



177- [JAWS] - Lab - [Reto]

Ejercicio de AWS Lambda

Datos Generales:

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Después de completar este laboratorio, usted será capaz de hacer lo siguiente:

- Crear una función Lambda para contar el número de palabras de un archivo de texto.
- Configurar un bucket de Amazon S3 para invocar una función de Lambda cuando se cargue un archivo de texto en el bucket de S3.
- Crear un Topic de Amazon SNS para informar del recuento de palabras en un email.

Desafío

(1) Crear una función Lambda para contar el número de palabras en un archivo de texto.

- Utilizar la AWS Management Console para desarrollar una función Lambda en Python y crear los recursos necesarios de la función.
- Informe del recuento de palabras en un correo electrónico utilizando un tema SNS.
- Formato del mensaje de respuesta:

```
The word count in the <textFileName> file is nnn.
```

- Asunto del mensaje de correo electrónico → Resultado del recuento de palabras.
- Invoca automáticamente la función cuando el archivo de texto se cargue en un bucket de S3.

(2) Pruebe la función cargando algunos archivos de texto de muestra con diferentes recuentos de palabras en el bucket de S3.

Paso 1: S3 → Create Bucket

- Bucket Name = labbucket224466
- AWS Region = us-west-2

Bucket name

Bucket name must be unique within the global namespace and fol

AWS Region

	Name	▲	AWS Region
●	labbucket224466		US West (Oregon) us-west-2

Paso 2: Lambda → Functions → Create Function → Basic Information

- Author from scratch

☒ Author from scratch
Start with a simple Hello World example.

- Function Name = WordCount

Function name

Enter a name that describes the purpose of your function.

WordCount

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

- Runtime → Python 3.9

Runtime [Info](#)

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

Python 3.9

Paso 3: Create Function → Permissions

- Use an existing role → LambdaAccessRole

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

Existing role

Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.

LambdaAccessRole

[View the LambdaAccessRole role](#) on the IAM console.

<input checked="" type="checkbox"/>	Function name
<input checked="" type="checkbox"/>	WordCount

Paso 4: Lambda → Create Trigger → Add Trigger

- Select Source → S3 → labbucket224466
- Event Types → All object create events

Trigger configuration [Info](#)



S3

aws asynchronous storage



Bucket

Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

🔍 s3/labbucket224466



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



Trigger



S3: [labbucket224466](#)

arn:aws:s3:::labbucket224466

▼ Details

Bucket arn: **arn:aws:s3:::labbucket224466**

Event types: **s3:ObjectCreated:***

Notification name: **e9a0872c-cd60-4aeb-a3a2-89454d0957fc**

Service principal: **s3.amazonaws.com**

Source account: **712310588139**

Statement ID: **lambda-c551ed8c-e595-4969-94a2-8f78388dca15**

Paso 5: SNS → Topic → Create Topic

- Type → Standard

☒ Standard

- Best-effort message ordering
- At-least once message delivery
- Highest throughput in publishes/second
- Subscription protocols: SQS, Lambda, HTTP, SMS, email, mobile application endpoints

- Name = WordCountTopic

Name

Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (_).

	Name
<input checked="" type="radio"/>	WordCountTopic

Paso 6: SNS → Topic → WordCountTopic → Create Subscription

- Topic ARN → WordCountTopic
- Protocol → Email
- Endpoint → tomas.villaseca.c@gmail.com

Topic ARN

Protocol

The type of endpoint to subscribe

Endpoint

An email address that can receive notifications from Amazon SNS.

You have chosen to subscribe to the topic:

arn:aws:sns:us-west-2:712310588139:WordCountTopic

...

To confirm this subscription, click or visit the link below (If this was in error no action is necessary):

[Confirm subscription](#)



Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:

arn:aws:sns:us-west-2:712310588139:WordCountTopic:f02e2117-aaba-4ac9-af59-afbbc8781846

If it was not your intention to subscribe, [click here to unsubscribe](#).

Paso 7: Lambda → Functions → WordCount → Code → Code Source

```
lambda_function x Environment Var x +
1 import boto3
2 def lambda_handler(event, context):
3     # Obtener el nombre del archivo de S3
4     bucket_name = event['Records'][0]['s3']['bucket']['name']
5     file_name = event['Records'][0]['s3']['object']['key']
6     # Crear una instancia del cliente de S3
7     s3 = boto3.client('s3')
8     # Leer el archivo de S3
9     response = s3.get_object(Bucket=bucket_name, Key=file_name)
10    content = response['Body'].read().decode('utf-8')
11    # Contar la cantidad de palabras en el archivo
12    word_count = len(content.split())
13    # Crear una instancia del cliente de SNS
14    sns = boto3.client('sns')
15    # Enviar el correo usando el tema de SNS
16    topic_arn = 'arn:aws:sns:us-west-2:712310588139:WordCountTopic'
17    message = f"El archivo {file_name} tiene {word_count} palabras."
18    sns.publish(TopicArn=topic_arn, Message=message)
```


Paso 8: S3 → labbucket224466 → Upload

No objects

You don't have any objects in this bucket.

 Upload

- Add files → test.txt

<input checked="" type="checkbox"/>	Name	Type
<input checked="" type="checkbox"/>	 text.txt	txt

```
text.txt x
1  Hola mi mama me quiere mucho
```

Paso 9: Revisar correo electrónico → Notificación SNS

AWS Notifications

para mí ▾

 inglés ▾ > español ▾ [Traducir mensaje](#)

El archivo text.txt tiene 6 palabras.

Laboratorio Completado



