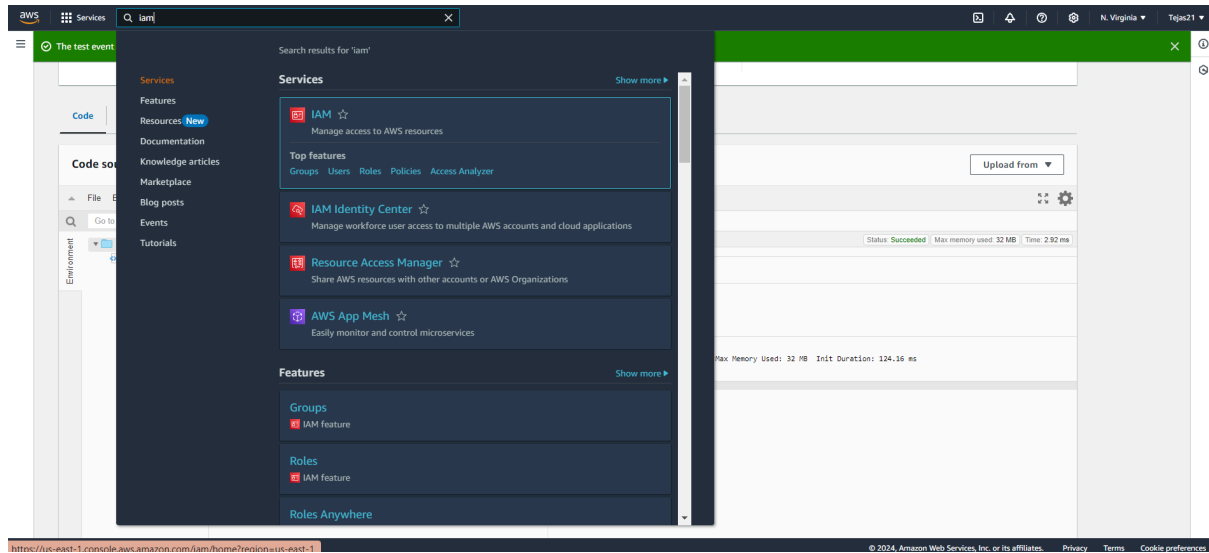


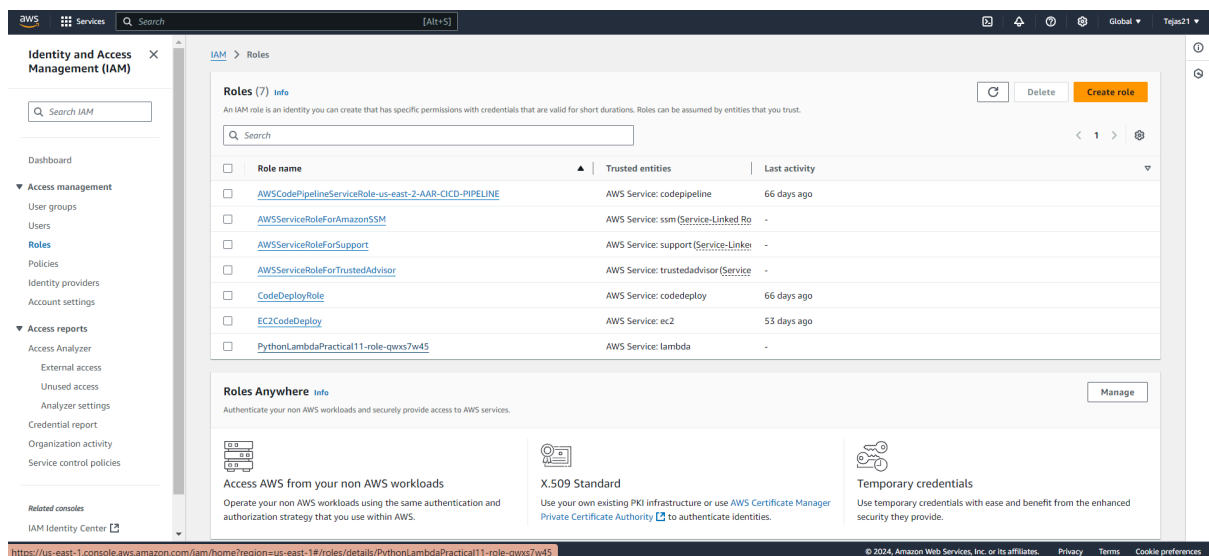
## EXPERIMENT NO: - 12

**AIM:-** To create a Lambda function which will log “An Image has been added” once you add an object to a specific bucket in S3

