



Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
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(Religious Jain Minority)

CCL Presentation

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Introduction

Sending emails programmatically can be a powerful tool for businesses and individuals alike. One way to do this is by using Amazon Web Services (AWS) Lambda and Simple Email Service (SES) together. AWS Lambda is a serverless compute service that allows you to run code without having to manage servers, while SES is a cost-effective email service that enables you to send and receive email using your own email addresses and domains. By integrating Lambda and SES, you can send emails automatically in response to events, such as user sign-ups or purchases. In this tutorial, we'll walk you through how to use Lambda and SES together to send emails programmatically.



Problem Definition

The problem that sending mail using Lambda and Amazon SES solves is the need to send automated emails in response to events or triggers. For example, if you run an e-commerce website, you may want to send a confirmation email to customers after they make a purchase. Without a way to automate this process, you would have to manually send each email, which can be time-consuming and inefficient. By using Lambda and SES together, you can create a programmatic solution that sends emails automatically based on certain triggers. This not only saves time but also ensures that emails are sent consistently and accurately. The integration of these two AWS services provides a reliable and cost-effective way to handle email communication for a variety of use cases.



Description

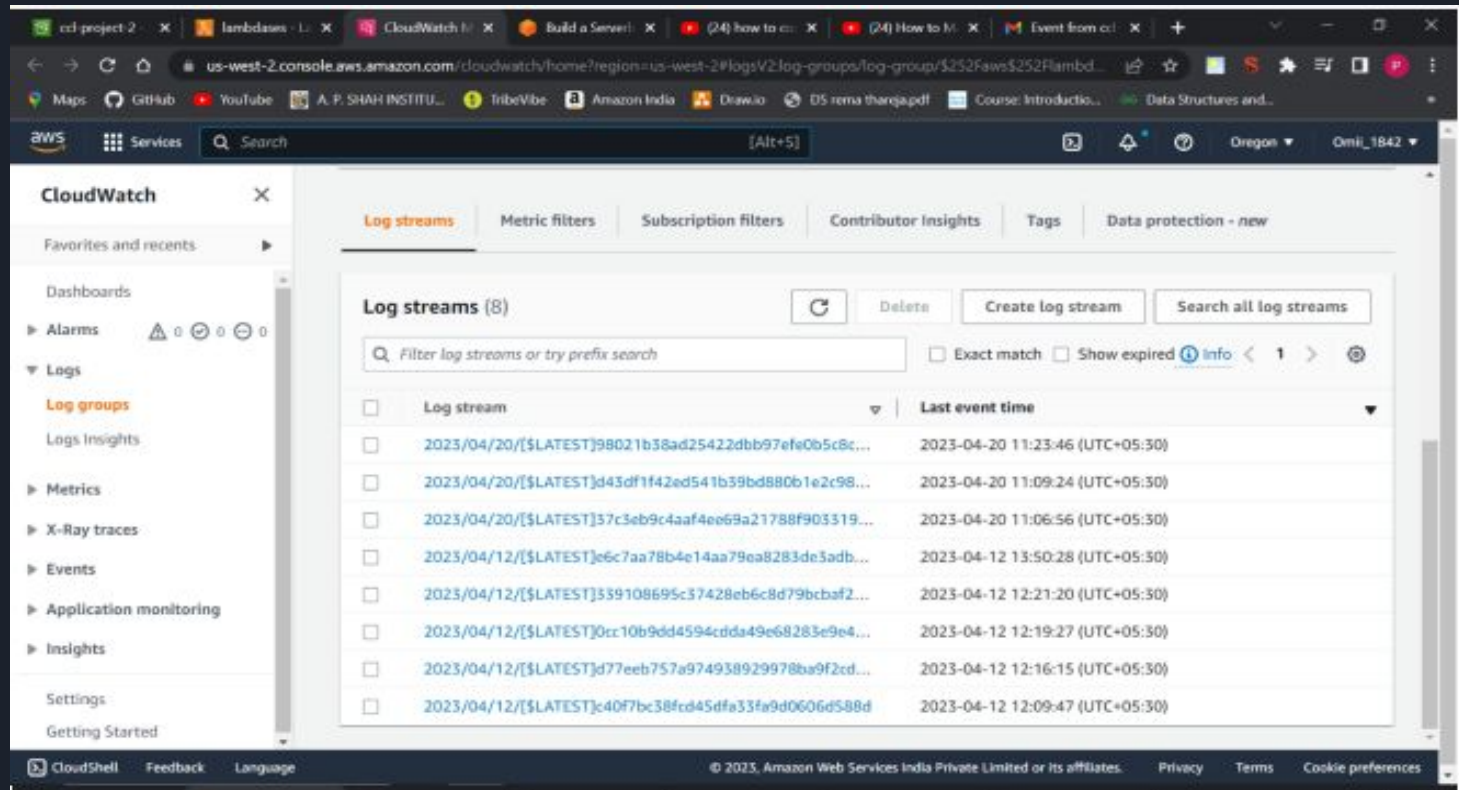
The application has been deployed on AWS using various cloud services, making it scalable, secure, and easy to deploy and maintain.

