Migration of Sample Database to AWS

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MIGRATION OF A SAMPLE DATABASE TO AWS

Objective: The objective of this project is to provide hands-on experience in migrating a sample database to AWS. The project covers these areas: Introduction to AWS Database, AWS Well-Architected Framework, AWS Database Migration Service (DMS), and Technical Writing.

Steps:

1. **Sign up for an AWS account:**

- Go to the AWS website (aws.amazon.com) and click on "Create an AWS Account."
- Follow the instructions to create a new account.

2. **Introduction to AWS:**

- Explore the AWS Management Console: familiarize yourself with the console's layout and navigation.
- Understand the different AWS services listed above and their purposes.

3. **AWS Well-Architected Framework:**

- Read about the AWS Well-Architected Framework and its five pillars (Operational Excellence, Security, Reliability, Performance Efficiency, and Cost Optimization).
- Understand the importance of designing and building applications based on these principles.

4. **AWS Infrastructure Overview:**

- Learn about the key components of the AWS infrastructure, such as Regions, Availability Zones, and Edge Locations.
- Understand the concept of AWS DMS

5.**Planning and Discovery:**

- Define migration goals and requirements: Determine the objectives of the migration, such as minimizing downtime, optimizing performance, or reducing costs. Identify any specific compliance or security requirements.
- Perform a database assessment: Evaluate the compatibility of the source database with the target database engine on AWS. Identify any schema or code changes required. Develop a simple web application using HTML, CSS, and JavaScript.

7. **Selecting the Target Database on AWS:**

- Choose an appropriate AWS database service: AWS provides various managed database services, including Amazon RDS (Relational Database Service), Amazon Aurora, Amazon DynamoDB, Amazon Redshift, etc.
- Select the service that best fits your requirements based on factors such as database type, scalability, performance, availability, and cost.

8. **Designing the Target Database Architecture:**

- Determine the desired architecture: Define the architecture for the target database environment, considering aspects such as high availability, scalability, disaster recovery, and security.
- Configure the database settings: Specify the necessary parameters, such as instance size, storage type, backup and retention policies, security groups, network settings, and encryption options.

9. **Data Migration:**

- Choose a migration method: Depending on the source and target databases, select an appropriate migration approach. This could include options like database backup and restore, database replication, AWS Database Migration Service (DMS), AWS Schema Conversion Tool (SCT), or other data migration tools.
- Test the migration process: Perform a trial migration or a pilot migration to validate the process, ensure data integrity, and identify any potential issues or performance bottlenecks.

10. **Technical Writing:**

- Document each step of the project with a technical writing overflow.

11. **Architecture:**

- Design a simple architecture for the project.