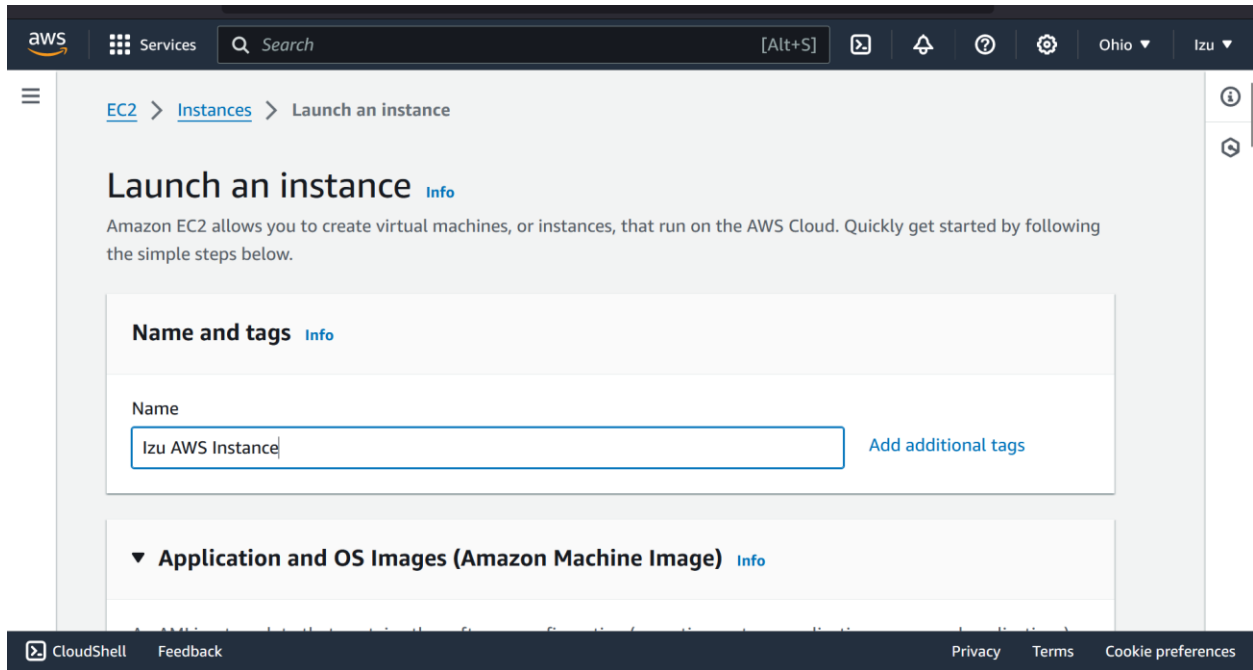
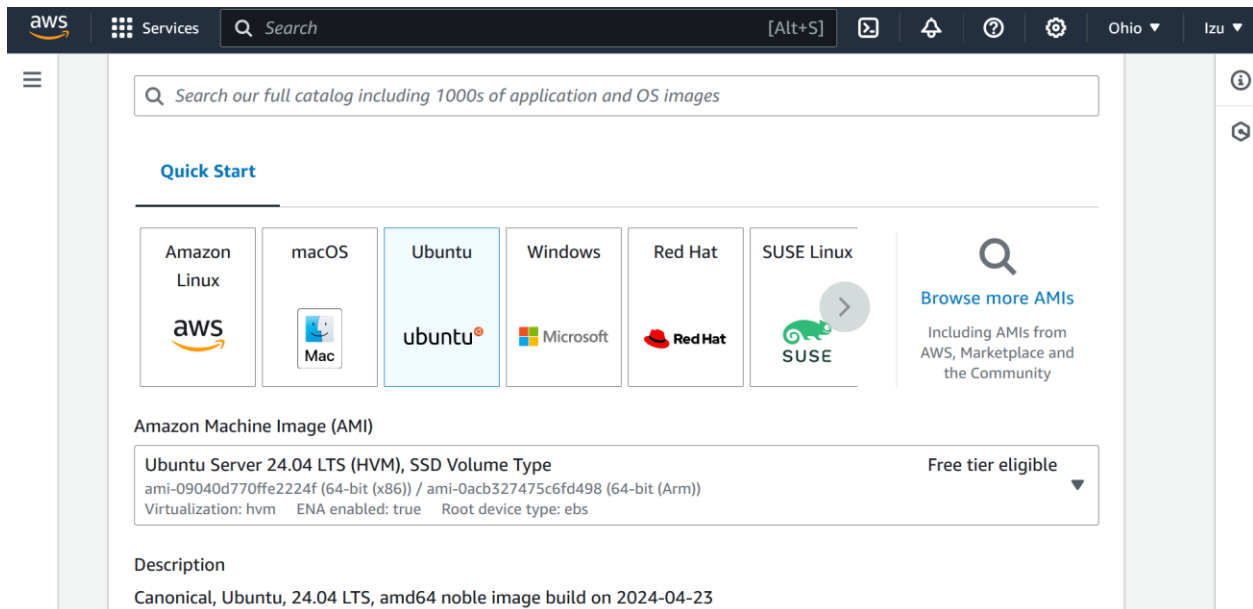


