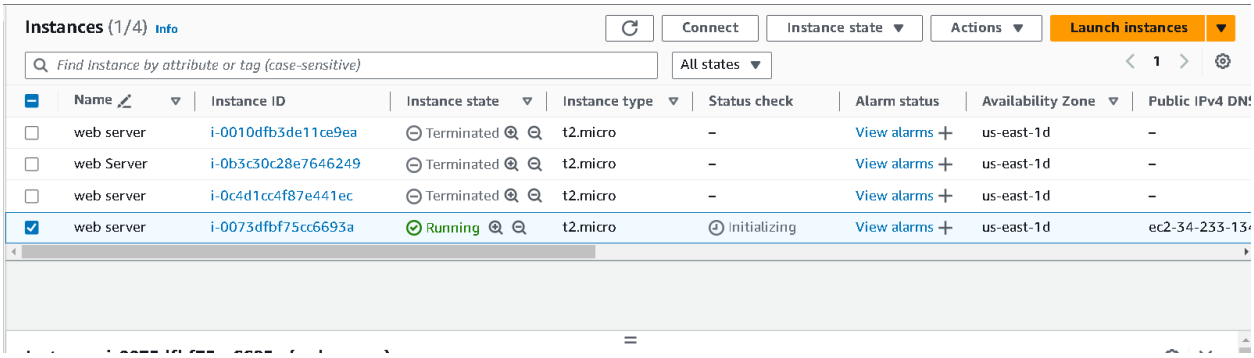
Hosting a website on AWS EC2 instance using the nginx web server.

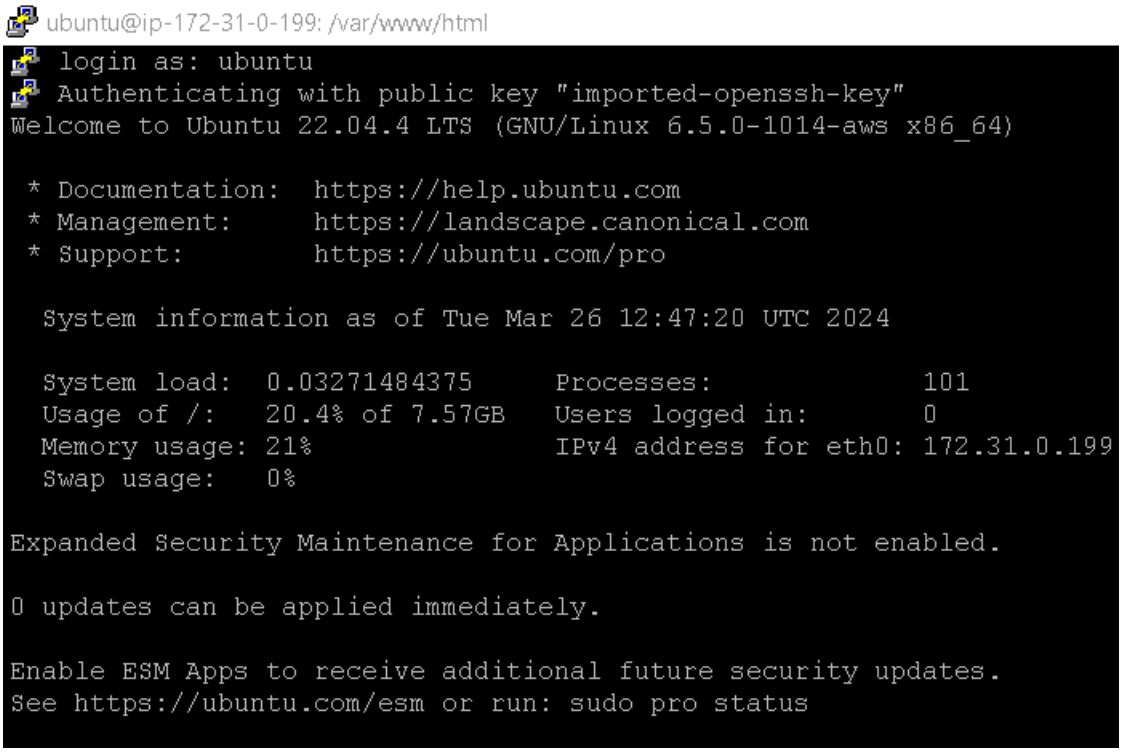
Nginx is a high-performance HTTP server, reverse proxy server, and an IMAP/POP3 proxy server. It is known for its stability, rich feature set, simple configuration, and low resource consumption.

Here's how to install and configure Nginx on an Ubuntu system.

Step 1: launch an instance.



Step 2: connect to instance.



Step 3: First, update your package lists to ensure you get the latest version and dependencies:

Sudo apt-get update

```
ubuntu@ip-172-31-0-199:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [11
9 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [
109 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packag
es [14.1 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-
en [5652 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f
Metadata [286 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Pack
ages [217 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translatio
n-en [112 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n
-f Metadata [8372 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 P
ackages [1505 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Transla
tion-en [290 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted a
md64 Packages [1628 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted T
ranslation-en [273 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd
64 Packages [1059 kB]
```

Step 4: Install nginx.

