EMC

Exam E20-526

XtremIO Solutions and Design Specialist Exam for Technology Architects

Verson: Demo

[Total Questions: 10]

Question No : 1

Based on XtremIO best practice, which byte sector size should be used for volumes hosting Oracle database files?

A. 256
B. 512
C. 1024
D. 4096

Answer: D

Explanation:
Architecting a database on an All Flash Array (AFA) like EMC's XtremIO is best done by reviewing practices to optimize I/O performance. One consideration is the use of Advanced Format and how it impacts the performance of the database Redo logs. Advanced Format refers to a new physical sector size of 4096 bytes (4KB) replacing original 512 byte standard.

References:https://community.emc.com/community/connect/everything_oracle/blog/2014/07/18/xtremio-best-practices-advanced-format-512e-and-native-modes

Question No : 2

A customer currently uses XtremIO native remote replication with four RPAs and a 1 GB WAN link to asynchronously protect all production data. Management has decided that all data stored on the XtremIO must now be protected at the disaster recovery site by synchronous replication.

How can this be achieved?

A. Set the Link Policy to Synchronous, Dynamic by throughput
B. Purchase four additional RPAs.
C. Set the Link Policy to Synchronous, Dynamic by latency
D. Use a VPLEX splitter

Answer: D

Explanation:

XtremIO with VPLEX provides for both synchronous and asynchronous replication.

Note: The engine of RecoverPoint is the RecoverPoint Appliance (RPA).

Question No : 3

Block size/IOPS	Single X-Brick – FC Connectivity						
Read/Write mix	100%R	80%/20%	70%/30%	50%/50%	30%/70%	20%/80%	100%W
512b	244,950	156,651	135,752	109,434	91,818	86,003	75,820
1K	244,840	156,814	136,096	109,300	92,150	86,103	76,293
2k	244,299	156,843	136,157	109,424	92,813	86,340	76,004
4k	243,655	156,563	135,376	109,205	93,068	86,181	75,857
8k	243,831	181,200	163,430	136,187	116,679	108,606	95,241
16k	154,240	109,849	97,069	77,777	64,731	59,666	51,776
32k	94,169	61,813	53,666	42,433	34,880	32,077	27,627
64k	50,170	32,405	28,365	22,662	18,683	17,116	14,660
128k	25,128	16,153	14,263	11,582	10,120	8,896	7,605
256k	12,116	7,692	6,841	5,695	4,886	4,522	3,885
512k	4,572	3,182	2,886	2,480	2,216	2,102	1,886
1M	2,264	1,582	1,440	1,238	1,104	1,050	944

Refer to the exhibit.

A customer has a VMware Horizon View environment with the following characteristics:

What is the maximum recommended number of VDIs the XtremIO cluster can support during a boot storm?

A. 1625
B. 1833
C. 3250
D. 5094

Answer: A

Explanation:

EMC estimates that 150 IOPS per desktop is required in a boot storm. As per table the recommended number of VDIs then is 243,831/ 150, which equals 1625.

References:https://www.emc.com/collateral/white-papers/h14279-wp-vmware-horizon-xtremio-design-considerations.pdf, page 32

Question No : 4

How many management IP addresses are required on a single XtremIO storage controller?

A. 1
B. 2
C. 3
D. 4

Answer: A
Explanation:

References:https://docs.openstack.org/juno/config-reference/content/XtremIO-cinder-driver.html#xtremio-management-ip

Question No : 5

You have been asked to design an XtremIO storage array solution that will be used for two large applications workloads. One overload will generate approximately 150,000 write IOPs with an average 4 kB I/O size. The second write workload will have an average I/O size of 128 kB and will generate approximately 2 GB/s of throughput.

At a minimum, how many X-Bricks are needed in a single cluster to meet this requirement?

A. 2
B. 4
C. 6

D. 8

Answer: A

Explanation:

Second write workload IOPS = 2 GB/s divided by 128 kB = 2 x1,073,741,824 / (128 x 1,024) = 16384 IOPs.

Total IOPS required would be 150,000, from the first workload, plus 16384, totaling 166384.

A 2 X-Brick cluster provides 300K Read/write IOPS so it would be adequate.

