AWStack training - Serverless

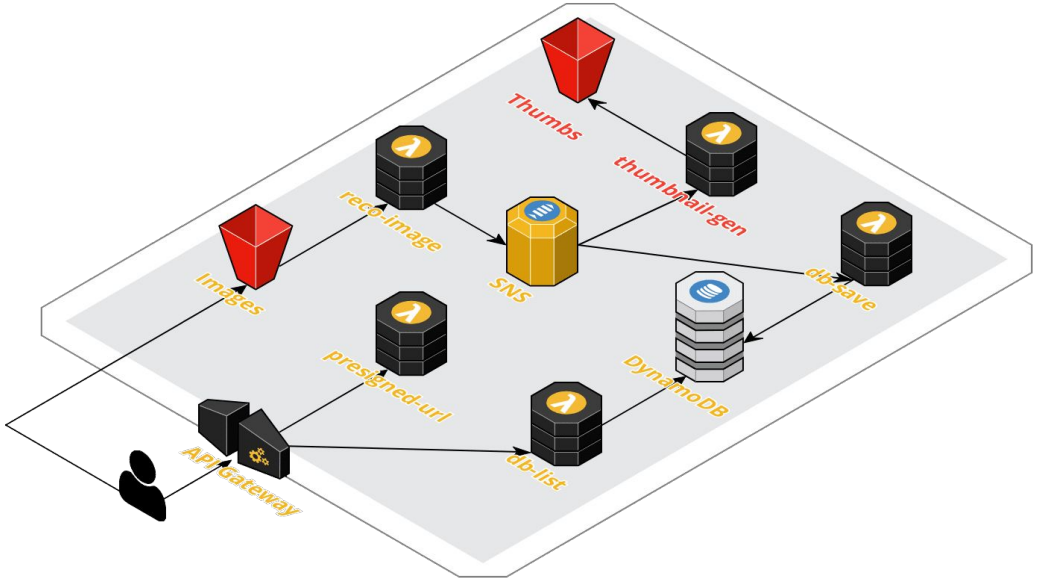
Hands On #7 - S3 | Lambda - Generate thumbnail

Overview

This Hands-on is composed of 2 parts:

1. S3 Part : new bucket to store thumbnails

2. Lambda Part : new function to create thumbnail from images analyzed by recognition function



Let’s go! | S3 Part

Go to Virginia region N. Virginia

Create a S3 bucket in order to store the thumbnails:

- **Bucket Name**: serverless-training-thumb-<xxx>
- **Policy**: see Hint 3 to set the JSON policy

Once done -> Go to **Lambda part** to create your function

Context:

In this part we create a S3 bucket storing thumbnails of the images which have been analyzed by the recognition function.

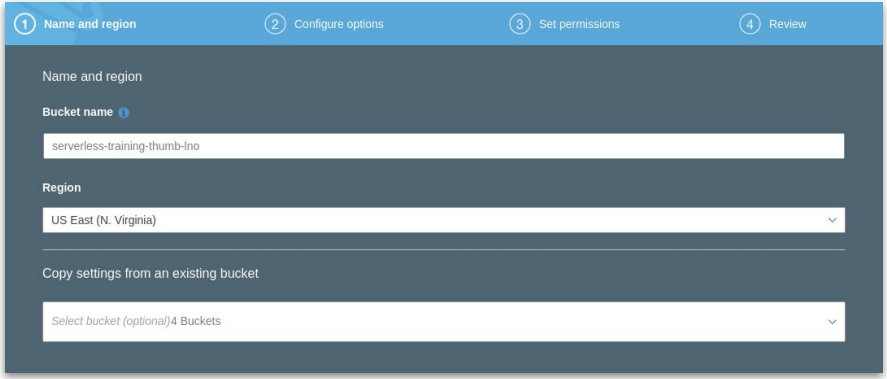
Documentation:

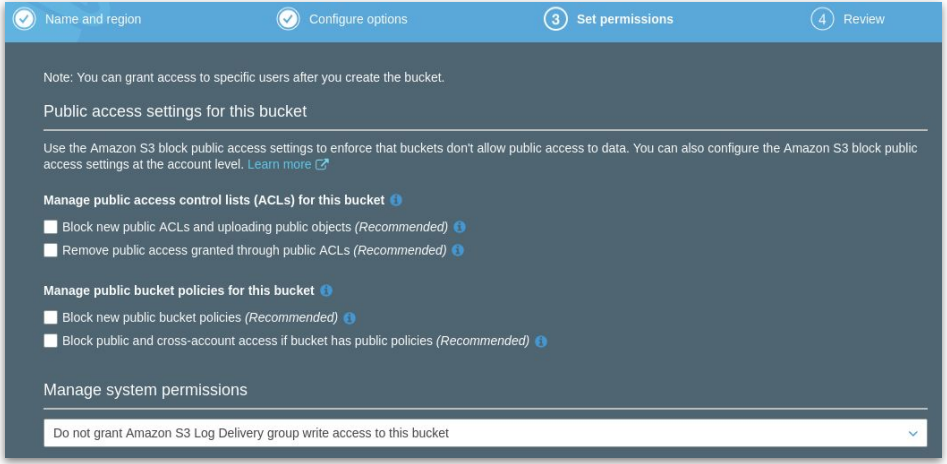
https://docs.aws.amazon.com/fr_fr/lambda/latest/dg/with-s3-example-deployment-pkg.html#with-s3-example-deployment-pkg-python

https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html

Hint 1

S3 - Create a new bucket serverless-training-thumb-<xxx> and configure public access settings (uncheck all)





