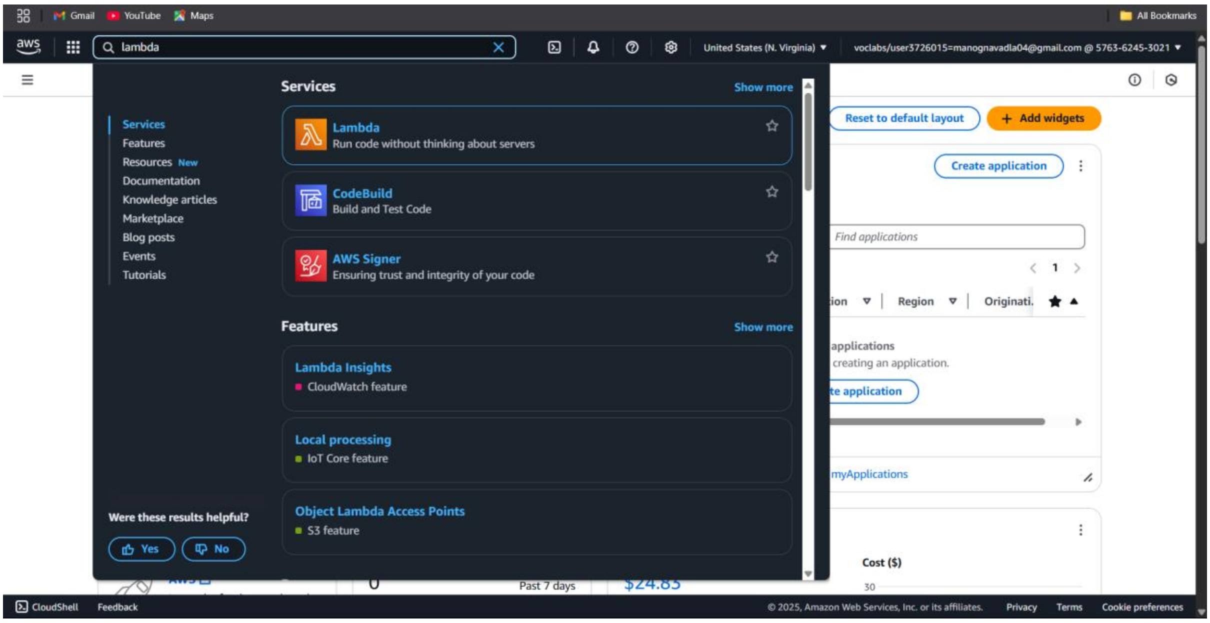
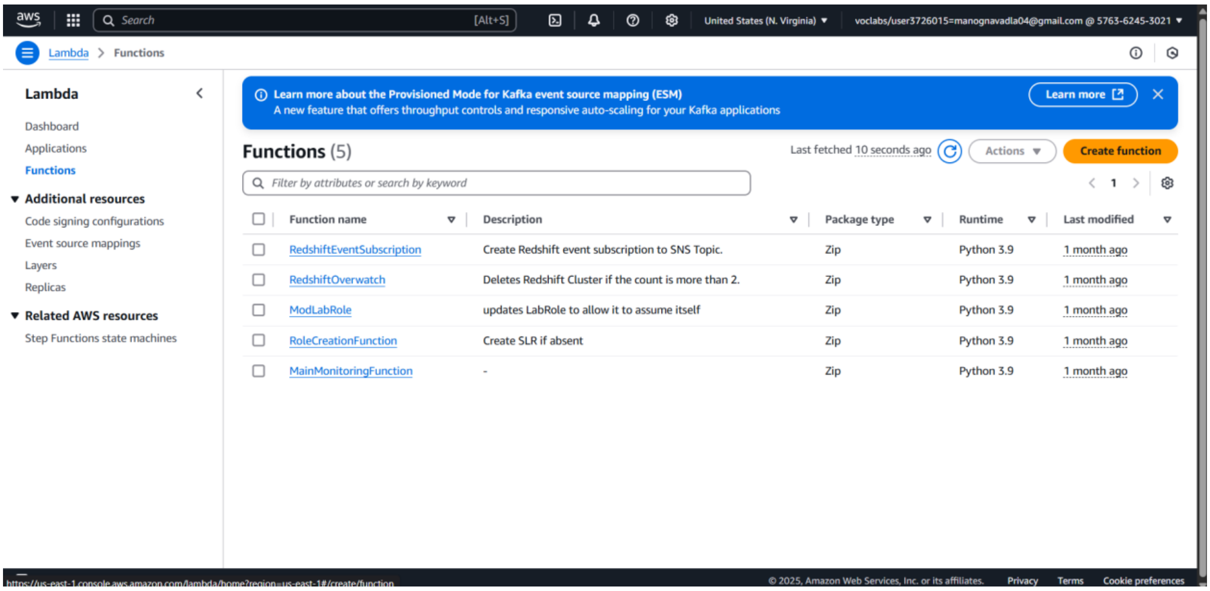
Lambda

In the Aws dashboard search for lambda



click on create function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voclabs/user3726015=manognavadla04@gmail.com @ 5763-6245-3021
Lambda
Functions
Lambda
Dashboard
Applications
Functions
Additional resources
Code signing configurations
Event source mappings
Layers
Replicas
Related AWS resources
Step Functions state machines
Learn more
Last fetched 10 seconds ago
Actions
Create function
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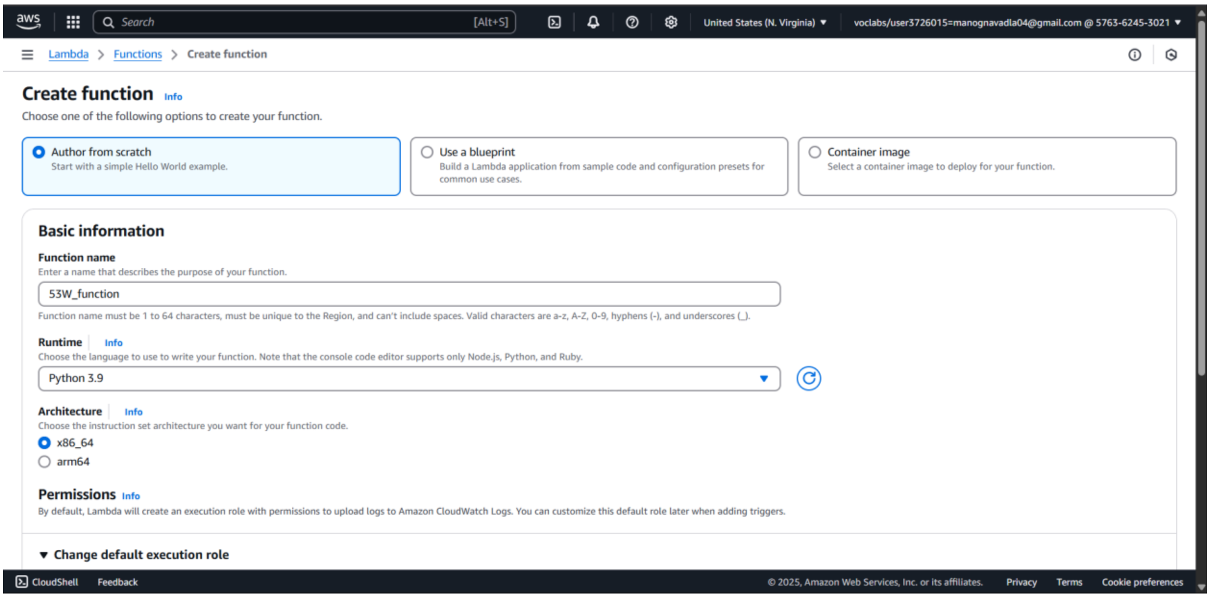
Learn more about the Provisioned Mode for Kafka event source mapping (ESM)
A new feature that offers throughput controls and auto-scaling for your Kafka applications

Functions (5)

	Function name	Description	Package type	Runtime	Last modified
□	RedshiftEventSubscription	Create Redshift event subscription to SNS Topic.	Zip	Python 3.9	1 month ago
□	RedshiftOverwatch	Deletes Redshift Cluster if the count is more than 2.	Zip	Python 3.9	1 month ago
□	ModLabRole	updates LabRole to allow it to assume itself	Zip	Python 3.9	1 month ago
□	RoleCreationFunction	Create SLR if absent	Zip	Python 3.9	1 month ago
□	MainMonitoringFunction	-	Zip	Python 3.9	1 month ago

https://us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/create/function

Give a function name(53W_function) , select the required runtime(python 3.9) and Select use an existing role and set it as “LabRole” then click on create function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Lambda > Functions > Create function

Create function Info

Choose one of the following options to create your function.

● Author from scratch
Start with a simple Hello World example.

○ Use a blueprint
Build a Lambda application from sample code and configuration presets for common use cases.

○ Container image
Select a container image to deploy for your function.

Basic information

Function name
Enter a name that describes the purpose of your function.
53W_function
Function name must be 1 to 64 characters, must be unique to the Region, and can't include spaces. Valid characters are a-z, A-Z, 0-9, hyphens (-), and underscores (_).

