NetApp Certified Technology Associate (NS0-003) Practice Test (Sample)

Study Guide



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Questions



- 1. What provides availability of a partner's physical resources during a node failover?
 - A. HA Pair
 - **B. Storage VM**
 - C. Cluster Interconnect
 - **D. Data Protection Interface**
- 2. Which of the following components is essential in configuring a Storage Virtual Machine (SVM)?
 - A. IP addresses
 - **B.** Cluster name
 - C. Node configurations
 - D. Physical drives
- 3. What is the primary function of the Insight Data warehouse?
 - A. To generate user access reports
 - B. To store and manage data for reporting and analysis
 - C. To monitor hardware performance
 - D. To integrate with external databases
- 4. Which two items are considered storage pool attributes in StorageGRID?
 - A. Grid, Site
 - **B.** Tenant, Storage Type
 - C. Site, Access Level
 - D. Node, Region
- 5. What is the supported port speed for cluster interconnect?
 - **A. 1GB**
 - **B. 10GB**
 - C. 40GB
 - D. 100GB

6. How many namespaces can a FlexGroup volume contain?
A. 1
B. Multiple
C. 2
D. Unlimited
7. For a RAID DP aggregate created with 44 disks and a RAID group size of 15, how many parity disks are there?
A. 4
B. 6
C. 8
D. 10
8. A StorageGRID appliance functions as which type of grid node?
A. Admin Node
B. Storage Node
C. Cache Node
D. Data Node
9. What service does Cloud Volumes ONTAP tiering require?
A. Azure Blob
B. Azure Queue Storage
C. Azure Data Lake Storage
D. Azure Stack
10. What IEEE standard supports VLAN tagging?
A. 802.1x
B. 802.1q
C. 802.1d
D. 802.3

Answers



- 1. A 2. A 3. B

- 4. A 5. B 6. A 7. B 8. B
- 9. A 10. B



Explanations



- 1. What provides availability of a partner's physical resources during a node failover?
 - A. HA Pair
 - **B. Storage VM**
 - C. Cluster Interconnect
 - **D.** Data Protection Interface

The availability of a partner's physical resources during a node failover is primarily provided by an HA Pair (High Availability Pair). In a NetApp storage system, an HA Pair consists of two nodes connected in such a way that they can work together to provide redundancy and maintain data availability. If one node fails, the other node in the HA Pair takes over its operations, ensuring that the services remain available and that there is minimal disruption to applications and users. This design is crucial because it allows for seamless failover; the system is able to automatically redirect I/O operations to the surviving node, maintaining access to the stored data without requiring manual intervention. This high availability setup is integral for organizations that require continuous access to their storage resources, especially in environments where downtime is unacceptable. Cluster Interconnect facilitates communication between nodes in a cluster but does not directly manage failover. Storage VMs are about logical separations of workloads and are not designed specifically for failover. The Data Protection Interface is focused on data management and protection strategies rather than the physical redundancy of nodes during a failover scenario.

- 2. Which of the following components is essential in configuring a Storage Virtual Machine (SVM)?
 - A. IP addresses
 - **B.** Cluster name
 - C. Node configurations
 - D. Physical drives

The essential component in configuring a Storage Virtual Machine (SVM) is IP addresses. An SVM is a logical abstraction that enables the provision of storage resources to clients over a network. IP addresses are critical because they provide the necessary network identification and enable communication between the SVM and clients or other systems. Each SVM typically has its own unique set of IP addresses which are associated with the services it exposes. For example, these might include data access protocols like NFS or CIFS, allowing clients to connect to the storage resources through the SVM. The configuration of SVMs relies heavily on IP addressing since they must have a clear endpoint for clients to interact with the stored data. Setting up appropriate IP addresses is a foundational step that ensures the SVM can serve data requests effectively and securely over the network. This emphasis on IP addressing highlights its role as a cornerstone in the configuration and operation of SVMs.

