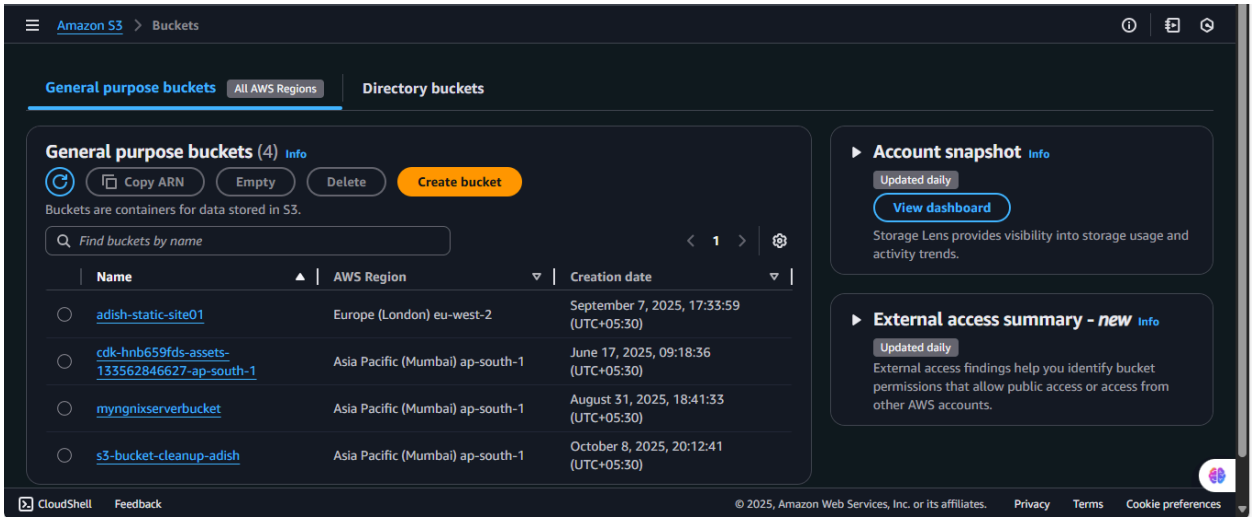
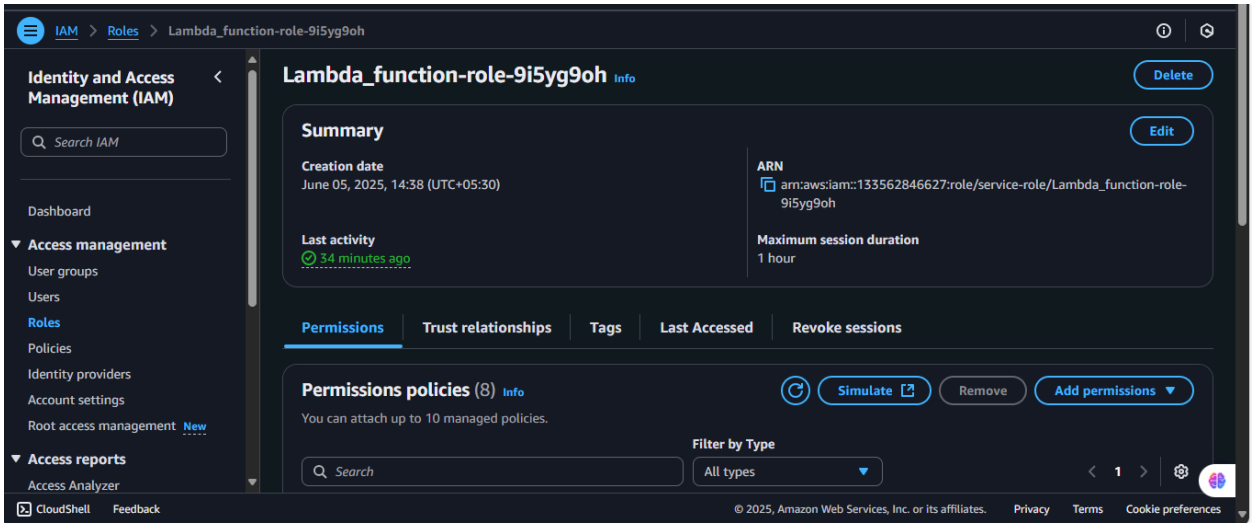
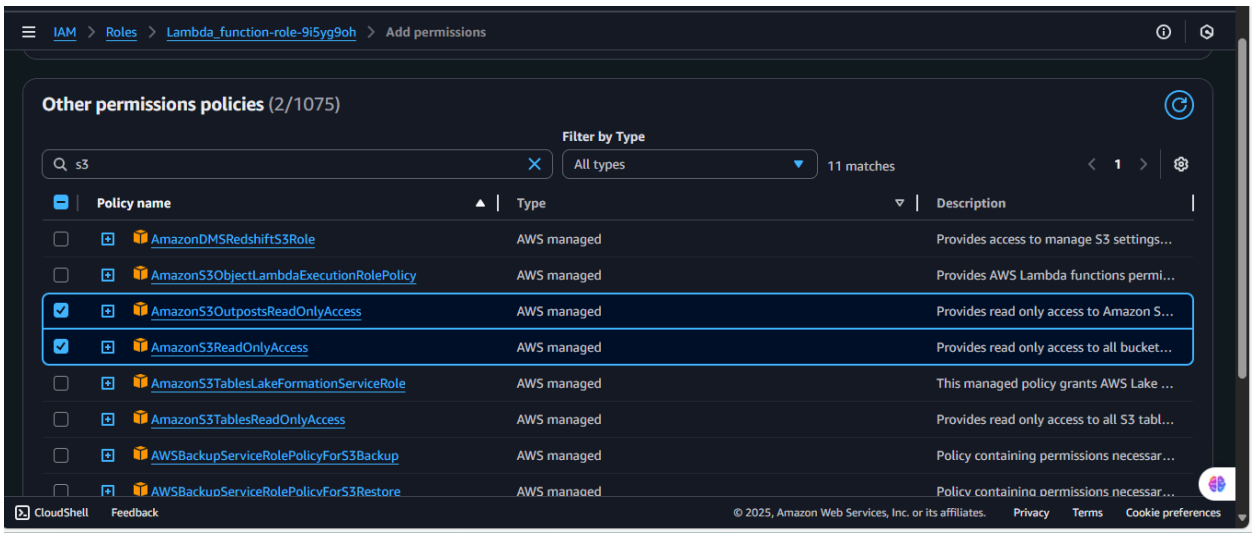
Step 1:- Create the S3 Bucket and list of bucket

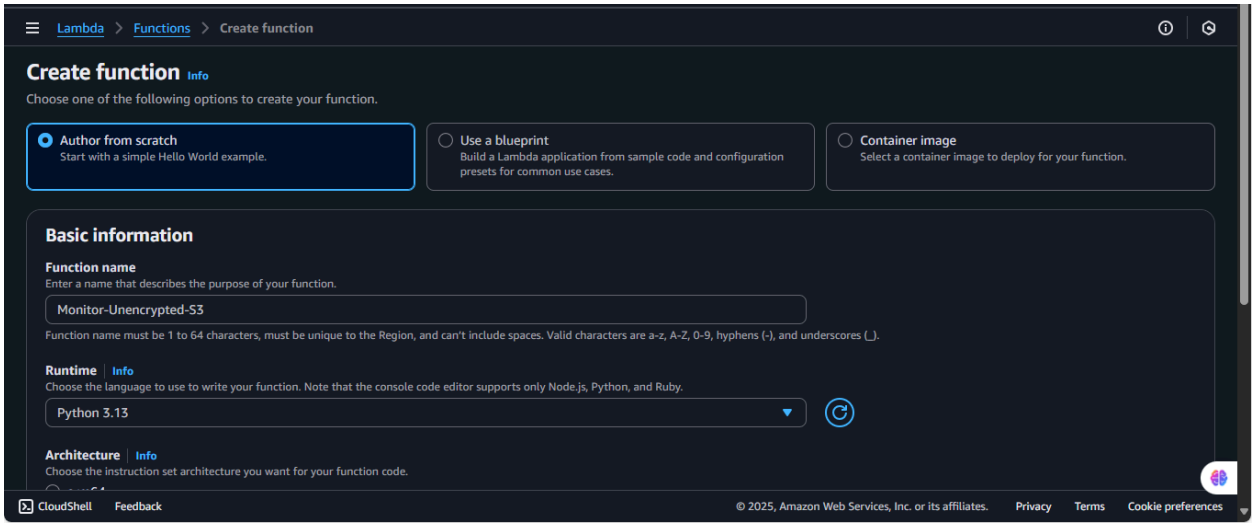


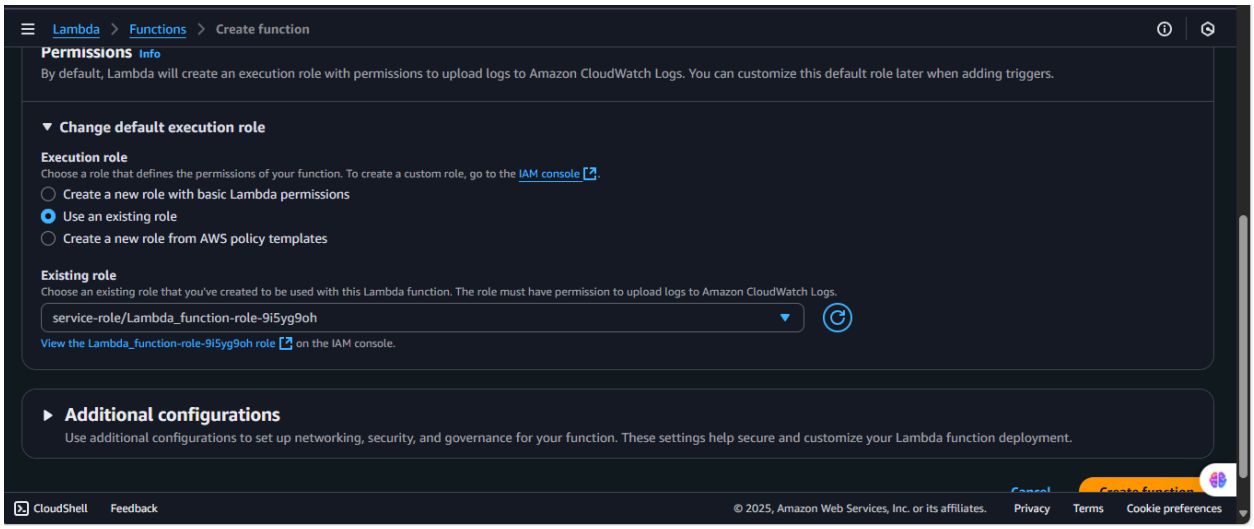
Step 2 : - Create IAM Role

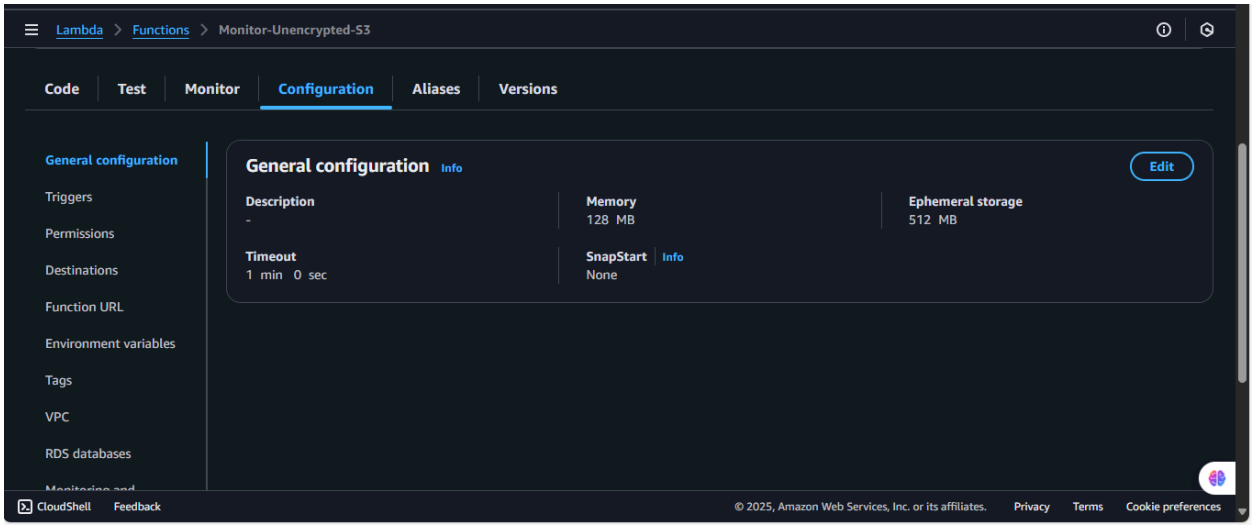


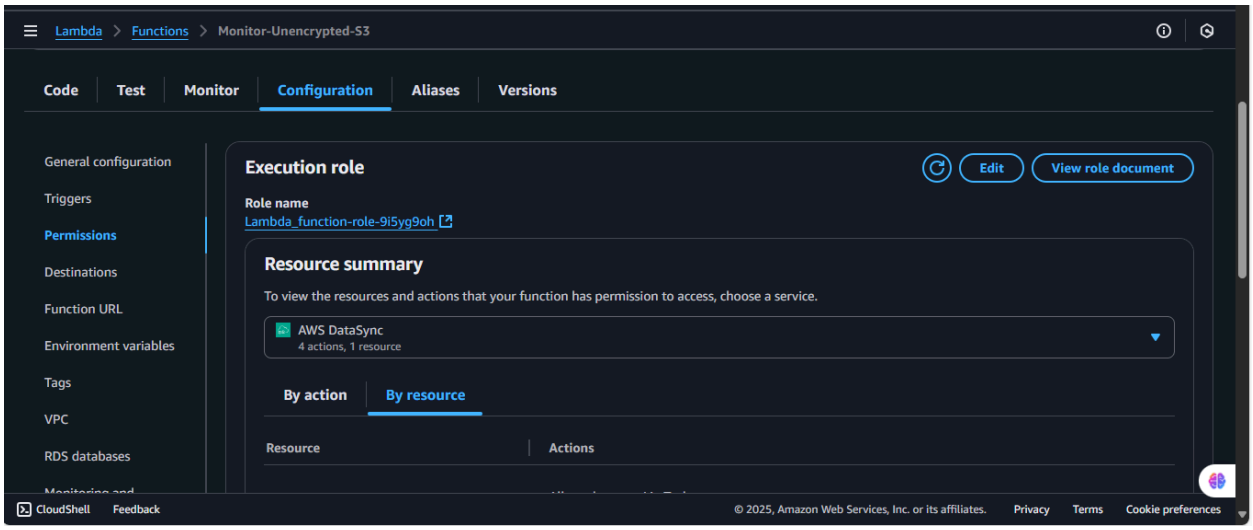


Step 3 :- Create Lambda Function



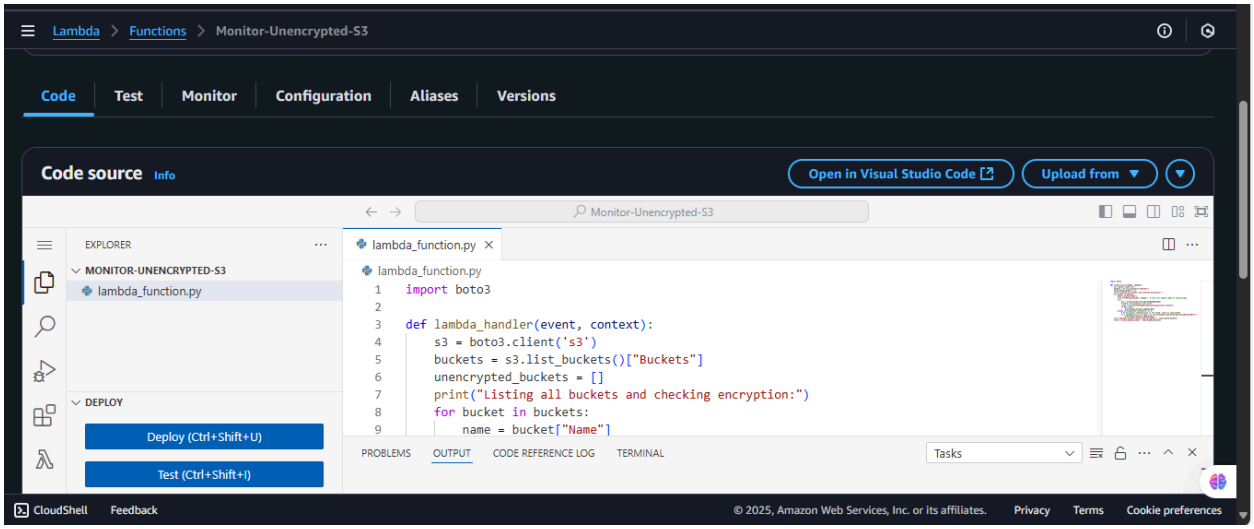







```
import boto3

def lambda_handler(event, context):
    s3 = boto3.client('s3')
    buckets = s3.list_buckets()["Buckets"]
    unencrypted_buckets = []
    print("Listing all buckets and checking encryption:")
    for bucket in buckets:
