AWS Database Types

The overview AWS Database Types, DB snapshots and Multi-AZ DB.

AWS Database Types

1. **RDS** = OLTP
2. SQL
3. My SQL
4. Postgre SQL
5. Oracle
6. Aurora
7. Maria DB
8. Dynamo DB – No SQL
9. Redshift – Amazon Data warehouse – OLAP
10. Elastic Cache – In Memory cache

RDS – Backups, Multi-AZ and Read Replicas

Two types of backups for AWS

1. Automated Backups
2. Database Snapshots.

Automated Backups allow you to recover your database to any point in time within a retention period. The retention period can be between 1 – 35 days. Automated backups will take a full daily snapshots and will store transaction logs through on the day. This allows you to do a point in time recovery down to a second, within the retention period.

Automated backups are enabled by default. The backup data is stored in S3 and you act tree storage space equal to the size of the database.

Snapshots:

A DB snapshot is initiated manually and is stored even after you delete the original RDS instance, unlike automated backups.

Restoring Backup: Whenever you restore either an automated backup or manual snapshots, the restored version of the database will be a new RDS instance with a new DWS endpoint.

Encryption: Encryption at rest is supported for MySQL. Oracle PostgreSQL and SQL Server, MariaDB, and Aurora. Encryption is done using the AWS key management Service (KMS) service. Once your RDS instance is encrypted, the data stored at rest in the underlying storage is encrypted as are its automated backups read replies and snapshots.

Multi-AZ

Multi-AZ allows you to have an exact copy of your production database in another Availability Zone. AWS handles the replication for you. In an event of failure of your database in one availability zone, Amazon RDS will automatically fail to the standby DB can resume without any manual interventions

Multi- AZ = For Disaster Recovery only

Read Replicas = Performance

Read Replica Allow you to have a read-only copy of your production database. This is achieved by using Asynchronous replication from the primary RDS instance to the reach replica. You use read replicas primarily for very read-heavy database workloads.

Elastic cache

This primarily is a web service that makes it easy to deploy, operate and scale in an in-memory cache in the cold. The service improves the performance of web applications by allowing you to retrieve information from fast managed in-memory caches, instead of relying entirely on shower disk-based b B's

Elastic cache supports two open source
In-memory caching engines

1. Memory cache

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2. Redis Give an example where this is used: like top 10 by gure movies, this can be cached.