# Experiment: 7

**Title :** Creating a lambda function in AWS to email daily reports

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**Aim :** Automate Sending Emails at a Specific Time with AWS Lambda, CloudWatch and SES

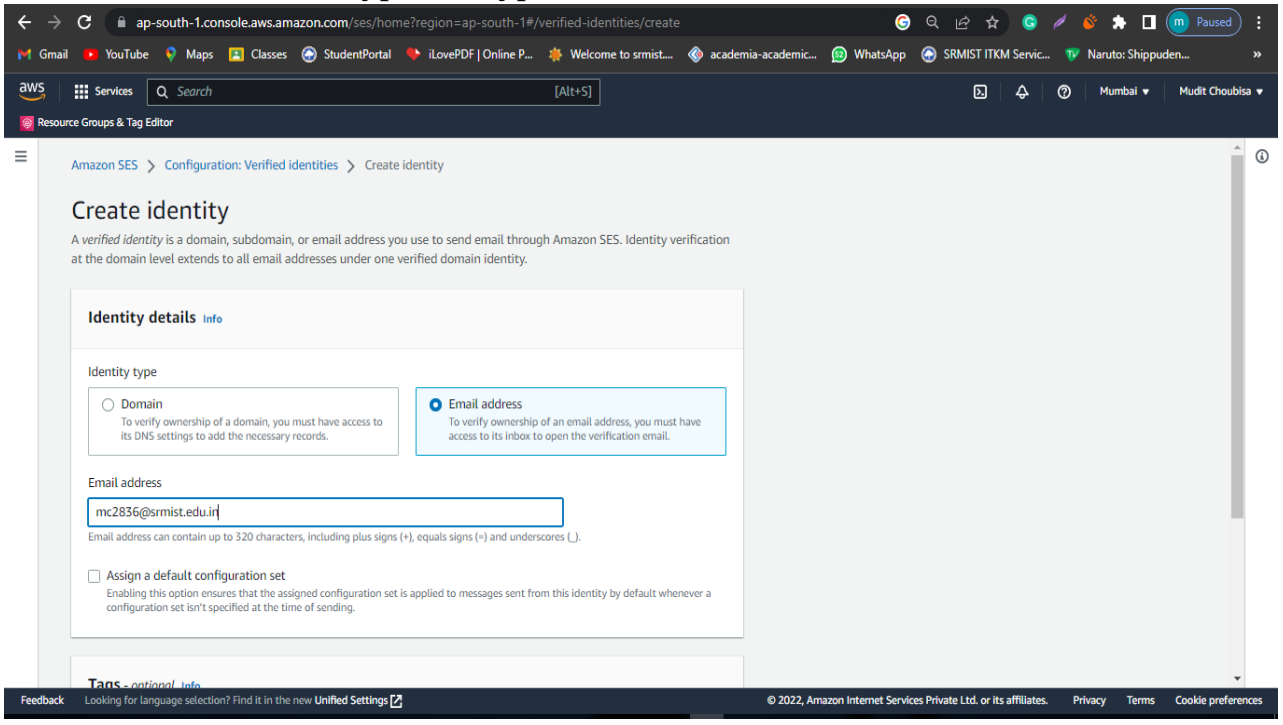
**Pre-requisites :** AWS Console, Amazon SES, Amazon Lambda, Amazon CloudWatch.

