

# Aquitectura en la nube



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# Parte 1 — Apache con PHP

Actualizamos el paquete con *sudo apt update* && *sudo apt upgrade -y*.

```
Microsoft Windows [Versión 10.0.26100.6584]
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C:\Users\Alumno.DESKTOP-DI5KTUG> wsl
Subsistema de Windows para Linux no tiene distribuciones instaladas.
Para resolverlo, instale una distribución con las instrucciones siguientes:

Use 'wsl.exe --list --online' para enumerar las distribuciones disponibles
y "wsl.exe --install <Distro>" para instalar.

C:\Users\Alumno.DESKTOP-DI5KTUG>wsl.exe --list --online
A continuación se muestra una lista de distribuciones válidas que se pueden instalar.
Instalar con "wsl.exe --install <Distro>".

NAME                                FRIENDLY NAME
AlmaLinux-8                         AlmaLinux OS 8
AlmaLinux-9                         AlmaLinux OS 9
AlmaLinux-Kitten-10                AlmaLinux OS Kitten 10
AlmaLinux-10                       AlmaLinux OS 10
Debian                             Debian GNU/Linux
FedoraLinux-42                     Fedora Linux 42
SUSE-Linux-Enterprise-15-SP6       SUSE Linux Enterprise 15 SP6
SUSE-Linux-Enterprise-15-SP7       SUSE Linux Enterprise 15 SP7
Ubuntu                             Ubuntu
Ubuntu-24.04                       Ubuntu 24.04 LTS
archlinux                         Arch Linux
kali-linux                         Kali Linux Rolling
openSUSE-Tumbleweed                 openSUSE Tumbleweed
openSUSE-Leap-15.6                 openSUSE Leap 15.6
Ubuntu-20.04                       Ubuntu 20.04 LTS
```

```
C:\Users\Alumno.DESKTOP-DI5KTUG> wsl.exe --install Ubuntu-22.04
wsl: Usando registro de distribución heredado. Considere la posibilidad de usar una distribución basada
ar.
Descargando: Ubuntu 22.04 LTS
Ubuntu 22.04 LTS Se ha descargado.
Distribución instalada correctamente. Se puede iniciar a través de "wsl.exe -d Ubuntu 22.04 LTS"
Iniciando Ubuntu 22.04 LTS...
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
```

```
This message is shown once a day. To disable it please create the
/home/manolo/.hushlogin file.
```

```
manolo@A6Alumno21:~$ sudo apt update
[sudo] password for manolo:
```

```
manolo@A6Alumno21:~$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
```

Luego instalamos el apache 2 con el siguiente comando *sudo apt install apache2*.

```
manoLo@A6Alumno21:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

Y ponemos el comando *php -v* para verificar la versión.


```
manoLo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-D15KTUG$ php -v
PHP 8.1.2-1ubuntu2.22 (cli) (built: Jul 15 2025 12:11:22) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.1.2, Copyright (c) Zend Technologies
with Zend OPcache v8.1.2-1ubuntu2.22, Copyright (c), by Zend Technologies
```

Después de hacer los procedimientos procedemos a mostrar el estado del apache.

```
manoLo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-D15KTUG$ 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 Wed 2025-10-01 10:49:48 CEST; 14s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 8443 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 8447 (apache2)
     Tasks: 6 (limit: 9350)
    Memory: 10.5M
       CPU: 28ms
    CGroup: /system.slice/apache2.service
           └─8447 /usr/sbin/apache2 -k start
             8448 /usr/sbin/apache2 -k start
             8449 /usr/sbin/apache2 -k start
             8450 /usr/sbin/apache2 -k start
             8451 /usr/sbin/apache2 -k start
             8452 /usr/sbin/apache2 -k start

Oct 01 10:49:48 A6Alumno21 systemd[1]: Starting The Apache HTTP Server...
Oct 01 10:49:48 A6Alumno21 apachectl[8446]: (98)Address already in use: AH00072: make_sock: could not
Oct 01 10:49:48 A6Alumno21 systemd[1]: Started The Apache HTTP Server.

