



INTEGRATION OF CT22 PROJECTOR LAMBDA FUNCTION

October 26 2024

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Overview

Projector uses a Lambda function for the connectivity between AWS DynamoDB logs and ElasticSearch.

The Lambda function is provided as a .zip file.

For the connectivity between AWS Dynamo logs and ElasticSearch, the Lambda function uses 2 AWS services it has to interface with : S3 and IAM

S3 provides the Bucket the Lambda function will pick up the logs from.

IAM, to properly set-up permissions

Lambda itself which must be triggered by the AWS log file put in the S3 bucket.

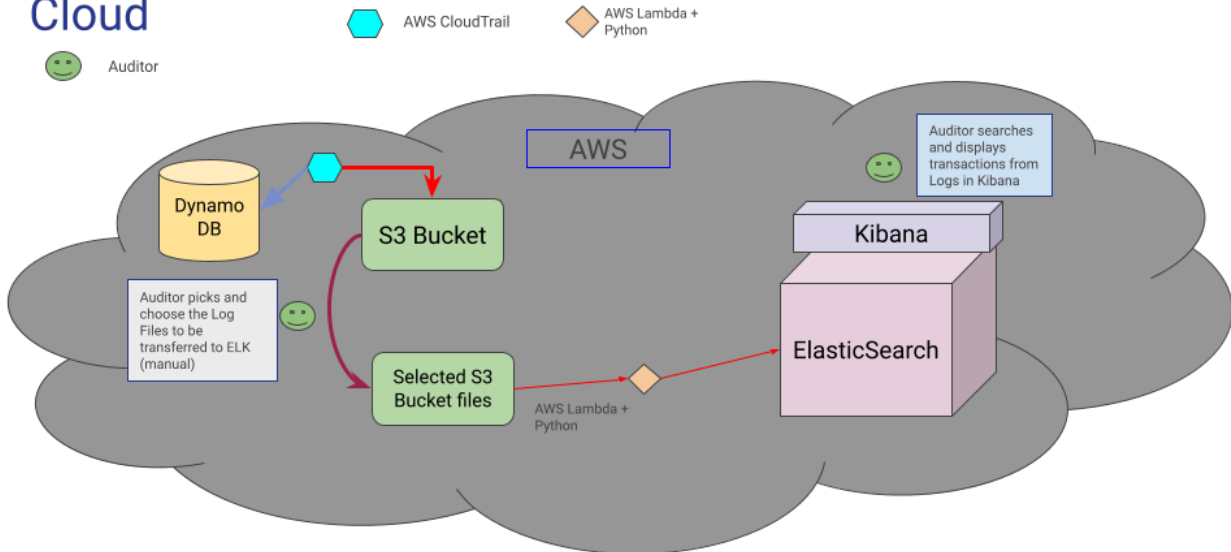
The procedure is therefore :

- Creation of the Lambda function
- Upload of the CT22 .zip file with Projector code
- Creation of the S3 bucket dedicated to CT22 Projector
- Setting of Lambda permissions
- Setting of S3 Trigger on Lambda

