

Guía de Docker

Actualización del kernel de Linux en WSL 2 (Windows Subsystem for Linux)

```
https://docs.microsoft.com/es-es/windows/wsl/install-win10  
https://docs.microsoft.com/es-es/windows/wsl/wsl2-kernel
```

Guía de instalación del Subsistema de Windows para Linux para Windows 10

Habilitación del Subsistema de Windows para Linux

```
dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
```

Habilitación de la característica Máquina virtual

```
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
```

Descarga del paquete de actualización del kernel de Linux

```
https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi
```

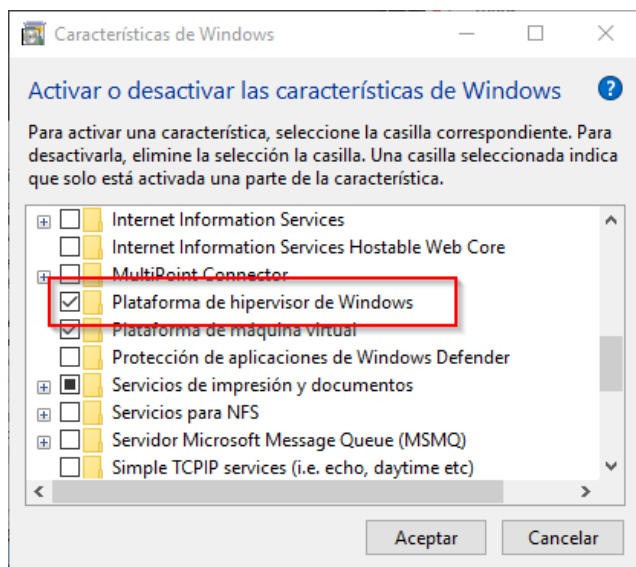
Ejecuta el paquete de actualización que descargaste en el paso anterior.

Definición de WSL 2 como versión predeterminada

```
wsl --set-default-version 2
```

Habilitar la características de

Ejecutar en el buscador: **feature**, O buscar la aplicación: Activar y desactivar las Características del Windows.



Instalación de Docker

Guía oficial de instalación en la siguiente dirección:

<https://docs.docker.com/docker-for-windows/wsl/>

Ingresa a la página:

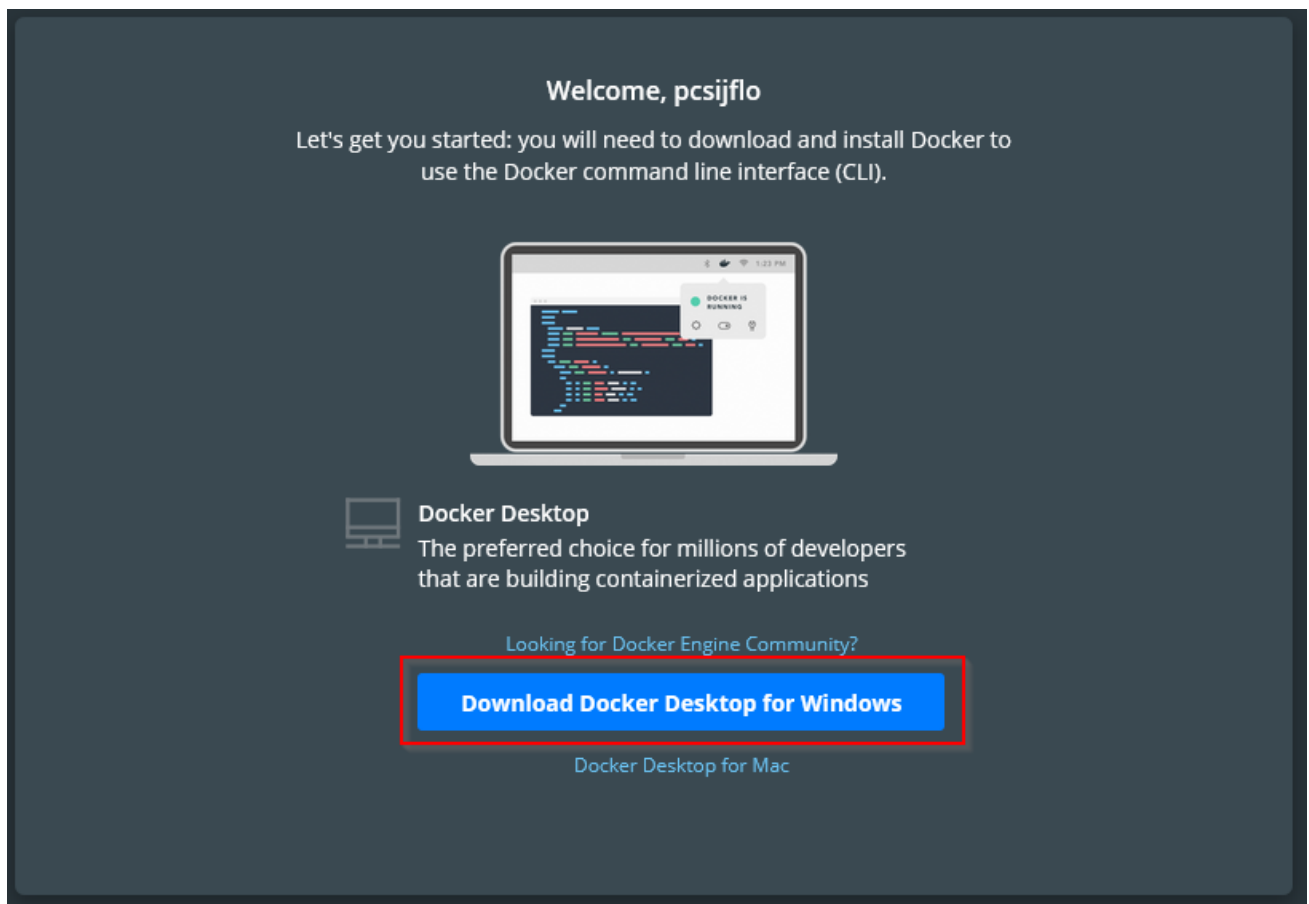
<https://www.docker.com/>

Regístrate en Docker y luego acceder utilizando su ID y contraseña predeterminados