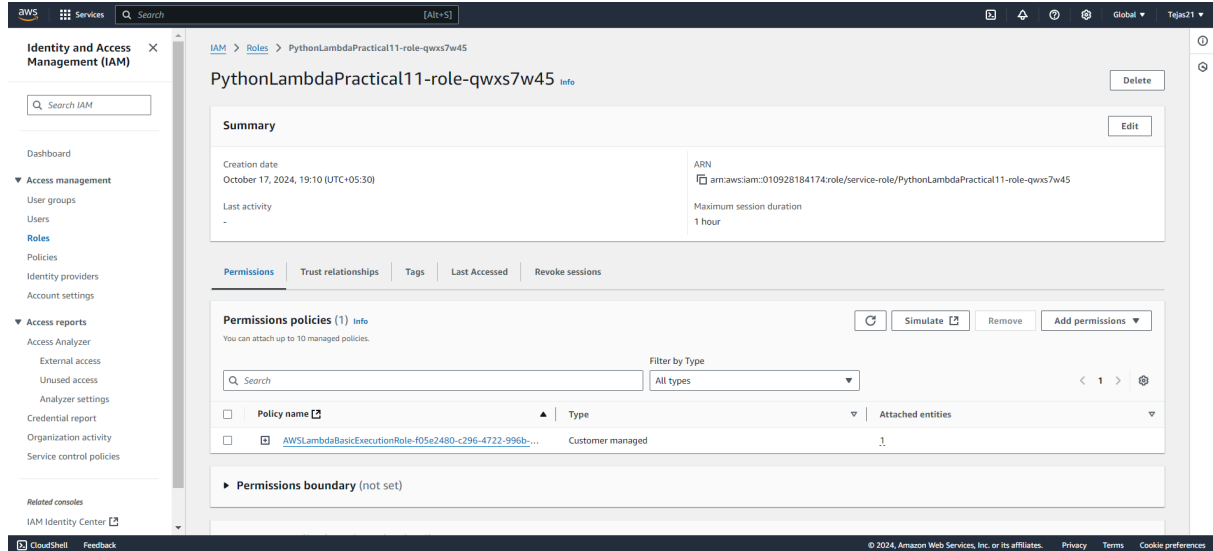
- ☐ Select an IAM services



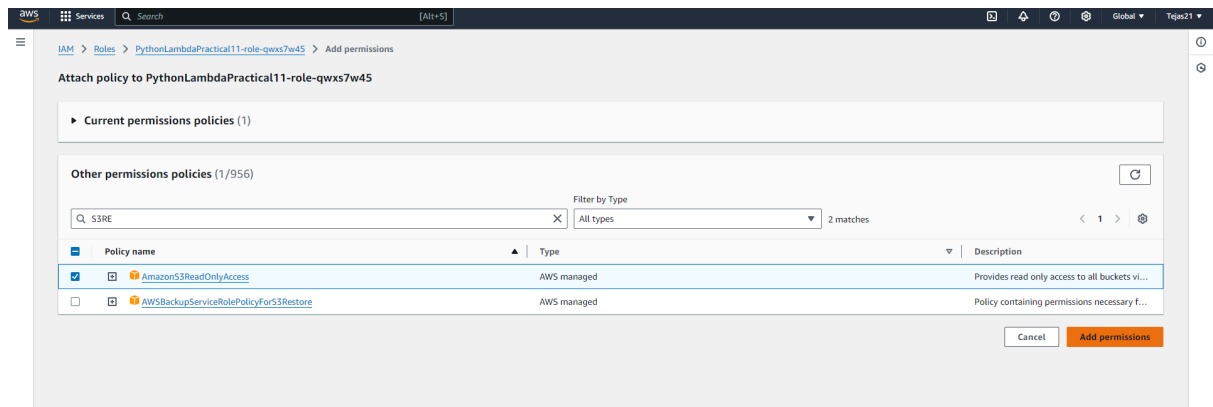
- ☐ Open up the IAM Console and under Roles, choose the Role we previously created for the Python Lambda Function (You can find your role name configuration of your Lambda function).



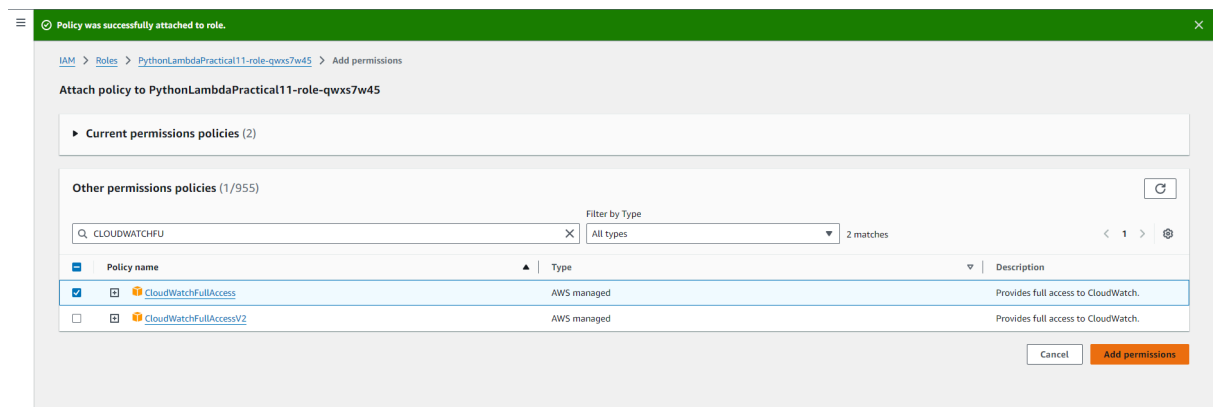
- Under Attach Policies, add S3-ReadOnly and CloudWatchFull permissions to this role.



