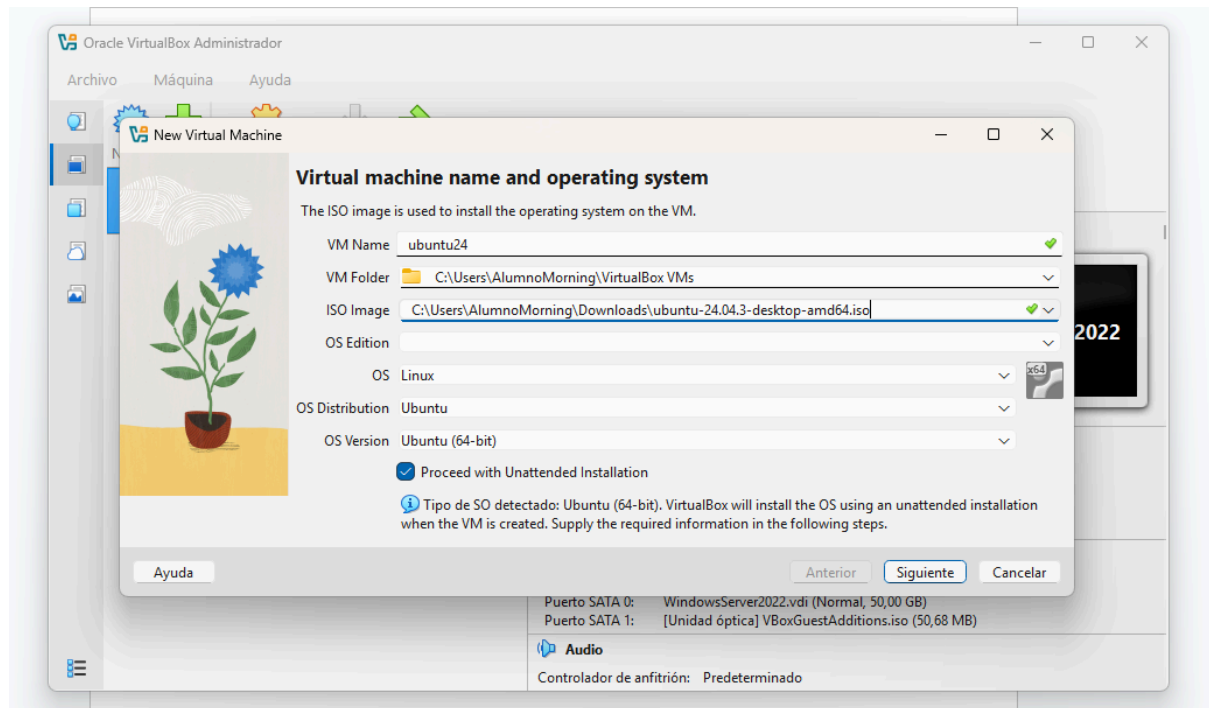
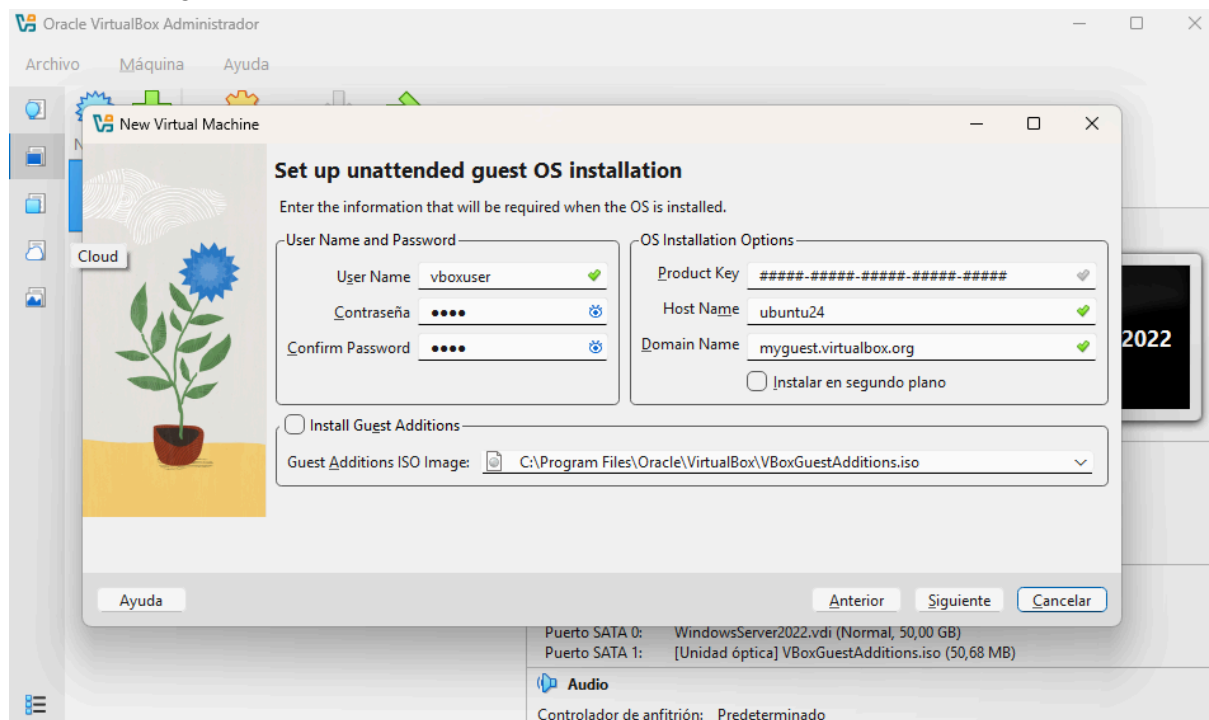


