

A stylized illustration of a blue whale swimming in dark blue water. On its back, a cargo ship is depicted, carrying several blue shipping containers. The whale has a white eye and a small white patch on its belly. The ship's superstructure is black, and the containers are blue with white vertical lines. This image serves as a metaphor for the integration of DevOps and Cloud Native architectures, suggesting a seamless and scalable approach to software development and deployment.



Introducción

La imagen oficial de Nginx en Docker es una versión ligera del servidor web Nginx , optimizada para entornos de contenedores. Por defecto:

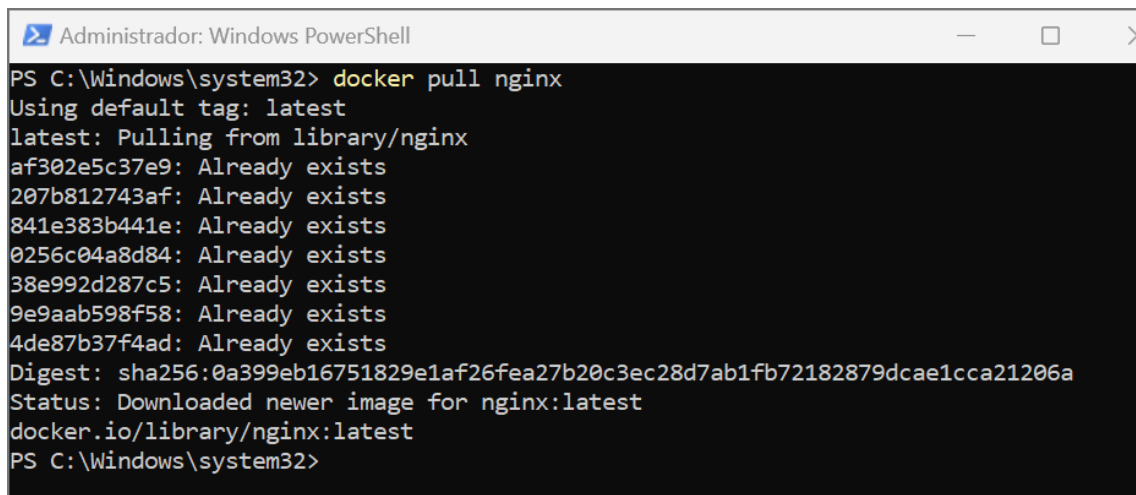
- Sirve archivos desde /usr/share/nginx/html.
- Sus archivos de configuración están en /etc/nginx/.
- Sus registros se almacenan en /var/log/nginx/.

Objetivo:

Crear un contenedor de Nginx con un volumen para almacenar los logs del servidor y asegurarnos de que estos persistan aunque el contenedor sea eliminado.

Descargar la imagen oficial de Nginx

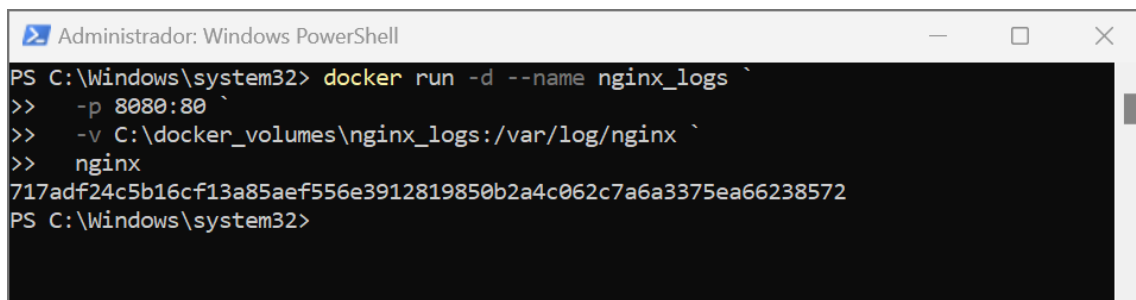
Ejecutamos el comando **`docker pull nginx`** en PowerShell para descargar la última versión de la imagen.



```
Administrador: Windows PowerShell
PS C:\Windows\system32> docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
af302e5c37e9: Already exists
207b812743af: Already exists
841e383b441e: Already exists
0256c04a8d84: Already exists
38e992d287c5: Already exists
9e9aab598f58: Already exists
4de87b37f4ad: Already exists
Digest: sha256:0a399eb16751829e1af26fea27b20c3ec28d7ab1fb72182879dcae1cca21206a
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
PS C:\Windows\system32>
```

Crear un contenedor con un volumen para registros

Vamos a iniciar un contenedor con Nginx y montaremos un volumen en la **ruta /var/log/nginx**, donde se almacenarán los logs.