## Procedure :

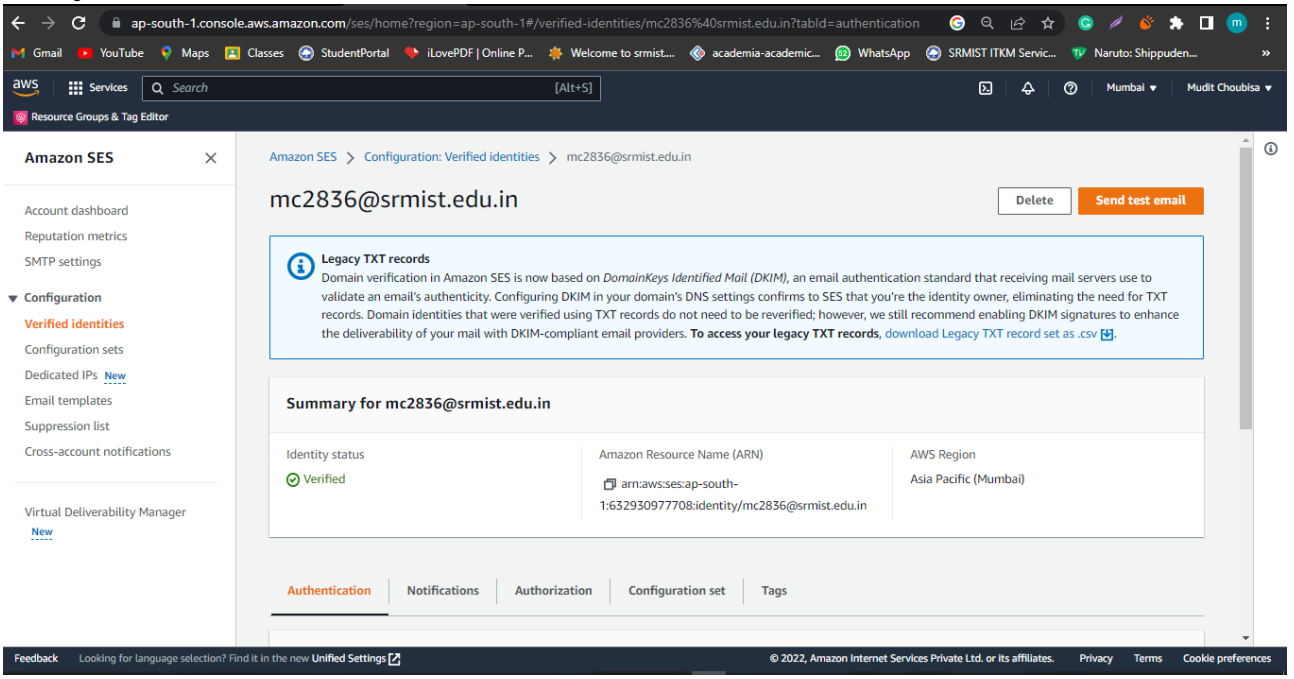
We are going automate sending email to a person or a group of people. AWS **Cloudwatch** is used to setup a schedule to trigger AWS **Lambda** function and then its going to use AWS **SES** (**Simple Email Service**) to send out emails to people.

Steps:

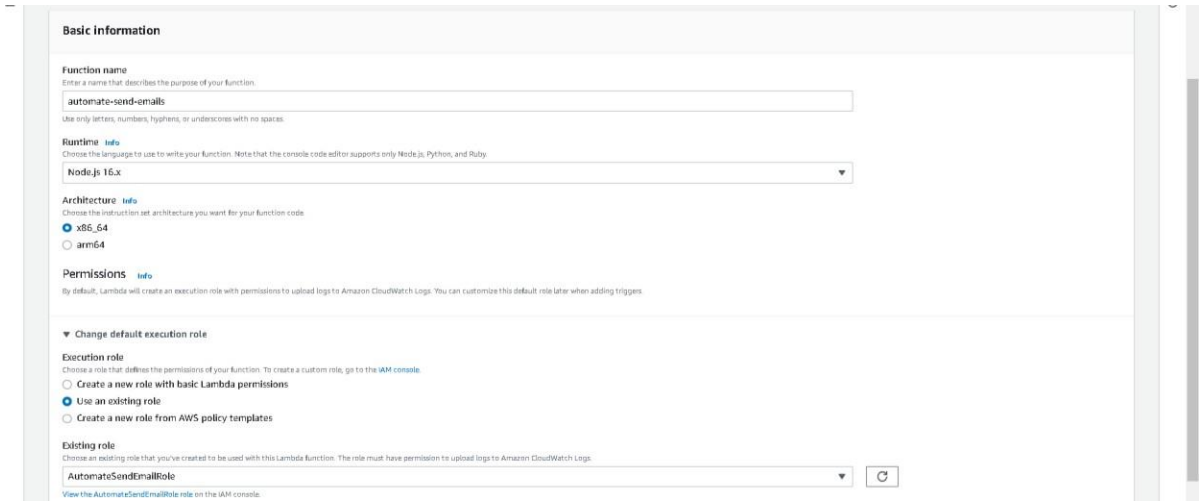
1. Go to AWS SES (Simple email service), click on “Create Identity”. Use email address as a type and type the email address.



