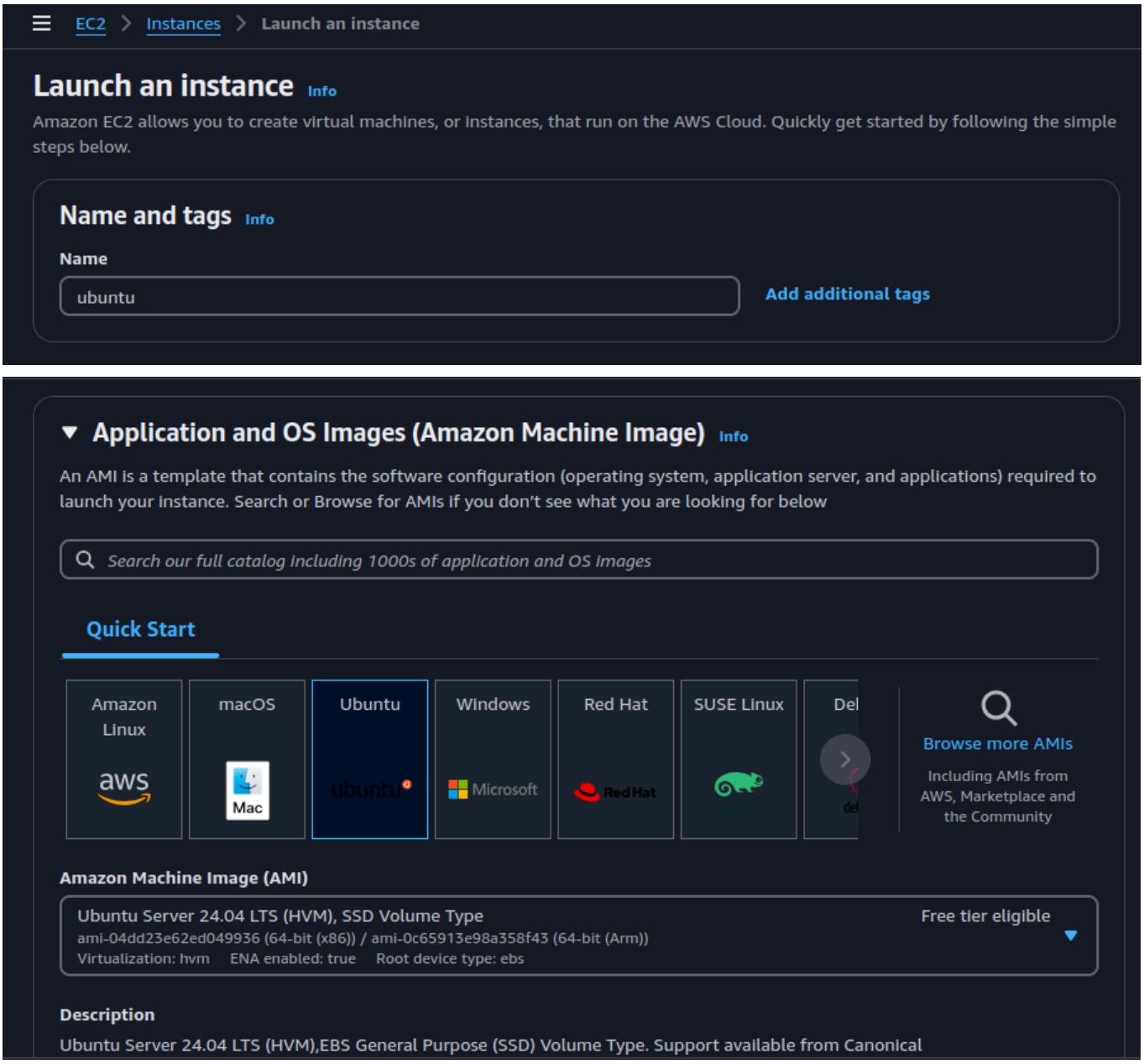
Documentation

Deploy a basic HTML/CSS Website on AWS EC2 Using Apache

Step 1: Launch an Ubuntu EC2 Instance

1. **Log in to the AWS Console** and navigate to the EC2 Dashboard.
2. **Launch an Instance:**
    - **AMI:** Select **Ubuntu Server 24.04 LTS**.
    - **Instance Type:** `t2.micro` (Free Tier Eligible).
    - **Key Pair:** Create or use an existing key pair.
    - **Security Group:**
        - Allow **HTTP (Port 80)** from 0.0.0.0/0.
        - Allow **SSH (Port 22)** from your IP.
3. **Launch the Instance.**


EC2 > Instances > Launch an instance
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
ubuntu
Add additional tags

Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Quick Start
Amazon Linux
macOS
Ubuntu
Windows
Red Hat
SUSE Linux
Del
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-04dd23e62ed049936 (64-bit (x86)) / ami-0c65913e98a358f43 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Free tier eligible
Description
Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical

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Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).