        name = bucket["Name"]
        print(f"Checking bucket: {name}")  # Print all bucket names to
console/logs
        try:
            enc = s3.get_bucket_encryption(Bucket=name)
            # Check if encryption rules exist
            rules = enc["ServerSideEncryptionConfiguration"]["Rules"]
            if not rules:
                unencrypted_buckets.append(name)
        except s3.exceptions.ClientError as e:
            # If encryption configuration is not found, treat as
unencrypted
            if e.response['Error']['Code'] ==
'ServerSideEncryptionConfigurationNotFoundError':
                unencrypted_buckets.append(name)
    print("Buckets without server-side encryption:", unencrypted_buckets)
    return {'unencrypted_buckets': unencrypted_buckets}
```


Lambda > Functions > Monitor-Unencrypted-S3
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Open in Visual Studio Code
Upload from
EXPLORER
MONITOR-UNENCRYPTED-S3
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
import boto3
def lambda_handler(event, context):
s3 = boto3.client('s3')
buckets = s3.list_buckets()["Buckets"]
unencrypted_buckets = []
print("Listing all buckets and checking encryption:")
for bucket in buckets:
name = bucket["Name"]
PROBLEMS
OUTPUT
CODE REFERENCE LOG
TERMINAL
Tasks
CloudShell
Feedback
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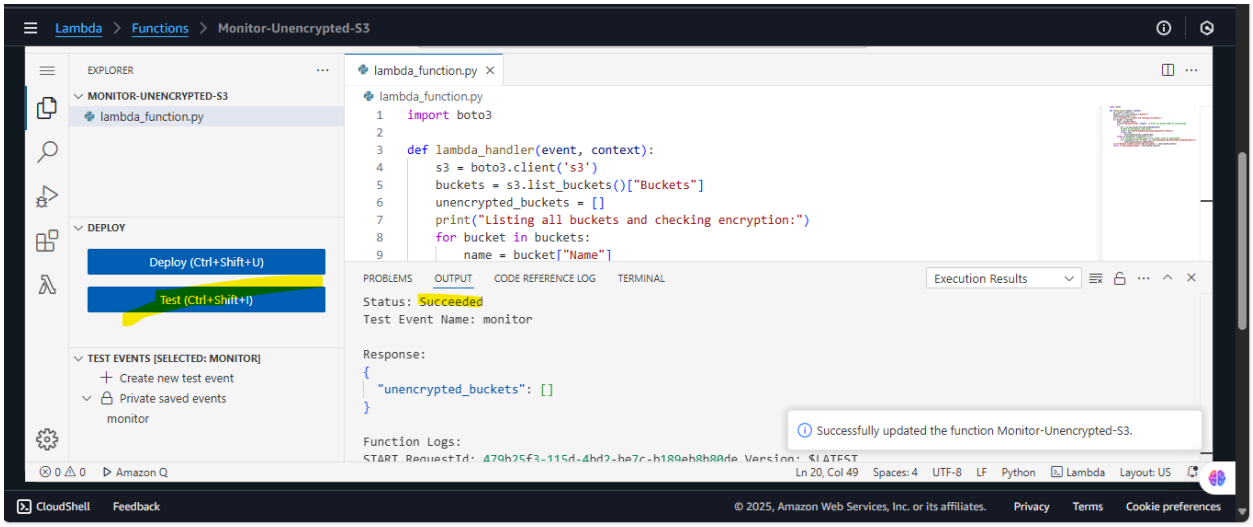
