

MODULE- 3

1-Different types of cloud storage

ANS: Cloud storage is used to store data on remote servers managed by cloud providers.

- Object Storage: Stores data as objects, highly scalable and cost-effective, used for unstructured data. Eg: AWS S3
- Block Storage: Data stored in blocks, attached to virtual machines, high performance and low latency. Eg: AWS EBS
- File Storage: Data stored in file & folder structure, Shared access like a network drive. Eg: AWS EFS, Azure Files

2-What is role base access control and identity and access management and MFA

- ANS: Identify and Access Management (IAM):
IAM is a system used to manage users, roles,

and permissions in the cloud. Functions of IAM are create users and groups, assign permissions, control access to cloud resources, enforce security policies

- Role-based Access Control (RBAC): it assigns permissions based on roles, not individual users. Eg: Admin-full access, Developer- App deployment access, Viewer- Read-only access.
- Multi-Factor Authentication (MFA): it requires more than one authentication factor, a) password (something you know), b) OTP / Mobile app / Face ID (something you are).

3-What is physical and virtual host allocation?

ANS: Physical Host Allocation: A dedicated physical server assigned to one customer, No resource sharing with others.

- Advantages: High security, Compliance requirements, better performance.

- Eg: AWS Dedicated Host.
 - Virtual Host Allocation: Multiple virtual machines run on one physical server, resources shared using a hypervisor.
 - Advantages: Cost-effective, scalable, Efficient resource usage.
 - Eg: AWS EC2 shared instances.

4-How to access resource of cloud computing?

ANS: Cloud resources can be accessed in multiple ways.

- Web Console: Browser-based GUI, Easy to use, Used for manual management. Eg: AWS management Console.
- Command Line Interface (CLI): text-based commands, faster and scriptable, Eg: AWS CLI

- Remote Access: used to connect to cloud virtual machines Eg: SSH (Linux), RDP (Windows).

5-Type of backup in cloud?

ANS: Full Backup: Complete copy of all data, Takes more time and storage.

- Incremental Backup: Backs up only changed data since last backup, fast and storage efficient.
- Differential Backup: Backs up changes since the last full backup.
- Snapshot Backup: Point-in-time copy of disks or VMs, very fast recovery.
- Continuous Backup: Real-time or near-real-time backup, Used for critical systems.

6-What is disaster recovery?

ANS: Disaster Recovery is a plan and process to restore IT systems and data after a disaster.

- Disaster can include Data center failure, Cyber-attacks (ransomware), Natural disasters, Hardware failure.
- Key DR terms: RTO (recovery time objective): maximum acceptable downtime, RPO (recovery Point objective): maximum acceptable data loss.
- DR Strategies: Backup & Restore, pilot light, warm standby, hot standby (active-active).