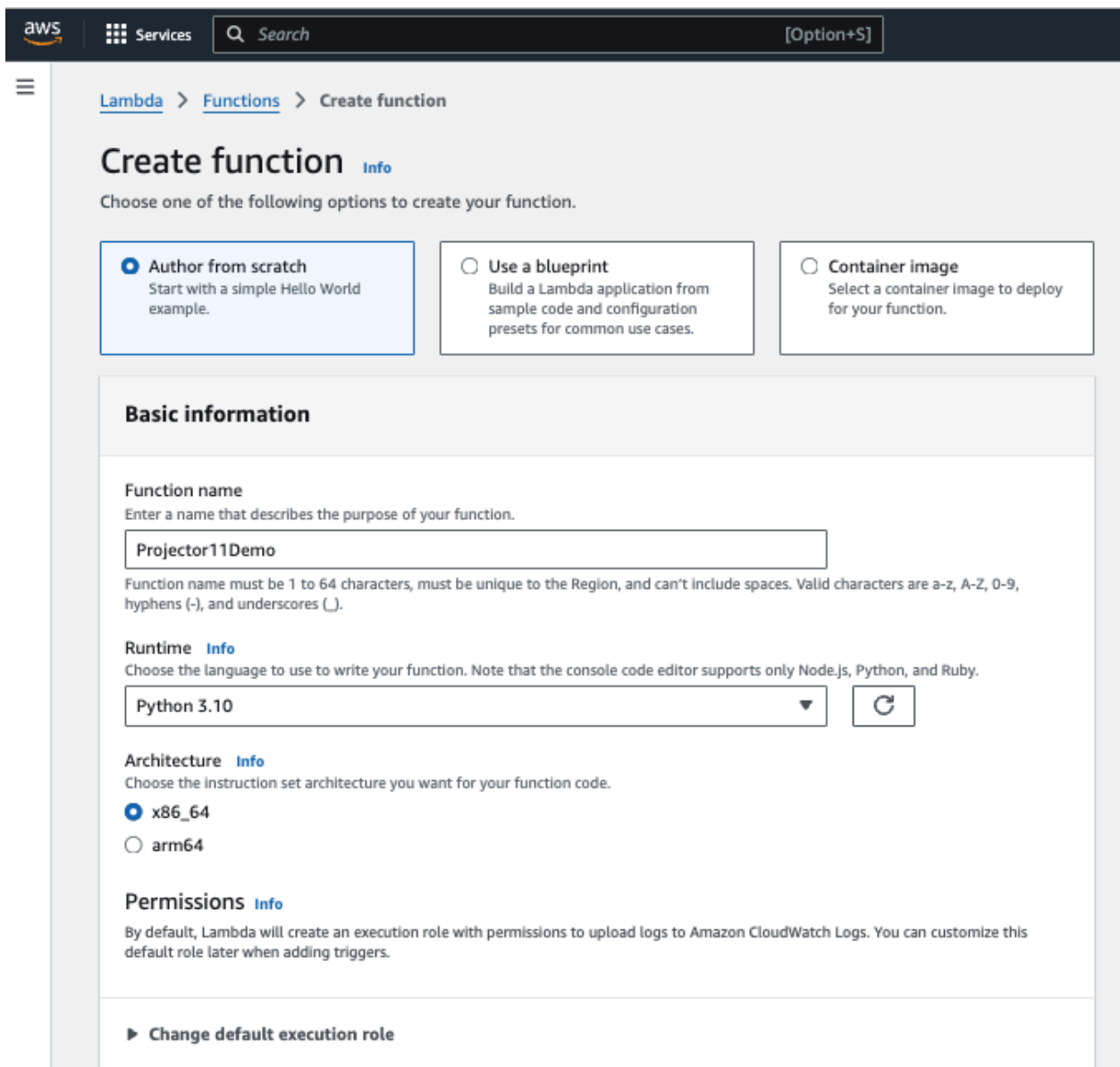
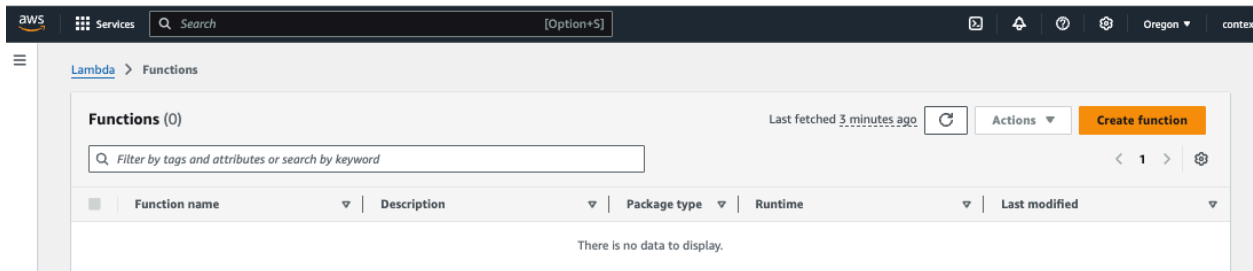
Is not covered here the configuration of the ElasticSearch credentials into Lambda. It will be covered once the ES instance for GainWell will be set up.

