# Placement Empowerment Program

***Cloud Computing and DevOps Centre***

Host a Static Website on a Cloud VM Install Apache on your cloud VM and host a simple HTML website.

Name: Santhoshini T Department: CSE

# Introduction

A static website serves pre-written HTML, CSS, and JavaScript files to the end user without requiring server-side processing. Hosting such websites on a cloud-based Virtual Machine (VM) has become a preferred choice for individuals and businesses due to its flexibility, scalability, and cost-effectiveness. By leveraging the cloud, developers can quickly deploy websites accessible from anywhere in the world.

# Overview

Hosting a static website on a cloud VM involves the following key steps:

1. **Provisioning a Cloud VM:** Setting up a virtual machine on a cloud provider (like AWS, Azure, or GCP).

2. **Installing a Web Server:** Configuring a web server such as Apache to serve the website's static files.

3. **Uploading Website Files:** Placing HTML, CSS, and JavaScript files in the web server's root directory.

4. **Configuring Network Access:** Ensuring that the web server is accessible via HTTP (port 80) from anywhere.

5. **Testing and Launching:** Verifying the functionality of the website to make it publicly accessible

# Objectives

The primary objectives of hosting a static website on a cloud VM include:

1. **Learning Cloud Computing Fundamentals:** Understanding how virtual machines operate in a cloud environment.

**2. Practical Web Hosting Skills:** Gaining hands-on experience in setting up and configuring web servers like Apache or Nginx.

**3. Website Deployment:** Successfully deploying and making a static website live on the internet.

**4. Understanding Networking Basics:** Learning about firewall rules, security groups, and HTTP protocol configurations.

**5. Cost-Effective Hosting:** Exploring affordable methods to host lightweight websites without needing managed services.

# Importance

**1. Hands-On Cloud Experience:** Hosting a static website on a cloud VM is an excellent starting point for understanding the capabilities of cloud platforms and virtual machine operations.

**2. Scalability:** Cloud-based hosting provides flexibility to scale resources up or down as the traffic to the website grows.

**3. Global Accessibility:** By deploying on the cloud, the website becomes accessible from any part of the world with minimal latency.

**4. Customization and Control:** Cloud VMs allow complete control over the hosting environment, enabling advanced configurations and optimizations.

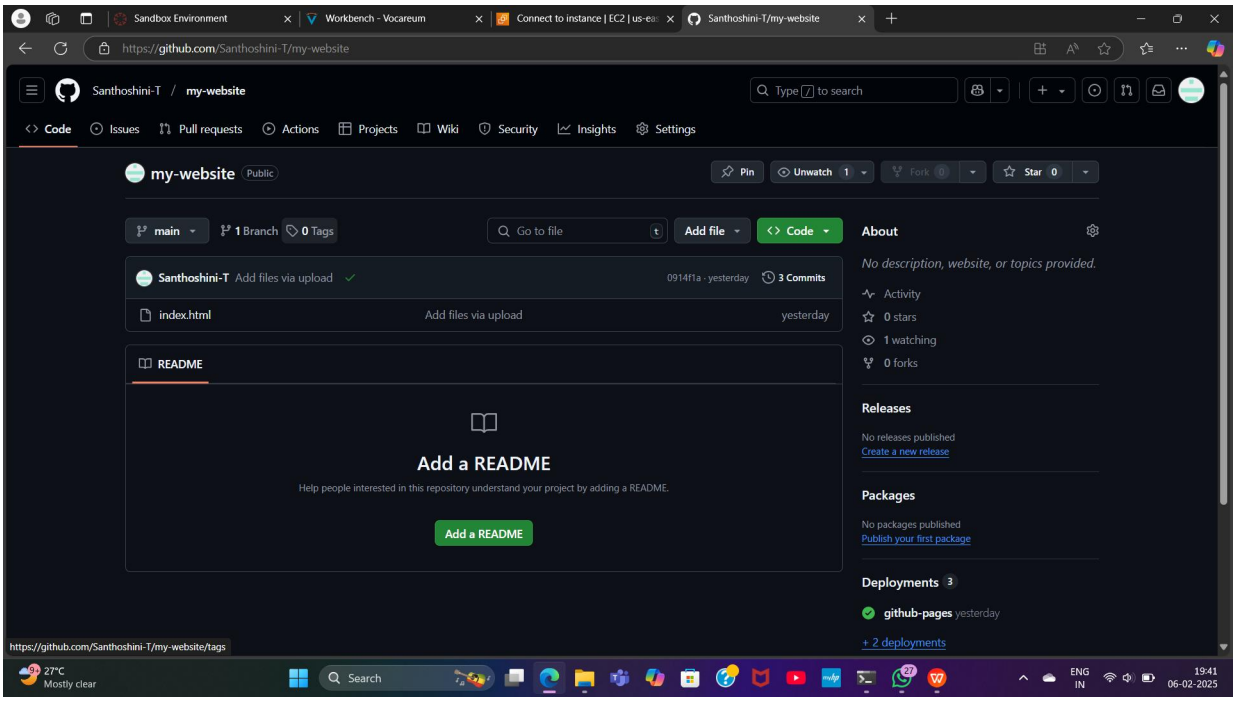
**5. Foundation for Advanced Hosting:** It lays the groundwork for more advanced projects, such as hosting dynamic websites, APIs, or using load balancers.