Hint 2

S3 - Under “Permission” > “Bucket Policy”, set the following policy (replace YOUR_BUCKET_NAME)

```
{
    "Version": "2008-10-17",
    "Statement": [
        {
            "Sid": "AllowPublicRead",
            "Effect": "Allow",
            "Principal": {
                "AWS": "*"
            },
            "Action": "s3:GetObject",
            "Resource": "arn:aws:s3:::YOUR_BUCKET_NAME/*"
        }
    ]
}
```

Let’s go! | Lambda Part

Create a lambda function having these properties:

- **Name**: py-aws-lambda-thumbnail-gen
- **Runtime**: Python 3.6
- **Trigger**: SNS
- **Role**: serverless_lambda_role
- Add two new **Environment variables** containing the source and thumbnail S3 bucket names
    - Name: imgSrcBucket
    - Value: serverless-training-img-<xxx>
    - Name: thumbDestBucket
    - Value: serverless-training-thumb-<xxx>
- Upload the **Function code** from the S3 bucket: https://s3.amazonaws.com/awstacktraining-serverless-resources/code-templates/py-aws-lambda-thumbnail-gen-template.zip

Once done -> Go to **Testing** part to test your Lambda

Context:

In this part we create a new Lambda function in charge of resizing as a thumbnail an image analyzed by the recognition function and store it in the thumbnail S3 bucket just created.

This function is triggered by the SNS results topic.

Documentation:

https://docs.aws.amazon.com/fr_fr/lambda/latest/dg/with-s3-example-deployment-pkg.html#with-s3-example-deployment-pkg-python

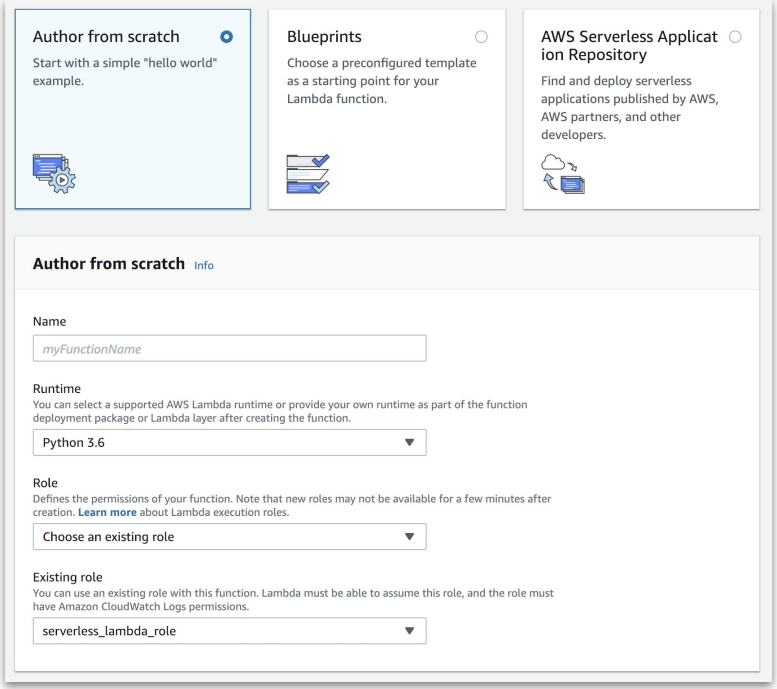
Hint 3

Lambda Creation - create a new Lambda function

“py-aws-lambda-thumbnail-gen”

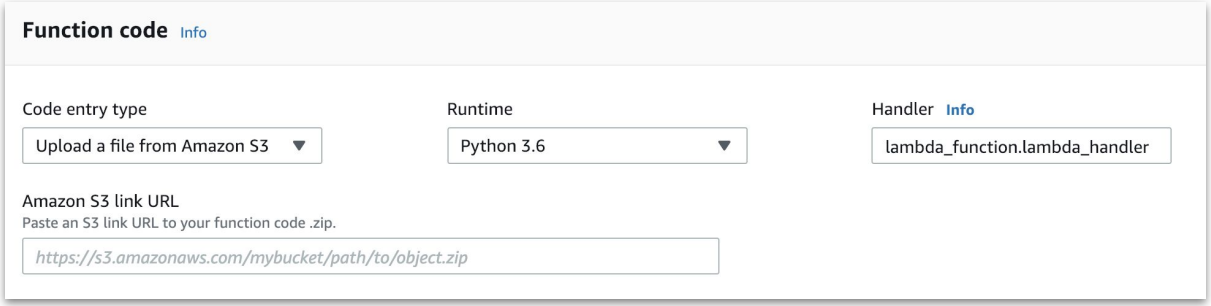
using the existing role

“serverless_lambda_role”



