Experiment : 7

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

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

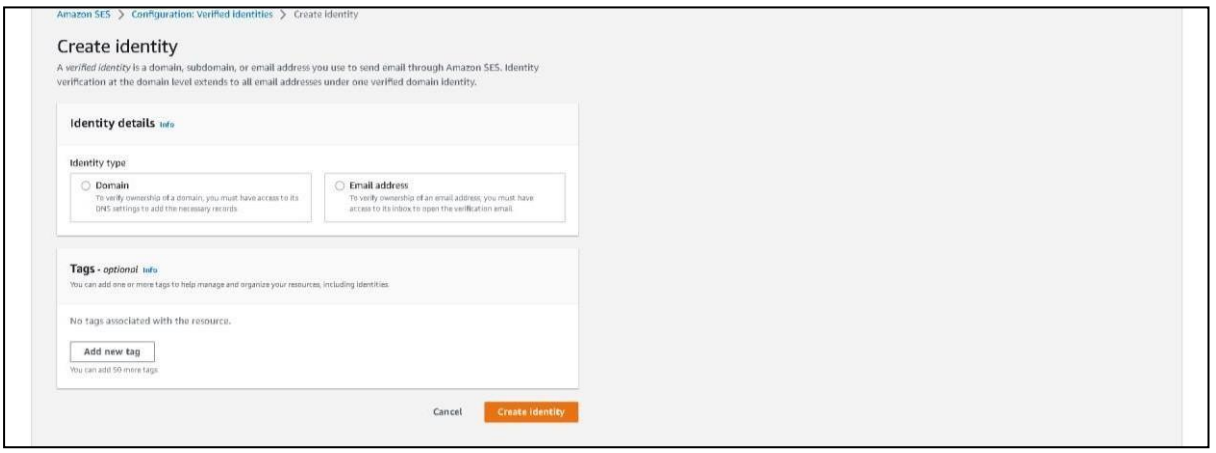
Pre-requisites : AWS Console, Amazon SES, Amazon Lambda, Amazon CloudWatch.

Procedure :

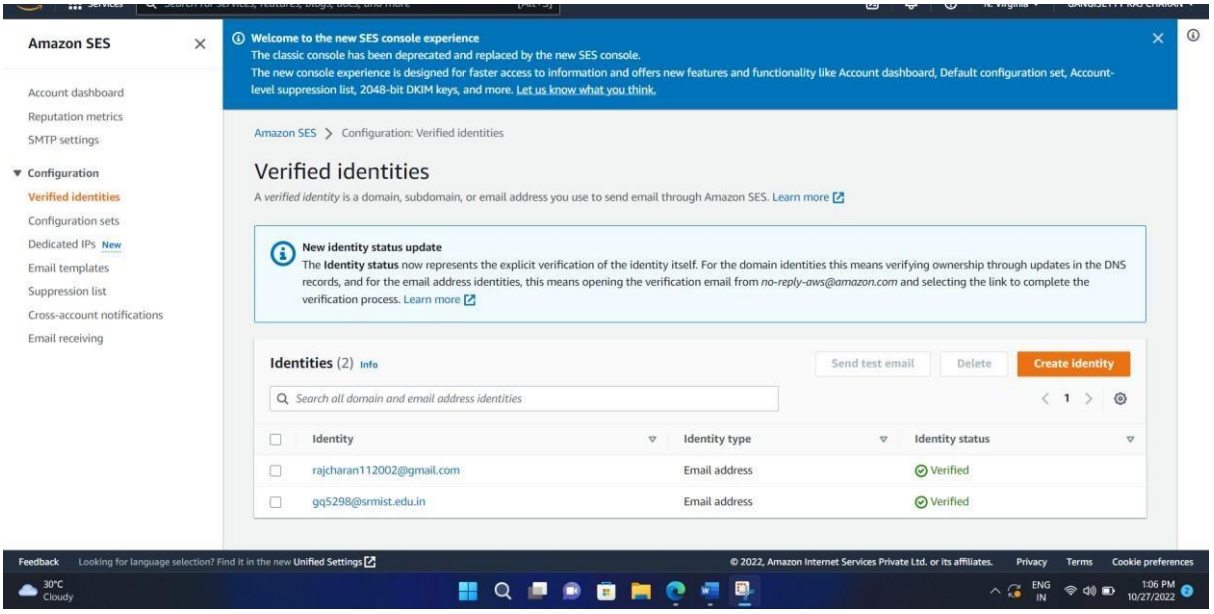
We are going automate sending email to a person or a group of people. AWS **Cloudwatch** is used to setup a schedule to trigger AWS **Lambda** function and then its going to use AWS **SES** (**Simple Email Service**) to send out emails to people.

