- ## Project 2.2: Creating a Cloud-Front CDN Distribution to distribute a set of image files.

Objective:

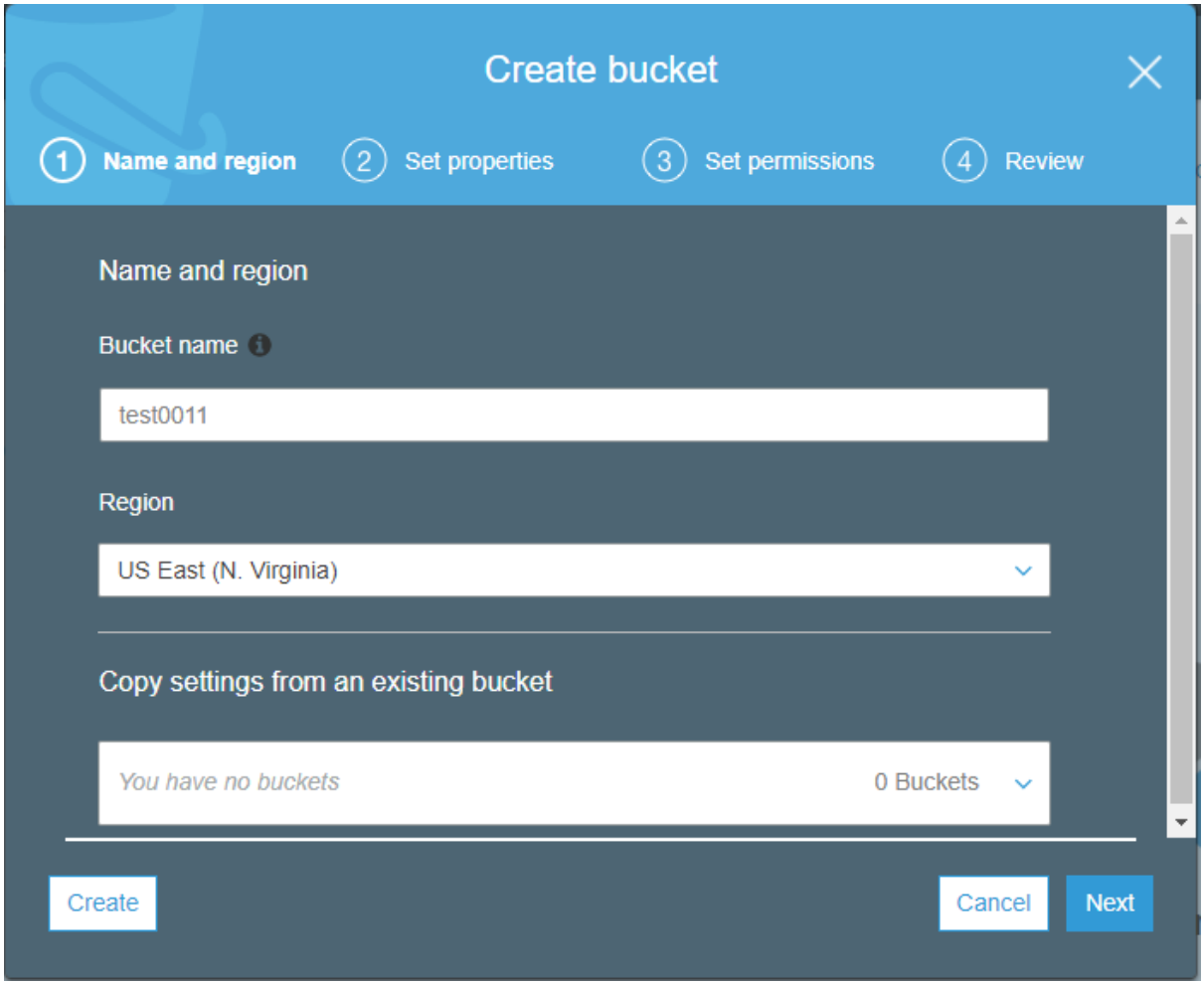
- **This project aims at creating a Cloud-Front CDN Distribution to distribute a set of image files.**

Used AWS Resources:

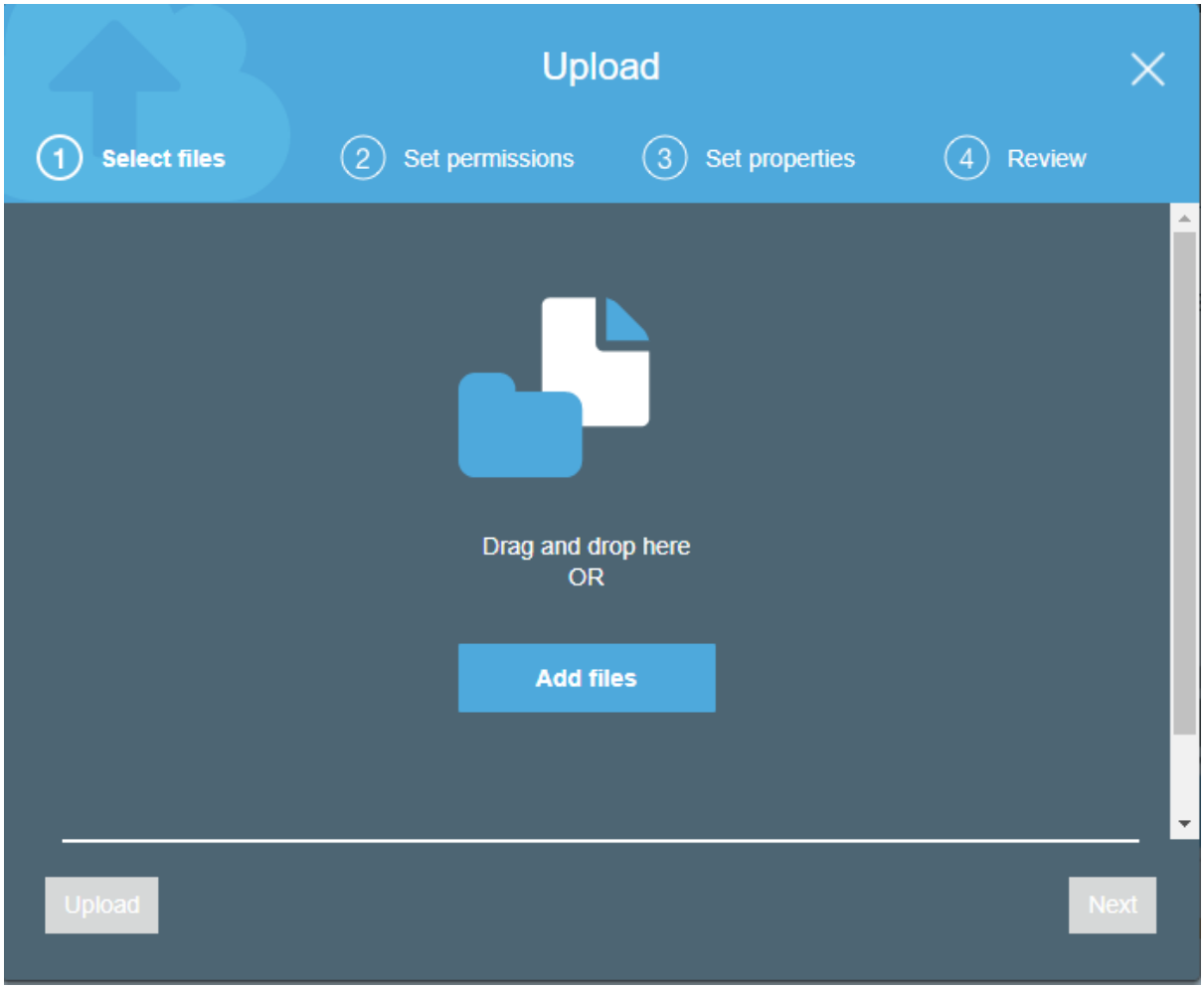
- **Cloud-front Content distributed network(CDN).**
- **Simple Storage Service(S3).**

End Result:

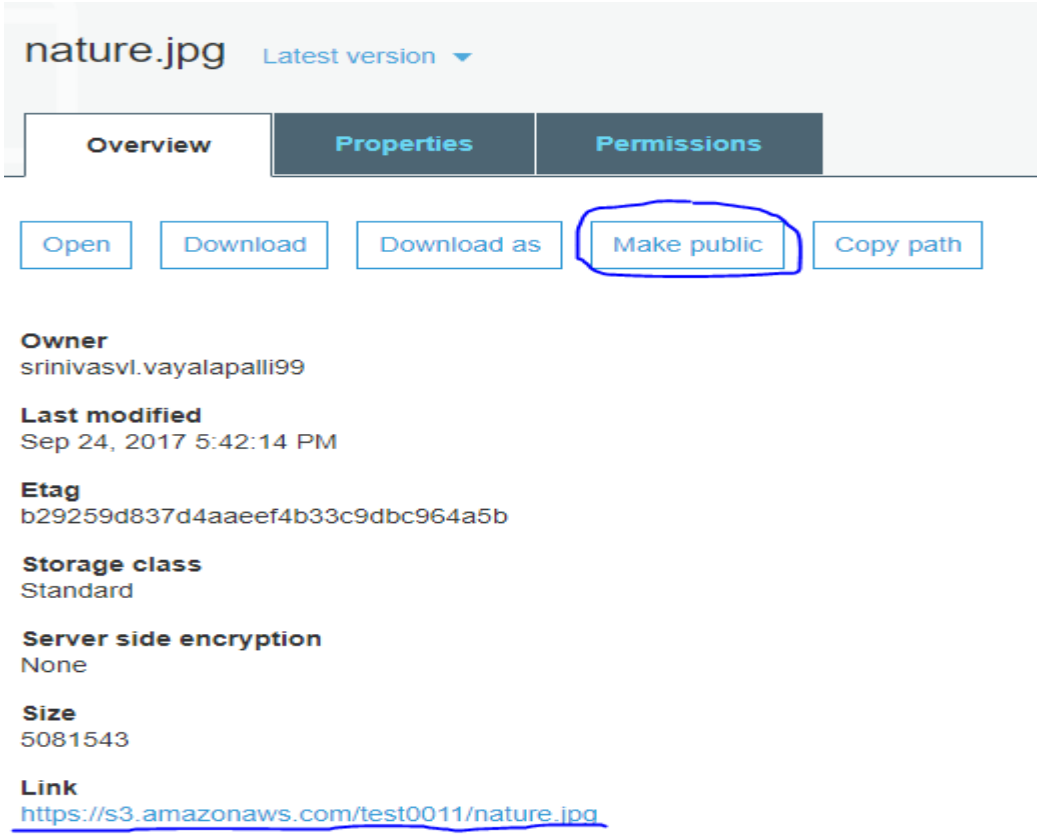
- **Getting an image file through the Content delivery network.**



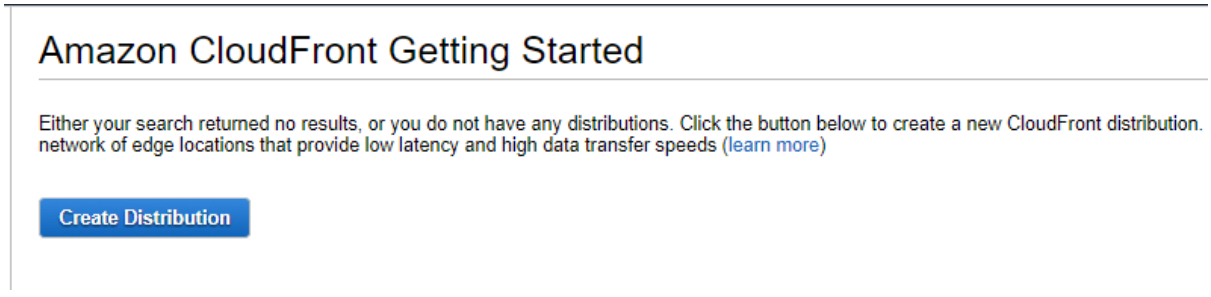
- First create a bucket with a unique name.
- Select the specific region where you want to locate bucket.
- If you have any previous buckets, then you can copy and apply same settings to the creating bucket.
- Click on to the create button to create a bucket.
- If you want to set the permission of bucket, then click on the next button which is located at right bottom as shown in the above screenshot.



