

Screenshots for Experiment 12

Create an S3 bucket of the same location as that of the Lambda function

[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](#)

sanketbucket123

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

Copy settings from existing bucket - *optional*
 Only the bucket settings in the following configuration are copied.

[Choose bucket](#)

Format: s3://bucket/prefix

aws Services Search [Alt+S] Stockholm SanketMore

[Amazon S3](#) > [Buckets](#) > sanketbucket123

sanketbucket123 [Info](#)

[Objects](#) [Properties](#) [Permissions](#) [Metrics](#) [Management](#) [Access Points](#)

Objects (0) [Info](#)


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](#)

Find objects by prefix

Name	Type	Last modified	Size	Storage class
No objects				
You don't have any objects in this bucket.				

Upload

 Services [Alt+S]



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.


☐ **Browse serverless app repository**
Deploy a sample Lambda application from the AWS Serverless Application Repository.

Basic information

Function name
Enter a name that describes the purpose of your function.

Use only letters, numbers, hyphens, or underscores with no spaces.


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



Architecture Info
Choose the instruction set architecture you want for your function code.


☒ x86_64
☐ arm64

Add roles while creating the Lambda function and give permissions for accessing the S3 bucket

 **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

 Role creation might take a few minutes. Please do not delete the role or edit the trust or permissions policies in this role.

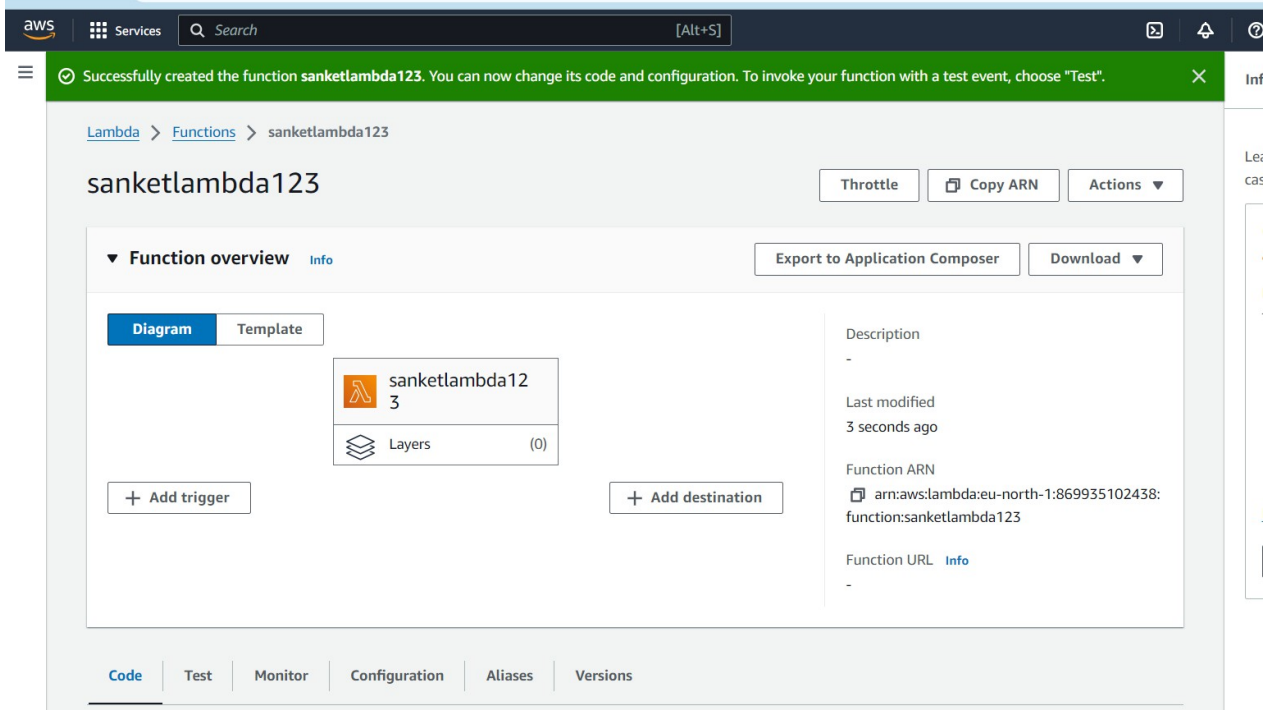
Role name
Enter a name for your new role.