Steps:

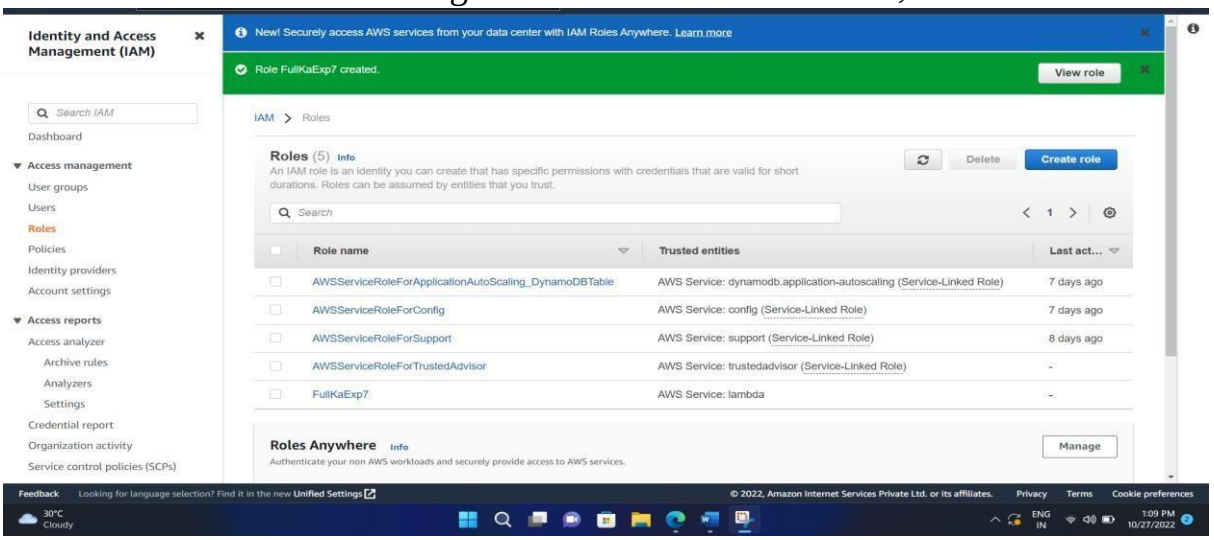
1. Go to AWS SES (Simple email service), click on “Create Identity”.
   Use email address as a type and type the email address.



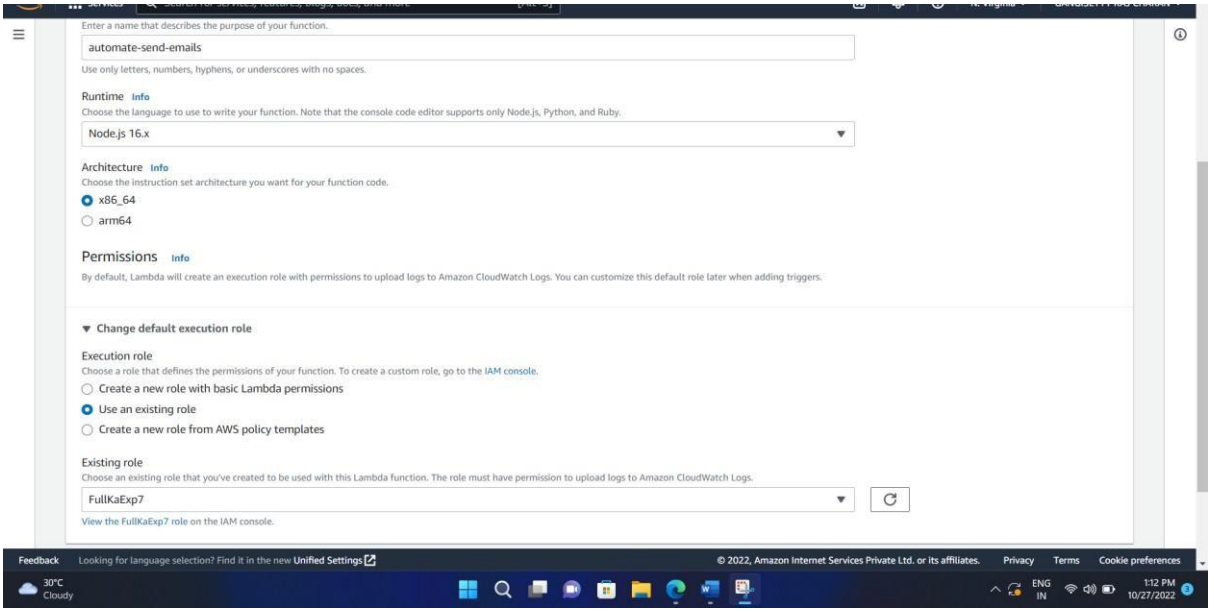
2. Verify the email address that revieved an email from aws to tell you to verify that.