Architecture Overview

CT22 Projector - Option 1.1 : DynamoDB - ASync - All Cloud



Creation of the Lambda Function



Change default execution role

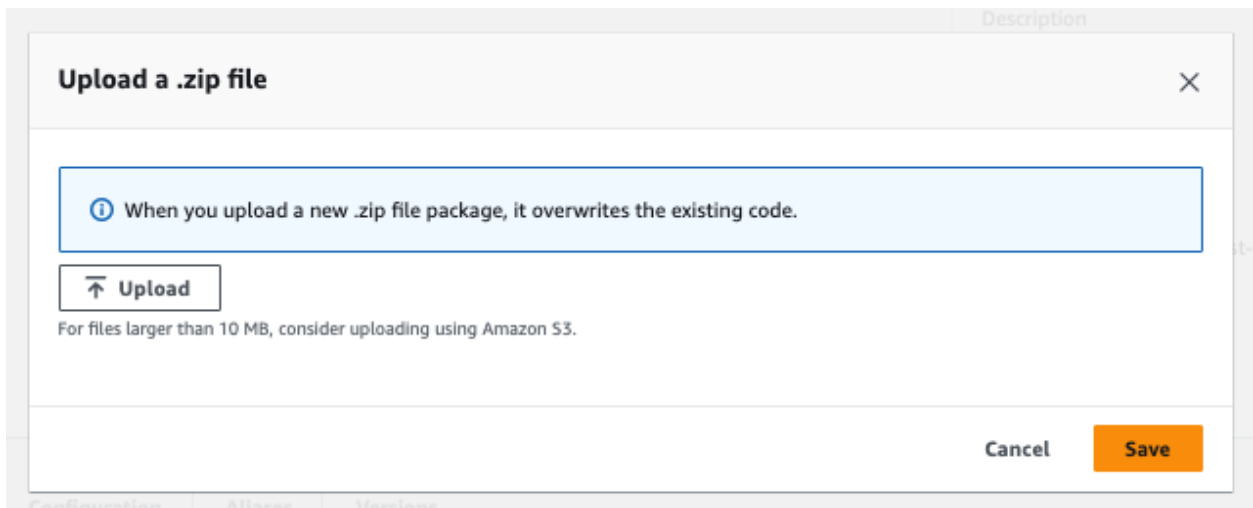
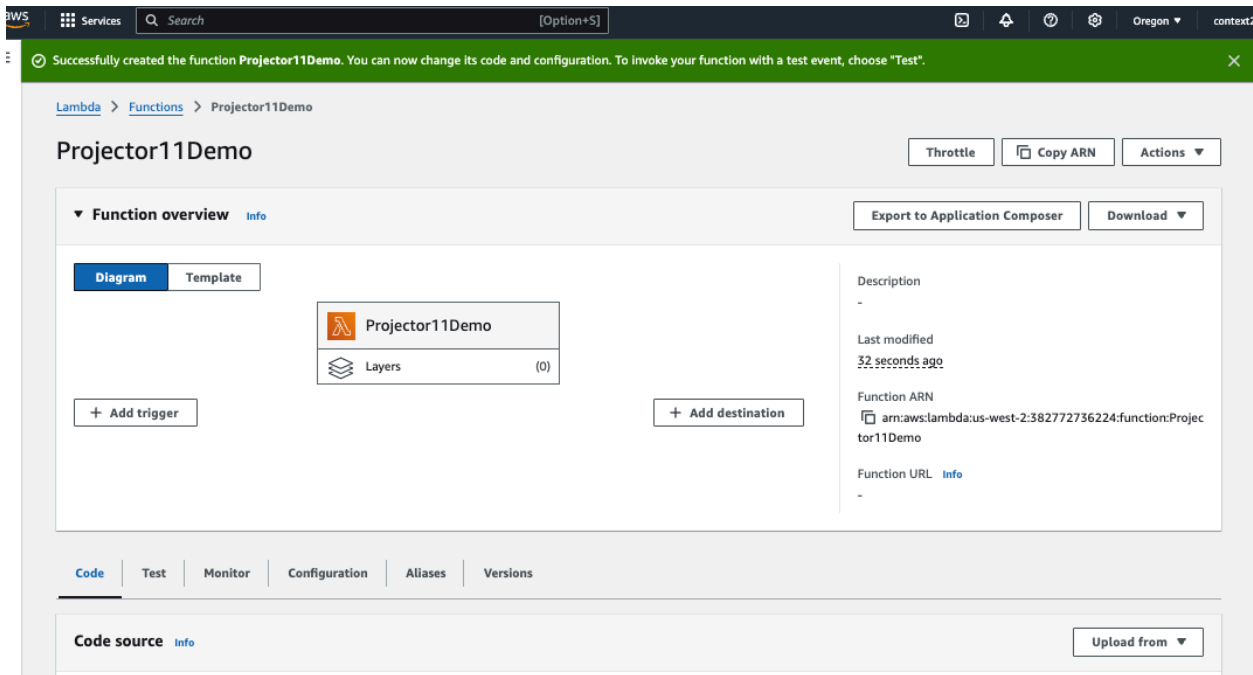
► **Additional Configurations**