Arquitectura en la Nube

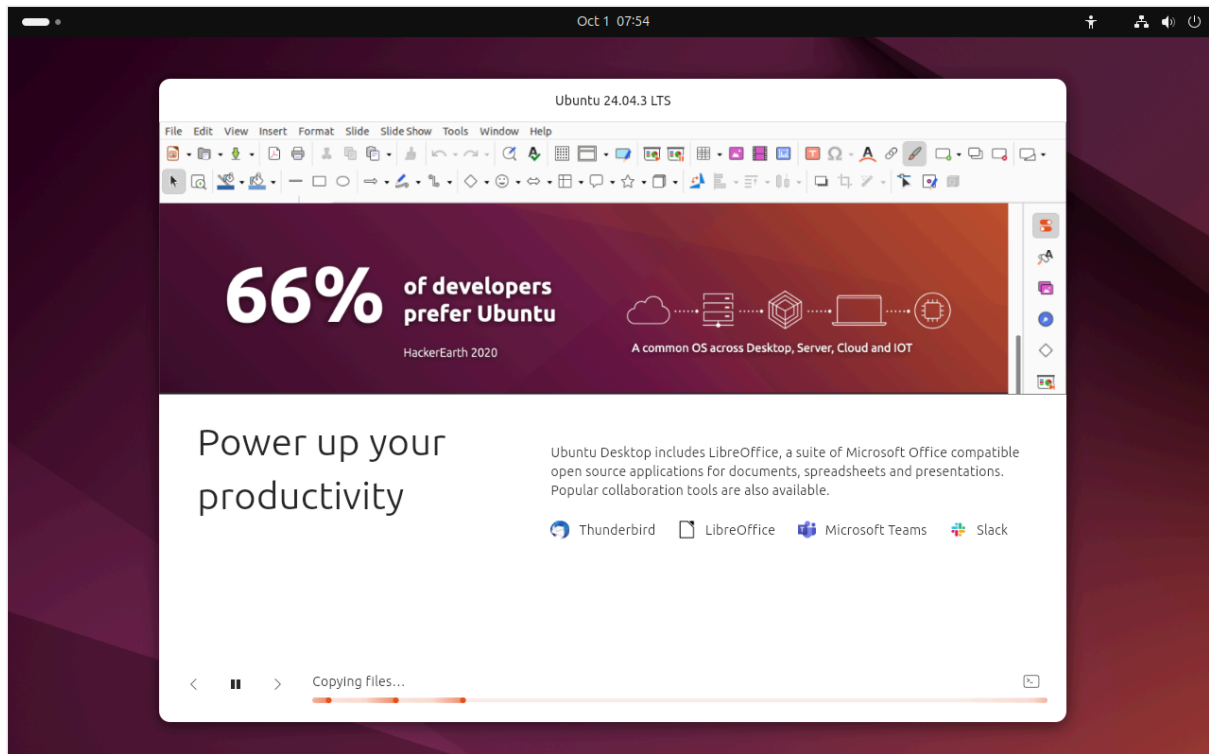
1. Instalar Ubuntu



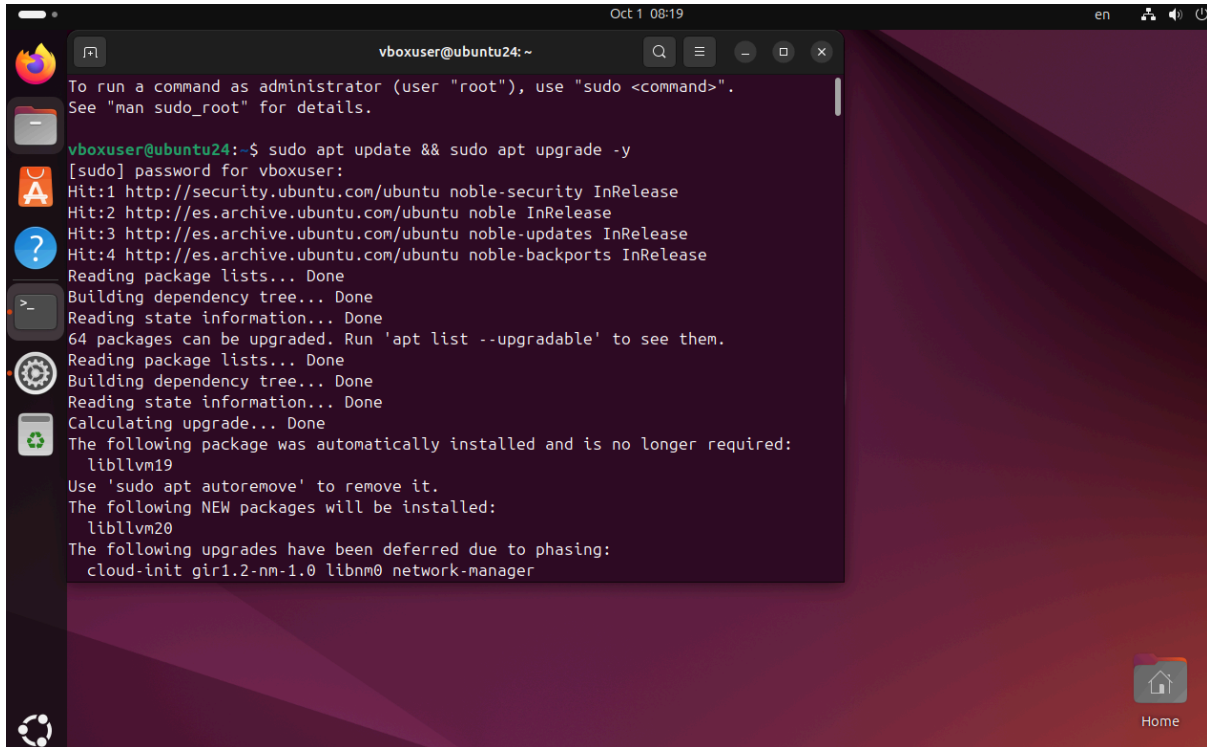
2. Configurar



3. Instalación

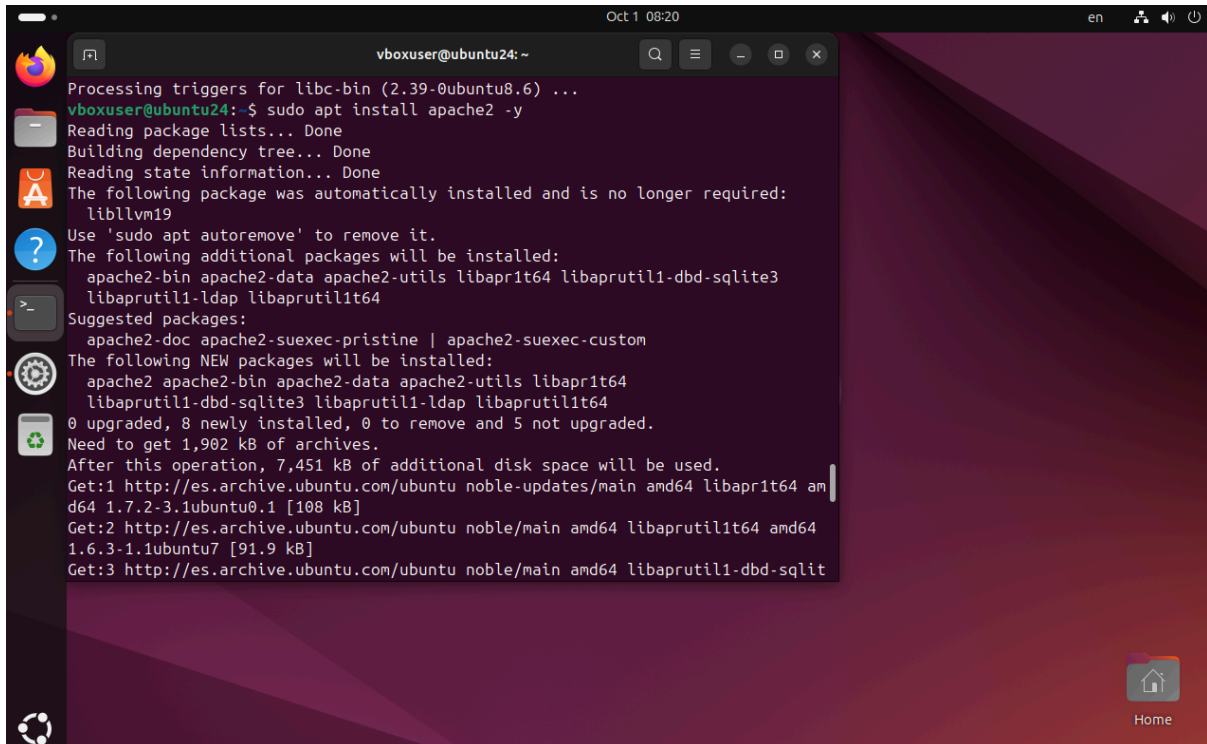


Actualizamos Ubuntu



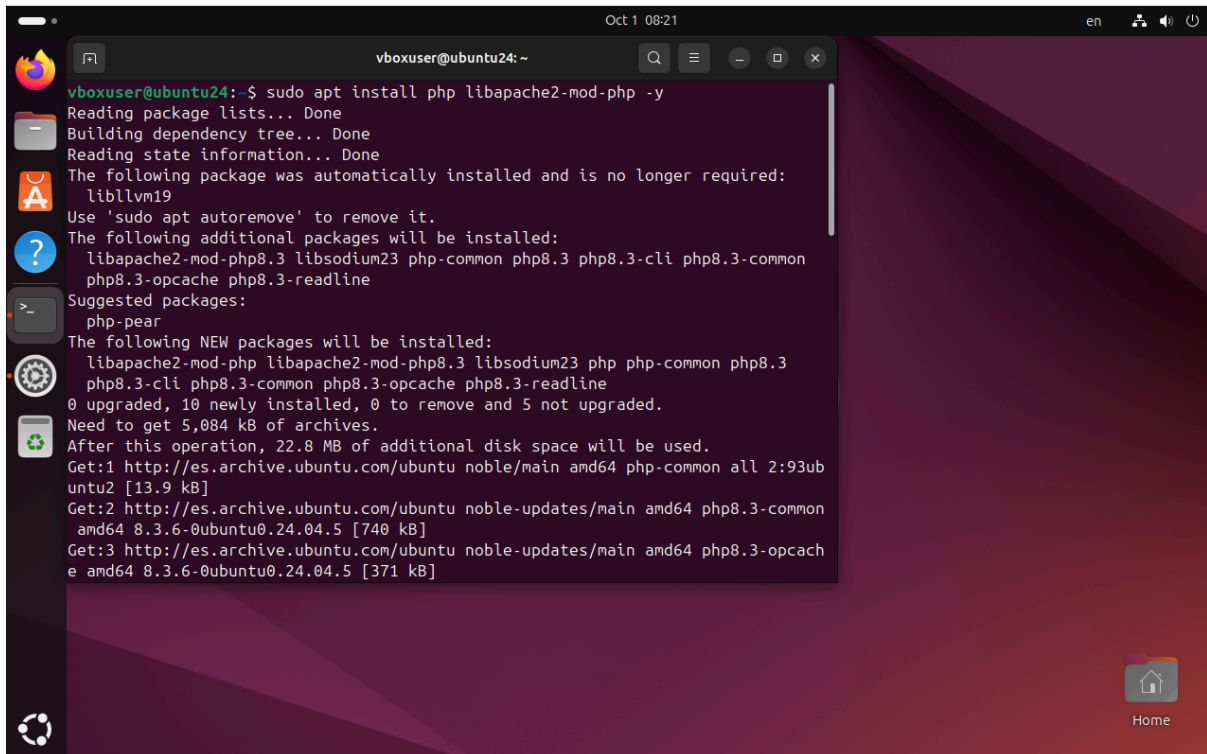
```
vboxuser@ubuntu24: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
vboxuser@ubuntu24:~$ sudo apt update && sudo apt upgrade -y  
[sudo] password for vboxuser:  
Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease  
Hit:2 http://es.archive.ubuntu.com/ubuntu noble InRelease  
Hit:3 http://es.archive.ubuntu.com/ubuntu noble-updates InRelease  
Hit:4 http://es.archive.ubuntu.com/ubuntu noble-backports InRelease  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
64 packages can be upgraded. Run 'apt list --upgradable' to see them.  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Calculating upgrade... Done  
The following package was automatically installed and is no longer required:  
  libllvm19  
Use 'sudo apt autoremove' to remove it.  
The following NEW packages will be installed:  
  libllvm20  
The following upgrades have been deferred due to phasing:  
  cloud-init gir1.2-nm-1.0 libnm0 network-manager
```

