

Project: Deploying a Static Website on AWS EC2 using Apache

Step 1: Login to AWS Management Console

1. Open <https://aws.amazon.com/>
 2. Sign in to **AWS Management Console**
 3. Select a **Region** (e.g., ap-south-1 – Mumbai)
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Step 2: Launch an EC2 Instance

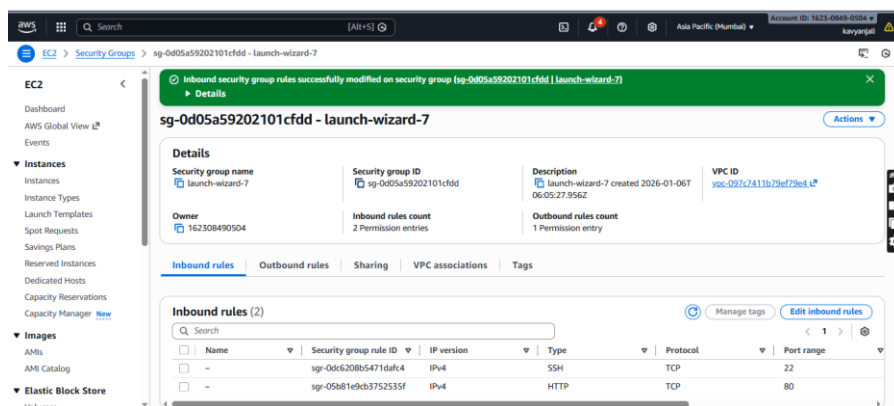
1. Go to **Services** → **EC2**
 2. Click **Launch Instance**
 3. **Name** the instance: Apache-Web-Server
 4. **Amazon Machine Image (AMI)**:
 - Select **Ubuntu Server 22.04 LTS**
 5. **Instance Type**:
 - Choose **t2.micro** (Free Tier eligible)
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Step 3: Create or Select Key Pair

1. Under **Key pair (login)**:
 - Click **Create new key pair**
 - Name: apache-key
 - Type: **RSA**
 - Format: **.pem**
 2. Download and save the key securely
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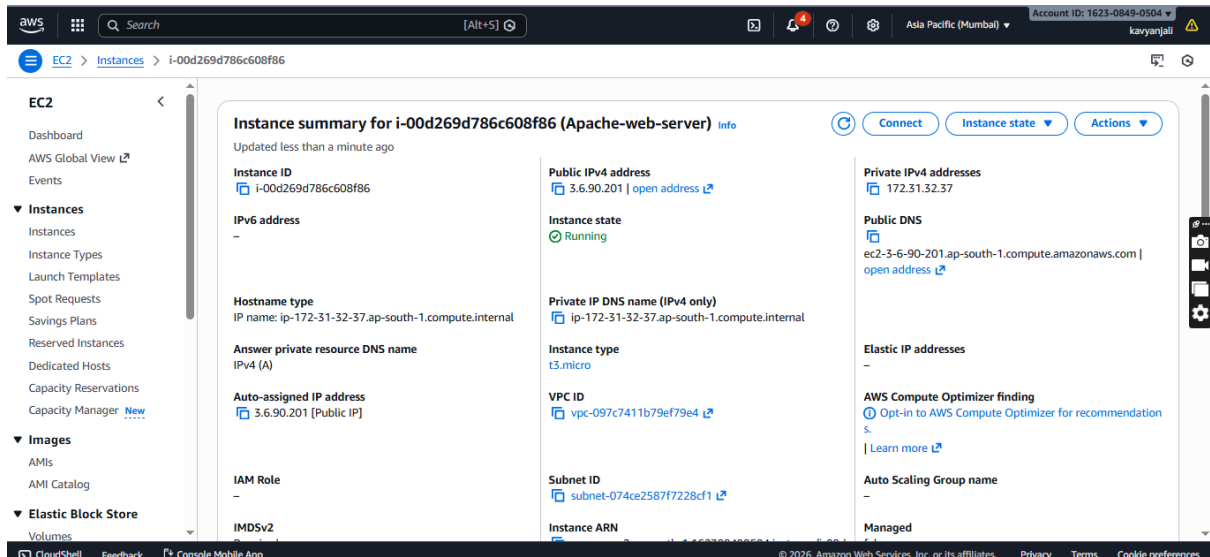
Step 4: Configure Security Group