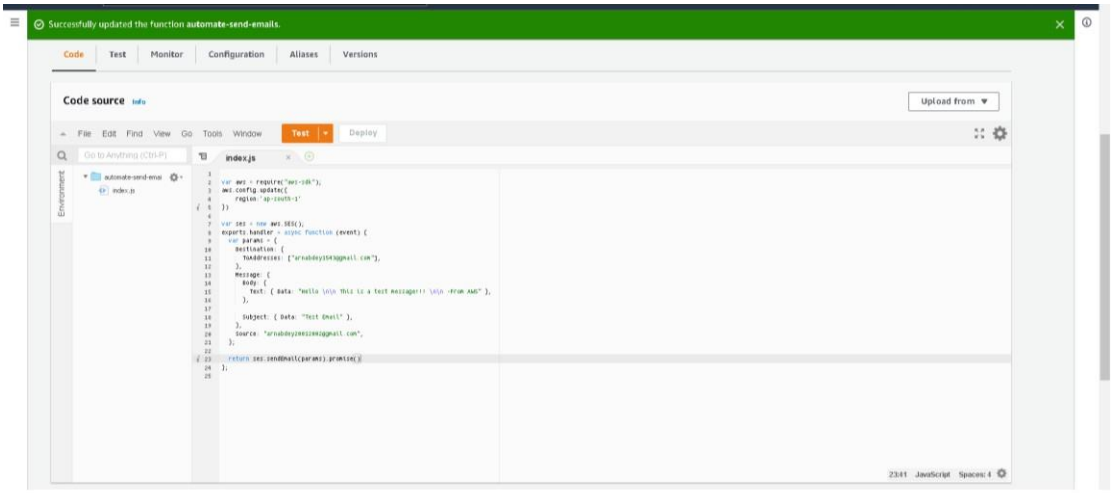
2. Verify the email address that revieved an email from aws to tell you to verify that.



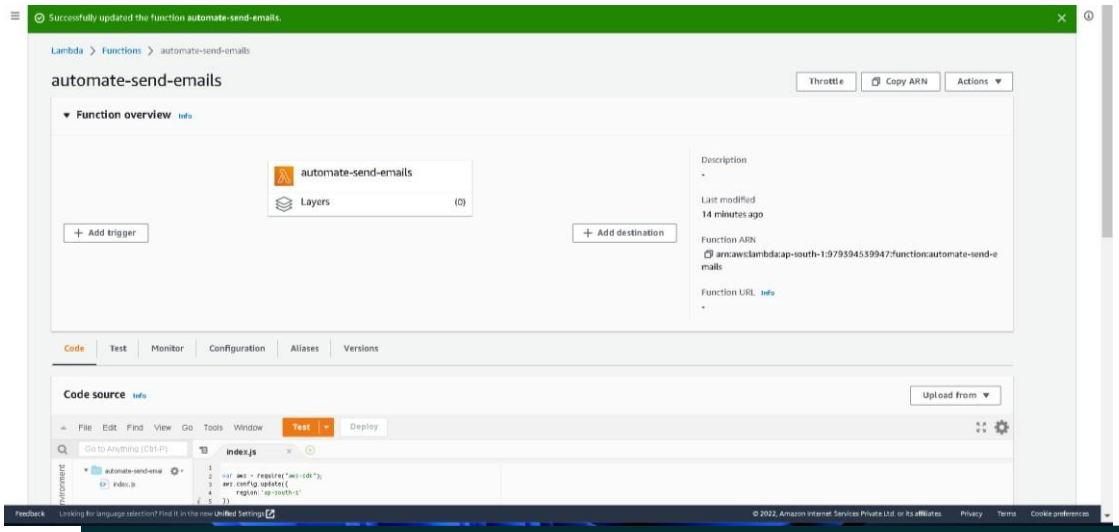

3. Create two identities (email address).
   One for sending emails and another for receiving.
4. Create an IAM role.
   Give  Use case as lambda and give full access to cloudwatch, SES.
5. Go to Lambda Service, create a lambda function.
   Give name, runtime as NodeJS, execution role as created IAM role previously.




