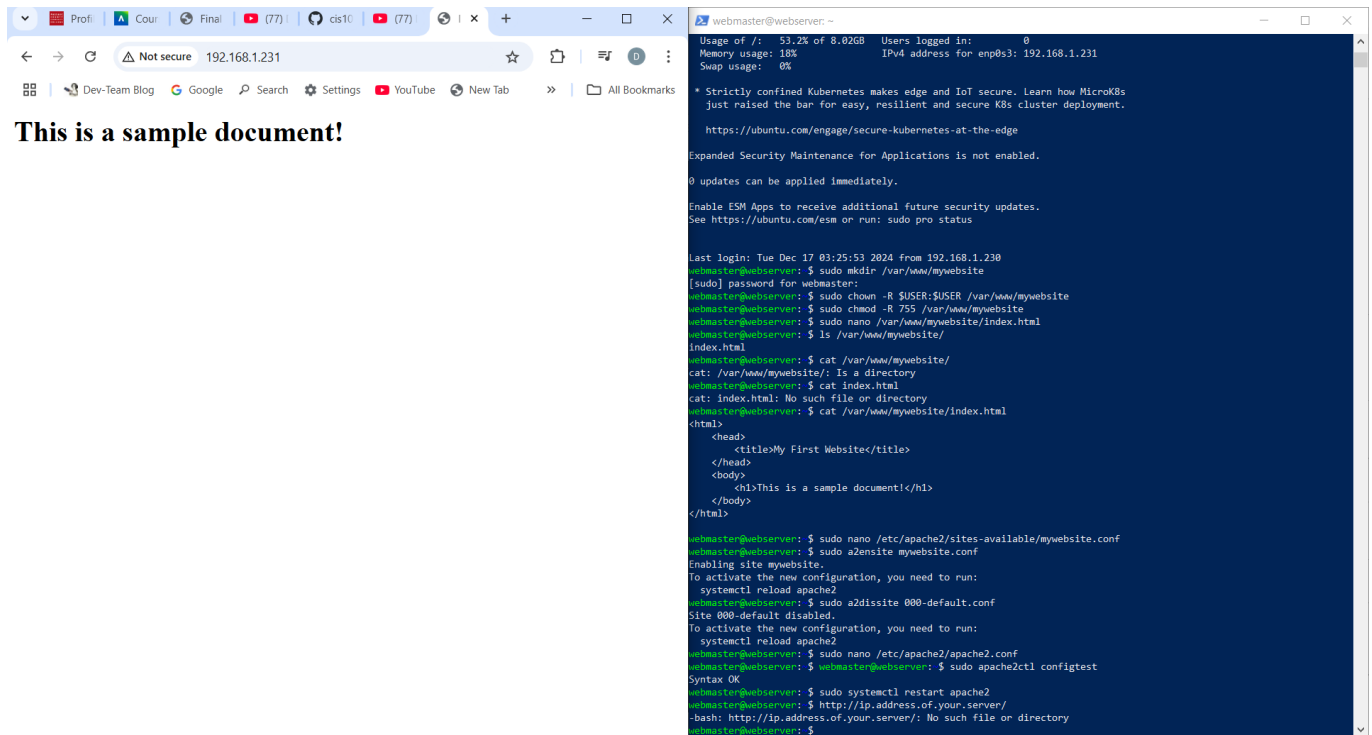


Server specs



Sample site



```
webmaster@webserver: ~
Usage of /: 53.2% of 8.02Gb  Users logged in: 0
Memory usage: 18%  IPv4 address for enp0s3: 192.168.1.231
Swap usage: 0%

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
  just raised the bar for easy, resilient and secure K8s cluster deployment.
https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Tue Dec 17 03:25:53 2024 from 192.168.1.230
webmaster@webserver: $ sudo mkdir /var/www/mywebsite
[sudo] password for webmaster:
webmaster@webserver: $ sudo chown -R $USER:$USER /var/www/mywebsite
webmaster@webserver: $ sudo chmod -R 755 /var/www/mywebsite
webmaster@webserver: $ sudo nano /var/www/mywebsite/index.html
webmaster@webserver: $ ls /var/www/mywebsite/
index.html
webmaster@webserver: $ cat /var/www/mywebsite/
cat: /var/www/mywebsite/: Is a directory
webmaster@webserver: $ cat index.html
cat: index.html: No such file or directory
webmaster@webserver: $ cat /var/www/mywebsite/index.html
<html>
  <head>
    <title>My First Website</title>
  </head>
  <body>
    <h1>This is a sample document!</h1>
  </body>
</html>
webmaster@webserver: $ sudo nano /etc/apache2/sites-available/mywebsite.conf
webmaster@webserver: $ sudo a2ensite mywebsite.conf
Enabling site mywebsite.
To activate the new configuration, you need to run:
  systemctl reload apache2
webmaster@webserver: $ sudo a2dissite 000-default.conf
Site 000-default disabled.
To activate the new configuration, you need to run:
  systemctl reload apache2
webmaster@webserver: $ sudo nano /etc/apache2/apache2.conf
webmaster@webserver: $ webmaster@webserver: $ sudo apache2ctl configtest
Syntax OK
webmaster@webserver: $ sudo systemctl restart apache2
webmaster@webserver: $ http://ip.address.of.your.server/
-bash: http://ip.address.of.your.server/: No such file or directory
webmaster@webserver: $
```

1. What is the IP address of your Ubuntu Server Virtual Machine?

The IP is 192.168.1.231

2. How do you enable the Ubuntu Firewall?

Use the command `sudo ufw enable`

3. How do you check if the Ubuntu Firewall is running?

Use the command `sudo ufw status`

4. How do you disable the Ubuntu Firewall?

Use the command `sudo ufw disable`

5. How do you add Apache to the Firewall?

Use command `sudo ufw allow 'Apache'`

6. What is the command you used to install Apache?

