Vendor:IBM

Exam Code:C9020-562

Exam Name:IBM Storwize Family Technical Solutions V4

Version: Demo

QUESTION 1

A customer is looking to replicate data to its disaster recovery location. The customer has gathered data about I/O and throughput to the storage.

Which piece of information is needed to properly size the bandwidth needed between the two locations?

A. Peak write IOPS

B. Peak write MBps

C. Peak read IOPS D. Peak read MBps

Correct Answer: A

Sizing the systems for replication

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Metro Mirror has the least impact to the amount of IO a system can handle, as it has the lowest overhead.

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Regular Global Mirror further lowers the maximum throughput of the system, and the increase in host write response time depends on the quantity of IO being replicated via Global Mirror. The main cause of increased write response time is spikes of host write IO that there\\'s insufficient partnership bandwidth to replicate instantly, but we have seen cases where the increased overhead of the Global Mirror processing has made a workload unusable.

References:https://www.ibm.com/developerworks/community/blogs/storwizecopyservices/e ntry/ sizingreplication?lang=en

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QUESTION 2

A cloud solution is being planned using the IBM Storwize family to provide storage for multiple clients on IBM Power and Intel hosts.

Which solution provides the necessary storage for the primary site and a disaster recovery location at a data center 1500 kilometers away?

A. Create a four node IBM Storwize V7000 cluster with one I/O Group at the primary data center and the other at the disaster recovery location. Use FlashCopy to copy the volumes from the primary I/O Group to the disaster recovery I/O Group.

B. Create volumeson IBM Storwize V7000 storage at the primary data center and use Global Mirror to create copies on an IBM Storwize V7000 at the disaster recovery location.

C. Create volume mirrors on IBM Storwize V7000 storage at the primary data center with virtualizedexternal IBM Storwize V3700 storage at the disaster recovery location.

D. Create volumes on IBM Storwize V7000 Storage at the primary data center and use Metro to create asynchronous copies on an IBM Storwize V5030 at the disaster recovery location.

Correct Answer: B

Metro Mirror and Global Mirror are technologies that enable you to keep a real-time copy of a disk at a remote site that contains another SVC Cluster or Storwize V7000 system.

Incorrect Answers

A: FlashCopy is a function that allows you to create a point-in-time copy of one of your SVC disks. This might be helpful when performing backups or application testing. These copies may be cascaded upon one another, read from, written to, and even reversed. These copies are able to conserve storage, if needed, by being space-efficient copies that only record items that have changed from the originals instead of full copies.

C: Volume Mirroring is a function designed to increase high availability of the storage infrastructure. It provides the ability to createup to two local copies of a volume.

References: IBM System Storage SAN Volume Controller and Storwize V7000 Replication Family Services, page 22 http://www.redbooks.ibm.com/redbooks/pdfs/sg247574.pdf

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QUESTION 3

A customer has SAS connected storage in its environment that was purchased from a competitor. The

customer does not have a SAN but wishes to add 10 Gb iSCSI. The customer is considering buying an

IBM Storwize product because the competitor charges for migration.

Which IBM product should the technical specialist recommend that includes these features?

A. IBM Storwize V7000

B. IBM SAN Volume Controller

C. IBM Storwize V5030

D. IBM Storwize V5010

Correct Answer: B

IBM SAN Volume Controller key features include:

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Combine storage capacity from multiple vendors for centralized management

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Increase storage utilization by providing more flexible access to storage assets

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Support for almost 400 different storage systems

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Help improve data security with support for encryption

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Implement hybrid cloud capabilities rapidly and with existing on-premises storage

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Has four 10 Gbps copper (RJ45) Ethernet ports for management and/or iSCSI

References:http://www03.ibm.com/systems/storage/software/virtualization/svc/overview.html

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QUESTION 4

A customer has acquired a new business and wants to bring its systems and storage under corporate systems. The company has an IBM SVC in the environment to manage all storage.

What must the customer do with the volumes from the new businesses storage to bring them under IBM Spectrum Virtualize management?

A. Import the volumes using Volume Mirror

B. Import the volumes using Managed mode

C. Import the volumes in Image Mode

D. Import the volumes as a storage pool

Correct Answer: C

Image mode volumes are used to migrate LUNs that were previously mapped directly to host servers over to the control of the IBM Spectrum Virtualize system.

Note: mkimagevolume Create a new image mode volume. This command can be used to import a volume, preserving existing data.

References:Implementing the IBM Storwize V7000 and IBM Spectrum Virtualize V7.8, page 215
http://www.redbooks.ibm.com/redpieces/pdfs/sg247938.pdf

QUESTION 5

In addition to pre-sale, what is the other type of Technical and Delivery Assessment (TDA)?

A. Post-sale

B. Pre-install

C. Pre-delivery

D. Post-warranty

Correct Answer: B

TDAs can be performed pre-sale, pre-installation, or post-installation.

References:http://joehertvik.com/an-ibm-technical-delivery-assessment-primer/

QUESTION 6

A customer wants to create an IBM SVC Enhanced Stretch Cluster between two data centers.

Which license is required to create this configuration?