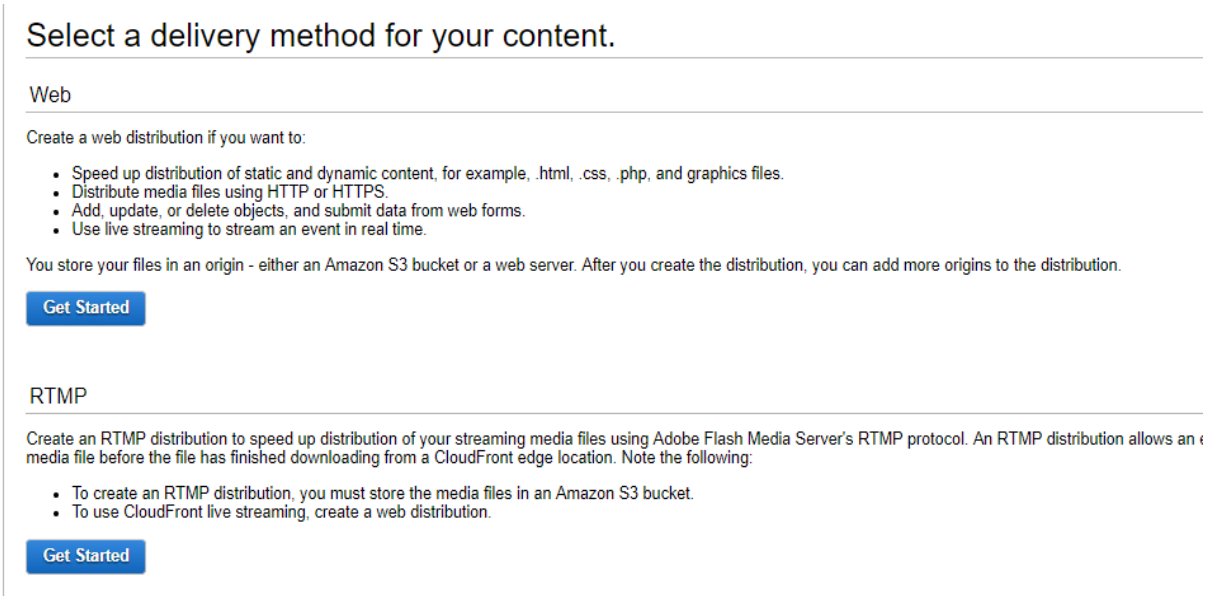
- After the creation of the bucket, upload required html file(testing.html) and image file(nature.jpg).
- To add files into bucket, click on the add files button then select files which you want to store into bucket.
- Then click on the upload button to upload selected files.



- To make public the files, select the files and click on the make public button.
- https://s3.amazonaws.com/test0011/nature.jpg is the link to access the nature.jpg file from s3.
- Now we will create the cloud front content distribution to access the same image file which is stored in s3.
- For that we have to create one CDN web distribution, after that we will setup some of the settings over the cloud front.



- if you aren't have any cloud front distributions, then the dash board of cloud front will looks like this as shown above screenshot.



