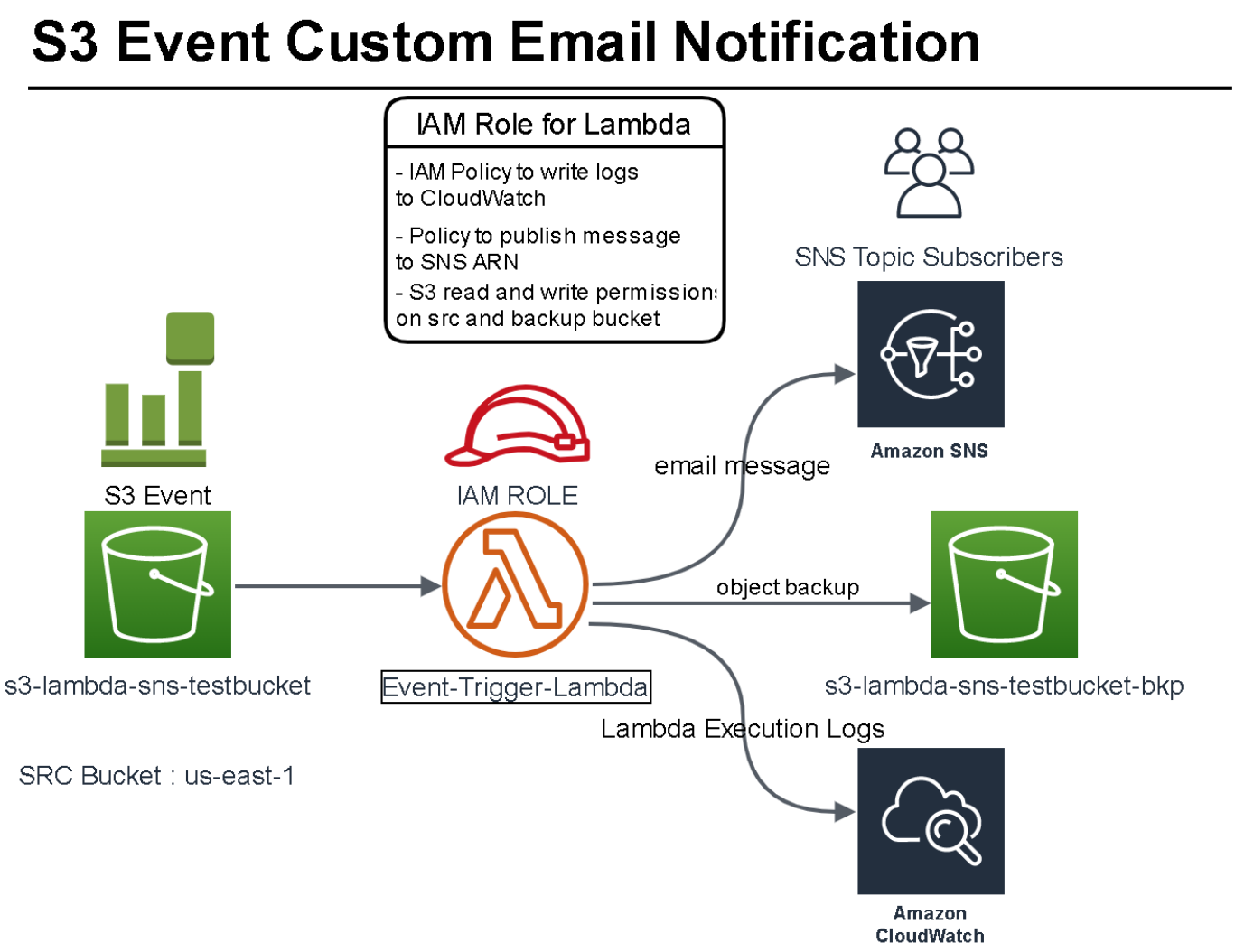
Lambda Function using Serverless

- Serverless applications are applications composed of functions triggered by events.
- A typical serverless application consists of one or more AWS Lambda functions triggered by events such as object uploads to Amazon S3, Amazon SNS notifications, and API actions.
- AWS SAM defines a set of objects which can be included in a CloudFormation template to describe common components of serverless applications easily.



Executing CF with Serverless Template.

- Create a zip file with a name e.g `s3-lambda-sns.zip`, this zip file should have the lambda function code with filename `lambda_function.py`.

> Make sure the `lambda_function.py` file is inside the top level of the zip. The Lambda Function to have the code from S3 Bucket Object, make sure S3 Bucket and Lambda Function to be created is present in same AWS Region.

- Upload this zip file in an S3 bucket which will have code.
- Execute the Serverless CloudFormation Template to create Lambda Function and pass necessary - Lambda Function using Serverless
- Executing CF with Serverless Template. in CF Stack Creation Page.

> Enter values below as per your AWS Account

CF Parameter Name	Value	Description
S3BackupBucketName	`<BUCKETNAMEVALUE>`	S3 Backup Bucket already present in your AWS Account.
NotificationEmailAddress	`<EMAIL_ID>`	Email Id to which Notification Email will be received via SNS topic
SNSTopicName	`<SNS_TOPIC_NAME>`	Email Id to which Notification Email will be received via SNS topic
CodeS3BucketName	`<CodeS3BucketName>`	Bucket Name where Lambda Function Zip Code is present
CodeS3ObjectKeyLocation	`<CodeS3ObjectKeyLocation>`	This should be value of the key name (Zip File Object) that is uploaded in S3 Bucket
EnvironmentName	`<EnvironmentName>`	This is value of SDLC Environment name as : `dev|qa|prod`

- Verify the resources created by CF template
- The CF Stack Creates below AWS Resources:
    - SNS Topic with EMAIL Id as a subscriber.
    - S3 Bucket for Source Event Setup
    - Lambda Function
    - IAM Role attached to Lambda Function

> Use CF CLI Commands to create stacks as per SDLC and passing parameters. A Continuous Integration approach would be to have this source code checked in to CodeCommit/Github Repository and Build a CI Job to execute CLI Commands for creating/updating AWS Resources. Ref: SAM Document Reference