Lab: Intro to Database Services

AWS relational database services (RDS)

A fully managed database services, makes it easy for you to launch a database servers.

You get to choose the different type of database engine from MySQL, MariaDB, PostgresSQL, Oracle, Microsoft SQL Server.

AWS Aurora

AWS's implementation of MySQL database.

DynamoDB

Amazon's NoSQL database. Provde high speed, extremely low latency performance

Redshift

Fast fully managed petabyte scale data storage that is based on postgre SQL. It can store up to petabyte of data.

ElasticCache

In-memory data store, retrieve information from fast RAM cache instead of relying on slower disk based database. Like Redis.

Database Migration services

Orchestrate migration of data from one database engine type to another database type.

For example: migrate Oracle to AWS Aurora.

Neptune

Graph database. High performance graph database engine optimized for storing billions of relationships.

Database Example

ElasticCache node can be used together with a database that is being queried frequently. For example, you spin up an Aurora database instance but it is being overwhelmed by more request than it can handle. You can either choose to scale up (which will cost more money) or you can put an ElasticCache node in front of it. Any data that is being handled will be put into the ElasticCache so that further of the same request will be answered by the ElasticCache from a fast in-memory query, rather than having to go to the database.

And any data that is not in ElasticCache that request will simplify be forwarded to the Aurora database. This will offload frequently accessed data in Aurora to ElasticCache that can be answered easily since it exists in memory, and those infrequently accessed ones will be forwarded to Aurora and then stored into cache.

Revision #2
Created 2023-01-09 20:23:31 UTC by Tamarine
Updated 2023-02-06 18:24:02 UTC by Tamarine