Runtime Info
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.
Python 3.9

Architecture Info
Choose the instruction set architecture you want for your function code.
● x86_64
○ arm64

Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

▼ Change default execution role

CloudShell
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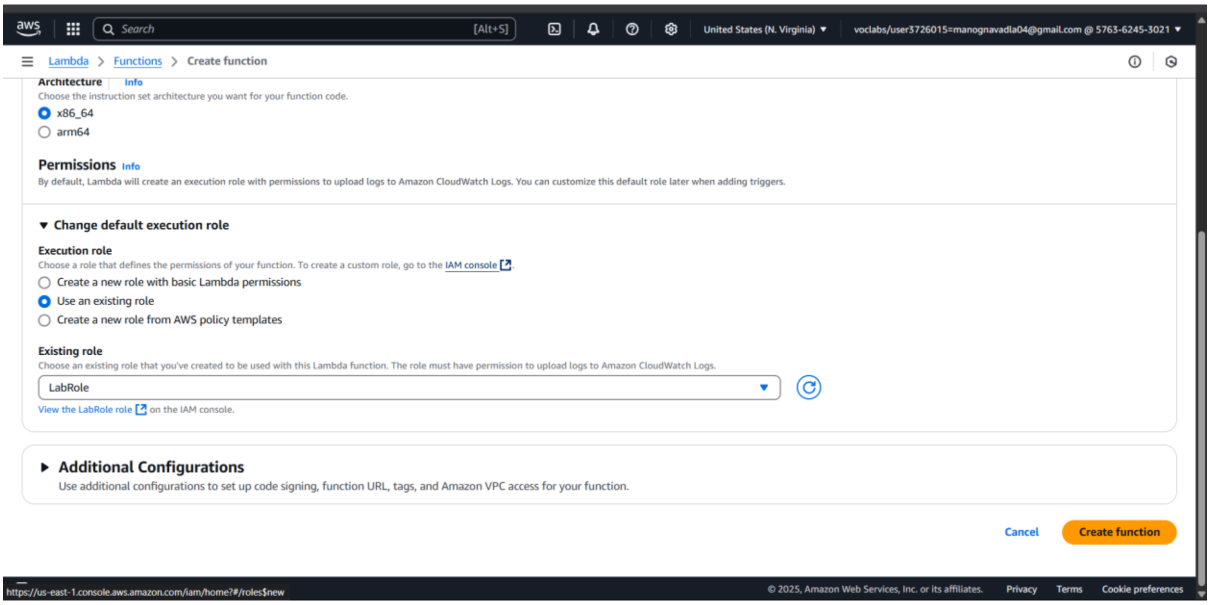
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Lambda > Functions > Create function

Architecture Info
Choose the instruction set architecture you want for your function code.
● x86_64
○ arm64

Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

▼ Change default execution role

Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the IAM console.
○ Create a new role with basic Lambda permissions
● Use an existing role
○ Create a new role from AWS policy templates

Existing role
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.
LabRole
View the LabRole role on the IAM console.

▶ Additional Configurations
Use additional configurations to set up code signing, function URL, tags, and Amazon VPC access for your function.

Cancel
Create function
https://us-east-1.console.aws.amazon.com/iam/home?#/roles$new
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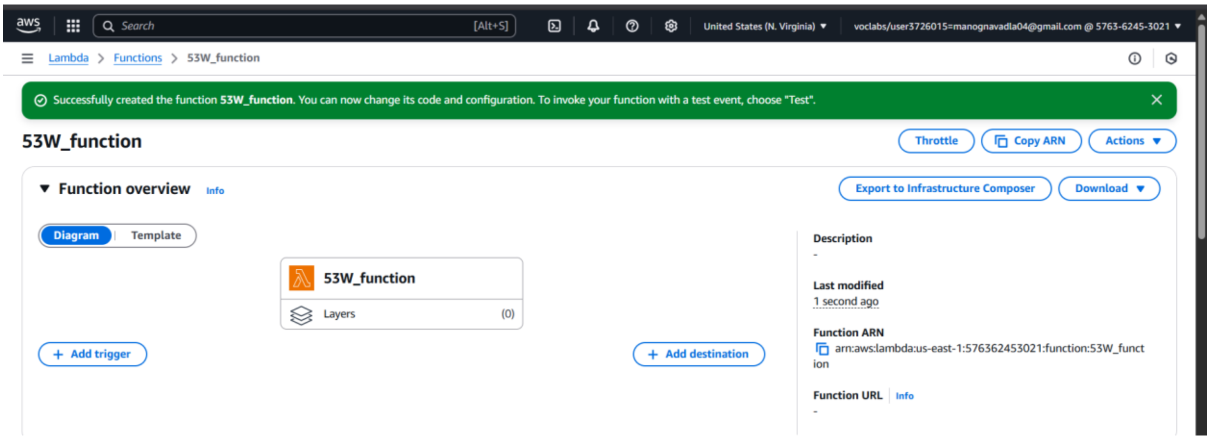
Lambda function created successfully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Lambda > Functions > 53W_function

Successfully created the function **53W_function**. You can now change its code and configuration. To invoke your function with a test event, choose "Test".

53W_function

Throttle
Copy ARN
Actions ▼
Export to Infrastructure Composer
Download ▼
Diagram
Template
Layers (0)
Add trigger
Add destination

▼ Function overview Info

53W_function

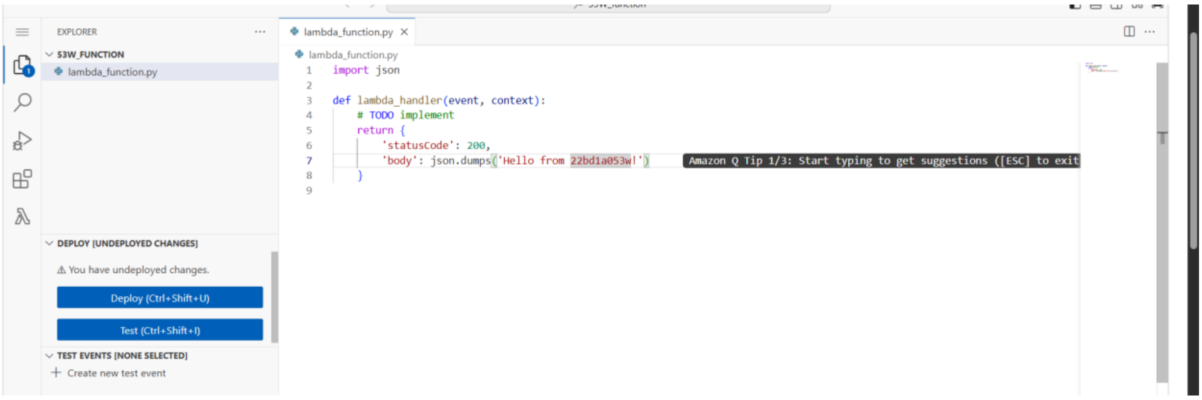
Description
-

Last modified
1 second ago

Function ARN
arn:aws:lambda:us-east-1:576362453021:function:53W_function

Function URL Info
-

Change the lambda_function.py and click on deploy



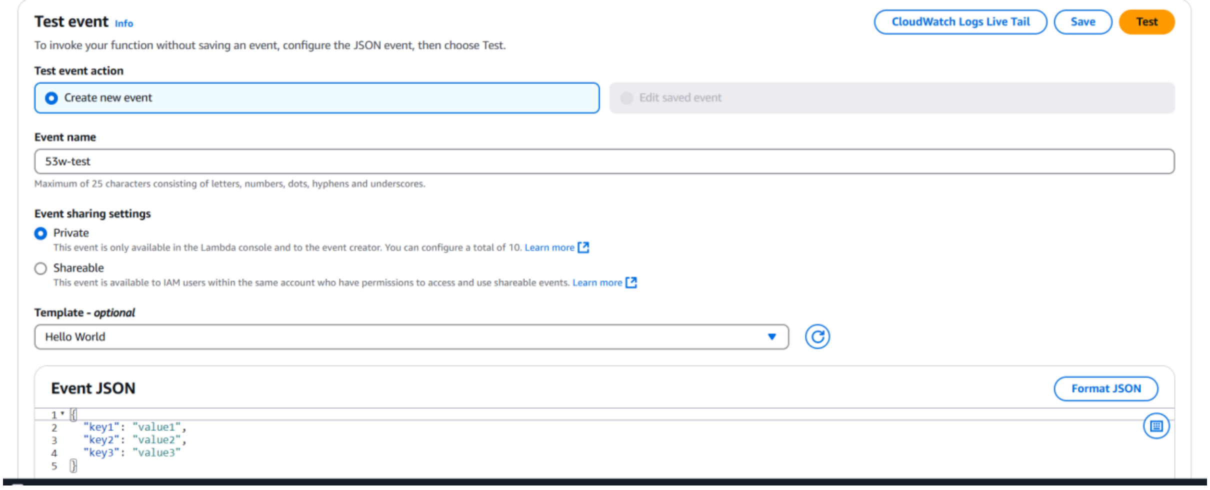
EXPLORER
53W_FUNCTION
lambda_function.py
DEPLOY [UNDEPLOYED CHANGES]
⚠ You have undeployed changes.
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
+ Create new test event
lambda_function.py
Amazon Q Tip 1/3: Start typing to get suggestions ([ESC] to exit

```python
import json

def lambda_handler(event, context):
    # TODO implement
    return {
        'statusCode': 200,
        'body': json.dumps('Hello from 22bd1a053w!')
    }

```

After the deployment is successful, in the tests section, create a new test and click on test to run the test



To invoke your function without saving an event, configure the JSON event, then choose Test.

Test event action

● Create new event ○ Edit saved event

Event name

53w-test

Maximum of 25 characters consisting of letters, numbers, dots, hyphens and underscores.

