SNS, SES, Cloudwatch

ASSIGNMENT

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1. **Monitor Your Estimated Charges Using CloudWatch**

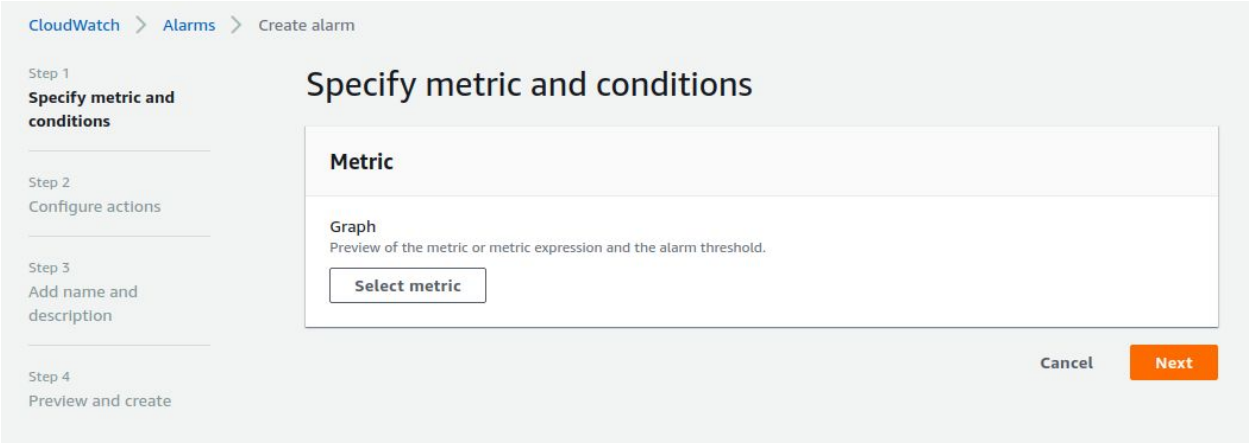
Step 1: Enable Billing Alerts

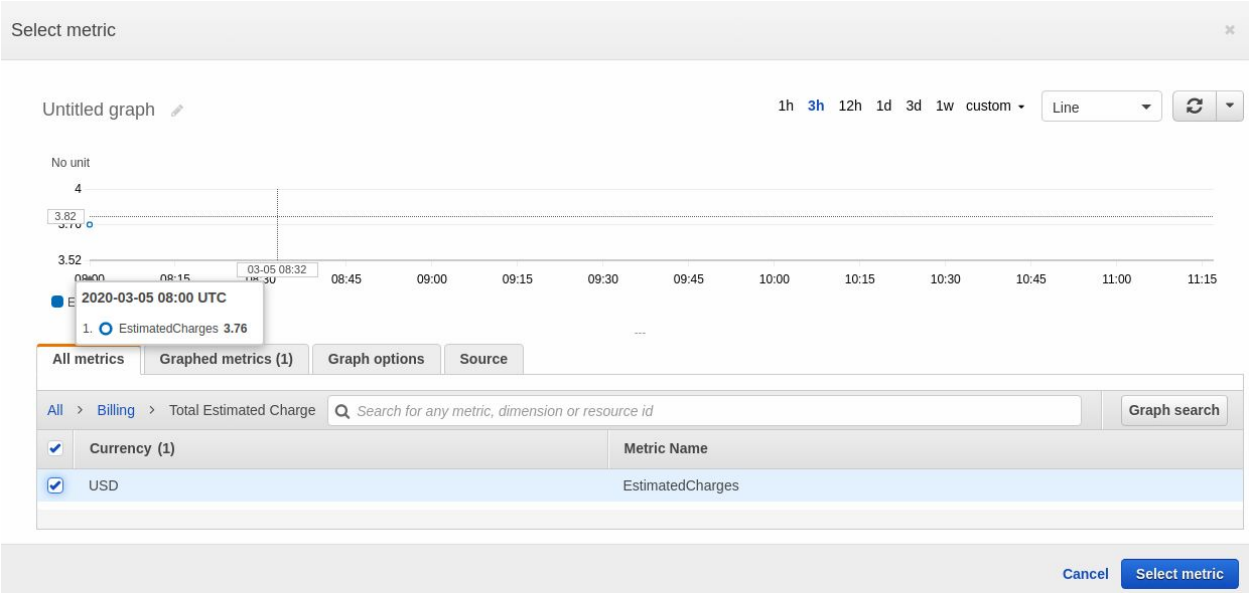
Step 2: Create a Billing Alarm

Step 3: Check the Alarm Status

Step 4: Create & Subscribe to SNS Topic

Step 5: Send a notification to all the stakeholder, if AWS resource pricing reaches the threshold value.





Conditions

Threshold type

- (●) Static
  Use a value as a threshold
- ( ) Anomaly detection
  Use a band as a threshold

Whenever EstimatedCharges is...

Define the alarm condition.

- (●) Greater
  > threshold
- ( ) Greater/Equal
  >= threshold
- ( ) Lower/Equal
  <= threshold
- ( ) Lower
  < threshold

than...

Define the threshold value.

1000 USD

Must be a number

▼ **Additional configuration**

Datapoints to alarm

Define the number of datapoints within the evaluation period that must be breaching to cause the alarm to go to ALARM state.

1 out of 1

Notification

Alarm state trigger

Define the alarm state that will trigger this action.

Remove

- (●) **In alarm** — The metric or expression is outside of the defined threshold.
- ( ) **OK** — The metric or expression is within the defined threshold.
- ( ) **Insufficient data** — The alarm has just started or not enough data is available.

Select an SNS topic

Define the SNS (Simple Notification Service) topic that will receive the notification.

- (●) Select an existing SNS topic
- ( ) Create new topic
- ( ) Use topic ARN

Send a notification to...

maithely

Only email lists for this account are available.

Email (endpoints)

Topic has no endpoints - View in SNS Console

Add name and description

Name and description

Alarm name

Define a unique name.

alrettttttttt created

Alarm description - *optional*

Define a description for this alarm.

