

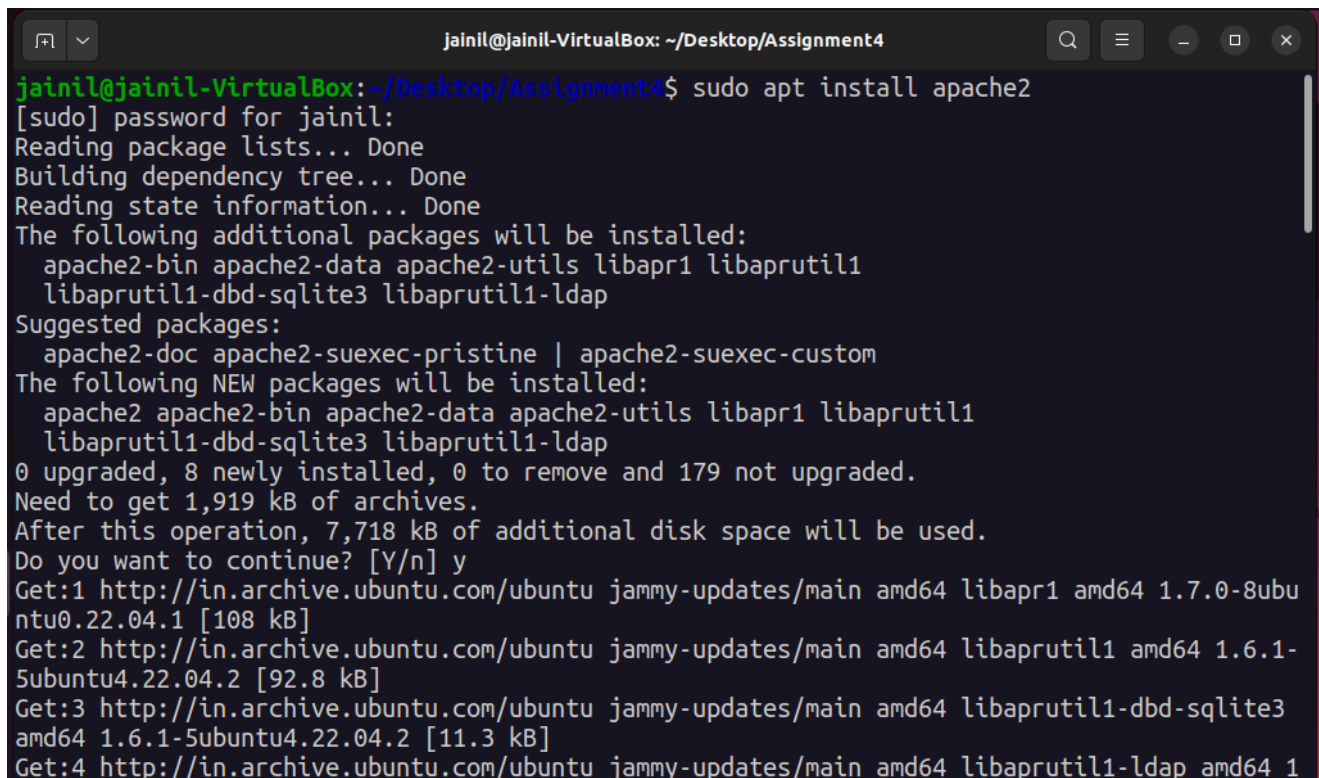
# TASK 1

## Start Systemd Service

**Task:** Download any web server(Nginx, Apache) and run it via Systemd. Check the status of the service, restart it with some changes and make sure that service run when host get restarted. Document the steps.