Install Nginx using the package manager.

Sudo apt-get install nginx

```
etadata [260 B]
Fetched 30.4 MB in 6s (5364 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-0-199:~$ Sudo apt-get install nginx
Command 'Sudo' not found, did you mean:
  command 'ludo' from snap ludo (0.17.1)
  command 'udo' from deb udo (6.4.1-6)
  command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
  command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
See 'snap info <snapname>' for additional versions.
ubuntu@ip-172-31-0-199:~$ sudo apt-get install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core libdeflate0 libfontconfig1 libgd3
  libjbig0 libjpeg-turbo8 libjpeg8 libnginx-mod-http-geoip2
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream libnginx-mod-stream-geoip2 libtiff5
  libwebp7 libxpm4 nginx-common nginx-core
Suggested packages:
  libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core libdeflate0 libfontconfig1 libgd3
  libjbig0 libjpeg-turbo8 libjpeg8 libnginx-mod-http-geoip2
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream libnginx-mod-stream-geoip2 libtiff5
  libwebp7 libxpm4 nginx nginx-common nginx-core
0 upgraded, 20 newly installed, 0 to remove and 19 not upgraded.
```

Step 5: Start and Enable Nginx

Start the Nginx service:

Sudo systemctl restart nginx

Sudo systemctl enable nginx

Step 6: Verify Nginx Installation

To check if Nginx is running, you can use:

sudo systemctl status nginx

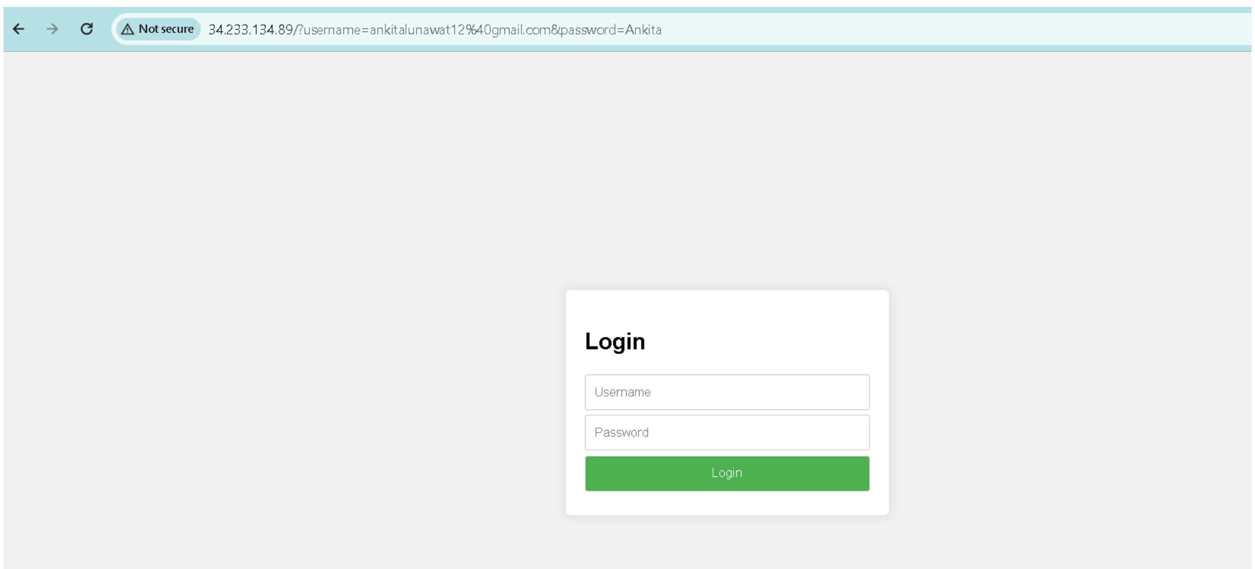
```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-0-199:~$ sudo systemctl restart nginx
ubuntu@ip-172-31-0-199:~$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /lib/systemd/
systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable nginx
ubuntu@ip-172-31-0-199:~$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
     Active: active (running) since Tue 2024-03-26 12:50:52 UTC; 1min 47s ago
       Docs: man:nginx(8)
   Main PID: 2224 (nginx)
      Tasks: 2 (limit: 1121)
     Memory: 2.6M
        CPU: 24ms
     CGroup: /system.slice/nginx.service
             ├─2224 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─2225 "nginx: worker process" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" ""

Mar 26 12:50:52 ip-172-31-0-199 systemd[1]: Starting A high performance web server and a reverse proxy server...
Mar 26 12:50:52 ip-172-31-0-199 systemd[1]: Started A high performance web server and a reverse proxy server.
ubuntu@ip-172-31-0-199:~$ cd  /var/www/html
ubuntu@ip-172-31-0-199:/var/www/html$ ls
index.nginx-debian.html
```

upload application code file.

Change application code in /var/ www/html/index.nginx-debian.html file.

check the webpage using public ip address.

Public IP of EC2 Instance.



By above these steps, you will have a fully functional Nginx server on your Ubuntu system, ready to serve static or dynamic

content, act as a reverse proxy, or perform other advanced tasks.