6. Use this template for the code:

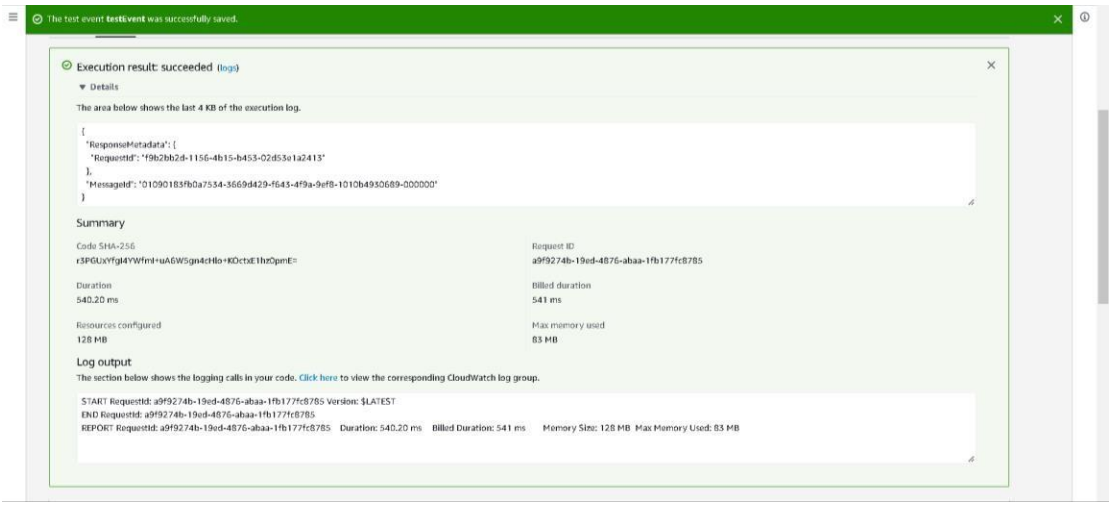



```
1)
2)  var aws = require("aws-sdk");
3)  var ses = new aws.SES({ region: "us-west-2" });
4)  exports.handler = async function (event) {
5)    var params = {
6)      Destination: {
7)      ToAddresses: ["RecipientEmailAddress"],
8)      },
9)      Message: {
10)          Body: {
11)            Text: { Data: "Test" },
```

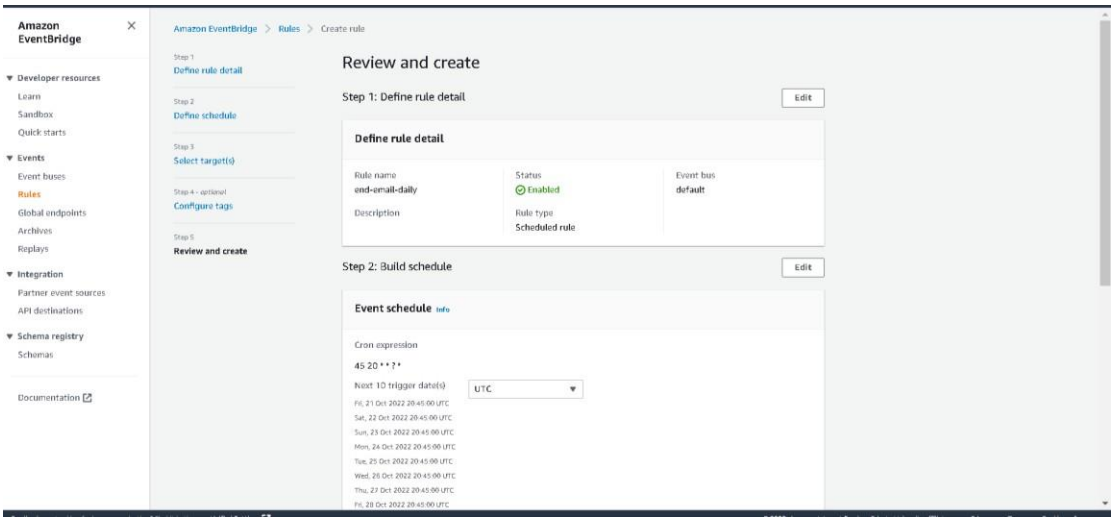



```
12)         },
13)
14)         Subject: { Data: "Test Email" },
15)       },
16)       Source: "SourceEmailAddress",
17)     };
18)
19)     return ses.sendEmail(params).promise()
20)   };
```

