

# 01/12/2025

## ▼ A- Installation de apache2

1- Mettre à jour la machine

```
debian@debian:~$ sudo apt update
```

```
debian@debian:~$ sudo apt upgrade
```

2- Renommez la machine apache2

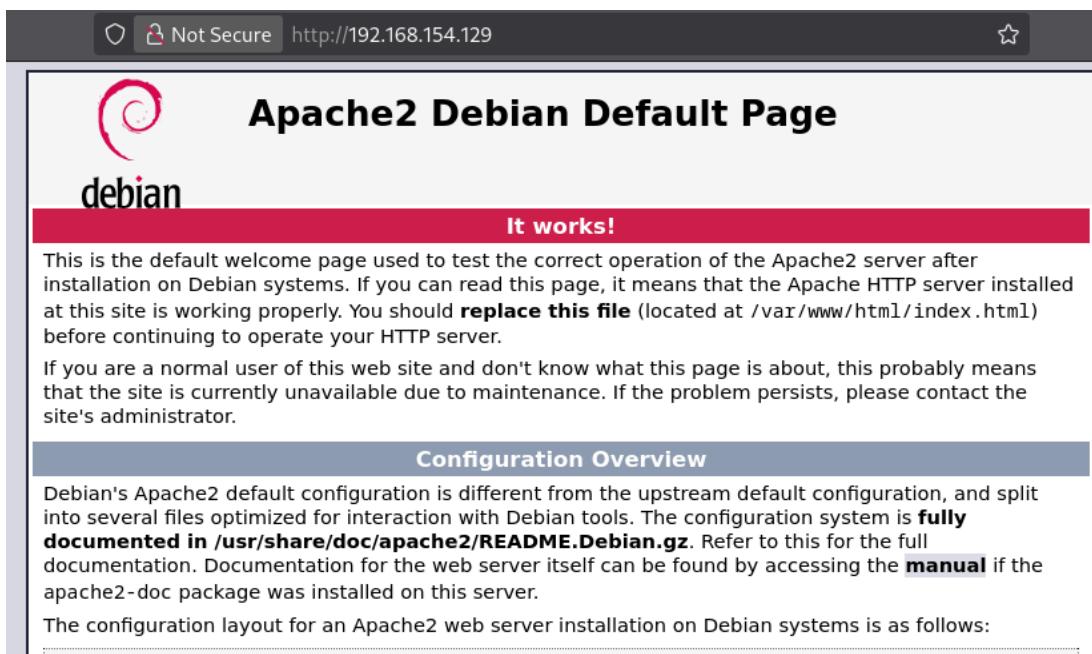
```
debian@debian:~$ hostnamectl set-hostname apache2
```

3- Installation du paquet apache2

```
debian@debian:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

4- Test de l'installation

```
debian@debian:~$ hostname -i
fe80::20c:29ff:fe96:aade%ens33 192.168.154.129
```



## 5- Comprendre l'arborescence des fichier d'apache2 Localiser les fichiers

```
debian@debian:~$ whereis apache2
apache2: /usr/sbin/apache2 /usr/lib/apache2 /etc/apache2 /usr/share/apache2 /usr/share/man/man8/apache2.8.gz
```

### a- Explorer le fichier apache2.conf

```
debian@debian:/etc/apache2$ cat apache2.conf

# It is split into several files forming the configuration hierarchy outlined
# below, all located in the /etc/apache2/ directory:
#
#      /etc/apache2/
#      |-- apache2.conf
#          '-- ports.conf
#      '-- mods-enabled
#          |-- *.load
#          '-- *.conf
#      '-- conf-enabled
#          '-- *.conf
#      '-- sites-enabled
#          '-- *.conf
#
```

### b- le contexte directory

