AWS Technical Essentials – Day 2 (2 October 2025)

Day #2

Database lesson

Benefits of AWS databases

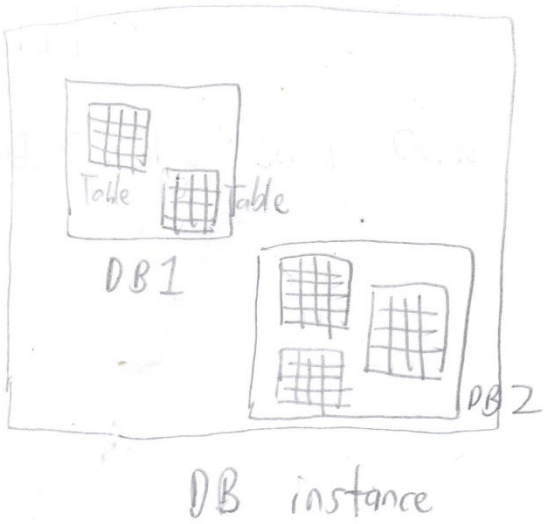
- Relational E.g. AWS Aurora, RDS, Redshift
- Key-value, Document E.g. DynamoDB, DocumentDB
- Ledger E.g. Quantum Ledger Database
- Graph E.g. Neptune

Hybrid Cloud deployment

- Front-end run in cloud
- Backend on-prem, local

Relational database indexed like SQL.

Need to re-index to Non-relational format



Read replica with RDS

Listeners

Target groups.

When need to trace data based on 1 attribute, use relational database (e.g. SQL, Access)

On premises versus EC2 instances

Managed databases in AWS

-Fully managed (Dynamo), just create table, no need select parameters e.g. size of database

-Partially managed (RDS) need to key in parameters e.g. database size

Best practice is not to hardcode database credentials.

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Database KPI is RPO (Recovery Point Objective)

Non-relational Databases (DynamoDB)

Attribute ≡ Column

Item ≡ Row

DynamoDB can use as shopping cart

Monitoring lesson

Amazon CloudWatch

Amazon CloudWatch Logs

Use Log Insight for querying.

Elastic Load Balancing Benefits

-High availability and elasticity

-Security

-Feature breadth

-Robust monitoring and visibility

-Integration and global reach

4 types of Load Balancers that can be created:

1. ALB (https)

2. NLB (tcp/udp)

3. Gateway LB (IP)

4. Classic LB

ELB components

Vertical scaling and Horizontal scaling

Create an Auto-scaling group.

Auto-Scaling

Scaling Policies

-Simple scaling policy

-Step scaling policy

-Target tracking scaling policy - Set a target,

1. Launch template

2. Create auto-scaling group

3. Create template policy