Use only letters, numbers, hyphens, or underscores with no spaces.

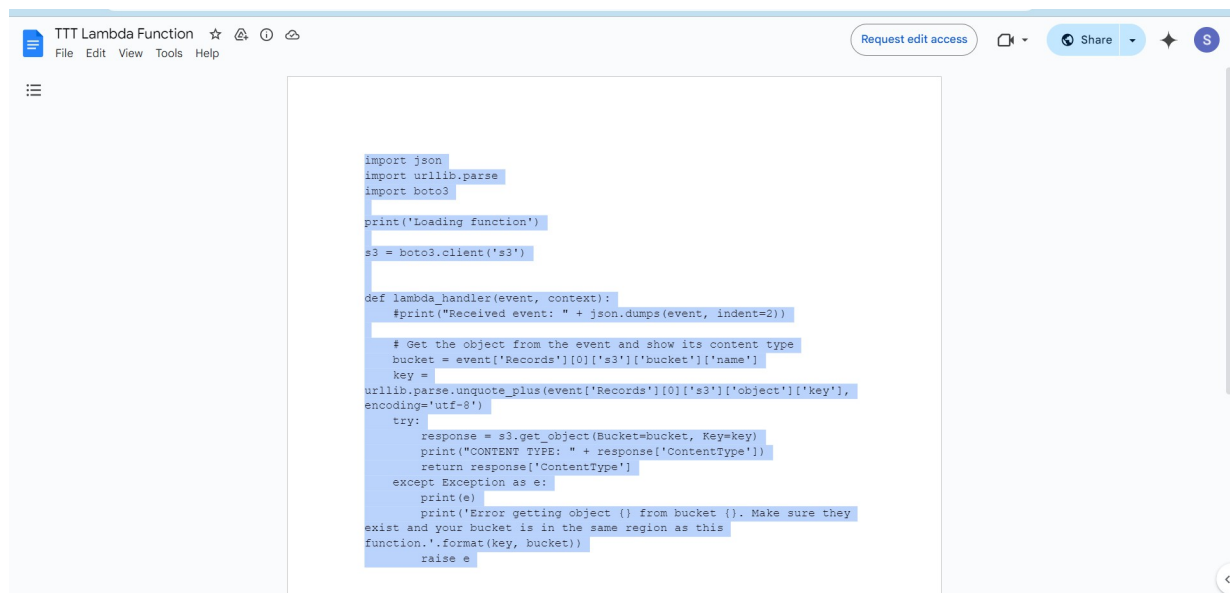
Policy templates - optional Info
Choose one or more policy templates.