3. What is the primary function of the Insight Data warehouse?

- A. To generate user access reports
- B. To store and manage data for reporting and analysis
- C. To monitor hardware performance
- D. To integrate with external databases

The primary function of the Insight Data Warehouse is to store and manage data specifically tailored for reporting and analysis purposes. This data warehouse serves as a centralized repository where vast amounts of information can be accumulated, organized, and processed. The design of such a warehouse allows for efficient querying and reporting, enabling businesses to derive meaningful insights from their data. The focus on reporting and analysis is crucial, as organizations rely on data-driven decision-making to optimize operations, improve performance, and strategize for the future. The structured nature of a data warehouse allows for various analytical tools to access and manipulate the data easily, facilitating comprehensive reporting that can guide business strategies. This understanding positions the Insight Data Warehouse as a critical component in the broader context of data management, ensuring that businesses can harness their data's full potential for insights and actions.

4. Which two items are considered storage pool attributes in StorageGRID?

- A. Grid, Site
- **B.** Tenant, Storage Type
- C. Site, Access Level
- D. Node, Region

The correct choice identifies "Grid" and "Site" as storage pool attributes in StorageGRID. In the context of StorageGRID, a grid is essentially the entire system that consists of multiple nodes and sites, creating a distributed storage environment. It represents the overarching architecture in which data is managed and stored. The site attribute reflects a specific physical location within the grid where storage resources are allocated. Each site can contain multiple storage nodes, and having sites defined helps in managing data geographically for compliance, availability, and performance. Understanding these attributes is essential, as they influence how data can be accessed, replicated, and distributed across the StorageGRID architecture, enabling scalability and efficiency in managing vast amounts of unstructured data. In contrast, other choices may refer to important aspects of StorageGRID but do not directly define storage pool attributes. For example, attributes like "Tenant" and "Storage Type" are relevant for managing user access and specifying the characteristics of the storage, while "Access Level" pertains more to permissions rather than the physical or logical structure of the storage itself. Similarly, "Node" and "Region" describe components of the system but do not fit the criteria of storage pool attributes directly linked to the organization and management of pooled resources in the grid.

5. What is the supported port speed for cluster interconnect?

- **A. 1GB**
- **B. 10GB**
- C. 40GB
- D. 100GB

The supported port speed for cluster interconnect is 10GB, which is crucial for ensuring high bandwidth and low latency communication between nodes in a NetApp clustered environment. This port speed is designed to handle the demands of clustered storage systems, where rapid data transfer is necessary to maintain performance levels and support various features such as data replication, failover, and scaling out the cluster. Using 10GB speeds allows for efficient utilization of resources and enhances the overall performance of the storage system. It provides a suitable balance between cost and performance, which is important for organizations looking to optimize their infrastructure without overspending on higher-tier speeds that may not be necessary for their specific use cases. In addition, the choice of 10GB connectivity helps ensure compatibility with current technologies in many enterprise networks, making it a widely adopted standard for cluster interconnects in modern data centers.

6. How many namespaces can a FlexGroup volume contain?

- **A.** 1
- **B.** Multiple
- C. 2
- D. Unlimited

A FlexGroup volume can contain one namespace. This design allows for the consolidation of multiple storage volumes into a single logical unit, facilitating both scalability and performance efficiency. The namespace serves as the unified file hierarchy for all files within the FlexGroup, ensuring that regardless of where files are physically stored across the member volumes, they are presented cohesively to users and applications. As a result, even though FlexGroup volumes can contain multiple data segments or members to handle large datasets and improve performance, there remains a single namespace for organization and access purposes. This characteristic is essential for maintaining flexibility while ensuring that data management remains efficient within the system.