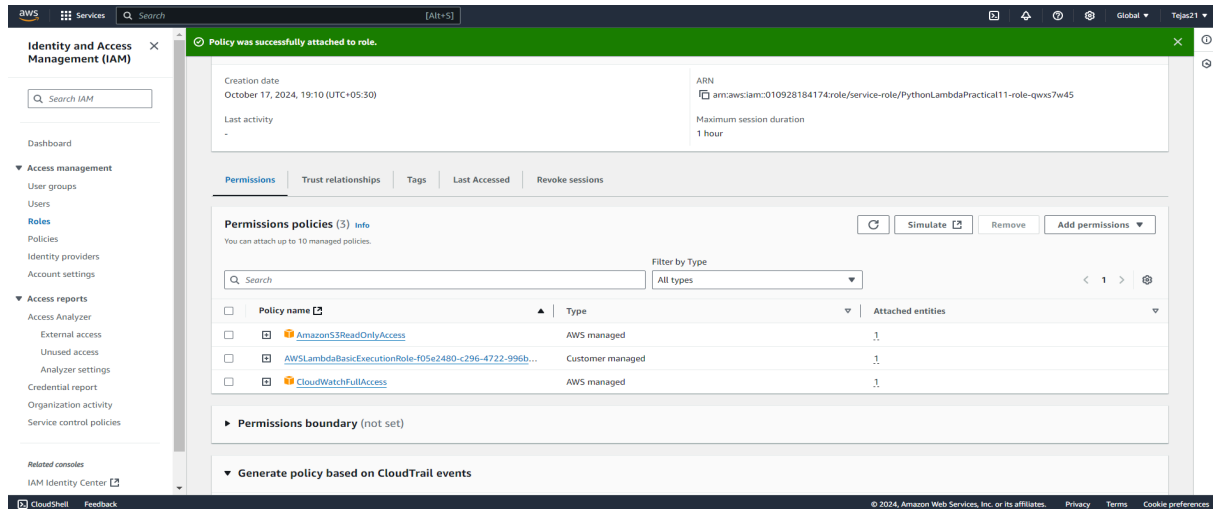
- S3-ReadOnly



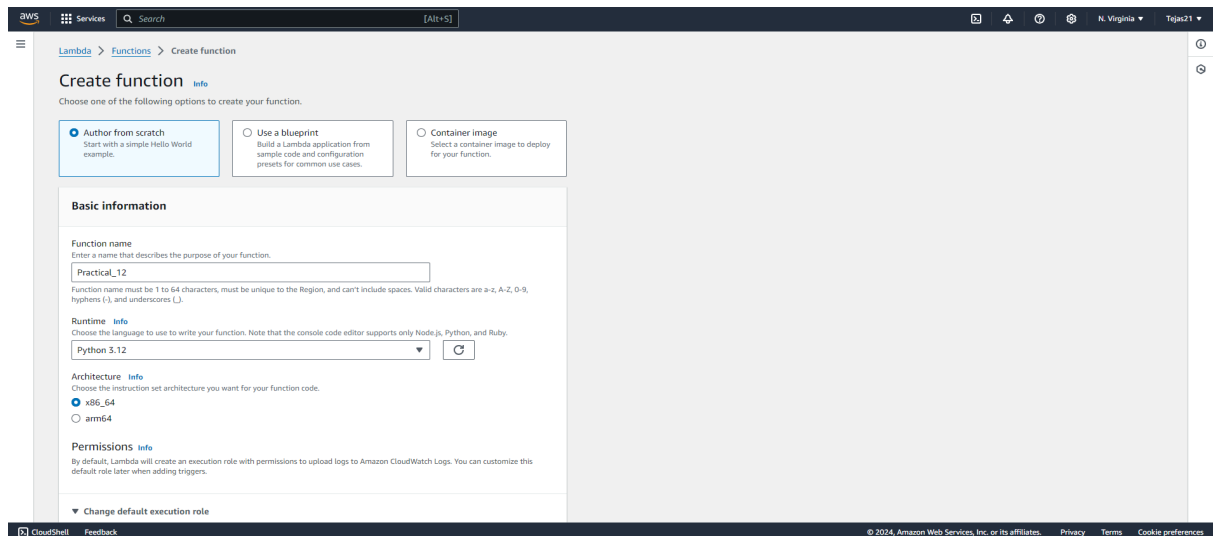
- CloudWatchFull

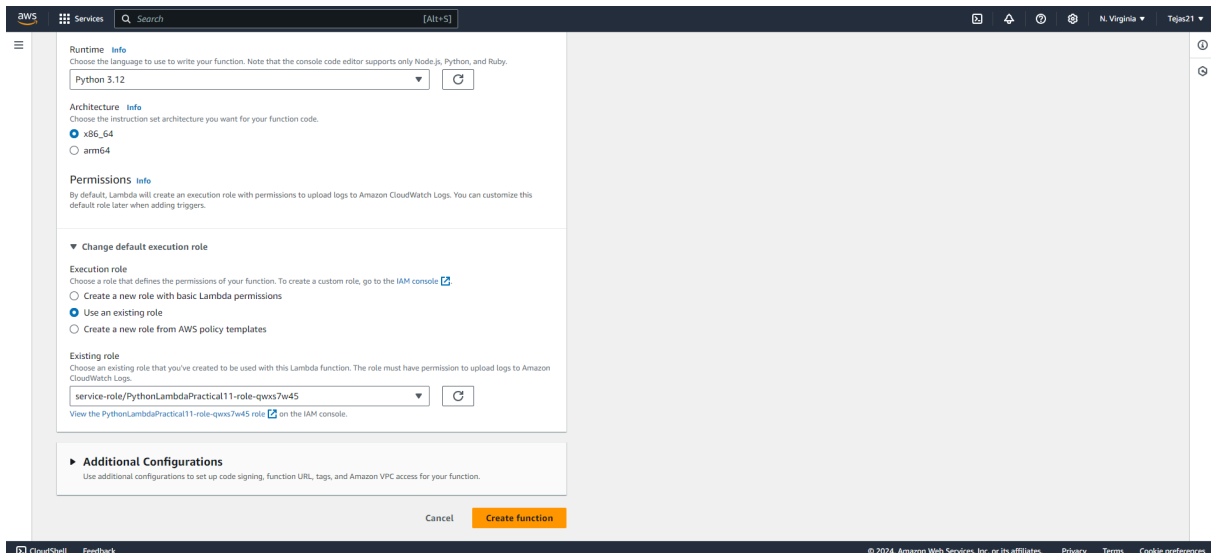


- ❑ After successful attachment of policy you will see something like this you will be able to see the updated policies.

