

EXPERIMENT-7:AWS Lambda

Steps:

Let's start by creating a Lambda Function.

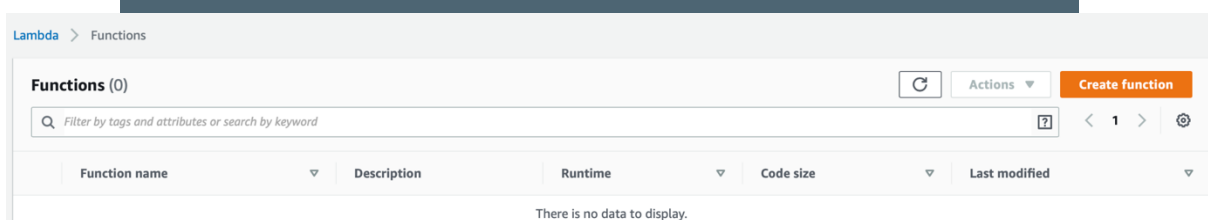
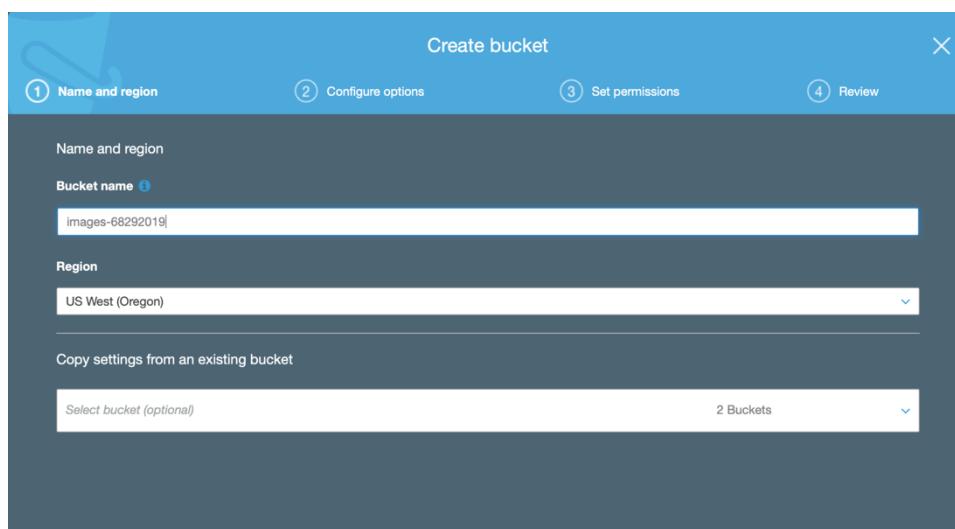
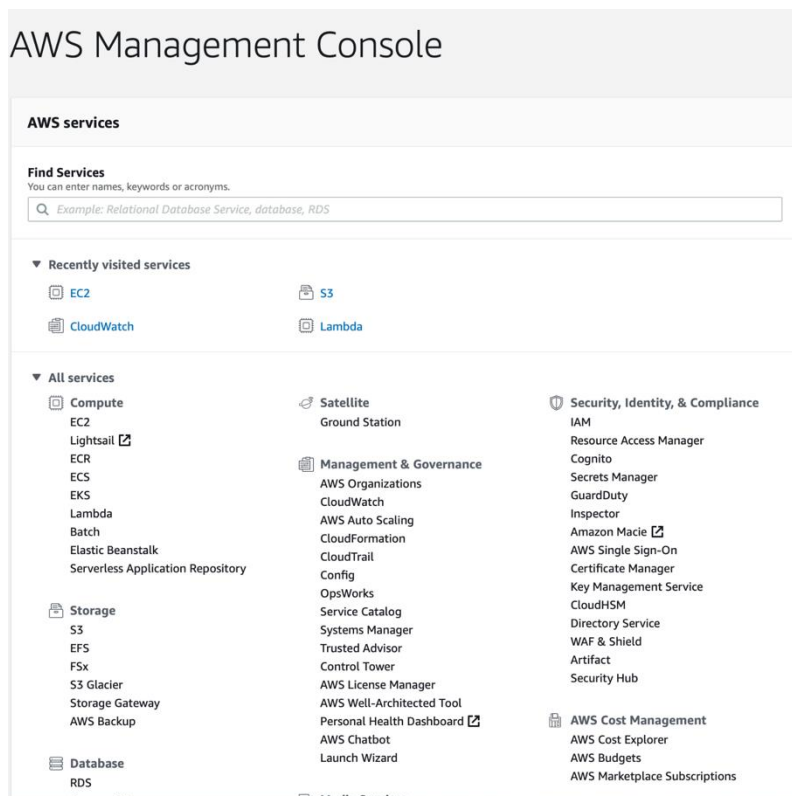
- After setting the AWS Account.
- Go and type **AWS Lambda** in your AWS Management console.
- Click on Create a Function.
- You'll see a setup page shows up where you have to fill up few aspects for your function as the name, runtime, role, you can choose from blueprints as well but here we're going to author it from scratch.
- Enter the name and all the credentials, now in case of the runtime, you can choose any based on your understanding of that language, we're choosing NodeJS 8.10, here you can choose from any option like python, java, .Net, Go (these are the languages it supports).
- Then create a role, you'll have to create a new role if you don't have one, either you create a new template for the role or leave the template blank.
- Like in our case, we've chosen an existing role that we have created
- As here we have already defined our role with the name of *service-role/shubh-intel*.
- The next step after this is **Writing Code** for your Lambda Function.
- We're choosing **Lambda Console** here, you can choose from different code editors like Cloud9 Editor or on your Local machine.
- You can check your function being created, as here we have created it with the name of *example-lambda*.
- When you created the function, you will be directed to a **Function Code** screen, where you will be defining your function, either you can choose the code from below or you can make your own template for it, it's quite easy.

```
exports.handler = async (event) => { // TODO implement
```

```
return 'Hello from Lambda!' };
```