**6. Professional Development:** Learning to host websites on the cloud adds significant value to your skill set, making you proficient in real-world deployment scenarios.

# Step-by-Step Overview

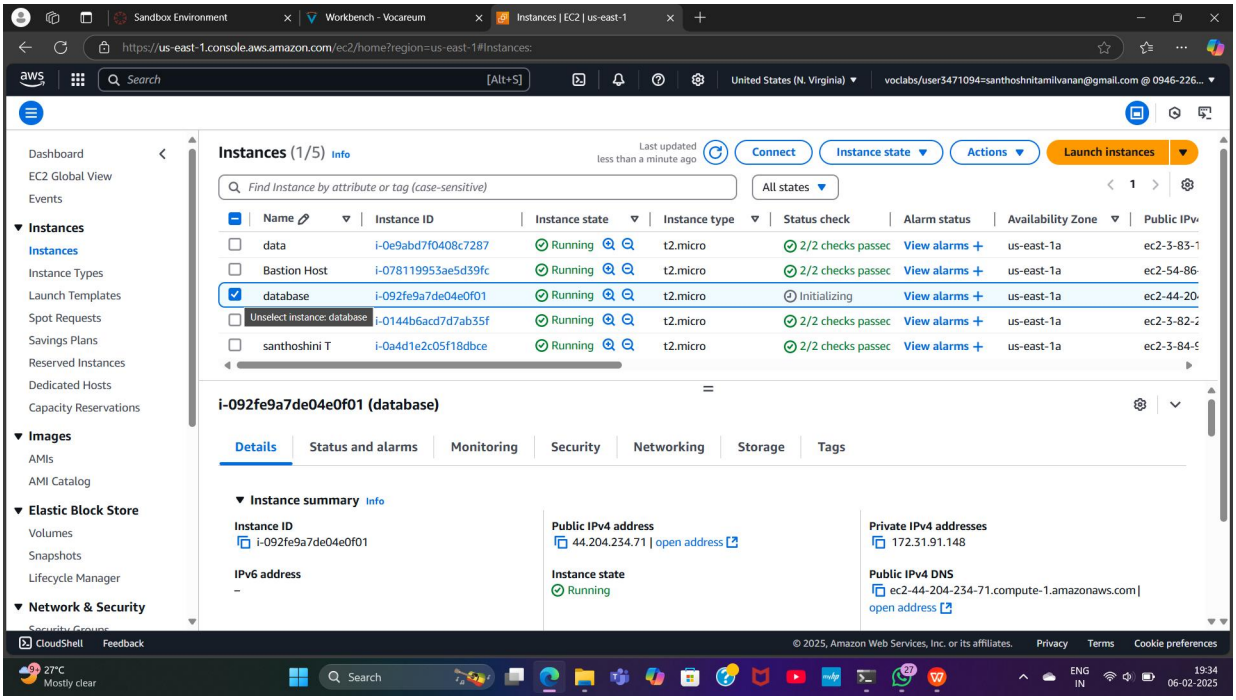
## Step 1:

Have an HTML file (with any related assets like CSS/JavaScript) that you want to host in your GitHub repository




## Step 2:

Launch an EC2 instance, select Ubuntu as the OS, configure security groups to allow all network traffic, create a key pair (e.g., new.pem), and download it for SSH access


Sandbox Environment
Workbench - Vocareum
Instances | EC2 | us-east-1
https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:
Search
[Alt+S]
United States (N. Virginia)
voclabs/user3471094=santhoshnitamilvanan@gmail.com @ 0946-226...
Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Instances (1/5) Info
Last updated less than a minute ago
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4
data
i-0e9abd7f0408c7287
Running
t2.micro
2/2 checks passed
View alarms
us-east-1a
Bastion Host
i-078119953ae5d39fc
Running
t2.micro
2/2 checks passed
View alarms
us-east-1a
database
i-092fe9a7de04e0f01
Running
t2.micro
Initializing
View alarms
us-east-1a
Unselect instance: database
i-0144b6acd7d7ab35f
Running
t2.micro
2/2 checks passed
View alarms
us-east-1a
santhoshini T
i-0a4d1e2c05f18dbce
Running
t2.micro
2/2 checks passed
View alarms
us-east-1a
i-092fe9a7de04e0f01 (database)
Details
Status and alarms
Monitoring
Security
Networking
Storage
Tags
Instance summary Info
Instance ID
i-092fe9a7de04e0f01
IPv6 address
–
Public IPv4 address
44.204.234.71 | open address
Instance state
Running
Private IPv4 addresses
172.31.91.148
Public IPv4 DNS
ec2-44-204-234-71.compute-1.amazonaws.com | open address
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
27°C
Mostly clear
Search
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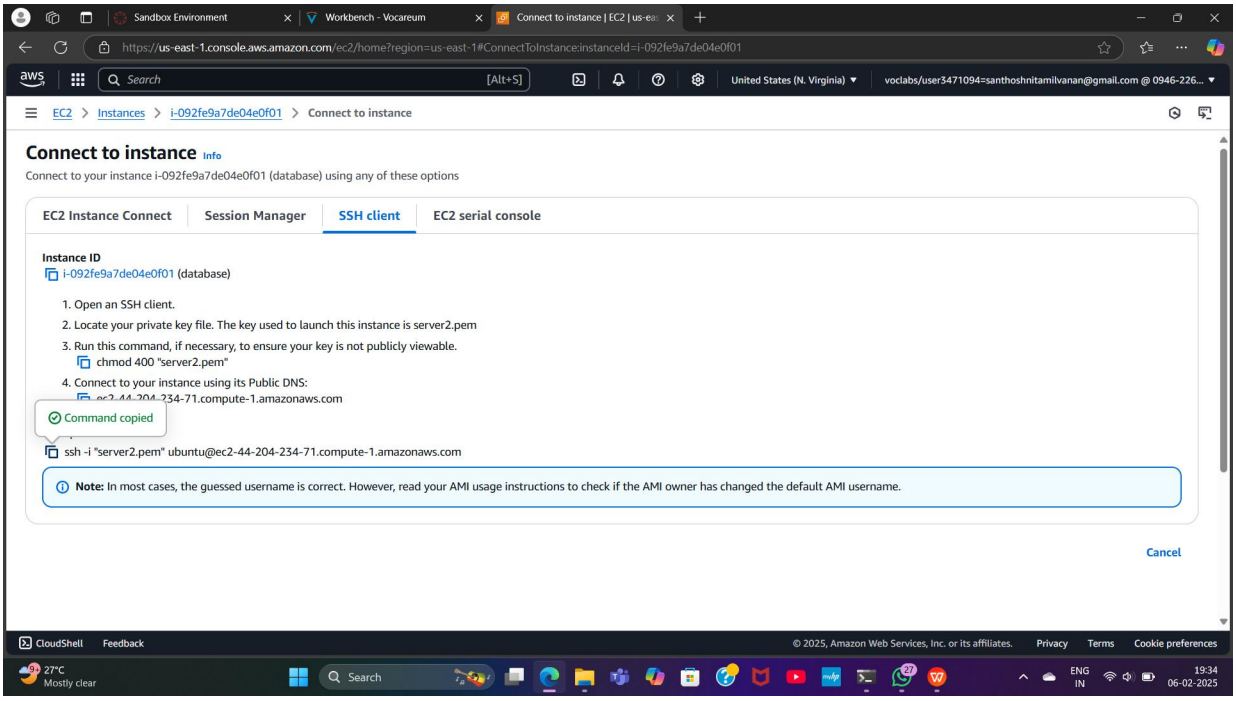
06-02-2025