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

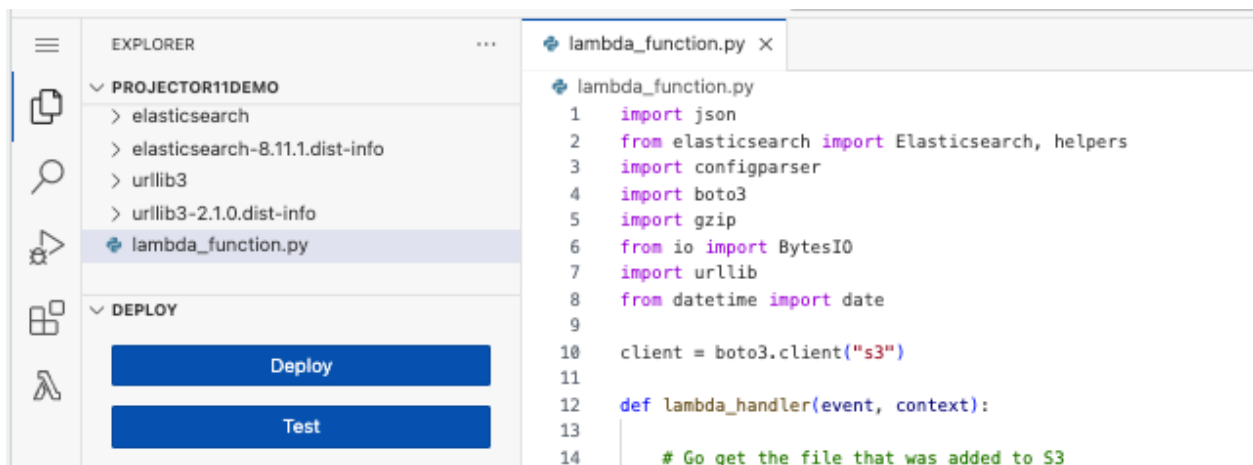
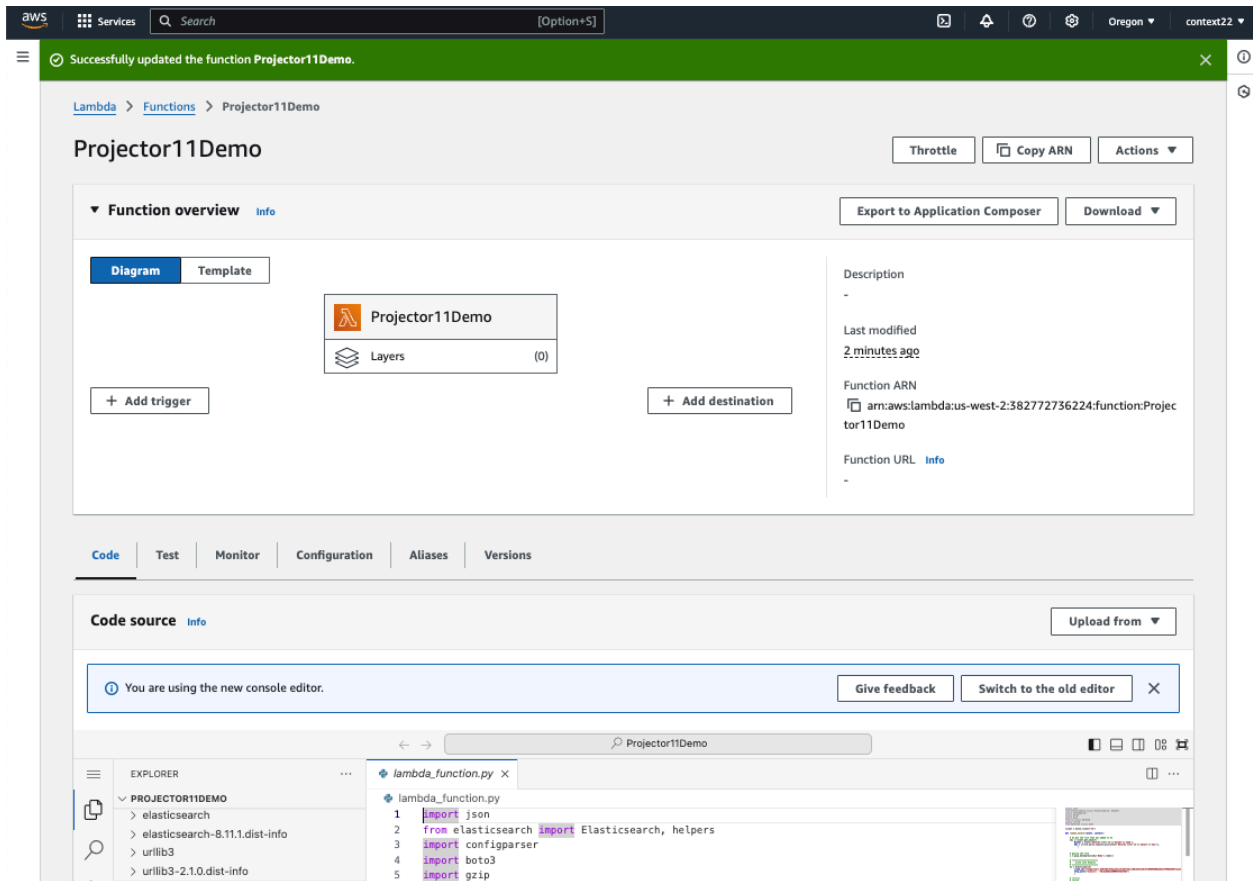
Cancel