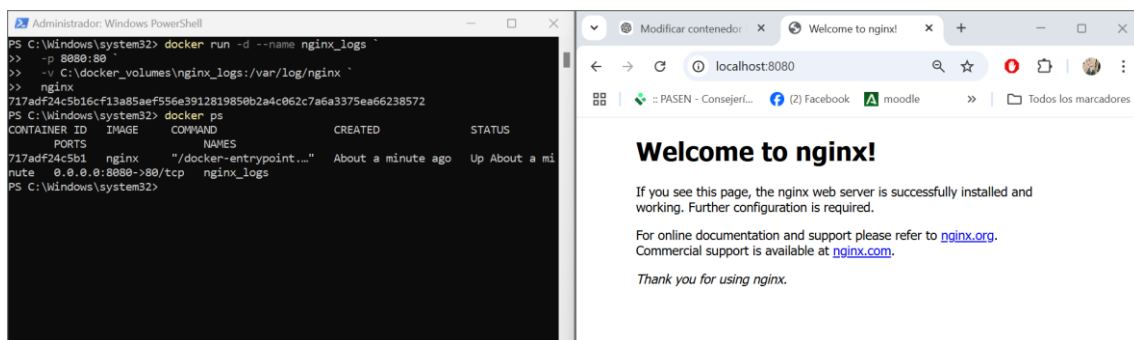
```
Administrador: Windows PowerShell
PS C:\Windows\system32> docker run -d --name nginx_logs `
>> -p 8080:80 `
>> -v C:\docker_volumes\nnginx_logs:/var/log/nginx `
>> nginx
717adf24c5b16cf13a85aef556e3912819850b2a4c062c7a6a3375ea66238572
PS C:\Windows\system32>
```

Explicación del comando:

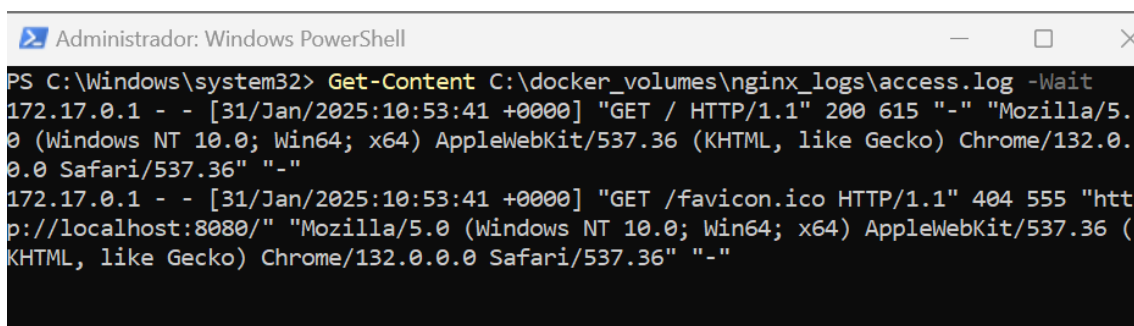
- -d→ Ejecuta el contenedor en segundo plano.
- --name nginx_logs→ Asigne el nombre nginx_logs al contenedor.
- -p 8080:80→ Mapea el puerto 80 del contenedor al puerto 8080 del host.
- -v C:\docker_volumes\nginx_logs:/var/log/nginx→ Monta un volumen en la carpeta /var/log/nginx para almacenar los registros en la máquina anfitriona.
- nginx→ Usa la imagen oficial de Nginx.

Verificar que los logs se están generando

- a) Comprobamos que Nginx está corriendo tanto en el terminal como en el navegador.