- 7. For a RAID DP aggregate created with 44 disks and a RAID group size of 15, how many parity disks are there?
 - A. 4
 - **B.** 6
 - **C.** 8
 - D. 10

To determine the number of parity disks in a RAID DP (Double Parity) aggregate, it's important to understand how RAID DP is structured. RAID DP is designed to provide redundancy and is a specific implementation of RAID 6. In this setup, double parity means that the system can tolerate the failure of two disks within the same RAID group. In this case, with a total of 44 disks and a specified RAID group size of 15, the formula for calculating the number of parity disks is as follows: 1. For a RAID DP configuration, each RAID group consists of a defined number of data disks. In this instance, we know the total number of disks available and the size of a RAID group. 2. The number of usable disks in a RAID group is given by subtracting the two parity disks from the total number of disks in the group. Therefore, for a RAID group of size 15, there would be 15 - 2 = 13 usable data disks. To find out how many parity disks are present in the entire aggregate, we can divide the total number of disks by the size of the RAID group. With 44 disks total: - The number of complete RAID groups = 44 / 15 =

- 8. A StorageGRID appliance functions as which type of grid node?
 - A. Admin Node
 - **B. Storage Node**
 - C. Cache Node
 - D. Data Node

A StorageGRID appliance functions as a Storage Node, which is crucial in the overall architecture of the StorageGRID system. Storage Nodes are responsible for the actual storage of the data managed by StorageGRID, facilitating the preservation and retrieval of objects stored within its system. They handle data redundancy, distribution, and availability across the grid, ensuring that data is safely stored in accordance with the configured policies. The role of a Storage Node encompasses managing both the object data and metadata, as well as executing operations that involve data integrity and security. This is why the designation of Storage Node is critical; it underlines the appliance's core function within the system's architecture. In contrast, the other types of nodes serve different purposes: Admin Nodes manage the control and configuration of the StorageGRID, Cache Nodes are used for temporary data storage to speed up access times, and Data Nodes are often synonymous with Storage Nodes but may refer to other architectures. The primary aspect here is that a StorageGRID appliance directly relates to the storage functionality, thereby confirming its classification as a Storage Node.

9. What service does Cloud Volumes ONTAP tiering require?

- A. Azure Blob
- **B. Azure Queue Storage**
- C. Azure Data Lake Storage
- D. Azure Stack

Cloud Volumes ONTAP tiering requires Azure Blob as it serves as the primary storage service for unstructured data in Microsoft Azure. When implementing Cloud Volumes ONTAP for tiering, data that is less frequently accessed can be moved to Azure Blob storage, which is cost-effective for storing large amounts of data that does not require immediate access. Azure Blob provides scalable object storage for various types of data, including text and binary data, which is essential for applications that need to manage large datasets efficiently. By utilizing Azure Blob, organizations can optimize costs while ensuring access to their data when necessary, leveraging the tiering capabilities of Cloud Volumes ONTAP to manage data based on usage patterns. Other storage options like Azure Queue Storage and Azure Data Lake Storage serve different purposes, such as message queuing and big data analytics, respectively, and are not designed for the type of data tiering required by Cloud Volumes ONTAP. Azure Stack, being an extension of Azure, allows for on-premises cloud experiences but does not specifically relate to the tiering function within Cloud Volumes ONTAP.

10. What IEEE standard supports VLAN tagging?

- A. 802.1x
- B. 802.1q
- C. 802.1d
- D. 802.3

The IEEE standard that supports VLAN tagging is 802.1q. This standard defines the format for VLAN tagging in Ethernet frames, allowing for the identification and separation of different virtual LANs (VLANs) within the same physical network. When a frame is tagged with a VLAN ID, it enables network devices to differentiate between frames belonging to different VLANs, thereby facilitating better network segmentation and management. The significance of VLAN tagging lies in its ability to enhance network efficiency and security by allowing multiple logical networks to coexist on a single physical network infrastructure. This helps in optimizing bandwidth usage and reducing congestion. Other standards listed do not deal with VLAN tagging. For instance, 802.1x focuses on port-based network access control for implementing authentication. Meanwhile, 802.1d defines the Spanning Tree Protocol (STP) used to prevent loops in network topologies. Finally, 802.3 pertains to Ethernet networking standards but does not include VLAN tagging specifications.