

Name	course	Semester	Instructor
Amiri Smith	CIS-106	Fall '24	R. Alberto

# Deliverable 2

## Device Specifications

System Info



Operating System	Linux Mint 21.2 Cinnamon
Cinnamon Version	5.8.4
Linux Kernel	5.15.0-76-generic
Processor	Intel® Core™ i5-2520M CPU @ 2.50GHz × 2
Memory	15.5 GiB
Hard Drive	120.0 GB
Graphics Card	Intel Corporation 2nd Generation Core Processor Family Integrated Graphics Controller

Upload system information

Copy to clipboard

```

1 / 1  +  [ ]  [ ]  Tilix: jel@jel-ThinkPad-T420: ~  🔍  ☰  -  □  ✕

1: jel@jel-ThinkPad-T420: ~  □  ✕

● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2024-12-17 20:22:01 EST; 2h 56min ago
     Docs: https://httpd.apache.org/docs/2.4/
  Process: 535209 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 535213 (apache2)
    Tasks: 55 (limit: 18891)
   Memory: 5.7M
      CPU: 741ms
   CGroup: /system.slice/apache2.service
           └─535213 /usr/sbin/apache2 -k start
             └─535214 /usr/sbin/apache2 -k start
               └─535215 /usr/sbin/apache2 -k start

Dec 17 20:22:01 jel-ThinkPad-T420 systemd[1]: Starting The Apache HTTP Server...
Dec 17 20:22:01 jel-ThinkPad-T420 systemd[1]: Started The Apache HTTP Server.
lines 1-16/16 (END)