Use the command `sudo apt install apache2 -y` to install Apache

7. What is the command you use to check if Apache is running?

Use the command `sudo systemctl status apache2`

8. What is the command you use to stop Apache?

Use the command `sudo service apache2 stop`

9. What is the command you use to restart Apache?

Use the command `sudo service apache2 restart`

10. What is the command used to test Apache configuration?

Use the command `sudo apachectl -t`

11. What is the command used to check the installed version of Apache?

Use the command `sudo apache2 -v`

12. What are the most common commands to troubleshoot Apache errors? Provide a brief description of each command.

`systemctl` - Used to control and interact with Linux services via the systemd service manager.

```
• apache2.service - The Apache HTTP Server
  Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
  Drop-In: /lib/systemd/system/apache2.service.d
           └─apache2-systemd.conf
  Active: active (running) since Mon 2020-07-13 14:43:35 UTC; 1 day 4h ago
  Process: 929 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 1346 (apache2)
  Tasks: 55 (limit: 4702)
  CGroup: /system.slice/apache2.service
          └─1346 /usr/sbin/apache2 -k start
```

`journalctl` - Used to query and view the logs that are generated by systemd.

Output

```
Jul 14 20:12:14 ubuntu2004 systemd[1]: Starting The Apache HTTP Server...
Jul 14 20:12:14 ubuntu2004 systemd[1]: Started The Apache HTTP Server.
```

`apachectl` - When troubleshooting, this command is used to check Apache's configuration.

```
AH00526: Syntax error on line 232 of /etc/apache2/apache2.conf:
Invalid command 'SSLEngine', perhaps misspelled or defined by a module not included in the serv
Action 'configtest' failed.
The Apache error log may have more information.
```

13. Which are Apache Log Files, and what are they used for? Provide examples and screenshots.

This is an Apache Log file. `/var/log/httpd/error_log`. Apache log files are used for troubleshooting, generally, any error that you receive in a browser or other HTTP client will have a corresponding entry in Apache's logs.

Error Log Examples

```
[Wed Jul 15 01:34:12.093005 2020] [proxy:error] [pid 13949:tid 140150453516032] (13)Permission
[Wed Jul 15 01:34:12.093078 2020] [proxy_http:error] [pid 13949:tid 140150453516032] [client 1
```