Create function

Upload of the Lambda .zip file



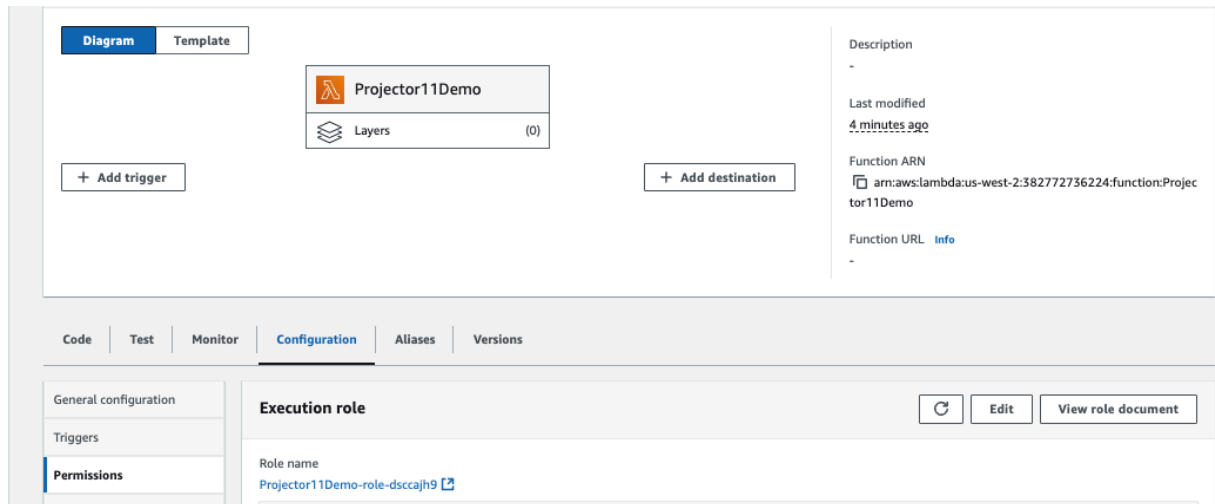
Result :



Hit “Deploy”

