03_Assignment - AWS Cloud

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3. L3 - Launch AWS EC2 Ubuntu Instance and configure the Security Group - Inbound Rule: 8080. Justify the usage of Inbound Rules

- o Creating inbound security group with TCP protocol and port 8080 while creating the instance

- o Inbound rules in a Security Group define **what incoming traffic is allowed** to reach an EC2 instance.
- o Port 8080 is used for web applications. An inbound rule allows traffic to reach the EC2 instance, and the application must be running on the same port.

```
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.58-1ubuntu8.8).
0 upgraded, 0 newly installed, 0 to remove and 68 not upgraded.
ubuntu@ip-172-31-9-67:~$ sudo systemctl start apache2
ubuntu@ip-172-31-9-67:~$ sudo nano /etc/apache2/ports.conf
ubuntu@ip-172-31-9-67:~$ sudo nano /etc/apache2/sites-enabled/000-default.conf
ubuntu@ip-172-31-9-67:~$ sudo systemctl restart apache2
ubuntu@ip-172-31-9-67:~$ 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 Thu 2026-01-01 20:00:28 UTC; 6s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 3025 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 3028 (apache2)
      Tasks: 55 (limit: 1008)
     Memory: 5.3M (peak: 5.6M)
        CPU: 26ms
     CGroup: /system.slice/apache2.service
             ├─3028 /usr/sbin/apache2 -k start
             ├─3030 /usr/sbin/apache2 -k start
             └─3031 /usr/sbin/apache2 -k start

Jan 01 20:00:28 ip-172-31-9-67 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Jan 01 20:00:28 ip-172-31-9-67 systemd[1]: Started apache2.service - The Apache HTTP Server.
ubuntu@ip-172-31-9-67:~$ sudo ss -tuln | grep 8080
tcp    LISTEN 0      511             *:8080           *:*
ubuntu@ip-172-31-9-67:~$
```

i-08f77b203620d23e7 (Ubuntu Instance)   ✕

PublicIPs: 56.228.9.46   PrivateIPs: 172.31.9.67

o Accessing in browser using public key of instance

← → C   ⚠ Not secure   56.228.9.46:8080   ☆   ☁   ⛶ | 🅐   ⋮

Apache2 Default Page

Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at /var/www/html/index.html) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|        `--  ports.conf
|-- mods-enabled
|        |-- *.load
```