# Step 3:

Click the 'Connect' option on your launched instance, go to the SSH client section, and copy the command provided under the 'Example' section.

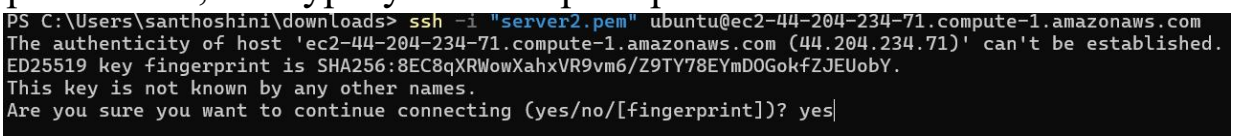



# Step 4:

Open PowerShell, navigate to the 'Downloads' directory where the downloaded key pair is located using the **cd Downloads** command


# Step 5:

Paste the command copied from the EC2 Connect's SSH client section, replace the key pair name with your downloaded key (e.g., new.pem), press Enter, and type 'yes' when prompted.



# Step 6:

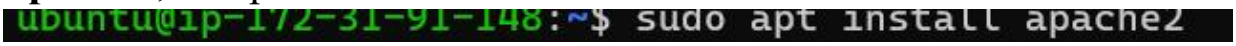
Run the command **sudo apt update** to update the package list.


# Step 7:

Run the command **sudo apt upgrade**, and press 'Y' to confirm and continue the upgrade process.

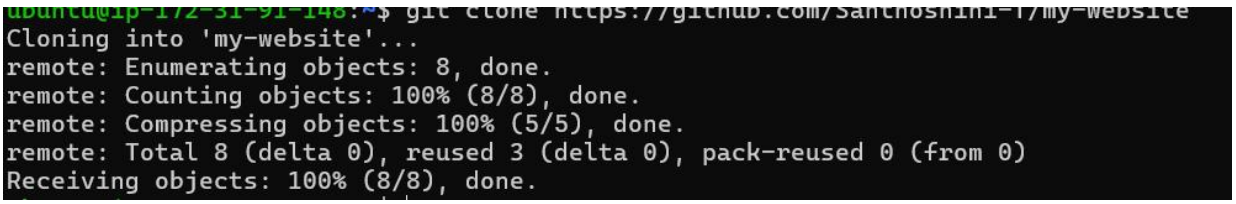

# Step 8:

Install the Apache server by running the command **sudo apt install apache2**, and press 'Y' to confirm the installation




# Step 9:

Insert your files by running the command **git clone <repository_link>** to clone your repository containing the website files



