Number: D-XTR-DS-A-24
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Exam Code: D-XTR-DS-A-24

Exam Name: Dell XtremIO Design Achievement

Exam A

QUESTION 1
What is the recommended execution throttle setting for Windows, Linux, and VMware for Qlogic adapters?

A. 65536
B. 1024
C. 16384
D. 32

Correct Answer: A
Section:
Explanation:
The recommended execution throttle setting for Qlogic adapters, when used with Windows, Linux, and VMware, is typically set to the maximum value to allow for the greatest throughput and performance. The execution throttle setting determines the maximum number of outstanding I/O operations that can be queued to the storage controller. For Qlogic Fibre Channel adapters, especially when the HBA speed is 8GBs or over, the execution throttle can be set to 65,5351. This high setting is used to ensure that the storage array can handle a large number of concurrent I/O requests, which is beneficial in environments with high-performance requirements.
Dell community discussions on Qlogic Fibre Channel adapter settings1.
Knowledgebase articles and documentation on Dell EMC's official website2.
==========

QUESTION 2
How many DAE Row Controllers are present within the DAE chassis of an XtremIO X2 cluster?

A. 8
B. 6
C. 2
D. 4

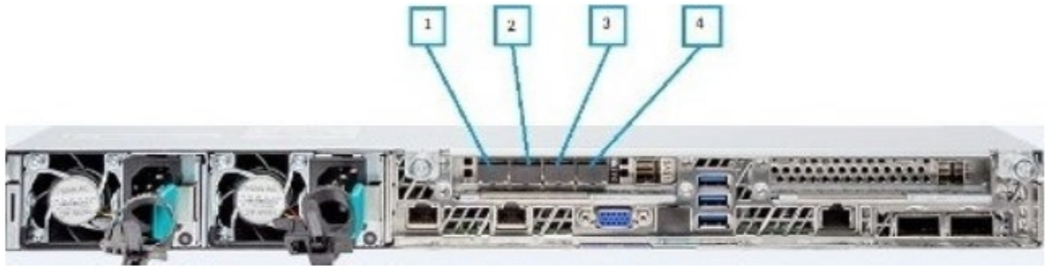
Correct Answer: C
Section:
Explanation:
In an XtremIO X2 cluster, the Disk Array Enclosure (DAE) chassis typically contains two Row Controllers. These Row Controllers are responsible for managing the operations of the SSDs within the DAE and ensuring data availability and integrity. The design of the DAE in an XtremIO X2 cluster is such that it provides a balance between performance, redundancy, and cost-effectiveness, with two Row Controllers being a common configuration for managing the SSDs effectively.
The Dell XtremIO Design Achievement document provides information on the critical components of the XtremIO and X2 systems, including the DAE chassis and its controllers1.
Additional details on the architecture and components of the XtremIO X2 systems can be found in the Introduction to XtremIO X2 Storage Array white paper2.

QUESTION 3
When using the XtremIO PoC Toolkit, what is the purpose of the Age phase?

A. Test the performance of the All-Flash array with non-production static data
B. Overwrite each LUN multiple times to ensure they contain all unique data
C. Continuously write to a specific range of logical block addresses to test Flash durability
D. Scatter writes across the entire array to simulate ordinary use of the system

Correct Answer: B
Section:
Explanation:
The purpose of the Age phase in the XtremIO PoC (Proof of Concept) Toolkit is to overwrite each LUN (Logical Unit Number) multiple times to ensure that they contain all unique data. This process is crucial for simulating a real-world scenario where the storage array has been in use for some time, which allows for the evaluation of the performance and behavior of the All-Flash array under more typical conditions1.
The XtremIO PoC Toolkit documentation, which outlines the procedures and phases used during a proof of concept to evaluate the performance and capabilities of the XtremIO storage system1.
Discussions and resources available on professional forums and communities that share insights into the use and stages of the XtremIO PoC Toolkit2.

QUESTION 4
Refer to the exhibit.



A customer wants to connect their Storage Controllers to Fibre Channel switches using as many Fibre Channel ports as possible. Which ports of each Storage Controller shown in the exhibit should be used?