1. Create a new **Security Group**
2. Add inbound rules:
 - **SSH** | Port 22 | Source: My IP
 - **HTTP** | Port 80 | Source: Anywhere (0.0.0.0/0)
3. Keep outbound rules as default (Allow all)



Step 5: Launch the Instance

1. Click **Launch Instance**
2. Wait until **Instance state = Running**



Step 6: Connect to the EC2 Instance

Using EC2 Instance Connect (Browser)

1. Select the instance
2. Click **Connect**
3. Choose **EC2 Instance Connect**
4. Click **Connect**

OR (Using Local Terminal)

```
ssh -i apache-key.pem ubuntu@<Public-IP>
```

Step 7: Update the System

```
sudo apt update
sudo apt upgrade -y
```

Step 8: Install Apache Web Server

```
sudo apt install apache2 -y
```

Step 9: Start and Enable Apache

```
sudo systemctl start apache2
```

sudo systemctl enable apache2

```
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Tue Jan  6 06:28:05 2026 from 13.233.177.5
ubuntu@ip-172-31-32-37:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Tue 2026-01-06 06:28:16 UTC; 1min 40s ago
     Docs: https://httpd.apache.org/docs/2.4/
    Main PID: 14077 (apache2)
      Tasks: 55 (limit: 1008)
     Memory: 5.3M (peak: 5.6M)
        CPU: 41ms
    CGroup: /system.slice/apache2.service
            └─14077 /usr/sbin/apache2 -k start
              └─14079 /usr/sbin/apache2 -k start
                └─14080 /usr/sbin/apache2 -k start

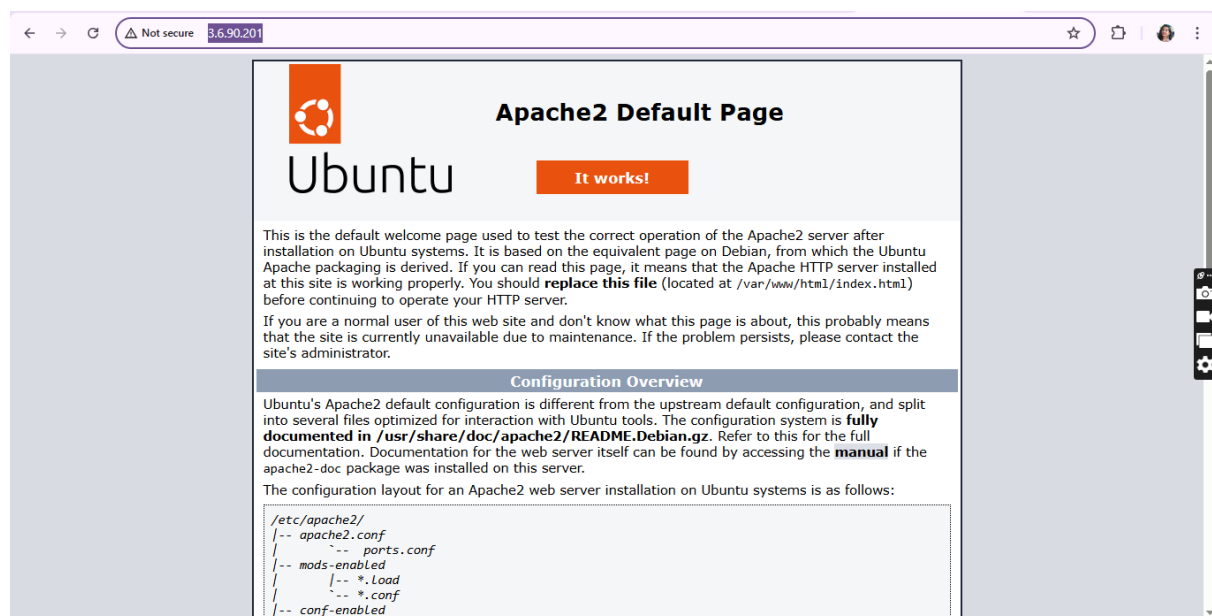
Jan 06 06:28:16 ip-172-31-32-37 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Jan 06 06:28:16 ip-172-31-32-37 systemd[1]: Started apache2.service - The Apache HTTP Server.
ubuntu@ip-172-31-32-37:~$ sudo systemctl start apache2
sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable apache2
ubuntu@ip-172-31-32-37:~$
```

