling Costs	Details	63.118€	20.300€	65.464€	42.817€
<input checked="" type="checkbox"/> Data Centre Floor Space Cost	Details	10.328€	1.661€	3.477€	8.667€
<input checked="" type="checkbox"/> Implementation Cost	Details	0€	8.534€	11.933€	(8.534€)
<input checked="" type="checkbox"/> Cost Of Unplanned Downtime (High Availability)	Details	81.282€	837€	40.641€	80.445€
<input checked="" type="checkbox"/> Cost Of Planned Downtime (Maintenance,Upgrades)	Details	29.767€	0€	29.767€	29.767€
<input checked="" type="checkbox"/> Time To Solution (PO, Create New Environments)	Details	26.801€	3.350€	20.101€	23.451€
<input checked="" type="checkbox"/> Application Integration (e.g. VMWare, Oracle...)	Details	28.605€	22.854€	25.744€	5.721€
<b>Total</b>		<b>1.272.886€</b>	<b>252.479€</b>	<b>685.373€</b>	<b>1.020.406€</b>

- A. planned downtime
- B. unplanned downtime
- C. application integration
- D. power and cooling



**Answer: A**

**Question No : 11**

Which HP 3PAR StoreServ feature improves storage array resiliency?

- A. Persistence Ports
- B. Virtual Lock
- C. Virtual Copy
- D. Virtual Domains

**Answer: A**

**Explanation:**

"To provide greater resiliency and to avoid dependency on host multi-pathing software, HP 3PAR StoreServ has introduced a new feature called Persistent Ports." - in HP 3PAR High Availability

**Question No : 12**

You need to ensure data integrity on physical disks within the proposed HP 3PAR StoreServ Storage array.

Which HP 3PAR StoreServ Storage component calculates the value of the disk T10 Data Integrity Feature (DIF)?

- A. HP Service Processor
- B. HP InServ Controllers CPUs
- C. Controller Cache Algorithm
- D. HP 3PAR Gen4 ASIC

**Answer: D**

**Explanation:**

**Bandwidth and communication optimization**

As previously mentioned, each V800 or V400 Controller Node contains two high-performance, proprietary HP 3PAR Gen4 ASICs optimized for data movement between three I/O buses, a three memory-bank Data Cache, and seven high-speed links to the other Controller Nodes over the full-mesh backplane. These ASICs perform parity calculations (for RAID 5 and RAID MP/Fast RAID 6) on the Data Cache, and calculates the CRC Logical Block Guard used by the T10 Data Integrity Feature (DIF) to validate data stored on drives. An HP 3PAR V800 Storage System with 8 Controller Nodes has: 16 ASICs, totaling 112 GB/s of peak interconnect bandwidth and 24 I/O buses totaling 96 GB/s of peak I/O bandwidth.

In "The HP 3PAR Architecture"

**Question No : 13**

A customer has an environment that spans two data centers in a campus environment. The primary storage is HP 3PAR 10400, and data is replicated between sites with an RPO of zero.

Recent bad weather has caused flooding near the customer site and the customer is questioning whether they have adequate protection. You suggest creating a data center at a remote location and actively replicating the data to it. The customer is concerned that the remote link to the third site will have insufficient bandwidth and will create a local replication bottleneck.

Which statement addresses the customer concerns?

- A. Synchronous Long Distance will schedule data replication outside high latency periods
- B. Data is transmitted in a continuous stream with write order being handled by the target array.
- C. Remote Copy uses multiple connections over the same link from multiple volumes.
- D. Over provisioning of the remote link will ensure enough bandwidth is always available for replication.

**Answer: C**

**Question No : 14**