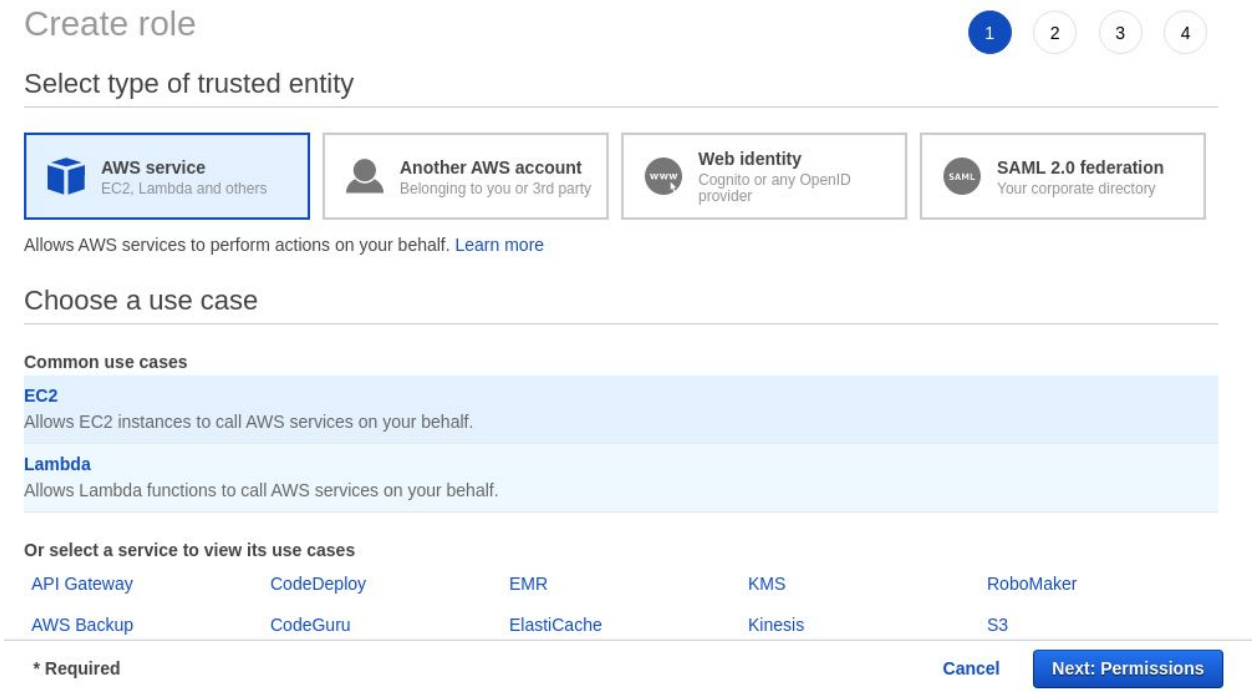
Send a notification to all the stakeholder, if AWS resource pricing reaches the threshold value.

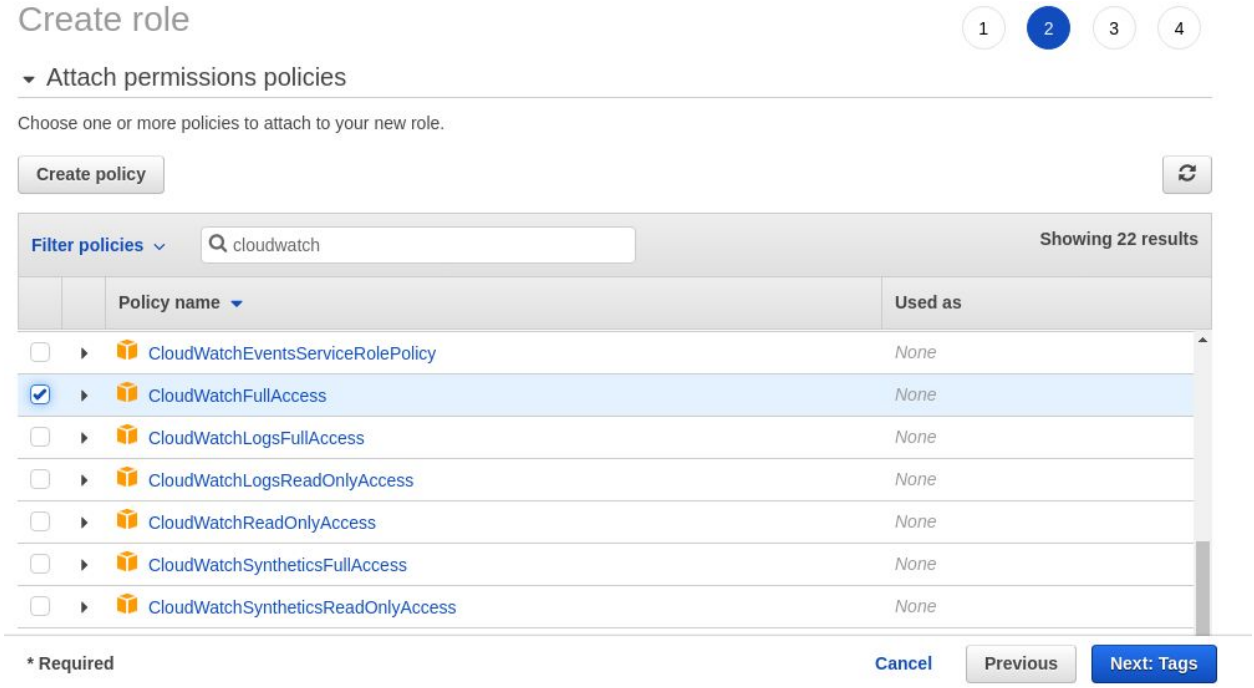
Up to 1024 characters (99/1024)