- If you want to define the key value then you can, like here we've defined key1 and key2 and key 1= 'Hello from Lambda!'
- Then create the event like we created it with the name of *mytestevent* click **Save and Test** in order to run your function.
- After running it, you will get an output where you check the details and you will get the output as below:

Screenshots:



▼ Designer

+

 Add trigger

Create-Thumbnail

Layers (0)

Amazon CloudWatch Logs

Amazon S3

Resources that the function's role has access to appear here

Add trigger

Trigger configuration

S3

aws storage

▼

Bucket
Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

images-68292019 ▼

Event type
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 ▼

Prefix
Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.

e.g. images/

Suffix
Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.

e.g. .jpg

Lambda will add the necessary permissions for Amazon S3 to invoke your Lambda function from this trigger. [Learn more](#) about the Lambda permissions model.

☒ **Enable trigger**
Enable the trigger now, or create it in a disabled state for testing (recommended).

Cancel

Add

Function code [Info](#)

Code entry type

Upload a file from Amazon S3 ▼

Runtime

Python 3.7 ▼

Handler [Info](#)

CreateThumbnail.handler

Amazon S3 link URL

Paste an S3 link URL to your function code .zip.

<https://s3-us-west-2.amazonaws.com/us-west-2-aws-training/awssu-spl-88/2.3.prod/scripts/CreateThumbnail.zip>

Create-Thumbnail

Throttle

Qualifiers ▼

Actions ▼

Select a test event ▼

Test

Save

✔ The trigger images-68292019 was successfully added to function Create-Thumbnail. The function is now receiving events from the trigger.

×

Configure test event

A function can have up to 10 test events. The events are persisted so you can switch to another computer or web browser and test your function with the same events.

- ☒ Create new test event
- ☐ Edit saved test events

Event template

Amazon S3 Put ▼

Event name

Upload

```
2- "Records": [  
3-   {  
4-     "eventVersion": "2.0",  
5-     "eventSource": "aws:s3",  
6-     "awsRegion": "us-west-2",  
7-     "eventTime": "1970-01-01T00:00:00.000Z",  
8-     "eventName": "ObjectCreated:Put",  
9-     "userIdentity": {  
10-      "principalId": "EXAMPLE"  
11-    }  
12-   }  
13- ]
```

Configure test event

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Create new test event

Edit saved test events

Event template

Amazon S3 Put

Event name

Upload

13

"sourceIPAddress": "127.0.0.1"

14

},

15

"responseElements": {

16

"x-amz-request-id": "EXAMPLE123456789",

17

"x-amz-id-2": "EXAMPLE123/5678abcdefghijklmbdaisawesom/mnopqrstuvwxyzABCDEFGH

18

},

19

"s3": {

20

"s3SchemaVersion": "1.0",

21

"configurationId": "testConfigRule",

22

"bucket": {

23

"name": "images-68292019",

24

"ownerIdentity": {

25

"principalId": "EXAMPLE"