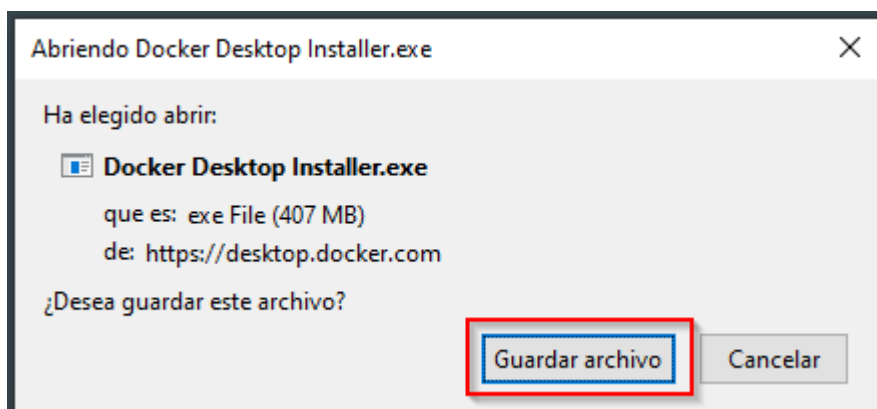
Haga click en Get Started



Luego haga click en Download Docker

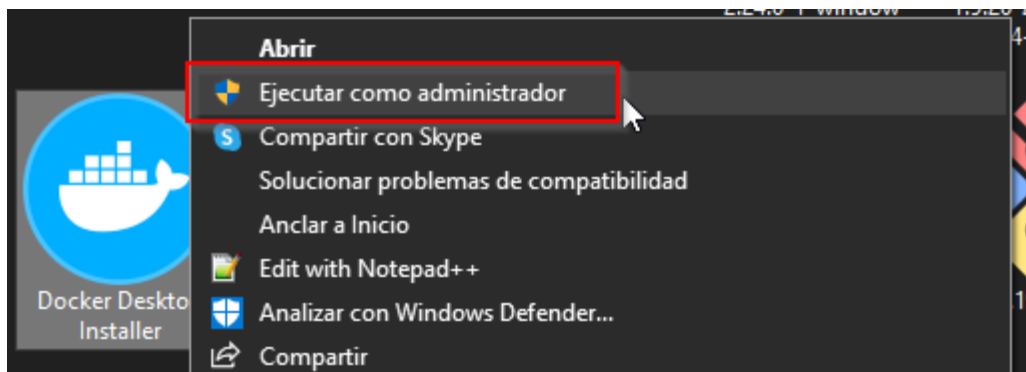


Se cargara la ventana de descarga y haga click en “Guardar archivo”



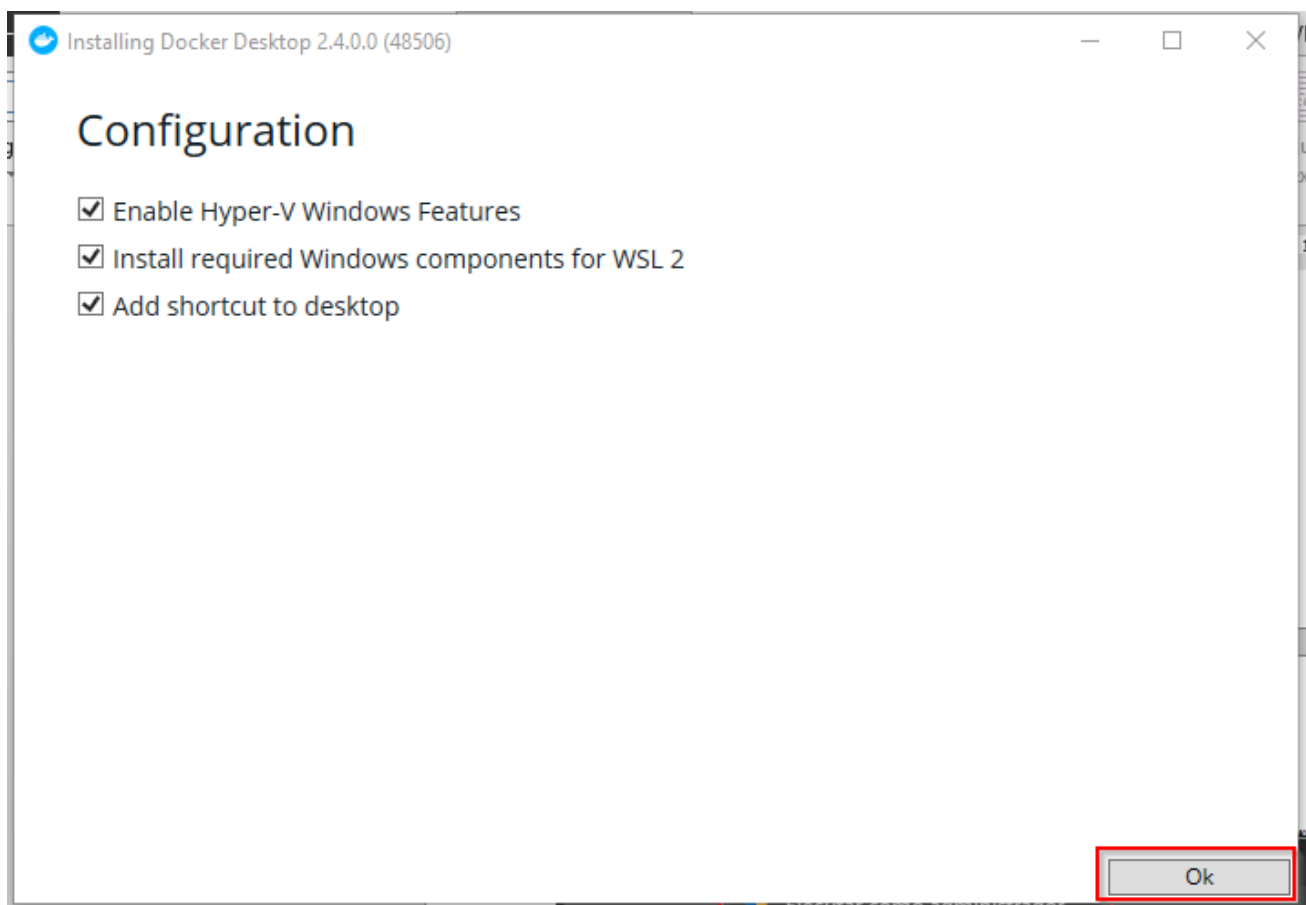
Instalación:

