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**Exam : HP0-J66**

**Title : HP Storage Migration**

**Version : DEMO**

1.A customer is preparing to migrate data between their data centers.They need to perform deduplication at the data creation point and eliminate the need for specialized deduplication hardware in their data centers.How does HP StoreOnce Catalyst enable the customer to achieve this goal?

- A.by performing source-side deduplication
- B.by performing switch-side deduplication
- C.by performing server-side deduplication
- D.by performing target-side deduplication

**Answer: A**

Explanation:

By enabling source-side deduplication (Dedupe 2.0), HP has the advantage of performing deduplication at the data creation point.Source-side deduplication eliminates the need for specialist deduplication hardware at remote and branch office sites.StoreOnce Catalyst allows customers to align backup with data protection needs, such as minimizing bandwidth utilization when moving data between sites or data centers.

Reference: Dedupe 2.0: What HP Has In Store(Once)

2.A customer is planning to migrate a database to a new site.They need to create an extended SAN in a single fabric namespace by using a dedicated link over a distance of 200 km.Which network protocol should they use to achieve this goal?

- A.FCIP
- B.iFC
- C.FCoE
- D.iSCSI

**Answer: A**

Explanation:

FCIP connects Fibre Channel fabrics over IP-based networks to form a unified SAN in a single fabric.FCIP relies on IP-based network services to provide connectivity between fabrics over LANs, MANs, or WANs.

Note:

HP SAN extension technologies include:

- \* FCIP

(greater than 10 km to 20,000 km)

- \* FC-ATM

- \* FC-SONET

- \* WDM

(greater than 35 km to 100–500 km)

- \* Fibre Channel using long-wave transceivers

(10 km–35 km)

3.A customer is extending a SAN by using wavelength division multiplexing (WDM) to migrate their master database to a new data center.They need to ensure that there is adequate line speed to perform the migration in the event of a primary path failure.What should the customer do to achieve this goal?

- A.Ensure that all SAN devices use the same Fibre Channel speed.
- B.Ensure that all SAN switches have the same core PID number.

C.Ensure that there are separate WDM paths for transmitting and receiving packets

D.Ensure that a secondary path with sufficient buffer-to-buffer credits is available

**Answer: D**

Explanation:

WDM devices extend the distance between two FICON directors.The devices are transparent to the directors and do not count as an additional hop.

To accommodate WDM devices, you must have enough Fibre Channel BB\_credits to maintain line-speed performance.WDM supports Fibre Channel speeds of 10 Gb/s, 8 Gb/s, 4 Gb/s, 2 Gb/s, and 1 Gb/s.When planning for SAN extension, BB\_credits are an important consideration in WDM network configurations.Typical WDM implementations for storage replication include a primary and secondary path.You must have enough BB\_credits to cover the distances for both the primary path and secondary path so that performance is not affected if the primary path fails.

Reference: HP Mainframe Connectivity Design Guide

4.A customer plans to migrate data from a third-party storage system to an HP 3PAR solution.The customer has leased data center space.Which HP 3PAR Storage solution must be integrated into an HP 3PAR rack?

A.HP 3PAR StoreServ 10800

B.HP 3PAR StoreServ 10400

C.HP 3PAR StoreServ F200

D.HP 3PAR StoreServ 7400

**Answer: D**

Explanation:

Note:

\* The HP MPX200 Multiprotocol Router provides support for HP 3PAR StoreServ 7000 and 10000 as well as 3PAR F/T, including 1GbE iSCSI and 10GbE iSCSI and FCoE target support.MPX200 iSCSI provides an alternative option for HP 3PAR storage systems if you don't want to dedicate native iSCSI ports on your array.The MPX200 also facilitates the sharing of iSCSI/FCoE connectivity simultaneously for HP 3PAR storage systems from the same MPX200.For Data Migration the MPX200 provides high performance migration from P6000/EVA to HP 3PAR storage systems and simplifies Data Migration from third party storage such as IBM and EMC to HP 3PAR.The MPX200 is an ideal solution enabler for HP 3PAR customers.

5.A company needs to migrate from a third-party storage system to an environment that can grow by scaling out.The solution must also allow use of a server for downloading upgrades.Which solution meets the company's requirements?

A.HP 3PAR StoreServ 7000

B.HP StoreOnce 6200

C.HP StoreVirtual 4000

D.HP 3PAR StoreServ 10000

**Answer: A**

Explanation:

Note:

\* HP MPX200 Multi-protocol and Heterogeneous Data Migration

The HP MPX200 Multiprotocol Router provides support for HP 3PAR StoreServ 7000 and 10000 as well as 3PAR F/T, including 1GbE iSCSI and 10GbE iSCSI and FCoE target support. MPX200 iSCSI provides an alternative option for HP 3PAR storage systems if you don't want to dedicate native iSCSI ports on your array. The MPX200 also facilitates the sharing of iSCSI/FCoE connectivity simultaneously for HP 3PAR storage systems from the same MPX200. For Data Migration the MPX200 provides high performance migration from P6000/EVA to HP 3PAR storage systems and simplifies Data Migration from third party storage such as IBM and EMC to HP 3PAR. The MPX200 is an ideal solution enabler for HP 3PAR customers.

6. A storage administrator needs to perform a gradual migration of large backup volumes and jobs to a remote D2D system over time. Because this data is being replicated for the first time, the administrator needs to populate the target device with all the relevant hash codes. Which method should the administrator use to achieve this goal?

