

## IBM 000-452 EXAM QUESTIONS & ANSWERS

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## IBM 000-452 EXAM QUESTIONS & ANSWERS

**Exam Name: IBM Storwize V7000 Technical Solutions V2**

## **Examsheets**

### **QUESTION 1**

A customer has a small existing SAN storage environment with disk systems from different vendors. This customer wants to deploy a single system to manage storage and advanced services across new and existing storage.

What storage solution should be proposed?

- A. XIV system
- B. Storwize V7000
- C. Storwize V3700
- D. IBM N6240 filer

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

### **QUESTION 2**

A customer has asked the technical specialist about security for five hosts connecting via iSCSI to a newly installed Storwize V7000 system.

Which of the following items should the specialist suggest to the customer?

- A. Port-based zoning
- B. Direct connections
- C. Virtual LAN (VLAN)
- D. Storwize V7000 port masking

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

### **QUESTION 3**

A customer is building a Virtual Desktop Infrastructure (VDI) for several hundred users. Which Storwize V7000 feature would help in avoiding performance impact on peak activity periods?

- A. FlashCopy
- B. Thin provisioning
- C. 15,000 rpm drives
- D. SSD drives with Easy Tier

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

### **QUESTION 4**

Which of the following is a competitive advantage of the Storwize V7000 RAID configuration wizard?

- A. allows the managed disk to be utilized after the array is formatted
- B. provides a simplified user experience in the creation of RAID arrays
- C. creation of RAID arrays composed of externally connected physical disk
- D. configure RAID levels beyond the capability of competitive storage arrays

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 5

A customer has asked for the amount of usable storage per storage pool for file based access in a Storwize V7000 Unified configuration.

What type of usable storage information does the Capacity' Magic tool supply for a Storwize V7000 Unified?



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- A. Amount per storage pool for file access only
- B. Amount per storage pool for block access only
- C. Amount per storage pool for both file and block access
- D. Usable storage is not provided for the Storwize V7000 Unified

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 6

What are the Storwize V7000 Unified models that have two 10 Gbps Ethernet ports per node canister?

- A. 2076-112 and 2076-124
- B. 2076-212 and 2076-224
- C. 2076-312 and 2076-324
- D. 2076-412 and 2076-424

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 7

Which configuration is supported with asynchronous replication in Storwize V7000 Unified environments?

- A. One file set to one file set target
- B. One filesystem to one filesystem target
- C. One filesystem to multiple filesystem targets
- D. One Storwize V7000 Unified filesystem to multiple Storwize V7000 targets

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 8**

A customer has several different storage systems from different vendors all connected on their storage area network. The customer has difficulty in easily using the full capacity of these different storage arrays. What concept within the Storwize V7000 Unified should be emphasized with this customer to convince the customer to purchase the system?

- A. EasyTier
- B. Storage virtualization
- C. Real-time data compression
- D. Integrated block and file I/O

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 9**

A customer has stated a particular set of host data will take a maximum of 30 days to migrate to a Storwize V7000 from a DS4700 storage array. The data is spread across only two of the four total disk enclosures of the DS4700.

What is the appropriate number of external virtualization licenses to order?

- A. 0
- B. 2
- C. 4
- D. 5

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 10**

Which statement best describes a difference in replication on the Storwize V7000 Unified between the block volumes and the file volumes?

- A. Both block and file volumes require Metro/Global Mirror licenses.
- B. Block volumes can replicate over the Ethernet ports or Fibre ports.
- C. File volumes must replicate through the block portion of the system.

D. File volumes replicate over the Ethernet ports without the use of a SAN router.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 11**

A customer is considering the replication of data between two Storwize V7000 systems using an existing, shared inter- site link. The technical specialist has been requested to investigate whether or not this proposal is viable.

To begin the assessment what information should the specialist request for this opportunity?

- A. The Recovery Point Objective and the application(s)
- B. The application(s) and the amount of data to be replicated
- C. The capacity of the inter-site link and the distance between sites
- D. The amount of peak change data to be replicated and the capacity of the inter-site link

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 12**

A Storwize V7000 customer's requirements dictate automated intelligent data placement and physical disk redundancy are critical, and overall cost is a critical decision point. The environment is a 98% read workload. Which solution meets these requirements?

- A. Configure one storage pool of SSD5 and a second storage pool of SAS drives
- B. Design two multi-tiered storage pools composed of SSD and SAS which utilize SSD5 with Easy Tier
- C. Provide a single multi-tiered storage pool composed of SSD and SAS with only enough SSDs for 5% of the required storage capacity
- D. Utilize Easy Tier with SSD5 in one multi-tiered storage pool composed of SSD and SAS, and a single NLSAS tier in a second storage pool

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 13**

One host at a remote site needs to connect to the Storwize V7000 in the customer's main data center. The customer has an existing IP network, and minimal bandwidth is required.