```

*status of running Apache service*

**What is the IP address of your Ubuntu Server Virtual Machine?** 192.168.1.179

**How do you enable the Ubuntu Firewall?** `sudo ufw enable`

**How do you check if the Ubuntu Firewall is running?** `sudo ufw status`

**How do you disable the Ubuntu Firewall?** `sudo ufw status`

**How do you add Apache to the Firewall?** `sudo ufw allow 'Apache'`

**What is the command you used to install Apache?** `sudo apt install apache2`

**What is the command you use to check if Apache is running?** `sudo systemctl status apache2`

**What is the command you use to stop Apache?** `sudo systemctl stop apache2`

**What is the command you use to restart Apache?** `sudo systemctl restart apache2`

**What is the command used to test Apache configuration?** `sudo apache2ctl configtest`

**What is the command used to check the installed version of Apache?** `sudo apache2 -v`

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

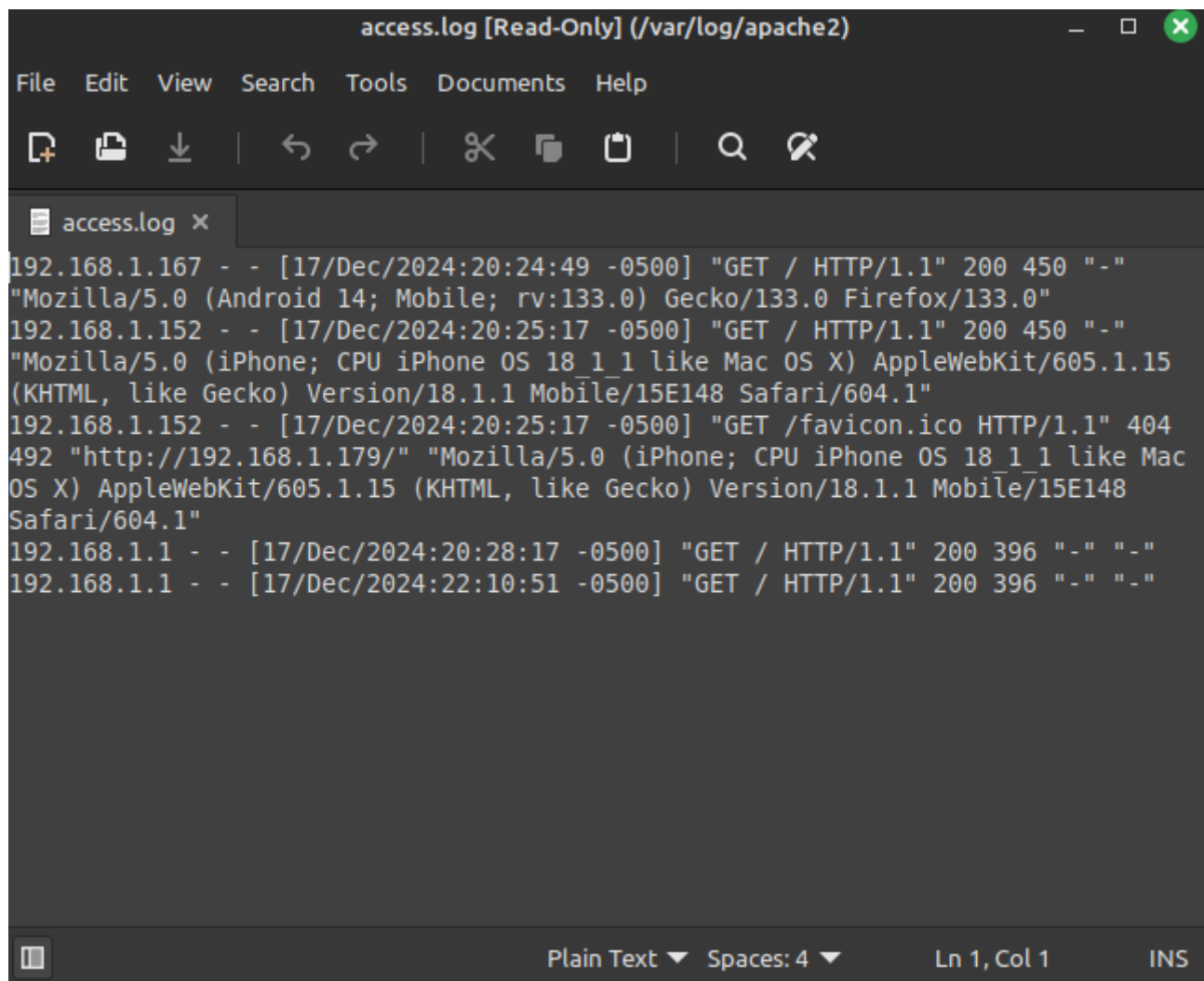
- **sudo apache2ctl configtest**
  - output alerts the user if any of the Apache configuration files have syntax errors
- **systemctl status apache2**
  - provides a general status of the Apache service on the device, including information like current running status, name of the Apache process, and the directory where the service is running from

**Which are Apache Log Files, and what are they used for? Provide examples and screenshots.** Apache log files provide static logs of the use and running status of the Apache service.

Apache access logs show information about web server requests made to the Apache web server, like the IP address a request was sent from, the relevant HTTP information like the request method and status code, and the browser and operating system the request was sent from (if applicable).

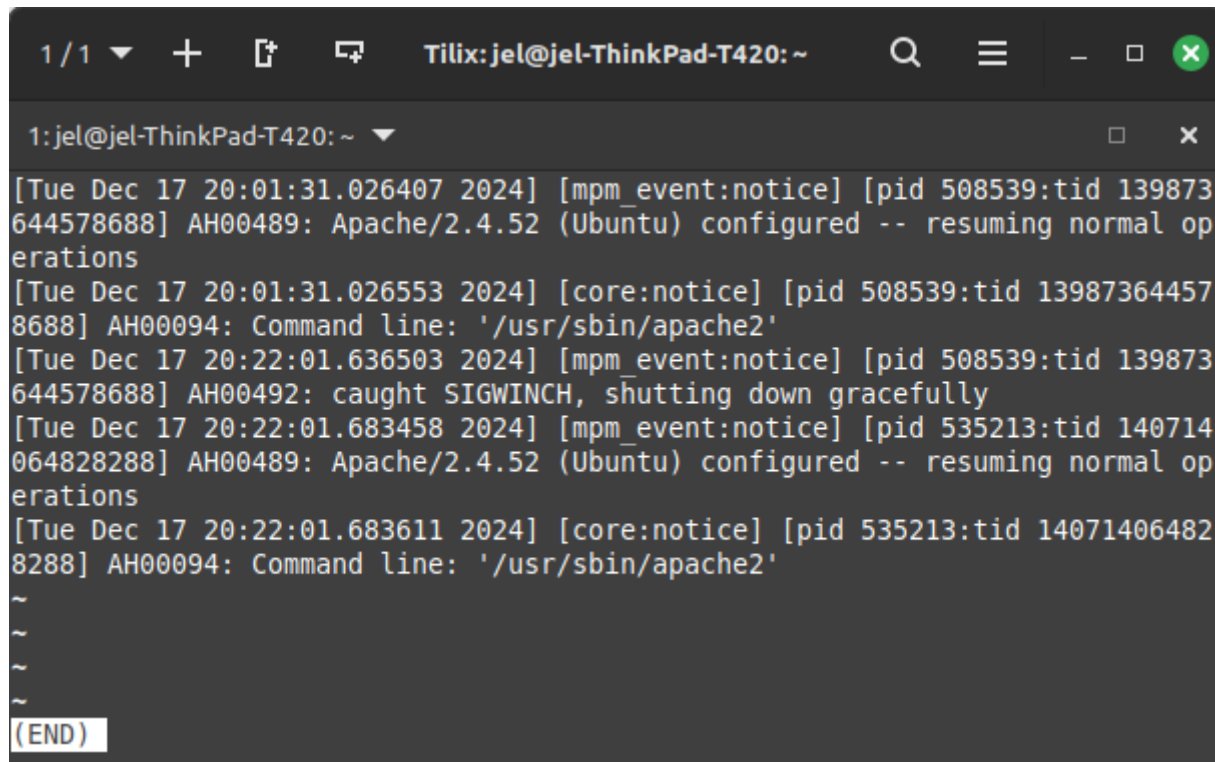
Apache error logs hold information about critical errors the Apache server may face, like a timestamp of when the error occurred, and the process ID of the service when the error occurred.