Cancel | Previous | Next

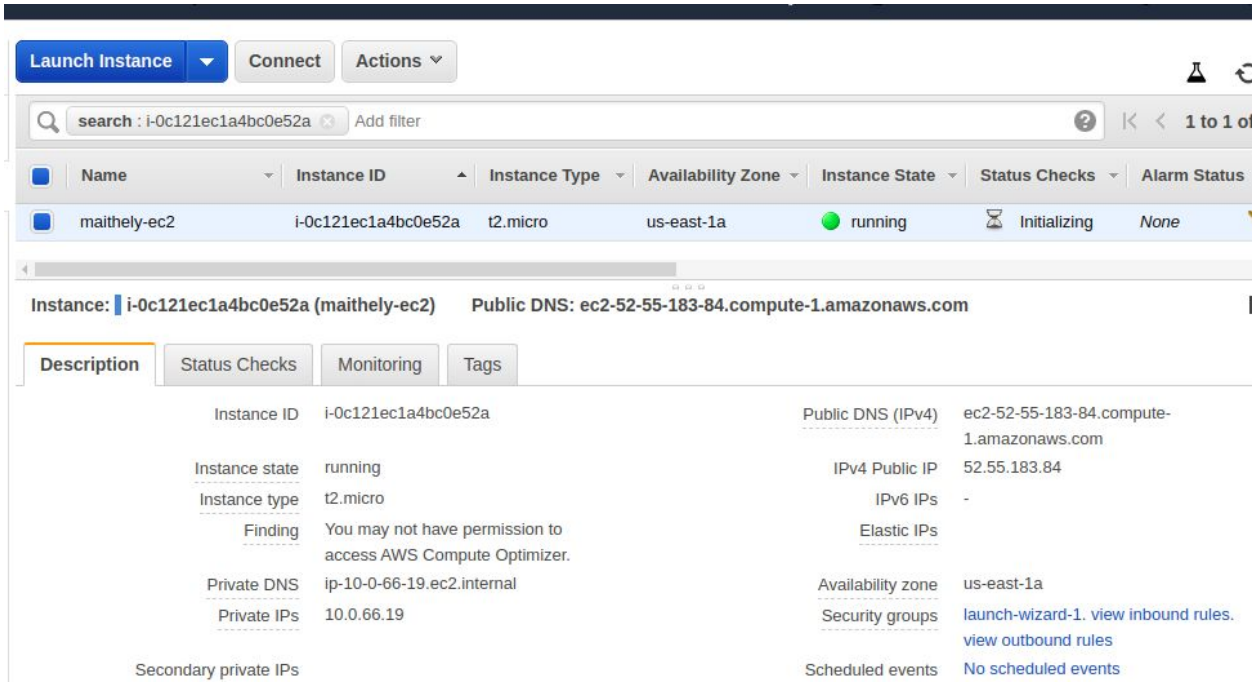
2. Create a custom Memory metric in CloudWatch and set up an alarm at 80 % which will autoscale the instance in the autoscaling group.

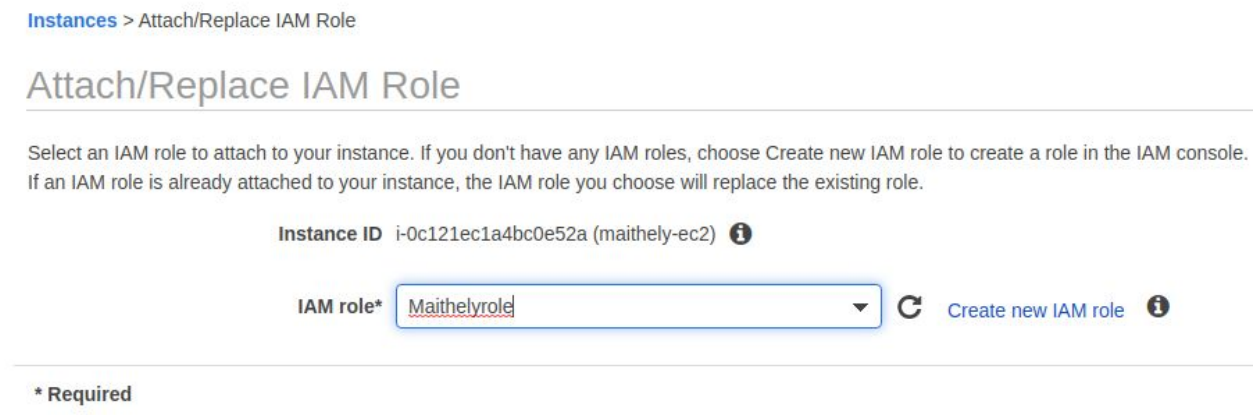
Create a role which has cloud watch full access