```
debian@debian:/etc/apache2$ ls -al
total 96
drwxr-xr-x  8 root root  4096 Dec  1 04:12 .
drwxr-xr-x 121 root root 12288 Dec  1 04:11 ..
-rw-r--r--  1 root root  7178 Jul 29 16:18 apache2.conf
drwxr-xr-x  2 root root  4096 Dec  1 04:12 conf-available
drwxr-xr-x  2 root root  4096 Dec  1 04:12 conf-enabled
-rw-r--r--  1 root root 1782 Jul 29 16:18 envvars
-rw-r--r--  1 root root 31063 Jul 17 11:59 magic
drwxr-xr-x  2 root root 12288 Dec  1 04:12 mods-available
drwxr-xr-x  2 root root  4096 Dec  1 04:12 mods-enabled
-rw-r--r--  1 root root   274 Jul 29 16:18 ports.conf
drwxr-xr-x  2 root root  4096 Dec  1 04:12 sites-available
drwxr-xr-x  2 root root  4096 Dec  1 04:12 sites-enabled
```

## 6- Les mods d'Apache2 et leur gestion le processus

```
debian@debian:~$ ps aux | grep apach[e]
root    22439  0.0  0.1  6716 3284 ?        Ss   04:12  0:00 /usr/sbin/apache2 -k start
www-data 22440  0.0  0.2 1212788 5004 ?        Sl   04:12  0:00 /usr/sbin/apache2 -k start
www-data 22441  0.0  0.3 1212860 6116 ?        Sl   04:12  0:00 /usr/sbin/apache2 -k start
www-data 22522  0.0  0.0   3416 160 ?        Ss   04:12  0:00 /usr/bin/htcacheclean -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
debian@debian:~$ 
debian@debian:~$ ps aux --forest | grep apach[e]
root    22439  0.0  0.1  6716 3284 ?        Ss   04:12  0:00 /usr/sbin/apache2 -k start
www-data 22440  0.0  0.2 1212788 5004 ?        Sl   04:12  0:00 \_ /usr/sbin/apache2 -k start
www-data 22441  0.0  0.3 1212860 6116 ?        Sl   04:12  0:00 \_ /usr/sbin/apache2 -k start
www-data 22522  0.0  0.0   3416 160 ?        Ss   04:12  0:00 /usr/bin/htcacheclean -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
```

## a- Les trois mods apache2 mpm\_event, mpm\_worker et mpm\_perfork

```
debian@debian:/etc/apache2$ ls mods-enabled/
access_compat.load authn_file.load autoindex.load env.load      mpm_event.load setenvif.conf
alias.conf         authz_core.load deflate.conf filter.load    negotiation.conf setenvif.load
alias.load         authz_host.load deflate.load mime.conf       negotiation.load status.conf
auth_basic.load   authz_user.load dir.conf     mime.load       reqtimeout.conf status.load
authn_core.load   autoindex.conf  dir.load     mpm_event.conf reqtimeout.load
```

```
debian@debian:~$ sudo a2query -M
[sudo] password for debian:
event
debian@debian:~$ █
```

## b- Activation et désactivation manuelle des mods/--

### i- Activation et désactivation manuelle des mod mpm

- Je supprime le module mpm\_event

```
debian@debian:~$ cd /etc/apache2/mods-enabled/
debian@debian:/etc/apache2/mods-enabled$ rm mpm_event.conf mpm_event.load
rm: cannot remove 'mpm_event.conf': Permission denied
rm: cannot remove 'mpm_event.load': Permission denied
debian@debian:/etc/apache2/mods-enabled$ sudo rm mpm_event.conf mpm_event.load
debian@debian:/etc/apache2/mods-enabled$ █
```

- Je redémarre le service apache2 et je vérifie que les processus sont arrêter

```
debian@debian:/etc/apache2/mods-enabled$ sudo service apache2 restart
Job for apache2.service failed because the control process exited with error code.
See "systemctl status apache2.service" and "journalctl -xeu apache2.service" for details.
debian@debian:/etc/apache2/mods-enabled$ sudo ps aux --forest | grep apach[e]
www-data  22522  0.0  0.0  3416  160 ?        Ss   04:12  0:00 /usr/bin/htcacheload -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
```

- ▼ Je crée les liens symboliques, je redémarre le service apache2 et je vérifie que les processus sont démarrés

ln -s [fichier cible] [Nom de fichier symbolique] teams