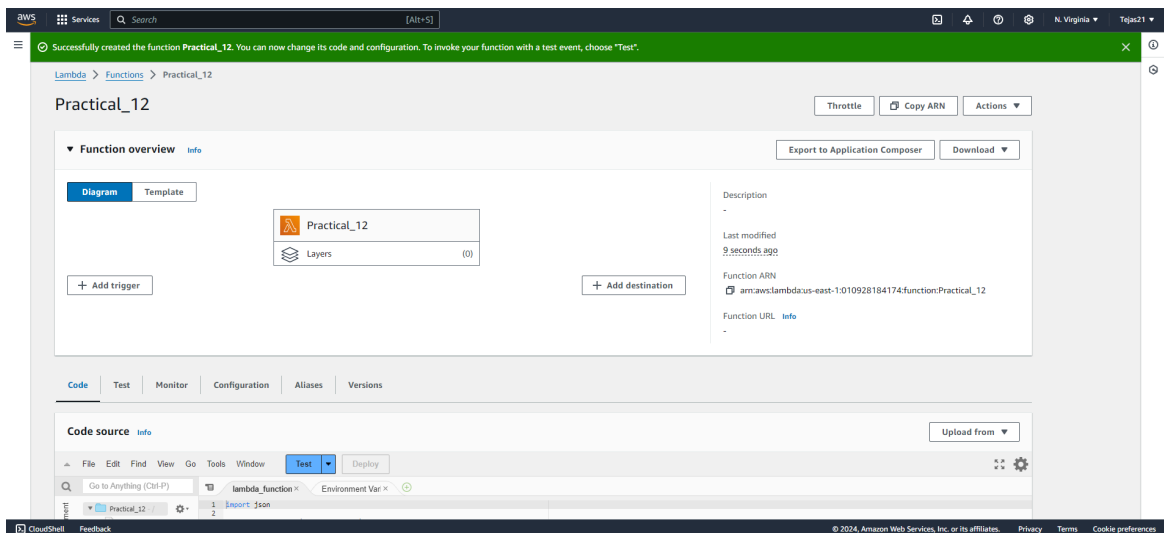


- ❑ Open up AWS Lambda and create a new Python function. Under Execution Role, choose the existing role, then select the one which was previously created and to which we just added permissions.

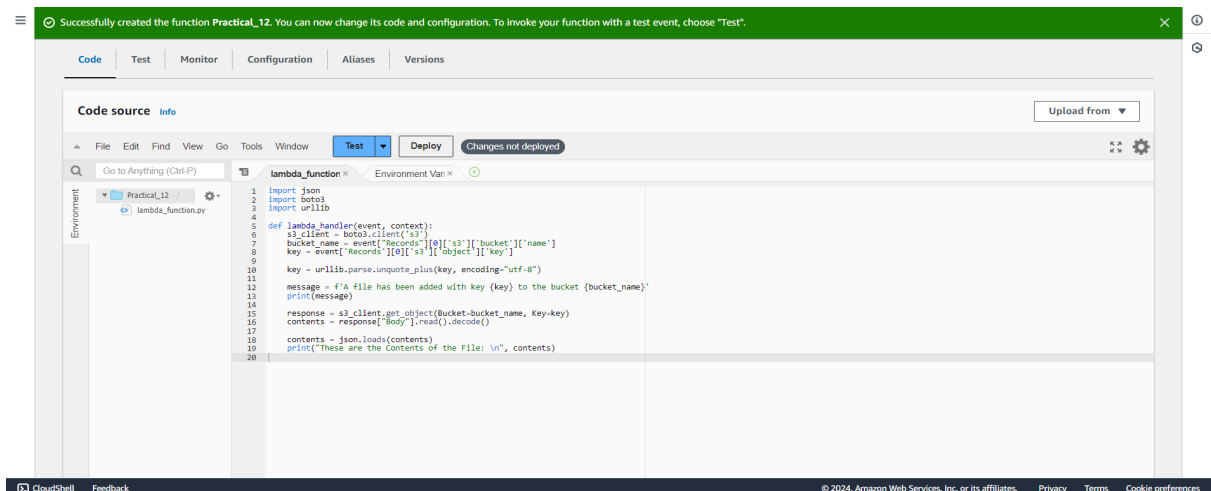




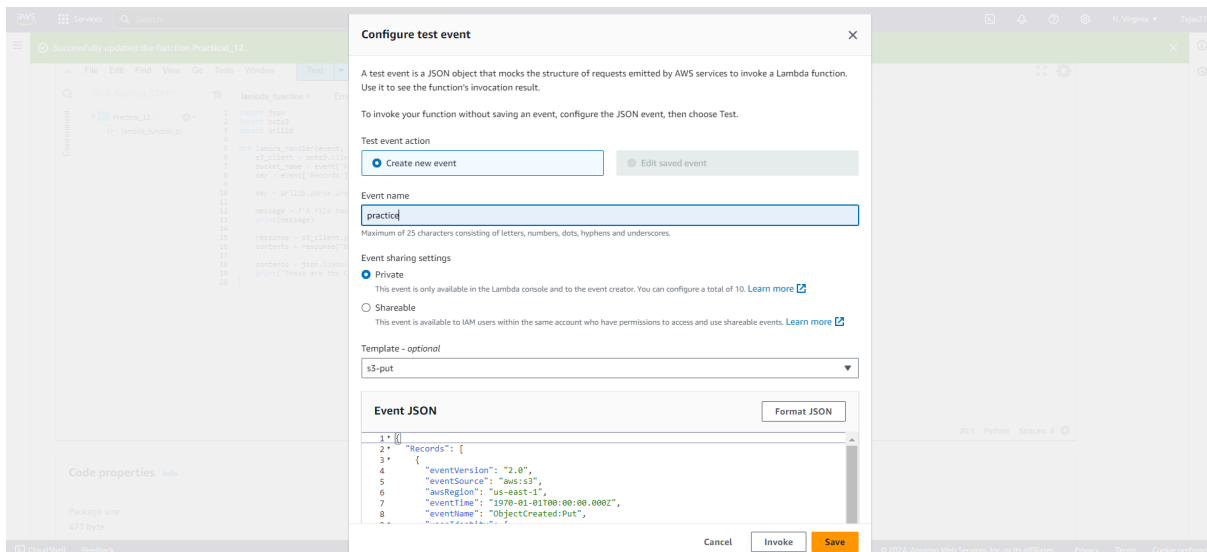
- ☐ The function is now successfully created and running