Storage capacity and performance scale linearly, such that two X-Bricks supply twice the IOPS, four X-Bricks supply four times the IOPS, six X-Bricks supply six times the IOPS and eight X-Bricks supply eight times the IOPS of the single X-Brick configuration.

Note: Choose an EMC XtremIO system and scale out linearly by adding more XtremIO X-Bricks.

System	Raw Capacity	Read/Write IOPS	Read IOPS
Starter X-Brick	5 TB	150K	250K
1 X-Brick	10, 20, or 40 TB	150K	250K
2 X-Brick Cluster	20, 40, or 80 TB	300K	500K
4 X-Brick Cluster	40, 80, or 160 TB	600K	1M
6 X-Brick Cluster	120 or 240 TB	900K	1.5M
8 X-Brick Cluster	160 or 320 TB	1.2M	2M

References: https://store.emc.com/en-us/Product-Family/EMC-XtremIO-Products/EMC-XtremIO-All-Flash-Scale-Out-Array/p/EMC-XtremIO-Flash-Scale-Out

Question No : 6

You are designing an XtremIO solution for a potential customer. If the server and storage information is available, which information should be documented regarding the customer's capacity expectations?

A. Capacity requirements on a per data center basisExpandability/scalabilityPerformance requirements determined on a server-to-server basis
B. Capacity requirements on a per volume basisExpandability/scalabilityPerformance requirements determined on a server-to-server basis
C. Capacity requirements on a per volume basisCompression rates/scalabilityPerformance requirements determined on a server-to-server basis
D. Capacity requirements on a per data center basisExpandability/scalabilityPerformance requirements determined holistically

Answer: B

Question No : 7

Table 1. Sustained remote replication throughput per RPA (MB/s)

Configuration	IP		Over FC
	Without compression	With compression	
Between XtremIO arrays	80	240	300
XtremIO to non-XtremIO	80	90	90
Continuous replication from non-XtremIO to XtremIO	110	300	300
Snap-based replication from VNX to XtremIO	110	150	150

Refer to the Exhibit.

A customer has the following XtremIO environment:

If an application generates 100,000 IOPS of traffic, how many RPAs are needed to replicate the traffic from one XtremIO array to another XtremIO array over IP?

A. 1
B. 2
C. 3
D. 4

Answer: C

Explanation:

Required bandwidth= 100,000 * 8 * 1024 bytes

Provided bandwidth between XtremIO arrays with compression over Fiber Channel: 300 * 1024 * 1024 bytes

Required number of RPAs: 100,000 * 8 * 1024 / (300 * 1024 * 1024) = 800,000 / (300 * 1024) = 2.6.
Three RPAs would be enough.

Question No : 8

Where is the XtremIO VSS hardware provider package installed?

A. On all X-Bricks in the cluster
B. On the XMS
C. Factory-installed on the array
D. On the backup server

Answer: D

Explanation:
In order to use the XtremIO VSS provider it must be installed on the server where we want to do an application consistent snapshot.

References:http://muegge.com/blog/tag/xtremio/

Question No : 9

A customer has a VMware vSphere environment running Native Multipathing (NMP). Which path selection policy should be set for optimal performance when connected to an XtremIO cluster?

A. Fixed AP

B. Most Recently Used
C. Fixed
D. Round Robin

Answer: D

Explanation:

Configuring vSphere Native Multipathing.
For best performance, it is recommended to do the following:
Set the native round robin path selection policy on XtremIO volumes presented to the ESX host.

References: https://itzikr.wordpress.com/2015/12/16/host-configuration-for-vmware-vsphere-on-emc-xtremio/

Question No : 10

A storage administrator is adding both an XtremIO and third-party storage arrays to their existing infrastructure. The administrator is using ViPR SRM to monitor the environment.

Which requirement is needed to implement this solution?

A. A single third-party Solution Pack is required to manage both storage arrays
B. Each storage needs its own Solution Pack
C. Each storage array requires two Solution Packs; one for monitoring and one for performance
D. A single XtremIO Solution Pack is required to manage both storage arrays

Answer: B

Explanation:

References:https://www.emc.com/techpubs/vipr/understanding_solutionpacks-3.htm