A. Spectrum Control

B. Spectrum Virtualize

C. FlashCopy

D. Metro Mirror

Correct Answer: B

The Enhanced Stretched Cluster configuration provides a continuous availability platform, whereby hostaccess is maintained during the loss of any single failure domain. This availability is accomplished through the inherent active/active architecture of IBM Spectrum Virtualize and SAN Volume Controller along with the use of volume mirroring.

References: IBM Spectrum Virtualize and SAN Volume Controller Enhanced Stretched Cluster with VMware, page 28

References:http://www.redbooks.ibm.com/redbooks/pdfs/sg248211.pdf

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QUESTION 7

A customer is implementing an IBM Storwize V7000 Unified solution and will access both file and block storage. Two fibre channel adapters are included within each controller.

What is the maximum number of fibre channel connections the customer can connect to its SAN fabrics?

A. 12

B. 6

C. 4

D. 16

Correct Answer: D

With the introduction of the 2076-524 nodes, and the ability to have up to eight FC ports per node, there are several different options that are valid for attaching storage to the Storwize V7000 Gen2 cluster.

Apply these Storwize V7000 Unified configuration details for Fibre Channel and Fibre Channel Over Ethernet (FC/FCoE Gateway, FCF) switches to ensure that you have a valid configuration. Configuring your SAN with at least two independent switches, or networks of switches, ensures a redundant fabric with no single point of failure. If one of the two SAN fabrics fails, the configuration is in a degraded mode, but is still valid. You should maintain separate fabrics for FCoE and FC. If you attempt to combine these fabrics, you might risk adding additional paths to the volumes. Supported configurations allow a maximum of eight paths.

References:http://www.ibm.com/support/knowledgecenter/ST5Q4U/com.ibm.storwize.v700

0.unified.141.doc/svc_rulesswitch_223fp0.html

QUESTION 8

Which tool is used to report usable capacity for IBM Storwize disk subsystems?

A. Batch Magic

B. Disk Magic

C. STAT

D. Capacity Magic

Correct Answer: D

IBM Capacity Magic is an easy-to-use tool that runs on a PC, requires a minimum of input, and calculates the physical and effective capacity of the IBM System Storage Systems,including Storwize V7000.

QUESTION 9

A solution requires access to a file share on the IBM Storwize V7000 Unified via Mac OS X 10.7, RHEL 6.4, and Windows 8.

Where should the technical specialist determine connection protocol support for this mixed environment?

A. SSIC

B. eConfig

C. Announcement

D. SalesManual

Correct Answer: A

The IBM System Storage Interoperation Center (SSIC) is used to check for hardware and software compatibility.

References:https://www.ibm.com/support/knowledgecenter/STAV45/com.ibm.sonas.doc/svc_connectingxivtofcswitch.html

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QUESTION 10

Which network authentication protocol is supported on the IBM Storwize V7000 Unified storage system, is used for client/server applications, and provides symmetric key cryptography?

A. Network Information Service (NIS)

B. Kerberos

C. Services for UNIX (SFU)

D. POSIX

Correct Answer: B

Kerberos To provide heterogeneous file sharing for Unix and Windows, the Storwize V7000 Unified system must support authentication methods for Unix and Windows. The Storwize V7000Unified system uses Windows authentication for incoming CIFS connections and Unix authentication for incoming NFS, HTTP, SFTP and SCP connections.

Kerberos is a network authentication protocol for client/server applications that uses symmetric key cryptography.

Note: User password in clear text format is never sent over a network; the Kerberos server grants a ticket to the client for a short span of time. This ticket is used while communicating with the server to obtain access to the service, such as a file server. The Windowsbased authentication is based on Kerberos. MIT Kerberos is a free implementation of the Kerberos protocol, which is provided by the Massachusetts Institute of Technology.

References:http://www.ibm.com/support/knowledgecenter/ST5Q4U/com.ibm.storwize.v7000.unified.142.doc/mng_authentication_basic_concepts.html

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QUESTION 11

A customer is interested in replacing a NetApp E-series disk array with one that supports auto-tiering between NL-SAS, SAS, and SSD disk technologies.

Which advantage does the IBM Storwize V7000 model 524 have over the competition?

A. The V7000 relocates data based on current usage.

B. The V7000 predictively relocates data

C. The V7000 uses SSDs for quorum disks.

D. The V7000 relocates the DACstor metadata to SSDs.

Correct Answer: A

Flex System V7000 Storage Node includes IBM System Storage Easy Tier, a function that responds tothe presence of flash drives in a storage pool that also contains hard disk drives (HDDs). The system automatically and nondisruptively moves frequently accessed data from HDD MDisks to SSD MDisks, thus placing such data in a faster tier of storage.

EasyTier eliminates manual intervention when assigning highly active data on volumes to faster responding storage. In this dynamically tiered environment, data movement is seamless to the host application regardless of the storage tier in which the data resides.

References:https://publib.boulder.ibm.com/infocenter/flexsys/information/index.jsp?topic=_Fcom.ibm.acc.4939.doc_Fsvc_easy_tier.html

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QUESTION 12

A small customer has an old VNXe with iSCSI and needs a new storage system that is easy to manage. Price is a concern.

Which IBM Storwize family product should the technical specialist recommend to the customer?

A. Storwize V5010

B. Storwize V5020

C. Storwize V7000

D. Storwize V5030

Correct Answer: A