LAUNCHING A SIMPLE STATIC WEBSERVER USING ALX

Ssh: Windows powershell & Ubuntu(aws)



I'm using Ubuntu for this demonstration



instance details

Description

Canonical, Ubuntu, 24.04 LTS, amd64 noble image build on 2024-04-23

Architecture

AMI ID

64-bit (x86)

ami-09040d770ffe2224f

Verified provider

▼ Instance type

Info | Get advice

Instance type

t2.micro

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: 0.0716 USD per Hour

Free tier eligible

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

aws Services Search [Alt+S]

EC2 > Instances > Launch an instance

Launching instance

Launch initiation

79%

Details

Please wait while we launch your instance.

Do not close your browser while this is loading.

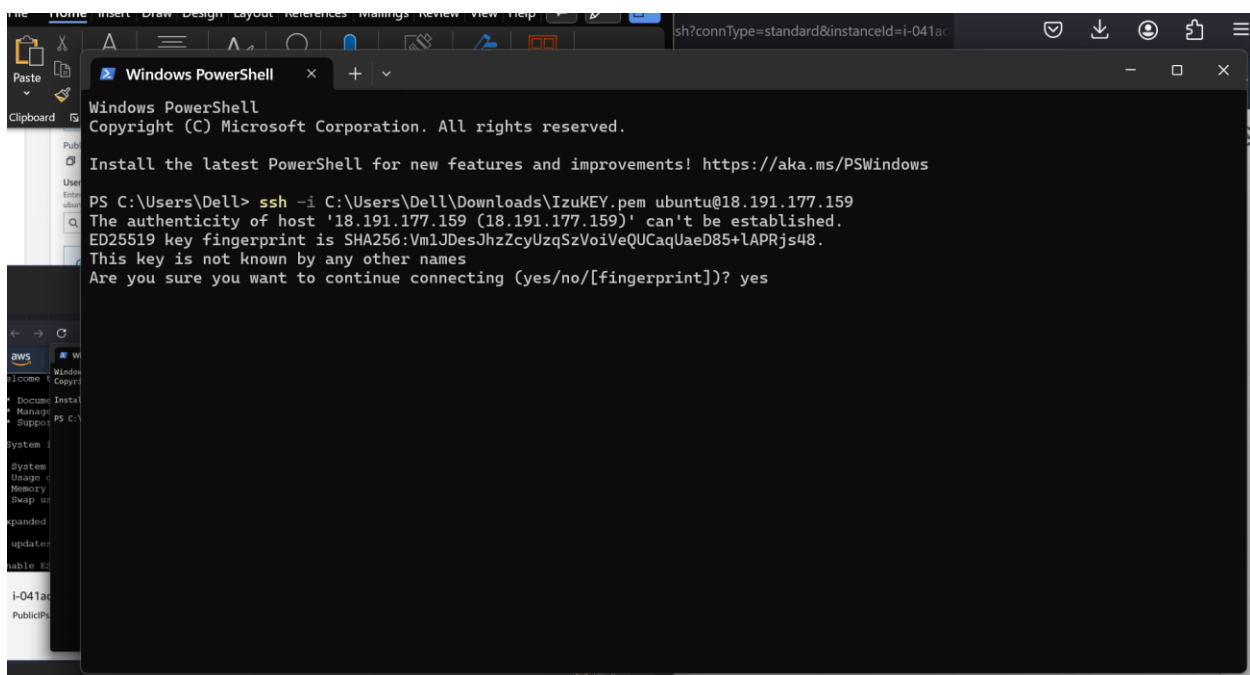
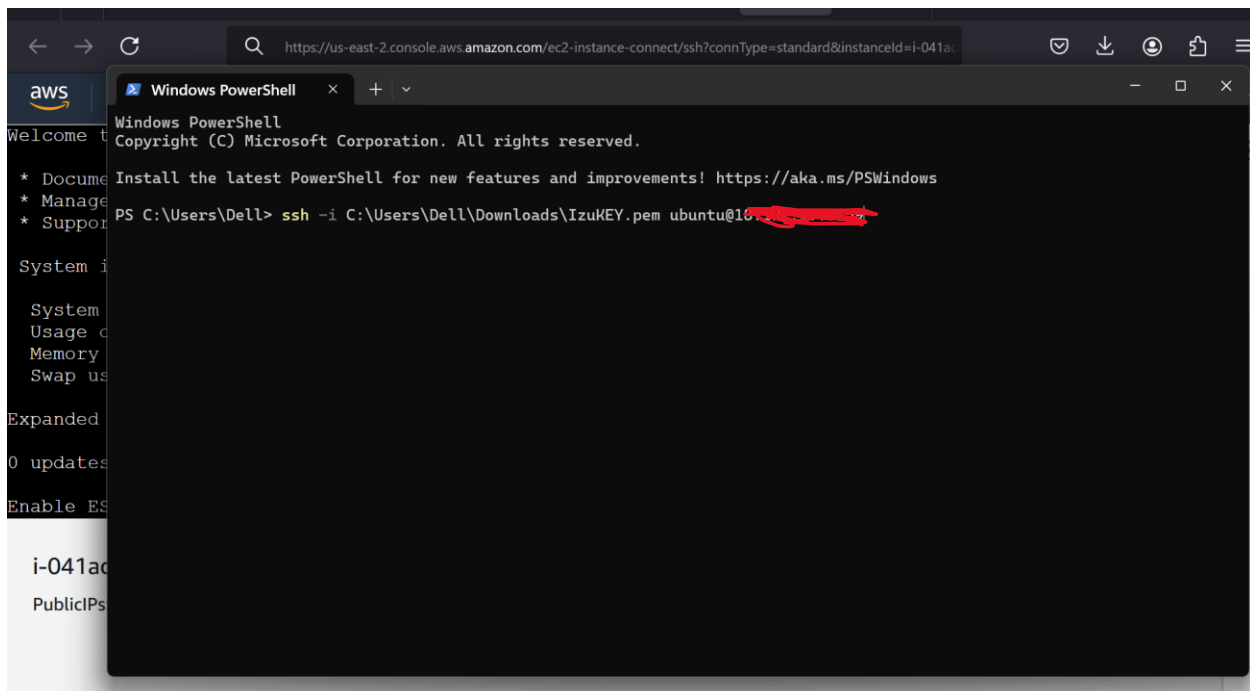
Launching the instance

The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, a 'Services' menu, a search bar, and a '[Alt+S]' shortcut. Below the navigation bar, there's a sidebar with a hamburger menu icon. The main content area has a tabbed interface with four tabs: 'EC2 Instance Connect' (selected), 'Session Manager', 'SSH client', and 'EC2 serial console'. The 'EC2 Instance Connect' tab displays the following information:

- Instance ID:** i-041ac86cc720645fa (Izu AWS Instance)
- Connection Type:** Two options are shown:
 - ☒ **Connect using EC2 Instance Connect**
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.
 - ☐ **Connect using EC2 Instance Connect Endpoint**
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.
- Public IP address:** 18.191.177.159
- Username:** A text input field containing 'ubuntu'. Below the field is a note: 'Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.'

