

WELCOME TO SERVERLESS WEB APPLICATION USING AWS(amazon web services)

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DOMAIN-Cloud Computing

Index Terms – Serverless Computing, Amazon Web Services

I.INTRODUCTION

In this project we have created a simple serverless website that helps user to request the feedback form for college survey. Serverless is a process which shows services, practices and strategies which is used to build a website so as to innovate and develop for faster changes. Serverless computing contains infrastructure management tasks as capacity provisioning and patching. Developers can easily focus on developing code that serves the customer. serverless services like AWS lambda has a quality of auto scaling and pay as per use billing model. Serverless infrastructure does not require any servers. Developers can focus on core product and a business logic. Serverless applications or website doesn't require you to manage any different servers. We can easily focus only on core product and business logic, instead of focusing on the responsibilities like operating system (OS) access control, OS patching, provisioning, right-sizing, scaling, and availability.

II. Objective

- Serverless computing offers a number of advantages over traditional cloud-based or server based infrastructure.
- Serverless architectures offer high scalability, high flexibility, and quicker time to release, all at a reduced cost. Thus, developers do not need to worry about purchasing, provisioning, and managing backend servers.
- However, serverless computing is not a magic bullet for all application developers.

functions that intercept and operate on data flows in a scalable manner without the need to manage a server, although presents several challenges.

IV. Feedback Form

Feedback form is to take reviews from the students of an university for the university revaluation. For creating a feedback form you can open a new HTML code editing page visual studio code. I have created a single file having HTML code. This is the format of our website. In this we can submit a review to the particular university.

Amazon Management Console x form x +

s3.amazonaws.com/www.feedform.com/feedbackform-3.html

Welcome to feedbaback form

Please fill the form for our college survey

Your details:-

First Name:

Middle Name:

Last Name:

Year:

University Roll Number:

Department:

Email:

IJCRT

V. On AWS Platform

You can build a serverless website by using different AWS services . Each service is fully managed and it is not require to manage servers. You have to configure them and upload the code to AWS Lambda, which is also called as serverless compute service.

1.S3 Storage Service (S3 bucket)

Amazon S3 stands for Simple Storage Service. Amazon S3 stores the data in buckets which have capacity of maximum 100 buckets and is used to store and retrieve any amount of data from anywhere such as web sites and mobile apps, corporate applications and data from IoT sensors and devices.

We create and upload a html file of our feedback form. From that an Object URL is generated from that we can access the website and submit the review.

2. API Gateway

An API gateway is an API management tool to connect a client and a collection of backend services. An API gateway used to access the HTTP and HTTPS to the lambda function.

3. AWS Lambda

In this, API gateway triggers the lambda function and the reviews will store into the table named reviews.

4. AWS DynamoDB

The reviews submitted by the students will be stored in the table which we have created in the AWS DynamoDB named as reviews.

VI. Advantages

Server management is not necessary. There is not necessary to manage any server as we have created a serverless website. Pay as per the use, reduce cost. In AWS it has a quality of pay as per the use that means we just have to pay only for that an AWS service which we use to create a serverless website.

1. Scalable

Scalability is one of the quality of AWS cloud in which we can easily scale up or scale down the space as per our requirements.

2. Quick updates are possible

By using serverless infrastructure or an architecture it is easy to deploy or update the web application. This property is generally used by the app developers.

VII. Disadvantages

Testing and debugging become more challenging. In AWS after using the serverless architecture testers face more difficulties to test and debug their web application on AWS cloud platform.

1. New security concern

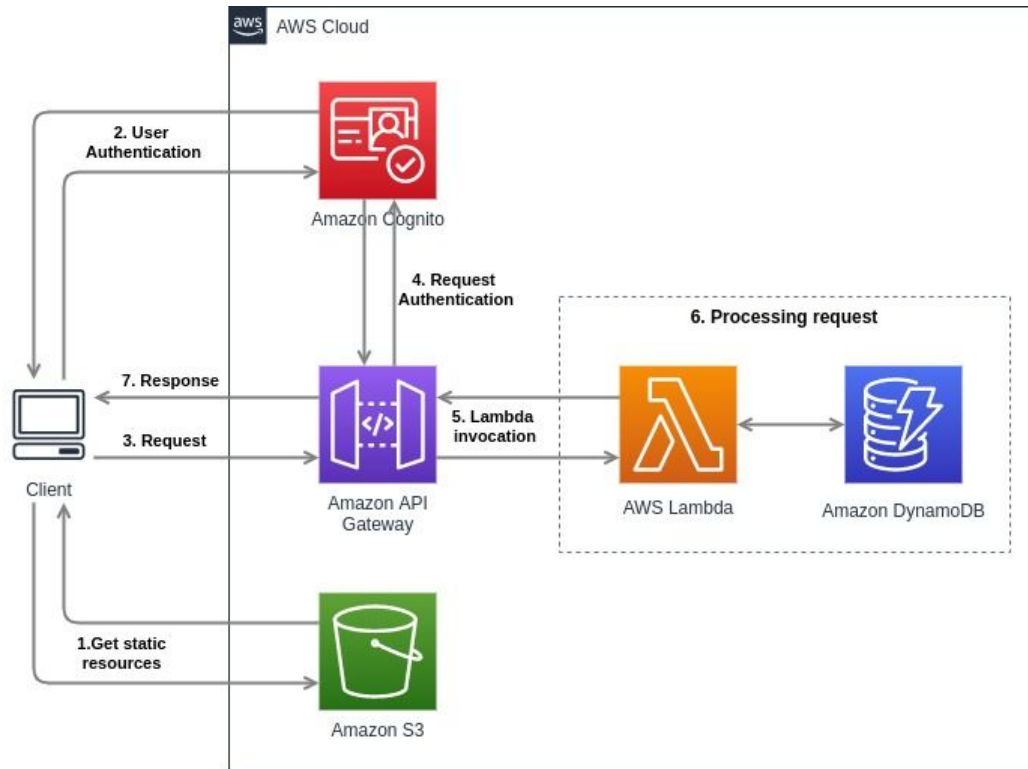
For the developers working on a backend face more problems regarding security of a code or any other important things which is important to secure.