What protocol should be used for this connection?

- A. SAS
- B. FCOE
- C. iSCSI
- D. Fibre Channel

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 14**

What is the preferred replication method that could achieve best application performance with reduced network requirements host performance that is independent of the replication, and RPO higher (with default of 10 minutes)?

- A. Metro Mirror
- B. Global Mirror
- C. Global Mirror with Change Volumes
- D. SAN Volume Controller Split cluster

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 15**

A customer has asked the technical specialist what host information is needed to allocate storage on a Storwize V7000 SCSI attached system.

What information should the technical specialist request?

- A. IQN
- B. WWNN
- C. WWPN
- D. IP address

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 16**

What are the possible options used by the Storwize V7000 and Storwize V700FJ Unified to send event notifications to the storage administrator?

- A. CLI, HTTPS, SSH
- B. iSCSI, LDAP, CIMOM
- C. Email, SNMP, Syslog
- D. Syslog, Tivoli Storage Productivity Center, LDAP

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 17**

A customer has a Storwize V7000 and wants to minimize downtime to perform backup and recovery in their Microsoft Exchange environment.

How would FlashCopy Manager benefit this customer compared to native Storwize V7000 FlashCopy support?

- A. Can use tape as a FlashCopy target
- B. Supports FlashCopy-based remote mirroring
- C. Provide inter-cluster consistent flash copies
- D. Support for application integrated flash copies

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 18**

A customer requires iSCSI and CIFS access for a Storwize V7000 Unified solution. How many Fibre Channel ports will be required for host connectivity?

- A. 0
- B. 2
- C. 4
- D. 8

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 19**

A customer is using a SAN Volume Controller and Storwize V7000 in their environment. Now they want to invest in SSD capacity to improve performance with EasyTier.

Which tool would help determine which storage pools or volumes would benefit from the SSDs?

- A. Disk Magic
- B. Capacity Magic
- C. Comprestimator
- D. Storage Tier Advisory Tool

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 20**

The customer is configuring redundant storage for their database application on a Storwize V7000, and they must determine the appropriate RAID type with the minimum number of drives. It is a 10% read and 90% write

environment.

What is the appropriate PAID type for this application?

- A. PAID 0
- B. PAID 1
- C. PAID 5
- D. PAID 6

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 21**

The Global Mirror with change volumes function can be defined as:

- A. Synchronous mirror with flashcopy of block data
- B. Asynchronous mirror with flashcopy of block data
- C. Asynchronous mirroring of a flashcopy created on a file system
- D. Automated synchronous migration of file-based data between storage pools

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 22**

A customer just implemented a Storwize V7000 within their environment and is interested in being able to review historical performance statistics.

What IBM supported option or tool would most appropriately address their requirement and be the most cost effective solution?

- A. Deploy Tivoli Storage Productivity Center
- B. Deploy Tivoli Storage Productivity Center Select
- C. Deploy Storwize V7000 Performance monitor - svcmon
- D. Access the real-time performance statistics within the management GUI

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 23**

Which statement is true when comparing the unified storage architecture of Storwize V7000 Unified with a standard N3000 series?

- A. N series supports PAID 10
- B. N series utilizes Read cache
- C. Storwize V7000 Unified supports RAID DP



D. Storwize V7000 Unified automates Information Lifecycle Management

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 24**

A customer is planning a Storwize V7000 Unified purchase to be used on an application with 75% read, 25% write, and high sequential workload. They have asked the technical specialist for advice on the selection and configuration of disk for this application. Cost will be a consideration, but performance and rebuild times are of greater concern.

Which of the following is the best solution for this customer?

- A. Use 1 TB NL-SAS drives in a 10+2 RAID 6 MDisk
- B. Use 24 x 1 TB NL-SAS drives using RAID 10 MDisk
- C. Use 600 GB SAS drives 15,000 RPM drives in a 7+1 RAID 5 MDisk
- D. Create a multi-tier pool using 400 GB SSD drives in a 7+1 RAID 5 MDisk and 600 GB 15,000 RPM SAS drive MDisk

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 25**

Which technology or feature on the Storwize V7UFJO is designed to provide automatic data movement involving SSDs?

- A. FlashCopy
- B. EasyTier
- C. Compression
- D. Volume mirroring

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 26**

What cluster system layer is configured when the IBM Storwize V7000 will be used with one or more SAN Volume Controllers as a Remote Copy partner?