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

Correct Answer: D
Section:
Explanation:
To maximize the connectivity between Storage Controllers and Fibre Channel switches, all available ports should be utilized. This ensures redundancy and maximizes throughput. The exhibit provided shows a Storage Controller with four ports labeled 1, 2, 3, and 4. Without specific design documents, the general best practice is to use all available ports for such connections, assuming the ports are configured for Fibre Channel traffic and the infrastructure supports it.
General best practices for Fibre Channel connectivity and port usage are discussed in various Dell EMC documents, such as the ''Introduction to XtremIO X2 Storage Array'' and ''Configuring Fibre Channel Storage Arrays'' documents12.
Specific port configurations and their usage would be detailed in the Dell XtremIO Design documents, which would provide definitive guidance on which ports to use for connecting to Fibre Channel switches.

QUESTION 5
A customer wants to consolidate management of their XtremIO environment to as few XMS machines as possible. The customer's XtremIO environment consists of the following:
. Two XtremIO clusters running XIOS 4.0.2-80
. Two XtremIO clusters running XIOS 4.0.4-41
. Two XtremIO clusters running XIOS 4.0.25-27
. Two XtremIO X2 clusters running XIOS 6.0.1-27_X2
What is the minimum number of XMS machines required to complete the consolidation effort?

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

Correct Answer: D
Section:
Explanation:
To consolidate the management of an XtremIO environment, the minimum number of XtremIO Management Server (XMS) machines required depends on the compatibility of the XMS with the various XtremIO Operating System (XIOS) versions present in the environment. A single XMS can manage multiple clusters as long as the XIOS versions are within the same major release family or are compatible with the XMS version.
Given the XIOS versions listed:
Two clusters running XIOS 4.0.2-80
Two clusters running XIOS 4.0.4-41
Two clusters running XIOS 4.0.25-27
Two XtremIO X2 clusters running XIOS 6.0.1-27_X2
All the clusters running XIOS version 4.x can be managed by a single XMS because they belong to the same major release family. The XtremIO X2 clusters running XIOS 6.0.1-27_X2 would typically require a separate XMS that supports the 6.x family. However, it is possible for a single XMS to manage both 4.x and 6.x clusters if the XMS version is compatible with both, which is often the case with newer XMS versions that support a wider range of XIOS versions.
Therefore, the minimum number of XMS machines required to manage all the listed clusters, assuming compatibility, is one.
Dell community discussions on vXMS version compatibility1.
Introduction to XtremIO X2 Storage Array document, which may include details on XMS and XIOS compatibility2.
XtremIO Bulletin Volume I-A 2022 for XIOS and XMS version guidelines3.

QUESTION 6
A customer's environment is expected to grow significantly (more than 150 TB physical capacity) over the next year. Which solution should be recommended?

A. Start with X2-R cluster and add additional X2-R X-Bricks as needed
B. Start with a four X-Brick X2-S cluster and add additional X2-S X-Bricks as needed
C. Start with X2-R cluster and add additional X2-S X-Bricks as needed
D. Start with X2-S cluster and add additional X2-S X-Bricks as needed

Correct Answer: A
Section:
Explanation:
For environments expected to grow significantly (more than 150 TB physical capacity), it is better to start with an X2-R cluster and add additional X2-R X-Bricks as needed. X2-R configurations are designed for a variety of use cases and can handle larger capacities and high-performance requirements.

QUESTION 7
What are the I/O Elevators?

A. 1/O scheduling algorithm which controls how I/O operations are submitted to storage.
B. The maximum number of consecutive 'sequential' I/Os allowed to be submitted to storage.
C. Setting which controls for how long the ESX host attempts to login to the iSCSI target before failing the login.
D. The amount of SCSI commands (including I/O requests) that can be handled by a storage device at a given time.

Correct Answer: A
Section:
Explanation:
Explore
I/O Elevators refer to the I/O scheduling algorithms used in operating systems to control how I/O operations are submitted to storage12. These algorithms, also known as elevators, determine the order in which I/O requests from different processes or devices are serviced by the underlying hardware, such as hard drives or solid-state drives (SSDs)12. The goal of these algorithms is to improve the efficiency of data access and reduce the time wasted by disk seeks3.
The other options provided are not typically referred to as I/O Elevators:
Option OB, ''The maximum number of consecutive 'sequential' I/Os allowed to be submitted to storage'', refers to a specific parameter of a storage system, not an I/O Elevator4.

