Vampire Unicorns - Week 8

Theoretical

Name 5 AWS services and their usage.

[Youssef Ashraf Sabry]

AWS Lambda

AWS Lambda is an event-driven, serverless computing service that allows developers to run their solutions without managing servers. Instead, Lambda automatically allocates compute execution power and runs the code based on an incoming request.

AWS SageMaker

AWS Sagemaker is an analytical tool based on Machine Learning that analyzes data efficiently. It allows for building, training, and deploying Machine Learning models at a large capacity.

AWS DynamoDB

AWS DynamoDB is a fully managed and serverless NoSQL database service. It is a high-performing and flexible database system with scalable storage.

AWS EC2

AWS Elastic Compute Cloud provides secure and resizable compute capacity in the cloud. It offers virtual servers emphasizing a safe, reliable, performing computing infrastructure that adapts to workloads precisely.

AWS ECS

AWS Elastic Container Service is a highly scalable, fast container management service that makes it easy to manage containers on a cluster. The containers can run on a serverless infrastructure or on a cluster of AWS EC2 instances.

[Mohamed Atef Safty]

1. **Amazon s3 glacier**
   Amazon S3 Glacier is the archive storage in the cloud at a low cost. It is built with three storage classes such as S3 Glacier instant retrieval, flexible retrieval, and deep archive. Here, the instant class supports immediate access to data, and the flexible class allows flexible access within minutes to hours with no cost. The third one, deep archive, helps archive compliance data and digital media. Overall, they support you to access data from archives faster.

2. **Amazon ElastiCache**
   Amazon ElastiCache is a fully-managed, flexible, in-memory caching AWS service. It supports increasing the performance of your applications and database. And this service helps to reduce the load in a database by caching data in memory. Amazon ElastiCache accesses data from in-memory with high speed, microsecond latency, and high throughput. With a self-managed cache service, you can reduce costs and eliminate the operational overhead of your business.

3. **Amazon Lightsail**
   Amazon Lightsail is the website and applications building AWS service. This service offers Virtual Private Server instances, containers, databases, and storage. It allows a serverless computing service with AWS Lambda. With Amazon Lightsail, you can create websites using pre-configured applications such as WordPress, Magento, Prestashop, and Joomla in a few clicks and at a low cost. In addition to this, it is the best tool for testing, so you can create, test, and delete sandboxes with your new ideas.

4. **Amazon EC2 Auto-scaling**
   This AWS service scales computing capacity to meet the demands accurately. And it is achieved by adding or removing EC2 instances automatically. There are two types of scaling such as dynamic scaling and predictive scaling. Here, dynamic scaling responds to the presently changing demands, whereas predictive scaling responds based on predictions. Through Amazon EC2 Auto-scaling, you can identify the unhealthy EC2 instances, terminate them, and replace them with new instances.

5. **Amazon DynamoDB**
   Amazon DynamoDB is a fully managed, serverless, key-value NoSQL database designed to run high-performance applications at any scale. DynamoDB offers built-in security, continuous backups, automated multi-Region replication, in-memory caching, and data export tools.

Practical

Create one of those services under the free tier

[Youssef Ashraf Sabry]

[Mohamed Atef Safty]