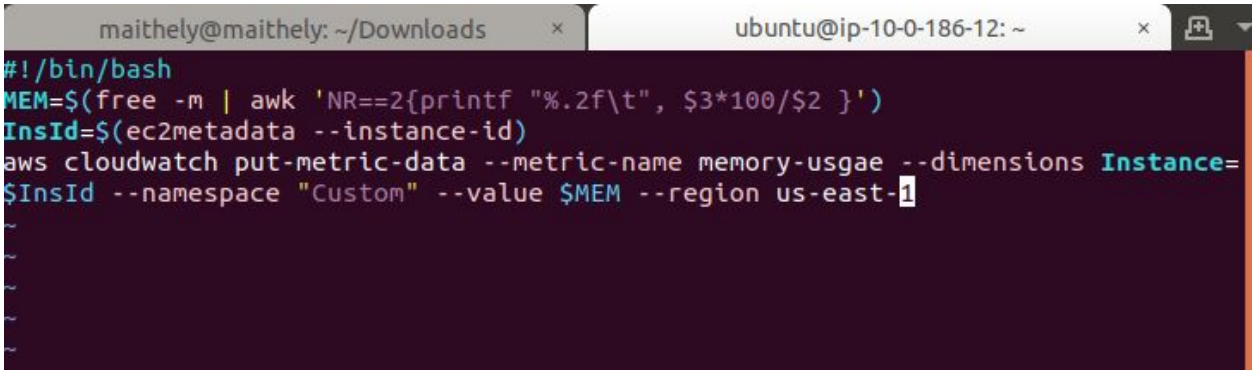


Now create an instance and attach role to it





Now ssh on instance and create a file

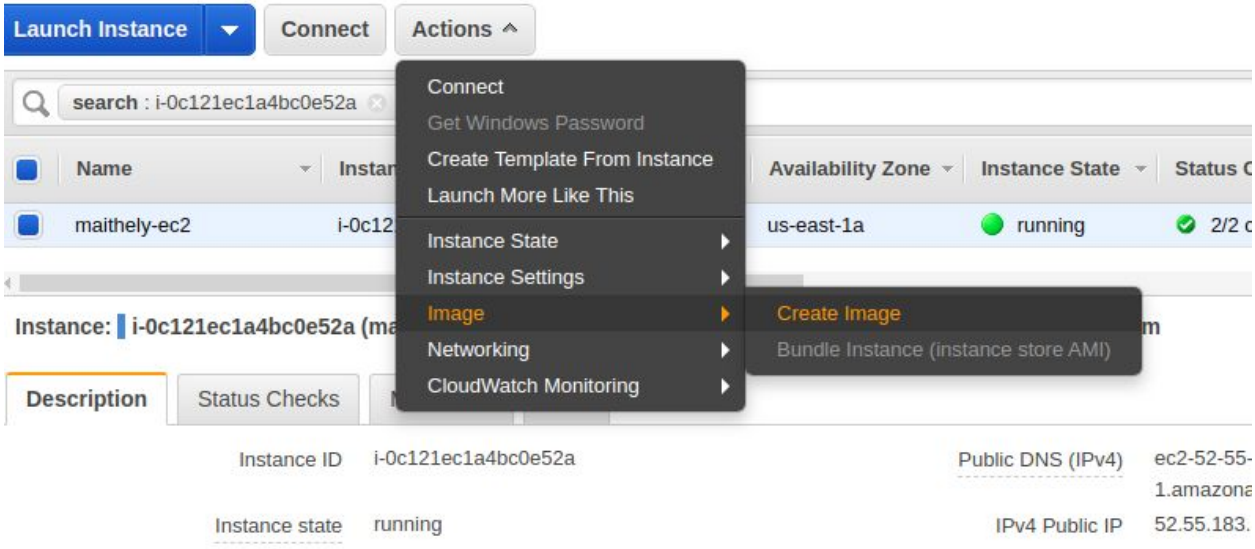


Write a cron in crontab -e

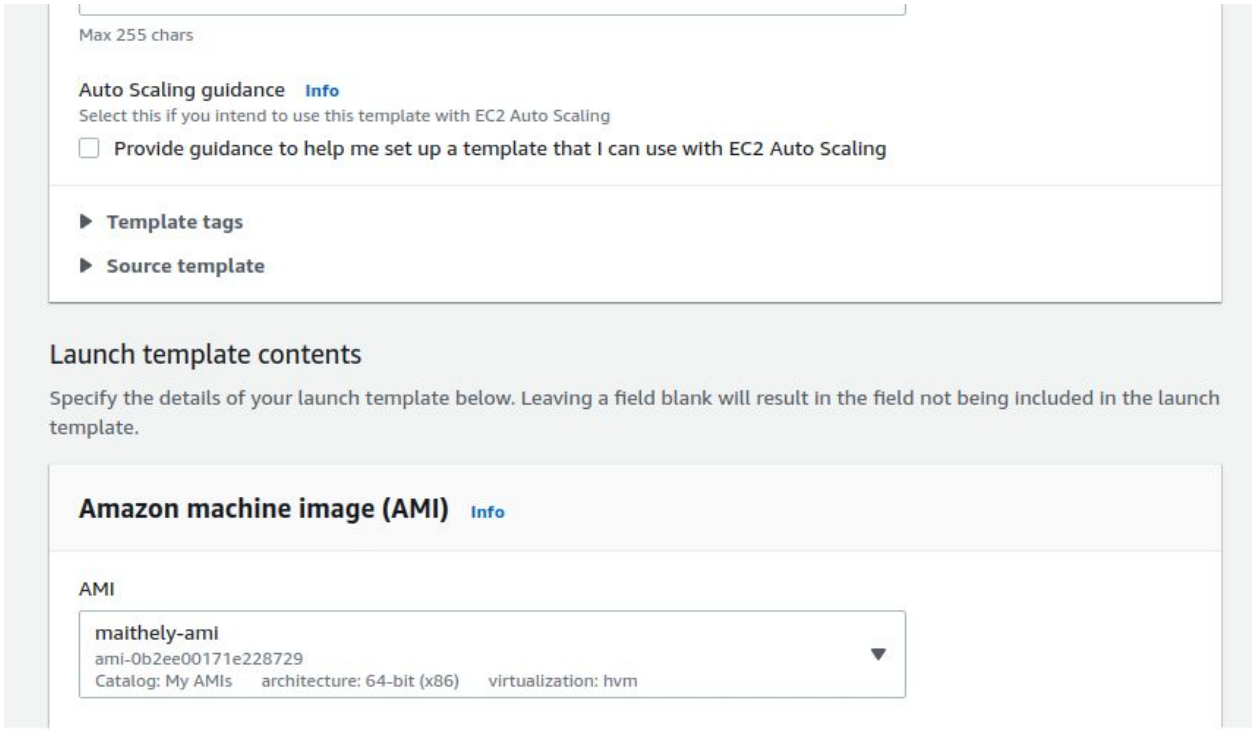
```
ubuntu@ip-10-0-66-19:~$ crontab -e
no crontab for ubuntu - using an empty one

Select an editor.  To change later, run 'select-editor'.
  1. /bin/nano        <---- easiest
  2. /usr/bin/vim.basic
  3. /usr/bin/vim.tiny
  4. /bin/ed

Choose 1-4 [1]: 2
crontab: installing new crontab
ubuntu@ip-10-0-66-19:~$ pwd
/home/ubuntu
```

```
File  Edit  View  Search  Terminal  Help
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
*/1 * * * * /home/ubuntu/mem.sh
```

Now create an AMI of the instance created

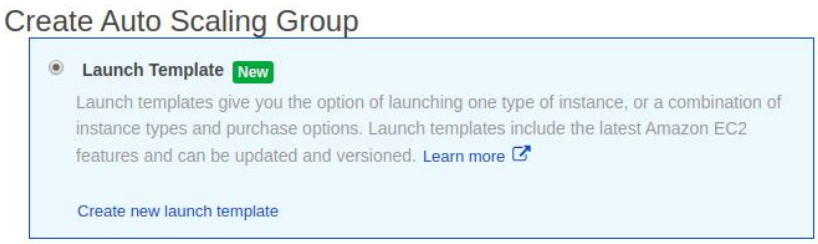


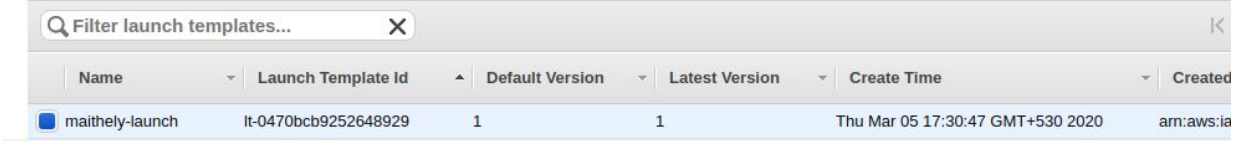
Now create a launch template and add ami created to it



