**Database services in AWS**

Database Services

User data---Images/Video/Document

**Data base is storage**

**There are two types in Database**

**Sql-**Structured Query Language-Table format ---Excel---Rows & Columns—RDS.

**No sql-** No Structured Language-KEY PAIR VALUE---DYNAMO DB.

For a Real time 99 % most of them using RDS only.

Tier-3-**webserver-**(Static Content) **Appserver-**(Dynamic Content), **Database-**(User Data)

**Blue color denotes Public Subnet and Red Color Denotes Private subnets.**

**Private subnets for security purpose.**

**Eg we take pendrive we can save Images /Video/ Documents in pendrive also if you copying**

After transferring some files from the computer to the USB drive, we are now trying to play a video, but we cannot access it at the same time. So why it’s called a single operation.

**Database –Main feature is storage and Multiple access at the same time.**

**RDS –Relational database service**

**Advantage is More than one DB .**

**-SQL-** Structured Query Language-Table format ---Excel---Rows & Columns—RDS.

EG: Government take on action they advise the people to link Aadhaar and PAN.

**Why and What was the purpose for the government?**

To Track the information about ours.

If I enter name and DOB it will give an entire information about ours.

Now we will see RDS

IN AWS THEY HAVE TWO METHOD

**STANDARD CREATE AND EASY CREATE**

**If you use easy create aws cost more amount or else if use standard create the cost will be less.**

1. **Easy Create**:
   * AWS sets everything up for you with **default options**, which are often bigger and more powerful.
   * This can cost more money because it includes extra **features by default**.
2. **Standard Create**:
   * **You get to pick options yourself,** like smaller sizes or fewer features.
   * This can cost less because you’re **only paying for what you need**.

**FYI: Easy Create is quicker but often more expensive**, while **Standard Create takes a little more time but can save you money**.

**RDS Engine Options:**

**After that we want to select version in SQL.**

There are various versions of SQL available. We want to select a stable version and avoid using newer, less tested versions. How can we find and choose a stable, previous version of SQL.

Most them using MYSql.

After we need select templates.

**Environment =Set of servers**

DEVELOPER---10 Servers ====LIN10DEV

TESTING TEAM SERVER =LIN10TEST

QA (QUALITY ANALYST) SERVER =

CAT/UAT ====Client Acceptance Testing

**PRODUCTION SERVER = DATABASE ---MYSQL---Real time using environment- Eg: Facebook Instagram.**

DR=Disaster recovery

If Interviewer will ask which team you working previous or which is familiar. I am working on production environment.

Next option is Availability and Durability.

**Availability and Durability**

Availability = 24x7x365 =Availability

Durability = How long lasting.

 Availability is like the ATM always being up and working.

 Durability is like knowing your photos will stay safe in the cloud, even if something goes wrong.

Database=Chennai +++Mumbai

Availability Zone----Adyar

Availability Zone---Kanchipuram

Availability Zone—TADA

**Settings:**

**Storage Auto scaling:**

**Eg : Amazon**

**After create and available**

**Interview related concept:**

**1.Master Replica:** When I create a database instance, I can select the **role** as **Instance**. Then, by selecting **Action** and choosing **Create Read Replica**, a related instance will be created. The first instance will show the role as **Master**, and the newly created instance will show the role as **Replica.**

**2.CRR—**

**Below snapshot is used for Backup:**

**3. SNAPSHOT---Manual Backup we can save it S3. After that u can push into S3. Why s3 means storage.**

**4. AUTOMATED BACKUP---Fixed time -2 am My data want to backup.**

**Cloning: same future and same thing.**

**Replica: Same Action. (Eg : Take mirror)**

**Replica means If I add one database in Master replica instance and same thing and added in replica instance. And If I delete one data in Master Replica and same thing deleted in Replica Instance.**

CRR (Cross-Region Replication) allows data replication from one region to another. For example, if I create a primary instance in the Northeast Asia region I can set up a replica instance in the **Southeast Asia region**. This process of replicating data across regions is called Cross-Region Replication (CRR).

**S3-Simple Storage service provided by AWS.**

Storage engineering:

S3 I compare with google drive.

S3 also doing same thing and doing some extra thing.

In google drive we can retrieve and storage the data. But in S3 I can save my data, retrieve my data and we can edit my data.

And S3 is global service. And also S3 is a versioning control system.

Benefits:

Real time scenarios:

Availabilty:99.99%

Durability:99.999999%

Unlimited Storage

Upto 5TB data can be stored under 1 object.

**Bucket is technology term**

If I create one bucket and saved file, we called as object.

Limitations

-except.exe

We cannot do any of the installations.

In free tier account 5 GB object I can only store.

 You can save **unlimited objects** in a single AWS S3 bucket.

 There is **unlimited total storage** available in S3.

 However, **each individual object** (file) can be **up to 5TB** in size.

S3 in New Video Reference

Simple storage service

Eg we take google drive we can only upload and download the

Name of the bucket should be unique.