- b) Ahora ejecutamos el comando **Get-Content** **C:\docker_volumes\nginx_logs\access.log -Wait**, el cual nos mostrará los registros de acceso en tiempo real.



También podemos inspeccionar los troncos dentro del contenedor con los comandos

- **`docker exec -it nginx_logs cat /var/log/nginx/access.log`**
- **`docker exec -it nginx_logs cat /var/log/nginx/error.log`**

```
Administrador: Windows PowerShell
PS C:\Windows\system32> docker exec -it nginx_logs cat /var/log/nginx/access.log
172.17.0.1 - - [31/Jan/2025:10:53:41 +0000] "GET / HTTP/1.1" 200 615 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36" "-"
172.17.0.1 - - [31/Jan/2025:10:53:41 +0000] "GET /favicon.ico HTTP/1.1" 404 555 "http://localhost:8080/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36" "-"
PS C:\Windows\system32> docker exec -it nginx_logs cat /var/log/nginx/error.log
2025/01/31 10:50:32 [notice] 1#1: using the "epoll" event method
2025/01/31 10:50:32 [notice] 1#1: nginx/1.27.3
2025/01/31 10:50:32 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2025/01/31 10:50:32 [notice] 1#1: OS: Linux 5.15.167.4-microsoft-standard-WSL2
2025/01/31 10:50:32 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2025/01/31 10:50:32 [notice] 1#1: start worker processes
2025/01/31 10:50:32 [notice] 1#1: start worker process 29
2025/01/31 10:50:32 [notice] 1#1: start worker process 30
2025/01/31 10:50:32 [notice] 1#1: start worker process 31
2025/01/31 10:50:32 [notice] 1#1: start worker process 32
2025/01/31 10:50:32 [notice] 1#1: start worker process 33
2025/01/31 10:50:32 [notice] 1#1: start worker process 34
2025/01/31 10:50:32 [notice] 1#1: start worker process 35
2025/01/31 10:50:32 [notice] 1#1: start worker process 36
2025/01/31 10:53:41 [error] 30#30: *1 open() "/usr/share/nginx/html/favicon.ico" failed (2: No such file or directory), client: 172.17.0.1, server: localhost, request: "GET /favicon.ico HTTP/1.1", host: "localhost:8080", referer: "http://localhost:8080/"
PS C:\Windows\system32>
```

Comprobar que los logs persisten tras eliminar el contenedor

a) Eliminar el contenedor

`docker stop nginx_logs`

`docker rm nginx_logs`

```
Administrador: Windows PowerShell
PS C:\Windows\system32> docker stop nginx_logs
nginx_logs
PS C:\Windows\system32> docker rm nginx_logs
nginx_logs
PS C:\Windows\system32>
```

- b) Recrear el contenedor con el mismo volumen
- docker run -d --name nginx_logs -p 8080:80 -v C:\docker_volumes\nnginx_logs:/var/log/nginx nginx***

```
Administrador: Windows PowerShell
PS C:\Windows\system32> docker run -d --name nginx_logs -p 8080:80 -v C:\docker_volumes\nnginx_logs:/var/log/nginx nginx
75cb76da0b26c69b662b5c1664c7b3e6d0f570f75cd77c4924a4ba8ff38ea06c
PS C:\Windows\system32> docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
75cb76da0b26   nginx    "/docker-entrypoint...."  57 seconds ago Up 56 seconds 0.0.0.0:8080->80/tcp
nginx_logs
PS C:\Windows\system32>
```

- c) Verificar que los registros anteriores siguen disponibles
- Get-Content C:\docker_volumes\nnginx_logs\access.log***

```
Administrador: Windows PowerShell
PS C:\Windows\system32> Get-Content C:\docker_volumes\nnginx_logs\access.log
172.17.0.1 - - [31/Jan/2025:10:53:41 +0000] "GET / HTTP/1.1" 200 615 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36" "-"
172.17.0.1 - - [31/Jan/2025:10:53:41 +0000] "GET /favicon.ico HTTP/1.1" 404 555 "http://localhost:8080/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36" "-"
PS C:\Windows\system32>
```