2. Not for long-running processes

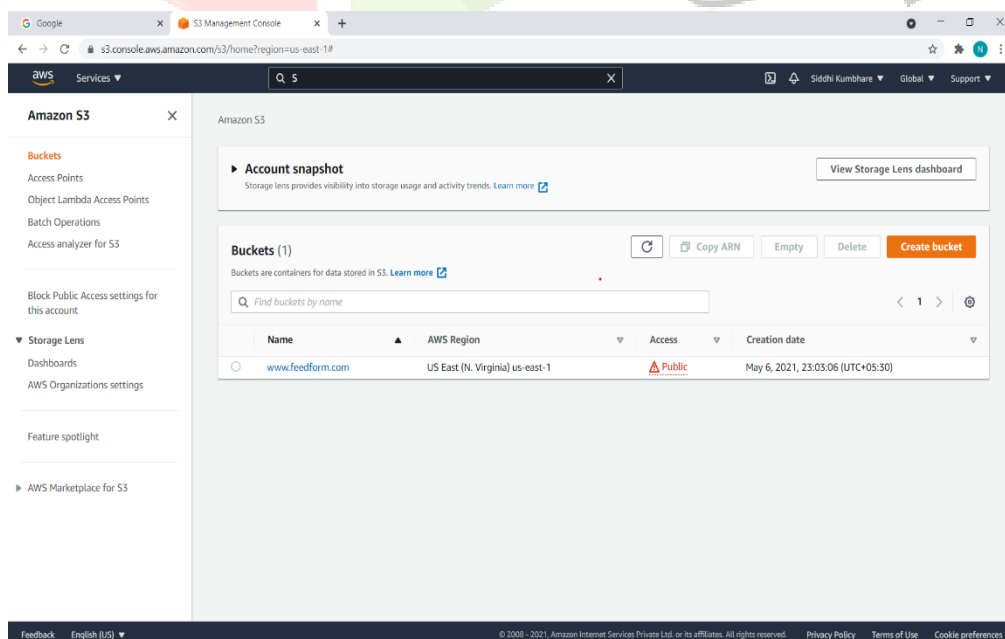
In AWS cloud platform the serverless architecture is not made for long term process or we can call as long running processes.

