

Lambda Function Python Code

The Lambda function reads contacts from an S3 bucket, personalizes email templates and sends emails using SES.

Python Code (used Python 3.12)

```
import boto3
import csv

# Initialize the boto3 client for S3 and SES
s3_client = boto3.client('s3')
ses_client = boto3.client('ses')

def lambda_handler(event, context):
    # Specify the S3 bucket name
    bucket_name = 'cwh-email-marketing' # Replace with your bucket name

    try:
        # Retrieve the CSV file containing contacts from S3
        csv_file = s3_client.get_object(Bucket=bucket_name, Key='contacts.csv')
        lines = csv_file['Body'].read().decode('utf-8').splitlines()

        # Retrieve the HTML email template from S3
        email_template = s3_client.get_object(Bucket=bucket_name,
        Key='email_template.html')
        email_html = email_template['Body'].read().decode('utf-8')

        # Parse the CSV file
        contacts = csv.DictReader(lines)

        for contact in contacts:
            # Replace placeholders in the email template with contact information
            personalized_email = email_html.replace('{{FirstName}}', contact['FirstName'])

            # Send the email using SES
            response = ses_client.send_email(
                Source='you@yourdomainname.com', # Replace with your verified "From"
                address
                Destination={'ToAddresses': [contact['Email']]},
                Message={
                    'Subject': {'Data': 'Your Weekly CloudWithHarry NewsLetter!', 'Charset': 'UTF-8'},
                    'Body': {'Html': {'Data': personalized_email, 'Charset': 'UTF-8'}}
                }
            )
            print(f"Email sent to {contact['Email']}: Response {response}")
    except Exception as e:
        print(f"An error occurred: {e}")
```

Lambda Function Test Event

Use the following JSON as a test event:

```
```json
{
 "comment": "Generic test event for scheduled Lambda execution. The function does not
use this event data.",
 "test": true
}
```
```

IAM Policy for SES and S3 Permissions

The Lambda function requires permissions to access S3 and SES. The following IAM policy grants the necessary permissions.

Policy JSON

Update the ARN to use your S3 bucket:

```
```json
{
 "Version": "2012-10-17",
 "Statement": [
 {
 "Effect": "Allow",
 "Action": [
 "s3:GetObject"
],
 "Resource": "arn:aws:s3:::[your-s3-bucket-name]/*"
 },
 {
 "Effect": "Allow",
 "Action": [
 "ses:SendEmail",
 "ses:SendRawEmail"
],
 "Resource": "*" # or you can specify which mail u want as sender
 }
]
}
```
```

