Exam : S10-300

Title : SNIA Architect - Assessment, Planning, & Design

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QUESTION 1
A San is supporting Windows and SUN operating system. What should the administrator do to support the heterogeneous Oss?

A. Use zoning to separate hosts.
B. Have a different fabric for each OS.
C. Use LUN masking to separate hosts.
D. Direct attach each host to the storage array

Answer: A

QUESTION 2
What is the primary objective of the storage capacity planning process?

A. To demonstrate the effects of changes in storage service levels.
B. To reach agreement with application representatives and management over the storage requirements.
C. To produce a capacity plan at agreed intervals which fits into the business planning cycle, e.g. the financial year.
D. To calculate the effects on ILM service levels, array and fabric utilization of the estimated demand over the period of the planning horizon.

Answer: C

QUESTION 3
What information must be gathered during the testing phase BEFORE allowing live customer data on the storage infrastructure? (Choose two)

A. time to failover, both without and with simulated load.
B. Single points of failure in the infrastructure as well as topology mapping
C. Hardware and software vendor escalation process including phone-home and /or ticket generation.
D. Powerup order, how long from power application to functionality per component, including dependencies.

Answer: A,D

QUESTION 4
Certkiller .com is planning to implement a new service, and needs to deploy two servers in a active/passive cluster maintaining a large repository of data. This data will include three sets of data:
SET 1:Stream type data:3MB Files on average :many thousands
SET 2:Large file data:200KB Files on average: many millions
SET 3:Small file data: 15 KB Files on average:hundereds of millions
The application developer is writing code that is specific to an implementation of

clustering that requires block level access.
Which solution does not degrade performance?

A. a RAID 5 grouping for set 3, while deploying set 1 and 2 on the same RAID 0+1 set
B. deploying set 1 and 2 as independent RAID 5 groupings, while deploying set 3 as a RAID 0+1 set
C. creating a single RAID 5 grouping on the array and using the OS to partition each of the three sets
D. creating a single RAID 5 grouping on the array and using the array to partition each of the three sets from the same pack of physical har drive.

Answer: B

QUESTION 5
Certkiller .com is using host based virtualization to mirror critical data between two vendors disk arrays. Which two scenarios are true? (Choose two)

A. The host can use the same HBA to connect to both arrays.
B. The customer can adhere to either vendors SAN design rules
C. The customer must adhere to both vendors SAN design rules
D. The host must use different HBAs with different firmware to connect to each array.

Answer: C,D

QUESTION 6
Which three principles best describe data collected during a strategic risk assessment of the storage environment (including impacts on RTO/RPO)?

A. identification of loss scenarios
B. probability an include will occur
C. procedures to reduce possibility of error or failure
D. fault tolerant and resilient IT systems and networks
E. documenting acceptable loss levels and severity from a business perdpective.

Answer: A,B,E

QUESTION 7
Certkiller .com needs to develop a fault tolerant solution. They have implemented a two server cluster with application failover. They have two split mirror snapshots of their data and have implemented redundant Fabrics.
Which solution should they implement?

A. each server in both Fabrics, each snapshot available to one host
B. each server in both Fabrics, each snapshot available to both host
C. each server in a separate Fabrics, each snapshot available to one host
D. each server in a separate Fabrics, each snapshot available to both host

Answer: B

QUESTION 8
An error happened in the data center. According to ITIL principles, when is your job as storage administrator complete?

A. when the problem is fixed
B. when the cause of the error is determined
C. when the problem is identified and the vendor is notified
D. when a plan is developed to ensure the error does not reoccur

Answer: D

QUESTION 9
A client is consolidating a database server into an existing SAN attached array with 73 GB drives and a default LUN size of 8.8 GB. The server currently uses O/S based volume management on 9 GB LUNs carved from 36 GB drives in a direct attached disk array. The array is connected using two 100 MB/s FC ports. The file systems are set at a default blocksize of 2048.
Which would be the most important to address in your design?

A. adapt to standard LUN sizes, paying migration penalities
B. upgrade connectivity from 100 to 200 GB, incurring upgrade cost
C. account for change in access density from 36 GB to 73 GB drive
D. determine capacity/performance impact of file system parameters

Answer: A

QUESTION 10
Certkiller .com has created a disaster recovery (DR) plan and is synchronously replicating its data to remote facility.
Which three must be identical between the remote and production site?