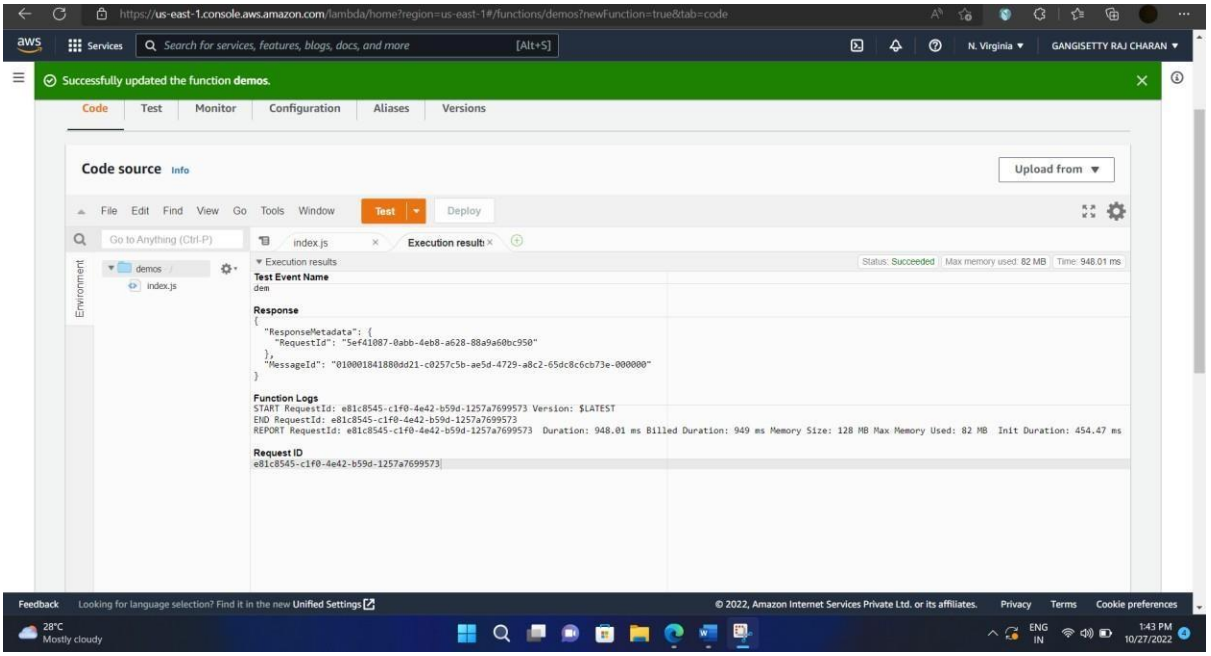
3. Create two identities (email address).
   One for sending emails and another for receiving.
4. Create an IAM role.
   Give Use case as lambda and give full access to cloudwatch, SES.



5. Go to Lambda Service, create a lambda function.
6. Give name, runtime as NodeJS, execution role as created IAM role previously.



