Datos Generales:

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Fecha: 06/11/2023

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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:

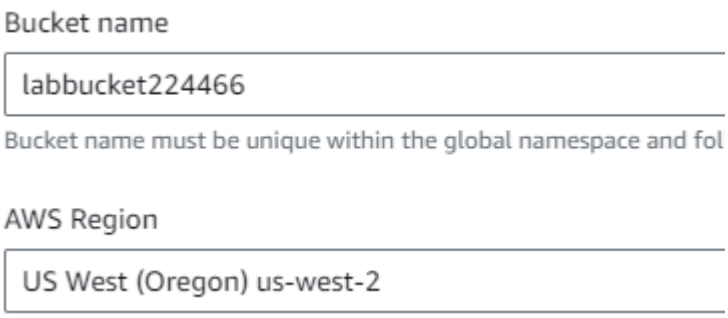
```
The word count in the <textFileName> file is nnn.
```

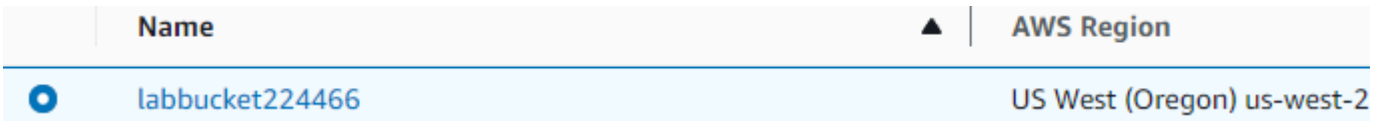
- Asunto del mensaje de correo electrónico → Resultado del recuento de palabras.
- Invoca automáticamente la función cuando el archivo de texto se cargue en un bucket de S3.

(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

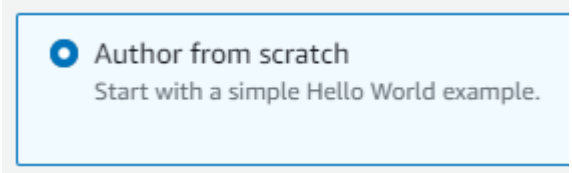
- Bucket Name = labbucket224466
- AWS Region = us-west-2



