Placement Empowerment Program

Cloud Computing and DevOps Centre

Host a Static Website Locally: Set Up a Local Server Apache and Host a Simple HTML page with your name

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Introduction

Hosting a static website on a remote server such as an EC2 instance allows you to make it accessible to anyone on the internet. Apache2 is one of the most widely used open-source web servers, making it a great choice for setting up your static website. EC2 instances are scalable, cost-effective, and provide flexibility for hosting websites of various types and sizes. This guide will take you through the process of hosting your static website using Apache2 on an EC2 instance.

Overview

This process involves launching an EC2 instance, setting up Apache2, and uploading your HTML files to the web server's root directory. Once configured, you'll be able to view your static website by accessing the public IP address of the EC2 instance in any web browser. The goal is to make sure the web server runs efficiently and securely while offering a reliable platform for users to view your website.

Objective

The primary objective of this setup is to:

1. **Install Apache Web Server**: Set up Apache on your EC2 instance to serve web pages.
2. **Deploy Static Website**: Create and upload an HTML file to the web server's root directory.
3. **Configure Security Settings**: Ensure the web server is accessible to users through proper security group settings.
4. **Test Website Access**: Verify the website is accessible by navigating to the EC2 instance's public IP in a browser

Importance of Local Hosting

1. **Cost-Effective**: EC2 instances come with a pay-as-you-go pricing model, which means you only pay for what you use. The free-tier eligible instances, such as t2.micro, are particularly suitable for small websites and experimentation.
2. **Scalability**: EC2 instances are scalable, so if your website grows, you can easily increase resources to handle more traffic without significant downtime or cost.
3. **Full Control**: Hosting on EC2 gives you full control over your server configuration and access, unlike traditional web hosting where the provider handles everything.
4. **Learning Opportunity**: Setting up a web server and managing a hosted website provides valuable experience with cloud technologies, Linux servers, and web hosting

Step-by-Step Overview

1.Launch EC2 Instance:

- Choose Amazon Linux 2 AMI and configure security groups to allow SSH (port 22) for connecting and HTTP (port 80) for serving web pages.
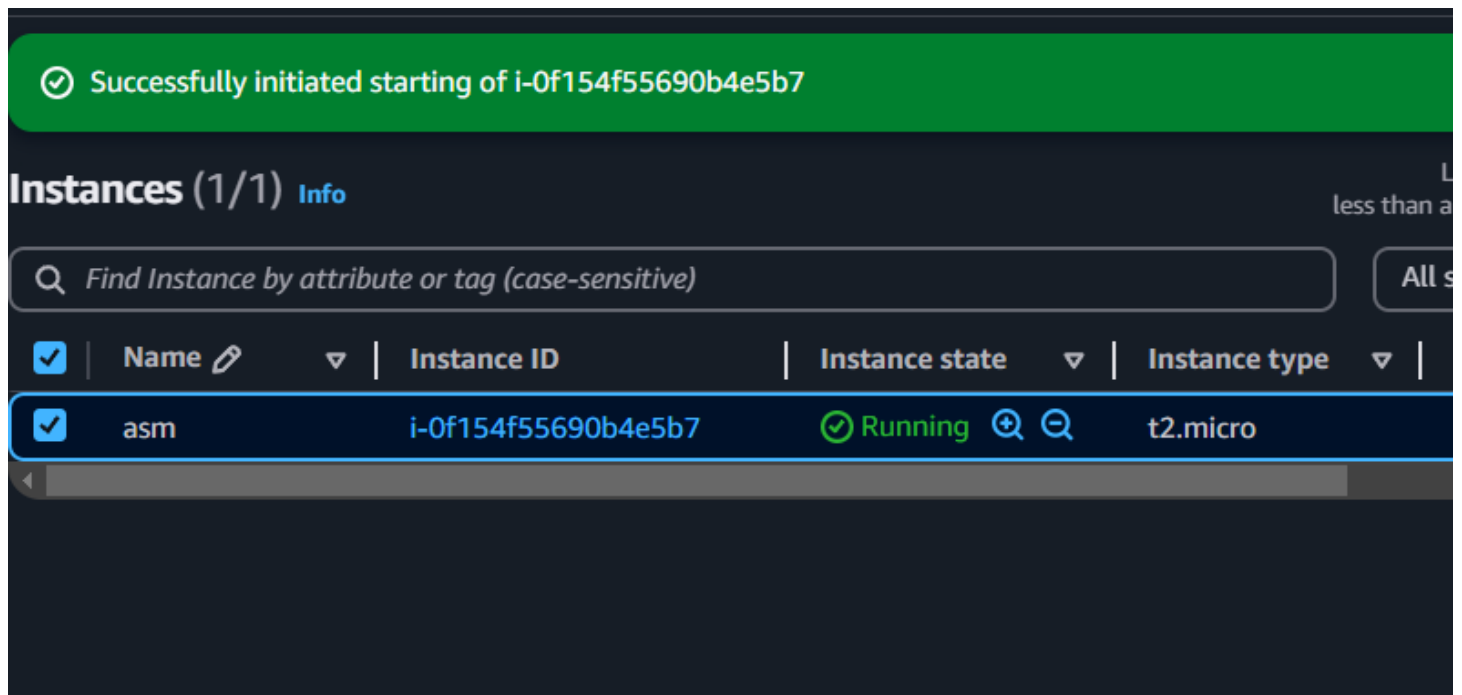
2. Connect to the Instance:

- Use SSH to securely connect to your EC2 instance. Ensure you have your private key (.pem file) and proper permissions set for it.