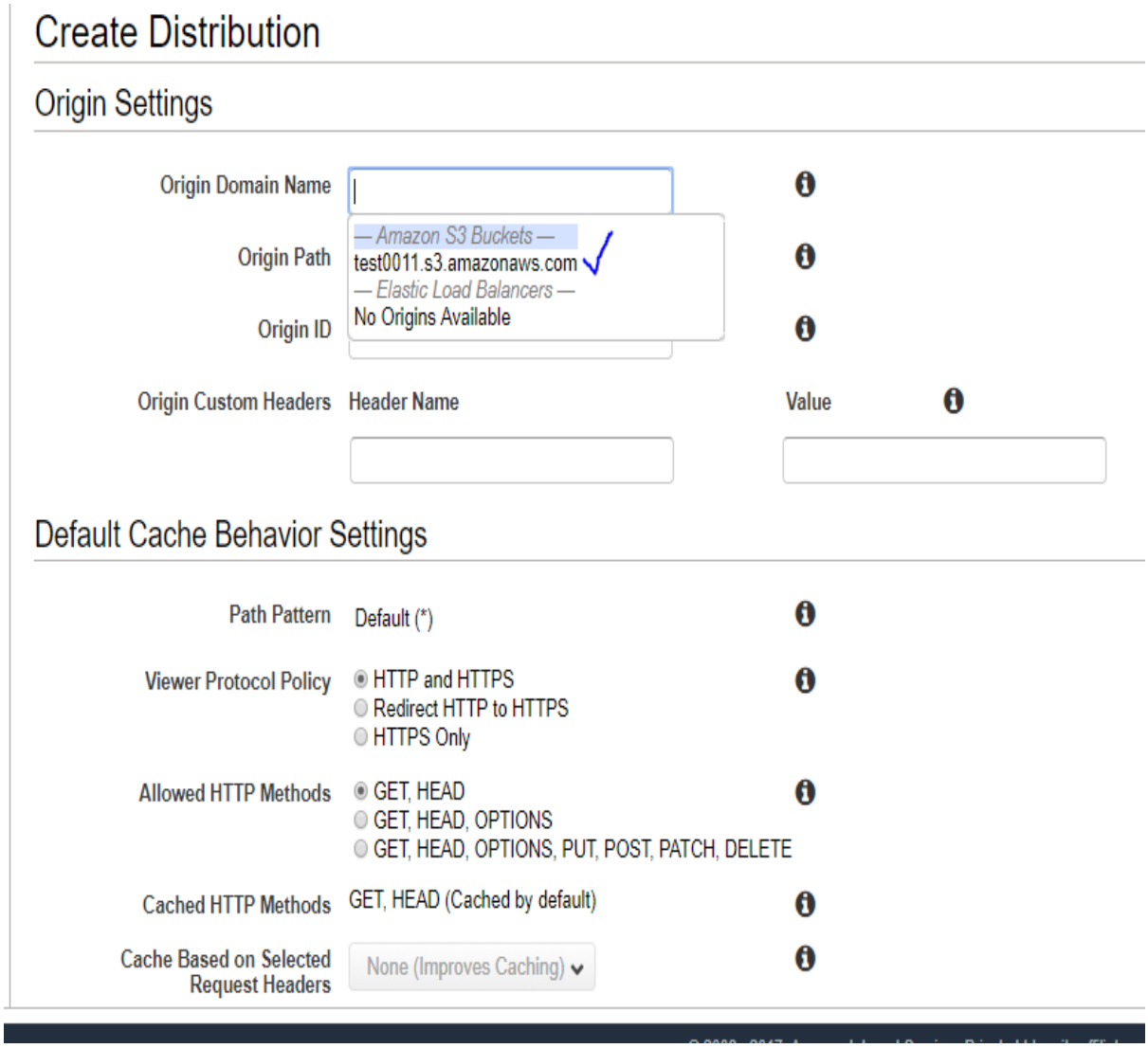
- There are two delivery methods available, those are web and RTMP.

Web:

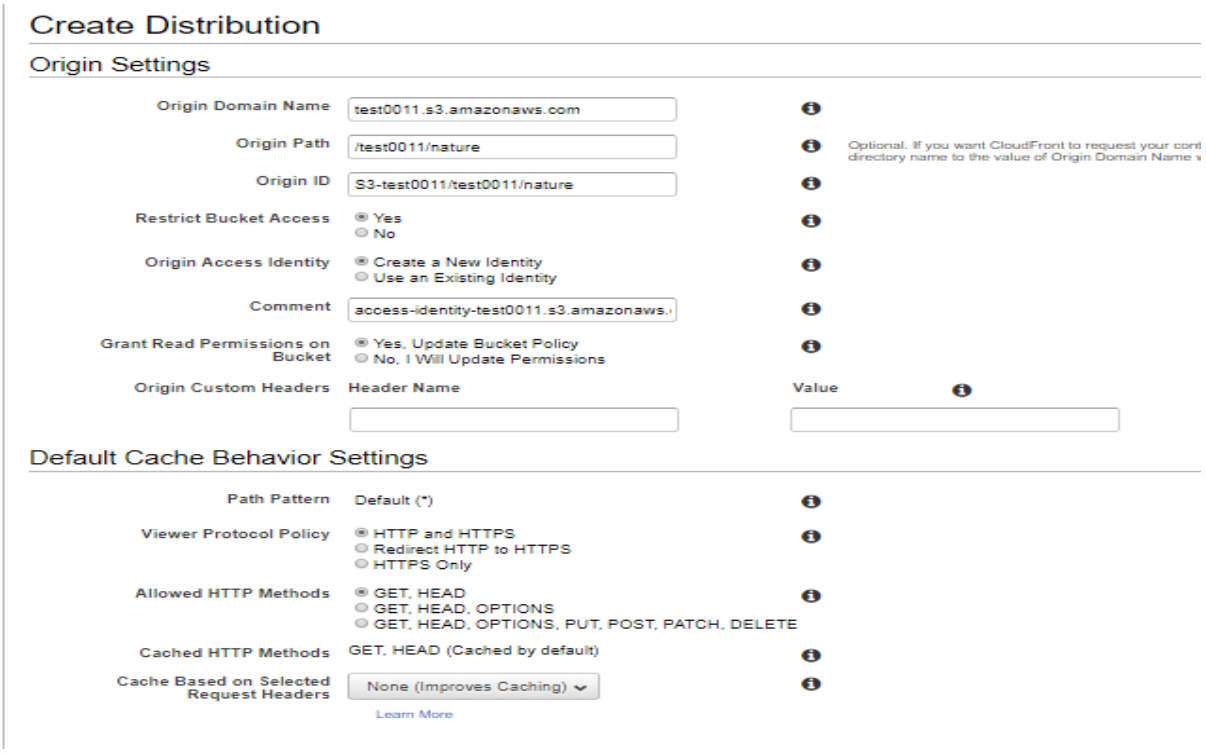
- Web is normally used to speed up distribution of static and dynamic content like any. Html, CSS, php, and any graphics files.
- This is using https and http protocols.

