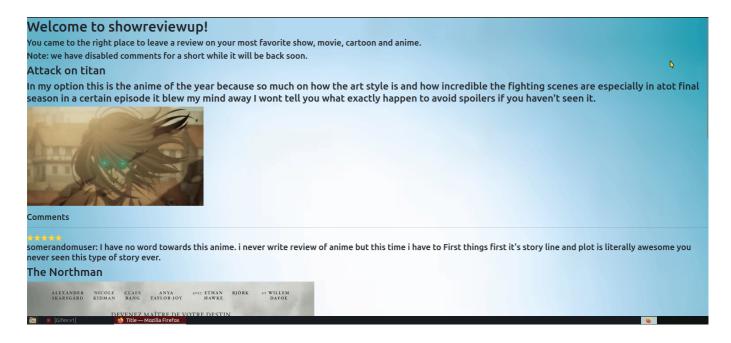
## Web Server



Apache and Configuring the Ubuntu Firewall

```
snumi@webserver:~$ hostname –I
192.168.1.172
snumi@webserver:~$ /var/www/html/
–bash: /var/www/html/: Is a directory
snumi@webserver:~$ ls /var/www/html/
index.html
snumi@webserver:~$ sudo ufw enable
Firewall is active and enabled on system startup
snumi@webserver:~$ sudo udf app list
sudo: udf: command not found
snumi@webserver:~$ sudo ufw app list
Available applications:
  Apache
  Apache Full
  Apache Secure
  OpenSSH
snumi@webserver:~$ sudo ufw status
Status: active
snumi@webserver:~$ sudo ufw allow 'Apache'
Rule added
Rule added (v6)
snumi@webserver:~$ _
```

```
snumi@webserver:~$ sudo ufw allow 'OpenSSH'
Rule added
Rule added (v6)
snumi@webserver:~$ sudo ufw status
Status: active
Τo
                             Action
                                         From
Apache
                             ALLOW
                                          Anywhere
OpenSSH
                             ALLOW
                                          Anywhere
Apache (v6)
                             ALLOW
                                          Anywhere (v6)
OpenSSH (v6)
                             ALLOW
                                          Anywhere (v6)
snumi@webserver:~$ s
```





# **Apache2 Ubuntu Default Page**

#### 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

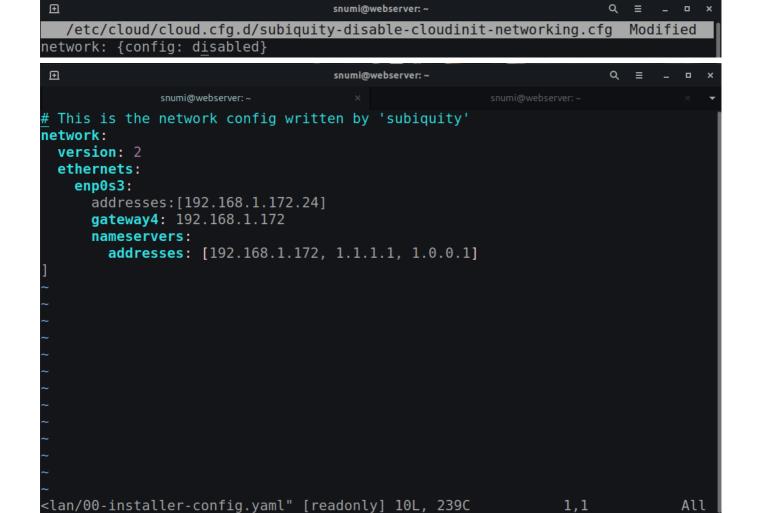
Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. 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:

### Static IP address setup

```
ⅎ
                                   snumi@webserver: ~
                                                                        ≡
snumi@webserver:~$ ip a
1: lo: <L00PBACK,UP,L0WER UP> mtu 65536 gdisc noqueue state UNKN0WN group defaul
t qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid lft forever preferred lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER UP> mtu 1500 gdisc fg codel state UP gr
oup default glen 1000
    link/ether 08:00:27:09:e9:c9 brd ff:ff:ff:ff:ff
    inet 192.168.1.172/24 brd 192.168.1.255 scope global dynamic enp0s3
       valid lft 64804sec preferred lft 64804sec
    inet6 fe80::a00:27ff:fe09:e9c9/64 scope link
       valid lft forever preferred lft forever
snumi@webserver:~$
```

snumi@webserver:~\$ sudo nano /etc/cloud/cloud.cfg.d/subiquity-disable-cloudinitnetworking.cfg \_



I attempted it but came across an road block.

How to install the server application you chose

First update your local package sudo apt update onces that is done type this command sudo apt install apache2 this will install apache.

