# TRABAJO ARQUITECTURA DOCKER

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Instalacion docker y servicios apache y nginx

Actualizamos ubuntu para que no nos de ningun tipo de fallo y despues instalamos certifcados curl,

```
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt install docker-ce docker-ce-cli containe
rd.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker-ce is already the newest version (5:28.5.0-1~ubuntu.24.04~noble).
docker-ce-cli is already the newest version (5:28.5.0-1~ubuntu.24.04~noble).
containerd.io is already the newest version (1.7.28-0~ubuntu.24.04~noble).
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ docker-buildx-plugin docker-compose-plugin -y
docker-buildx-plugin: command not found
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ docker-build-plugin docker-compose-plugin -y
docker-build-plugin: command not found
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ docker-buildx-plugin docker-compose-plugin -y
docker-buildx-plugin: command not found
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ docker-buildt-plugin docker-compose-plugin -y
docker-buildt-plugin: command not found
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt install docker-buildx-plugin docker-comp
ose-plugin -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker-buildx-plugin is already the newest version (0.29.1-1~ubuntu.24.04~noble).
docker-compose-plugin is already the newest version (2.40.0-1~ubuntu.24.04~noble).
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo docker pull ubuntu
```

Aquí instalamos el certicado curl

```
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt install apt-transport-https ca-certifica
tes curl software-properties-common -y
Reading package lists... Done
```

aquí arrancamos Docker y comprobamos que funciona

```
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo systemctl start docker
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo docker run hola-mundo
```

Vemos todos los contenedores existentes de Docker (es importante que despues de crearlo seleccionemos uno, sino estaríamos infinitamente creando uno)

```
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ docker ps -a
CONTAINER ID   IMAGE        COMMAND     CREATED         STATUS                    PORTS
eee0408cf0f0   hola-mundo   "/hello"    10 minutes ago  Exited (0) 10 minutes ago
l_khorana
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo docker run -it ubuntu /bin/bash
```

aquí revisamos los certificados curl, despues creamos una carpeta para las llaves de seguridad con los permisos correspodientes, descargamos la clave y la guardamos. Por ultimo creamos un repositorio para Docker y instalamos sus componentes. Y claro al final reiniciamos el servicio

```
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt-get install ca-certificates curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo install -m 0755 -d /etc/apt/keyrings
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo curl -fsSL htpps://download.docker.com/linux
/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
curl: (1) Protocol "htpps" not supported or disabled in libcurl
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo curl -fsSL htpp://download.docker.com/linux/
ubuntu/gpg -o /etc/apt/keyrings/docker.asc
curl: (1) Protocol "htpp" not supported or disabled in libcurl
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo curl -fsSL https://download.docker.com/linux
/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo chmod a+r /etc/apt/keyrings/docker.asc
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.doc
ker.com/linux/ubuntu \
  $(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | \
  sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
Get:1 https://download.docker.com/linux/ubuntu noble InRelease [48.8 kB]
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Get:5 https://download.docker.com/linux/ubuntu noble/stable amd64 Packages [32.1 kB]
Hit:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 81.0 kB in 0s (327 kB/s)
Reading package lists... Done
luis@A6Alumno02:/mnt/c/Users/Alumno.DESKTOP-DI5KTUG$ sudo apt-get install docker-ce docker-ce-cli cont
ainerd.io docker-buildx-plugin docker-compose-plugin
```

Instalamos el servicio apache 2 y el php para que no de fallo.

```
bash: run: command not found
root@e815c6798b99:/# apt update && apt install -y apache2
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelea
```

```
root@e815c6798b99:/# apt install php libapache2-mod-php -y
Reading package lists... Done
```

Instalamos y comprobamos con curl que funcione

```
root@e815c6798b99:/# apt install curl -y
Reading package lists... Done
Building dependency tree... Done
```

```
root@e815c6798b99:/# curl http://localhost
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1
-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <!--
    Modified from the Debian original for Ubuntu
    Last updated: 2022-03-22
    See: https://launchpad.net/bugs/1966004
  -->
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Apache2 Ubuntu Default Page: It works</title>
    <style type="text/css" media="screen">
    * {
```

Probamos con el navegador nginx tanto en comando como con el navegador

```
root@e815c6798b99:/# curl http://localhost/info.php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "DTD/xhtml1-transitional.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 3px 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; padding: 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;}
```



# Hola Mundo desde Nginx

Servidor funcionando correctamente