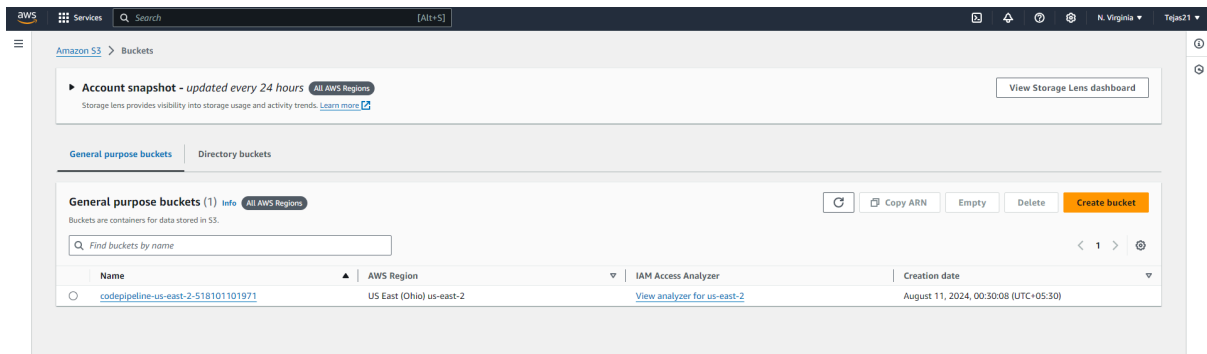
- ☐ Make the following changes to the function and click on the deploy button. This code basically logs a message and logs the contents of a JSON file which is uploaded to an S3 Bucket and then deploy the code.



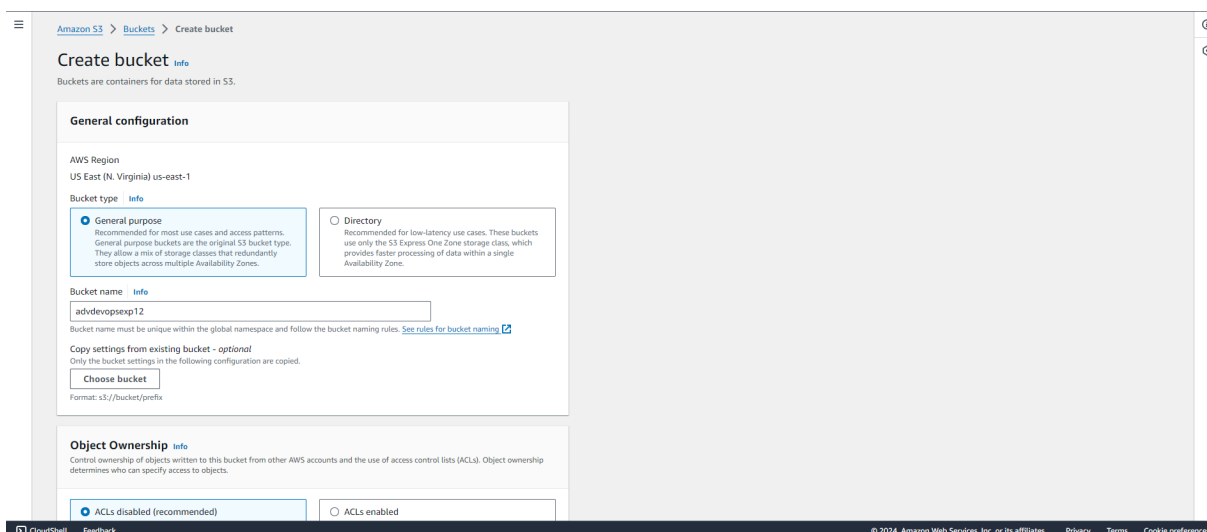
- Click on Test and choose the 'S3 Put' Template.



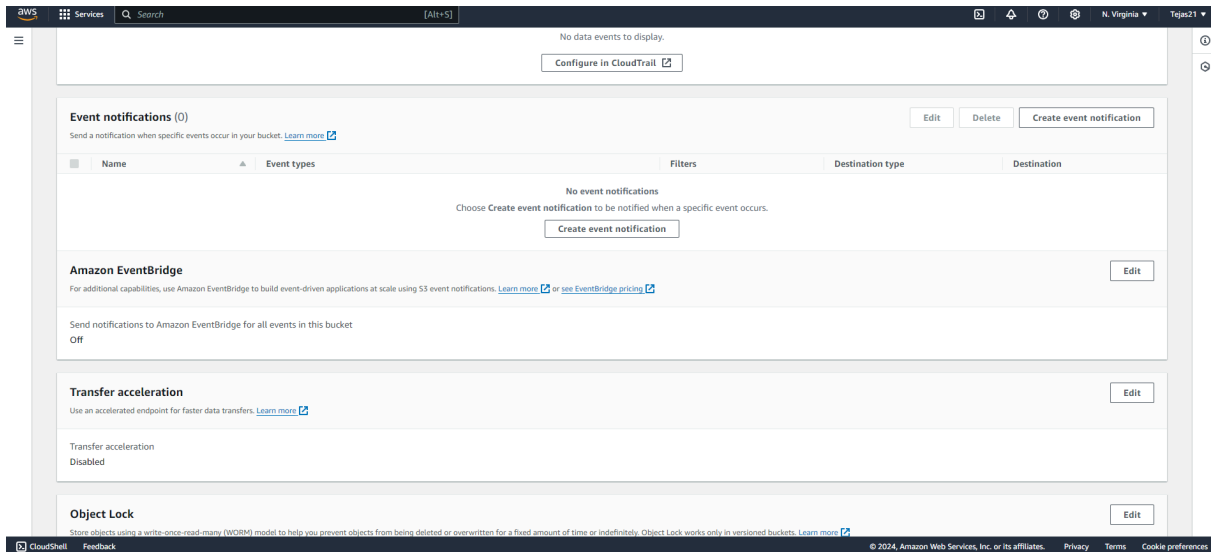
- Open up the S3 Console and create a new bucket.