A. LVM
B. Server OS
C. File system
D. Storage array
E. Server hardware

Answer: A,B,C

QUESTION 11
You notice, from continually monitoring a SAN arry, that an array has a number of soft SCSI bus error. You trace the errors back to a single drive using a vendor's event tool.

Which two would correct this? (Choose two)

A. You should pull the drive out immediately and replace it to prevent data corruption on the RAID set.
B. Soft SCSI bus errors can be safely ignored as they do not actually denote any service requirements.
C. You should research the error to determine the impact and proper response including the vendor in these discussions
D. Review the logs from the array to identify if there is a pattern of large numbers of these SCSI errors. A large number of these SCSI bus errors may denote a predictive failure.

Answer: C,D

QUESTION 12
Certkiller .com has implemented a disaster recovery (DR) plan with remote standby servers and synchronous data replication. The customer wants to upgrade to 2 Gb HBAs in a server.
What should be done before shutting down the production server and upgrading the HBA?

A. failover the storage and applications to the remote facility, shut down production servers and upgrade the HBA
B. create a copy-on-write (COW) snapshot and present it to a local host, failover applications, shut down productions servers and upgrade the HBA, delete snapshot.
C. Creat a split mirror snaphot and present it to a local host, failover applications, shut down production servers and upgrade the HBA, reestablish the snapshot
D. Create a COW snapshot of the production volume and present it to a remote host, failover applications, shut down production servers and upgrade the HBA, delete snapshot

Answer: A

QUESTION 13
You are conducting an ILM assessment and just completd the consolidation and assignment phase. What is your next steps?

A. perform gap analysis
B. develop detailed design
C. collect data and requirements
D. prepare actionable recommendations

Answer: A

QUESTION 14
After lab testing a solution, which two deliverables should be presented to the

implementation team? (choose two)

A. list of tested and approved versioning and code
B. performance metric showing maximum performance
C. complete TCO and ROI documentation for the solution
D. tested procedures and process for failover and redundancy

Answer: A,D

QUESTION 15
A disaster recovery (DR) Plan includes synchronously replicating data between a production and remote site and implementing a to-member extended distance cluster. Certkiller .com uses a database application that can run in parallel mode. What should Certkiller .com do?

A. Start the database in parallel mode so that it runs on both servers;failover the storage in a disaster
B. Start the database in parallel mode so that it runs on both servers;you do not need to failover anything.
C. Run the database in normal mode on the production cluster member and failover the application and storage in a disaster
D. Run the database in normal mode on each cluster member with each accessing local database files; you do need to failover anything.

Answer: C

QUESTION 16
Which technique is used to ensure that SAN-attached tape devices are represented consistently in a host operating system?

A. LUN mapping
B. Persistent binding
C. Fabric initialization
D. Indexed addressing

Answer: B

QUESTION 17
You are architecting a redundant SAN which will include 100 hosts with dual HBAs,50 hosts with quad HBAs, and storage arrays which have a total of 48 ports. The SAN implements redundant Fabrics and redundant ISLs. A 128 port director is ten times as expensive as a 16 port switch.
Focusing on management, cost, performance, and future expansion, which solution is the most effective?

A. 4 directories

B. 32 switches in a mesh configuration
C. 2 directors and 16 switches in a mesh configuration
D. 2 directors and 16 switches in a core edge configuration

Answer: A

QUESTION 18
A new host is added to the SAN. The SAN includes 200 hosts. The administrator is providing the host with one virtual device. What should be done?

A. Create a logical volume on the array, configure LUN masking, rescan the SCSI bu.
B. Create a logical volume on the array zone the host to the array ports, configure LUN masking, rescan the SCSI bus.
C. Create a logical volume on the array configure LUN masking, zone the host to the array ports, rescan the SCSI bus.
D. Create a logical volume on the array configure LUN mapping, zone the host on the array ports, rescan the SCSI bus.

Answer: B

QUESTION 19
A client has four servers they want to attach to a storage array containing 16 ports. Which topology is the most cost effective for this situation?