RTMP:

- RTMP is normally used to speed up distribution of your streaming media server's RTMP protocol.
- We can get the live streaming of videos.



- Creation of distribution network wen have to set some of the origin settings.
- In origin domain name, we have to select s3 bucket name or some other elastic load balancer (ELB).
- Origin path could be the path of the folder that you had created in your s3 bucket. But this one is optional.
- Origin id could be taken a default name. if we want set any name, then we can do that.
- As of now no need to change any default cache behavior settings.



- These are the filled details in the distribution setting block.
- Here we can see the created web distributed cloud front.

AWS Policy Generator

The AWS Policy Generator is a tool that enables you to create policies that control access to Amazon Web Services (AWS) products and resources. For more information about creating policies, see key concepts in Using AWS Identity and Access Management. Here are sample policies.

Step 1: Select Policy Type

A Policy is a container for permissions. The different types of policies you can create are an IAM Policy, an S3 Bucket Policy, an SNS Topic Policy, a VPC Endpoint Policy, and an SQS Queue Policy.

Select Type of Policy S3 Bucket Policy

Step 2: Add Statement(s)

A statement is the formal description of a single permission. See a description of elements that you can use in statements.

Effect Allow Deny

Principal *

Use a comma to separate multiple values.

AWS Service Amazon S3 All Services ('*')

Use multiple statements to add permissions for more than one service.

Actions -- Select Actions -- All Actions ('*')

Amazon Resource Name (ARN) arn:aws:s3:::test0011/*

ARN should follow the following format: arn:aws:s3:::<bucket_name>/<key_name>.
Use a comma to separate multiple values.

Add Conditions (Optional)

Add Statement

- we have to generate a bucket policy so that we can provide particular permissions at bucket level.

You added the following statements. Click the button below to Generate a policy.

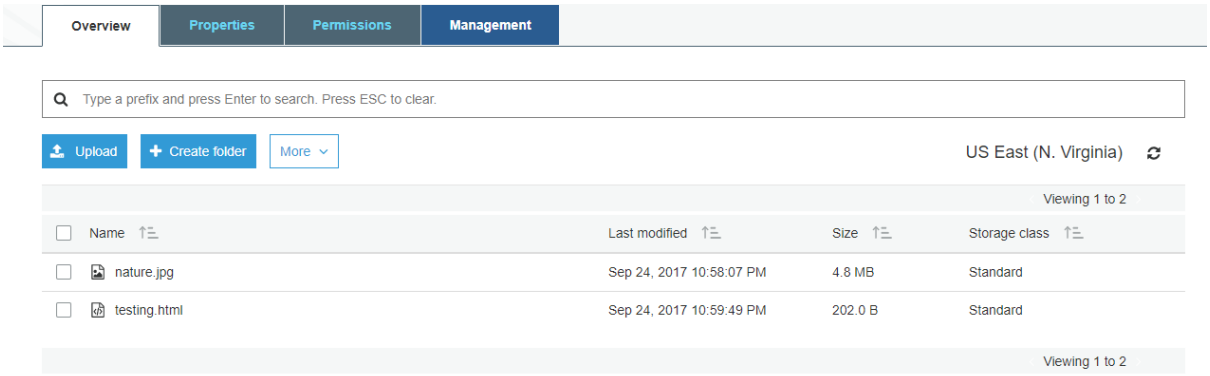
Principal(s)	Effect	Action	Resource	Conditions
• *	Allow	s3:*	arn:aws:s3:::test0011/*	*None*