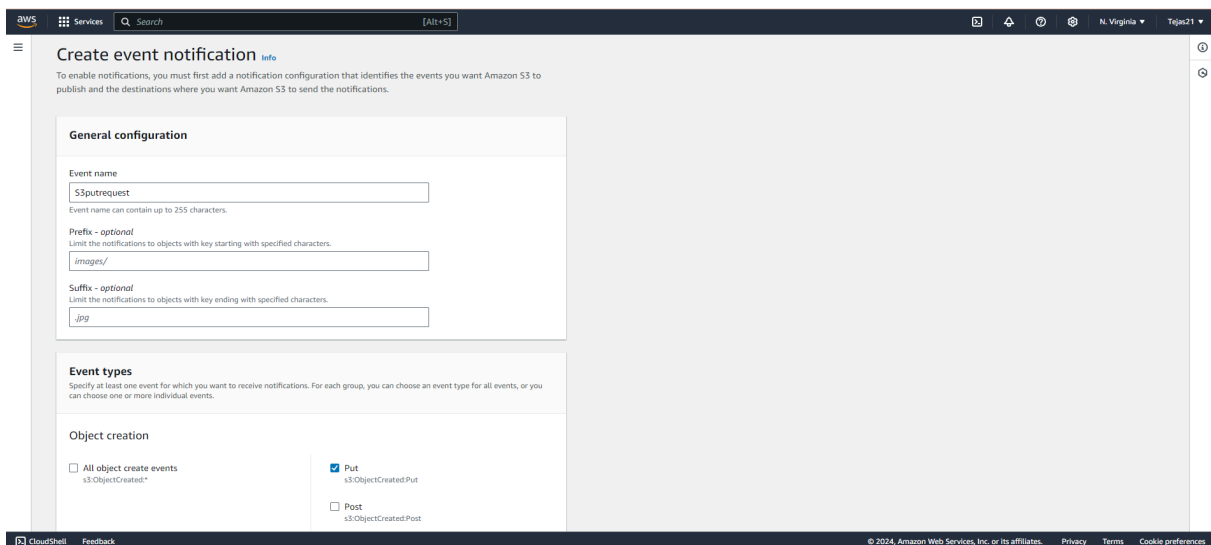
- With all general settings, create the bucket in the same region as the function.



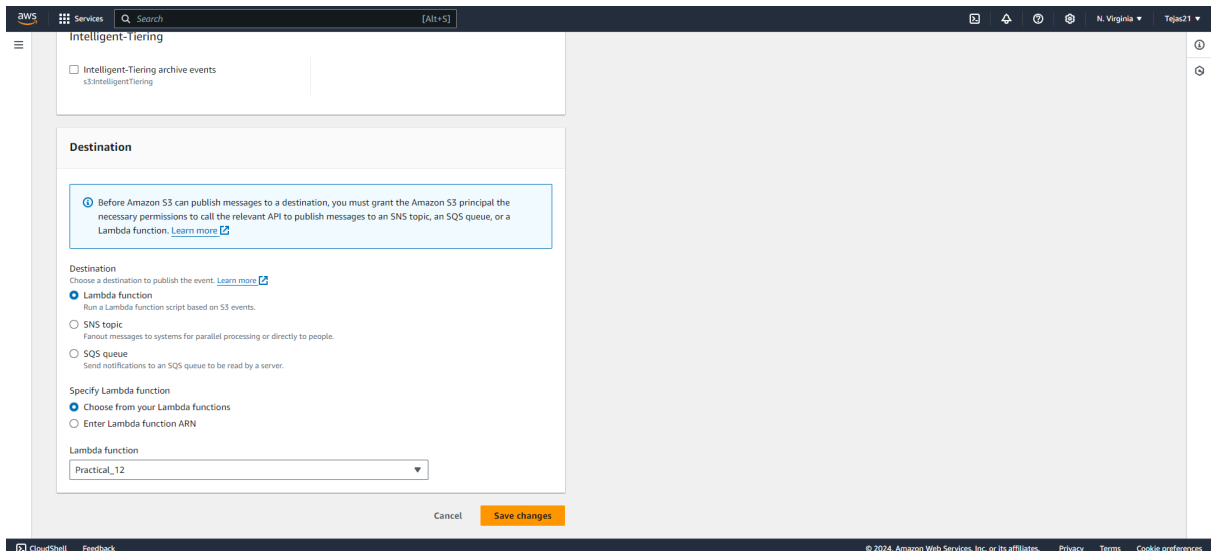
- ❑ Click on the created bucket and under properties, look for events. Click on Create Event Notification.



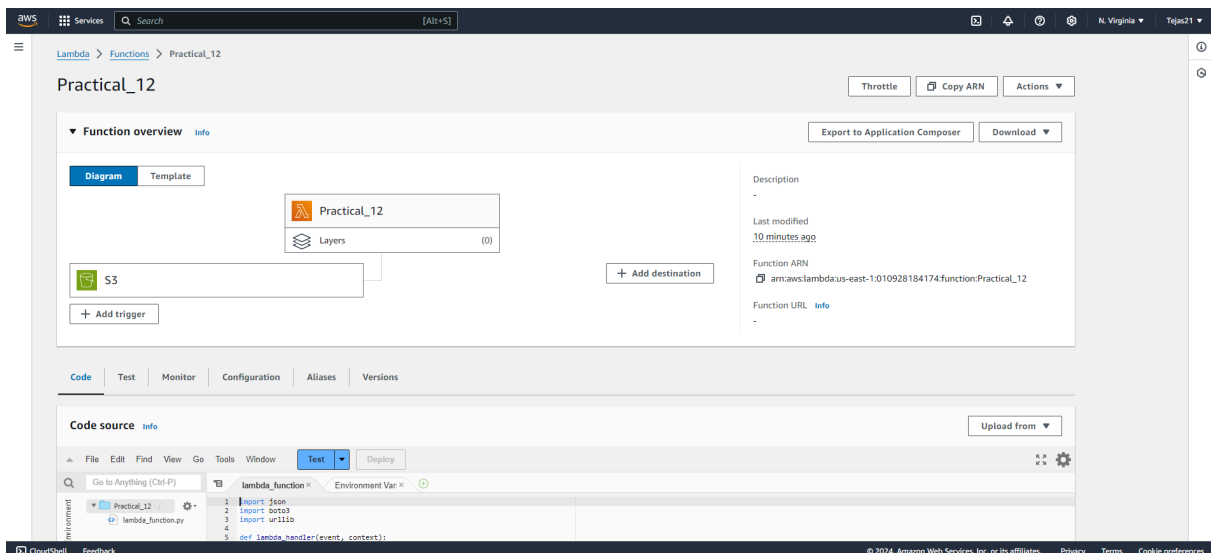
- ❑ Mention an event name and check Put under event types.



