AWS Static Website Hosting

Project Documentation

1.Introduction

This project demonstrates how to host a static website using AWS services, including S3, CloudFront, Route 53, and AWS Certificate Manager (ACM). The website will be secured with an SSL certificate and delivered via CloudFront for performance optimization.

2.Project Overview

Tech Stack Used:

- ✓ Amazon S3: Stores static website files (HTML, CSS, JS, images)
- ✓ Amazon CloudFront: Content Delivery Network (CDN) for fast global access
- ✓ AWS Route 53: Domain Name System (DNS) to map custom domains
- ✓ AWS ACM (Certificate Manager): Provides an SSL certificate for HTTPS

3.Features

- ✓ Custom domain name (e.g., tirueplantshoppingcart. shop)
- ✓ SSL encryption (HTTPS) for security
- ✓ Fast content delivery using CloudFront CDN
- ✓ DNS resolution via Route 53
- ✓ Automatic updates by syncing website files to S3

4.Procedure to create AWS Website Hosting

Step 1: Create an S3 Bucket for Website Hosting

- Go to AWS S3 Console → Click Create bucket.
- Bucket Name: Choose a unique name (e.g., tirueplantshoppingcart-bucket).
- Uncheck "Block all public access" to allow public access via CloudFront.
- Upload your website files (index.html, styles.css, etc.).

Example S3 Bucket Structure:

index.html

styles.css

images/

rain_wallpaper.png

Step 2: Configure CloudFront for Content Delivery

- Go to AWS CloudFront → Click Create Distribution.
- Choose Origin Domain → Select your S3 bucket.
- Set Viewer Protocol Policy to Redirect HTTP to HTTPS.
- Enable CNAME (tirueplantshoppingcart.shop).
- Click Create Distribution.

  CloudFront will now serve content from S3 globally.

Step 3: Set Up Route 53 for Custom Domain

- Go to AWS Route 53 → Create Hosted Zone for your domain.
- Create an A Record (Alias):
- Name: tirueplantshoppingcart.shop
- Type: A
- Alias Target: Select CloudFront Distribution.
- Add CNAME Record for www. version:
- Name: www.tirueplantshoppingcart.shop
- Type: CNAME
- Value: CloudFront Distribution URL.

Example Route 53 Records:

tirueplantshoppingcart.shop → Alias → CloudFront

www.tirueplantshoppingcart.shop. → CNAME → CloudFront URL

Step 4: Request an SSL Certificate from AWS ACM

- Go to AWS Certificate Manager (ACM) → Click Request a Certificate.
- Enter tirueplantshoppingcart.shop and www.tirueplantshoppingcart.shop.
- Choose DNS Validation (Recommended for Route 53 users).
- AWS will provide a CNAME record → Add this to Route 53.
- Once validated, attach the certificate to CloudFront.
- Site is now secured with HTTPS!

Step 5: Test the Website

- Open https://tirueplantshoppingcart.shop
- Verify HTTPS Lock Icon
- Test loading speed (CloudFront CDN improves performance)
- Static website is now hosted successfully!

User Uploads Website Files → S3 (Storage) → CloudFront (CDN) → Route 53 (DNS) → HTTPS (SSL via ACM) → User Accesses Website

Conclusion

This guide covers end-to-end static website hosting using AWS services. Now, our site is secure, fast, and globally available!