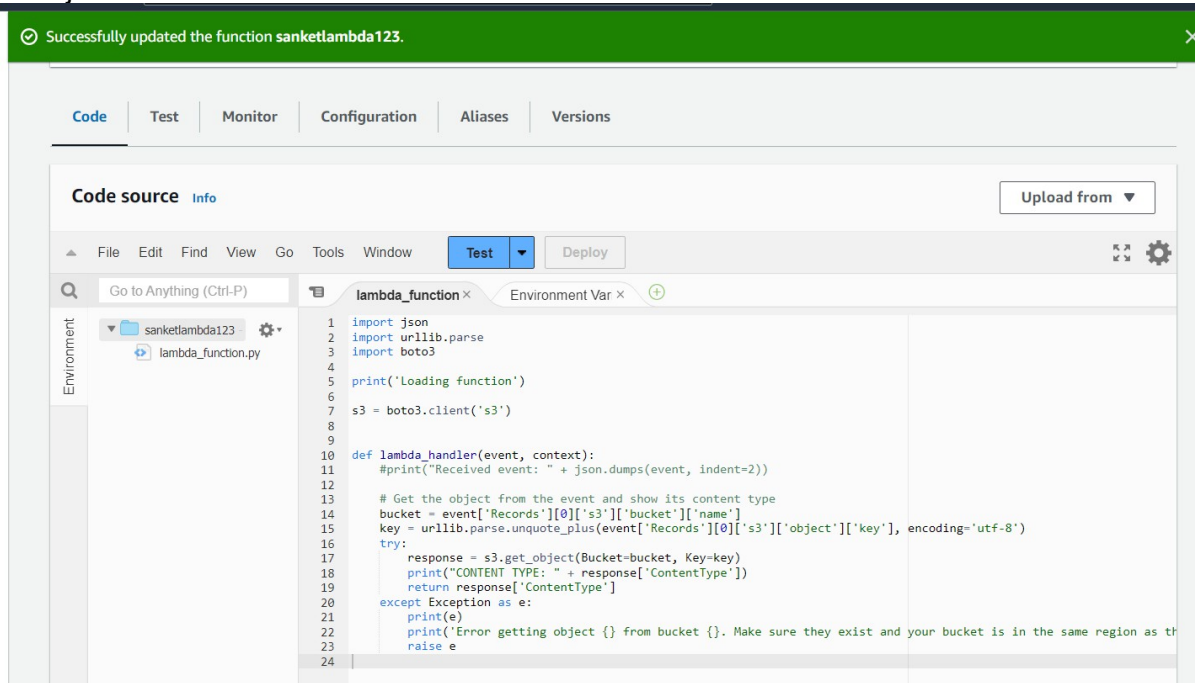
Amazon S3 object read-only permissions 

S3

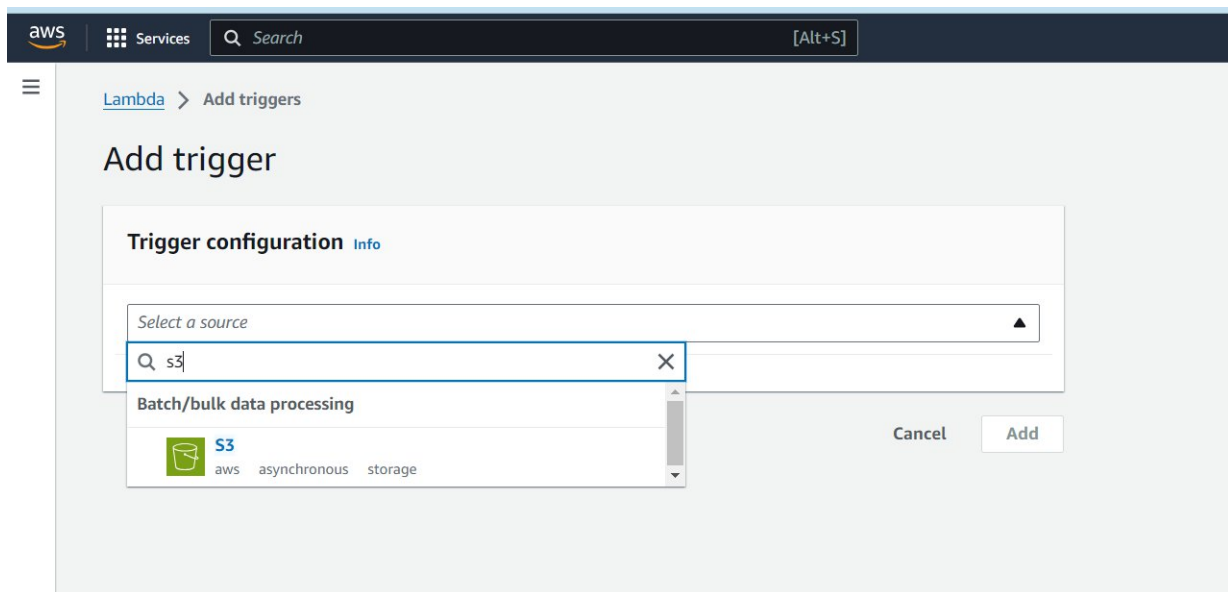


After creating the Lambda function copy a code available on the internet which allows the Lambda function to access the S3 bucket contents.