A. star
B. mesh
C. point-to-point
D. switched Fabric

Answer: C

QUESTION 20
A four switch Fabric with 8 ports per switch using a full-mesh connectivity approach will have 20 ports available for Fabric attached devices.
How many ports will be available using the full mesh approach when increasing the number of switches from four to six?

A. 12
B. 18
C. 20
D. 24

Answer: B

QUESTION 21
What is not affected by distance?

A. delay
B. latency
C. bandwidth
D. throughput

Answer: C

QUESTION 22
Certkiller .com needs to protect against data corruption. You must assume that it could take the company up to three hours to determine that their data is corrupted. They want to have a snapshot every hour. The production data is not write intensive. If a split mirror snapshot is used, incremental establishment takes 15 minutes.
Which solution fulfils their needs and is the most cost effective?

A. Create a COW snapshot every hour. Always keep three snapshots
B. Create a COW snapshot every hour. Always keep four snapshots
C. Incrementally establish a split mirror snapshot every hour. Rortate using four snapshot volumes.
D. Incrementally establish a split mirror snapshot every 45 minutes. Rotate using five snapshots volumes.

Answer: B

QUESTION 23
Certkiller .com is configuring a host to have access to three virtual devices. The customer wants to strip these devices into one logical volume.
Which three choices are valid?

A. host based virtualization
B. file based virtualization
C. device based virtualization
D. network based virtualization
E. capacity based virtualization

Answer: A,C,D

QUESTION 24
You are troubleshooting a disaster recovery plan for your data center. Your current configuration is one with a SAN that includes a local and remote data center. Recently the data center was moved further away. You are experiencing reduced throughput and link utilization is now at 35 percent.
What cause this?

A. hard zones

B. phone connections
C. data transport between sites
D. buffer credits between switches

Answer: D

QUESTION 25
Which two statements are correct when designing a core-edge or tired storage network topologies for high availability? (Choose two)

A. ISLs are connected across independent ASICs.
B. Large port count switches should only be used in the core.
C. A 10 Gb/ISL should always be used in place of two or four 2 Gb's ISLs.
D. Core-edge and tiered storage network topologies should always be deployed in pairs for redundancy.

Answer: A,D

QUESTION 26
For a high availability storage network what should you do?

A. Deploy two separate fabrics with redundant ISLs interconnecting them.
B. Interconnect all switches together with redundant ISLs and management interfaces.
C. Establish two separate fabrics with unique name servers and management configurations.
D. Use fully redundant components with no single point of failure that are all interconnected using redundant paths and networks.

Answer: C

QUESTION 27
Certkiller .com needs to create a tape backup strategy for a file system. On average the file system will be 60% full. Array based virtualization will be used to create the snapshot, which will only be used for the tape backup. Write activity on the production volume will be minimal during the backup process.
Which will provide the least impact to the production application?

A. COW snapshot mounted to a tutor/mount server.
B. COW snapshot mounted to the application server.
C. Split mirror snapshot mounted to a tutor/mount server
D. Split mirror snapshot mounted to the application server.

Answer: A

QUESTION 28
Some system servers contain valuable and frequently accessed data, manuals, and

engineering drawings. These files do not change very often, but they need to be kept on reasonably fast, reliable storage to serve the needs of users.
What would be an acceptable method of presenting these files for use?

A. Install an Arbitrated Loop Storage system off of the primary server.
B. Install a High availability storage system connected directly to all servers.
C. Install a new Ethernet segment and connect a NAS storage system for all users.
D. Install a full blown Fiber Channel switched SAN with high availability storage system.

Answer: C

QUESTION 29
When planning a NAS solution, which two sub-processes are associated with Business Capacity Management for a NAS solution? (Choose two)

A. develop financial forecast
B. determine transaction trend
C. run reports on the storage utilization and IOPS components
D. transaction Unit equated to IOPS block size cache hit and network impact.

Answer: A,B

QUESTION 30
Which statement is correct?

A. Fan-out is the ratio of switch ports to host ports, and indication of switch load at a single host port.
B. Fan-out is the ratio of storage ports to host ports, an indication of storage load at a single host port.
C. Fan-out is the ratio of switch ports to storage ports, an indication of switch load at a single storage port.
D. Fan-out is the ratio of host ports to storage ports, an indication of host traffic load at a single storage port.