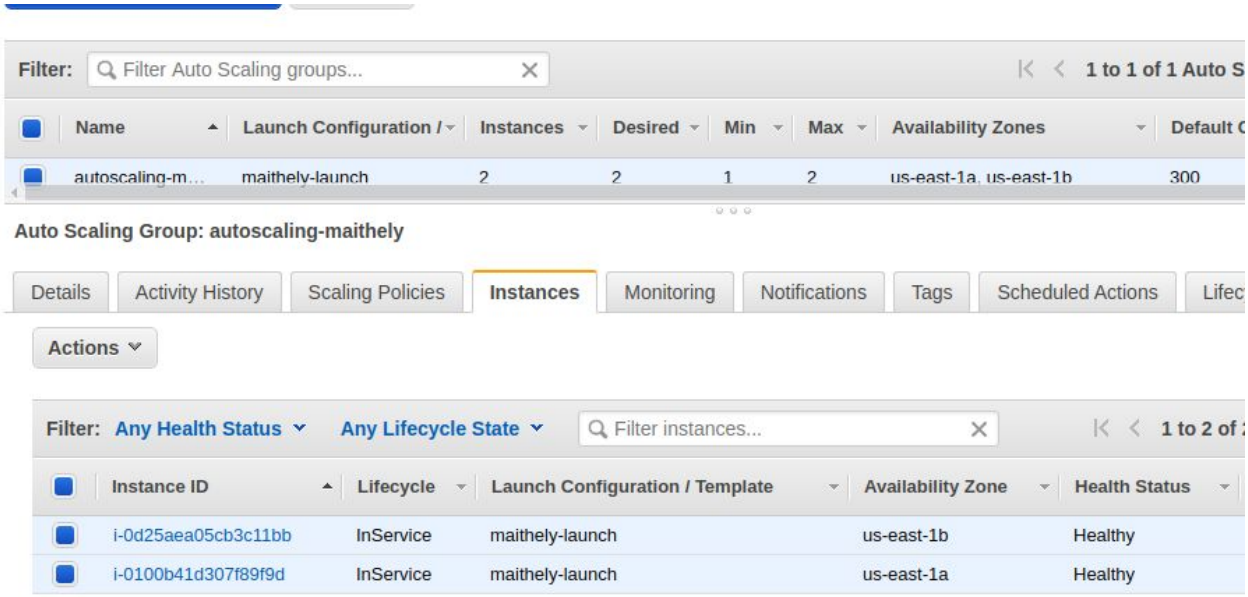
Also attach role in launch template

Now create ASG

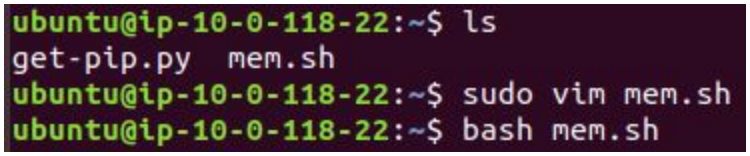




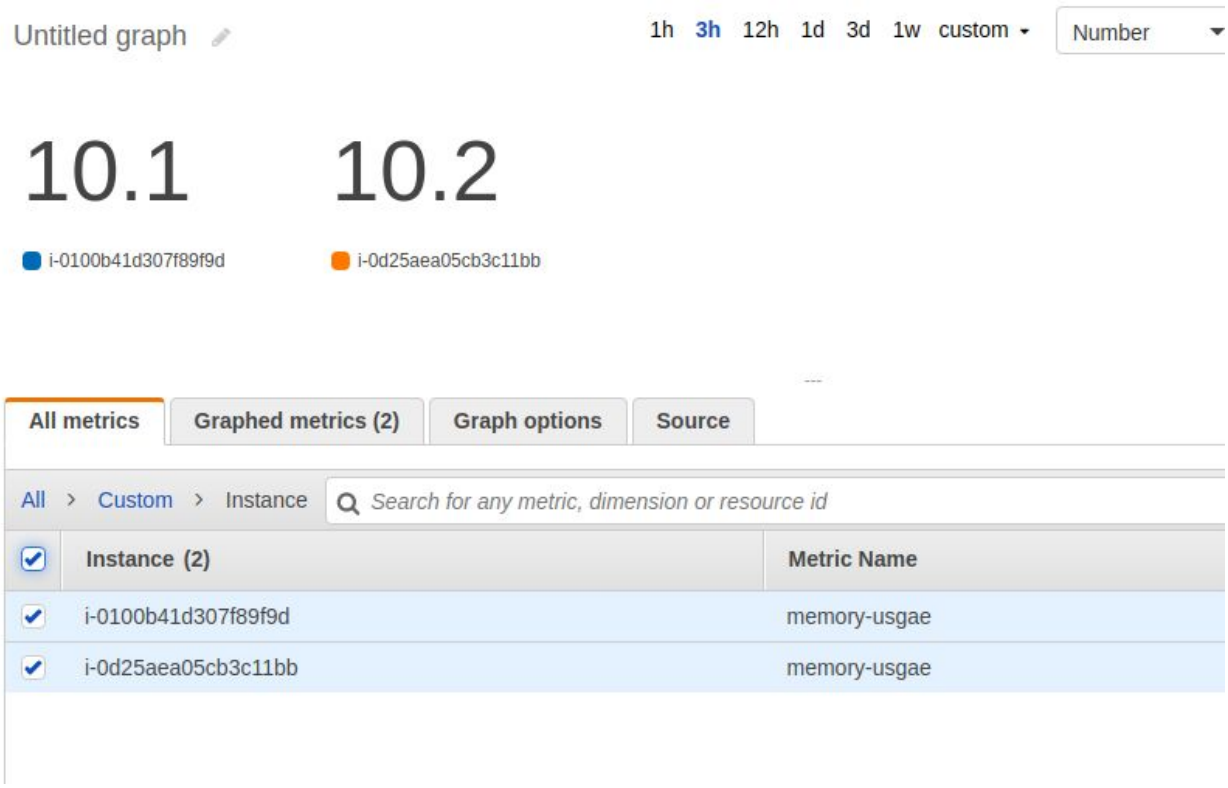
You can see that 2 desired instances are up now



Now you ssh at instance and install aws cli and run that ssh file at both the instances



Now you can see at metrices



3. Create SNS topic, subscribe to a topic, publish message, unsubscribe the message and delete the topic.

Create topic

Details

Name

maithely

Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (_).

