

Short notes for AWS exam

Database in AWS

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

RDS custom - It is a 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 across 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 maintenance , patching , backup , failover , setup , monitoring , configuration
- Elasticache needs heavy application code changes
- Elasticache supports only IAM authentication for RDS
- Use 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.

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

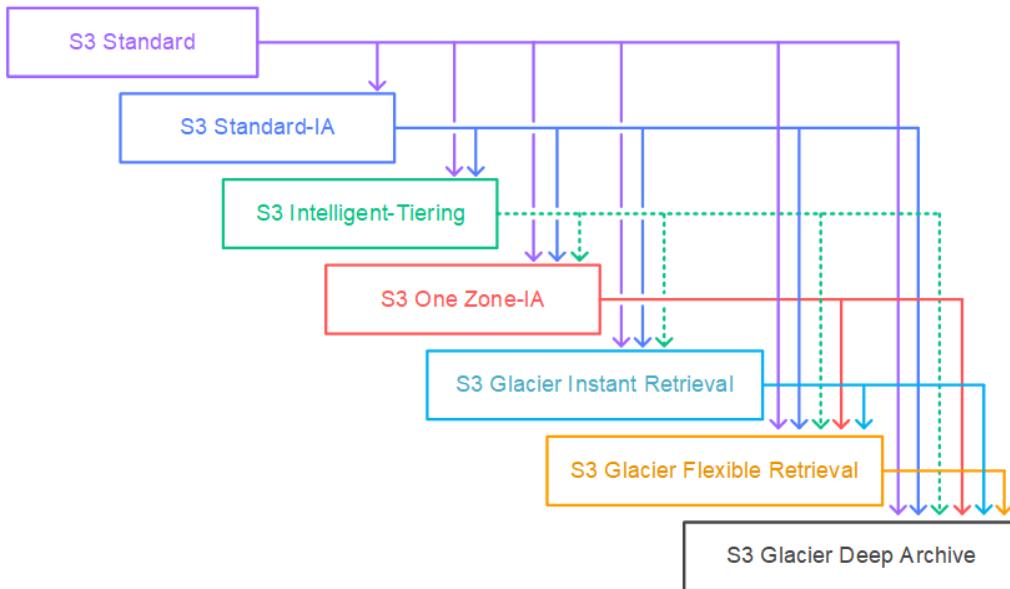
RDS Databases ports:

- 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



- 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 Alias

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

SQS	SNS	Kinesis
1. Consumers pull data	Push data to many subscribers and they will receive copy	
2. Data is deleted after being consumed	Data is not persist , get lost if not delivered	Possibility to replay data
3. 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
4. No need to provision throughput	No need to provision throughput	Provisioned or on demand capacity mode
5. Ordering guarantees only for FIFO queues	FIFO capability for fifo sqs	
6. 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**