- A. Storage layer
- B. Replication layer
- C. Remote Mirrorlayer
- D. Virtualization layer

**Correct Answer:** B

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 27**

IBM Storwize V7000 Unified supports which of the following remote copy types?

- A. Asynchronous only for both block and file data
- B. Synchronous and asynchronous for both block and file data
- C. Synchronous and asynchronous for block data, synchronous for file data
- D. Synchronous and asynchronous for block data, asynchronous for file data

**Correct Answer: D**

**Section: (none)**

**Explanation****Explanation/Reference:****QUESTION 28**

A customer has a storage configuration using remote mirroring between a SAN Volume Controller and a Storwize V7000.

How is remote mirroring on the Storwize V7000 licensed?

- A. Per enclosure
- B. Per internal storage virtualized
- C. Per a subset of the total storage
- D. Per external enclosure virtualized

**Correct Answer: A**

**Section: (none)**

**Explanation****Explanation/Reference:****QUESTION 29**

A customer has asked the technical specialist about methods to help device discovery, management, security, and simplify manual configuration of clients and servers to work with a new iSCSI-attached Storwize V7000. Which of the following items should the technical specialist discuss?

- A. iSCSI naming formats
- B. TOP Offload Engine (TOE)
- C. Internet Storage Name Server (iSNS)
- D. Data Center Bridge Capability Exchange (DCBX)

**Correct Answer: C**

**Section: (none)**

**Explanation****Explanation/Reference:****QUESTION 30**

A customer has an environment with complex replication requirements. They need to manage replicas stored

in multiple sites on multiple mirrored Storwize V7000 systems.

What tool should the technical specialist recommend to address the customer's issue?

- A. IBM Systems Director
- B. Tivoli Storage Manager for Storage Area Networks
- C. Tivoli Storage Productivity Center for Data V4.2.2
- D. Tivoli Storage Productivity Center Select Edition V5.1

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 31**

On the Storwize V7000, one of the benefits of virtualizing storage across several MDisks instead of creating one large RAID set is:

- A. fewer spindles to spread the workload
- B. more usable space and less flexibility
- C. fewer parity drives and more flexibility
- D. faster rebuild times and more flexibility

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 32**

What is a competitive advantage of Storwize V7000 Unified over Compellent (Dell) storage?

- A. SAS drive support
- B. Thin provisioning
- C. 10Gb iSCSI connectivity
- D. Cluster more than two controllers

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 33**

Which of the following accurately describes the Storwize V7000 FlashCopy clone process?

- A. The host must wait until the background copy process has been completed.
- B. After the FlashCopy volume has been created, all new change blocks are stored in the repository.
- C. When a FlashCopy volume is created, hosts are redirected to the new FlashCopy volume until the background copy is complete.
- D. When the FlashCopy process is initiated, the source and target volumes are logically related until the background copy is complete.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 34**

The customer requires a solution with EC and CIES support. They need 20 TB high performance capacity for block data and 5 TB capacity for file data. What would be the most cost effective solution to meet the customer requirements?

- A. SONAS
- B. Storwize V7000 Unified
- C. Storwize V3700 Unified
- D. Storwize V7000 and DCS3700

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 35**

Customer requirements show only iSCSI and CIFS access will be required for a Storwize V7000 Unified solution. How many Fibre Channel ports will be utilized on the control enclosures?

- A. 0
- B. 2
- C. 4
- D. 8

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 36**

A customer is looking for a cost effective solution that will centralize the management of their existing IBM DS5100 with 120 TB of storage, and EMC CX4-120 with 50 TB storage. The customer also wants the ability to add capacity to the solution as needed.

Which IBM solution best fits the customer requirements?

- A. DS5020
- B. StorwizeV7000
- C. N series Gateway
- D. SAN Volume Controller

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 37**

The real time compression algorithm used for the Storwize V7000 compression feature is:

- A. Lempez Ziv (LZ)
- B. Huffman Coding
- C. Temporal Location
- D. Lempel Ziv Welch (LZW)

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 38**

A customer wants to implement Metro Mirror replication between two sites 500 km apart. Which two responses would a technical specialist give the customer as being feasible? (Select two)

- A. IBM Storwize V7000 supports a thin mirrored volume at distances greater than 300 km
- B. IBM Storwize V7000 supports asynchronous replication of distances greater than 300 km
- C. IBM Storwize V7000 does not support synchronous replication of distances greater than 300 km
- D. IBM Storwize V7000 does not support asynchronous replication of distances greater than 300 km
- E. IBM Storwize V7000 requires an RPQ to support synchronous replication of distances greater than 300 km

**Correct Answer: BC**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 39**

A customer already has a link established between their primary and secondary locations that they want to use for Storwize V7000 Global Mirror with change volumes.

