

AWS - 103

Amazon RDS Service

→ Types of databases service by AWS

- RDS → Relational Database Service
- Dynamo → NoSQL Database Service
- ElastiCache → In-memory cache
- Redshift → Data Warehouse
- Aurora → MySQL-compatible relational database with 5x performance.

→ Amazon RDS Benefits

- Simple and Fast to deploy
 - Fast and predictable performance
 - MySQL, PostgreSQL, Oracle, SQL Servers are available under RDS
 - Pay only when you use the service
 - Patching, Backup and Replication are handled by AWS
 - Simple and Fast to scale
-

→ AWS RDS Data Base Engines (Remember)

- MySQL
- PostgreSQL
- Maria DB
- Oracle
- Amazon Aurora
- Microsoft SQL Server

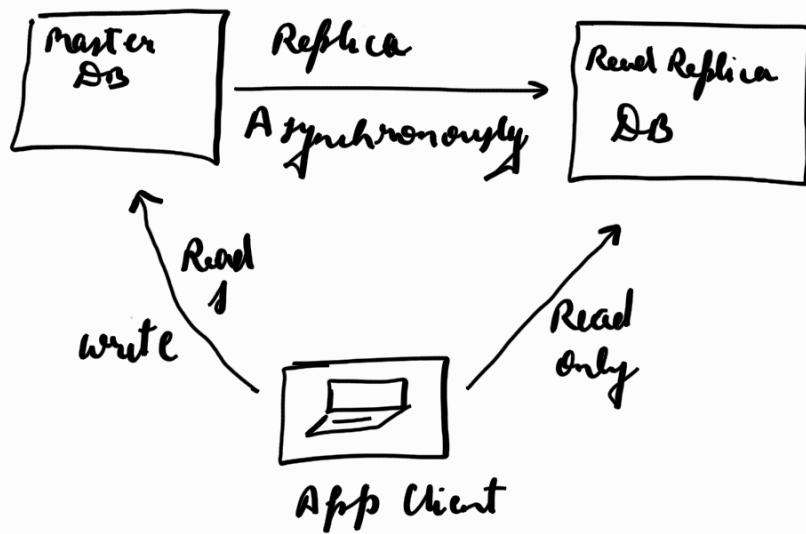
→ NOTE

→ Amazon RDS provides high availability and failover support for DB instances by maintaining asynchronous standby replica in Multi-Availability Zone deployments.

→ This standby replica is provided in different availability Zone.

→ Read Replica

- It is copy of master database which reflects changes done to the master database instance
- Whenever, the source DB instance is updated the corresponding Read Replica is also updated via asynchronous replication method
- The Read Replica allows only read connections
- The master DB snapshot is taken via Read Replica (or Slave DB)
 or
 Data Backup
 without affecting master db server



NOTE: Always go with these features in RDS:

- Multi-AZ deployment
- Provisioned IOPS Storage
- Make a read replica of master DB also, to use it for reporting purpose or BI (Business Intelligence) tools

→ Multi-AZ means → Multi Availability Zones

→ only purpose of Multi-AZ is to provide a failover option for a primary RDS instance.

→ Replication of data happens synchronously.

→ In the failover process, RDS updates DNS record to point to secondary instance within 60-120 seconds

→ SQL Server Mirroring

→ SQL Server Multi-AZ is achieved through the use of SQL

Server mirroring.

- Both primary and secondary instance in SQL server mirroring use the same Endpoint.

⇒ Read Replicas

- Read replica are NOT used as secondary instance in the event of failover
- Read replica are used to serve read-only access to your database data via separate instance.
- * → Read replicas are only available for My SQL, Maria DB, and PostgreSQL DB engines

NOTE : DR ⇒ Disaster Recovery