Display name - *optional*

To use this topic with SMS subscriptions, enter a display name. Only the first 10 characters are displayed in an SMS message. **Info**

My Topic

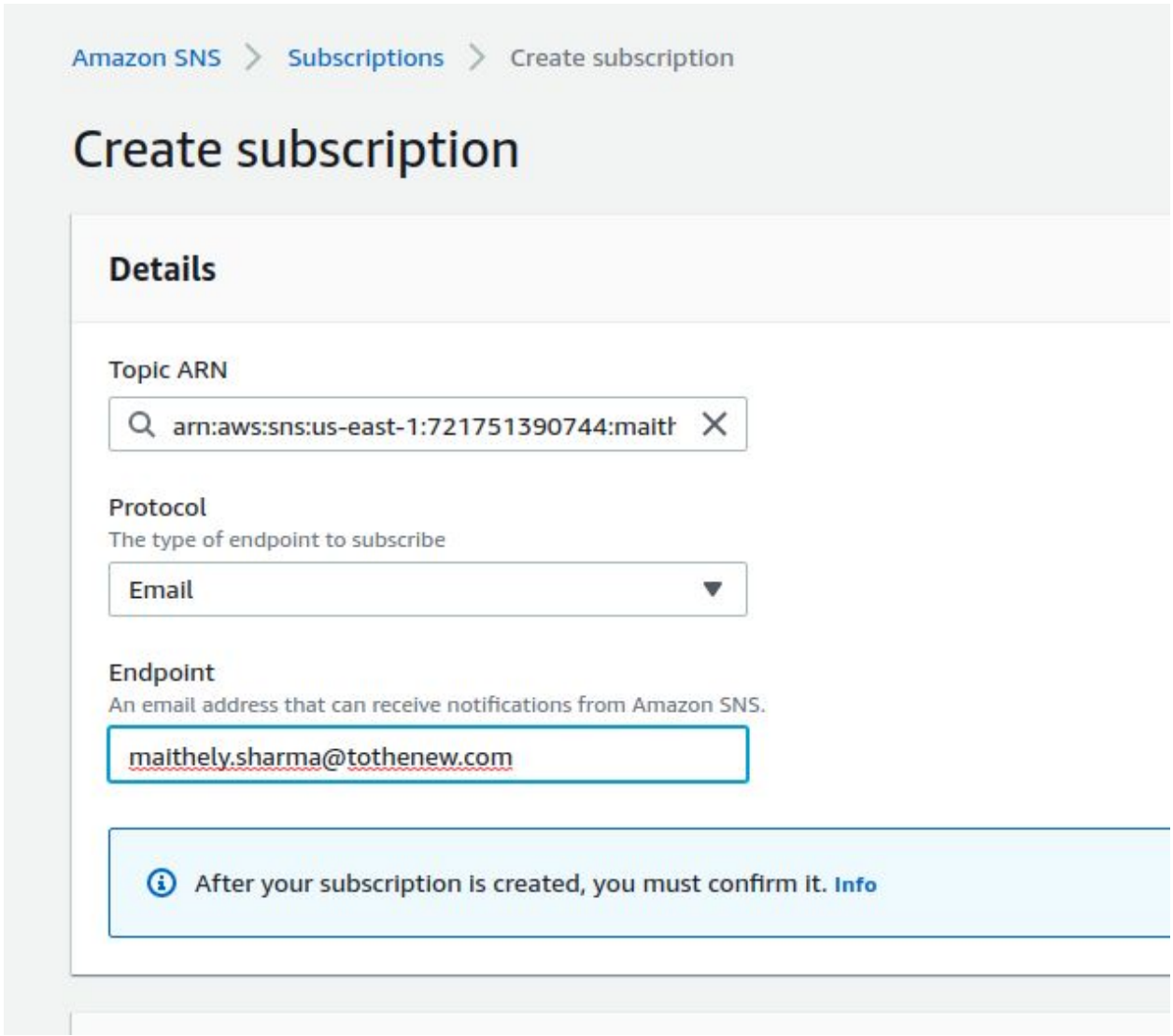
Maximum 100 characters, including hyphens (-) and underscores (_).

▸ Encryption - *optional*

Amazon SNS provides in-transit encryption by default. Enabling server-side encryption adds at-rest encryption to your topic.

▸ Access policy - *optional*

This policy defines who can access your topic. By default, only the topic owner can publish or subscribe to the topic. **Info**



AWS Notification - Subscription Confirmation Inbox ×

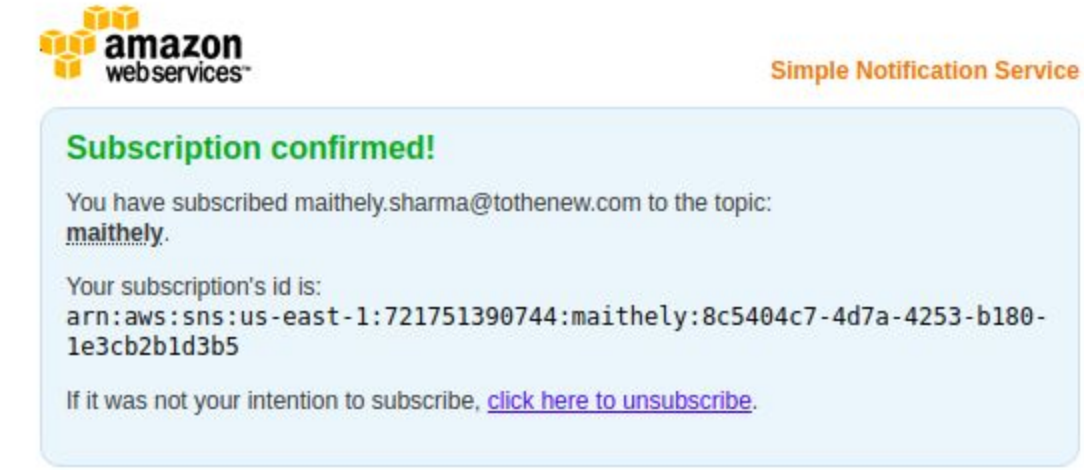
maithely <no-reply@sns.amazonaws.com> 4:38 PM (0 minutes ago)
to me