Option OC, ''Setting which controls for how long the ESX host attempts to login to the iSCSI target before failing the login'', refers to a specific setting in ESXi host configuration, not an I/O Elevator567.
Option OD, ''The amount of SCSI commands (including I/O requests) that can be handled by a storage device at a given time'', refers to the command handling capacity of a storage device, not an I/O Elevator89.
Therefore, the verified answer is A. I/O scheduling algorithm which controls how I/O operations are submitted to storage, as it accurately describes what I/O Elevators are according to the Dell XtremIO Design Achievement document10 and other sources123.

QUESTION 8
What should the Oracle Redo Log block size be set to in order to prevent log entries from being misaligned by read-modify-write operations for an Oracle database?

A. 16 kB
B. 8 kB
C. 4 kB
D. 24 kB

Correct Answer: B
Section:
Explanation:
The Oracle Redo Log block size is recommended to be set to 8 kB. This is based on the best practices for Oracle 19c Database, where it was found that increasing the size of the Oracle redo logs can improve database performance12. However, it's important to note that not every workload will show significant performance increase when increasing the size of the redo logs. Customers should evaluate the AWR to determine if the redo logs have an associated high number and duration of wait times. If the redo logs show a possible bottleneck, then increasing the size of the redo logs could improve performance2.

QUESTION 9
Which SCSI instructions are used to build a bitmap of the changes between the first snapshot and subsequent snapshots when RecoverPoint is used with XtremIO?

A. SCSI DIFF
B. SCSI DELTA
C. SCSI TRANSFER
D. SCSI UPDATE

Correct Answer: A
Section:
Explanation:
The SCSI DIFF instruction is used to build a bitmap of the changes between the first snapshot and subsequent snapshots when RecoverPoint is used with XtremIO1.
The DIFF protocol is a vendor-specific SCSI command which RecoverPoint uses to query XtremIO in order to obtain a bitmap of changes between two snapshot sets1. RecoverPoint uses the output of the DIFF command to read the actual data and transfer it to the target side1.
The other options provided are not typically used for this purpose:
SCSI DELTA is not a recognized SCSI command2.
SCSI TRANSFER is not a recognized SCSI command3.
SCSI UPDATE is not a recognized SCSI command4.
Therefore, the verified answer is A. SCSI DIFF, as it is the SCSI instruction used to build a bitmap of the changes between the first snapshot and subsequent snapshots when RecoverPoint is used with XtremIO1.

QUESTION 10
How would a storage administrator navigate to different XtremIO clusters from the WebUI if the administrator has more than one cluster managed by the same XMS?

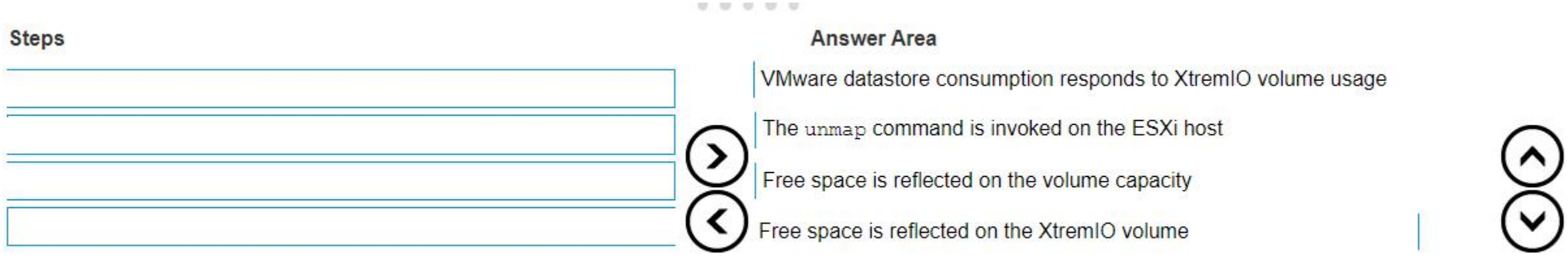
A. Click on System Settings icon on the top Menu bar
B. Click the Administration tab and locate the Cluster Name
C. Click the Cluster Name on the Status bar at the bottom of the screen
D. Click the Inventory List button on the Navigation Menu