Ejecutar como Administrador

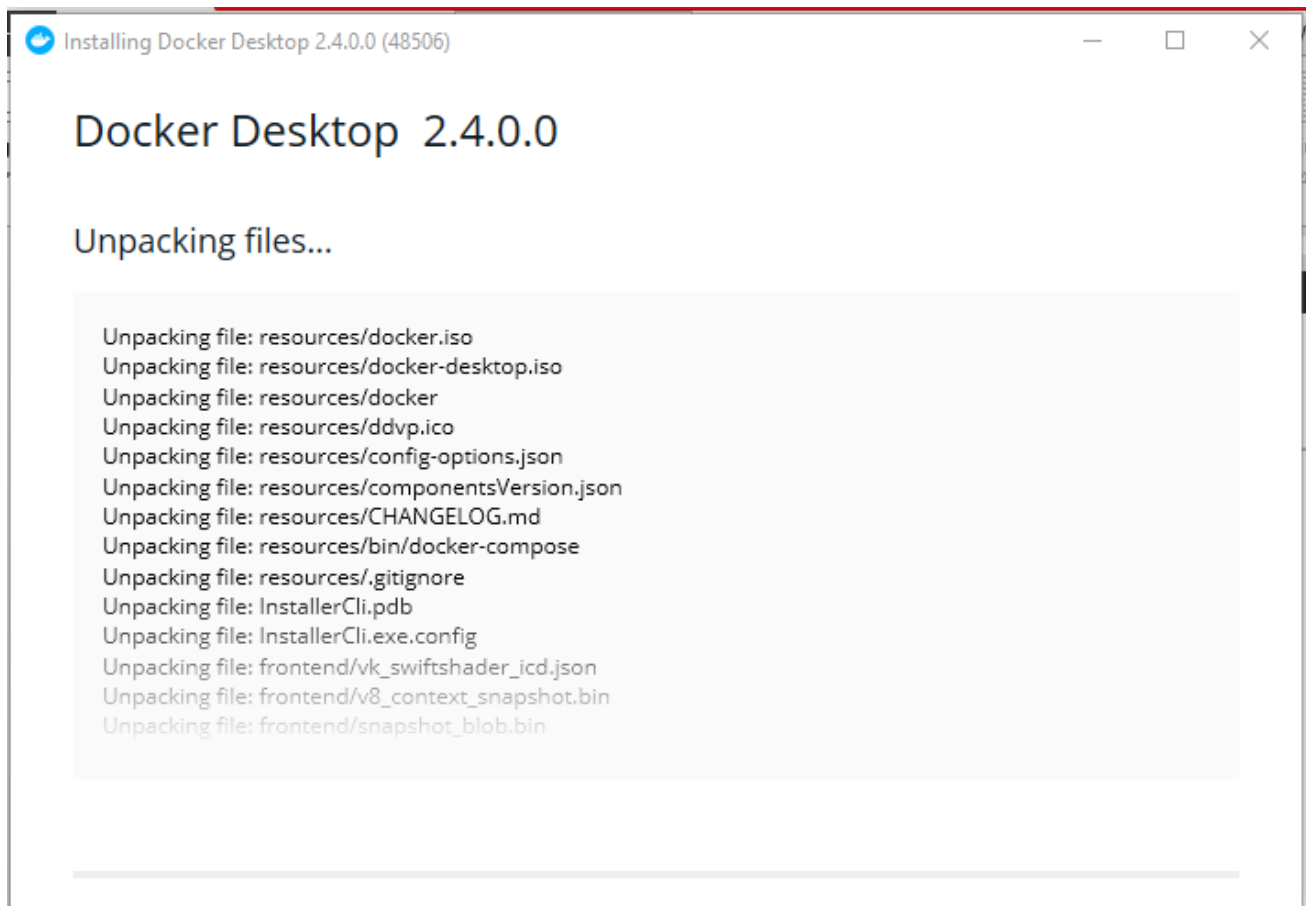


Espere a que descargue los archivos necesarios.

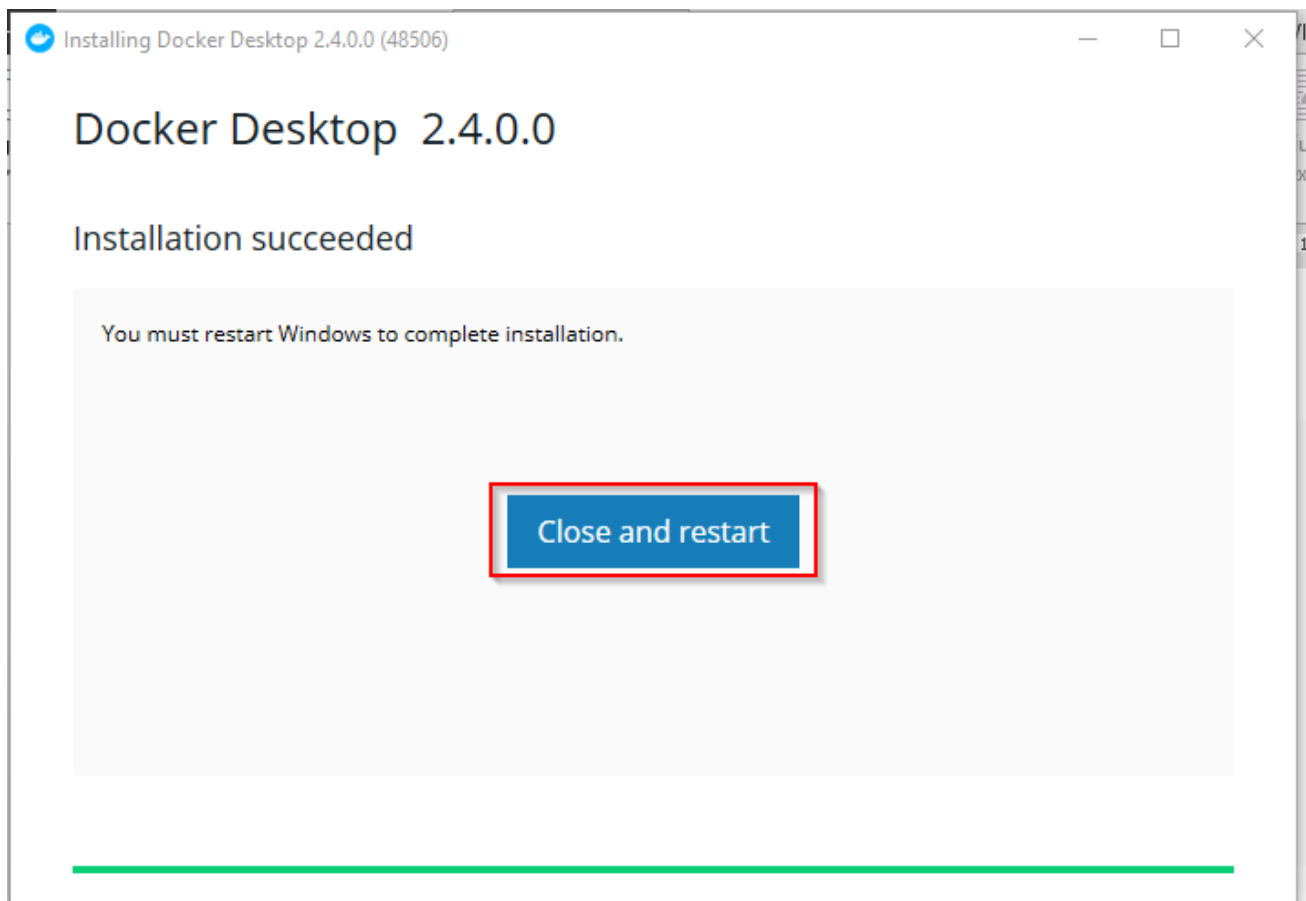
Presiones OK



Espere a que se desempaquete los archivos del instalable:



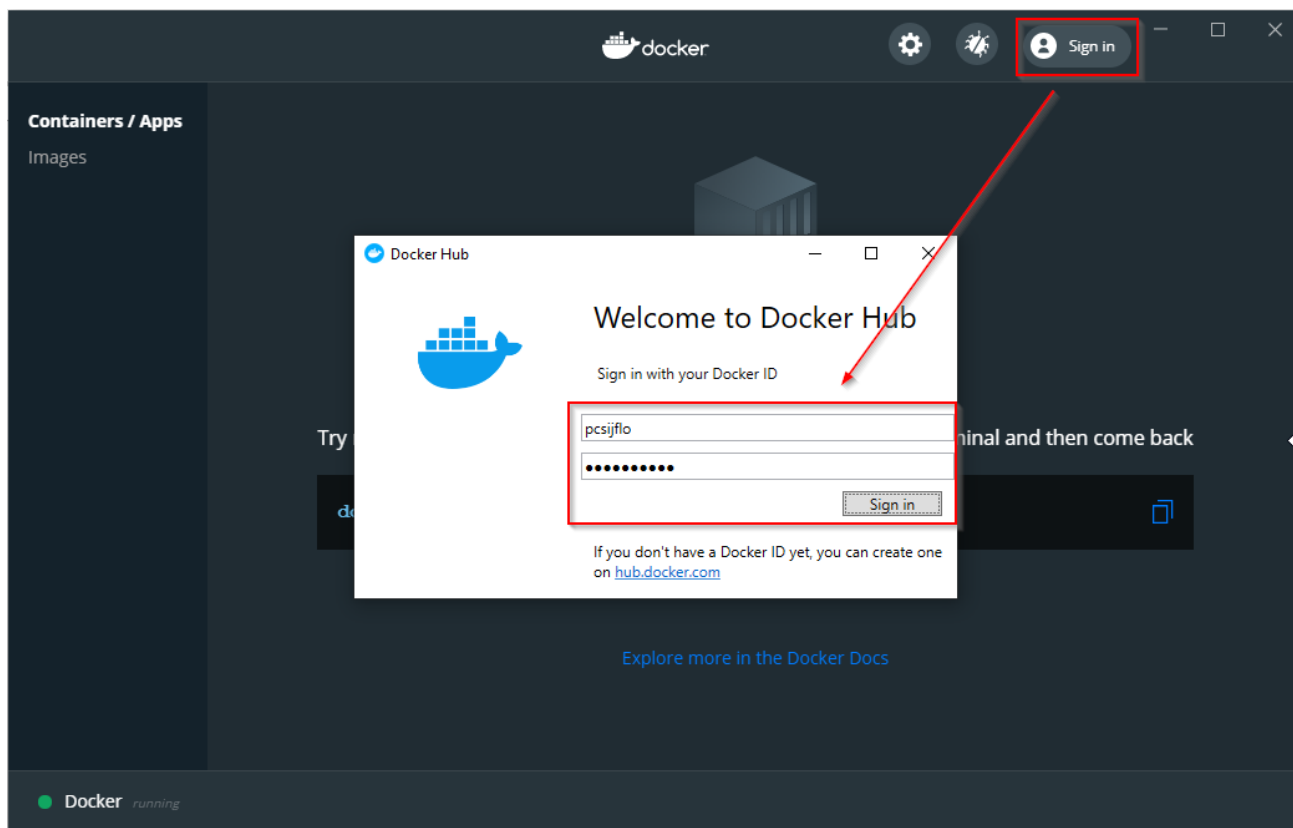
Termina la instalación, haga click en "Close and restart"



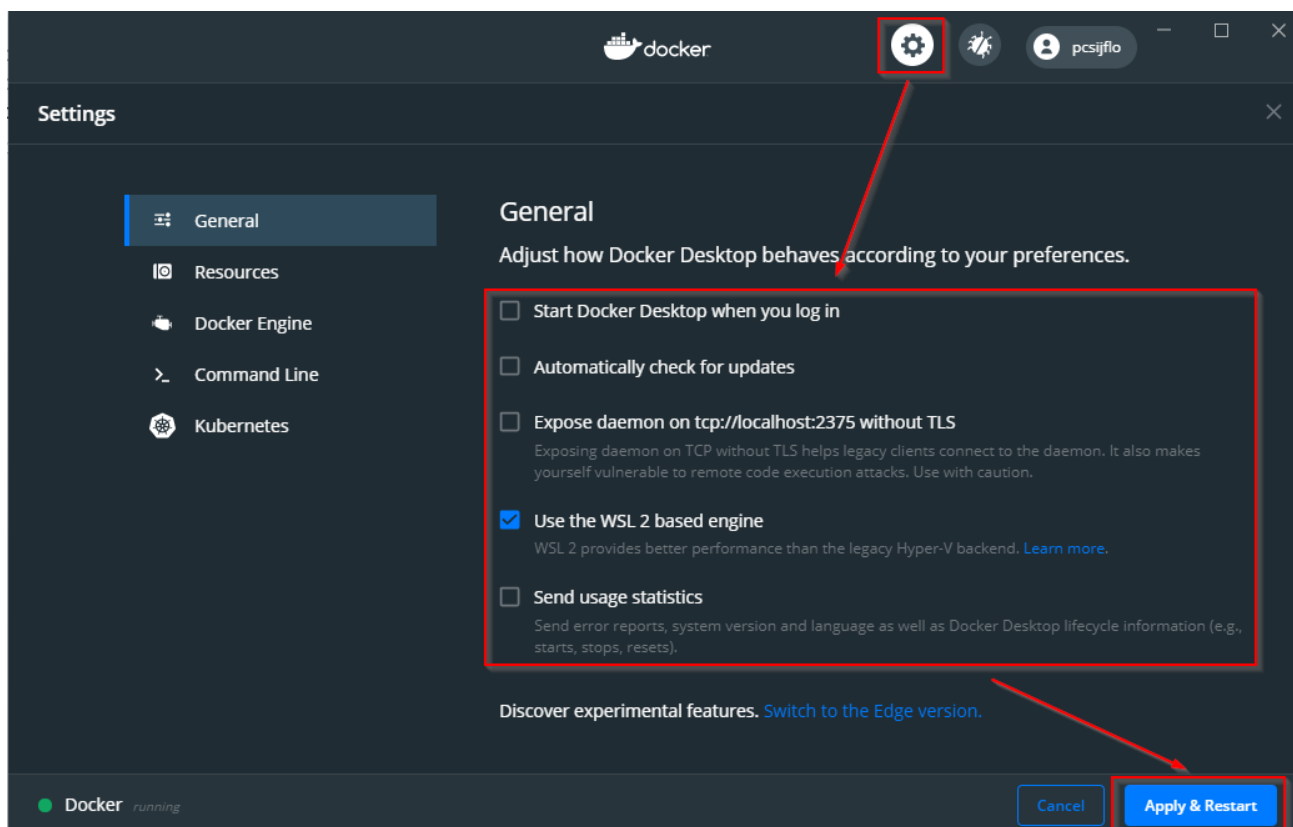
Iniciar la el Docker:



