

AWS Services Report

1. Amazon Elastic compute cloud (Amazon EC2)

→ Amazon EC2 provides resizable compute capacity in the cloud, allowing users to quickly scale computing resources as needed.

Use case

- Hosting web applications
- Running backend services.
- Batch processing
- Scientific computing

Benefits

- Flexibility to choose instance
- Scalability
- Pay-as-you-go pricing model.
- Integration with other AWS services.

Challenges

- Managing instances
- Optimizing costs.
- Ensuring security configuration

2. Amazon simple storage services

Use case

- Backup & restore
- Data archiving
- Hosting static website.
- Big data analytics.

Benefits:-

- Durable and highly available storage.
- Scalability to store large amount of data.
- Integration with other AWS services.
- Cost-effective storage options.

challenges

- Managing large volume of data
- Ensuring data security
- Controlling storage costs.

3. Amazon Relational Database service (RDS).

use cases

- Web & app mobile applications.
- Ecommerce platforms
- CRM systems
- Data warehousing

- ### Benefits :-
- Automated backups and patching
 - High availability with multi-AZ deployments
 - Easy scaling of database resources
 - cost efficient & resizable

- ### Challenges :-
- Managing database performance
 - Ensuring data security
 - Balancing cost with performance.

4. AWS Lambda

AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume.

Use case :-

- Real-time file processing.
- Data transformation.
- Running backend services.
- Event-driven applications.

Benefits :-

- No server management
- Automatic scaling
- Sub-second metering
- Integration with other AWS services.

Challenges :-

- Cold start latency
- Limited execution duration.
- Managing complex workflows

5. Amazon DynamoDB.

Use cases :-

- Mobile apps.
- Gaming app

Benefits :-

- Fully managed.
- Automatic Backups.

Challenges :-

- Limited querying capabilities.