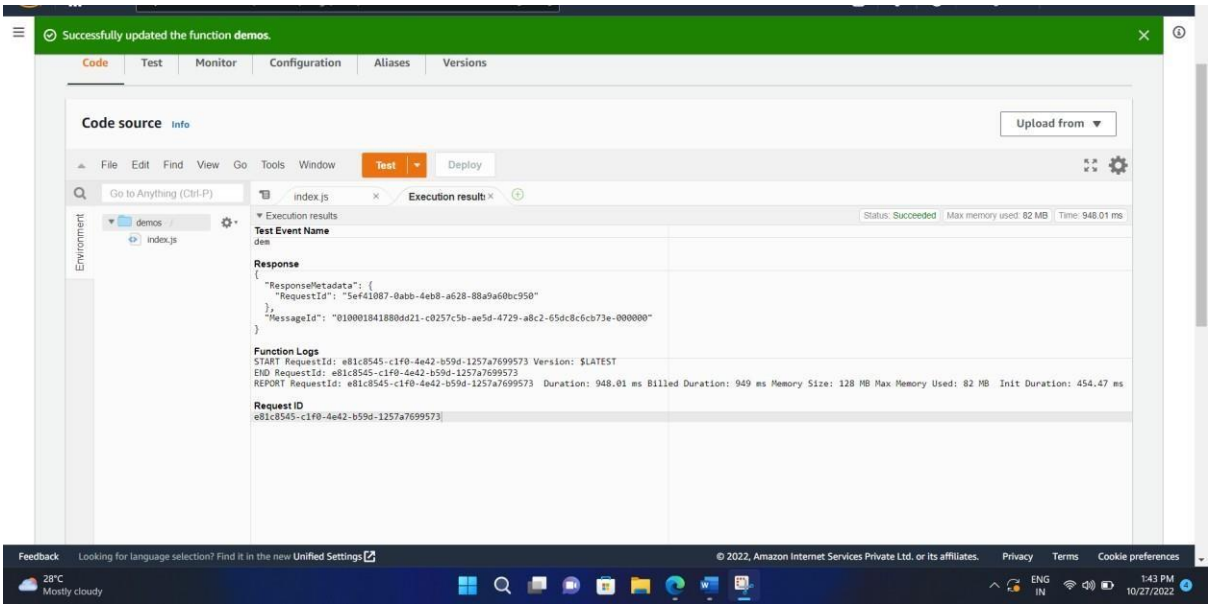
7. Use this template for the code:



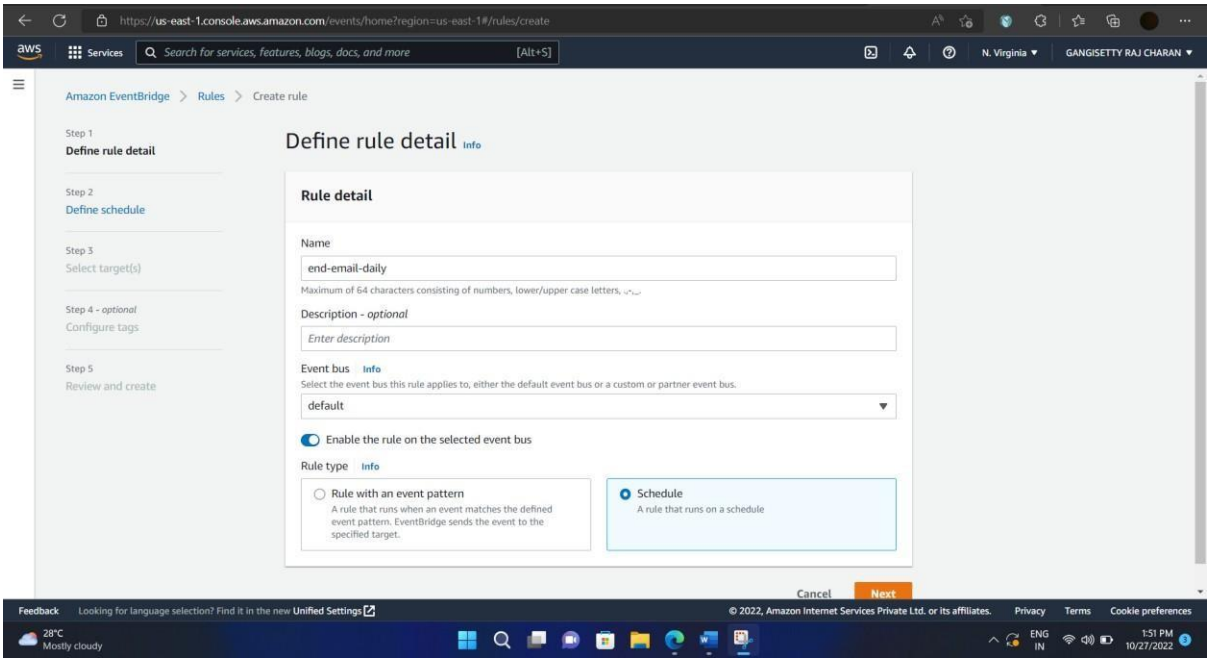

```
var aws = require("aws-sdk");
var ses = new aws.SES({ region: "us-east-1" });
exports.handler = async function (event) {
    var params = {
        Destination: {
            ToAddresses: ["gq5298@srmist.edu.in"],
        },
```

```
      Message: {
         Body: {
            Text: { Data: "Hello This is Test Mail From Srm University Lab
Of Dcn" },
         },

         Subject: { Data: "Test Email" },
      },
      Source: "rajcharan112002@gmail.com",
   };

   return ses.sendEmail(params).promise()
};
```

