

PRACTICAL 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 STEPS:

1. Create a S3 bucket and give it a bucket name

Amazon S3 > Buckets > Create bucket

Create bucket [Info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region
Europe (Stockholm) eu-north-1

Bucket type [Info](#)

☒ **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 [Info](#)

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

2. Allow public access to the bucket as we are going to add this bucket as a trigger for our lambda function

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

- ☐ **Block all public access**
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.
 - ☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
 - ☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.
 - ☐ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
 - ☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

3. Give confirmation that you want to allow full public access and create the bucket



Turning off block all public access might result in this bucket and the objects within becoming public
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

☒ I acknowledge that the current settings might result in this bucket and the objects within becoming public.

4. You will see the confirmation that the bucket is created successfully

Successfully created bucket "exp12d15c"

View details

To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Account snapshot - updated every 24 hours

All AWS Regions

View Storage Lens dashboard

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

General purpose buckets

Directory buckets

5. Now we need to upload something in the bucket so click on the upload button and add a file

Amazon S3 > Buckets > exp12d15c

exp12d15c [Info](#)

Objects

Properties

Permissions

Metrics

Management

Access Points

Objects (0) [Info](#)

Refresh

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name

Type

Last modified

Size

Storage class

No objects

You don't have any objects in this bucket.

Upload

6. I have added a .png extension file; You can upload a .txt file as well

Upload [Info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (1 Total, 293.3 KB) Remove Add files Add folder

All files and folders in this table will be uploaded.

<input type="checkbox"/>	Name	Folder	Type
<input type="checkbox"/>	AppBar(title Text('Guidelines'),),...	-	image/png

7. Here you can see the confirmation that the upload was a success

✓ Upload succeeded
View details below.

Summary

Destination s3://exp12d15c	Succeeded ✓ 1 file, 293.3 KB (100.00%)	Failed ✗ 0 files, 0 B (0%)
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Files and folders | Configuration

Files and folders (1 Total, 293.3 KB)

Name	Folder	Type	Size	Status	Error
AppBar(title...	-	image/png	293.3 KB	✓ Succeeded	-

8. Now go back to the aws dashboard and search for lamda function service, Open the function we created in experiment 10. We are going to add this bucket as a trigger to this function

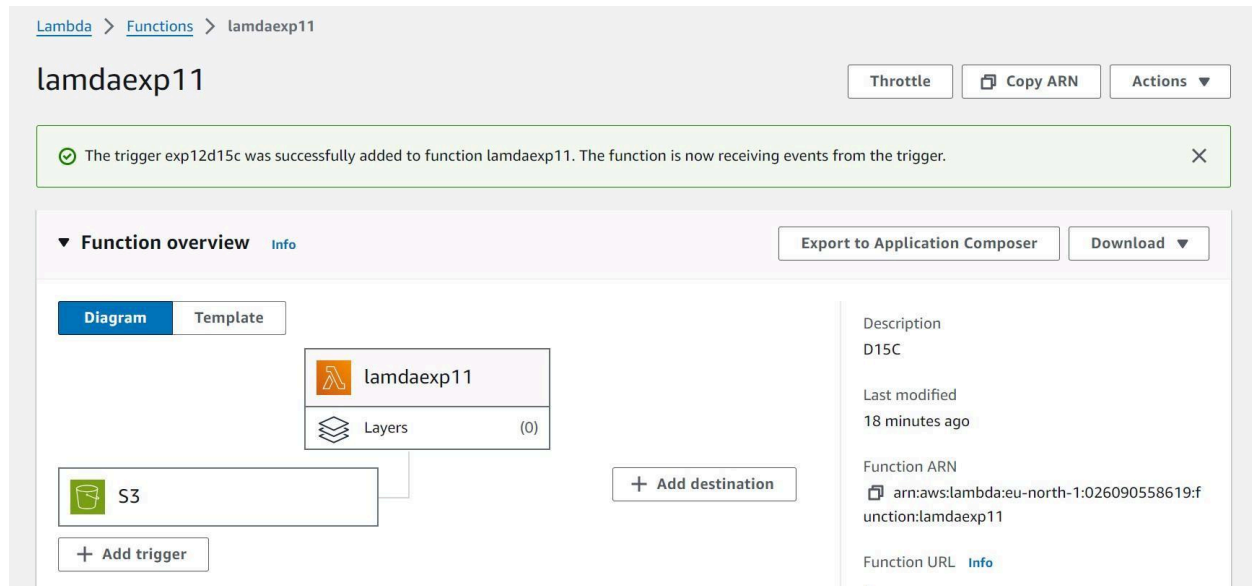
9. On the function overview section of the dashboard you can see the “Add trigger” button. Click on that