```
debian@debian:/etc/apache2/mods-enabled$ sudo ln -s ../mods-available/mpm_prefork.conf
debian@debian:/etc/apache2/mods-enabled$ sudo ln -s ../mods-available/mpm_prefork.load
debian@debian:/etc/apache2/mods-enabled$ sudo systemctl restart apache2
debian@debian:/etc/apache2/mods-enabled$ sudo ps aux --forest | grep apach[e]
www-data  22522  0.0  0.0  3416  160 ?        Ss   04:12  0:00 /usr/bin/htcacheload -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
root     23186  0.0  0.2  6428  4452 ?        Ss   04:42  0:00 /usr/sbin/apache2 -k start
www-data  23187  0.0  0.2  7848  4240 ?        S   04:42  0:00 \_ /usr/sbin/apache2 -k start
www-data  23188  0.0  0.2  7848  4272 ?        S   04:42  0:00 \_ /usr/sbin/apache2 -k start
www-data  23189  0.0  0.2  7848  4272 ?        S   04:42  0:00 \_ /usr/sbin/apache2 -k start
www-data  23190  0.0  0.2  7848  4268 ?        S   04:42  0:00 \_ /usr/sbin/apache2 -k start
www-data  23191  0.0  0.2  7848  4268 ?        S   04:42  0:00 \_ /usr/sbin/apache2 -k start
```

### ii- Activation et désactivation de mods mpm avec script

```

debian@debian:/etc/apache2/mods-enabled$ sudo a2dismod mpm_prefork
Module mpm_prefork disabled.
To activate the new configuration, you need to run:
  systemctl restart apache2
debian@debian:/etc/apache2/mods-enabled$ sudo systemctl restart apache2
Job for apache2.service failed because the control process exited with error code.
See "systemctl status apache2.service" and "journalctl -xeu apache2.service" for details.
debian@debian:/etc/apache2/mods-enabled$ sudo a2enmod mpm_event
Considering conflict mpm_worker for mpm_event:
Considering conflict mpm_prefork for mpm_event:
Enabling module mpm_event.
To activate the new configuration, you need to run:
  systemctl restart apache2
debian@debian:/etc/apache2/mods-enabled$ sudo systemctl restart apache2
debian@debian:/etc/apache2/mods-enabled$ sudo ps aux --forest | grep apache[e]
www-data  22522  0.0  0.0   3416  160 ?        Ss   04:12  0:00 /usr/bin/htcacheclean -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
root      23291  0.0  0.2   6716  4652 ?        Ss   04:47  0:00 /usr/sbin/apache2 -k start
www-data  23292  0.0  0.5 1212780 11112 ?       S1   04:47  0:00 \_ /usr/sbin/apache2 -k start
www-data  23293  0.0  0.3 1212780 7024 ?       S1   04:47  0:00 \_ /usr/sbin/apache2 -k start

```

### iii- Détermination du pid des processus

```

debian@debian:/var/run/apache2$ cat apache2.pid
23291

```

```

debian@debian:~$ pidof apache2
23293 23292 23291

```

```

debian@debian:~$ sudo ps aux --forest | grep apache[e]
www-data  22522  0.0  0.0   3416  160 ?        Ss   04:12  0:00 /usr/bin/htcacheclean -d 120 -p /var/cache/apache2/mod_cache_disk -l 300M -n
root      23291  0.0  0.2   6716  4652 ?        Ss   04:47  0:00 /usr/sbin/apache2 -k start
www-data  23292  0.0  0.5 1212780 11112 ?       S1   04:47  0:00 \_ /usr/sbin/apache2 -k start
www-data  23293  0.0  0.3 1212780 7024 ?       S1   04:47  0:00 \_ /usr/sbin/apache2 -k start

```