Event sharing settings

● Private

This event is only available in the Lambda console and to the event creator. You can configure a total of 10. Learn more

○ Shareable

This event is available to IAM users within the same account who have permissions to access and use shareable events. Learn more

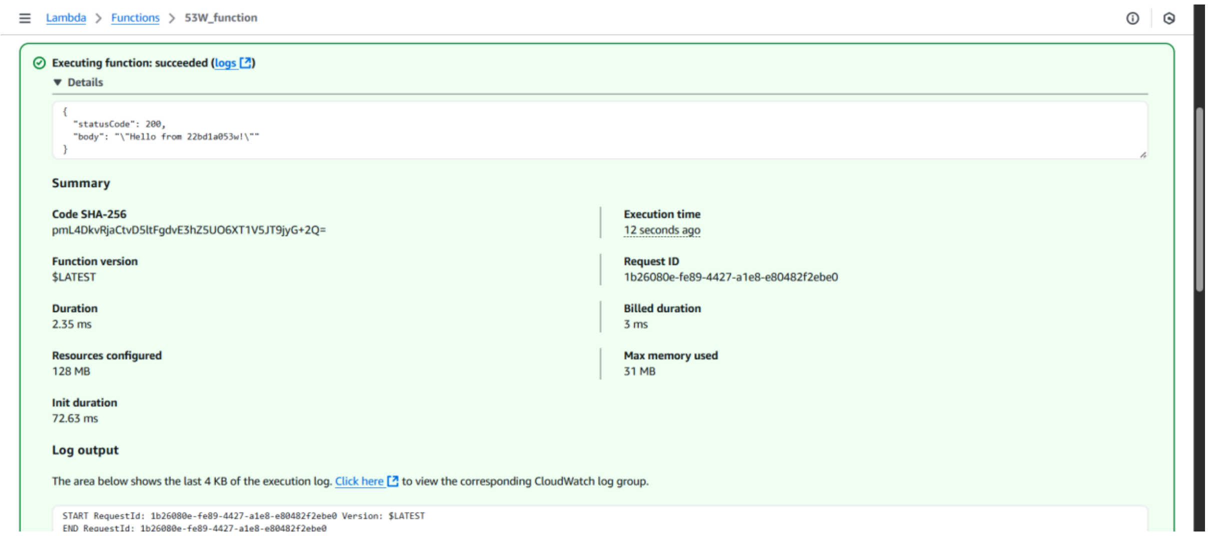
Template - *optional*

Hello World

Event JSON

```json
{
  "key1": "value1",
  "key2": "value2",
  "key3": "value3"
}
```

Test was successful



Executing function: succeeded (logs)

▼ Details

```
{
  "statusCode": 200,
  "body": "\"Hello from 22bd1a053w!\""
}
```

Summary

Code SHA-256
pmL4DkvRjaCtvD5ltFgdvE3hZ5UO6XT1V5JT9jyG+2Q=

Execution time
12 seconds ago

Function version
$LATEST

Request ID
1b26080e-fe89-4427-a1e8-e80482f2ebe0

Duration
2.35 ms

Billed duration
3 ms

Resources configured
128 MB

Max memory used
31 MB

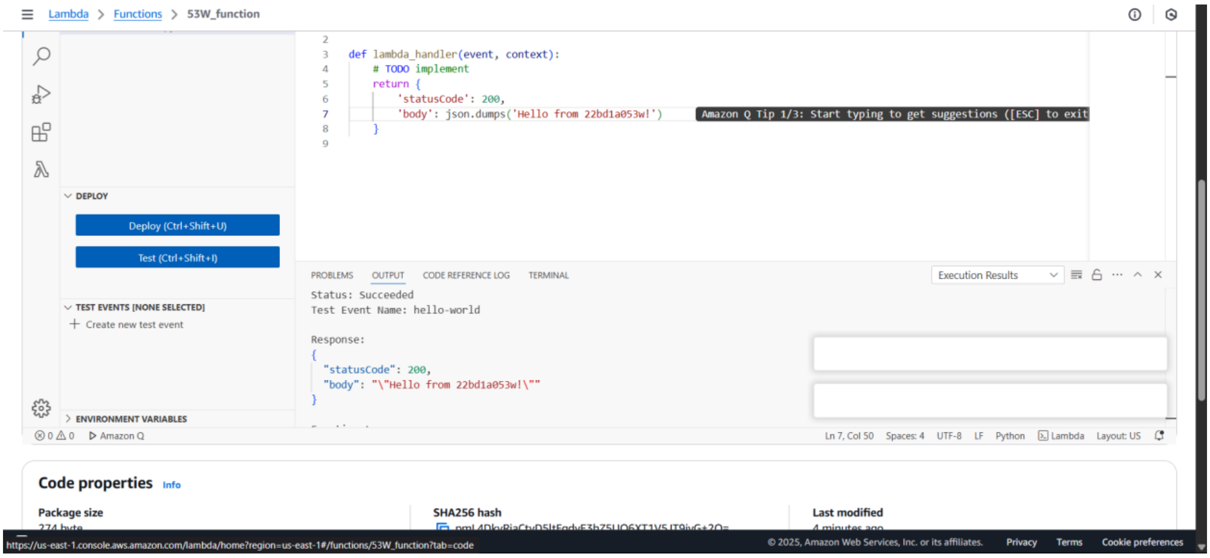
Init duration
72.63 ms

Log output

The area below shows the last 4 KB of the execution log. Click here to view the corresponding CloudWatch log group.

```
START RequestId: 1b26080e-fe89-4427-a1e8-e80482f2ebe0 Version: $LATEST
END RequestId: 1b26080e-fe89-4427-a1e8-e80482f2ebe0
```

We can see the output in the code section



```python

def lambda_handler(event, context):
    # TODO implement
    return {
        'statusCode': 200,
        'body': json.dumps('Hello from 22bd1a053w!')
    }

```

Amazon Q Tip 1/3: Start typing to get suggestions ([ESC] to exit

```
Status: Succeeded
Test Event Name: hello-world

Response:
{
  "statusCode": 200,
  "body": "\"Hello from 22bd1a053w!\""
}
```

Ln 7, Col 50 Spaces: 4 UTF-8 LF Python Lambda Layout: US

Code properties Info

Package size: 274 byte

SHA256 hash: pmL4DkyRiaCtyD5ltFqdvE3h75UO6XT1V5JT9ivG+2Q=

Last modified: 4 minutes ago

https://us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/53W_function?tab=code

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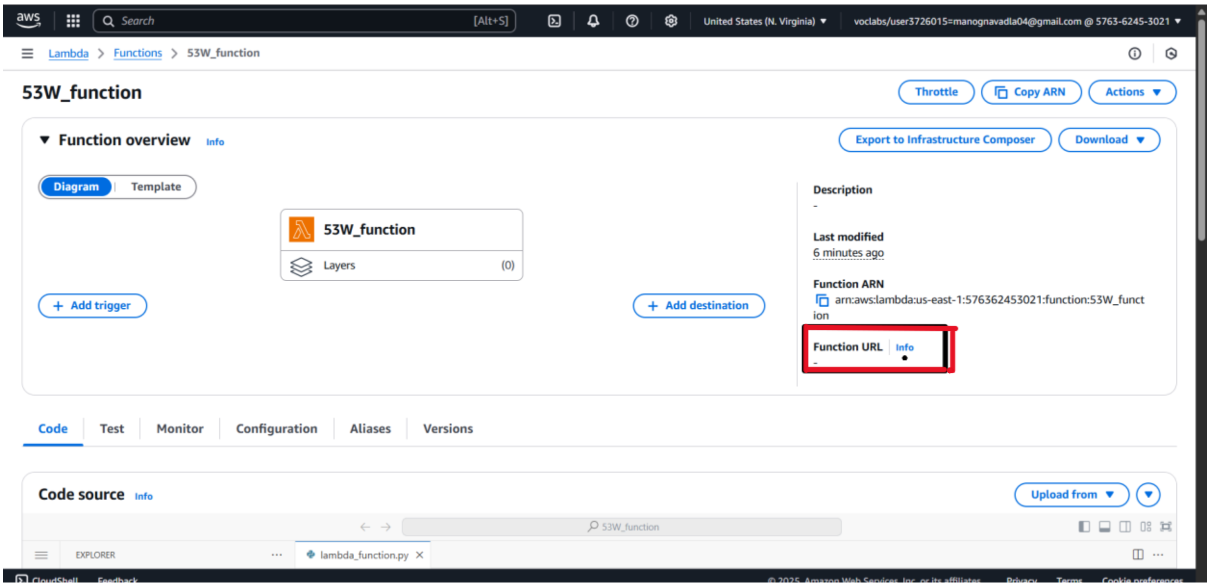
We cannot see the function url



