Project 3 Phase 1 — React App on AWS S3 with Static Hosting + CloudFront

Overview

This project will give you hands on experience building an AWS S3 static hosting site.
Unlike a website hosted on a TAMU server, like people.tamu.edu, the goal of being on the cloud prevents downtime from happening if your organization loses connectivity or goes under.

Amazon Web Services (AWS) aims to provide scalability, high availability, and low latency with 99.999999999% durability and between 99.95% to 99.99% availability.

Amazon Route 53 is a highly available and scalable Domain Name System (DNS) web service. You can use Route 53 to perform three main functions in any combination: domain registration, DNS routing, and health checking.

Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment.

Project Objectives:

You will be able to:

- **Show** your understanding of Simple Storage Service (S3) and how to set up data to be retrieved from anywhere.
- **Show** your understanding of how to create and name a domain.
- **Show** your understanding of how to create a security certificate (SSL).
- **Deploy a website** on the cloud.

Instructions:

More details will be provided as we gain access to the accounts and privileges.

1. This is an individual project, you must turn in your own work.
2. Collaboration for ideas is acceptable, duplication of work is not.
3. Use the account information given with this project.

4. Deploy a simple "hello World" react app on AWS in an S3 container.
5. Migrate your person webpage (The one from CSCE 315 will do) to the container, considering your domain name. (The content of the website is not going to be graded, but the ability to connect to multiple pages and external links will be evaluated.)
6. Create a HTTPS site with SSL certificate.
7. Document the process to create this website.
8. Demo the website in class.

Deliverables:

All deliverables must be at least a minimum viable solution to the problem assigned. No attempt at grading will be made for non substantial submissions.
All deliverables should have branding (create a logo or heading) and should look professional, ready to give to a customer. Internal documentation should have branding as well.

1. Provide the steps taken from beginning to end to create an S3 website on AWS.
2. Provide the link to your website.
3. Demonstration connectivity.

Grading:

This project is worth 100 points.

Documentation 30%
Successful deployment of appropriate web page as described above 50%
Demonstration 20%