# Project: Host a Static Website (RESUME) on AWS with S3, Cloud-Front, Route53

## Pre-requisites:-

1. AWS Account
2. GitHub Account
3. Custom Domain
4. Basic Knowledge About CloudFront, S3, Route53, AWS Certificate Manager

## Steps:

1. Create your own Resume/Portfolio Website or Clone the the sample repository created for this project.


2. Create a New S3 Bucket & Upload your Resume Website Files.
3. Enable S3 Static Website Hosting Feature
4. Connect your Domain to Route53 by Creating a Hosted Zone.

5. Obtain a SSL Certificate
6. Create a CloudFront Distribution & Connect it with your S3 Bucket
7. Set Bucket Policy to Allow Cloudfront to access S3
8. Connect CloudFront to Route53 to redirect Traffic
9. Finally Visit your Website to See the Resume

## Step 1:-

If you have not any Project Please use Below GitHub Repository it contains a Sample Resume Website

```
git clone https://github.com/tusharganguride2029/AWS_DevOps_Projects
```

Repository to Use (Use 2nd Project)

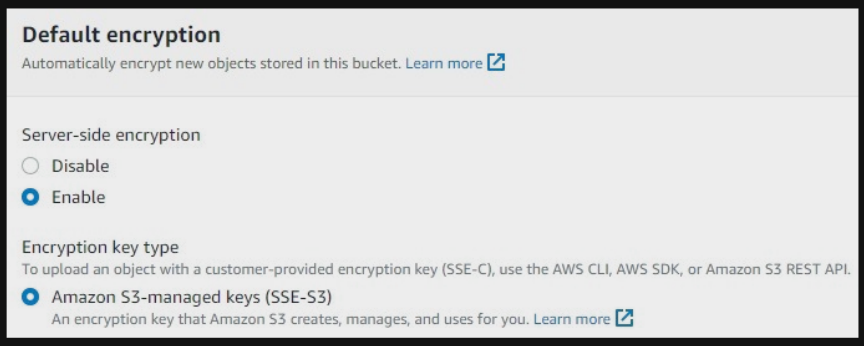
**Note:** Before Proceeding you should have your custom Domain you can buy a new domain or you can get a free domain from Freenom.com

## Step 2:

Let's Create a new S3 Bucket and upload our Resume Files
Go to your AWS Console & Open S3 & click on Create Bucket

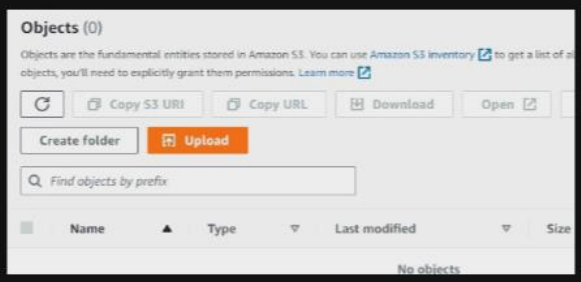
Provide Bucket Name & choose Your Region


For Security reasons block Public Access we are going to use CloudFront for Serve the Website

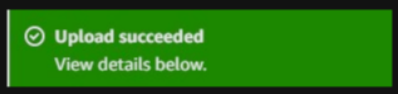



We are using Server-Side encryption with Amazon S3-Manged Keys to reduce overhead of key management

Upload your Resume Website Files




Finally Upload your Website Files




You can see I have Successfully Uploaded My Website Files

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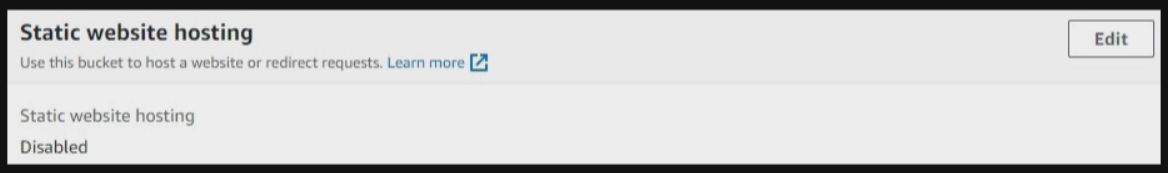
## Step 3:-

Now Let's Enable S3 Static Website Hosting Feature
Go to your Bucket -> Properties -> Static Website Hosting as shown in below image edit & enable feature