At the bottom of the page, there's a blue note box that reads: 'Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to'.

I connected my Local windows powershell to the EC2 instance using the instance IP Provided. I proceeded to generate a PEM key file, to ensure a secure connection with my AWS and localhost machine. But for flexibility, I f



Updating all necessary packages

```
aws Services Search [Alt+S]
Reading state information... Done
Package apache is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

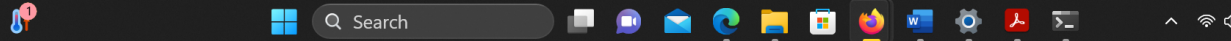
E: Package 'apache' has no installation candidate
ubuntu@ip-172-31-20-76:~$ sudo apt updaate
E: Invalid operation updaate
ubuntu@ip-172-31-20-76:~$ sudo apt update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
84 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-20-76:~$ sudo apt install apache2
```

i-041ac86cc720645fa (Izu AWS Instance)

PublicIPs: 18.191.177.159 PrivateIPs: XXXXXXXXXX

CloudShell Feedback Privacy Terms

© 2024, Amazon Web Services, Inc. or its affiliates.



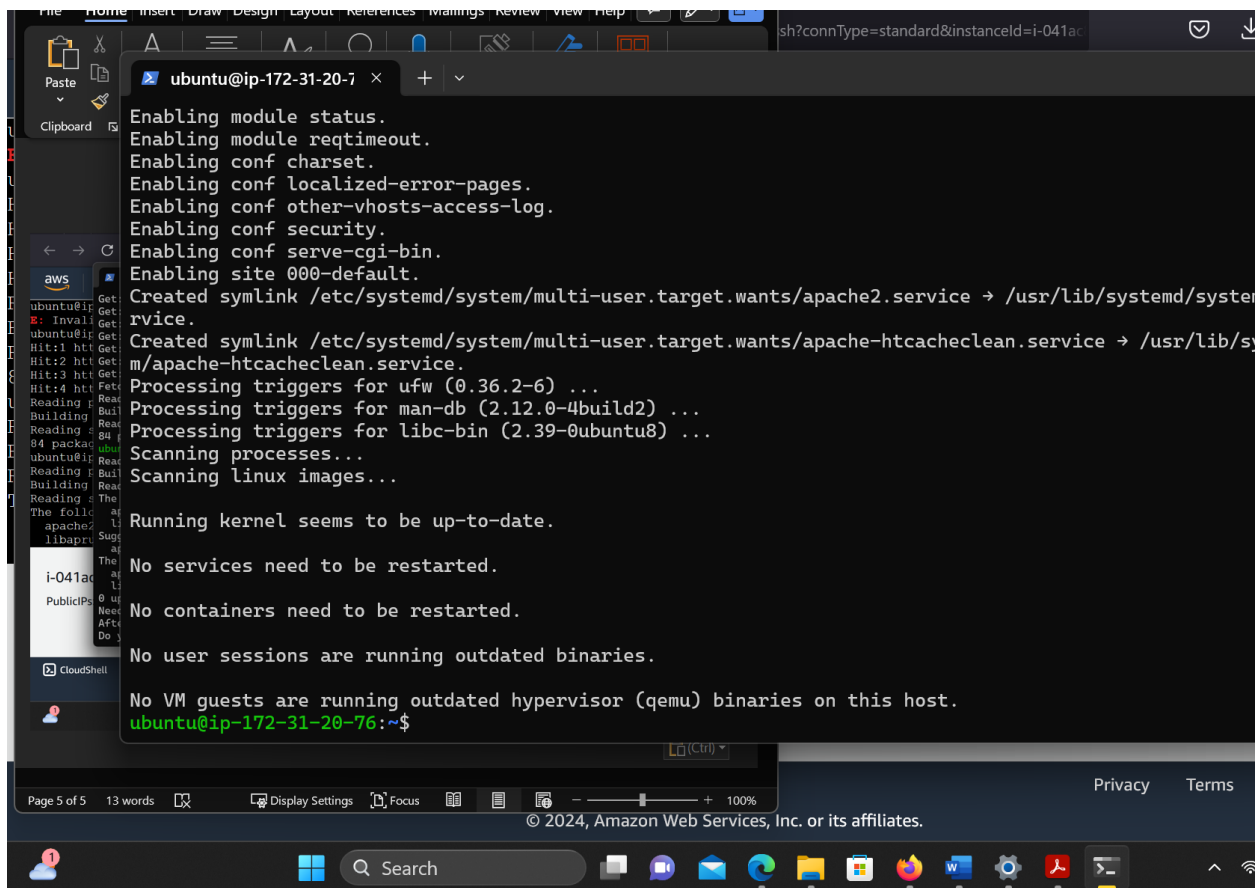
```
aws ubuntu@ip-172-31-20-76 x + v
Get:48 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [135 kB]
Get:49 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [25.9 kB]
Get:50 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:51 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [10.6 kB]
Hit:1 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [2808 B]