Lambda > Functions > Monitor-Unencrypted-S3
EXPLORER
MONITOR-UNENCRYPTED-S3
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [SELECTED: MONITOR]
Create new test event
Private saved events
monitor
import boto3
def lambda_handler(event, context):
s3 = boto3.client('s3')
buckets = s3.list_buckets()["Buckets"]
unencrypted_buckets = []
print("Listing all buckets and checking encryption:")
for bucket in buckets:
name = bucket["Name"]
PROBLEMS
OUTPUT
CODE REFERENCE LOG
TERMINAL
Execution Results
Status: Succeeded
Test Event Name: monitor
Response:
{
"unencrypted_buckets": []
}
Function Logs:
Successfully updated the function Monitor-Unencrypted-S3.
Amazon Q
Ln 20, Col 49
Spaces: 4
UTF-8
LF
Python
Lambda
Layout: US
CloudShell
Feedback
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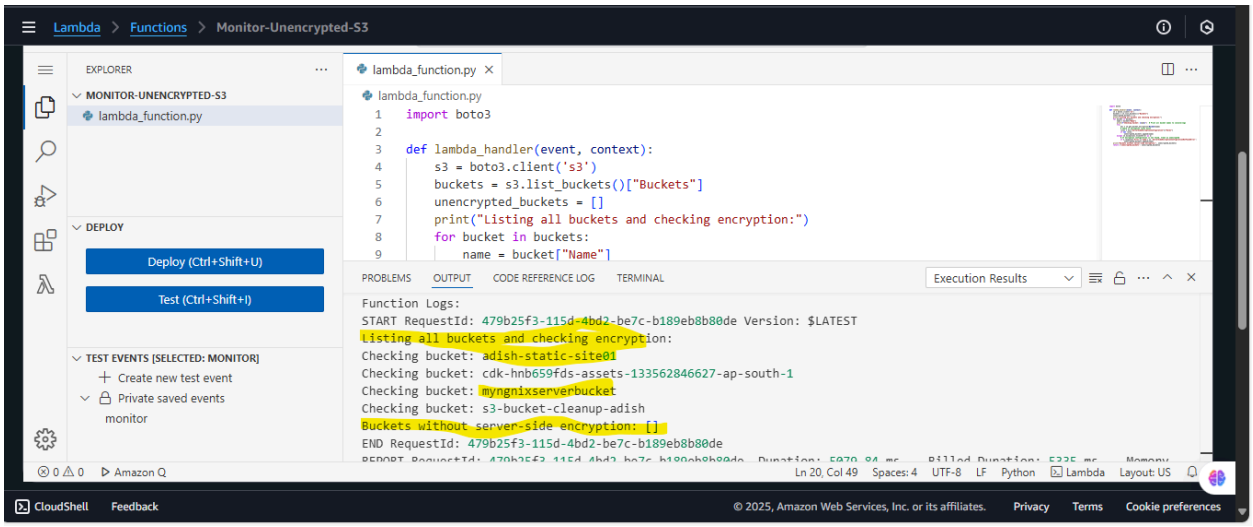
Lambda > Functions > Monitor-Unencrypted-S3
EXPLORER
MONITOR-UNENCRYPTED-S3
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [SELECTED: MONITOR]
Create new test event
Private saved events
monitor
import boto3
def lambda_handler(event, context):
s3 = boto3.client('s3')
buckets = s3.list_buckets()["Buckets"]
unencrypted_buckets = []
print("Listing all buckets and checking encryption:")
for bucket in buckets:
name = bucket["Name"]
PROBLEMS
OUTPUT
CODE REFERENCE LOG
TERMINAL
Execution Results
Function Logs:
START RequestId: 479b25f3-115d-4bd2-be7c-b189eb8b80de Version: $LATEST
