EMC

Exam E20-880

VNX Solutions Expert Exam for Technology Architects

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[Total Questions: 240]

Topic 1, Volume A

Question No : 1 - (Topic 1)

A customer is in the design phase of their SQL server implementation. They request your guidance concerning the number of disk drives needed to properly configure the database for performance. The current utilization of the database is shown below: S

- ✍ 85% reads and 15% writes
- ✍ 10K SAS disks
- ✍ RAID 1/0
- ✍ 1150 IOPS

What is the minimum number of disk spindles required to service the random I/O requests during usage of the SQL Server database?

A. 8
B. 10
C. 12
D. 14

Answer: B

Question No : 2 - (Topic 1)

Your customer has a new VNX solution configured with Flash, SAS, and NL-SAS drives. The customer requires their OLTP, VDI, Software Development, and Regulatory Compliance workloads to be distributed between the different drive types. Due to limited drive quantities only one workload type can be configured using Flash drives.

According to best practices which configuration best assigns the workloads?

A. VDI on Flash drives; OLTP on SAS; Software Development on SAS; Regulatory Compliance on NL-SAS
B. OLTP on Flash drives; VDI on SAS; Regulatory Compliance on SAS; Software Development on NL-SAS
C. OLTP on Flash drives; VDI on SAS; Software Development on SAS; Regulatory Compliance on NL-SAS
D. VDI on Flash drives; OLTP on SAS; Regulatory Compliance on SAS; Software Development on NL-SAS

Answer: A

Question No : 3 - (Topic 1)

A customer is in the design phase of their SQL server implementation. They request your guidance concerning the number of disk drives needed to properly configure the database for performance. The current utilization of the database is shown below:

- ✐ 80% reads and 20% writes
- ✐ 10K SAS disks
- ✐ RAID 5
- ✐ 1150 IOPS

What is the minimum number of disk spindles required to service the random I/O requests during usage of the SQL Server database?

A. 12
B. 14
C. 18
D. 20

Answer: B

Question No : 4 - (Topic 1)

A VNX storage system is being configured to provide storage for an Exchange 2010 implementation for 2,000 users. Performance and reliability are more important than cost for the customer.

What RAID configuration should be used?

A. A RAID 1/0 Group, spread across two DAEs on two separate storage system busses
B. Two RAID 5 Groups in a striped metaLUN across two DAEs, one from each back end bus
C. A RAID 1/0 Group on a single DAE
D. A RAID 6 Group which can accommodate two simultaneous drive failures

Answer: A

Question No : 5 - (Topic 1)

As a result of suffering a catastrophic failure, your customer has requested a DR solution. The solution must introduce a higher level of availability for their Exchange 2010 system. You have recommended a strategy that involves Replication Manager with native DAG.

In what state(s) of the database would the replication occur?

A. Either active or passive
B. Active only
C. Passive only
D. Neither active nor passive

Answer: A

Question No : 6 - (Topic 1)

A company has added a large number of users to a VMware VDI deployment. The users are complaining that the system (VNX-Block) is slow, especially when they start their shift. You have been tasked to provide an economical solution.

Which technology would you use to improve performance?

A. FAST Cache
B. FAST VP
C. FAST
D. Fast VPN

Answer: A

Question No : 7 - (Topic 1)

A customer has designed an environment using block based LUNs presented to individual hosts. They have configured a pool to start using both thick and thin LUNs. One of the standalone servers is an archive server running on Windows. They want to maximize

capacity on the standalone server since the data is no longer accessed. They have no more drives to increase LUN capacity.

How can the customer increase available capacity to the archive server?

A. Compress the data on the block based LUN
B. Add capacity to the existing LUN
C. Delete old files
D. Back up the files, reconfigure the LUN, and restore the data

Answer: A

Question No : 8 - (Topic 1)

A customer is checking a NAR file in Unisphere Analyzer. They see that a RAID Group with only a single LUN is shown with consistently large Disk - Average Seek Distances.

What could this indicate?

A. Randomness of the I/O
B. Write utilization
C. LUN misalignment
D. Application burstiness

Answer: A

Question No : 9 - (Topic 1)

A SQL Data Warehouse database is replicating between two VNX storage systems with Incremental San Copy. The production database is on 15, 15k rpm SAS drives and the Reserved LUN Pool uses five NL-SAS drives. The database is continuously updated locally and replicated once a day to maximize the benefits of write folding. Replication takes place from 6 PM until 10 PM. At 6 PM the storage administrator notices an increase in response time of the application, which steadily improves until 10 PM.

What should be done to improve performance during replication without affecting recovery data granularity?

A. Put the Reserve LUN Pool on a similar disk and RAID type as the source volume.
B. Create a clone of the source volume and replicate the clone.
C. Expand the number of drives in the source volume to accommodate the increased I/O from the replication session.
D. Adjust the San Copy throttle to minimize the impact to the production application.

Answer: A

Question No : 10 - (Topic 1)

A pair of VNX storage arrays is replicating between two data centers over an iSCSI connection. The SQL Admin has noticed that a small OLTP database with a write size of 4k periodically experiences increased disk response times. The Storage Admin reports that during the same period, replication sessions are taking longer to complete. The Network Admin reports degraded performance between the sites during the same period.