Hit:2 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Hit:3 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [116 B]
Hit:4 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [10.6 kB]
Fetched 29.5 MB in 6s (5249 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
84 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-20-76:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Building state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64
  liblua5.4-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libaprutil1t64 liblua5.4-0 ssl-cert
0 upgraded, 10 newly installed, 0 to remove and 84 not upgraded.
Need to get 2080 kB of archives.
After this operation, 8091 kB of additional disk space will be used.
Do you want to continue? [Y/n]

CloudShell Feedback Privacy Terms
© 2024, Amazon Web Services, Inc. or its affiliates.

Last login: Sun Jun 30 23:24:35 2024 from 3.16.146.4
ubuntu@ip-172-31-20-76:~$ apache2 -v
Server version: Apache/2.4.58 (Ubuntu)
Server built: 2024-04-18T15:13:41
ubuntu@ip-172-31-20-76:~$ ls
ubuntu@ip-172-31-20-76:~$ sudo systemctl start apache2
ubuntu@ip-172-31-20-76:~$ ls
ubuntu@ip-172-31-20-76:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-20-76:~$ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /usr/lib/systemd/systemd-sysv-installer
Executing: /usr/lib/systemd/systemd-sysv-install enable apache2
ubuntu@ip-172-31-20-76:~$ ^[[200~ls -l /var/www/html
ls: command not found
ubuntu@ip-172-31-20-76:~$ ls -l /var/www/html
total 12
-rw-r--r-- 1 root root 10671 Jun 30 23:23 index.html
```