Canonical, Ubuntu, 24.04, amd64 noble image

Architecture	AMI ID	Username
64-bit (x86)	ami-04dd23e62ed049936	ubuntu Verified provider

Instance type Info | Get advice

Instance type

t2.micro — Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0116 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Network settings Info

VPC - *required* Info

vpc-07fecafc317c1a7da (default)
172.31.0.0/16

Subnet Info

subnet-0c7ebe01854ca2dc9
VPC: vpc-07fecafc317c1a7da Owner: 953065575275
Availability Zone: us-west-2a Zone type: Availability Zone
IP addresses available: 4091 CIDR: 172.31.16.0/20)

Create new subnet

Auto-assign public IP Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info

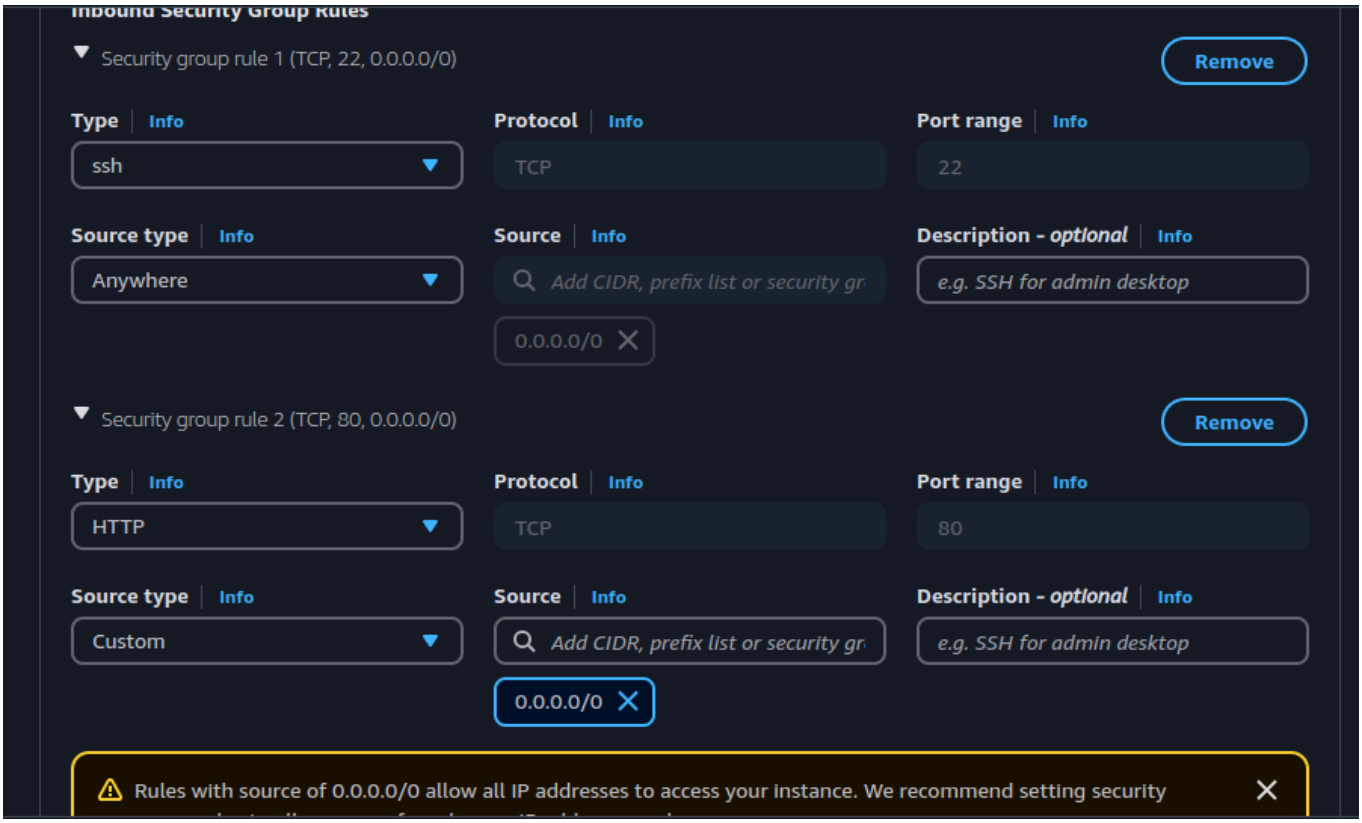
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

