INTERVIEW

20 Storage Area Network Interview Questions and Answers

Prepare for the types of questions you are likely to be asked when interviewing for a position where Storage Area Network will be used.

Interview Insights

Published Aug 11, 2022

A Storage Area Network (SAN) is a high-speed network that provides access to storage devices, such as hard drives and tape drives. SANs are often used by businesses that need to store large amounts of data, such as video or audio files. If you are applying for a position that involves working with a SAN, you should be prepared to answer questions about your experience and knowledge. In this article, we review some common SAN interview questions and provide tips on how to answer them.

Storage Area Network Interview Questions and Answers

Here are 20 commonly asked Storage Area Network interview questions and answers to prepare you for your interview:

1. What is a Storage Area Network (SAN)?

A Storage Area Network (SAN) is a network of storage devices that are connected together so that they can be accessed by computers and servers. A SAN typically uses a high-speed network, such as Fibre Channel, to connect the storage devices together. This allows for fast access to the storage devices, which is important for applications that require quick access to data, such as video streaming or online gaming.

2. Can you explain how a SAN works?

A storage area network (SAN) is a high-speed network of storage devices that also connects those devices with servers. A SAN typically uses a fiber-optic network to transmit data between servers and storage devices, which can be located up to 10 kilometers away.

3. How do SANs differ from other data storage solutions like NAS or DAS?

the network. This allows for much higher data transfer speeds and more flexibility in terms of how the storage is used.

4. What are the different types of SAN architectures?

There are three different types of SAN architectures: block, file, and object. Block SANs are the most common and use a block-based storage protocol, such as Fibre Channel, to connect storage devices to servers. File SANs use a file-based storage protocol, such as NFS or CIFS, to connect storage devices to servers. Object SANs use an object-based storage protocol, such as Amazon S3, to connect storage devices to servers.

5. Can you describe what a Fabric-based SAN is?

A Fabric-based SAN is a type of storage area network that uses a Fibre Channel fabric to connect storage devices to servers. This type of SAN is typically used in enterprise environments where high levels of performance and availability are required.

6. What's the difference between Fiber Channel and iSCSI? Which one would you recommend for a certain use case?

Fiber Channel is a point-to-point connection that uses optical fiber, while iSCSI is a point-to-point connection that uses copper wire. I would recommend Fiber Channel for use cases that require high bandwidth and low latency, while iSCSI would be a better choice for use cases that are more concerned with cost.

7. What is the role of a Fibre Channel switch in a SAN?

A Fibre Channel switch is responsible for connecting devices in a SAN and providing a path for data to travel between them. In order for data to be read from or written to a storage device, it must first pass through the Fibre Channel switch.

8. What are some advantages of using a SAN over other storage options like NAS, RAID, etc.?

Some advantages of using a SAN over other storage options include the ability to scale storage capacity and performance independently, the ability to connect multiple servers to the same storage pool, and the ability to provide high availability and disaster recovery capabilities.

9. What is the difference between block level and file level access to a SAN?

Block level access is when each individual block of data is addressed separately. This is the most common type of access. File level access is when the data is accessed as a whole file. This is less common, but can be useful in certain situations.

FCIP uses the Fibre Channel Protocol (FCP) to communicate with remote storage systems. FCP is a high-performance, lossless protocol that is designed specifically for Fibre Channel networks.

11. What is the difference between SCSI and IP protocols?

SCSI is a bus-oriented protocol, meaning that it uses a shared bus to connect devices. IP is a network-oriented protocol, meaning that it uses a network to connect devices.

12. What are the pros and cons of using a SAN as compared to other storage solutions like NAS?

There are several key advantages to using a SAN over other storage solutions like NAS. First, SANs offer much higher performance due to their ability to directly connect to servers. This can be a big advantage in applications where speed is critical. Additionally, SANs tend to be more scalable and offer more flexibility in terms of configuration.

There are a few potential drawbacks to using a SAN as well. First, they can be more expensive to set up and maintain than other storage solutions. Additionally, SANs can be more complex to manage, as they require specialized knowledge and skills.

13. How many devices can be connected to a single SAN? Is there any limit?

There is no limit to the number of devices that can be connected to a single SAN. The only limit is the amount of storage that is available on the SAN.

14. What is a zone in the context of a Storage Area Network?

A zone is a logical grouping of devices within a Storage Area Network. Zones are used to simplify management of the network by allowing administrators to group devices together based on their function or purpose. For example, all of the devices that are used for a particular application could be grouped together in a zone.

15. What happens when two hosts try to access the same LUN at the same time?

If two hosts try to access the same LUN at the same time, they will both be able to read and write to the LUN, but there is a risk of data corruption. In order to avoid this, it is best to use a SAN storage controller that can manage access to the LUN and ensure that only one host has access to it at a time.

16. What is Zoning in Storage Area Networks?

types. Zoning can be done at the hardware or software level, and can be static or dynamic.

17. What is a fabric in the context of SANs?

A fabric in the context of SANs is a collection of interconnected devices that allow for the storage and retrieval of data. This can include things like servers, storage arrays, and switches.

18. Can you explain what a virtual SAN is?

A virtual SAN is a software-defined storage area network. This means that it is a network that is designed to connect storage devices, but which is not limited by the physical constraints of a traditional SAN. This can be useful for organizations who want the flexibility to scale their storage capacity without having to invest in new hardware.

19. What is the main job of a HBA?

A HBA is a Host Bus Adapter, which is a type of computer hardware that allows a server to connect to a storage area network. The main job of a HBA is to manage the communication between the server and the storage devices, making sure that data is transferred correctly and efficiently.

20. How is a SAN engineered?

A SAN is engineered by connecting multiple storage devices together using a high-speed network. This allows for quick and easy access to data stored on the devices.

PREVIOUS
20 Kubeflow Interview Questions and Answers

BACK TO INTERVIEW

NEXT
20 Dapper Interview Questions and Answers

Interview Insights

You may also be interested in...

INTERVIEW

Interview Insights
Jan 6, 2023

INTERVIEW

20 Grocery Store Cashier Interview Questions and Answers

Kirsten Vernon
Feb 21, 2023

INTERVIEW

17 Stress Engineer Interview Questions and Answers

Interview Insights
Jul 19, 2022

INTERVIEW

20 The Emily Program Interview Questions and Answers

Interview Insights
Nov 19, 2022