

STORAGE IN THE CLOUD

1. What is virtualization and virtualization type?

Virtualization is the process of creating a virtual version of computing resources such as servers, storage devices, networks, or even an operating system. Types of virtualization include hardware virtualization, desktop virtualization, software virtualization, memory virtualization, storage virtualization, and network virtualization.

2. Type of hypervisor and how to manage it?

There are two types of hypervisors:

Type 1 (Bare-metal): Runs directly on the physical hardware (e.g., VMware ESXi, Microsoft Hyper-V).

Type 2 (Hosted): Runs on a host operating system (e.g., Oracle VirtualBox, VMware Workstation).

Management is done using tools like vCenter, SCVMM, or web-based management interfaces.

3. Roles of virtualization in cloud computing?

Virtualization allows efficient resource usage, scalability, cost savings, and isolation. It enables cloud providers to serve multiple customers using the same physical infrastructure securely and efficiently.

4. What is container?

A container is a lightweight, standalone, and executable package that includes everything needed to run a piece of software including the code, runtime, system tools, libraries, and settings. Examples include Docker and Kubernetes.

5. What is high availability and live migration in virtualization?

High availability ensures that virtual machines remain operational even if a host fails. Live migration is the process of moving a running VM from one host to another with minimal or no downtime.

6. Storage configuration –describe block storage, file storage and object storage---DAS NAS and SAN

Block storage divides data into blocks and stores them as separate pieces. File storage organizes data as a hierarchy of files and folders. Object storage manages data as objects with metadata and unique identifiers.

DAS (Direct Attached Storage): Directly attached to the server.

NAS (Network Attached Storage): Provides file-level access via a network.

SAN (Storage Area Network): Provides block-level storage over a high-speed network.

7. Describe storage allocation and provisioning. Storage Allocation

Storage allocation refers to assigning storage resources to users or systems. Provisioning is the process of preparing and equipping a network to allow it to provide storage services, either statically or dynamically.

8. Different type of cloud storage

The different types include:

Public Cloud Storage, Private Cloud Storage, Hybrid Cloud Storage, and Community Cloud Storage. Storage types also vary by access methods: block, file, and object storage.

9. What is role base access control and identity and access management and MFA

Role-Based Access Control (RBAC) assigns permissions based on user roles. Identity and Access Management (IAM) is a framework for managing digital identities and controlling user access. MFA (Multi-Factor Authentication) adds an extra layer of security by requiring multiple credentials.

10. What is physical and virtual host allocation?

Physical host allocation involves assigning physical servers to workloads. Virtual host allocation assigns virtual machines or containers within those physical servers to specific tasks or users.

11. How to access resource of cloud computing?

Resources in cloud computing are accessed via web interfaces, APIs, remote desktops, or management consoles provided by the cloud service provider.

12. Type of backup in cloud?

Types include Full Backup, Incremental Backup, Differential Backup, and Continuous Data Protection. Cloud-specific backups may also include snapshot-based backups.

13. What is disaster recovery?

Disaster recovery involves strategies and services that allow an organization to restore operations and IT infrastructure after a catastrophic event, using backups and redundant systems, often hosted in the cloud.