Creating my static webpage

Installing and downloading apache2 on my windows powershell



```
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /usr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /usr/lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

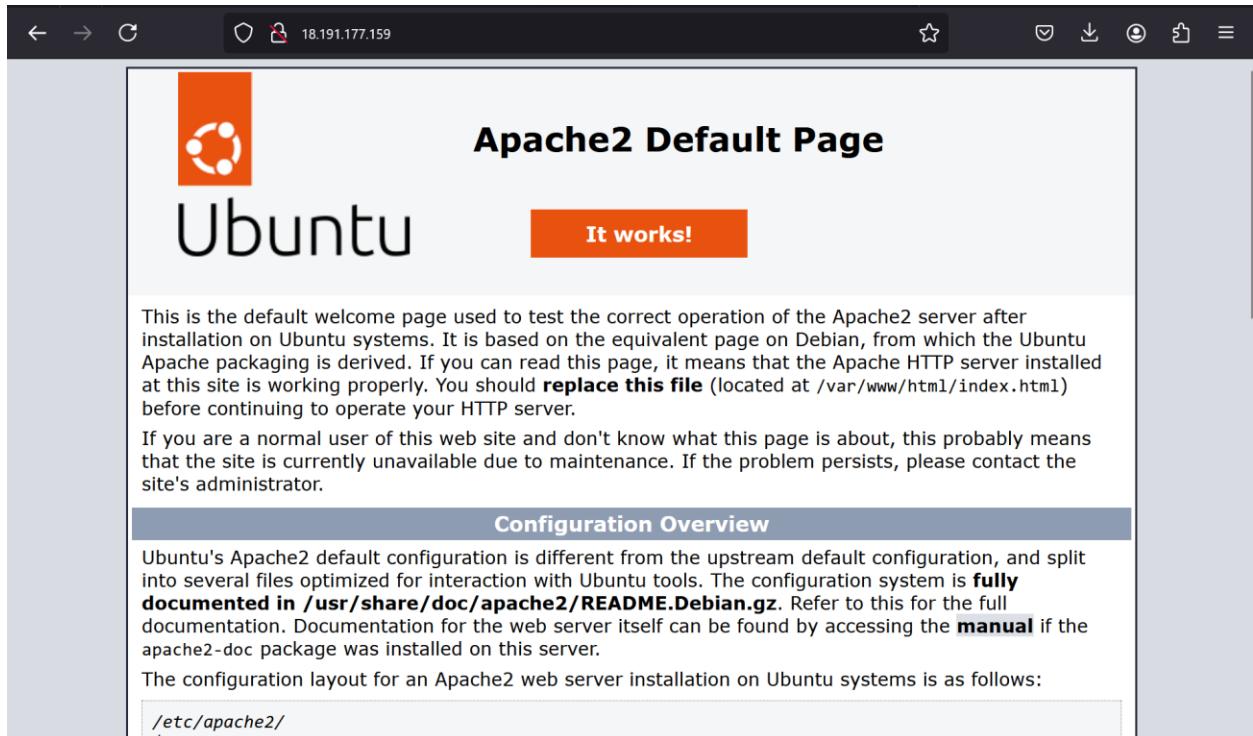
No services need to be restarted.

No containers need to be restarted.

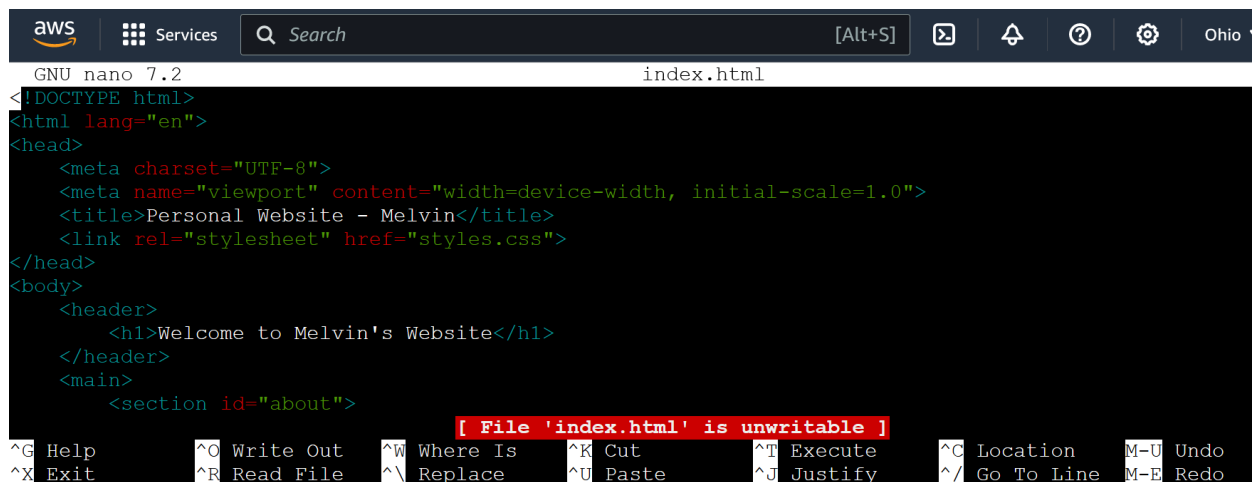
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-20-76:~$
```

Launching the Apache2 server to confirm it works before uploading m static website.