The technical specialist must verify that the maximum latency between the locations is less than which of the following?

- A. 40 ms
- B. 80 ms
- C. 95 ms
- D. 300 ms

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 40**

What are the three required hardware components of the Storwize V7000 Unified for a minimally configured system?

- A. A Storwize V7000 controller and two expansion enclosures
- B. Two file modules and a Storwize V7000 controller enclosure
- C. Two file modules and one Storwize V7000 expansion enclosure
- D. One file module, a Storwize V7000 controller enclosure and one expansion enclosure

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 41**

A customer is planning for deployment of a new Storwize V7000 and has identified interest in leveraging EC0E and 10 GbE.

Identify one requirement that will be part of the configuration setup and should be reviewed with the customer.

- A. Ensure that FC0E switch to which the 10 GbE ports are connected is configured in NPV mode.
- B. Inter node communication between two FCOE ports in the same I/O group should not cross ISL5.
- C. Connect 10 GbE ports on Storwize V7000 only to the CEE network that supports the DCBX protocol (802.1QBG).
- D. Each Storwize V7000 10 GbE FCoE port should have at least two paths to all other Storwize V7000 nodes that are part of the same clustered system.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 42**

A customer has poor response times on some of their volumes.

Which feature of the Storwize V7000 could be used to address this issue?

- A. Snapshot
- B. Thin provisioning
- C. EasyTier with SSDs
- D. Volume mirroring with SSDs

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 43**

A customer needs a new midrange disk system for their iSCSI-only environment. The Storwize V7000 meets all their requirements except that they are concerned that there may not be enough bandwidth available from the iSCSI ports on the Storwize V7000 control enclosure to meet the performance requirements.

What should be proposed to meet the customer needs?

- A. IBM DS5020
- B. IBM Storwize V7000 with 10Gb SCSI

- C. IBM Storwize V7000 with 2 control enclosures
- D. IBM Storwize V7000 with external storage license

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 44**

A customer requires a storage solution that will manage both block and file storage, with a performance requirement of 5,000 file ops. The customer expects that 80% of the storage will be block storage, and 20% will be file storage with an ILM strategy in the file system.

What storage solution should be proposed?

- A. SONAS
- B. IBM N6240
- C. XIV system
- D. Storwize V7000 Unified

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 45**

A customer is considering a Storwize V7000 and requires continuous data protection for their Linux environment. Which software solution should be recommended in conjunction with the Storwize V7000?

- A. Storwize V7000 Management GUI
- B. IBM FastBack for Storwize V7000
- C. Tivoli Storage FlashCopy Manager
- D. Tivoli Storage Productivity Center Select

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 46**

Describe the key competitive advantage of IBM integrated Real-time Compression (RtC) over EMC and HP compression technology.

- A. Operates on active primary data
- B. Achieves up to 40% better compression rates
- C. Provides up to 200% performance improvement
- D. Supports faster and more efficient data copies for online backup

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 47**

In the Storwize V7000, what is the Node Canister?

- A. A group of 5 drives
- B. The controller ERU
- C. The power supply/fan ERU
- D. Disk expansion interconnect ERU

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 48**

The Storwize V7000 supports creating multiple RAID based arrays.

Identify the RAID type which correctly lists minimum and maximum number of internal drives that can be selected for that RAID configuration.

- A. RAID 5 (Drive Count:3-8)
- B. RAID0(Drive Count:1-16)
- C. RAID 6 (Drive Count: 5-16)
- D. RAID 10 (Drive Count: 4-16)

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 49**

During a demonstration, the technical specialist was asked to configure performance monitoring data collection for a Storwize V7000.

How should the technical specialist respond?

- A. Basic performance monitoring is automatic, no configuration is necessary
- B. Basic performance monitoring is only available through the mobile dashboard
- C. Tivoli Storage Productivity Center is required to perform basic performance monitoring
- D. Basic performance monitoring is automatic on the Storwize V7000 and detailed performance monitoring is automatic on the Storwize V7000 Unified

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 50**



During the TDA it was discovered that the external storage the customer needs to virtualize is not listed on the IBM support matrices.

In order to ensure that the customer will receive support for this configuration what must be done?

- A. Submit a SCQRE/RPQ
- B. Purchase a Support line contract
- C. Have Lab Services to do the installation
- D. Have an FTSS onsite during the installation

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**



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