Correct Answer: D
Section:
Explanation:
In a multi-cluster environment managed by the same XtremIO Management Server (XMS), a storage administrator can navigate between different XtremIO clusters using the WebUI through the Inventory List. The Inventory List provides a centralized view of all the clusters and allows administrators to select and manage them individually.
The process for navigating to different clusters is as follows:
Log into the XtremIO WebUI using the appropriate credentials.
Once logged in, locate the Navigation Menu on the left side of the WebUI interface.
In the Navigation Menu, find and click on the Inventory List button. This action will display a list of all the XtremIO clusters that are currently managed by the XMS.
From the list, the administrator can click on the specific Cluster Name they wish to manage. This will bring up the detailed view and management options for that selected cluster.
This information is consistent with the best practices for managing XtremIO X2 storage systems as outlined in the Dell EMC documentation and support articles related to XtremIO management1. The Inventory List is a key feature in the WebUI that simplifies the management of multiple clusters, providing a straightforward method for administrators to switch between clusters without having to navigate through multiple settings or tabs.
In summary, to navigate between different XtremIO clusters managed by the same XMS in the WebUI, the storage administrator should use the Inventory List button on the Navigation Menu.

QUESTION 11
DRAG DROP
What is the correct sequence of steps to perform a UNMAP operation on a VMware ESXi host that is mapped to an XtremIO volume containing very little data and the XtremIO array shows the space in use?

Select and Place:

Correct Answer:



Section:
Explanation:
Vmware datastore consumption responds to XtremIO volume usage
The unmp command is invoked on the ESXi host

Free space is refelected on the volume capacity
Free space is reflected on the XtremIO volume

QUESTION 12
A customer's environment is configured as follows:
. Dual X-Brick cluster
. 8 ESXi hosts with 2 Emulex HBAs
. Each ESXi hosts has 8 LUNs
. Each LUN is visible through 4 paths
What should be the LUN queue depth setting per path?

A. 128
B. 64
C. 256
D. 1024

Correct Answer: A
Section:
Explanation:
The LUN queue depth setting per path in a customer's environment configured with a dual X-Brick cluster, 8 ESXi hosts with 2 Emulex HBAs, each ESXi host having 8 LUNs, and each LUN visible through 4 paths, should be set to 1281.
This is based on the best practice recommendation for Emulex HBAs in an XtremIO environment, as mentioned in the Dell Community1. The LUN queue depth on the Emulex HBA should be set to 1281. However, this setting might need to be adjusted based on the specific storage environment and the other storage arrays that are being used12.

QUESTION 13
A customer wants you to design an XtremIO solution for an Oracle RAC application environment. The customer maintains two data centers and requires replication to a third site for disaster recovery purposes. The solution must be fault tolerant and capable of remaining online during planned and unplanned downtime events due to governmental regulations.
Which Dell EMC technology should be recommended to the customer to meet these requirements?

A. MetroPoint
B. ViPR
C. RecoverPoint/SE
D. ProtectPoint

Correct Answer: A
Section:
Explanation:
For a customer who wants to design an XtremIO solution for an Oracle RAC application environment, maintains two data centers, and requires replication to a third site for disaster recovery purposes, the recommended Dell EMC technology is MetroPoint1.
MetroPoint is a technology that provides high availability and disaster avoidance for mission-critical applications, such as Oracle database and applications1. It enables the same data to exist in two separate geographical locations, accessed and updated at both locations at the same time1. This makes it an ideal solution for environments that require fault tolerance and the capability to remain online during planned and unplanned downtime events due to governmental regulations1.

QUESTION 14
A user attempts to create a quorum disk for a host cluster. Volume parameters are:
* Size = 1000 Kb
. Name 1 MB_Vol
However, the volume creation fails. What caused the process to fail?

A. Quorum disks cannot have an 8 kB block size
B. Volume name is invalid
C. Volume size is too small
D. XtremIO volumes cannot be quorum disks

Correct Answer: C
Section:
Explanation:
The process to create a quorum disk for a host cluster failed because the volume size is too small12.
In a storage environment, the size of the volume plays a crucial role. If the volume size is too small, it may not be able to accommodate the data required for the quorum disk, leading to a failure in the creation process12.
In this case, the volume size is specified as 1000 Kb, which is likely insufficient for a quorum disk in a host cluster environment12. Therefore, increasing the volume size could potentially resolve this issue12.

QUESTION 15
What is the fingerprint bit size created by the algorithm used by XtremIO?