53W_function

Function overview Info

Description: -

Last modified: 6 minutes ago

Function ARN: arn:aws:lambda:us-east-1:576362453021:function:53W_function

Function URL Info: -

Code source Info

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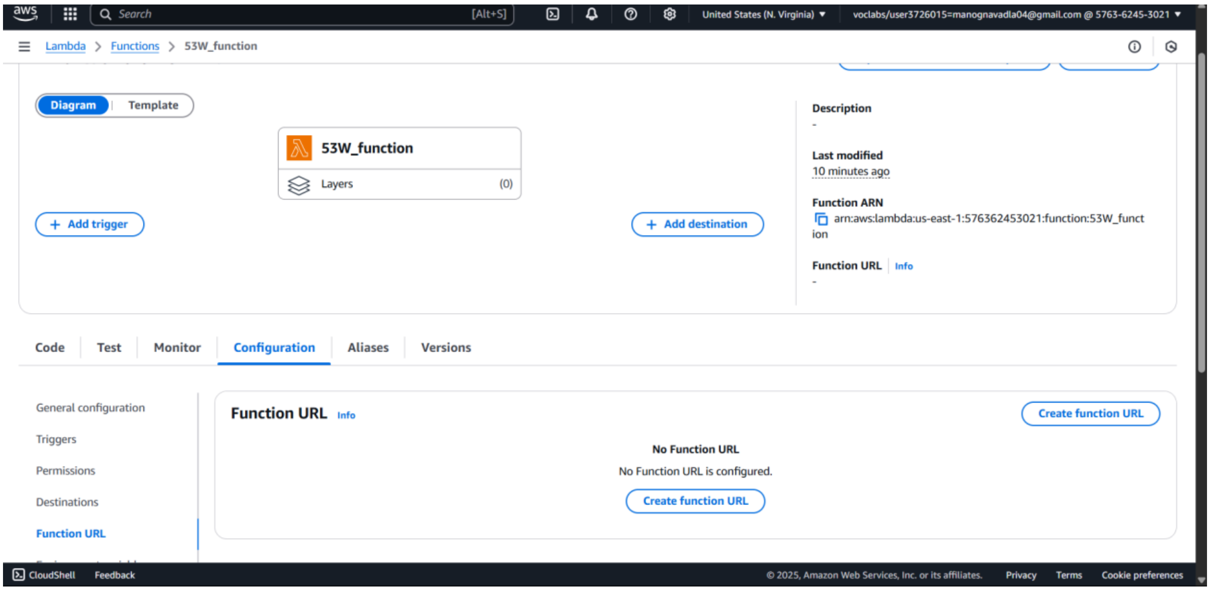
So inorder to create the function url, move to configuration section and in the function url , click on create new function url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Lambda > Functions > 53W_function
Diagram | Template
53W_function
Layers (0)
+ Add trigger
+ Add destination
Code | Test | Monitor | Configuration | Aliases | Versions
General configuration
Triggers
Permissions
Destinations
Function URL
Create function URL
CloudShell Feedback
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Description
-

Last modified
10 minutes ago

Function ARN
arn:aws:lambda:us-east-1:576362453021:function:53W_function

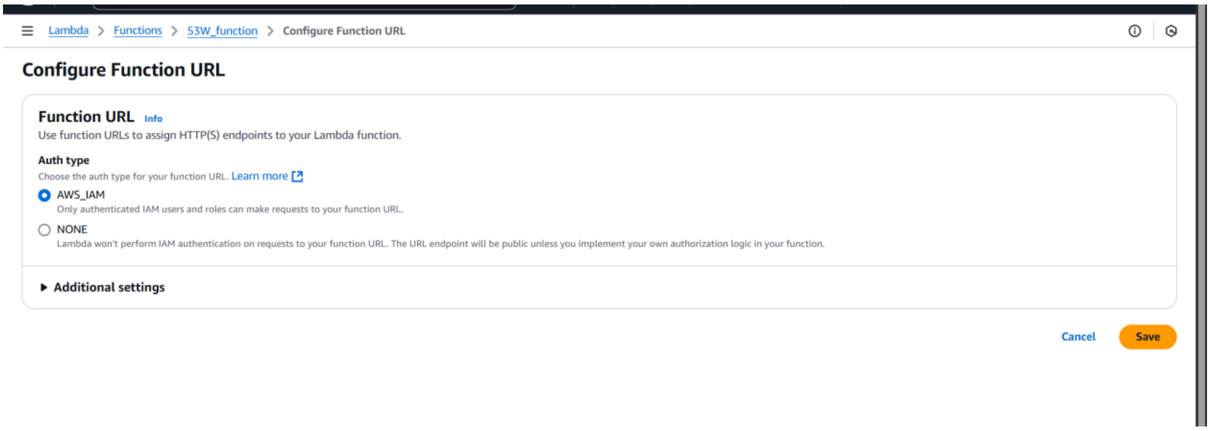
Function URL Info
-

Function URL Info

No Function URL

No Function URL is configured.

Select AWS_IAM and click on save



Configure Function URL

Function URL Info

Use function URLs to assign HTTP(S) endpoints to your Lambda function.

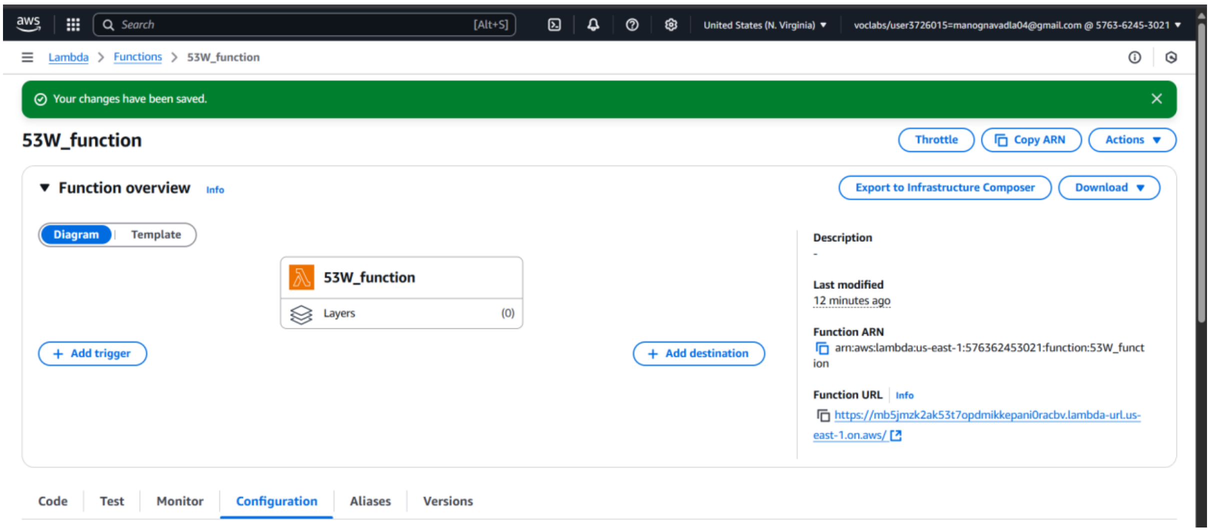
Auth type

Choose the auth type for your function URL. Learn more

● AWS_IAM
Only authenticated IAM users and roles can make requests to your function URL.

○ NONE
Lambda won't perform IAM authentication on requests to your function URL. The URL endpoint will be public unless you implement your own authorization logic in your function.

We can see that the Funtion url is now created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Lambda > Functions > 53W_function
53W_function
Throttle
Copy ARN
Actions ▾
Function overview Info
Export to Infrastructure Composer
Download ▾
Diagram | Template
53W_function
Layers (0)
+ Add trigger
+ Add destination
Code | Test | Monitor | Configuration | Aliases | Versions

Your changes have been saved.

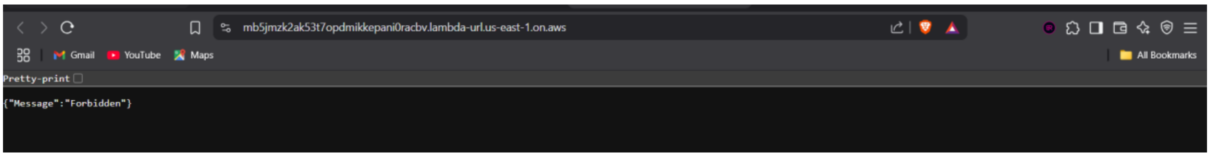
Description
-

Last modified
12 minutes ago

Function ARN
arn:aws:lambda:us-east-1:576362453021:function:53W_function

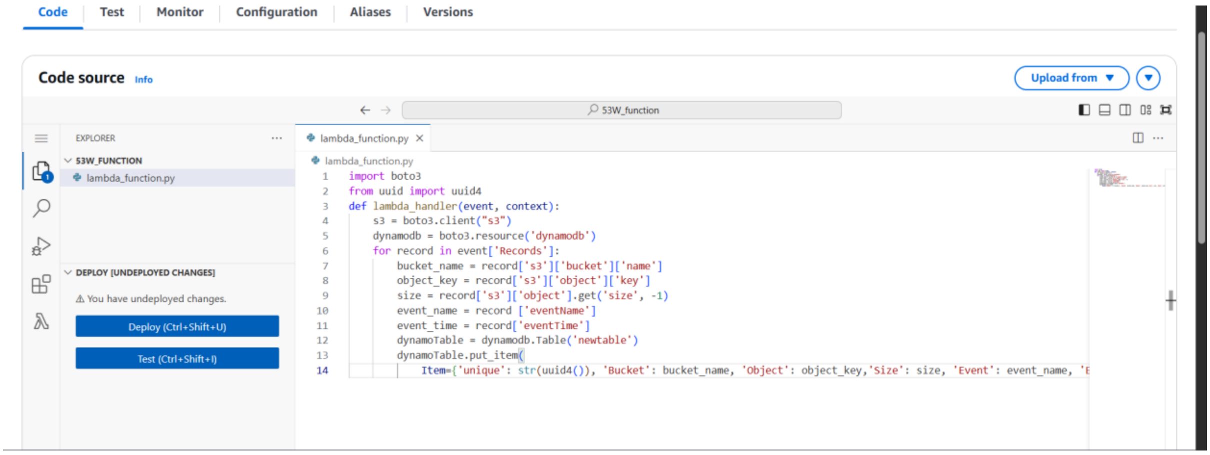
Function URL Info
https://mb5jmzk2ak53t7opdmikkepani0racbv.lambda-url.us-east-1.on.aws/

When the link is opened, we get error


mb5jmzk2ak53t7opdmikkepani0racbv.lambda-url.us-east-1.on.aws
Gmail
YouTube
Maps
All Bookmarks
Pretty-print □