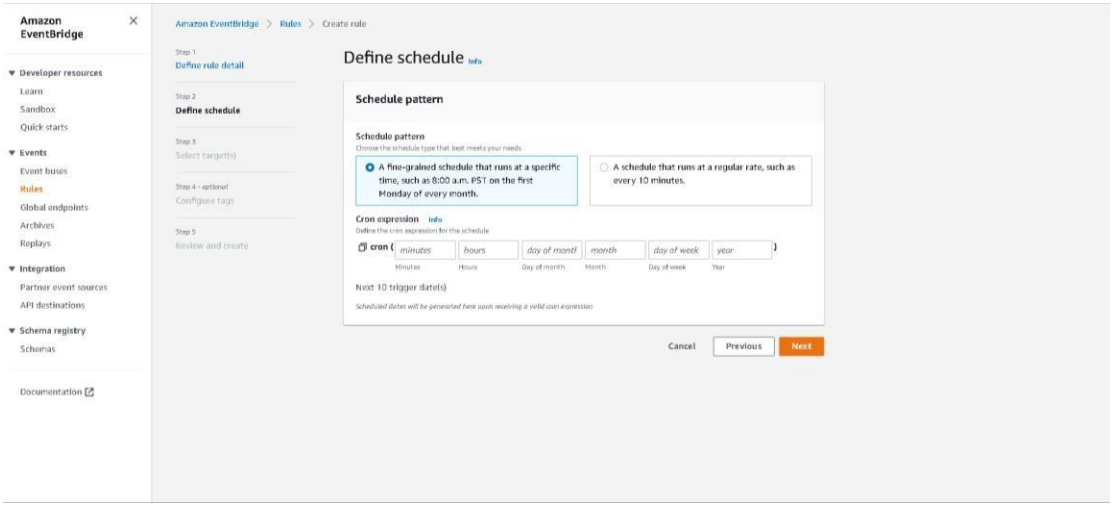
7. Click on Deploy and then TEST, you wil receive the message in your mentioned emails.



