[version_1.0]

Note

The exercises in this course will have an associated charge in your AWS account. In this exercise, you will create the following resources:

- Amazon Relational Database Service (Amazon RDS) instance
- Amazon DynamoDB table
- Amazon DynamoDB Accelerator (DAX) cluster

Familiarize yourself with **Amazon RDS pricing**, **Amazon DynamoDB pricing** and the **AWS Free Tier**.

Exercise 3: Comparing Databases

Scenario: In this challenge, you will run some experiments to compare and contrast two AWS database services: Amazon RDS and Amazon DynamoDB. You will create databases and caches for both database services, and then you will compare the two architectures.

Technical knowledge prerequisites

Remember that the following tasks are *requirements*. They are not steps. You must know how to create and connect the requested resources.

Similar to the exam, component names will be given for you to use. To meet the requirements on the exam, it is important that you use the resource names that are provided to you, where applicable.

Prerequisites

Before you start this exercise, you will first need to set up a virtual private cloud (VPC) with the necessary database requirements.

Task 1: Launching an RDS instance

1. The RDS instance uses these requirements.

   - **Creation method**: *Standard create*
   - **Engine options**: *MySQL*
   - **Templates**: *Free tier*
   - **Resource name**: Your VPC
   - **Region**: `us-east-1`

Task 2: Creating a read replica

1. The read replica uses these requirements.

- **DB instance identifier**: Enter a unique identifier
- **Region**: `us-east-1`

Task 3: Creating a DynamoDB table

1. The DynamoDB table uses these requirements.

   - **Table name**: Enter a unique table name
   - **Partition key**: Enter a unique key name

Task 4: Enabling DAX

1. The DAX cluster uses these requirements.

   - **Node type**: `dax.r5.large`
   - **Number of nodes**: `3`
   - **Subnet**: Create new
   - **VPC ID**: Your VPC

Task 5: Comparing the results

1. For each database and cache, think about how these processes were different.

   You can find more information in the documentation:
   - **Amazon RDS documentation**
   - **Amazon DynamoDB**

Cleaning up

In this task, you delete the AWS resources that you created for this exercise.

1. Open the **Amazon DynamoDB** console.
   - Delete your database table.
   - Delete your DAX cluster.
2. Open the **Amazon RDS** console.
   - Delete your read replica instance.
   - Delete your primary database instance.