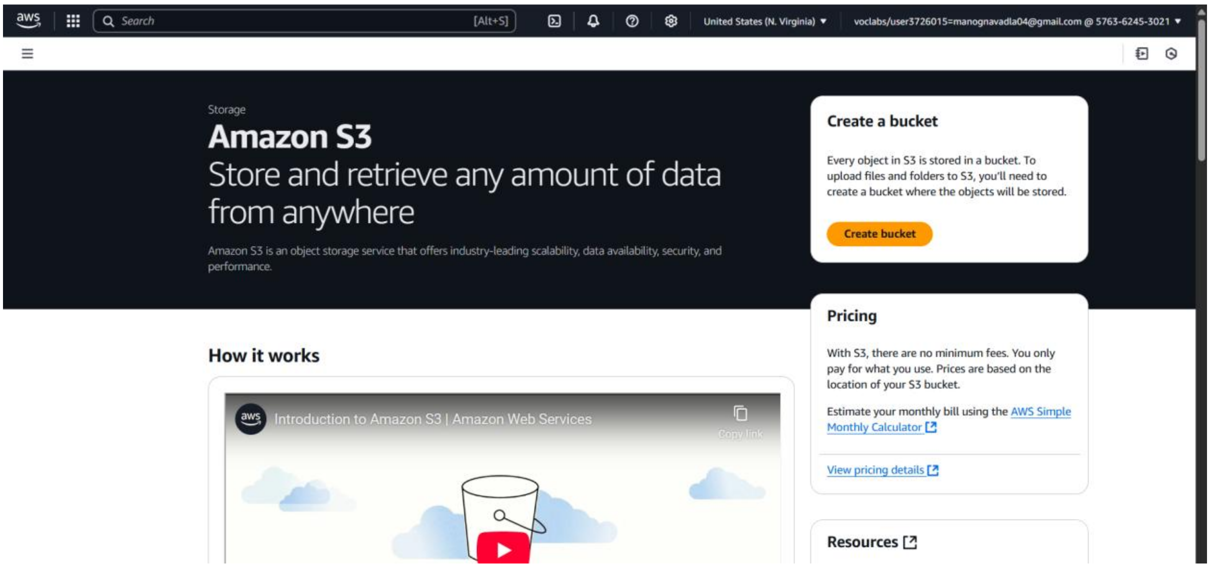
```
{"Message":"Forbidden"}
```

Now copy the code from github, And paste it into the code source part



```python
import boto3
from uuid import uuid4
def lambda_handler(event, context):
    s3 = boto3.client("s3")
    dynamodb = boto3.resource('dynamodb')
    for record in event['Records']:
        bucket_name = record['s3']['bucket']['name']
        object_key = record['s3']['object']['key']
        size = record['s3']['object'].get('size', -1)
        event_name = record ['eventName']
        event_time = record['eventTime']
        dynamoTable = dynamodb.Table('newtable')
        dynamoTable.put_item(
            Item={'unique': str(uuid4()), 'Bucket': bucket_name, 'Object': object_key,'Size': size, 'Event': event_name, 'E
```

Navigate to S3 bucket service on AWS console and click on create bucket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Storage
Amazon S3
Store and retrieve any amount of data from anywhere
Create bucket
View pricing details
Introduction to Amazon S3 | Amazon Web Services
Copy link

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

How it works

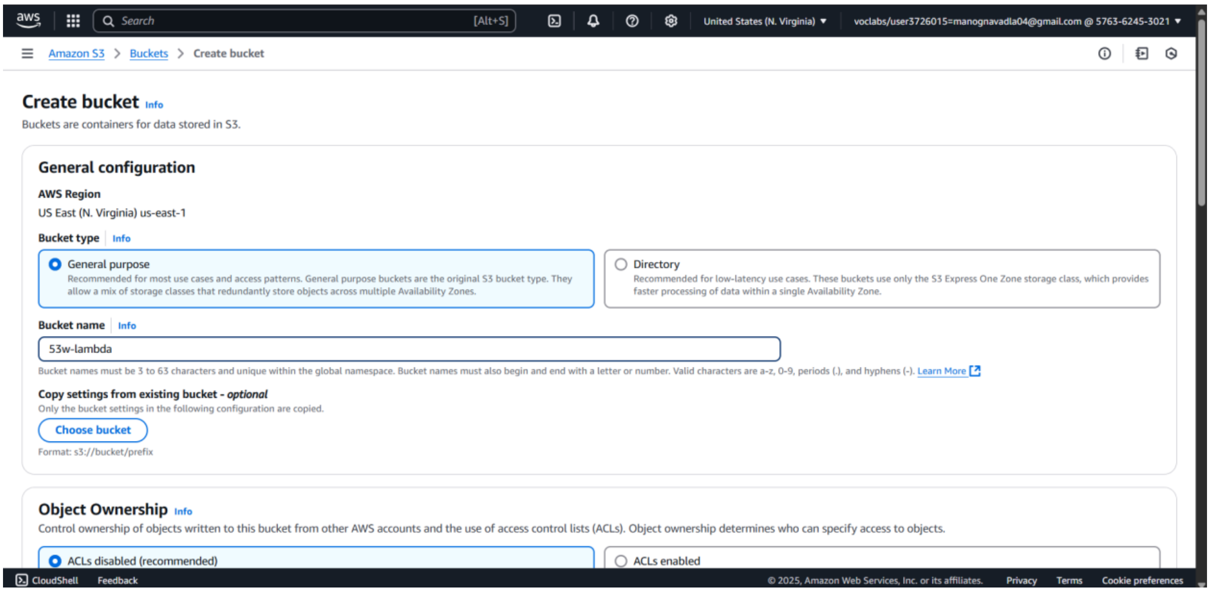
Pricing

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Estimate your monthly bill using the AWS Simple Monthly Calculator

Resources

Now create a s3 bucket, with default config(53w-lambda)



Amazon S3 > Buckets > Create bucket

Create bucket

Buckets are containers for data stored in S3.

General configuration

AWS Region

US East (N. Virginia) us-east-1

Bucket type

● General purpose
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

○ Directory
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name

53w-lambda

Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). Learn More

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Choose bucket

Format: s3://bucket/prefix

Object Ownership

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

● ACLs disabled (recommended)

○ ACLs enabled

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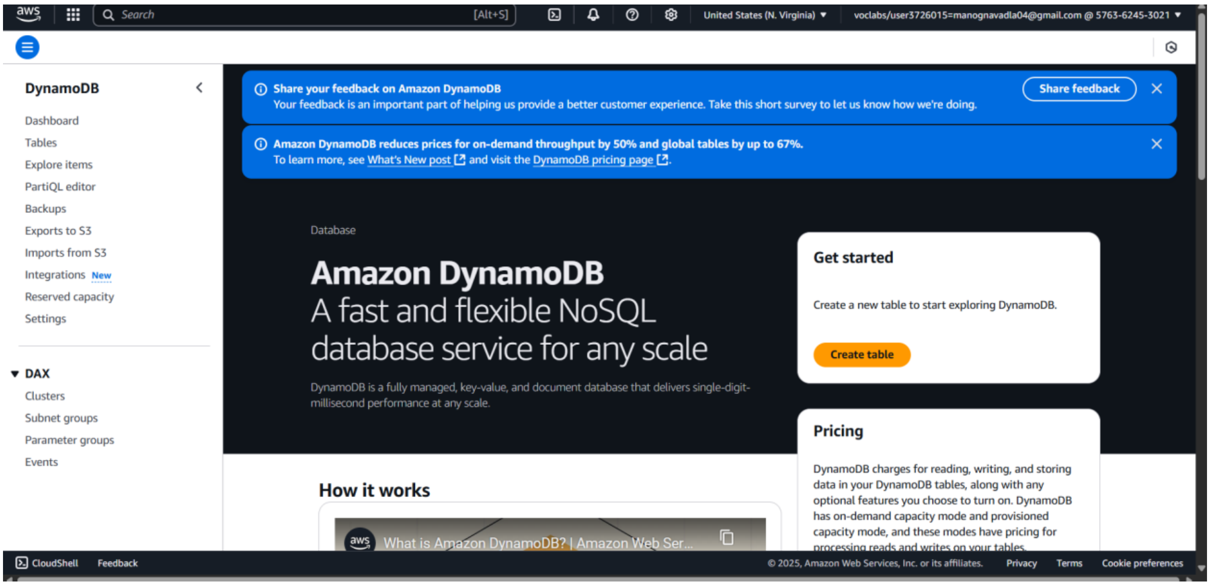
Now navigate to DynamoDB on AWS console and click on create table



Share your feedback on Amazon DynamoDB
Your feedback is an important part of helping us provide a better customer experience. Take this short survey to let us know how we're doing.

Amazon DynamoDB reduces prices for on-demand throughput by 50% and global tables by up to 67%.
To learn more, see What's New post and visit the DynamoDB pricing page.

Database

Amazon DynamoDB
A fast and flexible NoSQL database service for any scale

DynamoDB is a fully managed, key-value, and document database that delivers single-digit-millisecond performance at any scale.

Get started

Create a new table to start exploring DynamoDB.