manoLo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-D15KTUG$ sudo ls -l /var/www/html/info.php
-rw-r--r-- 1 www-data www-data 20 Oct  1 10:51 /var/www/html/info.php
```



# Â¡Hola :D

Esta es mi primera página en el [servidor.](#)

```

manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$ ls -l
total 3484
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 AppData
lrwxrwxrwx 1 manolo manolo 49 Aug 31 10:41 'Configuración local' -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Local
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Contacts
lrwxrwxrwx 1 manolo manolo 79 Aug 31 10:41 Cookies -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Local/Microsoft/Windows/NetCookies
lrwxrwxrwx 1 manolo manolo 51 Aug 31 10:41 'Datos de programa' -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Program
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Desktop
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Documents
drwxrwxrwx 1 manolo manolo 4096 Oct 1 10:59 Descargado
lrwxrwxrwx 1 manolo manolo 87 Aug 31 10:41 'Entorno de red' -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Roaming/Microsoft/Windows/Network Shortcuts
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Favorites
lrwxrwxrwx 1 manolo manolo 87 Aug 31 10:41 Impresoras -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Roaming/Microsoft/Windows/Printers Shortcuts
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Links
lrwxrwxrwx 1 manolo manolo 80 Aug 31 10:41 'Menú Inicio' -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Local/Microsoft/Windows/Start Menu
lrwxrwxrwx 1 manolo manolo 45 Aug 31 10:41 'Mis documentos' -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/Documents
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Music
-rwxrwxrwx 1 manolo manolo 1572864 Sep 30 14:57 NTUSER.DAT
-rwxrwxrwx 1 manolo manolo 65536 Aug 31 10:42 NTUSER.DAT{dac68c69-8583-11f0-99f7-e1d923a53e60}.TM.b
lf
-rwxrwxrwx 1 manolo manolo 524288 Aug 31 10:41 NTUSER.DAT{dac68c69-8583-11f0-99f7-e1d923a53e60}.TMCo
ntainer000000000000000000000001.regtrans-ms
-rwxrwxrwx 1 manolo manolo 524288 Aug 31 10:41 NTUSER.DAT{dac68c69-8583-11f0-99f7-e1d923a53e60}.TMCo
ntainer000000000000000000000002.regtrans-ms
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:42 OneDrive
drwxrwxrwx 1 manolo manolo 4096 Sep 30 14:24 Pictures
lrwxrwxrwx 1 manolo manolo 79 Aug 31 10:41 Plantillas -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Roaming/Microsoft/Windows/Templates
lrwxrwxrwx 1 manolo manolo 76 Aug 31 10:41 Reciente -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Roaming/Microsoft/Windows/Recent
drwxrwxrwx 1 manolo manolo 4096 Aug 31 10:41 Saved Games
drwxrwxrwx 1 manolo manolo 4096 Aug 31 12:17 Searches
lrwxrwxrwx 1 manolo manolo 76 Aug 31 10:41 SendTo -> /mnt/c/Users/Alumno.DESKTOP-DISKUG/AppData/Roaming/Microsoft/Windows/SendTo
drwxrwxrwx 1 manolo manolo 4096 Sep 22 10:37 Videos
drwxrwxrwx 1 manolo manolo 4096 Sep 30 09:58 VirtualBox VMs
-rwxrwxrwx 1 manolo manolo 458752 Aug 31 10:41 ntuser.dat.LOG1
-rwxrwxrwx 1 manolo manolo 421888 Aug 31 10:41 ntuser.dat.LOG2
-rwxrwxrwx 1 manolo manolo 20 Aug 31 10:41 ntuser.ini

```

Actualiza los paquetes como en la parte uno.