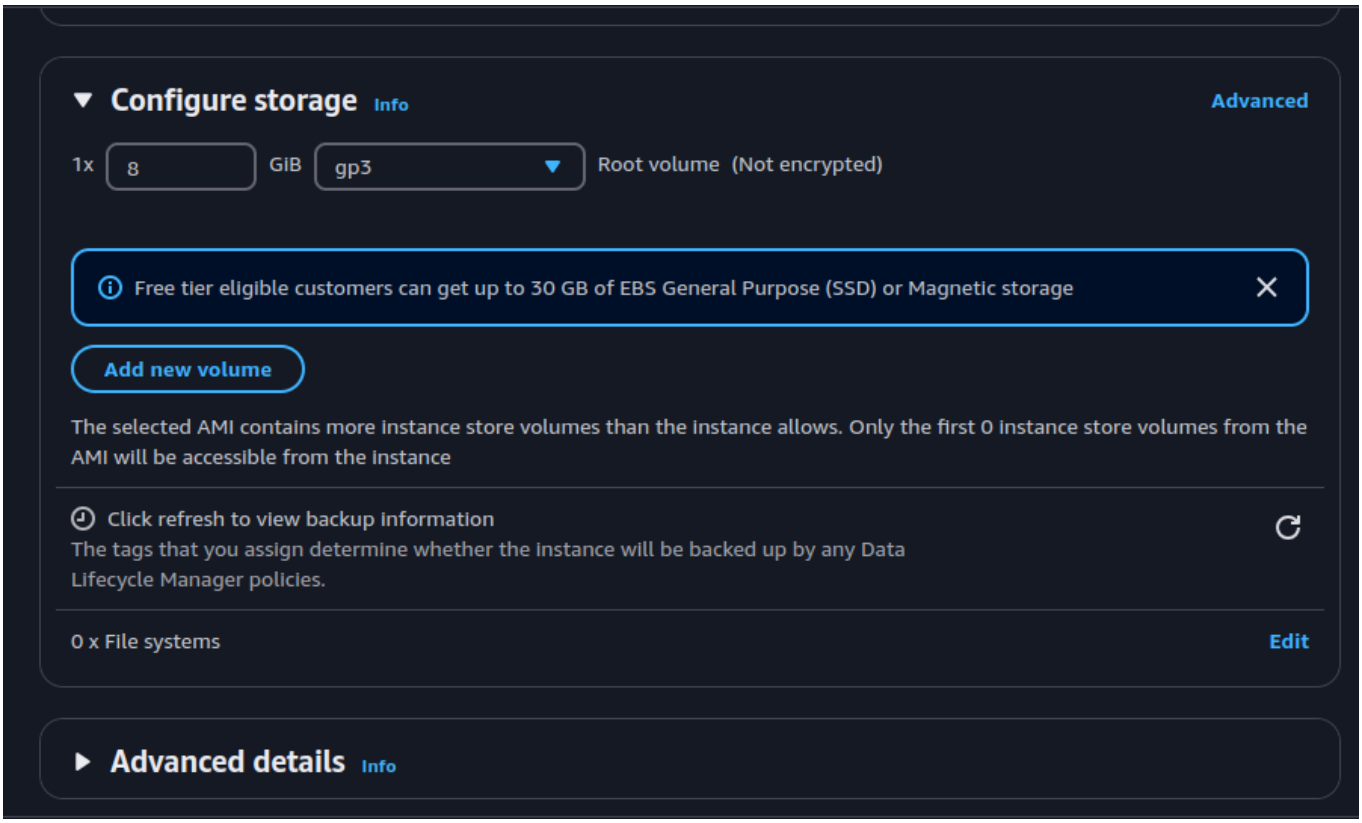
(•) Create security group ( ) Select existing security group