Instalamos Apache2



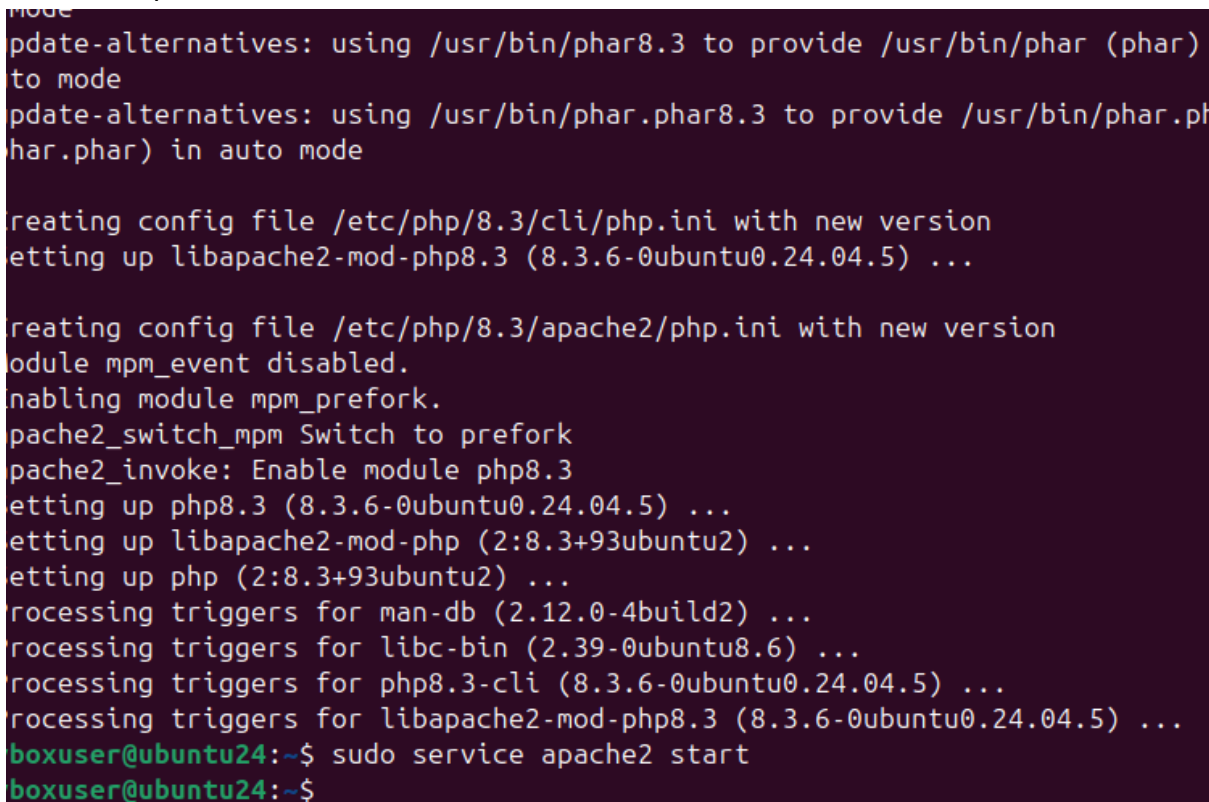
```
vboxuser@ubuntu24: ~  
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...  
vboxuser@ubuntu24:~$ sudo apt install apache2 -y  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following package was automatically installed and is no longer required:  
  libllvm19  
Use 'sudo apt autoremove' to remove it.  
The following additional packages will be installed:  
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3  
  libaprutil1-ldap libaprutil1t64  
Suggested packages:  
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom  
The following NEW packages will be installed:  
  apache2 apache2-bin apache2-data apache2-utils libapr1t64  
  libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64  
0 upgraded, 8 newly installed, 0 to remove and 5 not upgraded.  
Need to get 1,902 kB of archives.  
After this operation, 7,451 kB of additional disk space will be used.  
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 libapr1t64 am  
d64 1.7.2-3.1ubuntu0.1 [108 kB]  
Get:2 http://es.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64  
1.6.3-1.1ubuntu7 [91.9 kB]  
Get:3 http://es.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-dbd-sqlit
```