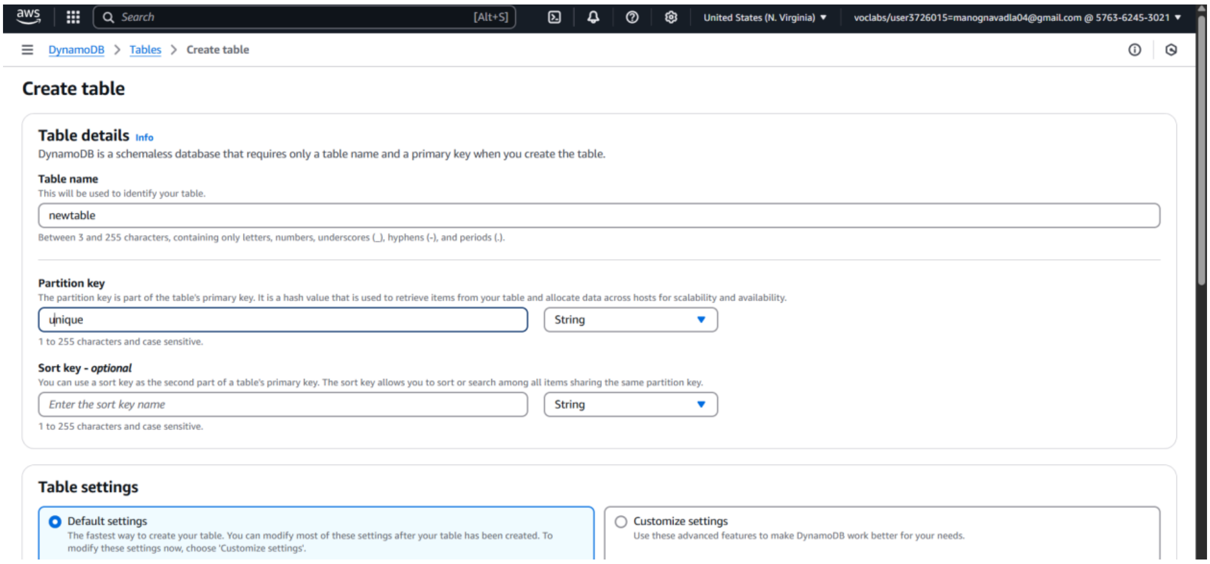
Create table

Pricing

DynamoDB charges for reading, writing, and storing data in your DynamoDB tables, along with any optional features you choose to enable. DynamoDB has on-demand capacity mode and provisioned capacity mode, and these modes have pricing for processing reads and writes on your tables.

How it works

Name the table as “newtable” and set the partition key as “unique”



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DynamoDB > Tables > Create table

Create table

Table details Info

DynamoDB is a schemaless database that requires only a table name and a primary key when you create the table.

Table name
This will be used to identify your table.
newtable
Between 3 and 255 characters, containing only letters, numbers, underscores (_), hyphens (-), and periods (.).

Partition key
The partition key is part of the table's primary key. It is a hash value that is used to retrieve items from your table and allocate data across hosts for scalability and availability.
unique | String ▼
1 to 255 characters and case sensitive.

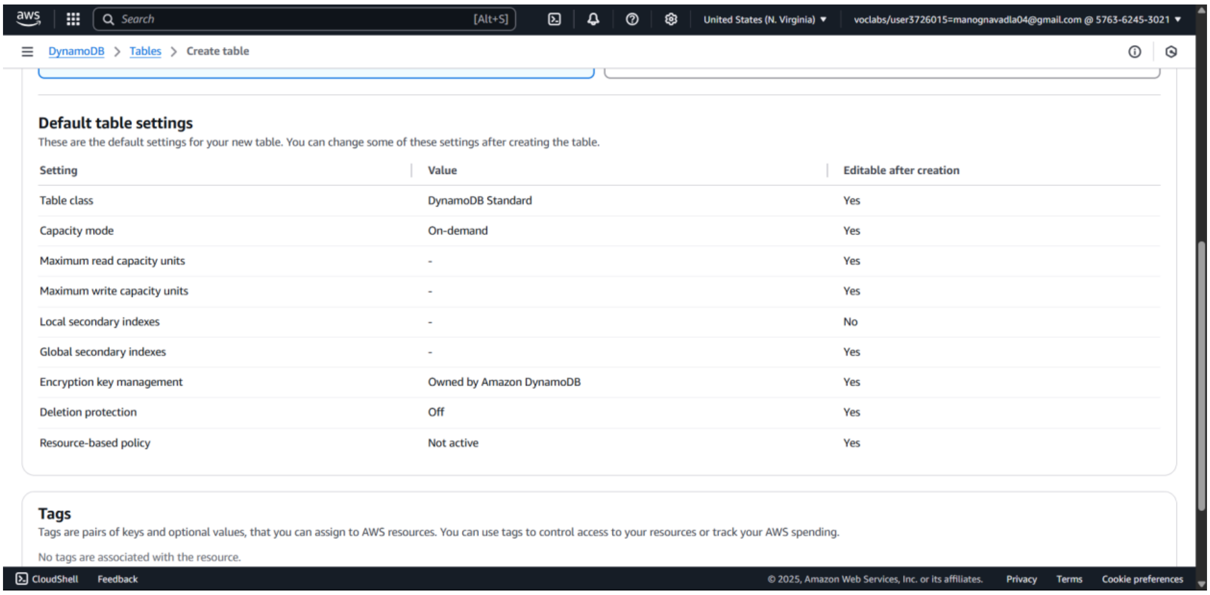
Sort key - *optional*
You can use a sort key as the second part of a table's primary key. The sort key allows you to sort or search among all items sharing the same partition key.
Enter the sort key name | String ▼
1 to 255 characters and case sensitive.

Table settings

● Default settings
The fastest way to create your table. You can modify most of these settings after your table has been created. To modify these settings now, choose 'Customize settings'.

○ Customize settings
Use these advanced features to make DynamoDB work better for your needs.

And leave the rest of the settings as default and then click on create table



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DynamoDB > Tables > Create table

Default table settings

These are the default settings for your new table. You can change some of these settings after creating the table.

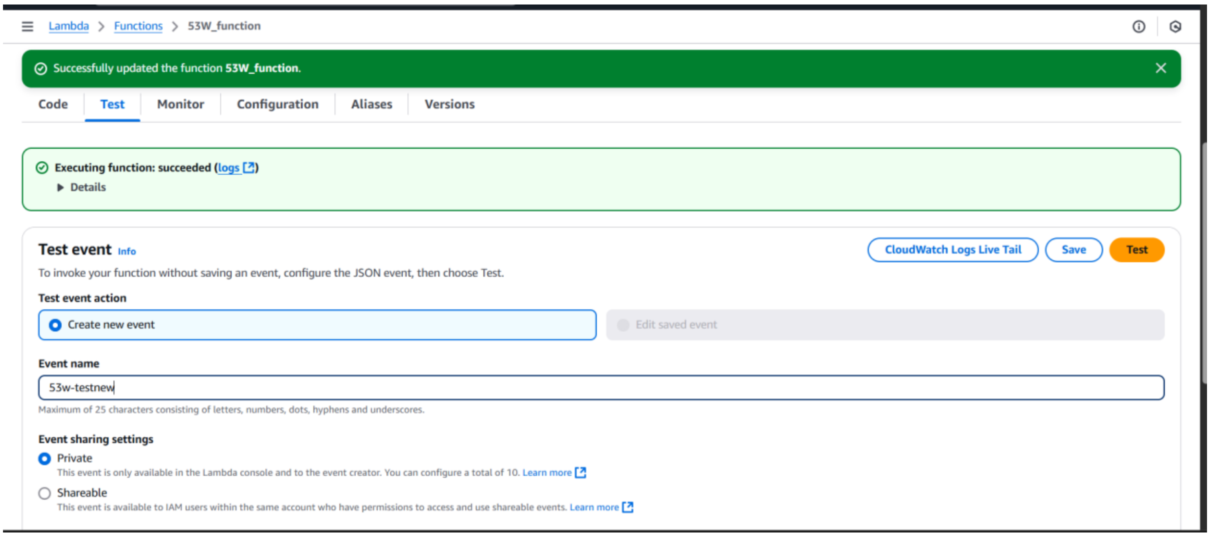
Setting	Value	Editable after creation
Table class	DynamoDB Standard	Yes
Capacity mode	On-demand	Yes
Maximum read capacity units	-	Yes
Maximum write capacity units	-	Yes
Local secondary indexes	-	No
Global secondary indexes	-	Yes
Encryption key management	Owned by Amazon DynamoDB	Yes
Deletion protection	Off	Yes
Resource-based policy	Not active	Yes

Tags

Tags are pairs of keys and optional values, that you can assign to AWS resources. You can use tags to control access to your resources or track your AWS spending.

No tags are associated with the resource.

Now deploy the new code and create a new test and test the code



Successfully updated the function **53W_function**.

Executing function: succeeded (logs)

▸ Details

Test event

To invoke your function without saving an event, configure the JSON event, then choose Test.

Test event action

● Create new event ○ Edit saved event

Event name

53w-testnew

Maximum of 25 characters consisting of letters, numbers, dots, hyphens and underscores.