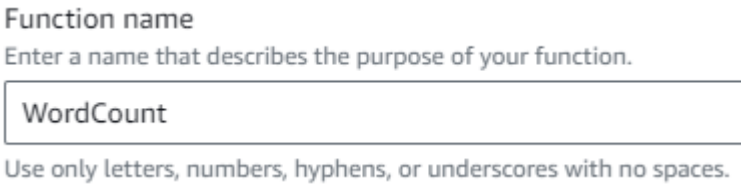


Paso 2: Lambda → Functions → Create Function → Basic Information

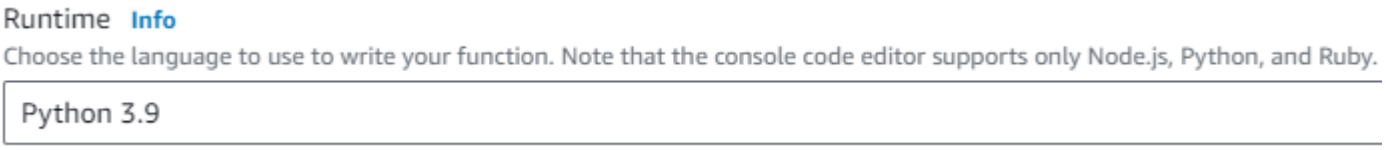
- Author from scratch



- Function Name = WordCount

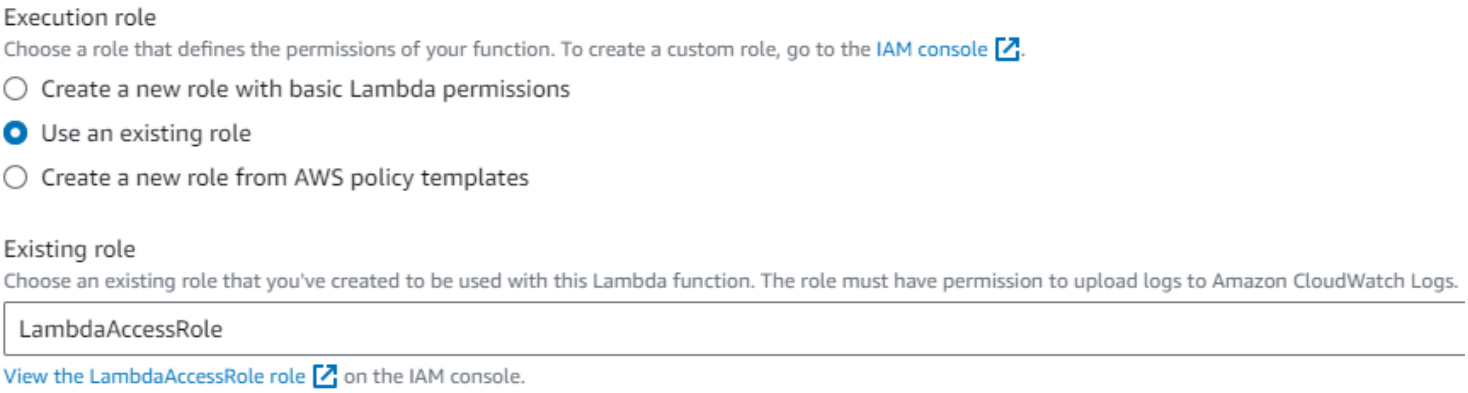