Instalamos PHP y su modulo



```
vboxuser@ubuntu24: ~  
vboxuser@ubuntu24:~$ sudo apt install php libapache2-mod-php -y  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following package was automatically installed and is no longer required:  
  libllvm19  
Use 'sudo apt autoremove' to remove it.  
The following additional packages will be installed:  
  libapache2-mod-php8.3 libsodium23 php-common php8.3 php8.3-cli php8.3-common  
  php8.3-opcache php8.3-readline  
Suggested packages:  
  php-pear  
The following NEW packages will be installed:  
  libapache2-mod-php libapache2-mod-php8.3 libsodium23 php php-common php8.3  
  php8.3-cli php8.3-common php8.3-opcache php8.3-readline  
0 upgraded, 10 newly installed, 0 to remove and 5 not upgraded.  
Need to get 5,084 kB of archives.  
After this operation, 22.8 MB of additional disk space will be used.  
Get:1 http://es.archive.ubuntu.com/ubuntu noble/main amd64 php-common all 2:93ub  
untu2 [13.9 kB]  
Get:2 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-common  
amd64 8.3.6-0ubuntu0.24.04.5 [740 kB]  
Get:3 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-opcach  
e amd64 8.3.6-0ubuntu0.24.04.5 [371 kB]
```

Iniciamos Apache



```
mode  
update-alternatives: using /usr/bin/phar8.3 to provide /usr/bin/phar (phar)  
to mode  
update-alternatives: using /usr/bin/phar.phar8.3 to provide /usr/bin/phar.ph  
ar.phar) in auto mode  
  
reating config file /etc/php/8.3/cli/php.ini with new version  
etting up libapache2-mod-php8.3 (8.3.6-0ubuntu0.24.04.5) ...  
  
reating config file /etc/php/8.3/apache2/php.ini with new version  
odule mpm_event disabled.  
nabling module mpm_prefork.  
apache2_switch_mpm Switch to prefork  
apache2_invoke: Enable module php8.3  
etting up php8.3 (8.3.6-0ubuntu0.24.04.5) ...  
etting up libapache2-mod-php (2:8.3+93ubuntu2) ...  
etting up php (2:8.3+93ubuntu2) ...  
rocessing triggers for man-db (2.12.0-4build2) ...  
rocessing triggers for libc-bin (2.39-0ubuntu8.6) ...  
rocessing triggers for php8.3-cli (8.3.6-0ubuntu0.24.04.5) ...  
rocessing triggers for libapache2-mod-php8.3 (8.3.6-0ubuntu0.24.04.5) ...  
vboxuser@ubuntu24:~$ sudo service apache2 start  
vboxuser@ubuntu24:~$
```

Hacemos status

```
vboxuser@ubuntu24: ~  
Processing triggers for libapache2-mod-php8.3 (8.3.6-0ubuntu0.24.04.5) ...  
vboxuser@ubuntu24:~$ sudo service apache2 start  
vboxuser@ubuntu24:~$ sudo systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: ▶  
   Active: active (running) since Wed 2025-10-01 08:21:55 UTC; 4min 56s ago  
     Docs: https://httpd.apache.org/docs/2.4/  
  Process: 14385 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/S>  
 Main PID: 14388 (apache2)  
    Tasks: 6 (limit: 4603)  
  Memory: 10.6M (peak: 11.0M)  
     CPU: 118ms  
   CGroup: /system.slice/apache2.service  
           └─14388 /usr/sbin/apache2 -k start  
             └─14393 /usr/sbin/apache2 -k start  
               └─14394 /usr/sbin/apache2 -k start  
                 └─14395 /usr/sbin/apache2 -k start  
                   └─14396 /usr/sbin/apache2 -k start  
                     └─14397 /usr/sbin/apache2 -k start  
  
Oct 01 08:21:55 ubuntu24 systemd[1]: Starting apache2.service - The Apache HTTP>  
Oct 01 08:21:55 ubuntu24 apachectl[14387]: AH00558: apache2: Could not reliably>  
Oct 01 08:21:55 ubuntu24 systemd[1]: Started apache2.service - The Apache HTTP >  
lines 1-20/20 (END)
```

Creamos el PHP

```
vboxuser@ubuntu24: ~  
Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: ▶  
Active: active (running) since Wed 2025-10-01 08:21:55 UTC; 4min 56s ago  
   Docs: https://httpd.apache.org/docs/2.4/  
 Process: 14385 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/S>  
Main PID: 14388 (apache2)  
   Tasks: 6 (limit: 4603)  
 Memory: 10.6M (peak: 11.0M)  
    CPU: 118ms  
   CGroup: /system.slice/apache2.service  
           └─14388 /usr/sbin/apache2 -k start  
             └─14393 /usr/sbin/apache2 -k start  
               └─14394 /usr/sbin/apache2 -k start  
                 └─14395 /usr/sbin/apache2 -k start  
                   └─14396 /usr/sbin/apache2 -k start  
                     └─14397 /usr/sbin/apache2 -k start  
  
Oct 01 08:21:55 ubuntu24 systemd[1]: Starting apache2.service - The Apache HTTP>  
Oct 01 08:21:55 ubuntu24 apachectl[14387]: AH00558: apache2: Could not reliably>  
Oct 01 08:21:55 ubuntu24 systemd[1]: Started apache2.service - The Apache HTTP >  
  
vboxuser@ubuntu24:~$ echo "<?php phpinfo(); ?>" | sudo tee /var/www/html/info.ph  
p  
<?php phpinfo(); ?>  
vboxuser@ubuntu24:~$
```