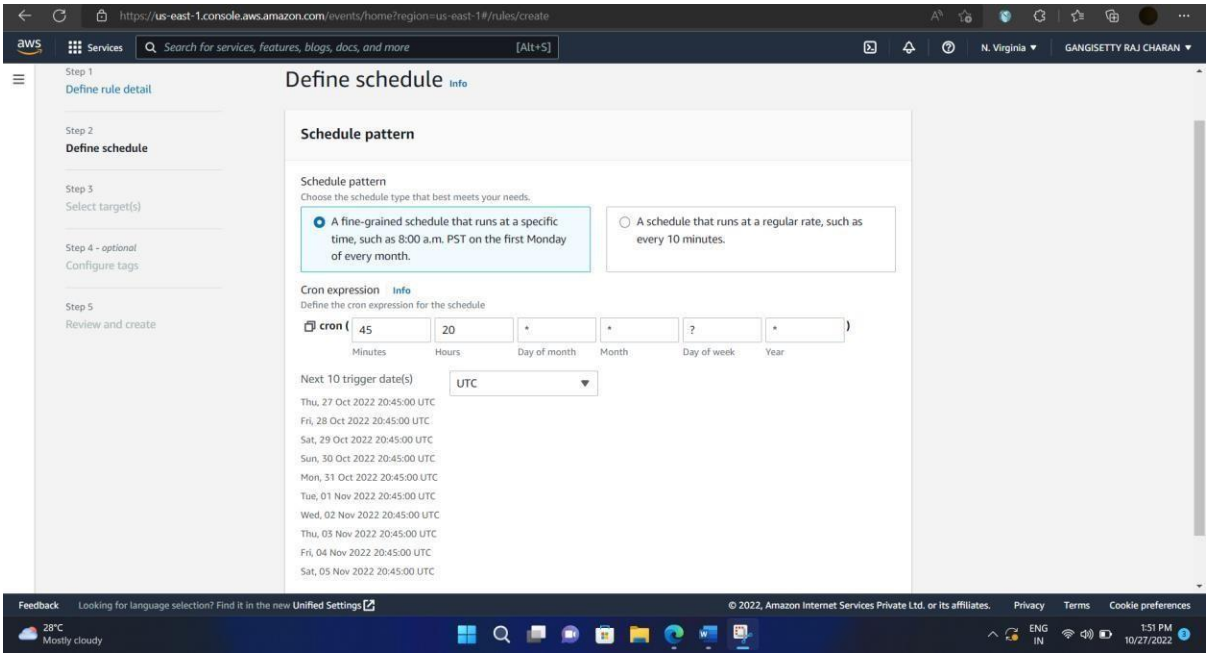
8. Click on Deploy and then TEST, you wil receive the message in your mentioned emails.