```

mano@A6Alumno21:~/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
mano@A6Alumno21:~/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt install -y nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.18.0-6ubuntu14.7).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
mano@A6Alumno21:~/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$

```

Mostramos el estado del nginx.

[illegible]

Modificamos los archivos con nano.

```
lines 1-29/29 (END)
[2]+  Stopped                  sudo systemctl status nginx
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$ sudo nano /var/www/html/index.html
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$ sudo chown www-data:www-data /var/www/html/index.html
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$ sudo chmod 644 /var/www/html/index.html
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$ sudo nginx -s reload
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DISKUG$
```

```
manolo@A6Alumno21: /mnt/  X  +  v
GNU nano 6.2 /var/www/html/index.html
<!DOCTYPE html>
<html>
<head>
  <title>Mi Página Nginx</title>
</head>
<body>
  <h1>¡Hola desde Nginx</h1>
  <p>dxddxxxxddd</p>
</body>
</html>
```

← → ↻ ⓘ localhost ☆ 🌐 ⋮

# ¡Hola desde Nginx

dxddxxxxddd



## Parte 3 — Verificación y Comparación

Algo que no he mencionado en las partes anteriores es que debemos detener los procesos anteriores cuando vayamos hacer algo, para eso se pone los comandos para pararlos `sudo service apache2 stop` y se inicia Nginx `sudo service nginx start` con el estado active (running).

```
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo service apache2 stop
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo service nginx start
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo service nginx status
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2025-10-01 12:37:28 CEST; 4s ago
     Docs: man:nginx(8)
  Process: 1086 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
  Process: 1087 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
 Main PID: 1088 (nginx)
    Tasks: 17 (limit: 9350)
   Memory: 15.6M
      CPU: 32ms
   CGroup: /system.slice/nginx.service
           └─1088 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
              └─1089 "nginx: worker process"
                 └─1090 "nginx: worker process"
                    └─1091 "nginx: worker process"
                       └─1092 "nginx: worker process"
                          └─1093 "nginx: worker process"
                             └─1094 "nginx: worker process"
                                └─1095 "nginx: worker process"
                                   └─1096 "nginx: worker process"
                                      └─1097 "nginx: worker process"
                                         └─1098 "nginx: worker process"
                                            └─1099 "nginx: worker process"
                                               └─1100 "nginx: worker process"
                                                  └─1101 "nginx: worker process"
                                                     └─1102 "nginx: worker process"
                                                        └─1103 "nginx: worker process"
                                                           └─1104 "nginx: worker process"

Oct 01 12:37:28 A6Alumno21 systemd[1]: Starting A high performance web server and a reverse proxy server: nginx.
Oct 01 12:37:28 A6Alumno21 systemd[1]: Started A high performance web server and a reverse proxy server: nginx.
lines 1-31/31 (END)
```

```
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ curl -i http://localhost/info.php
HTTP/1.1 200 OK
Server: nginx/1.18.0 (Ubuntu)
Date: Wed, 01 Oct 2025 10:38:38 GMT
Content-Type: application/octet-stream
Content-Length: 20
Last-Modified: Wed, 01 Oct 2025 08:51:50 GMT
Connection: keep-alive
ETag: "68dceba6-14"
Accept-Ranges: bytes

<?php
phpinfo();
?>
```

```
manolo@A6Alumno21:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ curl -i http://localhost
HTTP/1.1 200 OK
Server: nginx/1.18.0 (Ubuntu)
Date: Wed, 01 Oct 2025 10:39:12 GMT
Content-Type: text/html
Content-Length: 155
Last-Modified: Wed, 01 Oct 2025 10:34:42 GMT
Connection: keep-alive
ETag: "68dd03c2-9b"
Accept-Ranges: bytes

<!DOCTYPE html>
<html>
<head>
  <title>Mi Página Nginx</title>
</head>
<body>
  <h1>¡Hola desde Nginx</h1>
  <p>dxdxddxxxxddd</p>
</body>
</html>
```