Hay que instalar curl

```
vboxuser@ubuntu24: ~  
Process: 14385 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/S>  
Main PID: 14388 (apache2)  
Tasks: 6 (limit: 4603)  
Memory: 10.6M (peak: 11.0M)  
CPU: 118ms  
CGroup: /system.slice/apache2.service  
├─14388 /usr/sbin/apache2 -k start  
├─14393 /usr/sbin/apache2 -k start  
├─14394 /usr/sbin/apache2 -k start  
├─14395 /usr/sbin/apache2 -k start  
├─14396 /usr/sbin/apache2 -k start  
└─14397 /usr/sbin/apache2 -k start  
  
Oct 01 08:21:55 ubuntu24 systemd[1]: Starting apache2.service - The Apache HTTP>  
Oct 01 08:21:55 ubuntu24 apachectl[14387]: AH00558: apache2: Could not reliably>  
Oct 01 08:21:55 ubuntu24 systemd[1]: Started apache2.service - The Apache HTTP >  
  
vboxuser@ubuntu24:~$ echo "<?php phpinfo(); ?>" | sudo tee /var/www/html/info.ph  
p  
<?php phpinfo(); ?>  
vboxuser@ubuntu24:~$ curl http://localhost/info.php  
Command 'curl' not found, but can be installed with:  
sudo apt install curl  
vboxuser@ubuntu24:~$
```


Instalamos curl

```
vboxuser@ubuntu24: ~  
vboxuser@ubuntu24:~$ curl http://localhost/info.php  
Command 'curl' not found, but can be installed with:  
sudo apt install curl  
vboxuser@ubuntu24:~$ sudo apt install curl  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following package was automatically installed and is no longer required:  
  libllvm19  
Use 'sudo apt autoremove' to remove it.  
The following NEW packages will be installed:  
  curl  
0 upgraded, 1 newly installed, 0 to remove and 5 not upgraded.  
Need to get 226 kB of archives.  
After this operation, 534 kB of additional disk space will be used.  
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 curl amd64 8.5.0-2ubuntu10.6 [226 kB]  
Fetched 226 kB in 0s (762 kB/s)  
Selecting previously unselected package curl.  
(Reading database ... 150982 files and directories currently installed.)  
Preparing to unpack .../curl_8.5.0-2ubuntu10.6_amd64.deb ...  
Unpacking curl (8.5.0-2ubuntu10.6) ...  
Setting up curl (8.5.0-2ubuntu10.6) ...  
Processing triggers for man-db (2.12.0-4build2) ...
```

Hacemos curl del PHP

```
vboxuser@ubuntu24: ~  
Processing triggers for man-db (2.12.0-4build2) ...  
vboxuser@ubuntu24:~$ curl http://localhost/info.php  
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "DTD/xhtml1-trans  
itional.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml"><head>  
<style type="text/css">  
body {background-color: #fff; color: #222; font-family: sans-serif;}  
pre {margin: 0; font-family: monospace;}  
a:link {color: #009; text-decoration: none; background-color: #fff;}  
a:hover {text-decoration: underline;}  
table {border-collapse: collapse; border: 0; width: 934px; box-shadow: 1px 2px 3  
px rgba(0, 0, 0, 0.2);}  
.center {text-align: center;}  
.center table {margin: 1em auto; text-align: left;}  
.center th {text-align: center !important;}  
td, th {border: 1px solid #666; font-size: 75%; vertical-align: baseline; paddin  
g: 4px 5px;}  
th {position: sticky; top: 0; background: inherit;}  
h1 {font-size: 150%;}  
h2 {font-size: 125%;}  
h2 a:link, h2 a:visited {color: inherit; background: inherit;}  
.p {text-align: left;}  
.e {background-color: #ccf; width: 300px; font-weight: bold;}  
.h {background-color: #99c; font-weight: bold;}  
</style>  
</head>  
<body>  
<div>  
<table>  
<tr>  
<th></th>  
<td></td>  
</tr>  
</table>  
</div>  
</body>  
</html>
```

Lo abrimos el la web

Primera práctica de Arquitectu

ChatGPT

PHP 8.3.6 - phpinfo()