Security group name - *required*

ubuntu-sg

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#,@[]+=&;{}!$*

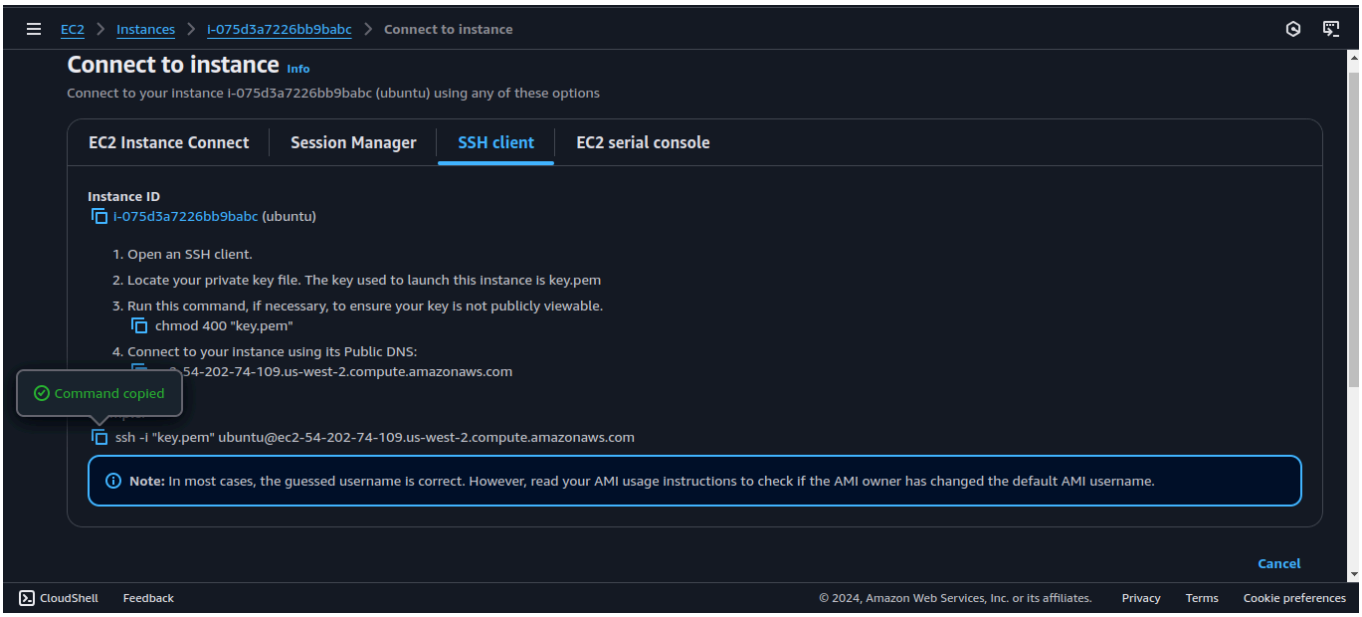


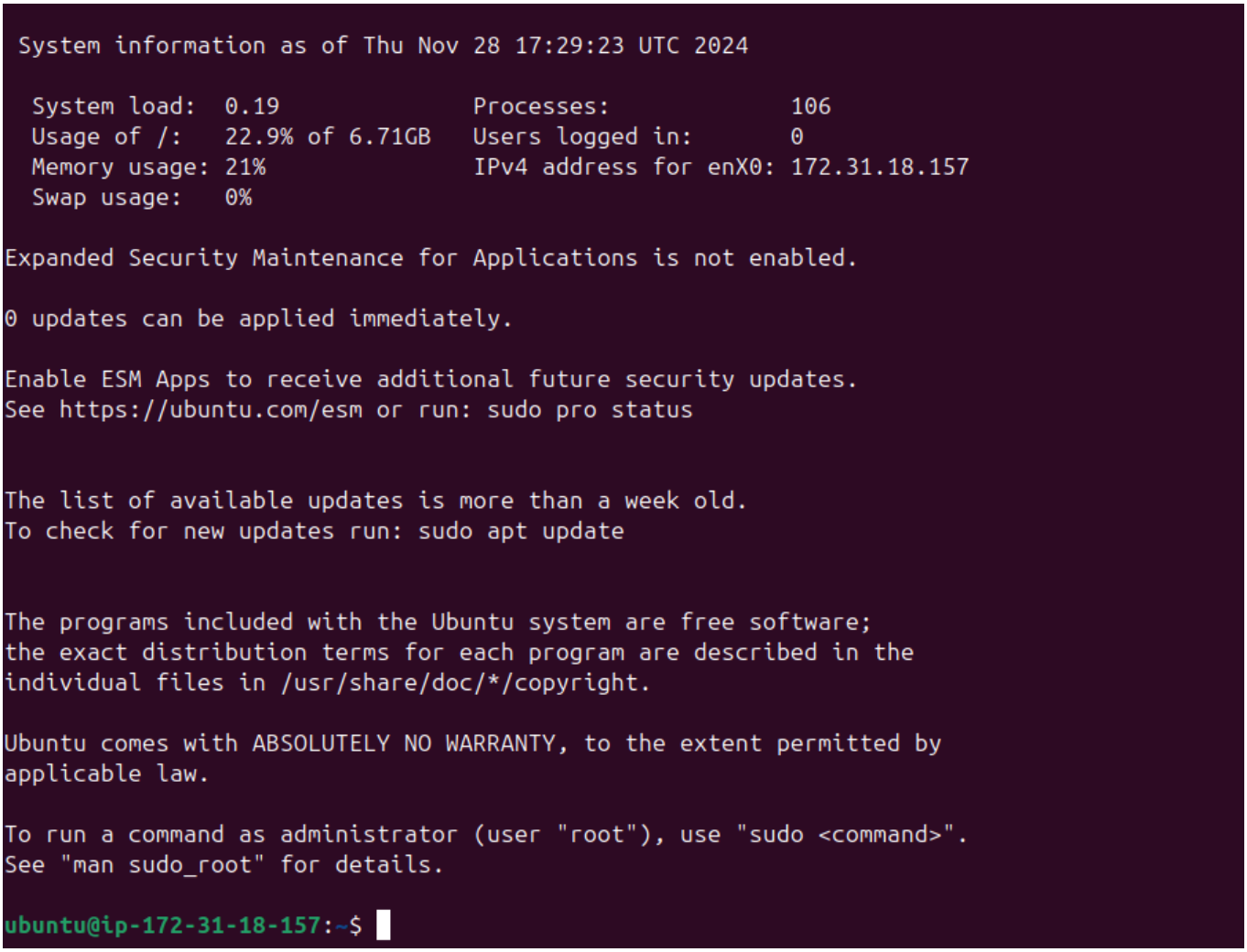


Step 2: Connect to the EC2 Instance

1. **Use SSH to connect:**

```
ssh -i "your-key-file.pem" ubuntu@<INSTANCE_PUBLIC_IP>
```





1. **Update the System:**

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

```
ubuntu@ip-172-31-18-157:~$ sudo apt update
Hit:1 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:5 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:6 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:8 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:9 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:10 http://us-west-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
```

```
ubuntu@ip-172-31-18-157:~$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
#
# Patches available for the local privilege escalation issue in needrestart
# tracked by CVE-2024-48990, CVE-2024-48991, CVE-2024-48992, and CVE-2024-10224
# For more see: https://ubuntu.com/blog/needrestart-local-privilege-escalation
#
The following NEW packages will be installed:
  linux-aws-headers-6.8.0-1019 linux-aws-tools-6.8.0-1019 linux-headers-6.8.0-1019-aws linux-image-6.8.0-1019-aws
```

Step 3: Install Apache Web Server

1. **Install Apache:**

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

```
ubuntu@ip-172-31-18-157:~$     sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
```