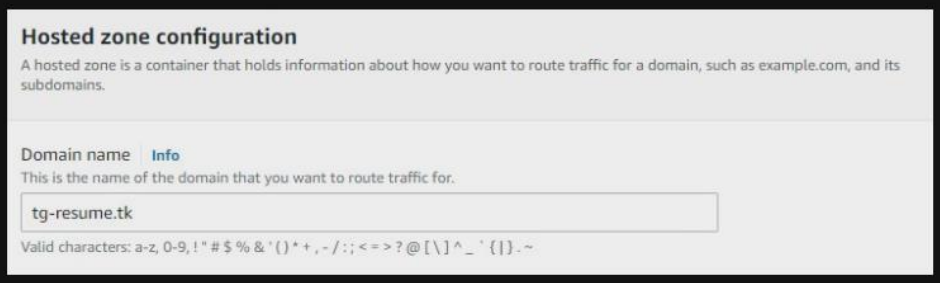



Provide Your Index Document for me its index.html

After that click on Save Changes.

## Step 4:-

Let's Connect our Domain to Route53
Go to Route53 in AWS -> Hosted Zone
Create a new Hosted Zone



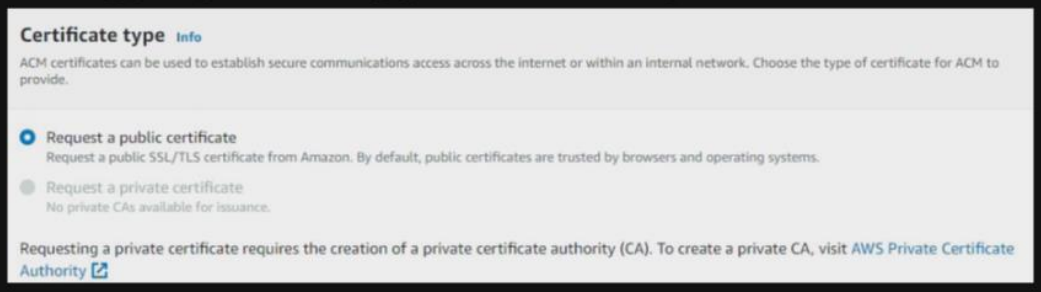

Provide Your Domain Name & Click on Create Hosted Zone

Now Let's Connect our domain to Route53
Open your Hosted Zone You can see 4 NS Records , we need to add that in our Domain Fields.
Go to your Domain Management & add 4 NameServers as shown in the below image

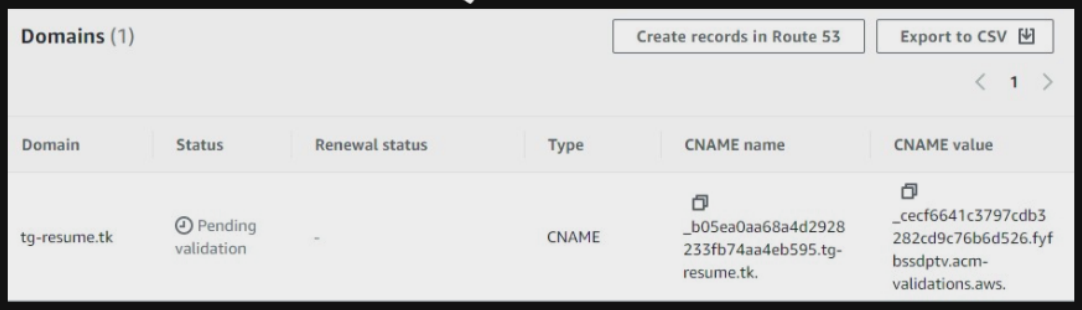
You have successfully created your domain to Route53

## Step 5:-

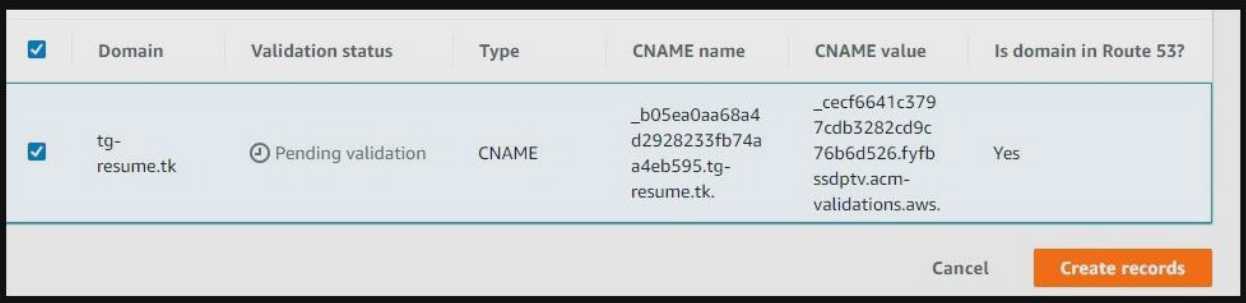
Let's Obtain a SSL Certificate from AWS Certificate Manager
Go to your AWS Console -> Certificate Manager
Click on List Certificates -> Request
You can see below screen click on next