**To download Apache use command:**

```
sudo apt install apache2
```

A terminal window titled 'jainil@jainil-VirtualBox: ~/Desktop/Assignment4' showing the command 'sudo apt install apache2' being executed. The output shows the package lists being read, the dependency tree being built, and the state information being read. It lists additional packages to be installed: apache2-bin, apache2-data, apache2-utils, libapr1, libaprutil1, libaprutil1-dbd-sqlite3, and libaprutil1-ldap. It also shows suggested packages and the disk space requirements. The user confirms the installation with 'y'. The terminal shows the progress of downloading and installing the packages from the Ubuntu repository.

```
jainil@jainil-VirtualBox: ~/Desktop/Assignment4$ sudo apt install apache2
[sudo] password for jainil:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
0 upgraded, 8 newly installed, 0 to remove and 179 not upgraded.
Need to get 1,919 kB of archives.
After this operation, 7,718 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1.7.0-8ubu
ntu0.22.04.1 [108 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1-
5ubuntu4.22.04.2 [92.8 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-dbd-sqlite3
amd64 1.6.1-5ubuntu4.22.04.2 [11.3 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-ldap amd64 1
```

**To start Apache use command:**

```
sudo systemctl start apache2
```

**To check status:**

```
sudo systemctl status apache2
```

**when host get restarted:**

```
sudo systemctl enable apache2
```

```
jainil@jainil-VirtualBox:~/Desktop/Assignment4$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-01-05 23:19:26 IST; 2min 21s ago
     Docs: https://httpd.apache.org/docs/2.4/
    Main PID: 5811 (apache2)
      Tasks: 55 (limit: 4599)
     Memory: 5.3M
        CPU: 112ms
    CGroup: /system.slice/apache2.service
            └─5811 /usr/sbin/apache2 -k start
              └─5812 /usr/sbin/apache2 -k start
                └─5813 /usr/sbin/apache2 -k start

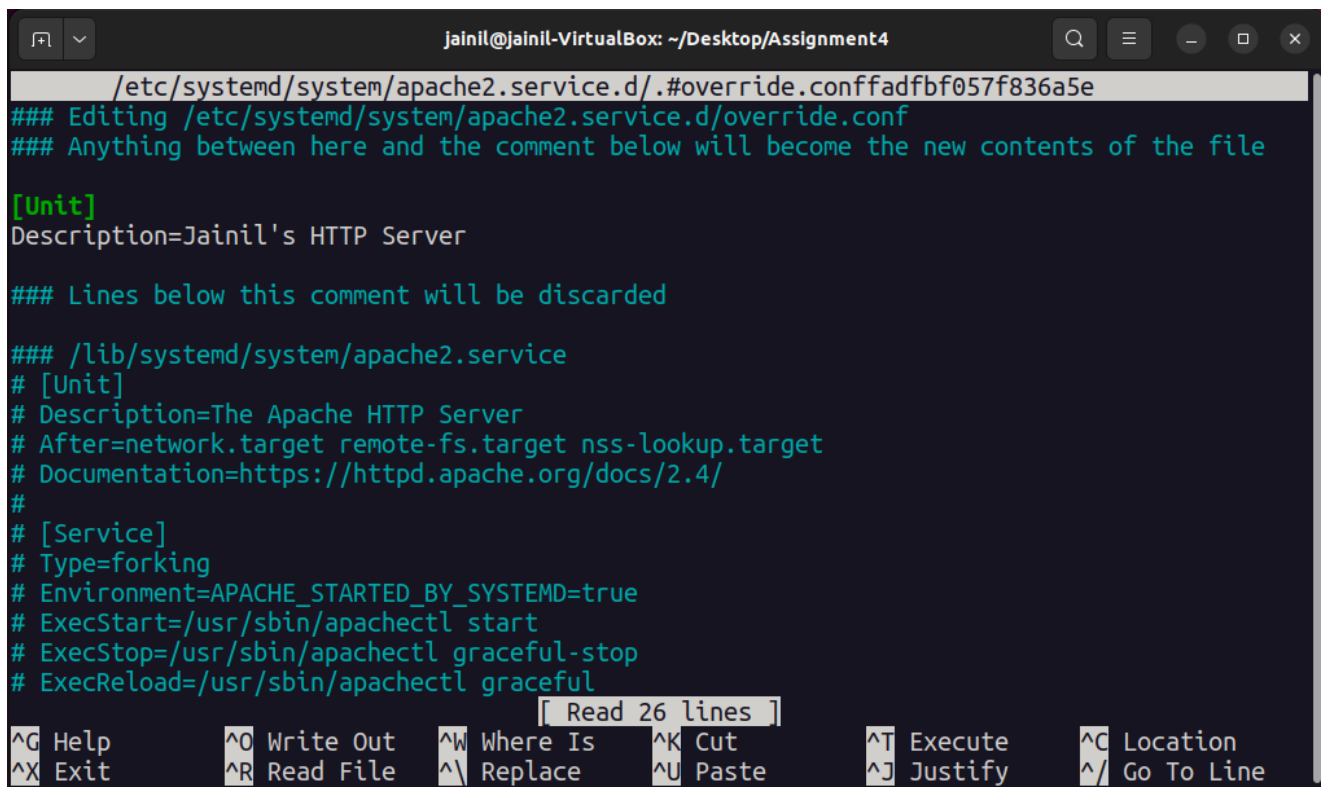
Jan 05 23:19:26 jainil-VirtualBox systemd[1]: Starting The Apache HTTP Server...
Jan 05 23:19:26 jainil-VirtualBox apachectl[5809]: AH00558: apache2: Could not reliably de
Jan 05 23:19:26 jainil-VirtualBox systemd[1]: Started The Apache HTTP Server.
jainil@jainil-VirtualBox:~/Desktop/Assignment4$
```