Iniciar sesión:



Configurar el Docker:



Ejecutar el PowerShell como administrador y ejecutar los siguientes comandos:

Verificar el wsl:

wsl -l -v		
NAME	STATE	VERSION
* docker-desktop	Running	2
docker-desktop-data	Running	2
Debian	Stopped	2
Ubuntu-20.04	Stopped	2

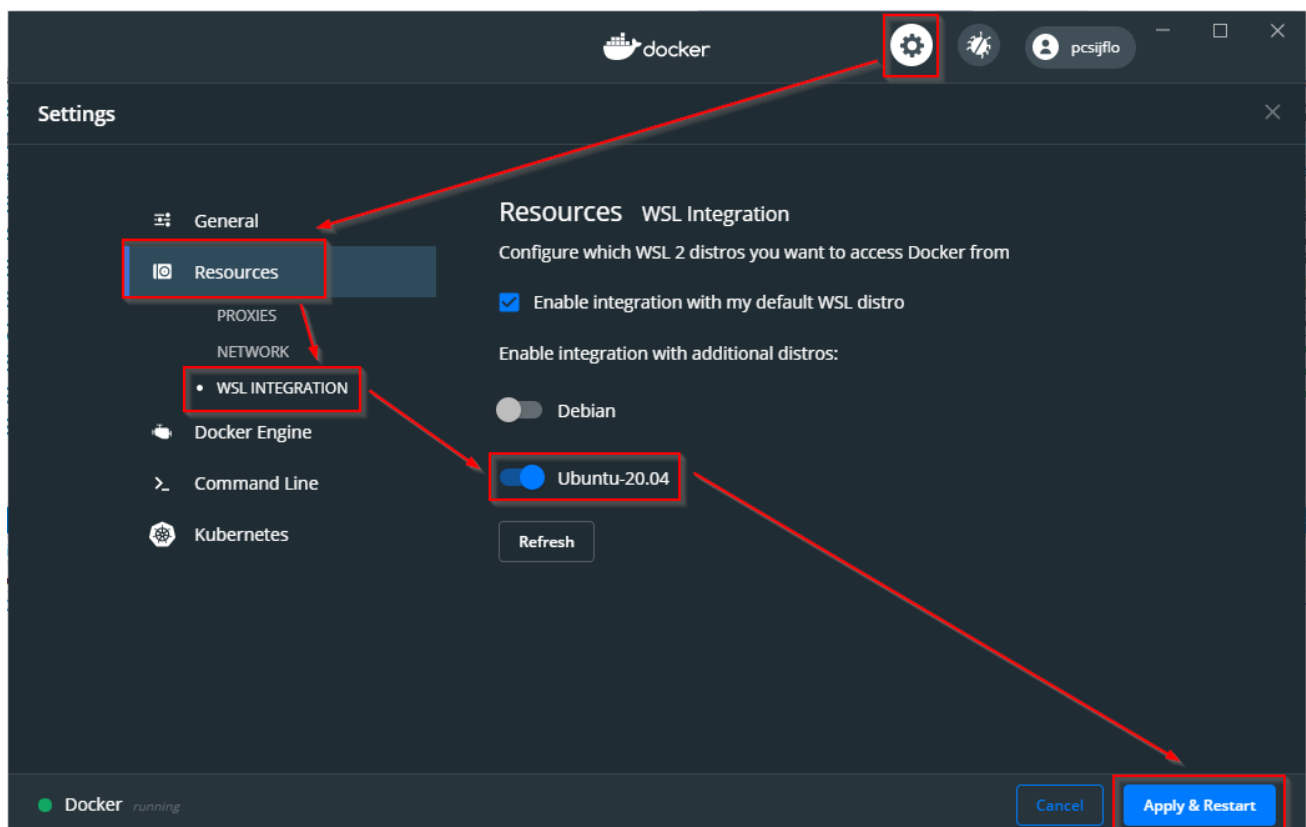
Cambiar la distribución WSL por defecto:

```
wsl --set-default Ubuntu-20.04
```

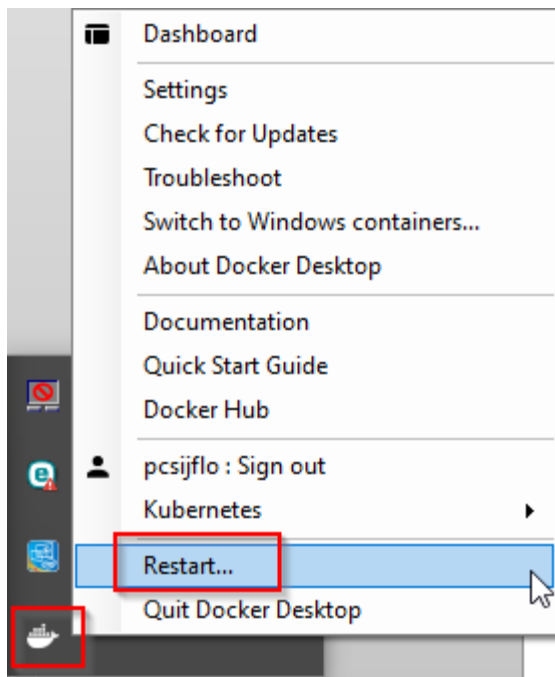
Verificar el cambio del wsl por defecto:

```
wsl -l
Distribuciones del subsistema de Windows para Linux:
Ubuntu-20.04 (predet.)
docker-desktop-data
docker-desktop
Debian
```