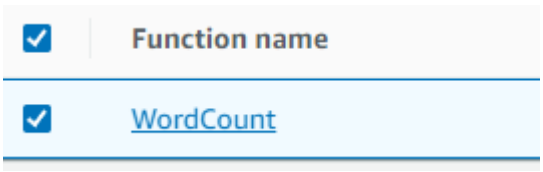
- Runtime → Python 3.9



Paso 3: Create Function → Permissions

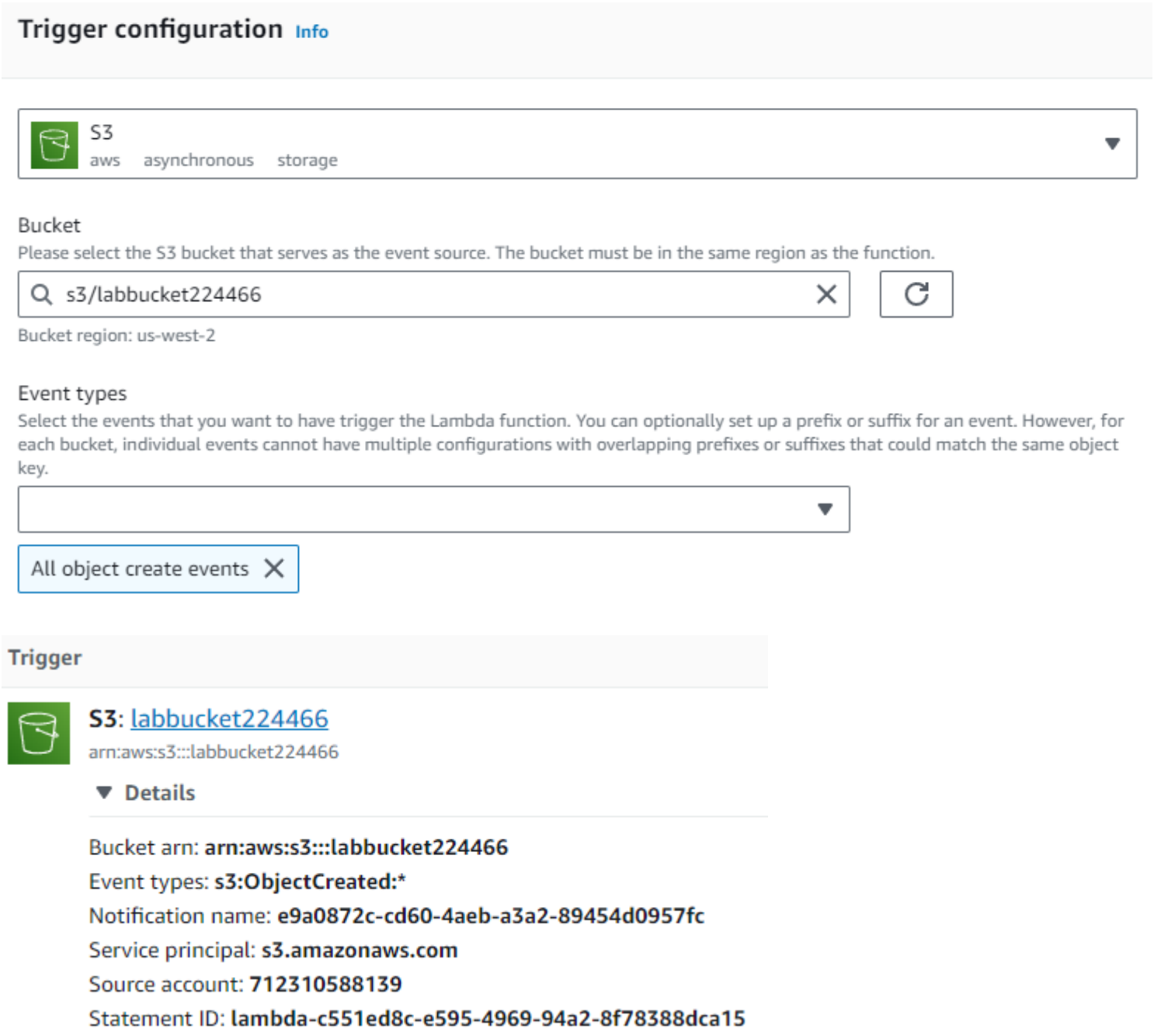
- Use an existing role → LambdaAccessRole





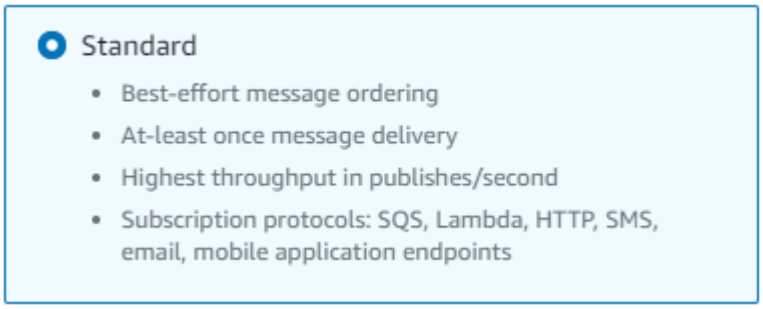
Paso 4: Lambda → Create Trigger → Add Trigger