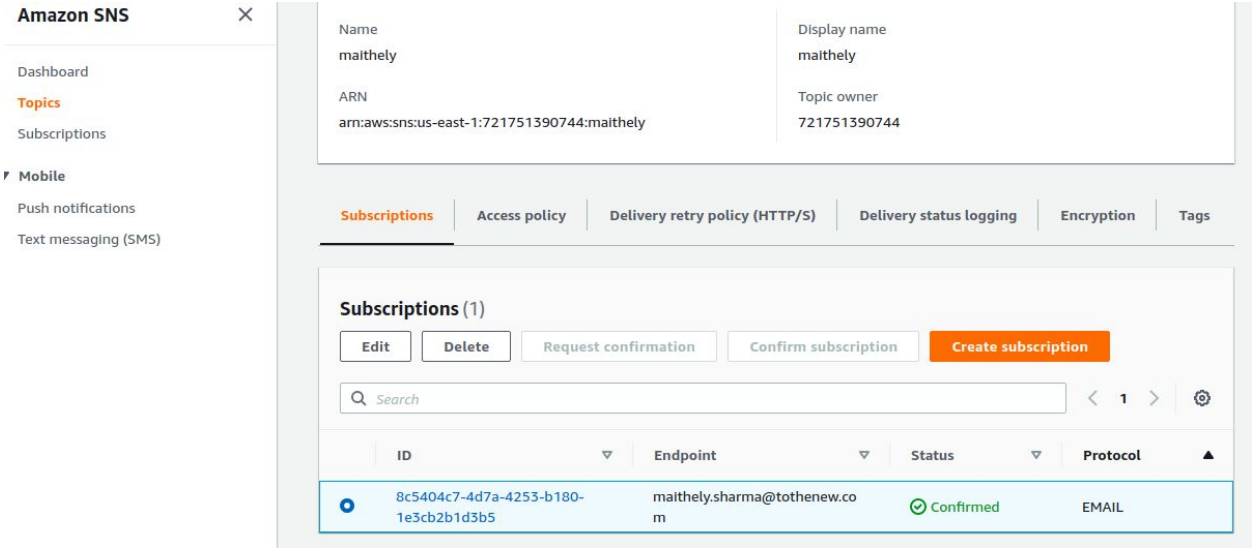
You have chosen to subscribe to the topic:
arn:aws:sns:us-east-1:721751390744:maithely

To confirm this subscription, click or visit the link below (If this was in error no action is necessary):
Confirm subscription

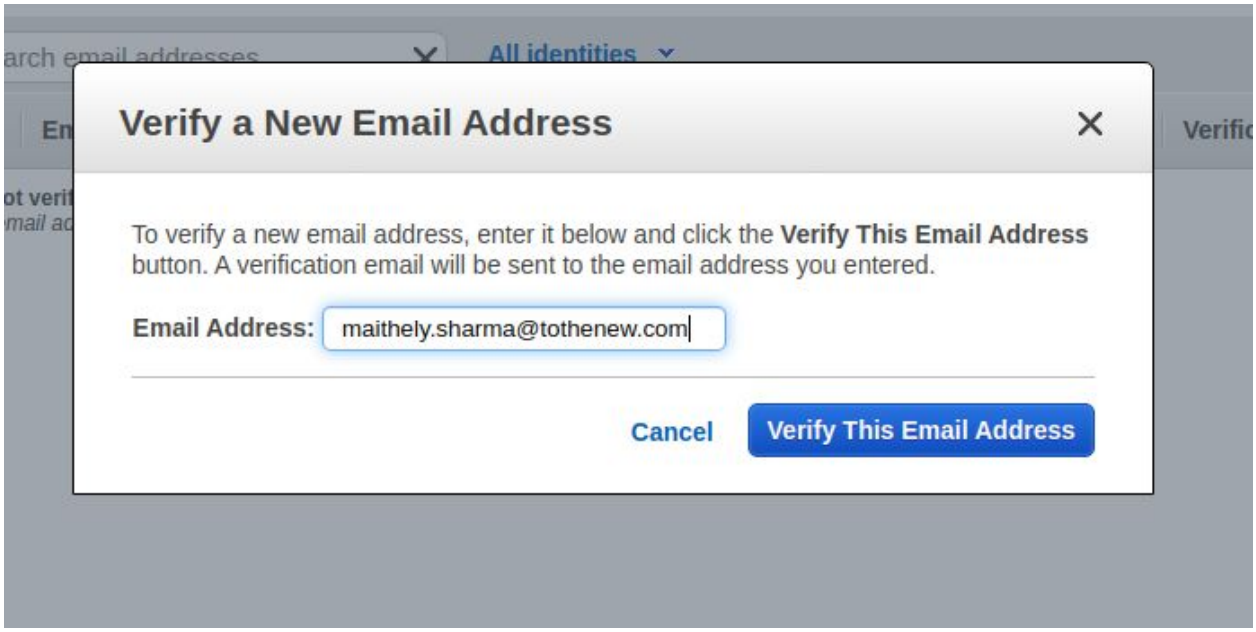
Please do not reply directly to this email. If you wish to remove yourself from receiving all future SNS subscription confirmation requests please send an email to sns-opt-out