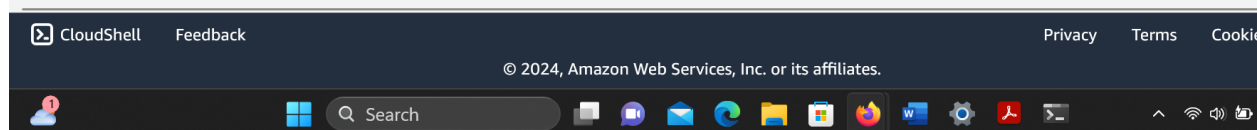
My Static website .html file:



```
aws Services Search [Alt+S] Ohio
GNU nano 7.2 index.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Personal Website - Melvin</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <header>
    <h1>Welcome to Melvin's Website</h1>
  </header>
  <main>
    <section id="about">
      [ File 'index.html' is unwritable ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line  M-E Redo
```


i-041ac86cc720645fa (Izu AWS Instance)

PublicIPs: 18.191.177.159 PrivateIPs: ~~10.0.0.1~~



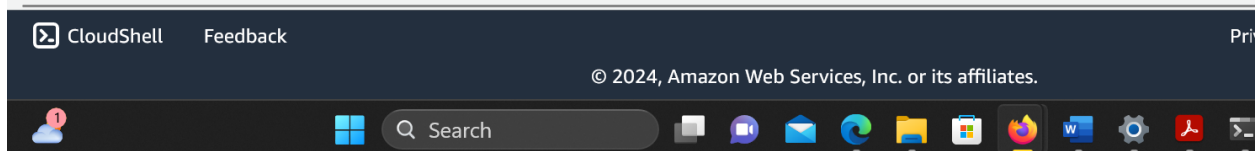
I deleted the previous content in the index.html file and replaced it with my webpage containing my details. I also created a .css file in the directory: PS(The right way is to actually create a separate folder containing all the relevant files, and UPLOAD to your EC2(Apache var/www/html .

```
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ sudo nano index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ nano index.html
ubuntu@ip-172-31-20-76:/var/www/html$ sudo nano index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html  inddex.html
ubuntu@ip-172-31-20-76:/var/www/html$ sudo rm index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ mv inddex.html index.html
mv: cannot move 'inddex.html' to 'index.html': Permission denied
ubuntu@ip-172-31-20-76:/var/www/html$ sudo mv inddex.html index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
```



i-041ac86cc720645fa (Izu AWS Instance)

PublicIPs: 18.191.177.159 PrivateIPs: 172.31.20.76



Launching the website .html file



Welcome to Melvin's Website

About Me

Hello, I'm **Izu Ebuka**. Welcome to my personal website!

Contact Me

Email: elioguizu@gmail.com

© 2024 Melvin. All rights reserved.



.CSS file

```
aws Services [Alt+S] Ohio Izu
GNU nano 7.2 style.css
/* styles.css */
body {
  font-family: Arial, sans-serif;
  line-height: 1.6;
  margin: 0;
  padding: 0;
  background-color: #f0f0f0;
}
header {
  background-color: #333;
  color: #fff;
  text-align: center;
}
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line M-E Redo

CloudShell Feedback Privacy Terms Cookie preferences
© 2024, Amazon Web Services, Inc. or its affiliates.
```

```
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ mv index.html index.html
mv: cannot move 'index.html' to 'index.html': Permission denied
ubuntu@ip-172-31-20-76:/var/www/html$ sudo mv index.html index.html
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html
ubuntu@ip-172-31-20-76:/var/www/html$ nano index.html
ubuntu@ip-172-31-20-76:/var/www/html$ nano style.css
ubuntu@ip-172-31-20-76:/var/www/html$ sudo nano style.css
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html  style.css
ubuntu@ip-172-31-20-76:/var/www/html$ sudo nano izu.java
ubuntu@ip-172-31-20-76:/var/www/html$ ls
index.html  izu.java  style.css
ubuntu@ip-172-31-20-76:/var/www/html$
```

i-041ac86cc720645fa (Izu AWS Instance) X

PublicIPs: 18.191.177.159 PrivateIPs: 172.31.20.76

CloudShell Feedback Privacy Terms Cookie preferences

© 2024, Amazon Web Services, Inc. or its affiliates.