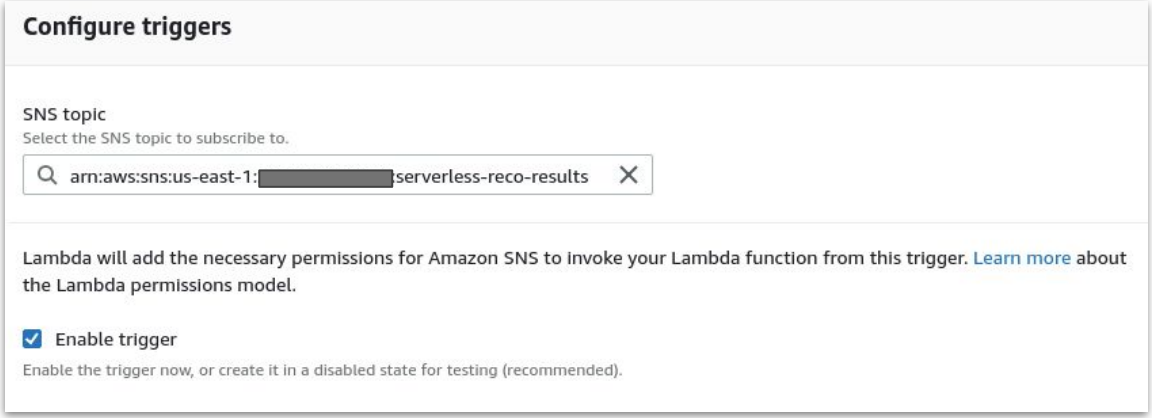
Hint 4

Lambda Configuration - Upload the function code from the S3 link URL given in “Let’s Go” section



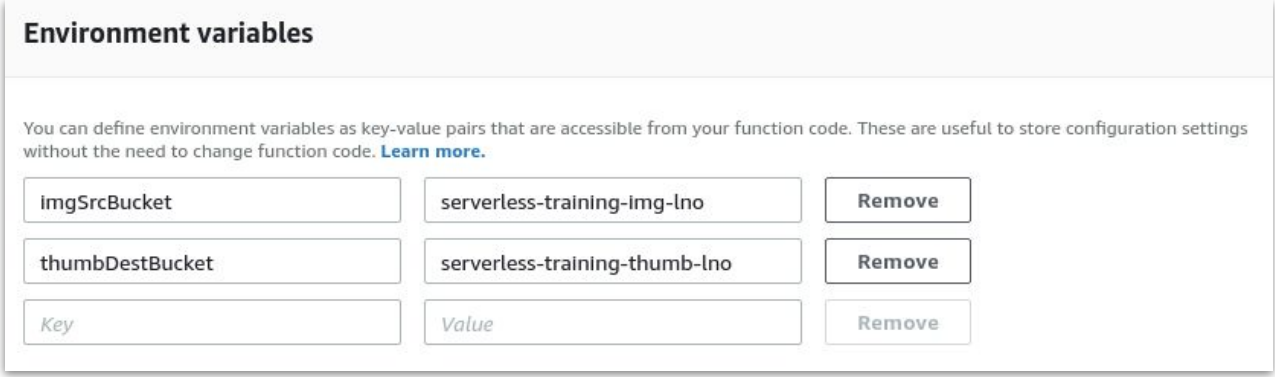
Hint 5

Lambda Configuration - Add a new SNS Trigger from list on the left



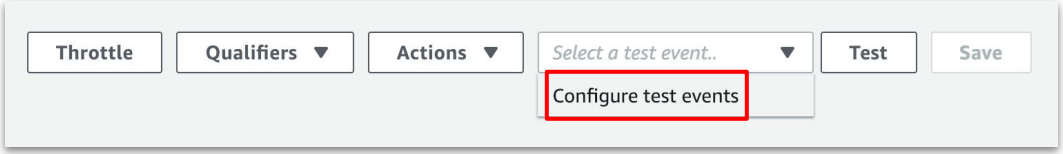
Hint 6

Lambda Configuration - Add two new environment variables “imgSrcBucket” and “thumbDestBucket”



Test the lambda function

1. Copy the test json sample **test-sample.json** from **Function code**
2. Configure a new **Test event** from the top menu



3. Paste the json sample and replace `<IMAGE_NAME>` by an image name present in the S3 bucket
4. Create the test event and test !

Done !

Test the full integration by uploading an image in the S3 image bucket and checking the S3 thumbnail bucket

You can download the answer code at

https://github.com/laurentnoireterre/py-aws-lambda-thumbnail-gen