Step 3: Generate Policy

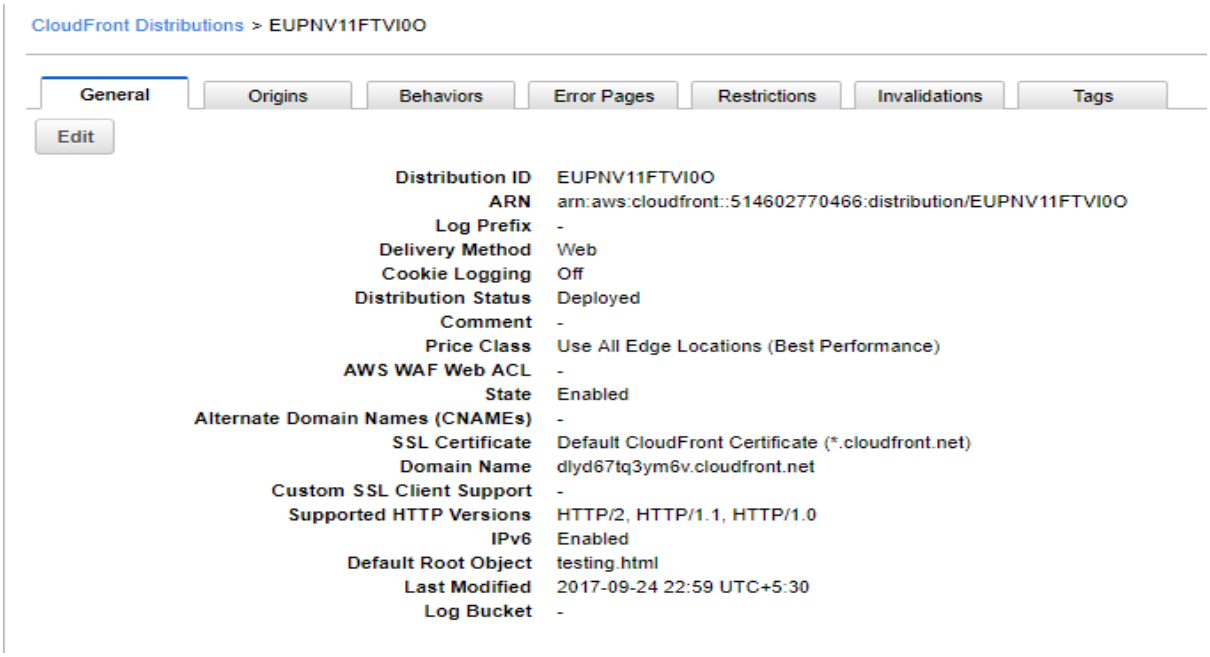
A *policy* is a document (written in the Access Policy Language) that acts as a container for one or more statements.