2. **Start and Enable Apache:**

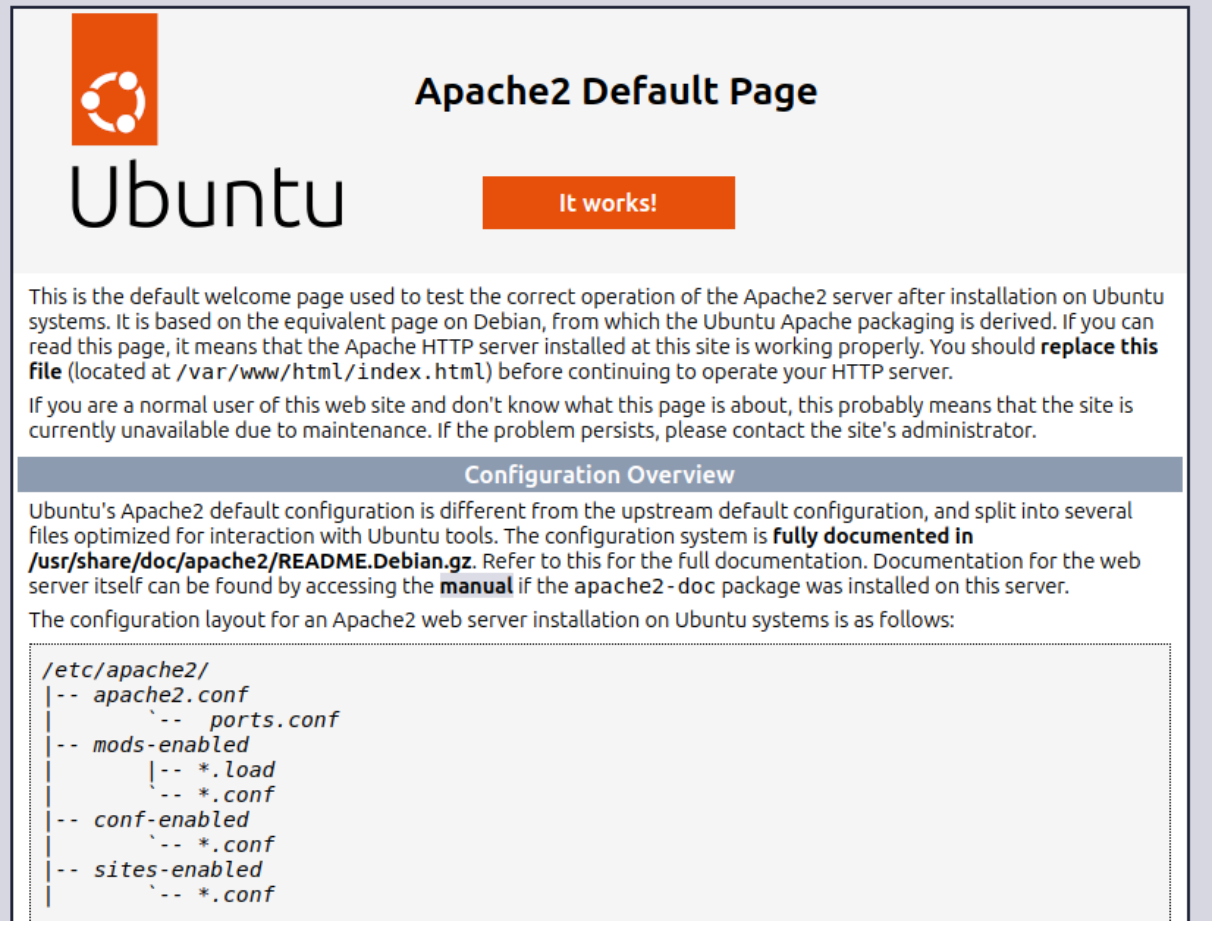
```
sudo systemctl start apache2
sudo systemctl enable apache2
```

```
ubuntu@ip-172-31-18-157:~$     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
```

3. **Verify Apache:**
   - Open a browser and visit:

```
http://<INSTANCE_PUBLIC_IP>
```

- You should see the Apache default page.



Step 4: Create the HTML/CSS Web Page

1. **Write the HTML File:**

```
- Create a new file:

    ```bash
    sudo vi /var/www/html/index.html
    ```

         ![[14-vi 2.png]]

- Add the following content:
```

```
```html
<!DOCTYPE html>
```

Welcome to My Test Website!

This is a simple webpage to test your Apache server.

Enjoy testing!

```
```

```
![[15-vi.png]]
```

2. **Save the File:**
   - Press `:`, then `X` to save and exit.

Step 5: Test the Web Page

1. Open your browser and visit:

```
http://<INSTANCE_PUBLIC_IP>
```

2. You should see the webpage with the following:
   - A header with the title "Welcome to My Test Website!."
   - A main section with the message:
     This is a simple webpage to test your Apache server.
     Enjoy testing!

```

Step 6: Secure and Clean Up

1. **Restrict SSH Access:**
   - Update the security group to allow SSH only from your IP.
2. **Clean Up Files (Optional):**
   - Remove unnecessary default files in `/var/www/html`:

```
sudo rm /var/www/html/index.html.bak
```