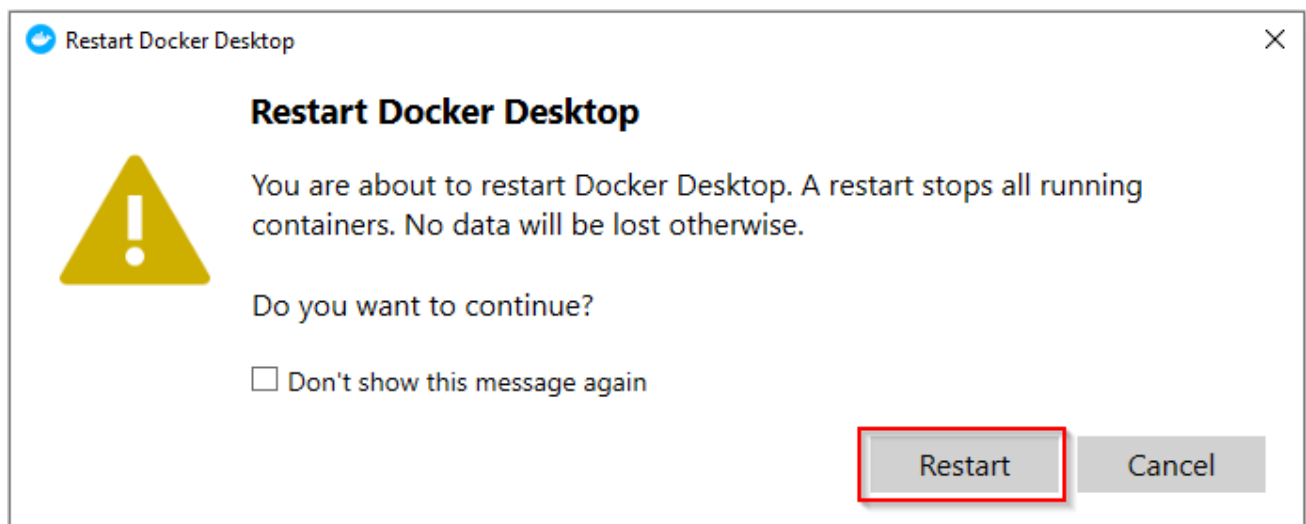
Verificar que reconoce las distribuciones de Linux, Ingresar al setting del Dashboard, y luego ingresa a WSL INTEGRATION de Resources:



Luego resetear el Docker:



Hacer click en Restart:



Utilizando Docker

Verificar la instalación de Docker:

<code>docker --version</code>
Docker version 19.03.13, build 4484c46d9d

Comando Buscar de Docker:

docker search hello					
NAME	DESCRIPTION	STARS	OFFICIAL	AUTOMATED	
hello-world	Hello World! (an example of minimal Dockeriz...	1306	[OK]		
kitematic/hello-world-nginx	A light-weight nginx container that demonstr...	148			
tutum/hello-world	Image to test docker deployments. Has Apache...	73		[OK]	
nginxdemos/hello	NGINX webserver that serves a simple page co...	62		[OK]	
openshift/hello-openshift	Simple Example for Running a Container on Op...	37			
dockercloud/hello-world	Hello World!	19		[OK]	
karthequian/helloworld	A simple helloworld nginx container to get y...	15		[OK]	
crccheck/hello-world	Hello World web server in under 2.5 MB	13		[OK]	
hello-seattle	Hello from DockerCon 2016 (Seattle)!	5	[OK]		
strm/helloworld-http	A hello world container for testing http bal...	5		[OK]	
ppc64le/hello-world	Hello World! (an example of minimal Dockeriz...	2			
wouterm/helloworld	A simple Docker image with an Nginx server ...	1		[OK]	
ansibleplaybookbundle/hello-world-db-apb	An APB which deploys a sample Hello World! a...	1		[OK]	
yaroslav/hello-core	Hello from ASP.NET Core!	1			
datawire/hello-world	Hello World! Simple Hello World implementati...	1		[OK]	
ansibleplaybookbundle/hello-world-apb	An APB which deploys a sample Hello World! a...	1		[OK]	
aosqe/hello-openshift	https://github.com/jhou1/hello-openshift	0			
dongxuny/hellotencent	Auto build	0		[OK]	
milsonian/hellohttp	Basic hello world http app in golang	0		[OK]	
silasbw/hello		0			
hivesolutions/hello_appier	Simple hello world application for Appier.	0		[OK]	
danieldreier/hello-pcr		0			
s390x/hello-world	Hello World! (an example of minimal Dockeriz...	0			
widdix/hello	Hello World!	0			
ocpqe/hello-pod	Copy form docker.io/deshuai/hello-pod:latest	0			

Descargar una imagen de docker:

<code>docker pull hello-world</code>
Using default tag: latest latest: Pulling from library/hello-world 0e03bdcc26d7: Pull complete Digest: sha256:4cf9c47f86df71d48364001ede3a4fcd85ae80ce02ebad74156906cafff5378bc Status: Downloaded newer image for hello-world:latest docker.io/library/hello-world:latest

Visualizar las imágenes descargadas:

docker images				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
hello-world	latest	bf756fb1ae65	9 months ago	13.3kB

Ejecutar una imagen docker:

<code>docker run hello-world</code>
Hello from Docker! This message shows that your installation appears to be working correctly. To generate this message, Docker took the following steps: 1. The Docker client contacted the Docker daemon. 2. The Docker daemon pulled the "hello-world" image from the Docker Hub. (amd64) 3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading.

4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal.

To try something more ambitious, you can run an Ubuntu container with:

```
$ docker run -it ubuntu bash
```

Share images, automate workflows, and more with a free Docker ID:

<https://hub.docker.com/>

For more examples and ideas, visit:

<https://docs.docker.com/get-started/>

Comandos utilizados:

```
docker pull <images>
docker images
docker search
docker ps
docker ps -a
docker run -p <port> -d <image>
docker rm -f <container_id>
docker start <container_id>
```

Creación de contenedores

Buscar una imagen para php:

docker search php				
NAME	DESCRIPTION	STARS	OFFICIAL	
AUTOMATED				
php	While designed for web development, the PHP ...	5492	[OK]	
phpmyadmin/phpmyadmin	A web interface for MySQL and MariaDB.	1076		[OK]
adminer	Database management in a single PHP file.	454	[OK]	
php-zendserver	Zend Server - the integrated PHP application...	188	[OK]	
webdevops/php-nginx	Nginx with PHP-FPM	174		[OK]
webdevops/php-apache-dev	PHP with Apache for Development (eg. with xd...	132		[OK]
webdevops/php-apache	Apache with PHP-FPM (based on webdevops/php)	107		[OK]
bitnami/php-fpm	Bitnami PHP-FPM Docker Image	107		[OK]
phpunit/phpunit	PHPUnit is a programmer-oriented testing fra...	78		[OK]
nazarpc/phpmyadmin	phpMyAdmin as Docker container, based on off...	61		[OK]
phpipam/phpipam-www	phpIPAM is an open-source web IP address man...	34		
thecodingmachine/php	General-purpose ultra-configurable PHP images	33		[OK]
circleci/php	CircleCI images for PHP	32		
phpmyadmin	phpMyAdmin - A web interface for MySQL and M...	26	[OK]	
phpdockerio/php72-fpm	PHP 7.2 FPM base container for PHPDocker.io.	21		[OK]
bitnami/phpmyadmin	Bitnami Docker Image for phpMyAdmin	20		[OK]
bitnami/phpbb	Bitnami Docker Image for phpBB	17		[OK]
phpdockerio/php7-fpm	PHP 7 FPM base container for PHPDocker.io.	16		[OK]
phpdockerio/php73-fpm	PHP 7.3 FPM base container for PHPDocker.io.	15		
arm32v7/php	While designed for web development, the PHP ...	14		
appsvc/php	Azure App Service php dockerfiles	13		[OK]
graze/php-alpine	Smallish php7 alpine image with some common ...	12		[OK]
phpdockerio/php72-cli	PHP 7.2 CLI base container for PHPDocker.io.	4		[OK]
isotopab/php	Docker PHP	1		[OK]
phpdockerio/php7-cli	PHP 7 CLI base container image for PHPDocker...	1		[OK]