Add a trigger to the Lambda function so any changes in the S3 bucket will be first visible to the user.



aws

Services


Search

[Alt+S]

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.

Q s3/sanketbucket123

X

↺

Bucket region: eu-north-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 X

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/

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.

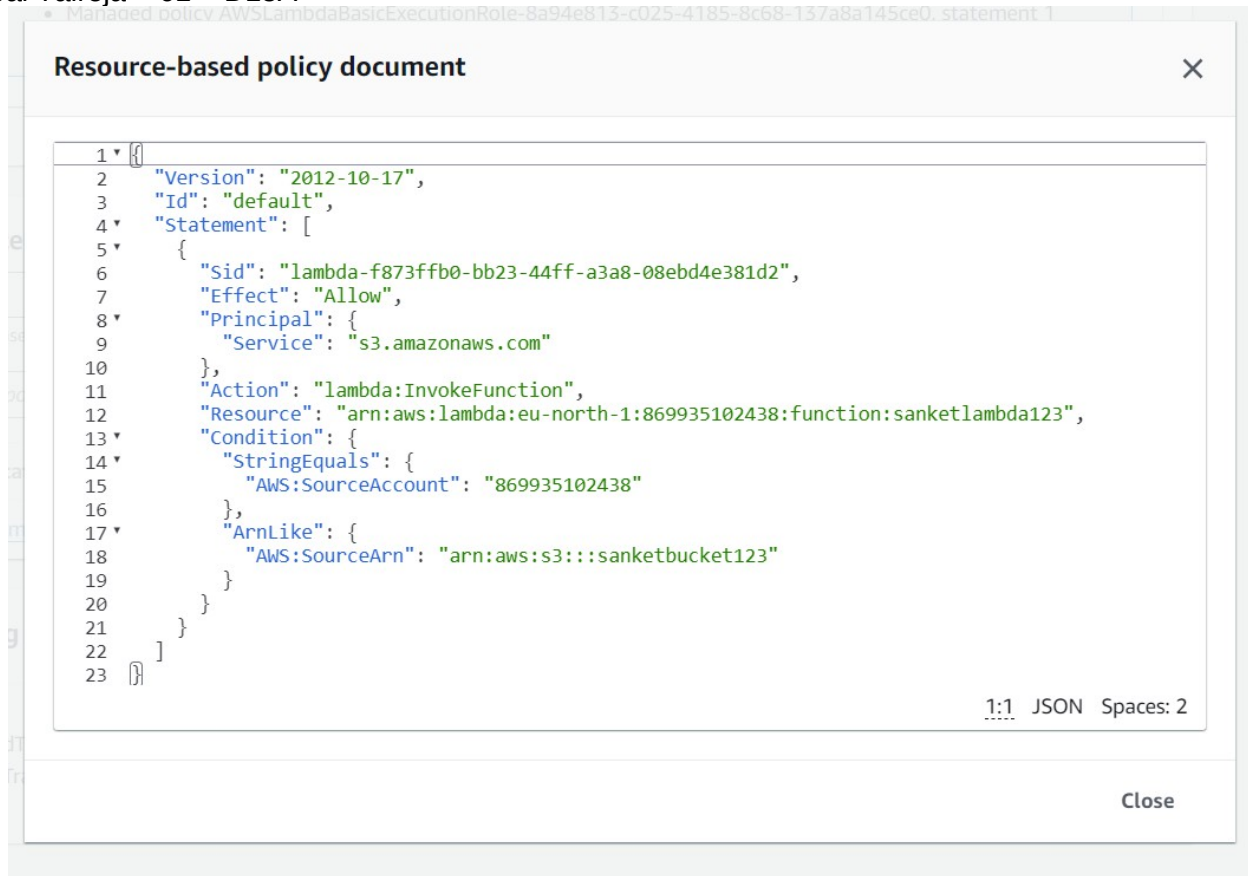
Cancel

Add

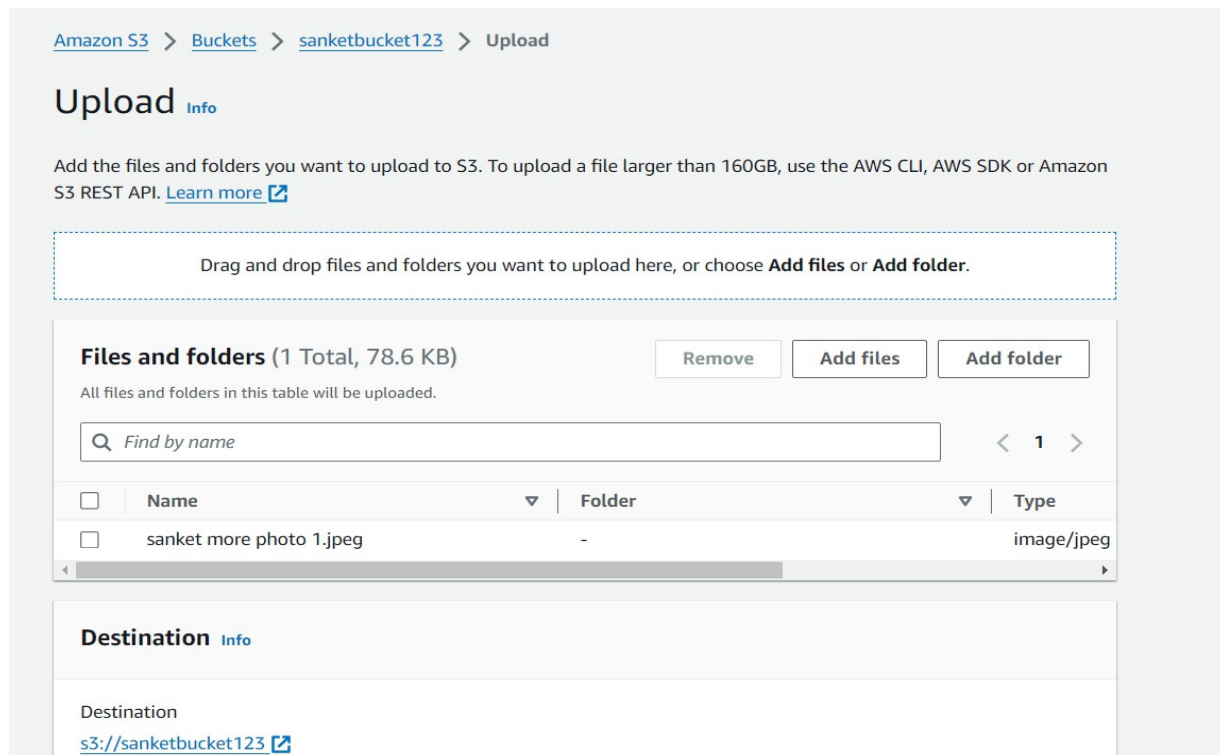
The screenshot shows the AWS Lambda console for the function 'sanketlambda123'. At the top, there's a breadcrumb trail: Lambda > Functions > sanketlambda123. The function name 'sanketlambda123' is prominently displayed. To the right of the name are buttons for 'Throttle', 'Copy ARN', and 'Actions'. Below this is a green success message: 'The trigger sanketbucket123 was successfully added to function sanketlambda123. The function is now receiving events from the trigger.' Below the message is the 'Function overview' section, which includes tabs for 'Diagram' and 'Template'. The 'Diagram' tab is active, showing a visual representation of the function's configuration. It includes a box for 'sanketlambda123' with a Lambda icon, a 'Layers' section with '(0)' layers, and an 'S3' trigger box. A '+ Add trigger' button is also present. To the right of the diagram is a 'Description' section with fields for 'Description', 'Last modified' (5 minutes ago), 'Function ARN' (arn:aws:lambda:eu-north-1:869935102438:function:sanketlambda123), and 'Function URL' (Info). At the bottom of the console, there are tabs for 'Code', 'Test', 'Monitor', 'Configuration' (which is selected), 'Aliases', and 'Versions'.