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

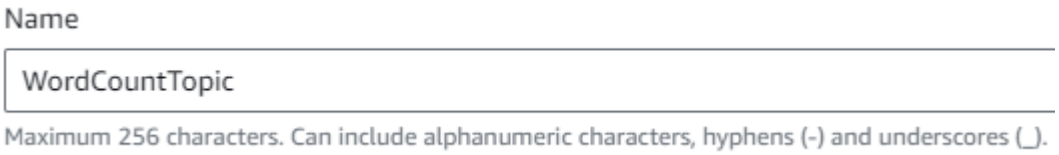


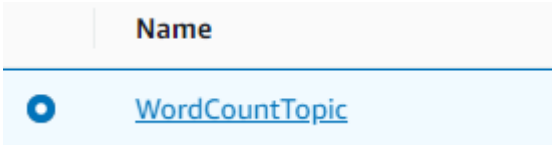
Paso 5: SNS → Topic → Create Topic

- Type → Standard



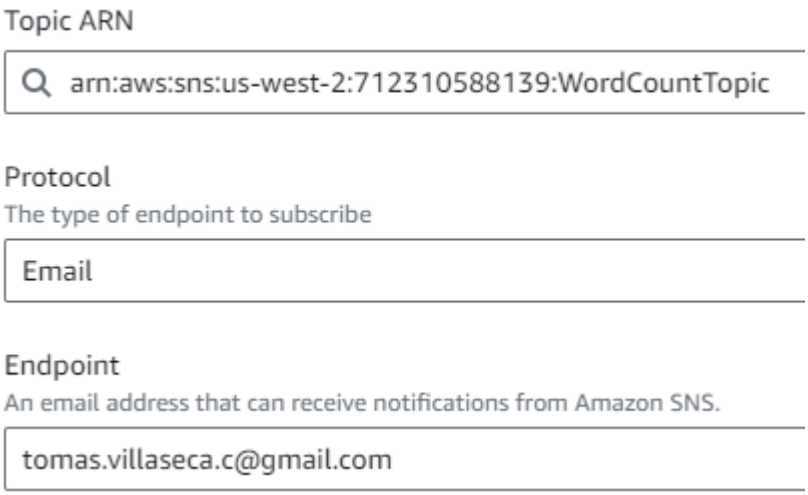
- Name = WordCountTopic





Paso 6: SNS → Topic → WordCountTopic → Create Subscription

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



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

aws 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

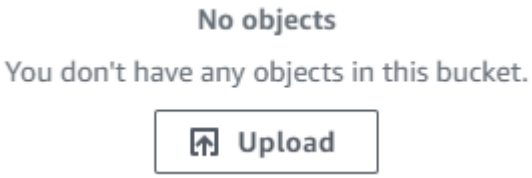
If it was not your intention to subscribe, click here to unsubscribe.

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

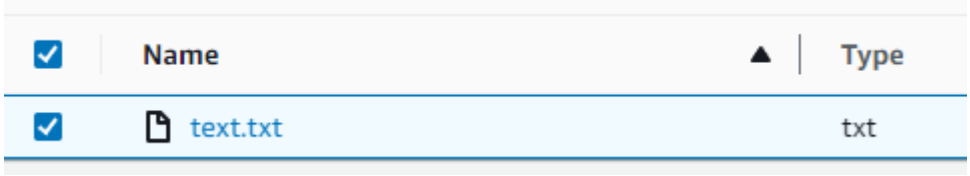
lambda_function × Environment Var ×

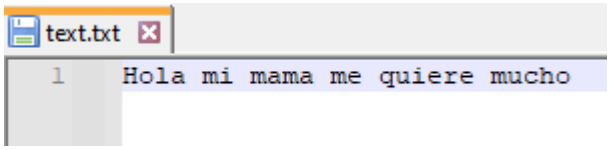
```python
import boto3
def lambda_handler(event, context):
    # Obtener el nombre del archivo de S3
    bucket_name = event['Records'][0]['s3']['bucket']['name']
    file_name = event['Records'][0]['s3']['object']['key']
    # Crear una instancia del cliente de S3
    s3 = boto3.client('s3')
    # Leer el archivo de S3
    response = s3.get_object(Bucket=bucket_name, Key=file_name)
    content = response['Body'].read().decode('utf-8')
    # Contar la cantidad de palabras en el archivo
    word_count = len(content.split())
    # Crear una instancia del cliente de SNS
    sns = boto3.client('sns')
    # Enviar el correo usando el tema de SNS
    topic_arn = 'arn:aws:sns:us-west-2:712310588139:WordCountTopic'
    message = f"El archivo {file_name} tiene {word_count} palabras."
    sns.publish(TopicArn=topic_arn, Message=message)
```

Paso 8: S3 → labbucket224466 → Upload



- Add files → test.txt





Paso 9: Revisar correo electrónico → Notificación SNS