26

},

27

"arn": "arn:aws:s3:::images-68292019"

28

},

29

"object": {

30

"key": "HappyFace.jpg",

31

"size": 1024,

32

"eTag": "0123456789abcdef0123456789abcdef",

33

"sequencer": "0A1B2C3D4E5F678901"

34

}

35

}

36

}

37

}

38

}

Cancel

Create

Lambda > Functions > Create-Thumbnail

ARN - arn:aws:lambda:us-west-2:556796510672:function:Create-Thumbnail

Create-Thumbnail

ThrottleQualifiersActionsUploadTestSave

Execution result: succeeded (logs)

Details

The area below shows the result returned by your function execution. [Learn more](#) about returning results from your function.

null

Summary

Code SHA-256

HDKILU+8k2GwuE02YjCSXBeYkrS5auTN90I84U5sY4=

Duration

1017.70 ms

Resources configured

128 MB

Request ID

acc51b3c-1663-4faf-a7e0-b148e900b3fd

Billed duration

1100 ms

Max memory used

88 MB Init Duration: 429.27 ms

Log output

The section below shows the logging calls in your code. These correspond to a single row within the CloudWatch log group corresponding to this Lambda function. [Click here](#) to view the CloudWatch log group.

START RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd Version: \$LATEST

END RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd

REPORT RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd Duration: 1017.70 ms Billed Duration: 1100 ms Memory Size: 128 MB Max Memory Used: 88 MB Init Duration: 429.27 ms

S3 buckets

Discover the console

Search for buckets

All access types

Create bucketEdit public access settingsEmptyDelete

4 Buckets2 Regions

Bucket name	Access	Region	Date created
images-68292019		US West (Oregon)	Nov 20, 2019 7:13:22 PM GMT+0530
images-68292019-resized		US West (Oregon)	Nov 20, 2019 7:13:41 PM GMT+0530
qi-cl-templates-1574257159-886161f815161e4-us-west-2		US West (Oregon)	Nov 20, 2019 7:09:21 PM GMT+0530
qitrail-lab-2010-1574257162		US East (N. Virginia)	Nov 20, 2019 7:09:23 PM GMT+0530

HappyFace.jpg Latest version ▾

Overview

Properties

Permissions

Select from

Open

Download

Download as

Make public

Copy path

Owner

aws033345

Last modified

Nov 20, 2019 7:23:49 PM GMT+0530

Etag

06669e6fbde55b5a8e77f61fef9a2661

Storage class

Standard

Server-side encryption

None

Size

2.6 KB

Key

HappyFace.jpg

Object URL

<https://images-68292019-resized.s3-us-west-2.amazonaws.com/HappyFace.jpg>

Functions (1) ↻ Actions ▾ Create function

? < 1 > ⚙

Function name ▾	Description	Runtime ▾	Code size ▾	Last modified ▾
<input type="radio"/> Create-Thumbnail	Create a thumbnail-sized image	Python 3.7	13.7 MB	6 minutes ago

Create-Thumbnail Throttle Qualifiers ▾ Actions ▾ Upload ▾ Test Save

Configuration

Monitoring

CloudWatch metrics

View logs in CloudWatch

Add to dashboard 1h 3h 12h 1d 3d 1w custom ▾ ↻ ▾

CloudWatch > Log Groups > /aws/lambda/Create-Thumbnail > 2019/11/20/[\$LATEST]j035c46659c94ec7b4822ed82102b77b

Try CloudWatch Logs Insights

CloudWatch Logs Insights allows you to search and analyze your logs using a new, purpose-built query language. Click [here](#) to experience it. If you want to learn more, read [the AWS blog](#) or visit [our documentation](#).

Expand all Row Text ↻ ⚙ ⓘ

Filter events

all 2019-11-19 (13:53:47) ▾

Time (UTC +00:00)	Message
2019-11-20	No older events found at the moment. Retry .
13:53:47	START RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd Version: \$LATEST
START RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd Version: \$LATEST	
13:53:48	END RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd
END RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd	
13:53:48	REPORT RequestId: acc51b3c-1663-4faf-a7e0-b148e900b3fd Duration: 1017.70 ms Billed Duration: 1100 ms Memory Size: 128 MB Max Memory Used: 88 MB Init Duration: 429.27 ms
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↻ Loading newer events...