Listing all buckets and checking encryption:
Checking bucket: adish-static-site01
Checking bucket: cdk-hnb659fds-assets-133562846627-ap-south-1
Checking bucket: myngnixserverbucket
Checking bucket: s3-bucket-cleanup-adish
Buckets without server-side encryption: []
END RequestId: 479b25f3-115d-4bd2-be7c-b189eb8b80de
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UTF-8
LF
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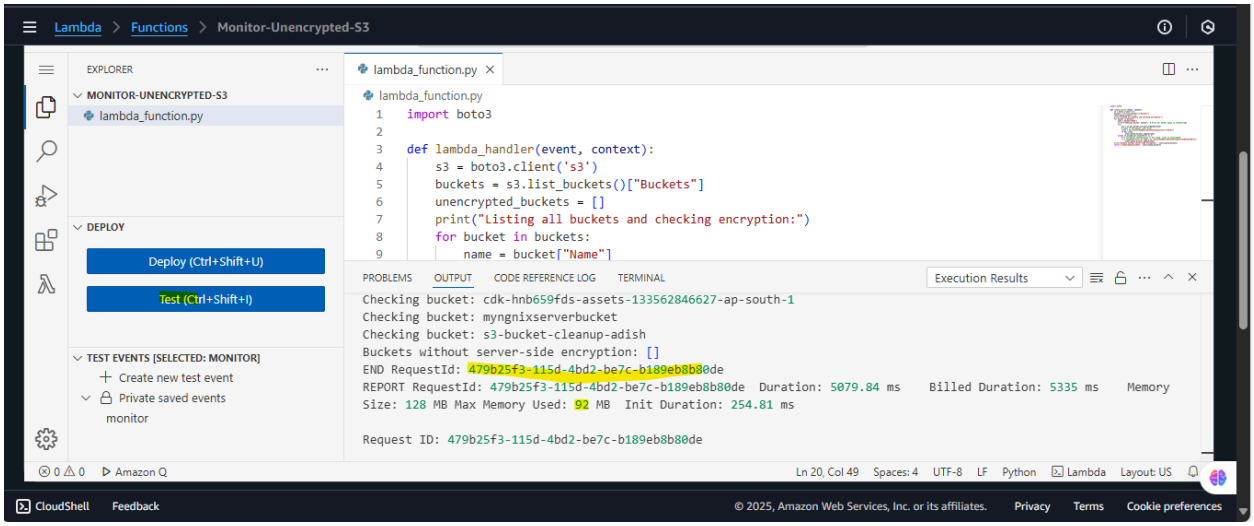
Lambda
Functions
Monitor-Unencrypted-S3
EXPLORER
MONITOR-UNENCRYPTED-S3
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [SELECTED: MONITOR]
Create new test event
Private saved events
monitor
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import boto3
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PROBLEMS
OUTPUT
CODE REFERENCE LOG
TERMINAL
Execution Results
Checking bucket: cdk-hnb659fds-assets-133562846627-ap-south-1
Checking bucket: myngnixserverbucket
Checking bucket: s3-bucket-cleanup-adish
Buckets without server-side encryption: []
END RequestId: 479b25f3-115d-4bd2-be7c-b189eb8b80de
REPORT RequestId: 479b25f3-115d-4bd2-be7c-b189eb8b80de Duration: 5079.84 ms Billed Duration: 5335 ms Memory
Size: 128 MB Max Memory Used: 92 MB Init Duration: 254.81 ms
Request ID: 479b25f3-115d-4bd2-be7c-b189eb8b80de
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