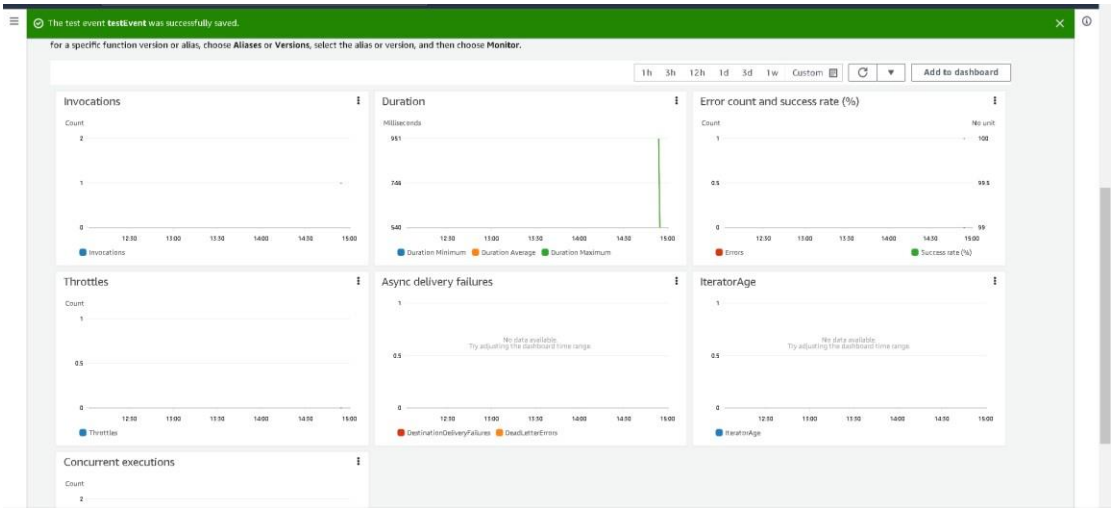

8. For scheduled daily report, go to AWS Cloudwatch , navigate to rule section (now called as eventBridge).

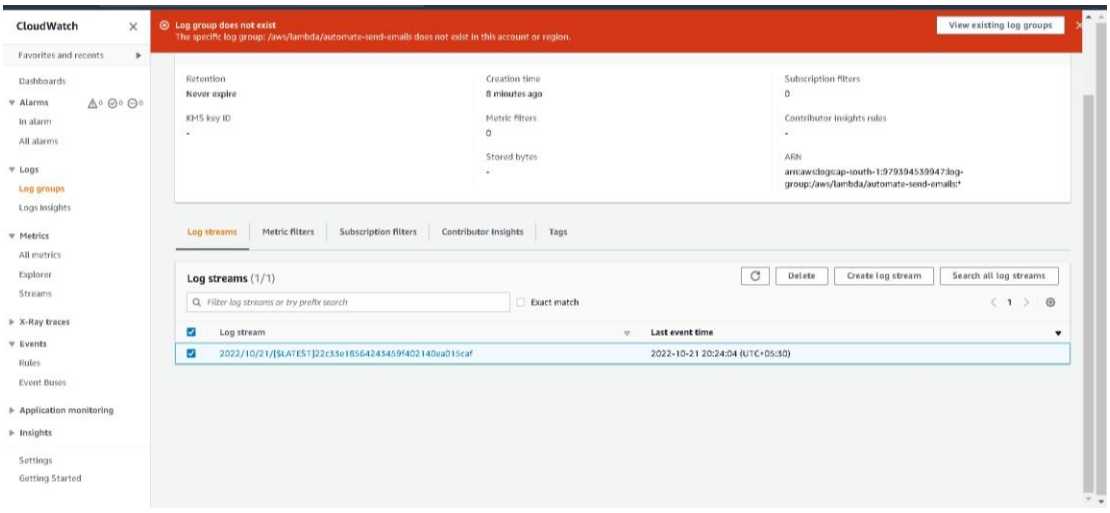


9. Create rule- give name, ruletype- schedule, use cron expression for schedule pattern .
   For e.g. :  15 19 * * ? *




10. Select Targets as lambda function, and use the above defined function.
11. Go to monitoring in Lambda service, click on View logs in cloudWatch and check your mail inbox .


The test event testEvent was successfully saved.
for a specific function version or alias, choose Aliases or Versions, select the alias or version, and then choose Monitor.
1h 3h 12h 1d 3d 1w Custom
Add to dashboard
Invocations
Duration
Error count and success rate (%)
Throttles
Async delivery failures
IteratorAge
Concurrent executions


CloudWatch
Log group does not exist
The specific log group: /aws/lambda/automate-send-emails does not exist in this account or region.
View existing log groups
Favorites and recents
Dashboards
Alarms
In alarm
All alarms
Logs
Log groups
Logs Insights
Metrics
All metrics
Explorer
Streams
X-Ray traces
Events
Rules
Event Buses
Application monitoring
Insights
Settings
Getting Started
Retention
Never expire
Creation time
8 minutes ago
Subscription filters
0
KMS key ID
-
Metric filters
0
Contributor Insights rules
-
Stored bytes
-
ARN
arn:aws:logs:ap-south-1:979394539947:log-group:/aws/lambda/automate-send-emails:*
Log streams
Metric filters
Subscription filters
Contributor Insights
Tags
Log streams (1/1)
Delete
Create log stream
Search all log streams
Filter log streams or try prefix search
Exact match
Log stream
Last event time
2022/10/21/[$LATEST]22c53e1856424345 9f402140ea015caf
2022-10-21 20:24:04 (UTC+05:30)

## Result:

Hence, the lambda function is created and also implemented using SES, CloudWatch to schedule daily reports.