+

← → ↻

http://localhost/info.php


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PHP Version 8.3.6



System	Linux ubuntu24 6.14.0-33-generic #33~24.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Sep 19 17:02:30 UTC 2 x86_64
Build Date	Jul 14 2025 18:30:55
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.3/apache2
Loaded Configuration File	/etc/php/8.3/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.3/apache2/conf.d
Additional .ini files parsed	/etc/php/8.3/apache2/conf.d/10-opcache.ini, /etc/php/8.3/apache2/conf.d/10-pdo.ini, /etc/php/8.3/apache2/conf.d/20-calendar.ini, /etc/php/8.3/apache2/conf.d/20-ctype.ini, /etc/php/8.3/apache2/conf.d/20-exif.ini, /etc/php/8.3/apache2/conf.d/20-ffi.ini, /etc/php/8.3/apache2/conf.d/20-fileinfo.ini, /etc/php/8.3/apache2/conf.d/20-ftp.ini, /etc/php/8.3/apache2/conf.d/20-gettext.ini, /etc/php/8.3/apache2/conf.d/20-iconv.ini, /etc/php/8.3/apache2/conf.d/20-phar.ini, /etc/php/8.3/apache2/conf.d/20-posix.ini, /etc/php/8.3/apache2/conf.d/20-readline.ini, /etc/php/8.3/apache2/conf.d/20-shmop.ini, /etc/php/8.3/apache2/conf.d/20-sockets.ini, /etc/php/8.3/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.3/apache2/conf.d/20-sysvsem.ini, /etc/php/8.3/apache2/conf.d/20-sysvshm.ini, /etc/php/8.3/apache2/conf.d/20-tokenizer.ini
PHP API	20230831
PHP Extension	20230831
Zend Extension	420230831
Zend Extension Build	API420230831,NTS
PHP Extension Build	API20230831,NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled

Instalamos Nginx

vboxuser@ubuntu24: ~

🔍 ☰ − □ ×

```
vboxuser@ubuntu24:~$ sudo apt install nginx -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 5 not upgraded.
Need to get 564 kB of archives.
After this operation, 1,596 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.5 [43.4 kB]
Get:2 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.5 [520 kB]
Fetched 564 kB in 1s (579 kB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 150989 files and directories currently installed.)
```


Detenemos apache2 y encendemos nginx

```
vboxuser@ubuntu24: ~  
</p>  
</td></tr>  
</table>  
</div></body></html>  
vboxuser@ubuntu24:~$ sudo systemctl stop apache2  
vboxuser@ubuntu24:~$ sudo systemctl disable apache2  
Synchronizing state of apache2.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.  
Executing: /usr/lib/systemd/systemd-sysv-install disable apache2  
Removed "/etc/systemd/system/multi-user.target.wants/apache2.service".  
vboxuser@ubuntu24:~$ sudo systemctl start nginx  
vboxuser@ubuntu24:~$ sudo systemctl enable nginx  
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.  
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx  
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service -> /usr/lib/systemd/system/nginx.service.  
vboxuser@ubuntu24:~$ sudo systemctl status nginx  
● nginx.service - A high performance web server and a reverse proxy server  
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)  
   Active: active (running) since Wed 2025-10-01 09:01:44 UTC; 18s ago  
     Docs: man:nginx(8)  
  Main PID: 20679 (nginx)  
    Tasks: 5 (limit: 4603)  
  Memory: 3.7M (peak: 4.2M)  
     CPU: 15ms  
   CGroup: /system.slice/nginx.service  
           └─20679 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"  
             └─20680 "nginx: worker process"  
               └─20681 "nginx: worker process"  
                 └─20682 "nginx: worker process"  
                   └─20683 "nginx: worker process"  
  
Oct 01 09:01:44 ubuntu24 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server.  
Oct 01 09:01:44 ubuntu24 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.  
lines 1-17/17 (END)
```

Creamos el html y hacemos curl y lo abrimos en la web

```
vboxuser@ubuntu24:~$ echo "<h1>Hola Mundo desde Nginx</h1><p>Servidor funcionando correctamente</p>" | sudo tee /var/www/html/index.html  
<h1>Hola Mundo desde Nginx</h1><p>Servidor funcionando correctamente</p>  
vboxuser@ubuntu24:~$ curl http://localhost  
<h1>Hola Mundo desde Nginx</h1><p>Servidor funcionando correctamente</p>  
vboxuser@ubuntu24:~$
```

Primera práctica de Arquitec x ChatGPT x localhost/ +
← → ↻ http://localhost ☆

Hola Mundo desde Nginx

Servidor funcionando correctamente