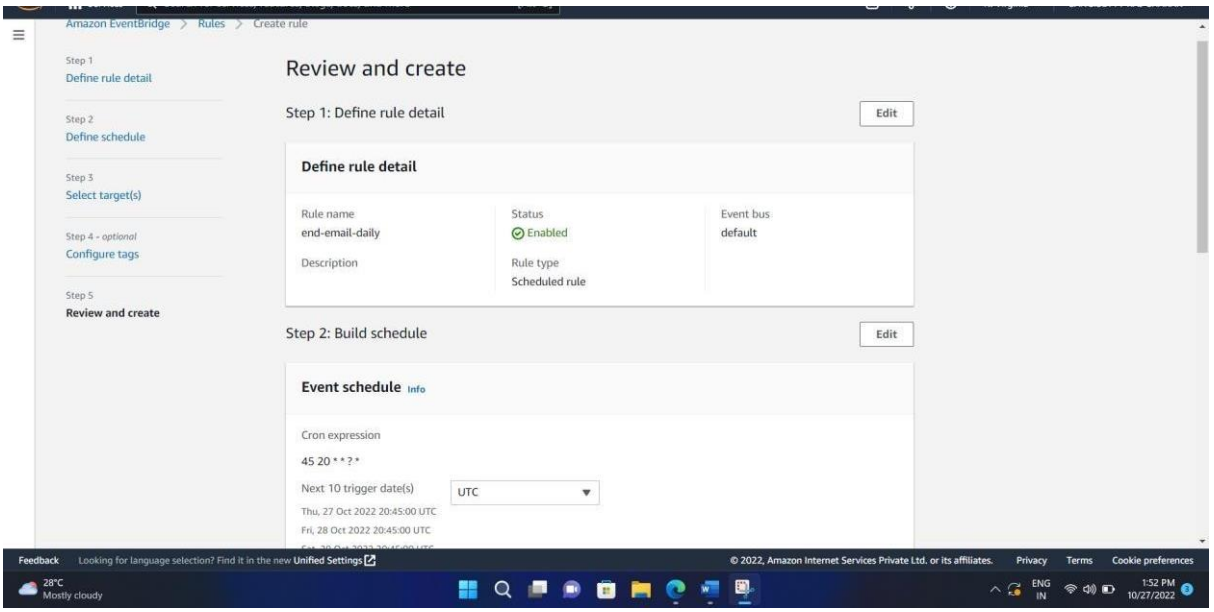
9. For scheduled daily report, go to AWS Cloudwatch , navigate to rule section (now called as eventBridge).