Event sharing settings

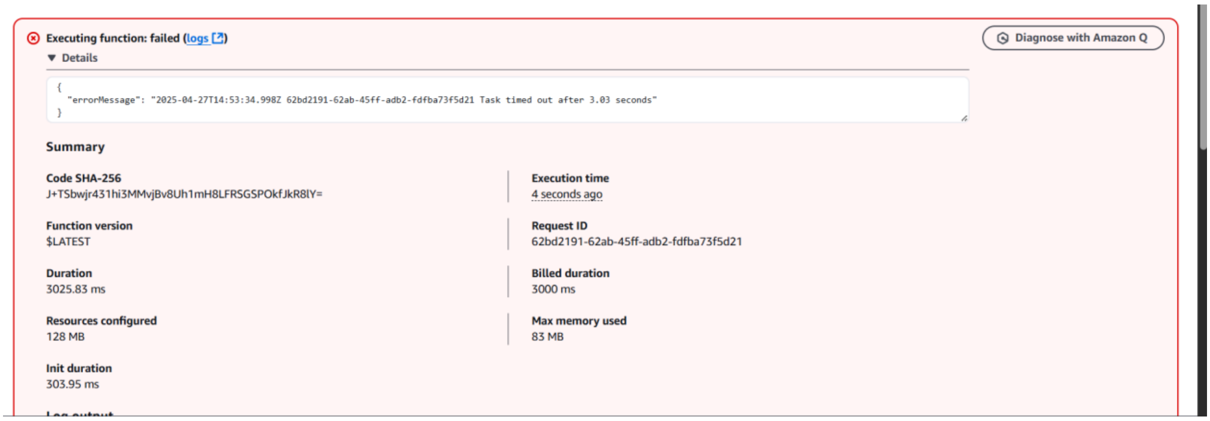
● Private

This event is only available in the Lambda console and to the event creator. You can configure a total of 10. Learn more

○ Shareable

This event is available to IAM users within the same account who have permissions to access and use shareable events. Learn more

We can see the errors after the test is executed



Executing function: failed (logs)

▾ Details

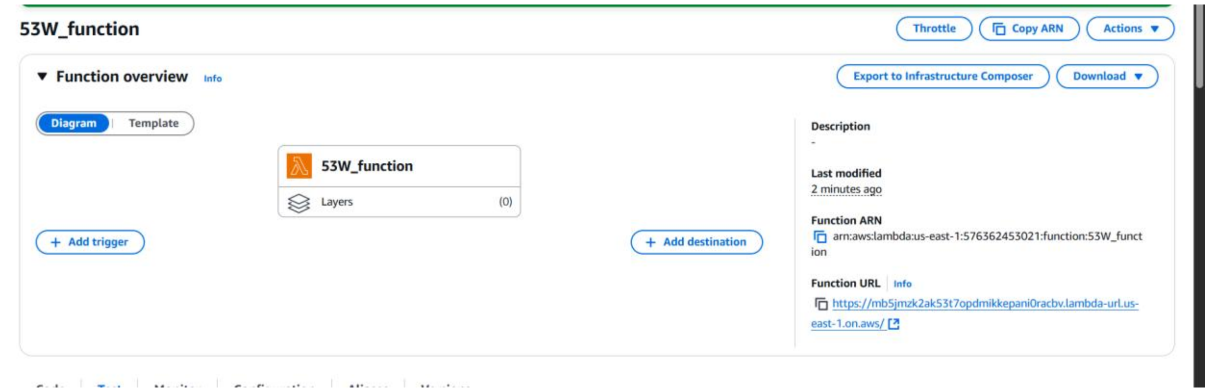
```
{
  "errorMessage": "2025-04-27T14:53:34.998Z 62bd2191-62ab-45ff-adb2-fdfba73f5d21 Task timed out after 3.03 seconds"
}
```

Summary

Code SHA-256 J+TSbwjr431hi3MMvjBv8Uh1mH8LFRSGSPOkfJkR8lY=	**Execution time** 4 seconds ago
Function version $LATEST	**Request ID** 62bd2191-62ab-45ff-adb2-fdfba73f5d21
Duration 3025.83 ms	**Billed duration** 3000 ms
Resources configured 128 MB	**Max memory used** 83 MB
Init duration 303.95 ms	

Log output

In order to make sure no errors occur, we need to create triggers accordingly



Description

-

Last modified

2 minutes ago

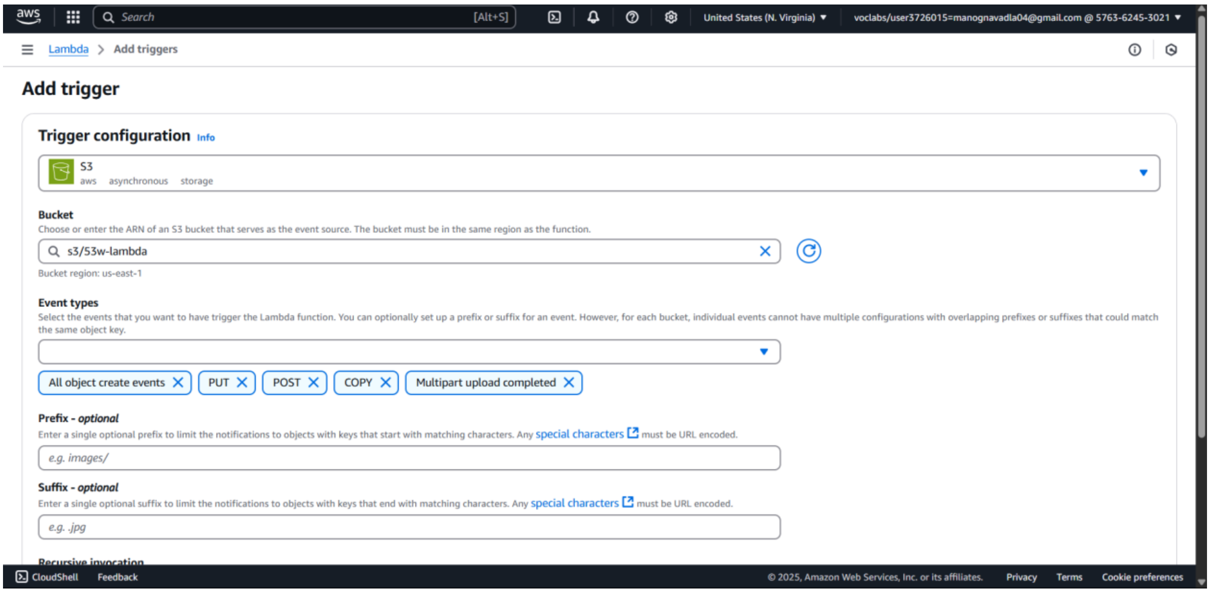
Function ARN

arn:aws:lambda:us-east-1:576362453021:function:53W_function

Function URL Info

https://mb5jmzk2ak53t7opdmikkepani0racbv.lambda-url.us-east-1.on.aws/

Select S3 as the trigger source



Lambda > Add triggers

Add trigger

Trigger configuration Info

S3
aws asynchronous storage

Bucket
Choose or enter the ARN of an S3 bucket that serves as the event source. The bucket must be in the same region as the function.

s3/53w-lambda

Bucket region: us-east-1

Event types
Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

All object create events ✕ | PUT ✕ | POST ✕ | COPY ✕ | Multipart upload completed ✕

Prefix - *optional*
Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters. Any special characters must be URL encoded.

e.g. images/

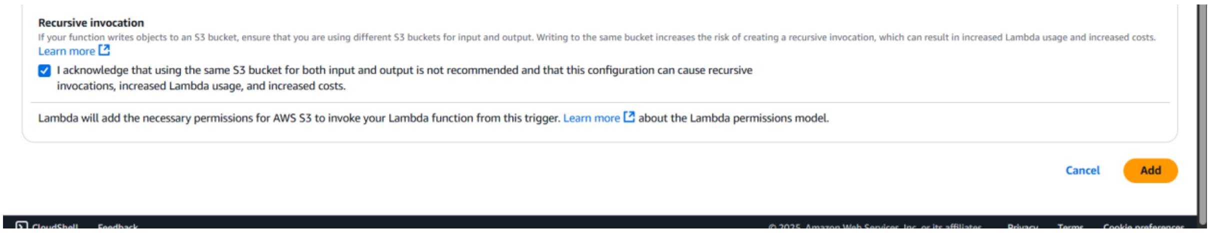
Suffix - *optional*
Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters. Any special characters must be URL encoded.

e.g. .jpg

Recursive invocation

aws
Search [Alt+S]
United States (N. Virginia) ▼
voclabs/user3726015=manognavadla04@gmail.com @ 5763-6245-3021 ▼
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

Select the checkbox and click on add

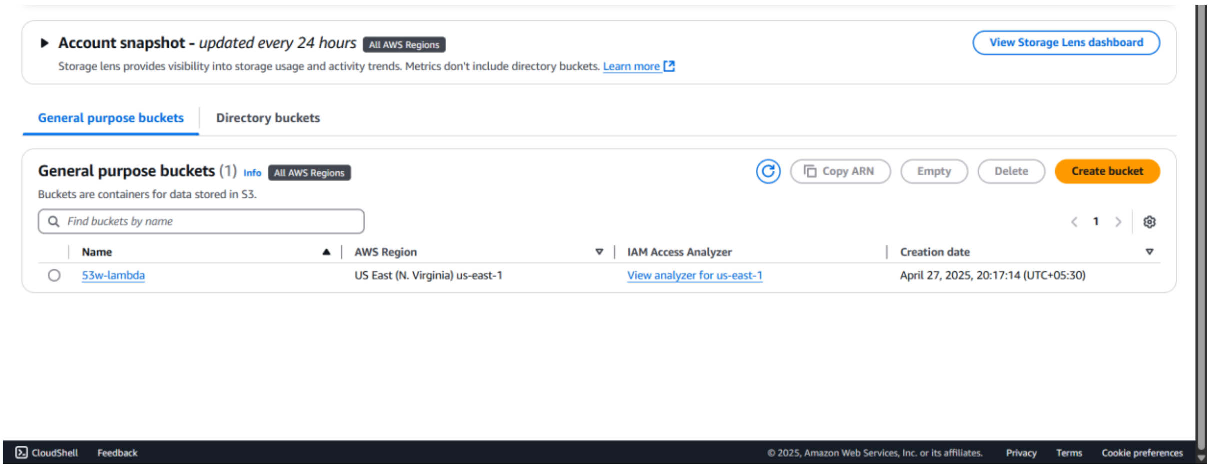


Recursive invocation
If your function writes objects to an S3 bucket, ensure that you are using different S3 buckets for input and output. Writing to the same bucket increases the risk of creating a recursive invocation, which can result in increased Lambda usage and increased costs. Learn more

☑ I acknowledge that using the same S3 bucket for both input and output is not recommended and that this configuration can cause recursive invocations, increased Lambda usage, and increased costs.

Lambda will add the necessary permissions for AWS S3 to invoke your Lambda function from this trigger. Learn more about the Lambda permissions model.