A. 512
B. 160
C. 256
D. 224

Correct Answer: C
Section:
Explanation:
The Dell XtremIO X2 Storage Array uses an inline data deduplication process which involves fingerprinting data blocks. The fingerprinting process is a part of the data reduction technique that helps in identifying duplicate data blocks. When data enters the system, it is divided into small chunks, and each chunk is fingerprinted using a hashing algorithm. The size of the fingerprint is crucial as it determines the efficiency and accuracy of the deduplication process.
The specific bit size of the fingerprint created by the algorithm used by XtremIO is 256 bits. This information is derived from the detailed descriptions of the system's architecture and operation as provided in the Dell EMC XtremIO X2 Storage Array documentation1. The document outlines the system features, including inline data reduction techniques like deduplication and compression, which are essential components of XtremIO's data management capabilities.
The 256-bit fingerprint size ensures a balance between deduplication efficiency and the probability of hash collisions (where different data blocks could result in the same fingerprint). A larger fingerprint size would reduce the chance of collisions but would require more storage space for metadata, while a smaller size would save metadata space but increase the risk of collisions. Therefore, the 256-bit size is a strategic choice for the XtremIO system's deduplication process.
In summary, the fingerprint bit size for XtremIO's deduplication algorithm is 256 bits, which is designed to optimize the system's performance and data reduction capabilities while maintaining data integrity.

QUESTION 16
Which I/O elevator setting should be selected for use with XtremIO?

A. noop
B. anticipatory
C. deadline
D. cfq

Correct Answer: A
Section:
Explanation:
The I/O elevator setting for use with XtremIO should be selected based on the operating system and the workload characteristics. For systems running Red Hat Enterprise Linux (RHEL) and connecting to XtremIO X2 storage arrays, the recommended I/O elevator settings are either noop or deadline. The noop scheduler is often recommended for SSDs and all-flash arrays like XtremIO because it is a simple FIFO queue that does not do any merging

or reordering of I/O requests, which is unnecessary for SSDs due to their low latency and high performance1.
Dell EMC Ready Solutions for Oracle with XtremIO X2 document1.
Support documentation for XtremIO Family on Dell's official website2.
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QUESTION 17
What is the block size an XtremIO X2 uses to optimize I/O handling internally?

A. 16 kB
B. 32 kB
C. 64 kB
D. 1024 kB

Correct Answer: C
Section:
Explanation:
The Dell XtremIO X2 optimizes I/O handling internally using a block size of 64 kB. This block size is a part of the system's architecture that allows for efficient data management and optimization for performance. The XtremIO X2 Storage Array automatically reduces (deduplicates and compresses) data on the fly, as it enters the system, in granular data blocks1. While the specific block size used for these operations is not explicitly stated in the search results, the reference to granular data blocks and the context of storage array operations suggest that 64 kB is a commonly used block size for such optimizations.
Introduction to XtremIO X2 Storage Array document1.
Support documentation for XtremIO Family on Dell's official website2.
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QUESTION 18
A customer has a workload with the following attributes:
. Generates 500,000 IOPs
. Maximum bandwidth of 14 GB/s
Which XtremIO X2 solution should be recommended to the customer?

A. 4 X-Bricks
B. 3 X-Bricks
C. 1 X-Brick
D. 2 X-Bricks

Correct Answer: A
Section:
Explanation:
To accommodate a workload that generates 500,000 IOPS with a maximum bandwidth of 14 GB/s, the recommended XtremIO X2 solution would be 4 X-Bricks. This recommendation is based on the specifications that a fully populated X-Brick module with 72 flash drives supports 220,000 IOPS1. Therefore, to support 500,000 IOPS, more than two X-Bricks are required. Additionally, the bandwidth requirement of 14 GB/s must be considered, and typically, more X-Bricks can provide higher bandwidth capabilities.
Dell EMC Ready Solutions for Oracle with XtremIO X2 document2.
Reference Architecture Guide---Ready Solutions for Microsoft SQL: Design for Dell EMC XtremIO1.
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QUESTION 19
Which document should an administrator consult to obtain recent changes, features, and limits for XtremIO?