Lambda : AWS Lambda is a compute service that lets you run code without provisioning or managing servers.

SES : Sending email Service is an email platform that provides an easy, cost-effective way for you to send and receive email using your own email addresses and domains.

S3 : Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Implementation Details



The screenshot displays the AWS CloudWatch console interface. The left sidebar contains navigation options: Favorites and recents, Dashboards, Alarms, Logs (selected), Log groups, Logs Insights, Metrics, X-Ray traces, Events, Application monitoring, Insights, Settings, and Getting Started. The main content area is titled 'Log streams (8)' and includes a search bar, filters (Exact match, Show expired), and a table of log streams. The table has two columns: 'Log stream' and 'Last event time'. The log streams listed are:

Log stream	Last event time
2023/04/20/[\$LATEST]98021b38ad25422dbb97efe0b5c8c...	2023-04-20 11:23:46 (UTC+05:30)
2023/04/20/[\$LATEST]d43df1f42ed541b39bd880b1e2c98...	2023-04-20 11:09:24 (UTC+05:30)
2023/04/20/[\$LATEST]37c3eb9c4aaf4ee69a2178f903319...	2023-04-20 11:06:56 (UTC+05:30)
2023/04/12/[\$LATEST]e6c7aa78b4e14aa79ea8283de3adb...	2023-04-12 13:50:28 (UTC+05:30)
2023/04/12/[\$LATEST]359108695c37428eb6c8d79bcbaf2...	2023-04-12 12:21:20 (UTC+05:30)
2023/04/12/[\$LATEST]0cc10b9dd4594cdda49e68283e9e4...	2023-04-12 12:19:27 (UTC+05:30)
2023/04/12/[\$LATEST]d77eeb757a974938929978ba9f2cd...	2023-04-12 12:16:15 (UTC+05:30)
2023/04/12/[\$LATEST]c40f7bc38fcd45dfa33fa9d0606d588d	2023-04-12 12:09:47 (UTC+05:30)

The bottom of the console shows the footer with 'CloudShell', 'Feedback', 'Language', and copyright information for Amazon Web Services India Private Limited or its affiliates, along with links for 'Privacy', 'Terms', and 'Cookie preferences'.

us-west-2.console.aws.amazon.com/lambda/home?region=us-west-2#/functions/lambda_dases?tab=code

Successfully updated the function lambda_dases.

Code source [Info](#)

Upload from ▾

File Edit Find View Go Tools Window Test Deploy

Go to Anything (Ctrl-P)

Environment

- lambda_dases
- lambda_function.py

```
1 import json
2 import boto3
3 def lambda_handler(event, context):
4     file_name = event['Records'][0]['s3']['object']['key']
5     bucketName=event['Records'][0]['s3']['bucket']['name']
6     print("Event details : ",event)
7     print("File Name : ",file_name)
8     print("Bucket Name : ",bucketName)
9     subject = 'Event from ' + bucketName
10    client = boto3.client("ses")
11    body = """
12
13    <br>
14    This is a notification mail to inform you regarding s3 event.
15    The file {} is inserted in the {} bucket .
16    """
17    message = {"Subject": {"Data": subject}, "Body": {"Html": {"Data": body}}}
18    response = client.send_email(Source = "20182126.pooja.tumma@gmail.com", Destination = [{"ToAddresses": ["20182126.pooja.t"}])
19    print("The mail is sent successfully")
20
```

cs1-project-2

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CloudWatch M

Build a Server

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Event from cl

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s3.console.aws.amazon.com/s3/buckets/cs1-project-2?region=us-west-2&tab=objects

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awsServicesSearch[Alt+S]