Now go to the s3 bucket that we created

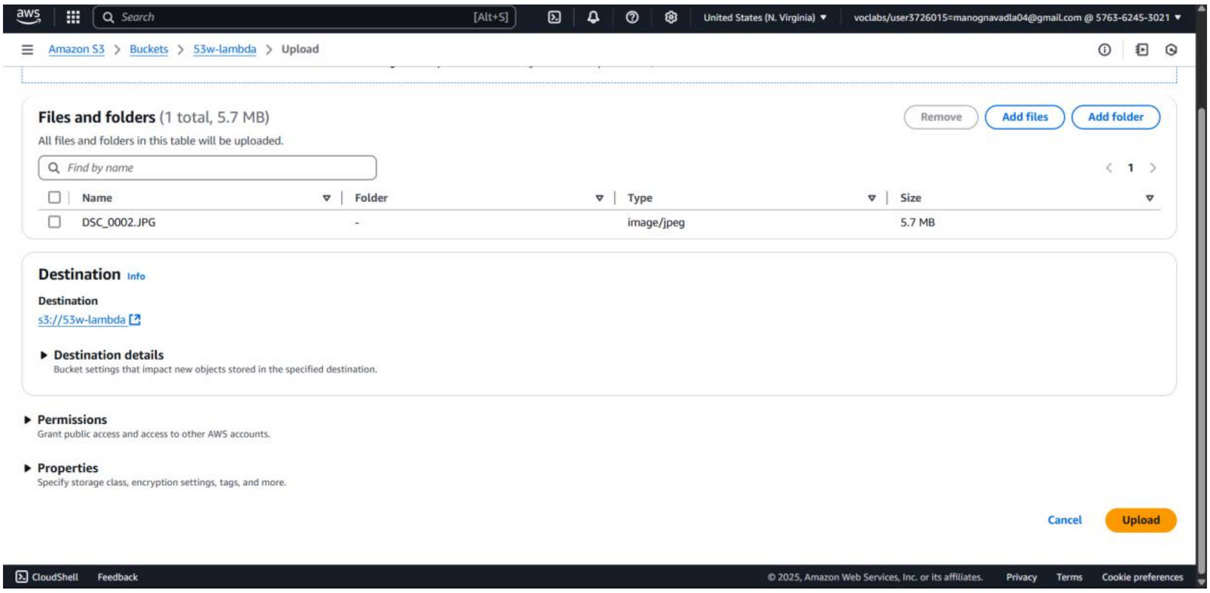


▶ **Account snapshot -** *updated every 24 hours* All AWS Regions
Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. Learn more

General purpose buckets (1) Info All AWS Regions
Buckets are containers for data stored in S3.

	Name	AWS Region	IAM Access Analyzer	Creation date
○	53w-lambda	US East (N. Virginia) us-east-1	View analyzer for us-east-1	April 27, 2025, 20:17:14 (UTC+05:30)

click on upload And upload some file into it



aws
Search [Alt+S]
United States (N. Virginia) ▼
voclabs/user3726015=manognavadla04@gmail.com @ 5763-6245-3021 ▼
Amazon S3 > Buckets > 53w-lambda > Upload
Remove
Add files
Add folder
Find by name
Cancel
Upload
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

Files and folders (1 total, 5.7 MB)

All files and folders in this table will be uploaded.

	Name	Folder	Type	Size
□	DSC_0002.JPG	-	image/jpeg	5.7 MB

Destination Info

Destination

s3://53w-lambda

▶ Destination details

Bucket settings that impact new objects stored in the specified destination.

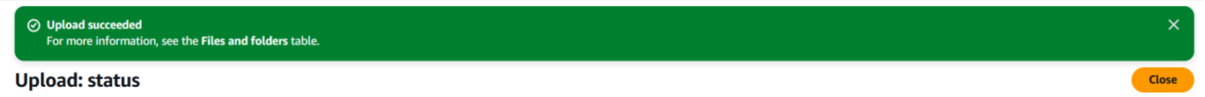
▶ Permissions

Grant public access and access to other AWS accounts.

▶ Properties

Specify storage class, encryption settings, tags, and more.

Upload successful

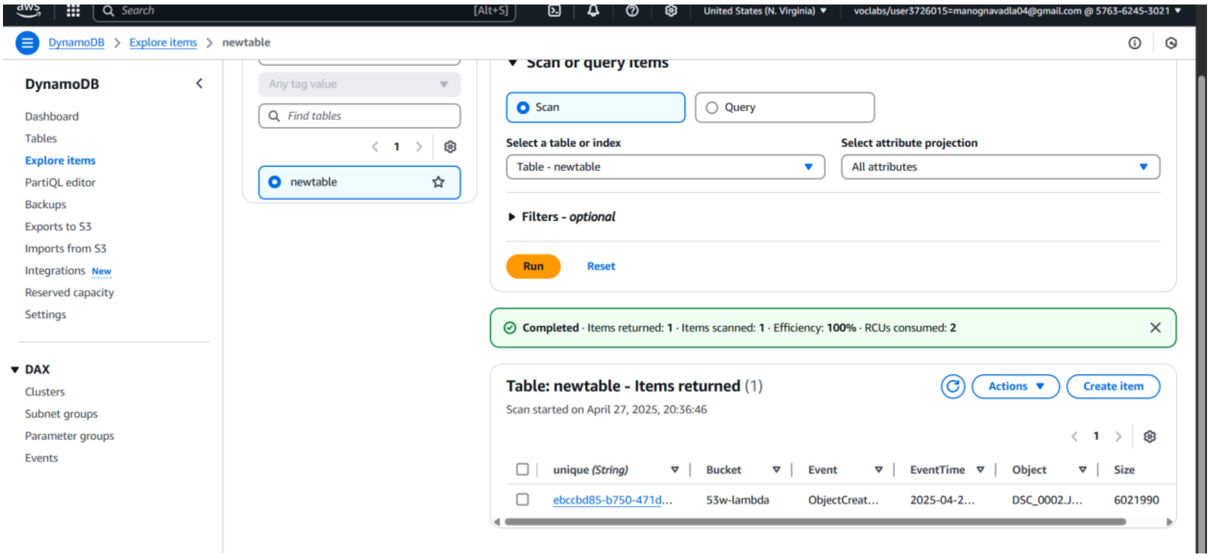


Upload succeeded

For more information, see the **Files and folders** table.

Upload: status

Now in the table that we created in DynamoDB, in the explore items page we can see that the file that we uploaded in the s3 bucket is reflected here



▼ Scan or query items

● Scan ○ Query

Select a table or index: Table - newtable

Select attribute projection: All attributes

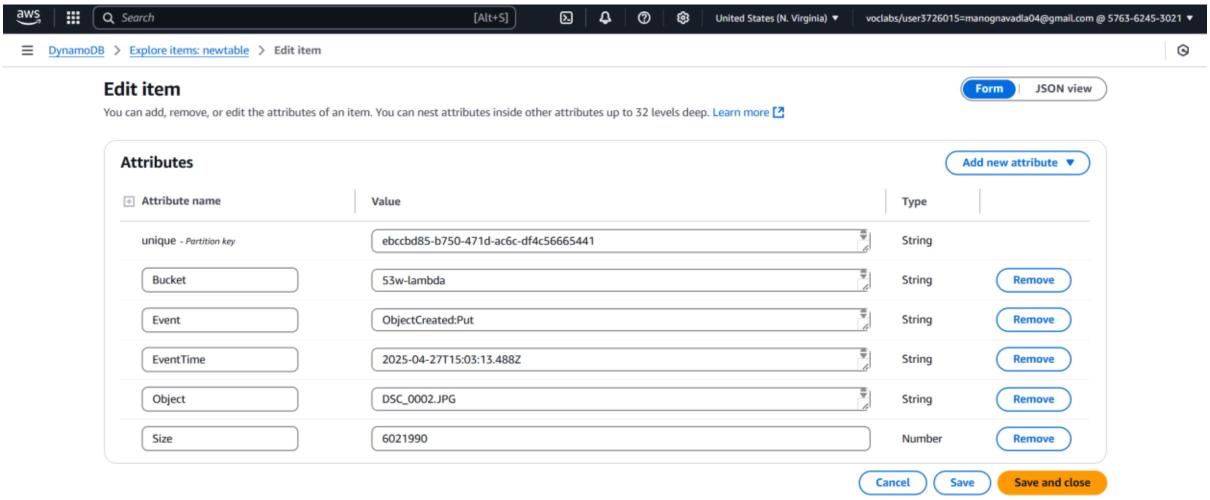
▶ Filters - *optional*

Completed · Items returned: 1 · Items scanned: 1 · Efficiency: 100% · RCUs consumed: 2

Table: newtable - Items returned (1)

Scan started on April 27, 2025, 20:36:46

	unique (*String*)	Bucket	Event	EventTime	Object	Size
□	ebccbd85-b750-471d...	53w-lambda	ObjectCreat...	2025-04-2...	DSC_0002.J...	6021990



aws
Search [Alt+S]
United States (N. Virginia) ▼
voclabs/user3726015=manognavadla04@gmail.com @ 5763-6245-3021 ▼
DynamoDB > Explore items: newtable > Edit item
Form
JSON view
Add new attribute ▼
Cancel
Save
Save and close

Edit item

You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. Learn more

Attributes

Attribute name	Value	Type	
unique - *Partition key*	ebccbd85-b750-471d-ac6c-df4c56665441	String	
Bucket	53w-lambda	String	Remove
Event	ObjectCreated:Put	String	Remove
EventTime	2025-04-27T15:03:13.488Z	String	Remove
Object	DSC_0002.JPG	String	Remove
Size	6021990	Number	Remove