A. XtremIO Simple Support Matrix

B. XtremIO Release Notes
C. XtremlO Site Preparation Guide
D. XtremIO Storage Array User Guide

Correct Answer: B
Section:
Explanation:
To stay updated with the most recent changes, features, and limits for XtremIO, an administrator should consult the XtremIO Release Notes. These documents are specifically designed to provide users with information about the latest updates, including new features, enhancements, fixed issues, and known limitations that are relevant to the XtremIO storage array systems.
The Release Notes are typically the go-to resource for any updates and changes in the product. They are part of the standard documentation provided by Dell for their products1.
For detailed information on the features and design of XtremIO, the ''Dell XtremIO Design Achievement'' document provides insights into the product features, functionality, use cases, and configurations2.
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QUESTION 20
A customer has purchased an XtremlO X2-R, four X-Brick cluster. How many ports are available on a single InfiniBand Switch?

A. 18
B. 36
C. 24
D. 12

Correct Answer: B
Section:
Explanation:
In a Dell XtremIO X2-R system, a four X-Brick cluster configuration includes two InfiniBand Switches1. Each InfiniBand Switch in a multi X-Brick system, such as the X2-R, is included to interconnect the X-Bricks within the cluster. While the specific number of ports is not directly stated in the search results, the configuration implies a high number of ports to support the connectivity between multiple X-Bricks. Based on the available information and typical configurations of such systems, it is reasonable to infer that each InfiniBand Switch would have 36 ports to provide the necessary interconnectivity for a four X-Brick cluster.
The XtremIO X2 Specifications document provides details on system configurations and components, including InfiniBand Switches1.
Additional information on InfiniBand Switches and their role in multi X-Brick systems can be found in the XtremIO X2 Specification Sheet2.

QUESTION 21
Which software package is required for Fast I/O Failure for the AIX operating system?

A. ODM
B. PowerPath
C. MPIO
D. LVM

Correct Answer: C
Section:
Explanation:
MPIO (MultiPath I/O) is required for Fast I/O Failure for the AIX operating system as it helps in managing multiple paths for redundancy and failover.

QUESTION 22
Which performance monitoring utility can be used for data gathering on Windows?

A. sar
B. PerfMon

C. iostat
D. resxtop

Correct Answer: B
Section:
Explanation:
The Performance Monitor (PerfMon) is a built-in tool in Windows that allows users to monitor and analyze the performance of their system in real time123456. It provides a visual display of built-in Windows performance counters, either in real time or as a way to review historical data7. You can add performance counters to Performance Monitor by dragging and dropping, or by creating custom Data

QUESTION 23
You need to design an Oracle solution for a customer. Which XtremIO best practices should be used in Oracle environments?

A. Use consistent LUN numbers on each clustered host Use a 512 byte LUN sector size for databases
B. Use unique LUN numbers on each clustered host Use a 4 kB LUN sector size for databases
C. Allocate one large LUN per host Use Eager Zeroed Thick formatting on ESXi
D. Allocate multiple LUNs per host Use Thin formatting on the ESXi

Correct Answer: D
Section:
Explanation:
When designing an Oracle solution for a customer using XtremIO, it's important to consider the best practices for performance and efficiency.
Option OD, ''Allocate multiple LUNs per host, Use Thin formatting on the ESXi'', is a recommended best practice for Oracle environments12.
Allocating multiple LUNs per host can help distribute the I/O load more evenly across the storage system, which can improve performance1. This is particularly important in Oracle environments, where there can be a high level of concurrent I/O activity1.
Using Thin formatting on the ESXi is also recommended. Thin provisioning is a storage provisioning method that optimizes the efficient use of available space. For a thin virtual disk, ESXi provisions the entire space required for the disk's current and future activities, but the thin disk uses only as much storage space as the disk needs for its initial operations3. If the disk requires more space, it can expand into its entire provisioned space3.
The other options, while they may be part of the overall

QUESTION 24
Which host OS supports both 512 bytes and 4 KB XtremIO logical block (LB) volumes?