Step 10: Verify Apache Installation

1. Copy the **Public IPv4 Address**
2. Open a browser
3. Enter:

<http://3.6.90.201/>

✓ You should see the **Apache2 Ubuntu Default Page**



Step 11: Deploy Static Website

1. Navigate to Apache root directory:

```
cd /var/www/html
```

2. Edit the default webpage:

sudo nano index.html

3. Add basic HTML:

```
<!DOCTYPE html>
<html>
<head>
  <title>My AWS Apache Website</title>
</head>
<body>
  <h1>Apache Web Server Deployed on AWS EC2</h1>
  <p>This is a static website hosted on Ubuntu EC2.</p>
</body>
</html>
```

4. Save and exit (CTRL + X → Y → Enter)

Step 12: Set File Permissions

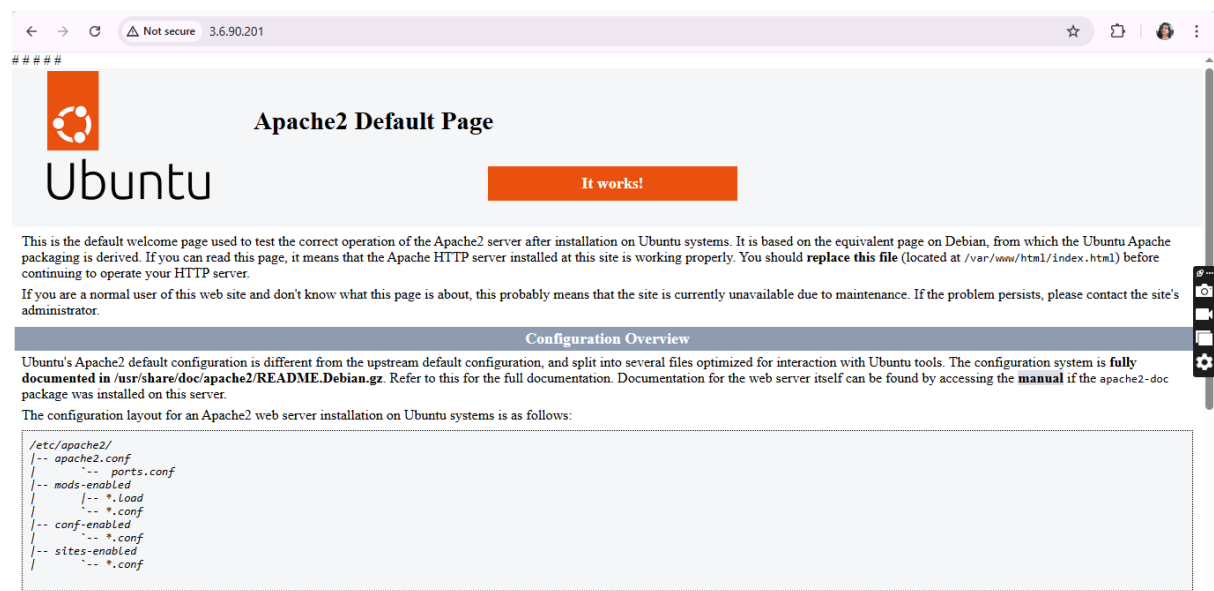
```
sudo chown -R www-data:www-data /var/www/html
sudo chmod -R 755 /var/www/html
```

Step 13: Final Verification

1. Refresh browser:

<http://3.6.90.201/>

✓ Static website should load successfully



Project Outcome

- Successfully launched an Ubuntu EC2 instance
 - Installed and configured Apache web server
 - Allowed HTTP traffic through security groups
 - Hosted a static website accessible from the internet
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