Provide your domain name let all the configurations as it is and click on Request
You can see your Request status as "Pending Validation"
Open that Certificate & click on created records in Route53 as shown in the below image




After that click on Create Records



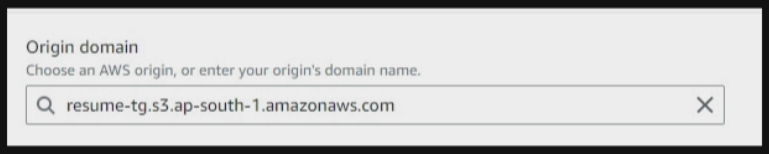

After few minutes you can see your Certificate status as "Issued"

## Step 6:-

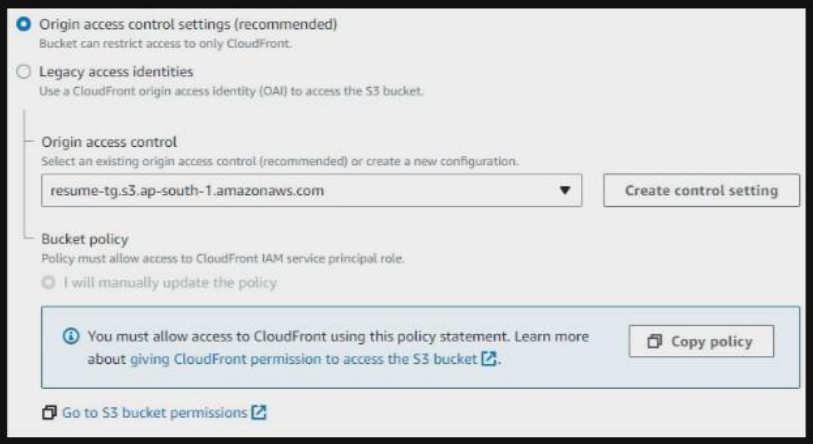
Let's Create a CloudFront distribution with S3 bucket origin and SSL Certificate

Go to your AWS Console -> CloudFront -> Create Distribution

Provide the Origin Domain as your S3 Bucket




Provide the Origin Access as shown in image & select your Bucket

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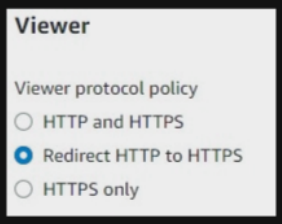
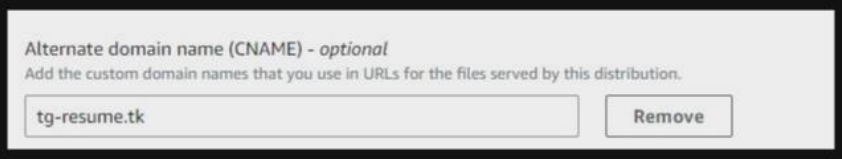
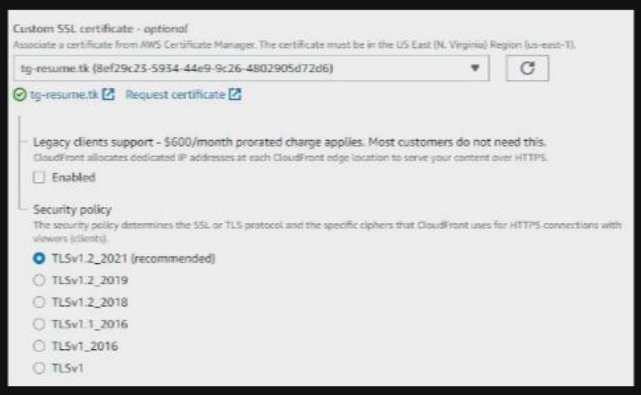
Provide the Viewer protocol policy as shown in the image as we are going to redirect the traffic to HTTPS




