Assignment 3 – S3

Make sure you follow the least privilege principle for the IAM policies for these 3 tasks and next classes.

- 1. Create a bucket for assets of the web app hosted on EC2. Put an image into the bucket.
 - a. Create an inline IAM policy in the LabRole that allows the instance to get objects from the bucket.
 - b. Download the image in the EC2. Copy from S3 to EC2.

aws s3 cp s3://<bucket>/< image_name> <image_name>

- c. Update the index.html and read the image from the /var/www/html folder
- 2. Send an email to yourself when the object is created in the bucket.
 - a. You need to create an SNS topic. Modify the default SNS policy while creating the SNS.
 - b. Subsribe it with your email.
- 3. Write a lambda that returns a Signed URL of the object. Make sure the LabRole has an inline policy that allows getting objects from the bucket.

```
const AWS = require("aws-sdk");
const s3 = new AWS.S3({apiVersion: '2006-03-01'});

exports.handler = async (event) => {
   const params = { Bucket: 'myfirstbucketcreatedwithcli2022cs516', Key: 'Capture.PNG' };
   return s3.getSignedUrl('getObject', params);
};
```

Refer: https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/S3.html#getSignedUrl-property

Extra:

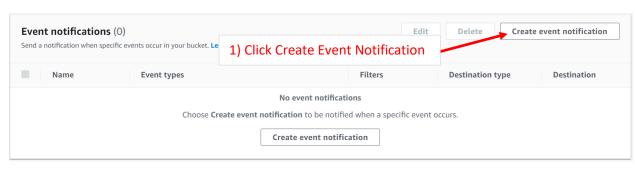
Read a file from S3 in EC2 using S3 Gateway Endpoint. After a successful connection, write S3
resource-based policy that allows read access only from the VPC endpoint in the bucket policy.
Refer: https://www.youtube.com/watch?v=TqApkvJx5hw

Setting Event Notification

Create SNS Topic & Add Permission for S3 to Publish Message. Subscribe to the SNS Topic

```
"Sid": "__console_pub_0",
"Effect": "Allow",
"Principal": {
    "Service": "s3.amazonaws.com"
},
"Action": "SNS:Publish",
"Resource": "<Your SNS ARN>",
"Condition": {
    "StringEquals": {
        "aws:SourceAccount": "<Your AWS Account Number>"
    },
    "ArnLike": {
        "aws:SourceArn": "arn:aws:s3:*:*:<Your Bucket Name>"
    }
}
```

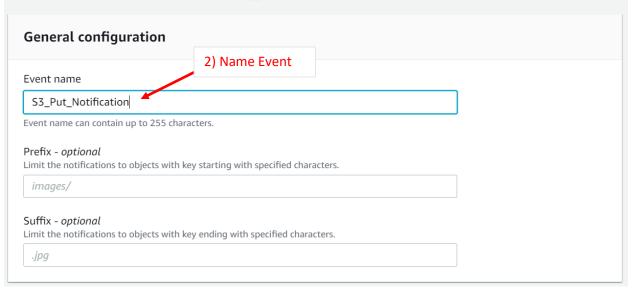
Create S3 Event Notification for Your Bucket Under Properties Tab Event Notification

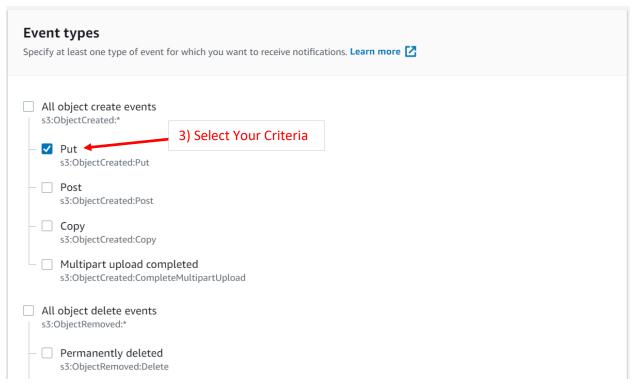


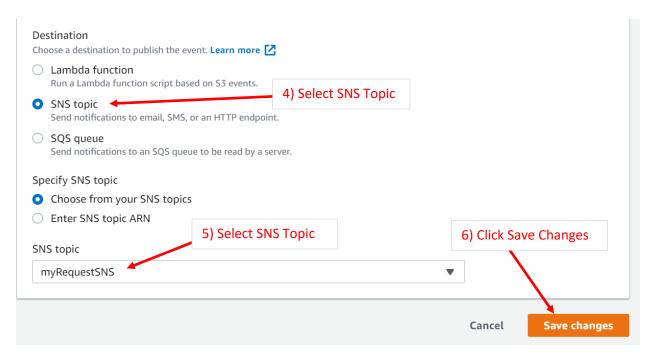
•••

Create event notification Info

The notification configuration identifies the events you want Amazon S3 to publish and the destinations where you want Amazon S3 to send the notifications. Learn more







Test by Uploading a File to Your S3 Bucket