The screenshot shows the AWS Lambda console interface for a function named 'lamdaexp11'. At the top, there's a breadcrumb trail: 'Lambda > Functions > lamdaexp11'. Below this, the function name 'lamdaexp11' is displayed with buttons for 'Throttle', 'Copy ARN', and 'Actions'. A 'Function overview' section is active, showing tabs for 'Diagram' and 'Template'. The 'Diagram' tab displays a visual representation of the function with a 'Layers' section showing '(0)' layers. There are buttons for '+ Add trigger' and '+ Add destination'. On the right, a metadata panel lists: 'Description: D15C', 'Last modified: 16 minutes ago', 'Function ARN: arn:aws:lambda:eu-north-1:026090558619:function:lamdaexp11', and 'Function URL: Info'.

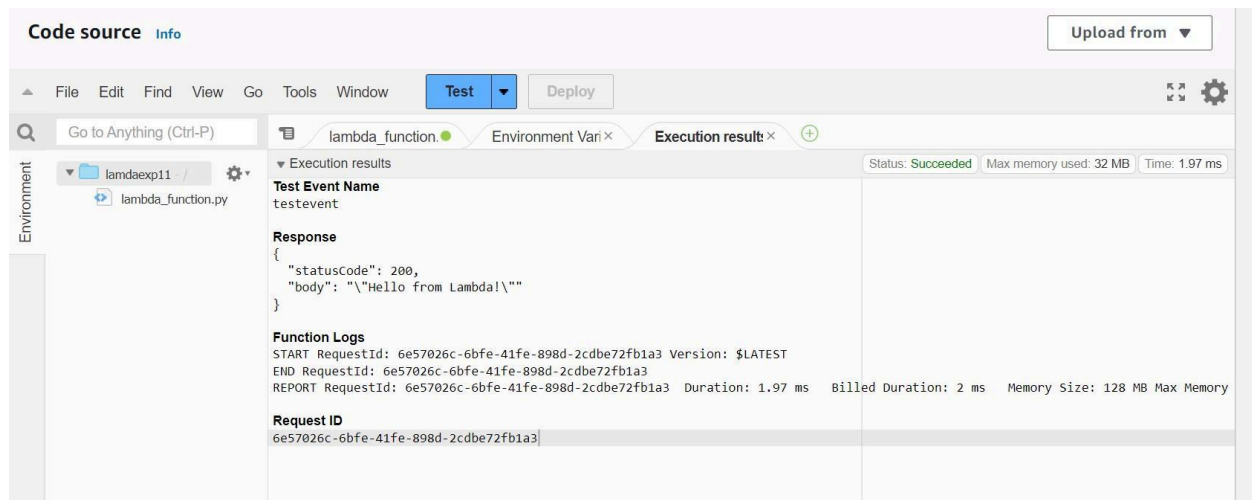
10. It will lead you to the trigger configuration tab; Where you have to select the service and the bucket you created. Add the required configuration information and then save.

The screenshot shows the 'Trigger configuration' page in the AWS Lambda console. The 'Service' is set to 'S3' (aws, asynchronous, storage). The 'Bucket' field contains 's3/exp12d15c' with a search icon, a clear button (X), and a refresh button (C). Below this, it says 'Bucket region: eu-north-1'. The 'Event types' section has a dropdown menu and a button labeled 'All object create events' with a clear button (X). At the bottom, the 'Prefix - optional' section has a text input field containing 'e.g. images/' and a link for 'special characters'.

11. Here you can see we have the confirmation message as well the the s3 bucket added to our triggers



12. Test the code by clicking on the Test tab ; Here as you can see our code ran successfully



Conclusion: In conclusion, the experiment successfully demonstrated the integration of an S3 bucket with an AWS Lambda function as a trigger. By creating the S3 bucket and configuring it to invoke the Lambda function upon object uploads, we established a seamless workflow for automated processing.