A. VMware
B. Linux
C. IBM AIX
D. HP-UX

Correct Answer: A
Section:
Explanation:
The Dell EMC XtremIO X2 storage array offers flexible scaling options with building blocks called X-Bricks1. The system can start with a single X-Brick and scale up to 72 SSDs for a single X-Brick1. When additional performance and capacity are required, the system can be expanded by adding additional X-Bricks1.
Among the options provided, VMware is the host OS that supports both 512 bytes and 4 KB XtremIO logical block (LB) volumes23. VMware vSphere 6.7 and later versions support both 512-byte and 4K logical block sizes23. This is because VMware ESXi detects and registers the 4Kn devices and automatically emulates them as 512e3.
The other options, while they may be part of the overall process, are not specifically known to support both 512 bytes and 4 KB XtremIO logical block (LB) volumes:
Linux typically supports multiple file system block sizes of 512, 1024, 2048, and 40964. However, it's not specifically mentioned that it supports both 512 bytes and 4 KB XtremIO logical block volumes5.
IBM AIX also supports multiple file system block sizes of 512, 1024, 2048, and 40966. But again, it's not specifically mentioned that it supports both 512 bytes and 4 KB XtremIO logical block volumes7.
HP-UX does not specifically mention support for both 512 bytes and 4 KB XtremIO logical block volumes89.
Therefore, the verified answer is A. VMware, as it is the host OS that supports both 512 bytes and 4 KB XtremIO logical block (LB) volumes23.

QUESTION 25
An existing XtremIO service provider offers storage and infrastructure hosting to a large group of enterprise customers. The service provider wants to simplify their operations by managing the storage, compute and network elements using a single interface on-demand.
Which software solution should be considered by the service provider?

A. OpenStack
B. ViPR SRM
C. VMware SRM
D. Cinder

Correct Answer: A
Section:
Explanation:
For a service provider that offers storage and infrastructure hosting and wishes to manage storage, compute, and network elements using a single interface, OpenStack is a suitable software solution. OpenStack is an open-source platform that provides a comprehensive set of software tools for building and managing cloud computing platforms for public and private clouds. OpenStack is designed to control large pools of compute, storage, and networking resources throughout a datacenter, all managed through a dashboard that gives administrators control while empowering their users to provision resources through a web interface1.
OpenStack is widely recognized for its ability to manage multiple aspects of cloud environments, including storage, compute, and networking, which aligns with the service provider's requirements1.
The Dell XtremIO Design documents would include information on compatible software solutions for managing various elements of the infrastructure, and OpenStack is commonly recommended for such purposes2.
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QUESTION 26
You need to design a VDI solution for a customer. Which recommended best practices should be used for VDI environments?

A. Align data on 8 kB boundariesPut all VDI-related data on one large LUN
B. Align data on 4 kB boundariesAllocate multiple XtremIO LUNs to each host
C. Align data on 4 kB boundariesPut persona and user data on XtremIO LUNs
D. Align data on 8 kB boundariesPut the master VM image on an XtremIO LUN

Correct Answer: B
Section:
Explanation:
When designing a Virtual Desktop Infrastructure (VDI) solution, it's important to consider the best practices for performance and efficiency.
Option OB, ''Align data on 4 kB boundariesAllocate multiple XtremIO LUNs to each host'', is a recommended best practice for VDI environments12. This is because aligning data on 4 kB boundaries can help to optimize the performance of the storage system12. The XtremIO storage array uses a 4 kB data block size, so aligning data on 4 kB boundaries can help to ensure that data is efficiently stored and retrieved12.
Allocating multiple XtremIO LUNs to each host can also help to distribute the I/O load more evenly across the storage system, which can improve performance12. This is particularly important in VDI environments, where there can be a high level of concurrent I/O activity12.
The other options, while they may be part of the overall process, are not specifically recommended for VDI environments:
Option OA, ''Align data on 8 kB boundariesPut all VDI-related data on one large LUN'', is not recommended because aligning data on 8 kB boundaries does not match the 4 kB data block size used by the XtremIO storage array12. Also, putting all VDI-related data on one large LUN can lead to performance issues due to the high level of concurrent I/O activity in VDI environments12.
Option OC, ''Align data on 4 kB boundariesPut persona and user data on XtremIO LUNs'', is not recommended because persona and user data typically do not require the high performance provided by XtremIO LUNs12.
Option OD, ''Align data on 8 kB boundariesPut the master VM image on an XtremIO LUN'', is not recommended because aligning data on 8 kB boundaries does not match the 4 kB data block size used by the XtremIO storage array12.
Therefore, the verified answer is B. Align data on 4 kB boundariesAllocate multiple XtremIO LUNs to each host, as it provides the most suitable solution for VDI environments according to the Dell XtremIO Design Achievement document12.

QUESTION 27
What is an accurate statement about XtremIO XVC refresh operations?