A1	30-01-2025 05:53
A2	30-01-2025 05:54
gitbackup	30-01-2025 07:53
Aizen.pem	16-10-2024 14:10
aofs.bat	21-01-2025 13:21
backup.bat	30-01-2025 05:23
sample.log	30-01-2025 07:51

Type: PEM File
Size: 1.63 KB
Date modified: 16-10-2024 14:10

3. Install Apache Web Server:

- Use the yum package manager to install Apache on your EC2 instance. After installation, start and enable the Apache service to run on boot.

```
ec2-user@ip-172-31-87-36:/var/www/html

pcabd@peace MINGW64 ~ (master)
$ ssh -i "/c/Users/pcabd/Downloads/Aizen.pem" ec2-user@ec2-54-152-181-49.compute
-1.amazonaws.com
Last login: Sat Feb  1 13:38:45 2025 from 49.43.250.250
       ,       #_
   ~\_   ####_          Amazon Linux 2
  ~~  \_#####\
  ~~     \###|          AL2 End of Life is 2026-06-30.
  ~~      \#/ ___
   ~~     V~' '->
    ~~~        /         A newer version of Amazon Linux is available!
     ~~._.   _/
       _/ _/           Amazon Linux 2023, GA and supported until 2028-03-15.
     _/m/'                 https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-87-36 ~]$
[ec2-user@ip-172-31-87-36 ~]$
[ec2-user@ip-172-31-87-36 ~]$ sudo yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                          | 3.6 kB     00:00
No packages marked for update
[ec2-user@ip-172-31-87-36 ~]$ sudo yum install httpd -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package httpd-2.4.62-1.amzn2.0.2.x86_64 already installed and latest version
Nothing to do
[ec2-user@ip-172-31-87-36 ~]$ sudo systemctl start httpd
[ec2-user@ip-172-31-87-36 ~]$
[ec2-user@ip-172-31-87-36 ~]$ sudo systemctl enable httpd
[ec2-user@ip-172-31-87-36 ~]$ cd /var/www/html/
[ec2-user@ip-172-31-87-36 html]$ sudo nano index.html
[ec2-user@ip-172-31-87-36 html]$ sudo chmod 755 /var/www/html/index.html
[ec2-user@ip-172-31-87-36 html]$
```

4. Deploy Static Website:

- Navigate to the Apache web server's root directory (/var/www/html/) and create your index.html file.
- Add your desired content to the HTML file.

5. Adjust File Permissions:

- Ensure Apache has the appropriate permissions to serve the file using the chmod command.

6. Test and Access the Website:

- Use the EC2 public IP address in your browser (e.g., http://54.152.181.49) to access the static website and confirm that everything is working.
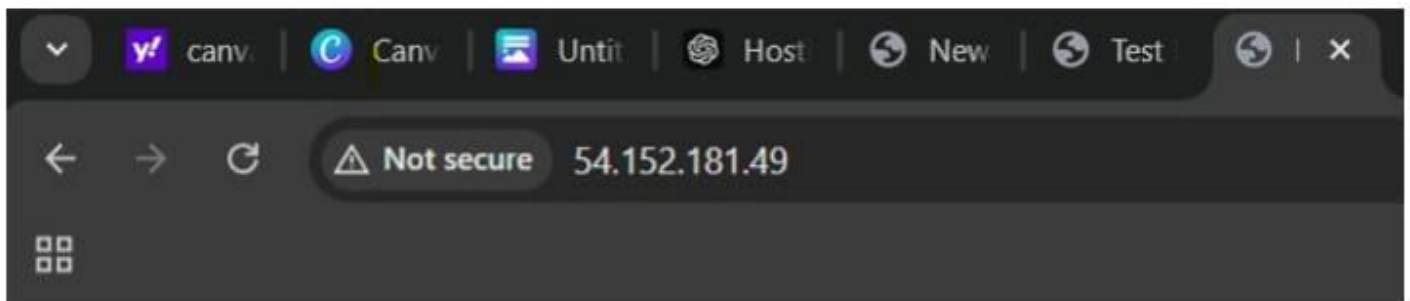
Hello, My Name is eric

Welcome to my EC2-hosted website!

Expected Outcome

By completing this POC, you will:

1. Successfully configure and run an Apache server IN EC2.

2. Host a static HTML website that displays your name.

3. Understand the basics of web server configuration and file hosting.