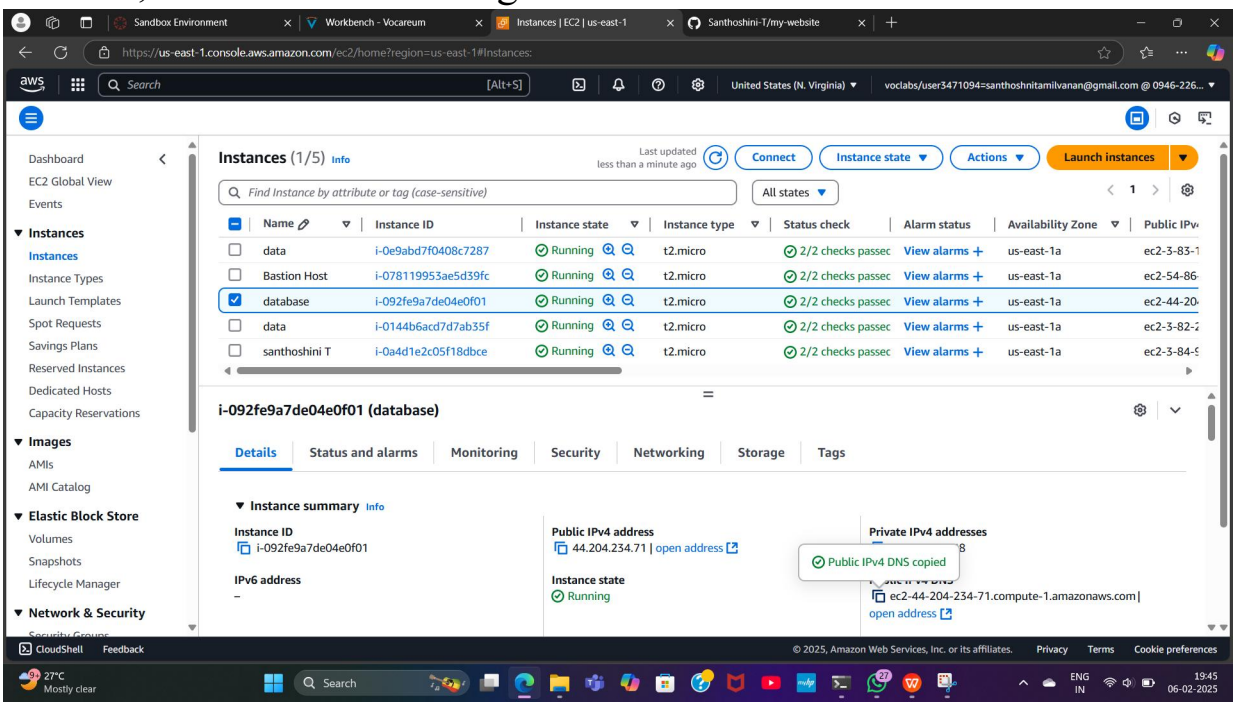
# Step 10:

Run the command **cd /var/www/html** to navigate to the web server's root directory, then type ls to verify that your HTML files from the GitHub repository are present.

```
ubuntu@ip-172-31-91-148:~$ cd /var/www/html
ubuntu@ip-172-31-91-148:/var/www/html$ ls
index.html
```

# Step 11:

Copy the Public IPv4 DNS from the instance details page in the EC2 console, as shown in the image below.



# Step 12:

Open Chrome and paste the copied Public IPv4 DNS in the address bar to view the content of your index.html file.

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# Outcome

By completing this PoC of deploying a static website using an EC2 instance, you will:

1. Launch and configure an EC2 instance with Ubuntu as the OS.

2. Install and configure Apache web server to serve your static website.

3. Clone your GitHub repository containing your static website files (HTML, CSS, JavaScript) onto your EC2 instance.

4. Upload and place the website files in the Apache root directory (/var/www/html).

5. Access your static website live on the web using the EC2 instance's Public IPv4 DNS.