- A. using co-location
- B. using removable media
- C. seeding data over the WAN link
- D. setting initializer to migration

**Answer: C**

Explanation:

\* prior to being able to replicate only unique data between source and target D2D, we must first ensure that each site has the same hash codes or "bulk data" loaded on it – this can be thought of as the reference data against which future backups are compared to see if the hash codes exist already on either source or target. The process of getting the same bulk data or reference data loaded on the D2D source and D2D target is known as "seeding".

\* Seeding is generally is a one-time operation which must take place before steady-state, low bandwidth replication can commence. Seeding can take place in a number of ways:

/ Over the WAN link – although this can take some time for large volumes of data

/ Using co-location where two devices are physically in the same location and can use a GbE replication link for seeding. After seeding is complete, one unit is physically shipped to its permanent destination.

/ Using a form of removable media (physical tape or portable USB disks) to "ship data" between sites.

7. A small-business customer needs to implement a high IOPS storage system for an application that uses approximately 7 TB of space. Because the customer does not expect a large amount of data growth in the next few years, they need to minimize costs. Which storage system should the customer implement?

- A. HP 3PAR StoreServ 7400
- B. HP 3PAR StoreServ 10000
- C. HP 3PAR StoreServ F200
- D. HP 3PAR StoreServ 7200

**Answer: C**

Explanation:

HP 3PAR F200 9.6TB capacity

Incorrect:

Not A: 432 TB RAW

Not B: 2.2 TB capacity

Not D: 250 TB RAW

8.A customer wants a new HP 3PAR StoreServ 7200 Storage System to maximize storage performance.What should the customer implement?

- A.quad controllers
- B.Adaptive Optimization
- C.120 SSDs
- D.Dynamic Optimization

**Answer: B**

Explanation:

The HP 3PAR Adaptive Optimization (AO) software takes optimization a step further into sub-LUN tiering.AO migrates sub-LUN data across CPGs based on user-defined policies.Two or three CPG tiers can be specified per policy; all volumes inside a CPG are subject of an AO policy.AO policies usually operate on an FC and NL tier or on an SSD, FC, and NL tier.

This tool can improve system response and reduce disk acquisition cost by storing frequently accessed data in the faster tier while moving infrequently accessed data to the slower and cheaper slower tier.

Incorrect:

Not D: Related to online migration:

P 3PAR's Dynamic Optimization (DO) software offers the functionality of EVA's Dynamic LUN Migration: volumes are migrated online to another CPG with a different RAID level, set size, drive media type , etc.

9.Your customer has an existing HP StoreServ 7400 with four controllers.The array has only SSD drives installed.What should you consider when sizing a solution which includes Adaptive Optimization?

- A.Ensure that 3% of the capacity and 30% of the performance can be delivered by the SAS disks.
- B.Include SAS 10/15K disks in the configuration.
- C.Add SSDs or nearline disks to a single node pair.
- D.Size the nearline tier for 30% of the performance requirement.

**Answer: B**

Explanation:

Note:

\* SAS stands for Serial Attached SCSI.Basically, a SAS drive utilizes the same form factor as a SATA drive but has several high performance advantages.First of all, there's the platter speed.While typical SATA drives operate at 7200RPM, a SAS drive operates at 10K or 15K.Although the platter speed is double that of SATA, the MTBF (Mean Time Before Failure) remains at the industry standard of 1.2 million hours.

\* Make sure to define tier 0 to be on a higher performance level than tier 1, which in turn should be higher performance than tier 2.For example, you may choose RAID 1 with SSDs for tier 0, RAID 5 with FC drives for tier 1 and RAID 6 with NL or SATA drives for tier 2.

\* Best practices encourage you to begin your Adaptive Optimization configurations with your application CPG starting with tier 1.For example, tier 1 could be CPG using your FC or SAS physical disks.This allows you to add both higher and lower tier capabilities at a later date.If you don't have higher or lower tier, you can add either or both at a later date by using a new CPG, such as tier 0 using SSDs or tier 2 using NL.Or, you could have CPG tiers with RAID 1 or RAID 5 and RAID 6.The main point is that you

should begin with middle CPG tier 1 when configuring Adaptive Optimization with your application.

\* Example:

HP 3PAR Adaptive Optimization moved ~33 percent of the IOPS workload to the SSD drives even though that involved moving only 1 percent of the space. Performance improved in two ways: the 33 percent of the IOPS that were serviced by SSD drives got very good latencies (~2 ms), and the latencies for the NL drives also improved (from ~40 ms to ~15 ms). Moreover, the investment in the 16 SSD drives permitted them to add even more NL drives in the future, because the SSD drives have both space and performance headroom remaining.

Reference; Adaptive Optimization for HP 3PAR StoreServ Storage

10. A company needs a storage solution that provides four host bus adapter (HBA) slots and 64 GB of cache. Which HP storage solution meets these requirements?

A. HP 3PAR StoreServ 7400

B. HP StoreOnce 6200

C. HP 3PAR StoreServ 7200

D. HP StoreVirtual 4000

**Answer: A**

Explanation:

HP 3PAR StoreServ 7400 4-node base with two 2U enclosures, four controller nodes, 64 GB cache, eight 8Gb/sec FC ports, four adapter slots, and 48 SFF drive bays.

Incorrect:

Not C: 3PAR StoreServ 7200 only has 32 GB cache.