Answer: D

QUESTION 31
An array is behaving erratically. Upon working and troubleshooting with the vendor representative, you are told that the only way to clear the problem is to reboot the unit. The vendor states they have seen this behavior previously and feels it will return the unit to a fully operational status.
Which three actions should you perform? (choose three)

A. Retrieve any logs or dump that exit on the array prior to reboot
B. Reboot the unit as soon as possible to lessen the risk of corruption

C. Identify the actions to commit if a reboot does not fix the problem before you reboot the array.
D. If this is a known issue, request documentation outlining the symptoms, as well the cause, if known

Answer: A,C,D

QUESTION 32
You have been tasked with identifying upgrade options for your networked storage. Which two should you do?

A. Only select hardware and software that is SMI-S complaint
B. Share all received information openly with all vendors involved.
C. Understand needs and requirements as well capabilities of your existing technology.
D. Enlist legal advice or support of your purchasing department when creating RFI, RFP, and RFQs.

Answer: C,D

QUESTION 33
Which three technical requirements should be rejected or restarted ? (Choose three)

A. Nee to keep the business running in case of a disaster.
B. The ROI of the SAN infrastructure should equal or be lower than the existing infrastructure.
C. The SAN must allow all functionality of business critical server at site X to resume within Y minutes at Site Z.
D. In an effort to stay current with technology advances all business critical servers are to be hosted on SANs.

Answer: A,B,D

QUESTION 34
What are three key advantages of deploying a director-based solution over a mesh of switches? (Choose three)

A. lower cost
B. consistent latency
C. improved availability
D. increased hop count
E. ease of management

Answer: B,C,E

QUESTION 35
When deploying a copy on write backup solution that uses 3rd party copy, which two statements are true? (Choose two)

A. No backup servers are required
B. The NDMP engine must be loaded on the backup server.
C. A backup server will still control the environment such as loading tapes.
D. The backup server must be able to see the 3rd party copy engine as well as the LUN to be backed up.

Answer: C,D

QUESTION 36
A database is being replicated to a remote location. To have maximum flexibility to restore the database, what should you do?

A. Put database binaries, data files, logs, and meta data files on one logical volume.
B. Put database binaries, data files, logs, and meta data files on four different logical volume.
C. Put database binaries and logs on one volume and data files and meta data files on a different logical volume.
D. Put database binaries and metadata files on one volume and data files and logs, on a different logical volume.

Answer: B

QUESTION 37
The customer currently has 50 servers and 20 direct-attached storage array and wants to consolidate their data on a SAN. They want to be able to rapidly add storage and servers with minimum impact to data availability?
Which topology is most appropriate?

A. star
B. mesh
C. core-edge
D. round-robin

Answer: C

QUESTION 38
An existing SAN is presently deployed that has two arrays (8FC ports each) and eight Servers (2FC ports each) two backup servers (4 FC Ports Each) and four FC to SCSI tape routers (2 port each). They presently have two Fabric each with a single 32 port switch. They wish to add four new servers, one new array, and one new backup server.
Which statement is correct?

A. The existing switch infrastructure will handle the expansion
B. An additional pair of switches would be needed to enable this request
C. An additional 3 switches should be ordered to allow conversion of these fabrics to a core-edge design.
D. The added latency of the ISL would require that the backup server would need to be deployed on the same switch as the tape routers.

Answer: B

QUESTION 39
When implementing a high performance NAS solution you must check for which two items? (Choose two)

A. Ensure the network is full duplex
B. Ensure that hosts have 100 Mb NICs.
C. Ensure the network is at least 100Mb.
D. Ensure routers are configured for OSPF.

Answer: A,C

QUESTION 40
An existing SAN has been experiencing numerous faults in the past few months, you have been tasked with bringing the problems to solution and ensure reliability. Your primary concern is visibility into the SAN and the present lack of monitoring. Which two are true about the existing infrastructure? (Choose two)

A. Evaluating vendor supplied tools, and knowledge base type documents may outline best practices for increasing reliability and reporting .
B. Requesting vendor assistance, and if need be custom builds of the firmware/software that runs your array to fix the specific problems that you encounter.
C. Testing and then Level settings firmware and code levels to a common vendor supported standard will allow you to avoid many of the problems that may have been encountered in the past.
D. Since SMI-S is an emerging standard, the likehood of being able to manage equipment bought in previous years is very low. A migration plan should be considered to an SMI-S complaint infrastructure.

