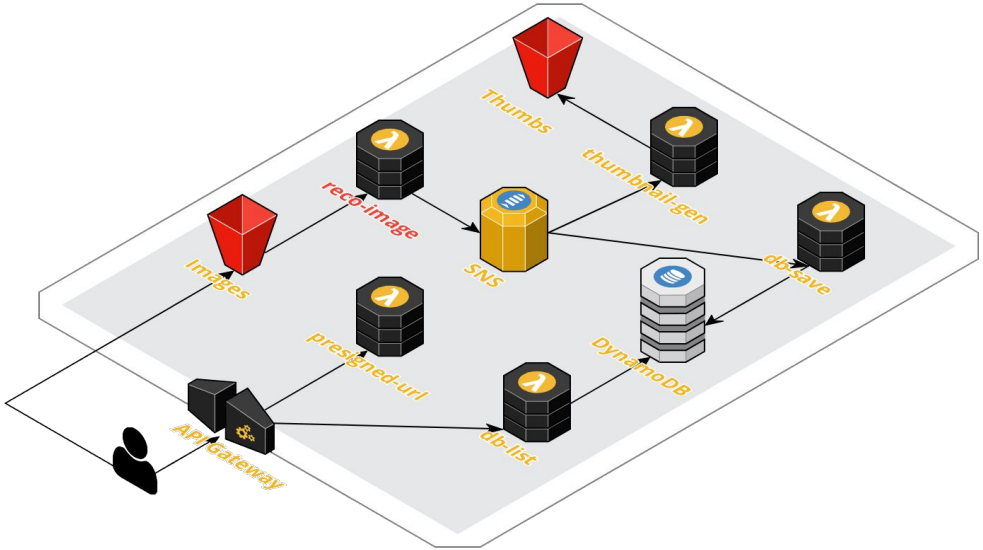
AWStack training - Serverless

Hands On #3 - Lambda - Image recognition

Overview

This Hands-on has only one part:

1. Lambda Part : new function to analyze and recognize images



Let's go!

Go to Virginia region 

Create a lambda function having these properties:

- **Name**: py-aws-lambda-image-reco
- **Runtime**: Python 3.6
- **Trigger**: S3 (**all create events** on the bucket created previously)
- **Role**: serverless_lambda_role
- **Layer**: *Tensorflow-Kera-Pillow* layer **using this ARN** *arn:aws:lambda:us-east-1:347034527139:layer:tf_keras_pillow:3*
- **Memory & Timeout**: adjust the memory to **512MB** and timeout to **10 sec.**
- Upload the **Function code** from the S3 bucket: https://s3.amazonaws.com/awstacktraining-serverless-resources/code-templates/py-aws-lambda-image-reco-template.zip

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

Context:

In this part we create a lambda function in charge of analyzing an image. This function is triggered by S3 for each image uploaded in the bucket we created previously.

We integrate Keras deep learning API to our function using a shared Lambda layer named *Tensorflow-Kera-Pillow*

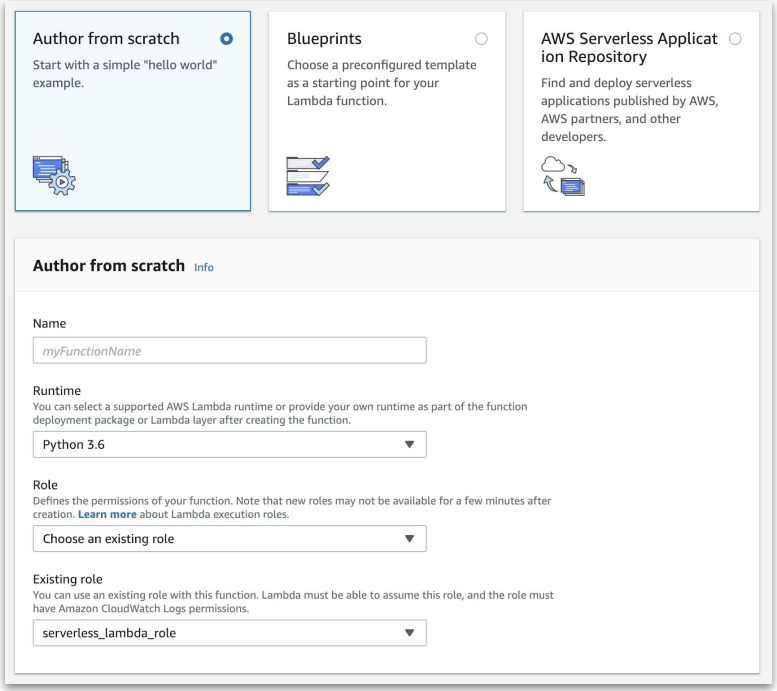
Documentation:

https://docs.aws.amazon.com/lambda/latest/dg/configuration-layers.html

https://github.com/antonpaquin/Tensorflow-Lambda-Layer

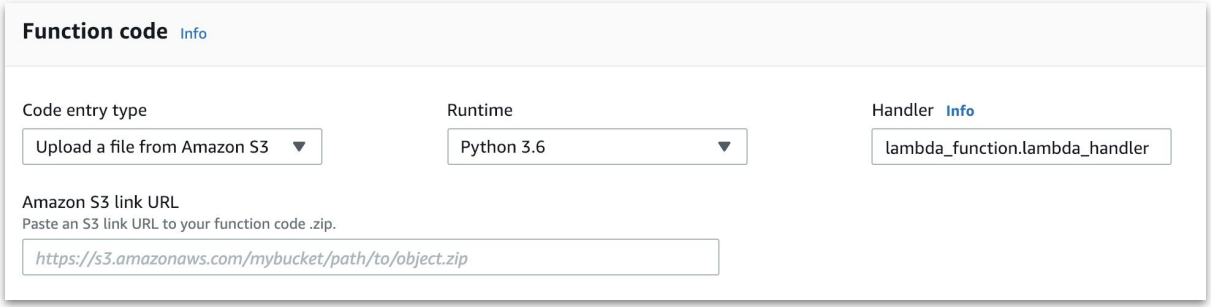
Hint 1

Lambda Creation - create a new Lambda function “py-aws-lambda-image-reco” using the existing role “serverless_lambda_role”