- ❑ Choose Lambda function as destination and choose your lambda function and save the changes.



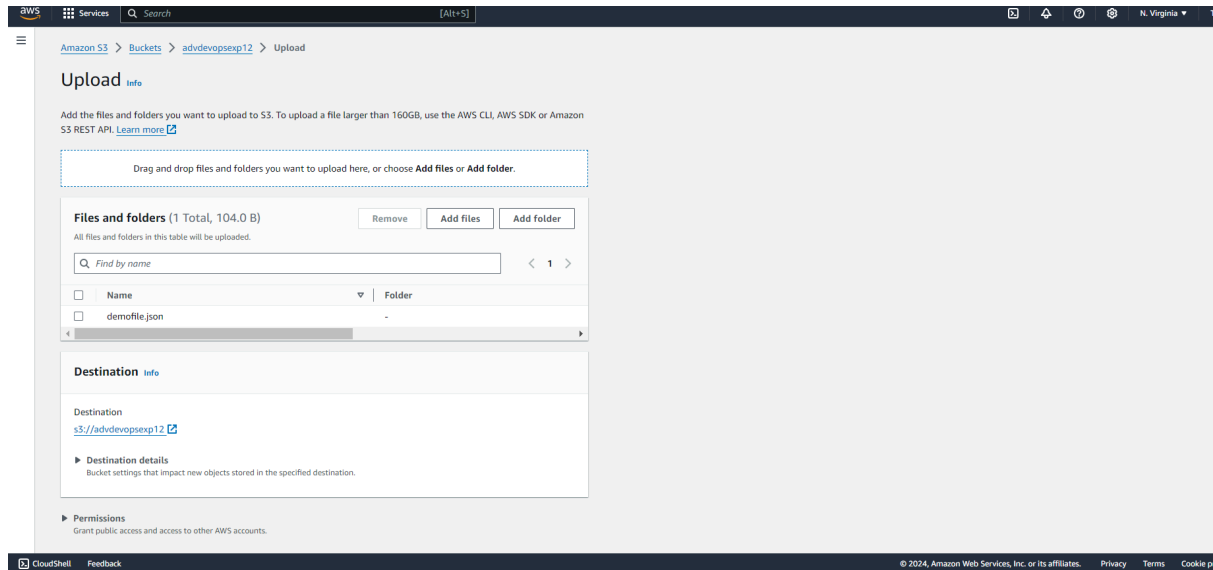
- ☐ Refresh the Lambda function console and you should be able to see an S3 Trigger in the overview.



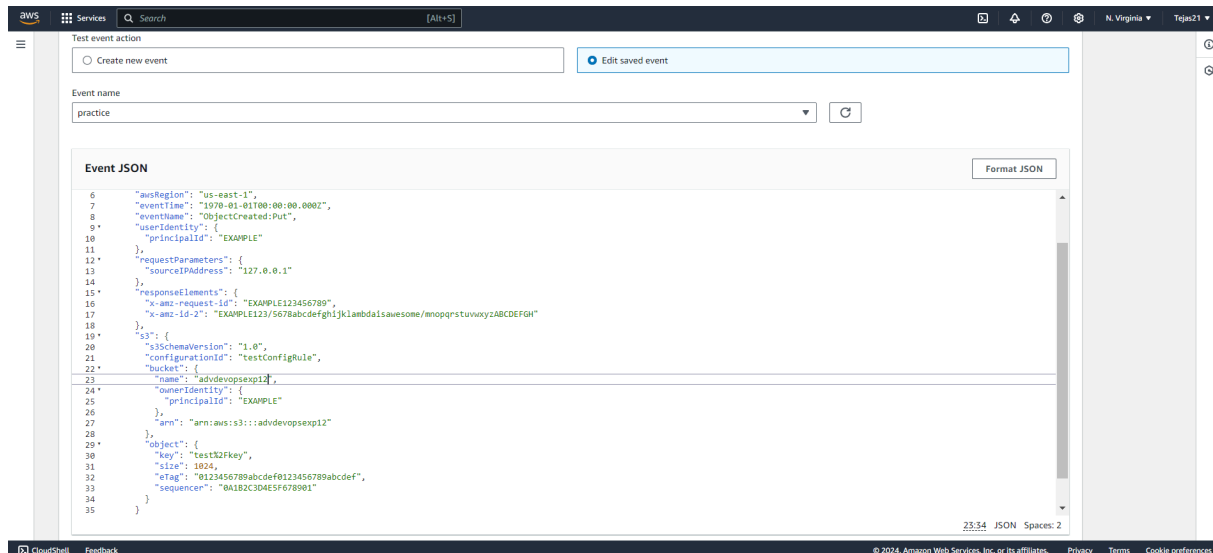
- ☐ Now, create a demofile JSON file locally.

```
{ } demofile.json U X
{ } demofile.json > ...
1 {
2   "firstname" : "TEJAS",
3   "lastname" : "GUNJAL",
4   "gender" : "Male",
5   "age" : "20"
6 }
7
```

- ☐ Go back to your S3 Bucket and click on Add Files to upload a new file. Select the demofile data file from your computer and click Upload.