To stop apache2 use command:

```
sudo systemctl stop apache2
```

To edit apache2 config file use command:

```
sudo systemctl edit apache2
```



```
jainil@jainil-VirtualBox: ~/Desktop/Assignment4
/etc/systemd/system/apache2.service.d/.#override.confadfbf057f836a5e
### Editing /etc/systemd/system/apache2.service.d/override.conf
### Anything between here and the comment below will become the new contents of the file

[Unit]
Description=Jainil's HTTP Server

### Lines below this comment will be discarded

### /lib/systemd/system/apache2.service
# [Unit]
# Description=The Apache HTTP Server
# After=network.target remote-fs.target nss-lookup.target
# Documentation=https://httpd.apache.org/docs/2.4/
#
# [Service]
# Type=forking
# Environment=APACHE_STARTED_BY_SYSTEMD=true
# ExecStart=/usr/sbin/apachectl start
# ExecStop=/usr/sbin/apachectl graceful-stop
# ExecReload=/usr/sbin/apachectl graceful

[ Read 26 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

To restart use command:

```
sudo systemctl restart apache2
```

```
jainil@jainil-VirtualBox: ~/Desktop/Assignment4
jainil@jainil-VirtualBox:~/Desktop/Assignment4$ sudo systemctl restart apache2
jainil@jainil-VirtualBox:~/Desktop/Assignment4$ sudo systemctl status apache2
● apache2.service - Jainil's HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Drop-In: /etc/systemd/system/apache2.service.d
            └─override.conf
   Active: active (running) since Fri 2024-01-05 23:31:15 IST; 2s ago
     Docs: https://httpd.apache.org/docs/2.4/
  Process: 6440 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 6445 (apache2)
    Tasks: 55 (limit: 4599)
   Memory: 5.0M
      CPU: 62ms
   CGroup: /system.slice/apache2.service
           └─6445 /usr/sbin/apache2 -k start
             └─6446 /usr/sbin/apache2 -k start
               └─6448 /usr/sbin/apache2 -k start

Jan 05 23:31:15 jainil-VirtualBox systemd[1]: Starting Jainil's HTTP Server...
Jan 05 23:31:15 jainil-VirtualBox apachectl[6444]: AH00558: apache2: Could not reliably de
Jan 05 23:31:15 jainil-VirtualBox systemd[1]: Started Jainil's HTTP Server.
jainil@jainil-VirtualBox:~/Desktop/Assignment4$
```