Generate Policy Start Over

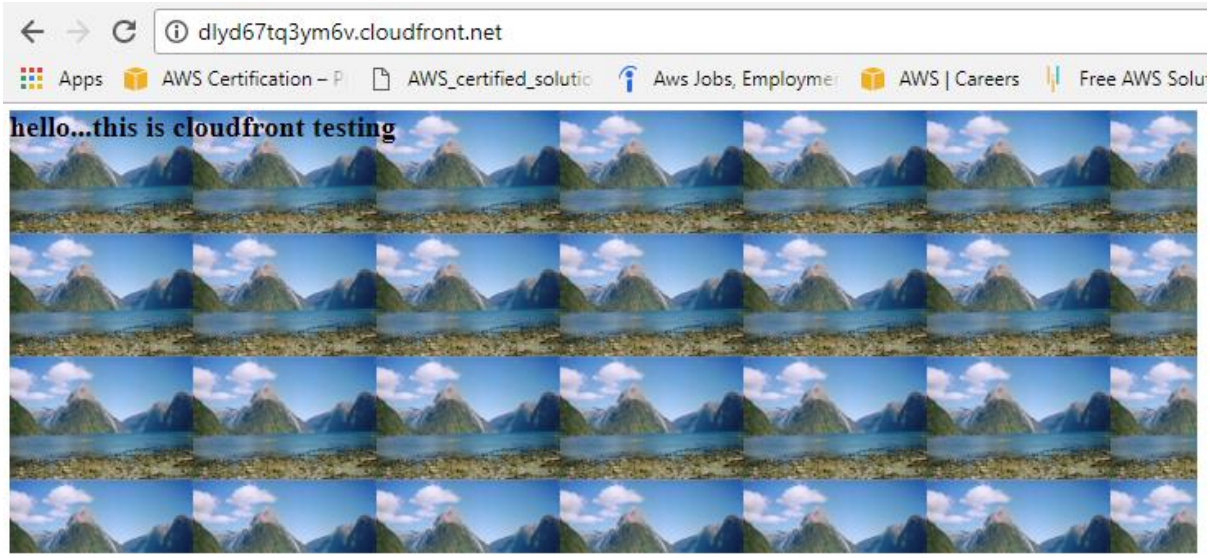
- Click on the Generate button to create a new policy for the bucket.



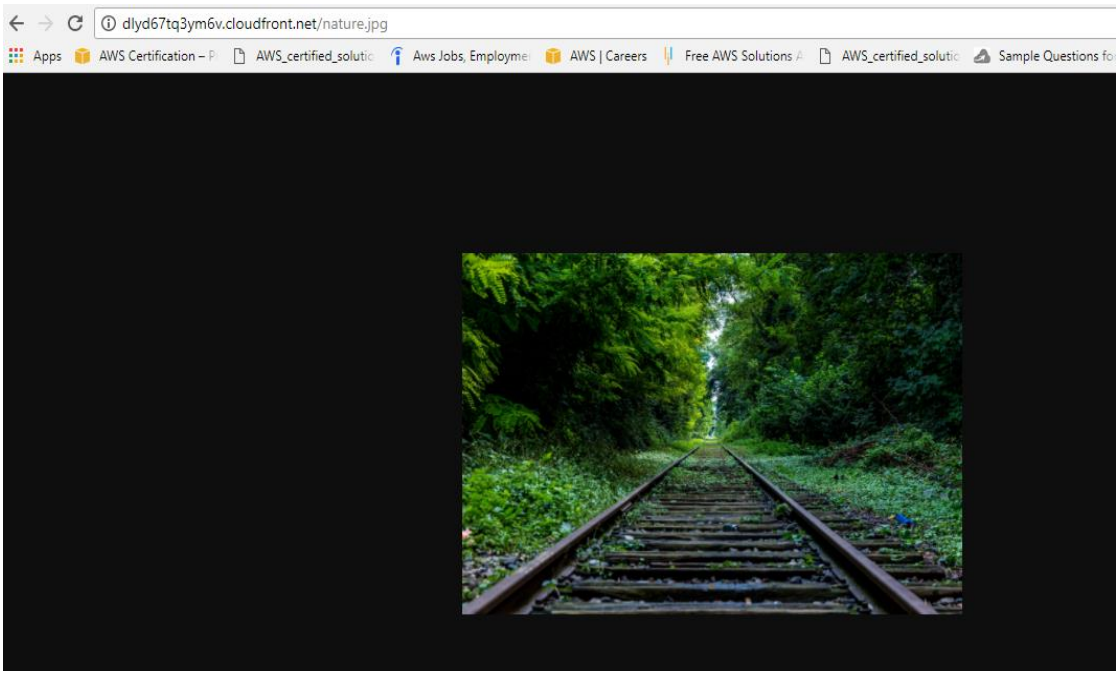
- We uploaded two files into the bucket named test0011.
- Those are the nature.jpg, testing.html



- If we want to change any settings regarding the origin or change the bucket or add the elastic load balancer end point URL, those things we can do from here.



- After the deployment completion, we can simply copy that particular domain name and put it over web browser. Then we can get the output.



- **This is the nature.jpg (image file) which we were uploaded in s3 bucket and accessing from the cloud-front without enter into the simple storage service(S3).**

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