

# ENRIQUE CRESPO RAMIREZ

## Práctica 1: Apache + PHP y Nginx en WSL

### Objetivo

Configurar en **WSL (Ubuntu)**:

1. Un servidor **Apache** que sirva **PHP (info.php)**.
2. Un servidor **Nginx** que sirva una **página HTML**.
3. Verificar, comparar y documentar con **capturas**.

### Entorno

- **Windows 10/11** con **WSL 2** y **Ubuntu** instalado.
- Terminal: Ubuntu en WSL.

# 1 Instalación de WSL

con comando **wsl --install -d Ubuntu**

```
kike@Double-KK: /mnt/c/Windows/System32
Microsoft Windows [Versión 10.0.26100.6725]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Windows\System32>wsl --install -d Ubuntu
Descargando: Ubuntu
Instalando: Ubuntu
Distribución instalada correctamente. Se puede iniciar a través de "wsl.exe -d Ubuntu"
Iniciando Ubuntu...
Provisioning the new WSL instance Ubuntu
This might take a while...
Create a default Unix user account: kike
New password:
Retype new password:
passwd: password updated successfully
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

kike@Double-KK: /mnt/c/Windows/System32$
```

**apt update && apt upgrade** pone al día índices y paquetes, evitando errores de dependencias.

```
kike@Double-KK: /mnt/c/Windows/System32$ sudo apt update && sudo apt upgrade -y
[sudo] password for kike:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1201 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [201 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [8744 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [881 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [196 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [18.0 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1938 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [439 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [520 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [28.0 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5844 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:21 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 B]
Get:22 http://archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:23 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:25 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:26 http://archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:27 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:28 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:29 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1483 kB]
Get:30 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [286 kB]
Get:31 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:32 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.3 kB]
Get:33 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1486 kB]
Get:34 http://archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [300 kB]
```

**sudo apt install -y curl lsb-release ca-certificates curl** te permite probar desde terminal las páginas servidas

```
kike@Double-KK:/mnt/c/Windows/System32$ sudo apt install -y curl lsb-release ca-certificates
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
lsb-release is already the newest version (12.0-2).
lsb-release set to manually installed.
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
The following package was automatically installed and is no longer required:
  liblvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
kike@Double-KK:/mnt/c/Windows/System32$
```

## 2 Apache + PHP

- **Apache** es un servidor web popular y estable; **PHP** permite páginas **dinámicas**, frente a HTML estático. Ambos son “conceptos clave” citados en tu documento.
- `service/systemctl start` **levanta el servicio**; `systemctl status apache2` te da la evidencia de que está **activo** para la captura obligatoria.
- `info.php` con `phpinfo()` es la **prueba de fuego**: muestra versión y configuración de PHP. La práctica exige **captura del navegador/curl** mostrando esa página.

```
kike@Double-KK:/mnt/c/Windows/System32$ sudo apt install -y apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  liblvm19
```

```
kike@Double-KK:/mnt/c/Windows/System32$ sudo apt install -y php libapache2-mod-php
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
```

```
kike@Double-KK:/mnt/c/Windows/System32$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Sun 2025-10-05 21:25:12 CEST; 48s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 9979 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 9982 (apache2)
    Tasks: 6 (limit: 37958)
   Memory: 10.7M (peak: 12.0M)
      CPU: 38ms
   CGroup: /system.slice/apache2.service
           └─9982 /usr/sbin/apache2 -k start
             └─9985 /usr/sbin/apache2 -k start
               └─9986 /usr/sbin/apache2 -k start
                 └─9987 /usr/sbin/apache2 -k start
                   └─9988 /usr/sbin/apache2 -k start
                     └─9989 /usr/sbin/apache2 -k start
```

### 3 Nginx + HTML

Antes de Nginx, **deténer Apache** para liberar el puerto 80.

**sudo service apache2 stop** # o **sudo systemctl stop apache2**

**sudo apt install -y nginx**

**sudo service nginx start** o **sudo systemctl start nginx**

**sudo systemctl status nginx**

echo "<h1>Hola Mundo desde Nginx</h1><p>Servidor funcionando correctamente</p>" | sudo tee /var/www/html/index.html

curl <http://localhost>

```
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 Sun 2025-10-05 21:27:52 CEST; 1min 12s ago
Docs: man:nginx(8)
Process: 10309 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
Process: 10311 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
Main PID: 10353 (nginx)
Tasks: 17 (limit: 37958)
Memory: 11.6M (peak: 27.0M)
CPU: 69ms
CGroup: /system.slice/nginx.service
├─10353 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
├─10355 "nginx: worker process"
├─10356 "nginx: worker process"
├─10357 "nginx: worker process"
├─10358 "nginx: worker process"
├─10359 "nginx: worker process"
├─10360 "nginx: worker process"
├─10361 "nginx: worker process"
├─10362 "nginx: worker process"
├─10363 "nginx: worker process"
├─10364 "nginx: worker process"
├─10365 "nginx: worker process"
├─10366 "nginx: worker process"
├─10367 "nginx: worker process"
├─10368 "nginx: worker process"
├─10369 "nginx: worker process"
└─10370 "nginx: worker process"

Oct 05 21:27:52 Double-KK systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
Oct 05 21:27:52 Double-KK systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
~
~
~
~
```

- **Apache y Nginx ambas escuchan en 80** por defecto; si no paras Apache, Nginx no podrá iniciar.
- Nginx es un servidor **ligero y muy rápido** para contenido estático; la práctica te pide **crear un HTML simple** y comprobarlo con `curl`/navegador.

## Verificación y comparación

```
kike@Double-KK:/mnt/c/Windows/System32$ curl http://localhost/info.php
<html>
<head><title>404 Not Found</title></head>
<body>
<center><h1>404 Not Found</h1></center>
<hr><center>nginx/1.24.0 (Ubuntu)</center>
</body>
</html>
kike@Double-KK:/mnt/c/Windows/System32$ curl http://localhost
<h1>Hola Mundo desde Nginx</h1><p>Servidor funcionando correctamente</p>
kike@Double-KK:/mnt/c/Windows/System32$
```

- El servidor activo es **Nginx**, no Apache.
- Nginx no tiene configurado PHP, por eso no interpreta el archivo `info.php` y devuelve error 404.
- Esto demuestra que **Apache está detenido**, y **Nginx está sirviendo el puerto 80** correctamente.

- El archivo `/var/www/html/index.html` creado en el paso anterior se muestra correctamente.
- Verifica que **Nginx funciona como servidor de contenido estático**.

IMPORTANTE ERROR 404:

## 4 Qué ocurrió con el error 404

Cuando ejecutaste:

```
curl http://localhost/info.php
```

...el servidor Apache respondió con:

```
404 Not Found
```

```
The requested URL was not found on this server.
```

```
Apache/2.4.58 (Ubuntu) Server at localhost Port 80
```

Esto significa que **Apache sí estaba funcionando**, pero **no encontró el archivo solicitado (`info.php`)** en la carpeta raíz del sitio web.

Durante la verificación del servidor Apache, se intentó acceder a la página `info.php` y se obtuvo un error **404 Not Found**.

Este error no indicaba un fallo del servidor, sino que el archivo solicitado no existía en el directorio raíz (`/var/www/html/`).

El problema se debió a que, tras la instalación de Nginx, el archivo `info.php` había sido eliminado o reemplazado.

Para solucionarlo, se volvió a crear el archivo mediante el comando:





localhost



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# Hola Mundo desde Nginx

Servidor funcionando correctamente