Apache error logs can be viewed with command-line tools for viewing text files, like `grep` or `less`, or with a text editor.



```
access.log [Read-Only] (/var/log/apache2)
File Edit View Search Tools Documents Help
access.log x
192.168.1.167 - - [17/Dec/2024:20:24:49 -0500] "GET / HTTP/1.1" 200 450 "-"
"Mozilla/5.0 (Android 14; Mobile; rv:133.0) Gecko/133.0 Firefox/133.0"
192.168.1.152 - - [17/Dec/2024:20:25:17 -0500] "GET / HTTP/1.1" 200 450 "-"
"Mozilla/5.0 (iPhone; CPU iPhone OS 18_1_1 like Mac OS X) AppleWebKit/605.1.15
(KHTML, like Gecko) Version/18.1.1 Mobile/15E148 Safari/604.1"
192.168.1.152 - - [17/Dec/2024:20:25:17 -0500] "GET /favicon.ico HTTP/1.1" 404
492 "http://192.168.1.179/" "Mozilla/5.0 (iPhone; CPU iPhone OS 18_1_1 like Mac
OS X) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/18.1.1 Mobile/15E148
Safari/604.1"
192.168.1.1 - - [17/Dec/2024:20:28:17 -0500] "GET / HTTP/1.1" 200 396 "-" "-"
192.168.1.1 - - [17/Dec/2024:22:10:51 -0500] "GET / HTTP/1.1" 200 396 "-" "-"
Plain Text Spaces: 4 Ln 1, Col 1 INS
```

*Apache access log in xed text editor*



The screenshot shows a terminal window titled 'Tilix: jel@jel-ThinkPad-T420: ~'. The terminal displays the output of the 'less' command applied to an Apache error log. The log entries are as follows:

```
1: jel@jel-ThinkPad-T420: ~  
[Tue Dec 17 20:01:31.026407 2024] [mpm_event:notice] [pid 508539:tid 139873644578688] AH00489: Apache/2.4.52 (Ubuntu) configured -- resuming normal operations  
[Tue Dec 17 20:01:31.026553 2024] [core:notice] [pid 508539:tid 139873644578688] AH00094: Command line: '/usr/sbin/apache2'  
[Tue Dec 17 20:22:01.636503 2024] [mpm_event:notice] [pid 508539:tid 139873644578688] AH00492: caught SIGWINCH, shutting down gracefully  
[Tue Dec 17 20:22:01.683458 2024] [mpm_event:notice] [pid 535213:tid 140714064828288] AH00489: Apache/2.4.52 (Ubuntu) configured -- resuming normal operations  
[Tue Dec 17 20:22:01.683611 2024] [core:notice] [pid 535213:tid 140714064828288] AH00094: Command line: '/usr/sbin/apache2'  
~  
~  
~  
~  
(END)
```

The terminal window includes standard icons for window management (minimize, maximize, close) and a search icon. The bottom of the terminal shows the '(END)' message, indicating the end of the log file.

Apache

*error log viewed using less command*