Add your Alternate Domain Name




Add your SSL Certificate




Finally click on Create Distribution

## Step 7:

Let's Set Bucket Policy to allow cloudfront to access s3
Go to Buckets -> Open the Bucket we have created
Go to Permission -> Edit Bucket Policy

```
{
  "Version": "2008-10-17",
  "Id": "PolicyForCloudFrontPrivateContent",
  "Statement": [
    {
      "Sid": "AllowCloudFrontServicePrincipal",
      "Effect": "Allow",
      "Principal": {
        "Service": "cloudfront.amazonaws.com"
      },
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::resume-tg/*"
      "Condition": {
        "StringEquals": {
          "AWS:SourceArn": "arn:aws:cloudfront::669087208571:distribution/E1X7VVUG2MRP6G"
        }
      }
    }
  ]
}
```

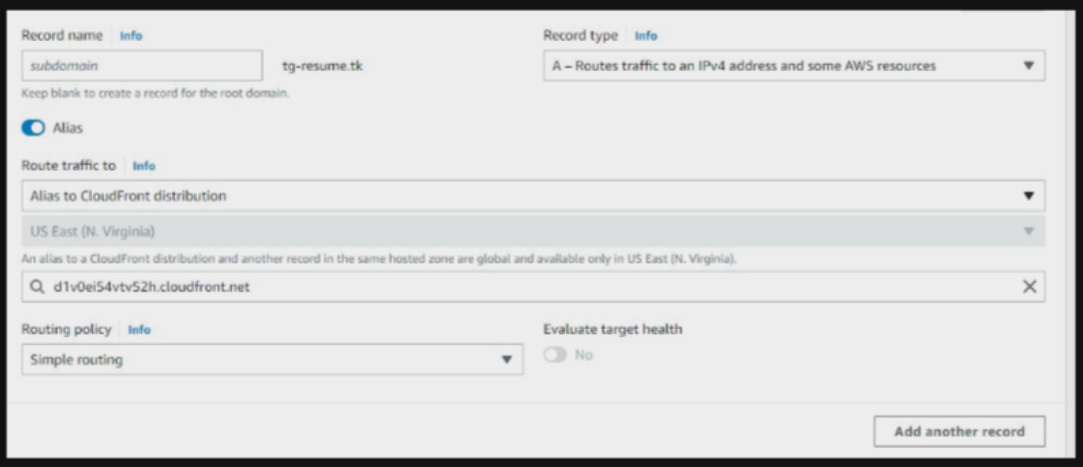
Provide your bucket details you can see at the top

Provide Cloud Distribution Details that we created

As shown in the image give the same policy edit the provided info as per your bucket and cloudfront distribution
After that click on Save Changes

## Step 8:

Now Let's Connect our CloudFront to Route53
Go to Route53 -> Hosted Zone -> Open hosted zone that we have created
After that click on Create Record
Record Type -> A
Alias -> should be enable
Route Traffic to -> Alias to cloudfront distribution
choose distribution that we have created
Finally click on Create Records

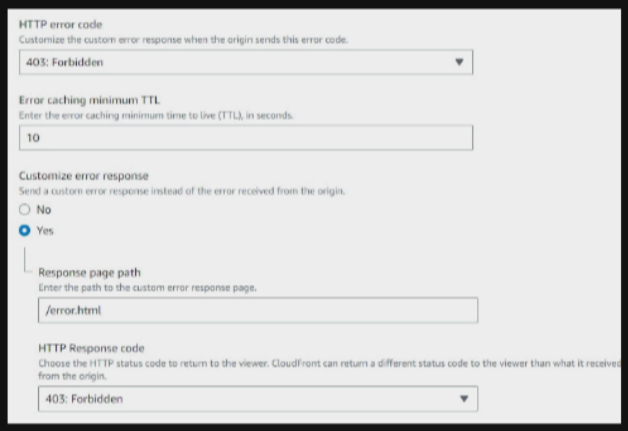



Refer the above Image for Configurations

## Step 9:-

Let's add a error page so that if any error request occurs users should redirect to error page

Go to CloudFront -> Open the CloudFront Distribution that we have created
Open Error Pages click on Create custom error response




After that click on Save Changes if we anything like URL/random_string
we can see the error Page


Now you can visit your Website & its Completely hosted by the AWS.

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