Descargando el php 7.2 con Apache

docker pull php:7.2-apache	
7.2-apache: Pulling from library/php	
d121f8d1c412: Pull complete	
58b3577b786a: Pull complete	
60538287851f: Pull complete	
c53ff72fe225: Pull complete	
79b018c8773f: Pull complete	
fbe3e00ac4b0: Pull complete	
ff35226e1df8: Pull complete	
1ff2e8210c7e: Pull complete	
a4bca3363aa7: Pull complete	
86058a8dc9bd: Pull complete	
9ed686d1de4b: Pull complete	
08db5f275636: Pull complete	
1cdaff488d5c: Pull complete	
c3ae97cb3590: Pull complete	
Digest: sha256:f9c3c4feea489b642b169d94b95b0c8918f9730cd84dd507974829c1d8e3dbc	
Status: Downloaded newer image for php:7.2-apache	
docker.io/library/php:7.2-apache	

Ver las descarga:

docker images				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
php	7.2-apache	ed14925495ea	6 days ago	410MB
hello-world	latest	bf756fb1ae65	9 months ago	13.3kB

Para ver los contenedores:

docker ps						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES

Para ver los contenedores previamente ejecutados:

docker ps -a						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
a1ae2ec6d4ac	hello-world	"/hello"	20 minutes ago	Exited (0) 20 minutes ago		busy_antonelli

Para eliminar un Container:

docker rm -f a1a
a1a

Crear un contenedor a partir de una imagen:

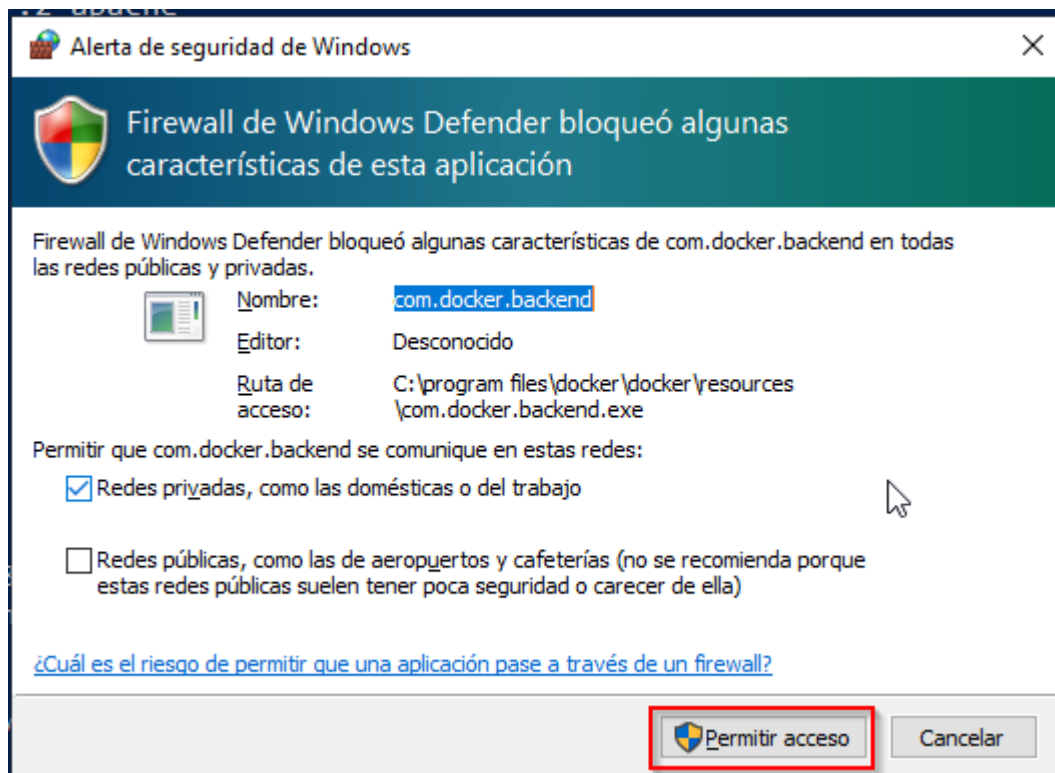
-it: Iniciar en modo interactivo

-p: Asignarle un puerto

--name: El nombre alternativo de la imagen

docker run -it -p 8080:80 --name phpserver php:7.2-apache
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress this message AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress this message [Thu Oct 08 18:35:45.552257 2020] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.38 (Debian) PHP/7.2.34 configured -- resuming normal operations [Thu Oct 08 18:35:45.552586 2020] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND' [Thu Oct 08 18:35:45.575794 2020] [mpm_prefork:notice] [pid 1] AH00170: caught SIGWINCH, shutting down gracefully

Habilitar los permisos:



Crear un contenedor a partir de una imagen en modo daemon:

-d: modo daemon

<code>docker run -it -p 8080:80 -d --name phpserver2 php:7.2-apache</code>
<code>7bcdeebb77e776428c2774b8e7b61160239e082fd6e14ecac143a3693197a225</code>

Ver los contenedores:

<code>docker ps -a</code>						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
7bcdeebb77e7	php:7.2-apache	"docker-php-entrypoi..."	45 seconds ago	Up 43 seconds	0.0.0.0:8080->80/tcp	phpserver2
c359aabc7341	php:7.2-apache	"docker-php-entrypoi..."	43 minutes ago	Exited (0) 43 minutes ago		phpserver

Eliminando el contenedor inactivo:

<code>docker rm -f c359</code>
<code>c359</code>

Descargando Wildfly:

Buscar una imagen para wildfly:

<code>docker search wildfly</code>					
NAME	DESCRIPTION	STARS	OFFICIAL	AUTOMATED	
jboss/wildfly	WildFly application server image	543		[OK]	
wildflyext/wildfly-camel	WildFly with Camel Subsystem	10			
bitnami/wildfly	Bitnami WildFly Docker Image	9		[OK]	
openshift/wildfly-101-centos7	A Centos7 based WildFly v10.1 image for use ...	8			
openshift/wildfly-81-centos7	DEPRECATED - see openshift/wildfly-81-centos7	6		[OK]	
frekele/wildfly	docker run --rm --name wildfly -p 8080:8080 ...	5		[OK]	
imixs/wildfly	This Docker image runs the Java application ...	2		[OK]	
gennyproject/wildfly-qwanda-service		1			
openshift/wildfly-110-centos7	A Centos7 based WildFly v11.0 image for use ...	1			
rhche/wildfly-swarm		1			
openshift/wildfly-100-centos7	A Centos7 based WildFly v10.0 image for use ...	1			
openshift/wildfly-81-centos7	A Centos7 based WildFly v8.1 image for use w...	1			
cfje/wildfly-resource	Wildfly Concourse Resource	1			
openshift/wildfly-130-centos7	A Centos7 based WildFly v13.0 image for use ...	1			
openshift/wildfly-140-centos7	A Centos7 based WildFly v14.0 image for use ...	0			
openshift/wildfly-150-centos7	A Centos7 based WildFly v15.0 image for use ...	0			
appsvc/wildfly	wildfly images	0			
openshift/wildfly-160-centos7	A Centos7 based WildFly v16.0 image for use ...	0			
jelastic/wildfly	An image of the WildFly Java application ser...	0			
openshift/wildfly-120-centos7	A Centos7 based WildFly v12.0 image for use ...	0			
devbeta/wildfly		0			
fksaito/wildfly	Modificações em imagens wildfly para expor p...	0			
openshift/wildfly-90-centos7	A Centos7 based WildFly v9.0 image for use w...	0			
splatform/wildfly-resource		0			
paulosalgado/wildfly10	WildFly 10.1.0.Final with various versions o...	0		[OK]	

Descargando la imagen de wildfly

<code>docker pull jboss/wildfly</code>
Using default tag: latest
latest: Pulling from jboss/wildfly
75f829a71a1c: Pull complete
7b11f246b3d3: Pull complete
b765648c2a58: Pull complete
506aff4a9c5a: Pull complete
aa58db2cb8d8: Pull complete
Digest: sha256:3bad88bc5fb7ecd89591f541b3251a87c40b0537f0efbf97a0c5bcdd0ab5412a
Status: Downloaded newer image for jboss/wildfly:latest
docker.io/jboss/wildfly:latest

Verificando la descarga:

<code>docker images</code>				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE

php	7.2-apache	ed14925495ea	6 days ago	410MB
jboss/wildfly	latest	180441aeef21	4 weeks ago	702MB
hello-world	latest	bf756fb1ae65	9 months ago	13.3kB

Ejecutando la imagen:

<code>docker run -p 8180:8080 -d jboss/wildfly</code>
<code>5b660c3cbf83d3c58893f1bbfe4c6858118a0906fbbd6f1fba4756cd15bd227a</code>

Para los contenedores:

<code>docker stop 7bc</code>
<code>7bc</code>

<code>docker stop 5b6</code>
<code>5b6</code>

Eliminar una imagen:

<code>docker rmi -f hello-world</code>
Untagged: hello-world:latest Untagged: hello-world@sha256:4cf9c47f86df71d48364001ede3a4fcd85ae80ce02ebad74156906caff5378bc Deleted: sha256:bf756fb1ae65adf866bd8c456593cd24beb6a0a061dedf42b26a993176745f6b Deleted: sha256:9c27e219663c25e0f28493790cc0b88bc973ba3b1686355f221c38a36978ac63

Interacción con contenedores

Visualizar los contenedores activos:

<code>docker ps -a</code>						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
7bcddebb77e7	php:7.2-apache	"docker-php-entrypoi..."	45 seconds ago	Up 43 seconds	0.0.0.0:8080->80/tcp	phpserver2

Interactuar con un contenedor:

<code>docker exec -it 7bc /bin/bash</code>
<code>root@7bcddebb77e7:/var/www/html#</code>

Actualizar el apt-get para instalar aplicaciones de consola:

<code>apt-get update -y</code>
Get:1 http://security.debian.org/debian-security buster/updates InRelease [65.4 kB] Get:2 http://deb.debian.org/debian buster InRelease [121 kB] Get:3 http://deb.debian.org/debian buster-updates InRelease [51.9 kB] Get:4 http://security.debian.org/debian-security buster/updates/main amd64 Packages [233 kB] Get:5 http://deb.debian.org/debian buster/main amd64 Packages [7906 kB] Get:6 http://deb.debian.org/debian buster-updates/main amd64 Packages [7868 B] Fetched 8387 kB in 11s (731 kB/s) Reading package lists... Done

Instalando nano:

apt-get install nano

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
  sensible-utils
Use 'apt autoremove' to remove it.
Suggested packages:
  spell
The following NEW packages will be installed:
  nano
0 upgraded, 1 newly installed, 0 to remove and 2 not upgraded.
Need to get 544 kB of archives.
After this operation, 2269 kB of additional disk space will be used.
Get:1 http://deb.debian.org/debian buster/main amd64 nano amd64 3.2-3 [544 kB]
Fetched 544 kB in 2s (232 kB/s)
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package nano.
(Reading database ... 13531 files and directories currently installed.)
Preparing to unpack .../archives/nano_3.2-3_amd64.deb ...
Unpacking nano (3.2-3) ...
Setting up nano (3.2-3) ...
update-alternatives: using /bin/nano to provide /usr/bin/editor (editor) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/editor.1.gz because associated file
/usr/share/man/man1/nano.1.gz (of link group editor) doesn't exist
update-alternatives: using /bin/nano to provide /usr/bin/pico (pico) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/pico.1.gz because associated file
/usr/share/man/man1/nano.1.gz (of link group pico) doesn't exist
```

Ejecutar nano:

nano index.html

```
<html>
  <head>
    <title>Titulo</title>
  </head>
  <body>
    <h1>Hello Programmers</h1>
  </body>
</html>
```

Docker Hub

<https://hub.docker.com>



jboss/wildfly ☆

By [jboss](#) • Updated a month ago

WildFly application server image

Container

↓ Pulls **5M+**



Overview

Tags

Dockerfile

Builds

WildFly Docker image

This is an example Dockerfile with WildFly application server.

Usage

Docker Pull Command

```
docker pull jboss/wildfly
```



Owner

Activar Windows

Ve a Configuración para activar Windows.