Answer: A,C

QUESTION 41
When implementing a LAN-free/severless (third party copy) backup solution, which benefit is achieved?

A. since the backup is serverless no backup servers are required.
B. SINCE THE BACKUP IS lan-FREE ALL BACKUP DATA TRAFFIC IS

RELEGATED TO THE san
C. The third party copy protocol will handle all open files so no snapshots or data quiesce is required
D. The combination of 3rd party copy and incremental backups allows significant reduction of tapes needed.

Answer: B

QUESTION 42
A host is using only 10 percent of a 64 GB volume. Which solution would enable you to reclaim the wasted disk space?

A. Shrink the 64 GB volume to 16 GB
B. Create a new 16 GB volume use a file system copy to migrate the data.
C. Create a new 16 GB volume create a COW snapshot of the production volume restore the snapshot to the new volume.
D. Create a new 16 GB volume attach the new volume to the production volume as a split mirror snapshot to migrate the data.

Answer: B

QUESTION 43
Which design supports high availability and no single point of failure for storage networks along with performance and scalability?

A. A large single Fabric with any to any connectivity between all switches
B. Dual and quad ported servers and storage devices attached to a dual fabric.
C. High quality fiber optic cabling transceivers cable management and diagnostic tools.
D. Clustered servers with a single host adapters attached to switches that have redundant paths to storage subsystems.

Answer: B

QUESTION 44
Certkiller .com is designing a disaster recovery (DR) plan using synchronous array based data replication with Fiber Channel SAN extension technology. The remote site is 125 km from the production facility.
Which solution fits their needs?

A. FCIP
B. IFCIP
C. DWDM
D. ISCSI bridge

Answer: C

QUESTION 45
Certkiller .com is utilizing ITIL to create a high availability environment. Maintainability of the IT infrastructure consists of which three stages? (Choose three)

A. COST OF FAILURES
B. CETECTION OF FAILURES
C. ANTIPATION OF FAILURES
D. RESTORATION OF THE DATA AND IT SERVICE
E. EFFECT OF FAILURES ON SERVICE LEVEL AGREEMENTS

Answer: B,C,D

QUESTION 46
Certkiller .com has a disk subsystem with eight ports. Each port delivers 200 MB/s. The customer wants a solution designed which allows access from 32 servers with no single point of failure.
Which number of HBAs and the associated throughput provide server access to the subsystem?

A. 16 HBAs, 75 MB/s
B. 32 HBAs, 90 MB/s
C. 64 HBAs, 25 MB/s
D. 64 HBAs, 50 MB/s

Answer: C

QUESTION 47
When designing a redundant IP storage network for data movement or access of remote data, which two must be considered? (Choose two)

A. Obtain the fastest network circuit that is available.
B. Enable IP jumbo frames and as large of TCP window size as possible.
C. Obtain data circuits with low latency and good quality that take diverse routes between locations.
D. Understand network solution including network circuits routers and gateways capabilities and management interfaces.

Answer: C,D

QUESTION 48
You are preparing a detailed design, applying ILM principles. Which two processes are performed during the detailed design phase? (Choose two)

A. Develop an idealized environment
B. Prepare work-task breakdown structure

C. Define internal storage parameters used in the implementation
D. Document current and proposed infrastructure, demonstrating change in capabilities.

Answer: B,C

QUESTION 49
What is the Maximum Transmit Unit (MTU) size for IP-based NAS and SAN using Gigabit Ethernet jumbo frames?

A. 2K bytes
B. 65K bytes
C. 1508 bytes
D. 100M bytes

Answer: B

QUESTION 50
Certkiller .com has consolidated multiple servers into a NAS solution and is redesigning their network to safeguard against malicious networking threats. The original servers were serving multiple subnets.
To implement the solution including NAS failover, what should you do?

A. Implement VSANS
B. Implement VLAN technology
C. Implement FCIP with encryption.
D. Connect each data mover/filer to each subnet.

Answer: B