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



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


Amazon EventBridge > Rules > Create rule
Step 1
Define rule detail
Step 2
Define schedule
Step 3
Select target(s)
Step 4 - optional
Configure tags
Step 5
Review and create
Review and create
Step 1: Define rule detail
Edit
Define rule detail
Rule name
end-email-daily
Status
Enabled
Event bus
default
Description
Rule type
Scheduled rule
Step 2: Build schedule
Edit
Event schedule Info
Cron expression
45 20 * * ? *
Next 10 trigger date(s)
UTC
Thu, 27 Oct 2022 20:45:00 UTC
Fri, 28 Oct 2022 20:45:00 UTC
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Internet Services Private Ltd. or its affiliates.
Privacy
Terms
Cookie preferences
28°C
Mostly cloudy
ENG
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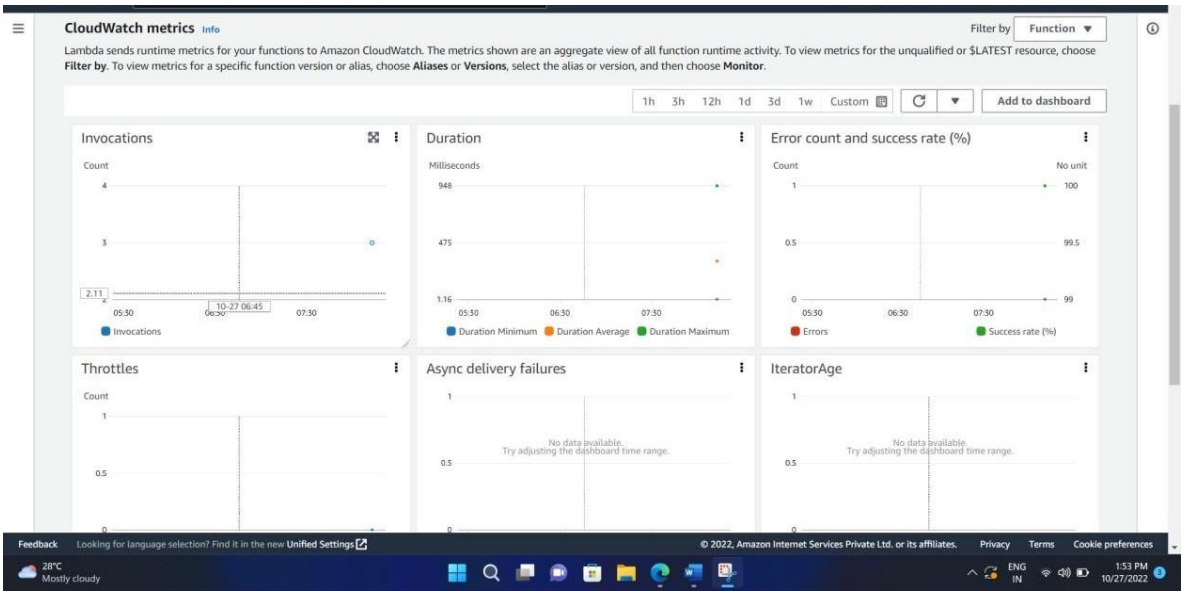
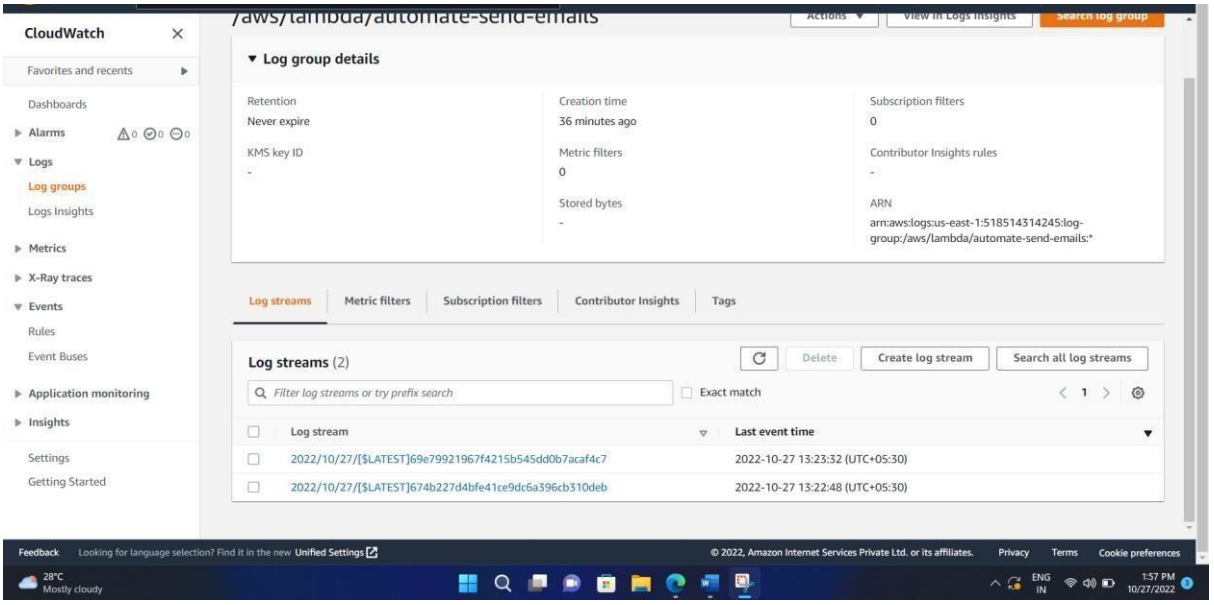
10/27/2022


CloudWatch metrics Info
Filter by
Function
Lambda sends runtime metrics for your functions to Amazon CloudWatch. The metrics shown are an aggregate view of all function runtime activity. To view metrics for the unqualified or $LATEST resource, choose Filter by. To view metrics 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
Count
Duration
Milliseconds
Error count and success rate (%)
Count
No unit
Invocations
Duration Minimum
Duration Average
Duration Maximum
Errors
Success rate (%)
Throttles
Count
Async delivery failures
IteratorAge
No data available.
Try adjusting the dashboard time range.
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Internet Services Private Ltd. or its affiliates.
Privacy
Terms
Cookie preferences
28°C
Mostly cloudy
ENG
IN
1:53 PM
10/27/2022



Result:

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