Why is the SQL application seeing increased disk response times from the local array?

A. Increased latency causes the MirrorView/A update cycles to take longer, increasing COFW activity.
B. The 64 KB chunk size for MirrorView/A does not match the small transaction size of the database, increasing the bandwidth required between the arrays.
C. The MirrorView/A update cycle time is too short. It should be increased to improve write folding.
D. The MirrorView/A buffer size should be adjusted to match the smaller write I/O size.

Answer: A

Question No : 11 - (Topic 1)

You are working with a customer to design a VNX for Block solution for their SQL database. They currently have a CX4-480. In the past they have co-located their database and log files. In the new VNX design, the database will be placed in a FAST VP enabled pool. The transaction logs will be placed on a traditional RAID Group. Your customer needs help determining the number of spindles they need to satisfy the needs of their transaction logs.

You know the following:

✍ Transaction period: 8 hours (business day)
✍ Throughput during transaction period: 240 GB

How many RAID 1/0 15K spindles will the transaction log volume require?

A. 4
B. 8
C. 10
D. 16

Answer: D

Question No : 12 - (Topic 1)

Which action would be most effective in reducing the performance impact of a Snapshot on a Source LUN?

A. Using faster disks for the Source LUN
B. Using faster disks for the Reserved LUN Pool
C. Increasing the Snapshot chunk size
D. Increasing the Snapshot write-aside size

Answer: A

Question No : 13 - (Topic 1)

A customer has a VNX system to provide storage for a VMware Cluster with five ESX hosts. Each ESX host has one dual-port FC HBA connected to two FC switches. They are using VMware native failover functionality for high availability and load-balancing.

The customer requires higher availability for the ESX host connectivity to the storage system.

What would you recommend to the customer?

A. Use dual HBAs with dual ports on each ESX host.
B. Use a host-based load balancing solution.
C. Use high quality stackable FC switches.
D. Current configuration ensures the best availability.

Answer: A

Question No : 14 - (Topic 1)

A customer would like to configure their VNX for File for the highest possible level of client availability. There are five Ethernet ports on a single DataMover and a single Ethernet switch available for client communications.

What availability features would you recommend to the customer?

A. Link Aggregation Control Protocol only
B. EtherChannel port aggregation and Fail Safe Networking
C. Fail Safe Networking and Link Aggregation Control Protocol
D. EtherChannel port aggregation only

Answer: A

Question No : 15 - (Topic 1)

A customer would like to use five Ethernet ports on a VNX to increase the port and switch availability. Two non-stackable Ethernet switches are available for the VNX and both support Full Duplex communications.

How should the customer configure the VNX for the network?

A. Fail Safe Networking and Link Aggregation
B. Link Aggregation only
C. EtherChannel and Fail Safe Networking
D. EtherChannel only

Answer: A

Question No : 16 - (Topic 1)

A client has asked for assistance with designing his Exchange environment. The environment today is fully virtualized and Exchange will be as well. The client is concerned

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about local recovery and has decided to make VMware snapshots of their VMFS File system housing Exchange. The VMware servers are all attached through fiber to a VNX.

What volume type is required to meet the customer's protection needs?

A. Virtual Mode RDMs
B. Physical Mode RDMs
C. VMFS
D. Dedicated RAID Group LUNs

Answer: A

Question No : 17 - (Topic 1)

A customer has created a thin LUN, enabled compression on a LUN Pool, and installed their Exchange environment. The Exchange application is showing poor performance.

Which workload characteristic of Exchange would produce poor access times on a compressed LUN?

A. Small random writes
B. Small random reads
C. Sequential reads
D. Uncompressed or host based data

Answer: A

Question No : 18 - (Topic 1)

You are migrating a backup application that runs on physical servers to a VDC. The VDC storage is currently a VNX configured with NL-SAS drives only. Your customer is concerned about the cost to achieve reasonable performance. You are designing the VMs that will support the application.

Based on cost, which would be the first solution you would recommend?

A. VMware Paravirtual SCSI virtual adapter
B. Virtual adapter is BusLogic Parallel

C. FAST VP Pool (Flash and SAS drives)
D. SAS RAID Group

Answer: A

Question No : 19 - (Topic 1)

Your customer is designing a Proof of Concept with SQL Server attached to a VNX. The storage design includes seven LUNs on a RAID Group. The system is generally very heavily loaded, with a particularly high load on the cache. This is a very carefully controlled environment and your customer has asked for assistance in planning the layout of the LUN location on the physical spindles.

Where in the RAID Group would you recommend placing the two heavily used LUNs for a "short-stroked" architecture?

A. Adjacent to each other at the beginning
B. One at beginning and one at the end
C. Adjacent to each other in the middle
D. Evenly placed, as non-adjacent as possible

Answer: A

Question No : 20 - (Topic 1)

A customer is about to implement your VNX for File design for a file-sharing environment. The design specifies both NFS and Windows clients that access file systems in a multi-threaded manner. All file systems will be created using the Automatic Volume Manager. The customer is most concerned with disk efficiency, and wants to use all storage in each pool entry before creating another.

Which value would you change to meet this requirement?

A. is_greedy
B. slice
C. is_dynamic
D. stripesize

Answer: A