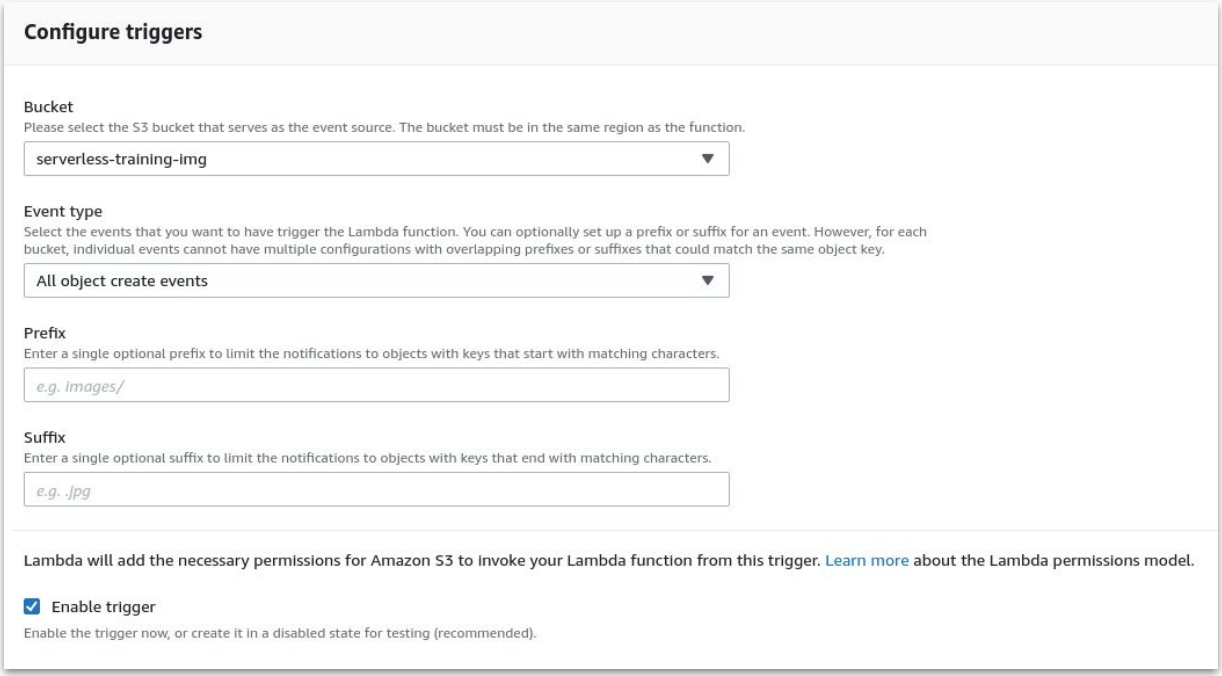
Hint 2

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



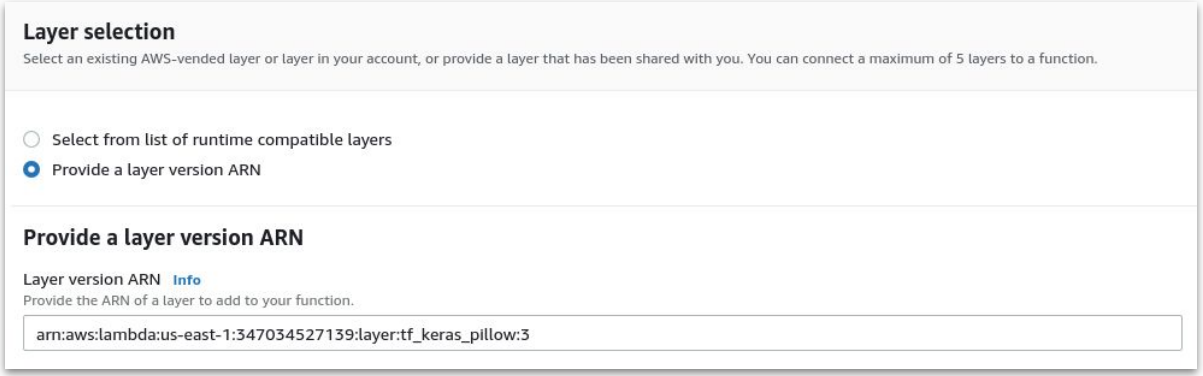
Hint 3

Lambda Configuration - Add a new S3 Trigger from list on the left



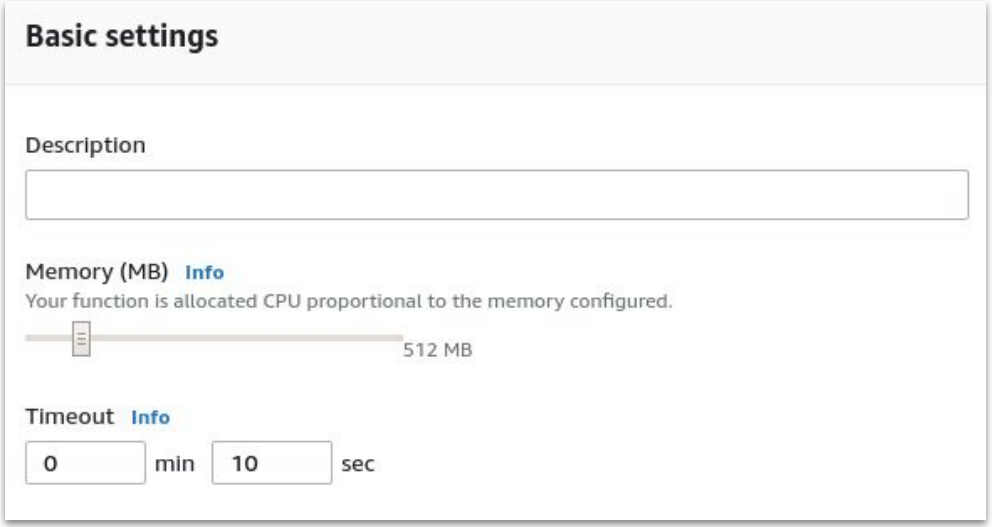
Hint 4

Lambda Configuration - Add the layer “arn:aws:lambda:us-east-1:347034527139:layer:tf_keras_pillow:3” to the function



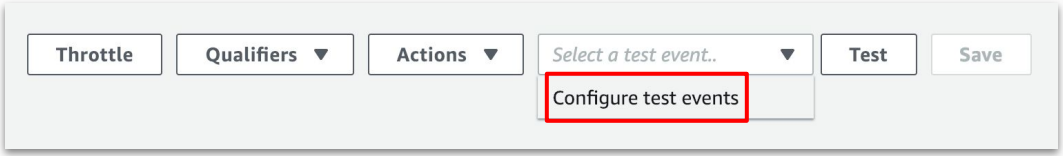
Hint 5

Lambda Configuration - Modify the lambda basic settings



Test the lambda function

1. Upload an image in the S3 bucket from the console
2. Copy the test json sample **test-sample.json** from **Function code**
3. Configure a new **Test event** from the top menu



4. Paste the json sample and replace `<YOUR_BUCKET_NAME>` and `<YOUR_BUCKET_TEST_IMAGE>` by your bucket and image names
5. Create the test event and test !

Done !

Test the full integration with S3 by uploading an image and checking CloudWatch logs

You can download the answer code at

https://github.com/laurentnoireterre/py-aws-lambda-image-reco