Basic commands about managing the server application

```
snumi@webserver:~$ sudo systemctl stop apache2
Snumi@webserver:~$ sudo systemctl stop apache2
Snumi@webserver:~$ sudo systemctl stor apache2
snumi@webserver:~$ sudo systemctl start apache2
snumi@webserver:~$ _

snumi@webserver:~$ _
```

#### How to start, terminate, and restart a service in Ubuntu

```
⊕
                                   snumi@webserver: ~
snumi@webserver:~$ sudo systemctl restart apache2
[sudo] password for snumi:
snumi@webserver:~$ sudo systemctl reload apache2
snumi@webserver:~$ sudo systemctl disable apache2
Synchronizing state of apache2.service with SysV service script with /lib/system
d/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install disable apache2
Removed /etc/systemd/system/multi-user.target.wants/apache2.service.
snumi@webserver:~$ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /lib/system
d/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable apache2
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /l
ib/systemd/system/apache2.service.
snumi@webserver:~$
```

How to setup virtual hosts

```
snumi@webserver:- Q = - D ×
snumi@webserver:-$ sudo mkdir /var/www/showreviewup
[sudo] password for snumi:
snumi@webserver:-$ sudo chown -R $USER:$USER /var/www/showreviewup/
snumi@webserver:-$ sudo chmod -R 755 /var/www/showreviewup/
snumi@webserver:-$
_
```



```
∄
                                snumi@webserver: ~
 GNU nano 4.8
                                                                 Modified
                       /var/www/showreviewup/index.html
html>
        <title>showreviewup</title>
   </head>
   <body>
        <h1>Success! The your domain virtual host is working!</h1>
^G Get Help
              ^O Write Out
                             ^W Where Is
                                            ^K Cut Text
                                                           ^J Justify
  Exit
              ^R Read File
                                            ^U Paste Text ^T To Spell
                                Replace
                don@dono:~/cis106-spring22$
⊕
                                snumi@webserver: ~
snumi@webserver:~$ sudo nano /etc/apache2/sites-available/showreviewup.
snumi@webserver:~$ sudo nano /etc/apache2/sites-available/showreviewup.
onf
snumi@webserver:~$
```

```
⊕
                                snumi@webserver: ~
  GNU nano 4.8 /etc/apache2/sites-available/showreviewup.conf
<VirtualHost *:80>
    ServerAdmin snumi@localhost
    ServerName showreviewup
    ServerAlias www.showreviewup
    DocumentRoot /var/www/showreviwup
    ErrorLog ${APACHE LOG DIR}/error.log
    CustomLog ${APACHE LOG DIR}/access.log combined
</VirtualHost>
                               Read 8 lines
                                                           ^J Justify
  Get Help
               ^O Write Out
                             ^W Where Is
                                             'K Cut Text
                                Replace
                                                             To Spell
               ^R Read File
                                            Paste Text
                               snumi@webserver: ~
snumi@webserver:~$ snumi@1<del>22</del>
                  : command not found
snumi@
snumi@webserver:~$ ssh snumi@1
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-110-generic x86 64)
 * Documentation:
                   https://help.ubuntu.com
 * Management:
                   https://landscape.canonical.com
 * Support:
                   https://ubuntu.com/advantage
 System information as of Sat 21 May 2022 12:52:51 AM UTC
 System load: 0.0
                                  Processes:
                                                            125
                27.8% of 8.90GB
 Usage of /:
                                  Users logged in:
 Memory usage: 6%
                                  IPv4 address for enp0s3:
 Swap usage:
0 updates can be applied immediately.
Last login: Sat May 21 00:48:36 2022 from 192.1
snumi@webserver:~$
```

I had to delete the previous conf and make a new one with vim instead of nano.

### Important files and directories

vim /var/www/html/index.html is important because that is where you can design your webserver.

/etc/apache2/apache2.conf you can make changes to the main apache configuration file.

/var/log/apache2/error.log all errors will be brought to this file so you can look back on what happened.

#### Server log files

```
snumi@webserver:/var/log/apache2$ ls
access.log error.log error.log.2.gz
access.log.1 error.log.1 other_vhosts_access.log
snumi@webserver:/var/log/apache2$ cat access.log
192.168.1.159 - - [21/May/2022:00:12:48 +0000] "GET / HTTP/1.1" 200 3477 "-" "Mo zilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) C hrome/101.0.4951.67 Safari/537.36"
192.168.1.159 - - [21/May/2022:00:12:48 +0000] "GET /icons/ubuntu-logo.png HTTP/
```

#### Sources

Source 1 Source 2 Source 3 static ip