In the event notification of the S3 bucket we can see that it has been connected to the Lambda function .

The screenshot shows the AWS S3 console for a bucket. At the top, there's a message: 'No data events to display.' Below this is a 'Configure in CloudTrail' button. The main section is 'Event notifications (1)', which includes a table of event notifications. The table has columns for 'Name', 'Event types', 'Filters', 'Destination type', and 'Destination'. There is one notification listed with the name '905f180d-6a25-4474-941b-66671d74e4cd', event types 'All object create events', filters '-', destination type 'Lambda function', and destination 'sanketlambda123'. Below the table is the 'Amazon EventBridge' section, which includes a toggle switch to 'Send notifications to Amazon EventBridge for all events in this bucket'. The toggle is currently 'Off'.



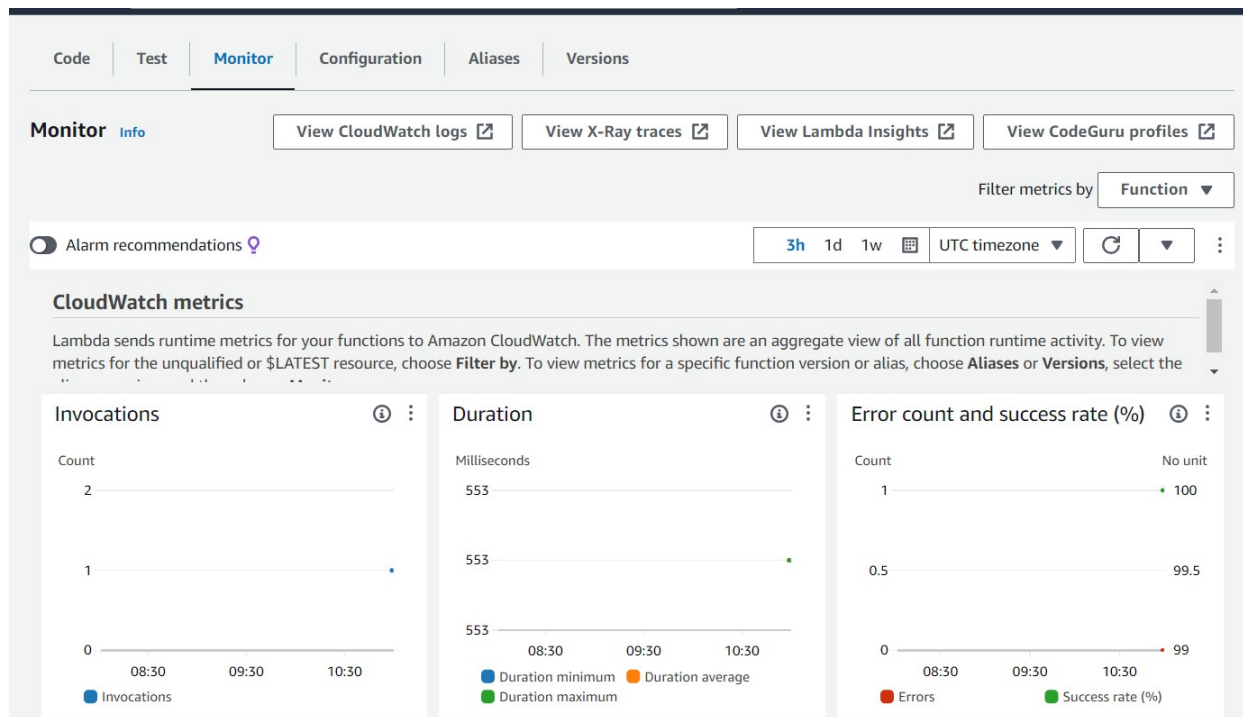
Upload a photo to the S3 bucket



The screenshot shows the AWS S3 console interface. At the top, a green banner indicates "Upload succeeded" with a link to "View details below." Below this, a light blue box contains a warning: "The information below will no longer be available after you navigate away from this page." The main content area is titled "Summary" and displays upload statistics. A table below the summary shows the upload details for a file named "sanket more ...".

Name	Folder	Type	Size	Status	Error
sanket more ...	-	image/jpeg	78.6 KB	Succeeded	-

Now run the function and in the cloud watch logs of AWS you can see the message printed and all the other details of the working of the Lambda function.



The screenshot shows the AWS CloudWatch console. The left sidebar contains navigation options: Dashboards, Alarms, Logs, Metrics, X-Ray traces, Events, Application Signals, Network monitoring, and Insights. The main content area displays the details for the log group `/aws/lambda/sanketlambda123`. The breadcrumb trail is `CloudWatch > Log groups > /aws/lambda/sanketlambda123`. At the top right of the main area are buttons for `Actions`, `View in Logs Insights`, `Start tailing`, and `Search log group`. Below this is a section titled `Log group details` with a table of properties:

Property	Value
Log class	Standard
ARN	<code>arn:aws:logs:eu-north-1:869935102438:log-group:/aws/lambda/sanketlambda123:*</code>
Creation time	3 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	-

Below the table are tabs for `Log streams`, `Tags`, `Anomaly detection`, `Metric filters`, `Subscription filters`, `Contributor Insights`, and `Data protection`. The `Log streams` tab is currently selected.

The screenshot shows the AWS CloudWatch console displaying the log events for the log group `/aws/lambda/sanketlambda123`. The breadcrumb trail is `CloudWatch > Log groups > /aws/lambda/sanketlambda123 > 2024/10/02/[$LATEST]8ed57b1dccf54ab8b05688935ed748db`. At the top right of the main area are buttons for `Actions`, `Start tailing`, and `Create metric filter`. Below this is a section titled `Log events` with a filter bar and a table of log events.

The filter bar includes a search input, a `Clear` button, time range filters (`1m`, `30m`, `1h`, `12h`, `Custom`), a `UTC timezone` dropdown, and a `Display` dropdown. The table of log events has two columns: `Timestamp` and `Message`.

Timestamp	Message
No older events at this moment. Retry	
2024-10-02T10:59:36.409Z	INIT_START Runtime Version: python:3.12.v36 Runtime Version ARN: <code>arn:aws:lambda:eu-north-1::runtime:188d9ca2e2714ff5637bd2bb...</code>
2024-10-02T10:59:36.801Z	Loading function
2024-10-02T10:59:37.172Z	START RequestId: <code>df929631-f73a-46eb-8a07-56f2f4a810c8</code> Version: <code>\$LATEST</code>
2024-10-02T10:59:37.718Z	CONTENT TYPE: <code>image/jpeg</code>
2024-10-02T10:59:37.725Z	END RequestId: <code>df929631-f73a-46eb-8a07-56f2f4a810c8</code>
2024-10-02T10:59:37.725Z	REPORT RequestId: <code>df929631-f73a-46eb-8a07-56f2f4a810c8</code> Duration: 552.91 ms Billed Duration: 553 ms Memory Size: 128 MB Max M...
No newer events at this moment. Auto retry paused. Resume	