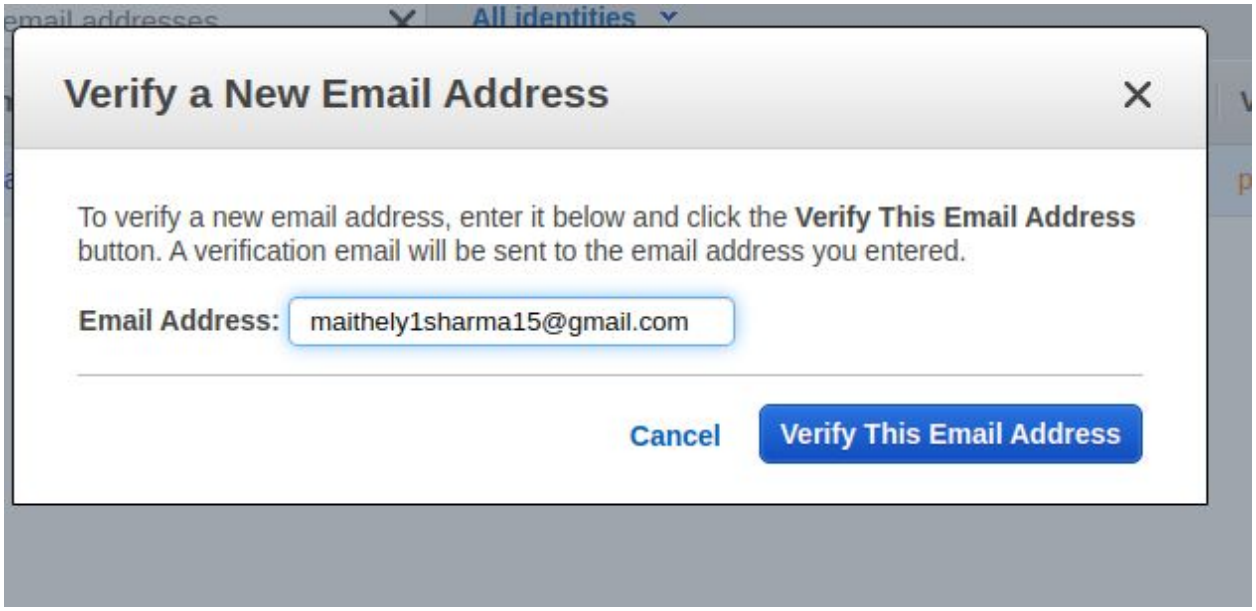
Reply Forward



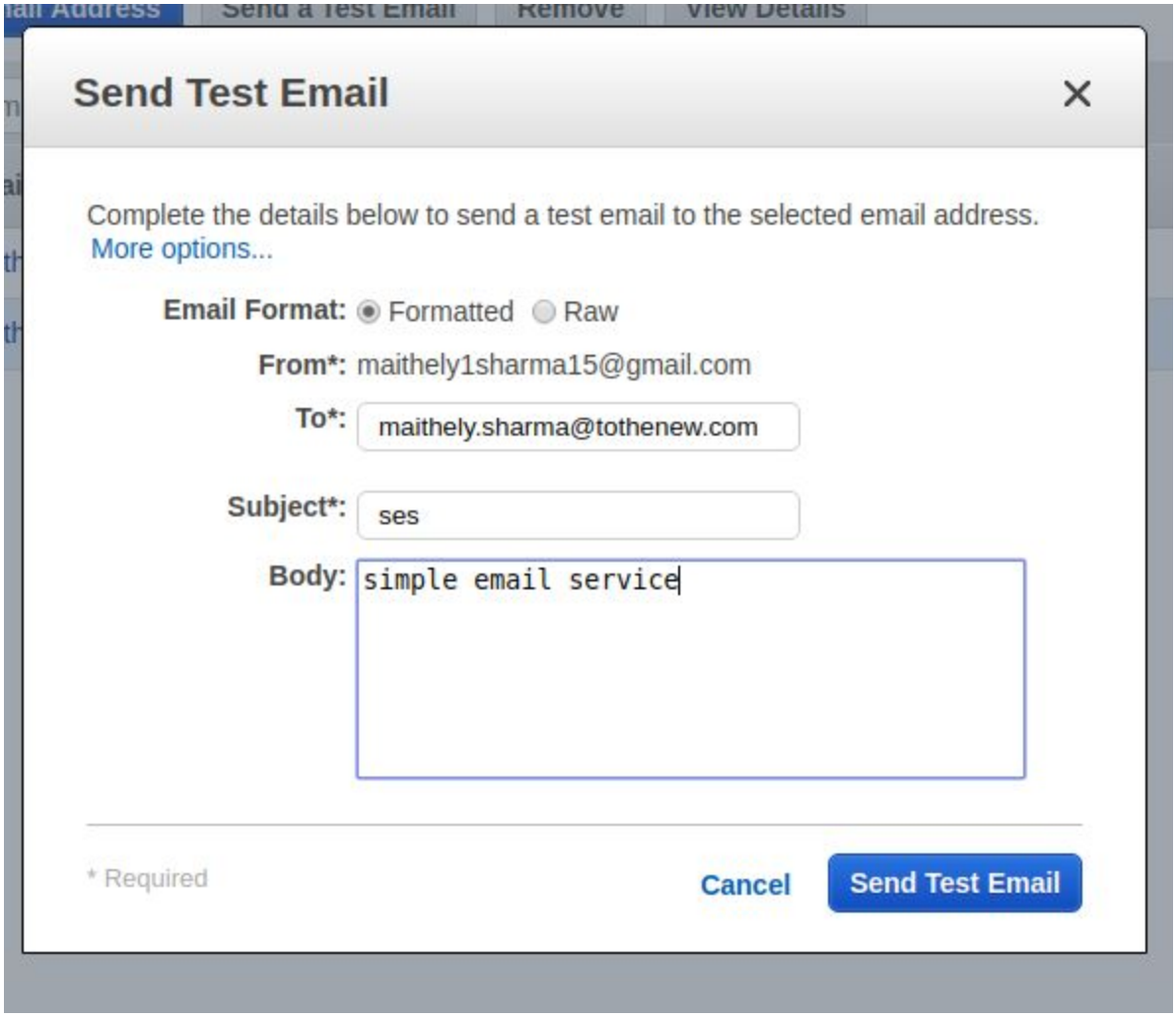


4. Send a sample mail using SES.


All identities
Verify a New Email Address
To verify a new email address, enter it below and click the Verify This Email Address button. A verification email will be sent to the email address you entered.
Email Address:
maithely.sharma@tothenew.com
Cancel
Verify This Email Address


All identities
Verify a New Email Address
To verify a new email address, enter it below and click the Verify This Email Address button. A verification email will be sent to the email address you entered.
Email Address:
maithely1sharma15@gmail.com
Cancel
Verify This Email Address


Search email addresses
All identities
Email Address Identities
Verification Status
maithely.sharma@tothenew.com
verified
maithely1sharma15@gmail.com
verified



ses Inbox ×

maithely1sharma15@gmail.com via amazonses.com
to me

simple email service

Reply Forward