GlobalOmii_1842

Objects

PropertiesPermissionsPoliciesV-manage-mentAccess Points

1

Objects (6)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

↻

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

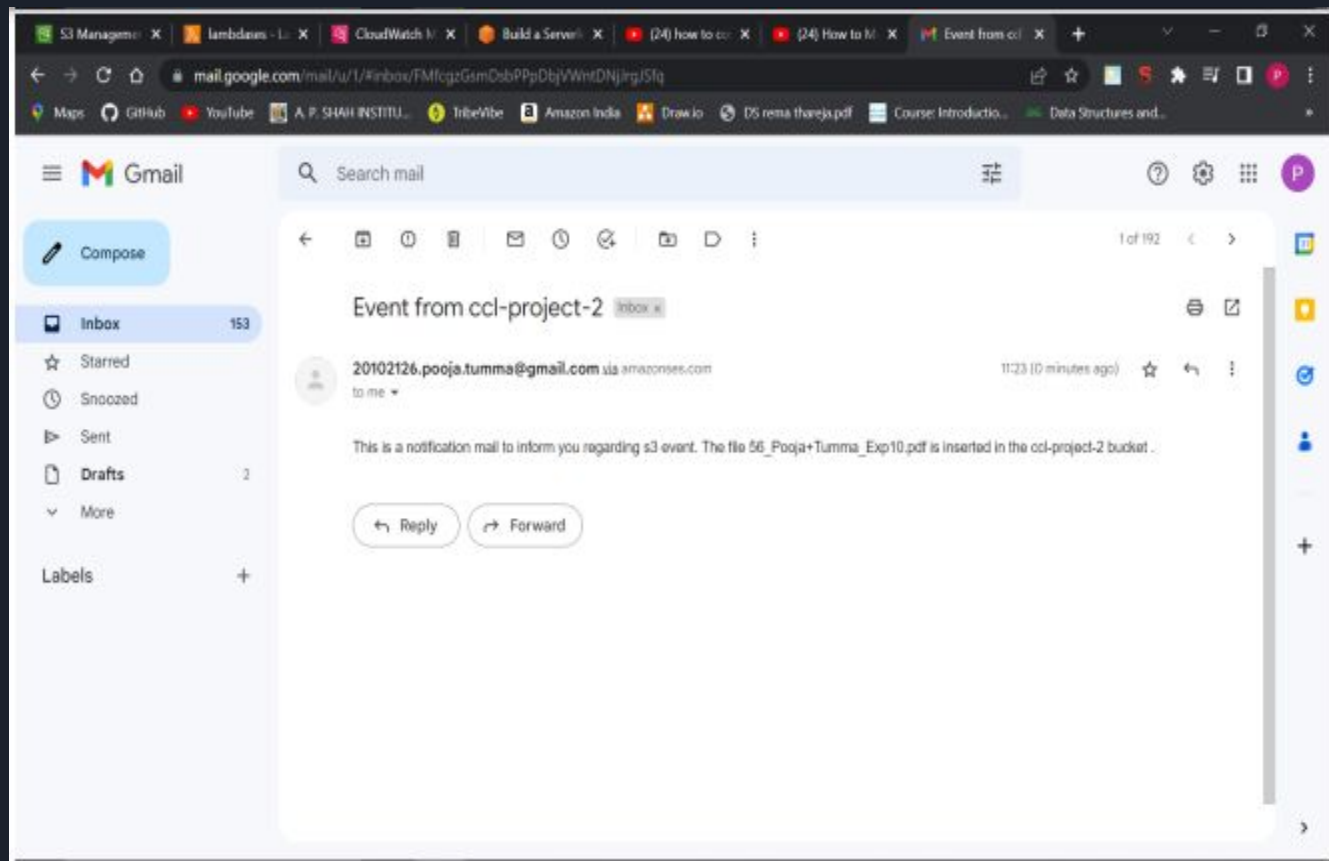
Create folder

Upload

Find objects by prefix

< 1 > ⚙

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	56_Pooja Tumma_Exp10.pdf	pdf	April 20, 2023, 11:23:44 (UTC+05:30)	235.3 KB	Standard
<input type="checkbox"/>	56_Pooja Tumma_Exp6.pdf	pdf	April 20, 2023, 11:06:55 (UTC+05:30)	96.9 KB	Standard
<input type="checkbox"/>	56_Pooja Tumma_Exp8.pdf	pdf	April 20, 2023, 11:09:21 (UTC+05:30)	64.8 KB	Standard
<input type="checkbox"/>	Al6-sejal-67.pdf	pdf	April 12, 2023, 12:20:46 (UTC+05:30)	147.5 KB	Standard
<input type="checkbox"/>	mc6-sejal-67.pdf	pdf	April 12, 2023, 13:50:26 (UTC+05:30)	123.6 KB	Standard
<input type="checkbox"/>	stage1_labels.csv	csv	April 12, 2023, 12:18:34 (UTC+05:30)	1.8 KB	Standard





Outcomes

Working on an AWS cloud project can provide a range of learning outcomes, including:

Understanding of AWS services: By working on an AWS cloud project, you can gain a deeper understanding of various AWS services and their functionality. This includes services such as EC2, S3, Lambda, and more.

Experience with cloud computing: By working on an AWS cloud project, you can gain experience with cloud computing concepts, such as scalability, availability, and fault tolerance.

Improved coding skills: Working on an AWS cloud project, you can improve your coding skills and learn how to write scalable, maintainable code.

Deployment and management skills: By working on an AWS cloud project, you can learn how to deploy and manage applications on the cloud using tools such as AWS CLI, AWS Console, and AWS SDK.

Project management skills: By working on an AWS cloud project, you can improve your project management skills and learn how to deliver projects on time and within budget.



THANK YOU