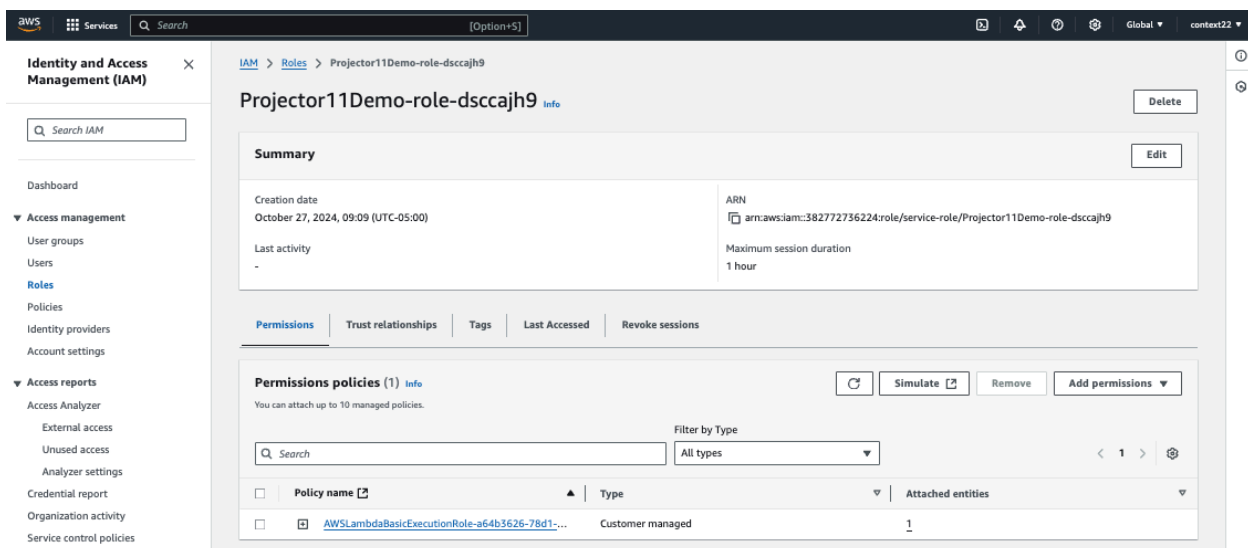
Lambda Function Permissions configuration

1 - Create the Function. Choose Projector11



Select “Role Name”

2 - Configuring the role for the Lambda function



Select “Add Permissions”

3 - Adding 2 Permissions Policies

PermissionsTrust relationshipsTagsLast AccessedRevoke sessions

Permissions policies (3) Info

You can attach up to 10 managed policies.

Search

Filter by TypeAll types

< 1 > ⌕

☐

Policy name ⓘ

▲

Type▼

Attached entities▼

☐

+

AmazonS3ReadOnlyAccess

AWS managed

5

☐

+

AWSLambda_FullAccess

AWS managed

10

☐

+

AWSLambdaBasicExecutionRole-a64b3626-78d1-424b-af6a-ca8e7...

Customer managed

1

Add the 2 Permissions Policies

<input type="checkbox"/>	<div><div>+</div><div>AmazonS3ReadOnlyAccess</div></div>	AWS managed
<input type="checkbox"/>	<div><div>+</div><div>AWSLambda_FullAccess</div></div>	AWS managed

S3 Configuration

Creation of S3 Bucket

General purpose buckets

Directory buckets

General purpose buckets (15)

Info

All AWS Regions

Buckets are containers for data stored in S3.

Find buckets by name

< 1 > ⚙

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	aws-cloudtrail-logs-382772736224-da326c32	US East (N. Virginia) us-east-1	View analyzer for us-east-1	January 3, 2024, 06:37:14 (UTC-06:00)
<input type="radio"/>	ct22data	US East (N. Virginia) us-east-1	View analyzer for us-east-1	October 9, 2024, 13:22:03 (UTC-05:00)

☐

[ct22gwprojector1](#)

US West (Oregon) us-west-2

[View analyzer for us-west-2](#)

October 28, 2024, 06:34:50 (UTC-05:00)

↻

Copy ARN

Empty


Delete

Create bucket

Lambda Trigger Configuration

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.

×

↺

Bucket region: us-west-2

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

×

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.

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.

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


▼ Function overview [Info](#)

Diagram

Template

 Projector11Demo

 Layers (0)

 S3

+ Add trigger

+ Add destination

Code | Test | Monitor | **Configuration** | Aliases | Versions

General configuration

Triggers

Permissions

Destinations

Function URL


Environment variables

Tags

VPC

Triggers (1) [Info](#)

☐ Trigger

 **S3:** [ct22gwprojector1](#)
arn:aws:s3:::ct22gwprojector1

► Details

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ES Credentials Set-Up

This part will be completed once the ElasticSearch instance for GainWell will be done.

End of Document