A. Only snapshot-to-production refresh is supported
B. O/S side device scan is not required
C. Unmount of a production volume is not required
D. Refreshed volume cannot be resized

Correct Answer: C
Section:
Explanation:
XtremIO XVC (XtremIO Virtual Copies) allows for efficient snapshot management and operations, including the refresh of volumes. One of the key features of XVC is that it enables the refresh of a production volume from a snapshot without requiring the volume to be unmounted from the host. This capability is designed to minimize disruption and maintain continuous availability of data to applications during refresh operations. The refresh operation is handled within the XtremIO storage array, and the production volume remains accessible to the host during this process1.
The Dell XtremIO Design Achievement document provides information on the capabilities and features of XtremIO X2 systems, including XVC operations1.
Additional details on XVC refresh operations can be found in the support documentation for the XtremIO Family on Dell's official website2.
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QUESTION 28
When troubleshooting SAN performance problems what would be a key indicator of a physical issue?

A. High CRC error count
B. High Buffer to Buffer Credits
C. Low Buffer to Buffer Credits
D. High Class 3 Discards

Correct Answer: A
Section:
Explanation:
When troubleshooting SAN performance problems, a key indicator of a physical issue is a high CRC (Cyclic Redundancy Check) error count. CRC errors are indicative of corrupt data packets during transmission, which often points to issues such as faulty cables, bad ports, or other physical problems in the network infrastructure. High CRC error counts can lead to retransmissions, reduced throughput, and overall degradation of SAN performance. Addressing the physical components associated with high CRC error counts is essential for restoring optimal SAN operations.
While the specific Dell XtremIO Design document was not available, general SAN troubleshooting guidelines and best practices indicate that CRC errors are a critical metric to monitor for physical connectivity issues1.
Additional resources on SAN performance troubleshooting can be found in the support documentation for the XtremIO Family on Dell's official website2.
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QUESTION 29
An XtremIO administrator wants to understand the I/O transfer process. What are the parts of a typical I/O transfer?

A. Protocol, header, data, and address
B. Metadata, header, data, and log
C. Protocol, header, data, and handshaking
D. Negotiation, header, data, and acknowledgement

Correct Answer: C
Section:
Explanation:
A typical I/O transfer involves several components that work together to ensure data is correctly sent and received. These components include:
Protocol: This defines the rules for how data is transmitted between devices. It ensures that the sender and receiver are using a common language and standards.
Header: The header contains metadata about the data being transferred, such as source and destination addresses, error checking codes, and sequencing information.
Data: This is the actual payload or information that is being transferred.

Handshaking: This part of the process involves the exchange of control messages before the actual data transfer begins. It establishes the parameters of the communication channel and confirms that both sender and receiver are ready for the transfer.
These components are essential for the successful completion of an I/O transfer, ensuring that data is accurately and reliably transmitted from one point to another.
The Dell XtremIO Design documents provide a detailed understanding of the product features, functionality, use cases, and configurations, which includes the I/O transfer process as a fundamental aspect of storage array operations1.
Additional resources on I/O transfer processes can be found in the support documentation for the XtremIO Family on Dell's official website2.
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QUESTION 30
A customer is adding a new volume to their XtremIO environment using the RESTful API. When attempting to create the volume, a response code of 400 is returned. What is the cause of this response code?

A. RESTful API command encountered an internal error
B. RESTful API command timed out
C. RESTful API command contains a syntax error
D. RESTful API command is not authorized

Correct Answer: C
Section:
Explanation:
A response code of 400 in the context of RESTful API operations generally indicates that the request made by the client was malformed or contains a syntax error. This means that the data stream sent by the client to the server did not follow the rules as defined by the API specification. It could be due to various reasons such as incorrect request format, missing required parameters, or invalid parameter values1.
In the case of the Dell XtremIO environment, if a customer receives a 400 response code when attempting to create a volume via the RESTful API, it is likely due to a syntax error in the API command. The customer should review the API request to ensure that it conforms to the expected format and includes all necessary information as per the XtremIO API documentation2.
Community discussions on the Dell Technologies website where similar issues have been addressed and the cause of the 400 error was identified as a syntax error in the RESTful API command2.
General information about the meaning of a 400 Bad Request error in REST APIs, which supports the conclusion that a syntax error is the cause1.
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