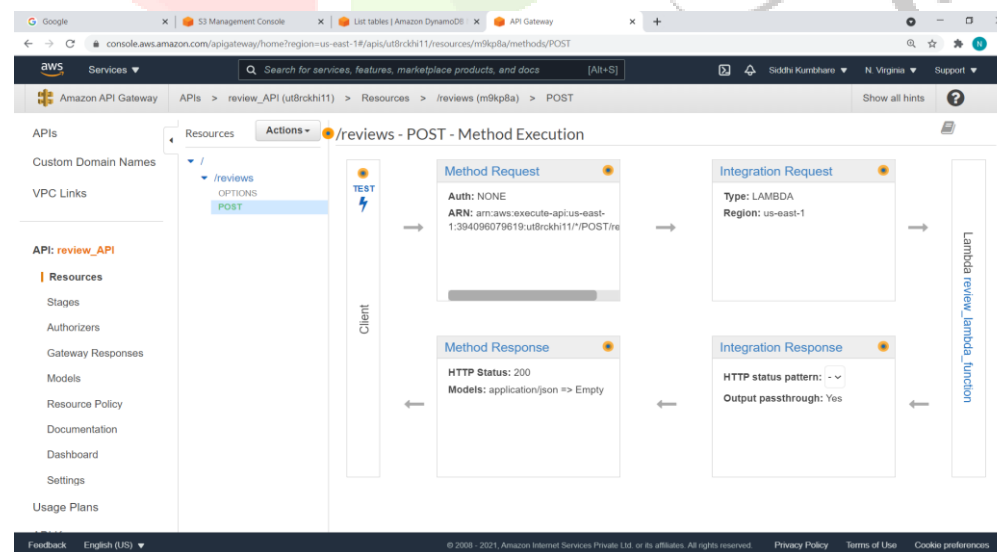
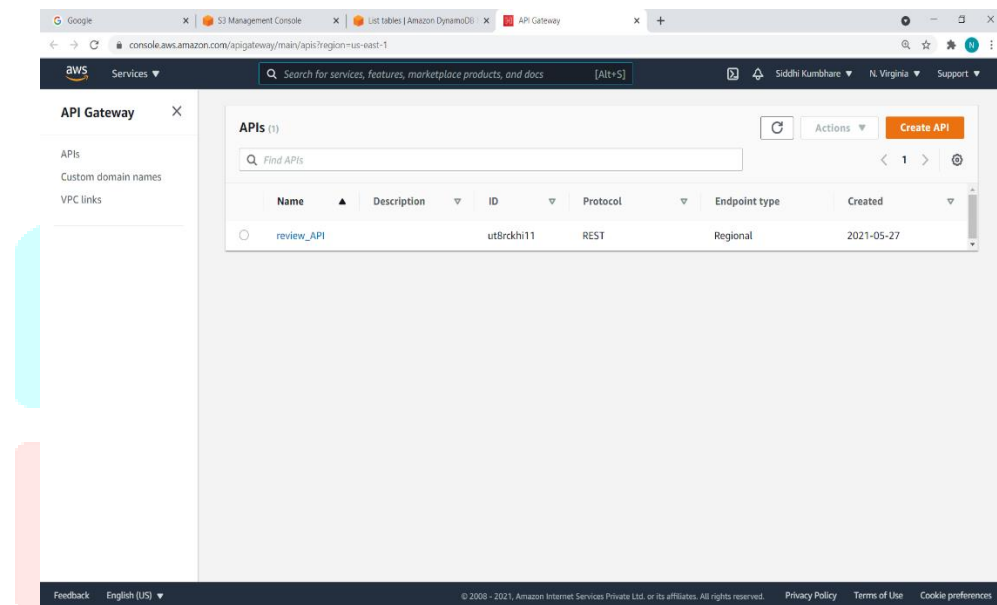
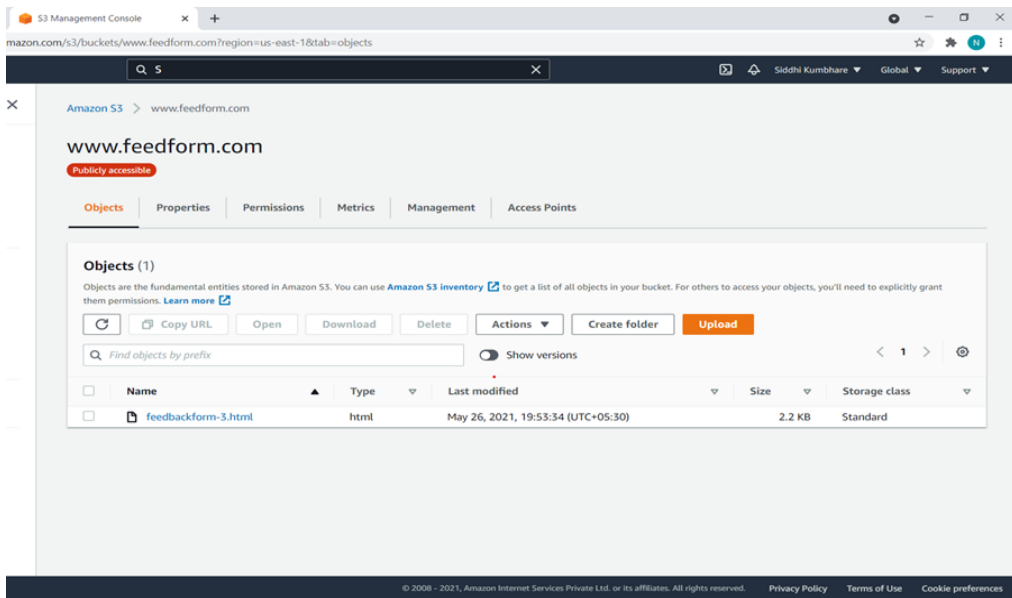
VIII. Conclusion

Building serverless applications on AWS shows that the responsibilities that servers introduce. Using AWS Lambda as our serverless logic layer used to build faster and focus our development efforts on what differentiates our website. Lambda, AWS provides additional serverless capabilities so that we can build robust, reliable, secure, and cost-effective website. Understanding the capabilities and recommendations described in this research paper can help to ensure our success when building serverless website of our own.



XI. Project Screenshots





Google | S3 Management Console | List tables | Amazon DynamoDB | API Gateway | Functions - Lambda

console.aws.amazon.com/lambda/home?region=us-east-1#/functions

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Lambda > Functions

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Function name	Description	Package type	Runtime	Code size	Last modified
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DynamoDB

- Dashboard
- Tables
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- PartiQL editor
- Backups
- Exports to S3
- Reserved capacity
- DAX
- Revert to the current console

DynamoDB > Tables

Tables (1) Info

Find tables by table name Any table tag

Name	Status	Partition key	Sort key	Indexes	Read capacity mode	Write capacity mode
reviews	Active	email (String)	-	0	Provisioned with auto scaling (1)	Provisioned with auto scaling (1)

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