**Short notes for AWS exam**

Database in AWS

RDS - It is as service for Relational databases like mysql and postgres

RDS custom - It is service for Oracle and microsoft sql

RDS Proxy is never publically accessible ( it is accessed via VPC , lambdas)

Aurora is managed DB like sql and postgres –

* aurora has higher performance , Aurora grows automatically by aws upto 128TB , so no need to monitor its capacity
* Aurora has upto 15 read replicas and replication is faster than mysql
* failover are handled much faster than mysql, but aurora costs more than RDS
* aurora keeps 6 copies of data accross 3 AZ

Elasticache – It is AWS managed service for Cache databases like redis and Memcached

It is like buffer or cache of our RDS which is used to get faster responses

* Cache databases are in-memory databases with really high performance and low latency
* It reduces the load of databases for read workloads and helps to make application stateless
* Similar to RDS , AWS will take care of all maintance , patching , backup , failover , setup , monitoring , configuration
* Elasticache needs heavy application code changes
* Elasticache supports only IAM authentication for RDS
* Uses cases for redis – Gaming leaderboard
* Read replica uses Asynchronous replication and multi AZ uses Synchronous replication

encrypt an unencrypted RDS DB instance

* first creating a snapshot, enabling encryption during the copy process, and then restoring from that encrypted snapshot.

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| RDS ( Service name in AWS) | Elasticache ( Service name in AWS) |
| Mysql ,postgres ( db resources ) | Redis , memchaced ( resources) |
| Aurora ( manged db by aws ) |  |

**Important ports:**

* FTP: 21
* SSH: 22
* SFTP: 22 (same as SSH)
* HTTP: 80
* HTTPS: 443

**RDS Databases ports:**

* PostgreSQL: 5432
* MySQL: 3306
* Oracle RDS: 1521
* MSSQL Server: 1433
* MariaDB: 3306 (same as MySQL)
* Aurora: 5432 (if PostgreSQL compatible) or 3306 (if MySQL compatible)

S3 Buckets

* Glacier Deep Archive offers only Standard(3-5 hours) and Bulk(5-12 hours) retrieval options.
* AWS Glacier Flexible retrieval options, which include Expedited(1-5 minutes), Standard(3-5 hours) and Bulk(5-12 hours)
* S3 bucket – moving transition between storage classes

A diagram of a computer

AI-generated content may be incorrect.

* For infrequent accessed objects move them to Standard IA
* For archive objects move them to Glacier or deep glacier
* All this process of moving objects can be automated by s3 lifecycle rules

1. Transition Action – move objects from 1 storage class to another
2. Expiration Action - delete objects after certain time period , delete all old versioned files if versioning enabled , delete incomplete multipart uploads

CNAME Vs Alise

Cname – Points a hostname to hostname ( only for non-root domain)

Alias – Points a hostname to AWS resources ( works for root and non-root domains)

Alias records are always of type A/AAAA

You cant set alias record for ec2 dns name

CORS - CORS is a feature of HTTP that uses headers to allow browsers to display content which a web server requested from a different origin. If you make a cross-origin request to an Amazon S3 bucket that isn't defined by a CORS rule, then the CORS header isn't returned.

SQS Vs SNS Vs Kinesis

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| SQS | SNS | Kinesis |
| 1. Consumers pull data | Push data to many subscribers and they will receive copy |  |
| 1. Data is deleted after being consumed | Data is not persist , get lost if not delivered | Possibility to replay data |
| 1. Can have many consumer as you want | Can have upto 12500000 subscribers | Meant for real time big data analytics and data expires after given time |
| 1. No need to provision throughput | No need to provision throughput | Provisioned or on demand capacity mode |
| 1. Ordering guarantees only for FIFO queues | FIFO capability for fifo sqs |  |
| 1. Individual msg delay capability |  |  |

**What Is Amazon MQ?**

* **Amazon MQ** is a **managed message broker** service.
* It helps **different applications communicate reliably**, even if they are built in different languages or on different platforms.
* It supports **standard messaging protocols** like:
  + **AMQP**
  + **MQTT**
  + **OpenWire**
  + **STOMP**