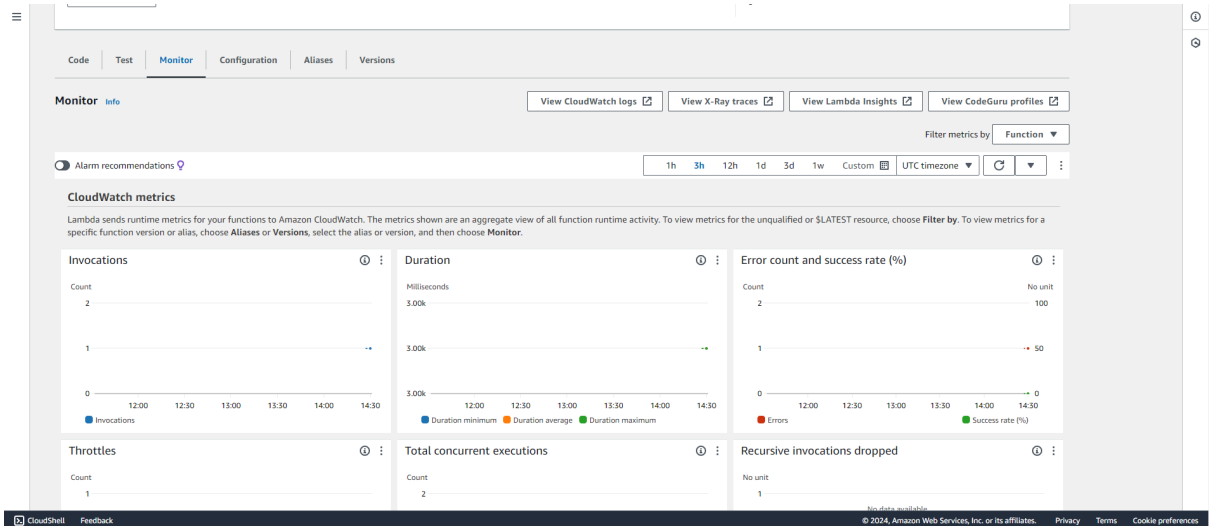


- After this make the necessary changes in the Test configuration file which we created it previously by replacing the Bucket Name and the ARN of Bucket.



- Go back to your Lambda function , Refresh it and check the Monitor tab.





- Under Log streams, click on View logs in Cloudwatch to check the Function logs.

The screenshot shows the AWS CloudWatch Log groups page. The 'Log streams' tab is selected, displaying a list of log streams for the function. The 'Log group details' section is visible, showing the log class, ARN, and other metadata.

**Log group details:**

- Log class: info
- Standard
- ARN: arn:aws:logs:us-east-1:010928184174:log-group:/aws/lambda/Practical\_12
- Creation time: 7 minutes ago
- Retention: Never expire
- Stored bytes: -
- Metric filters: 0
- Subscription filters: 0
- Contributor Insights rules: -
- KMS key ID: -
- Anomaly detection: Configure
- Data protection: -
- Sensitive data count: -

The 'Log streams' section shows a list of log streams, with the 'Log stream' tab selected. The 'Log stream' tab shows a list of log streams, with the 'Log stream' tab selected.

- Click on this log Stream that was created to view what was logged by your function.

The screenshot shows the AWS CloudWatch Log events page. The 'Log events' tab is selected, displaying a list of log events for the function. The 'Log events' section is visible, showing the timestamp, message, and other metadata.

**Log events:**

- Timestamp: 2024-10-17T14:27:07.193Z
- Message: INIT\_START Runtime Version: python:3.12.v38 Runtime Version ARN: arn:aws:lambda:us-east-1::runtime:8809ca2e2714f9637bd20be06ce81ec3bc408a0f2770a0184c14c08140801
- Timestamp: 2024-10-17T14:27:07.522Z
- Message: START RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Version: \$LATEST
- Timestamp: 2024-10-17T14:27:10.304Z
- Message: A file has been added with key demoFile.json to the bucket addevsopp12
- Timestamp: 2024-10-17T14:27:10.613Z
- Message: END RequestId: dc3c9c42-f608-4970-9309-efe588469a3f
- Timestamp: 2024-10-17T14:27:10.613Z
- Message: REPORT RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Duration: 3000.00 ms Billed Duration: 3000 ms Memory Size: 128 MB Max Memory Used: 82 MB Init Duration: 326.45 ms Status: timeout
- Timestamp: 2024-10-17T14:28:06.695Z
- Message: INIT\_REPORT Init Duration: 3000.62 ms Phase: Invoke Status: timeout
- Timestamp: 2024-10-17T14:28:06.695Z
- Message: START RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Version: \$LATEST
- Timestamp: 2024-10-17T14:28:06.732Z
- Message: END RequestId: dc3c9c42-f608-4970-9309-efe588469a3f
- Timestamp: 2024-10-17T14:28:06.732Z
- Message: REPORT RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Duration: 3000.00 ms Billed Duration: 3000 ms Memory Size: 128 MB Max Memory Used: 69 MB Status: timeout
- Timestamp: 2024-10-17T14:30:05.892Z
- Message: INIT\_REPORT Init Duration: 3000.62 ms Phase: Invoke Status: timeout
- Timestamp: 2024-10-17T14:30:05.892Z
- Message: START RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Version: \$LATEST
- Timestamp: 2024-10-17T14:30:05.934Z
- Message: END RequestId: dc3c9c42-f608-4970-9309-efe588469a3f
- Timestamp: 2024-10-17T14:30:05.934Z
- Message: REPORT RequestId: dc3c9c42-f608-4970-9309-efe588469a3f Duration: 3000.00 ms Billed Duration: 3000 ms Memory Size: 128 MB Max Memory Used: 69 MB Status: timeout