

Práctica uso de Docker

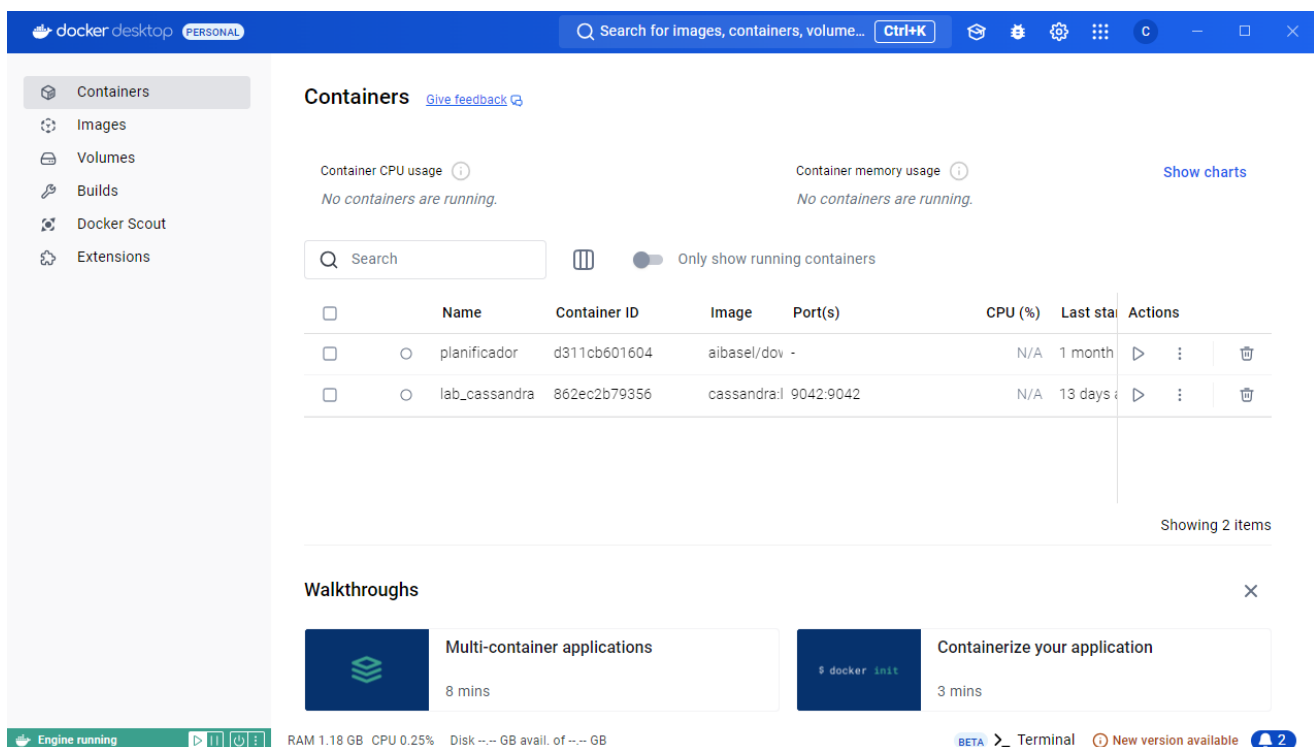
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Objetivos

Esta actividad te permitirá conocer los comandos básicos de Docker. Ponte a prueba ejecutando varios comandos sobre una instalación previa de Docker Desktop.

Parte 1. Ejercicios Guiados

Para realizar esta actividad, se asume que tienes instalado Docker Desktop en su versión reciente.



Instrucciones

Debe abrir la línea de comandos y ejecutar los comandos indicados, luego de ejecutar debe sacar una captura de pantalla y pegar debajo del comando

Primeros pasos

1. Comprueba la versión de Docker:

> `docker --version`

```
Loading personal and system profiles took 3061ms.
> niki > ⚡ > 🏠
❯ docker --version
Docker version 28.3.2, build 578ccf6
> niki > ⚡ > 🏠
❯
```

2. Descarga una imagen de Docker, por ejemplo, httpd (Apache):

> `docker pull httpd`

```
root :: pwsh : niki
> niki > ⚡ > 🏠
❯ docker pull httpd
Using default tag: latest
latest: Pulling from library/httpd
396b1da7636e: Pull complete
40712a21826a: Pull complete
4f4fb700ef54: Pull complete
d2b1a5ae8cd3: Pull complete
7e8bbac53823: Pull complete
779ccd583397: Pull complete
Digest: sha256:3198c1839e1a875f8b83803083758a7635f1ae999f0601f30f2f3b8ce2ac99e3
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest
> niki > ⚡ > 🏠
❯
```

3. Consulta las imágenes descargadas:

> `docker images`

```
> niki > ⚡ > 🏠
❯ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
node          24-alpine b15a96093dc9   6 days ago    168MB
httpd         latest    199e3a035264   12 days ago    117MB
mongo         latest    91dcc1438063   4 weeks ago    908MB
> niki > ⚡ > 🏠
❯
```

4. Ejecuta una instancia (contenedor) de la imagen descargada (httpd):

> `docker run -it -d -p 8080:80 httpd`

```
mongo         latest    91dcc1438063   4 weeks ago    908MB
> niki > ⚡ > 🏠
❯ docker run -it -d -p 8080:80 httpd
69bcd152b8cec19f2a50bb004c784e8e9818f5da79378fd2dab1ddf202c2aaf7
> niki > ⚡ > 🏠
❯
```

5. Consulta todos los contenedores creados:

> `docker ps`

```

> niki > ⚡ > 🏠
❯ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS
69bcd152b8ce   httpd     "httpd-foreground"      25 seconds ago Up 24 seconds  0.0.0.0:8080→80/tcp, [::]:8080→80/tcp
exciting_roentgen
> niki > ⚡ > 🏠
❯

```

> `docker ps -a`

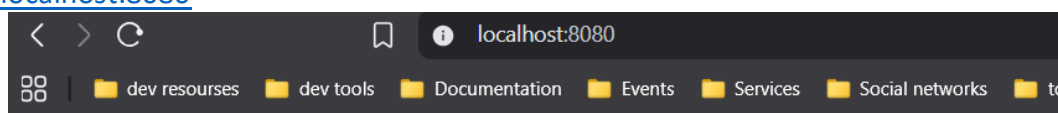
```

> niki > ⚡ > 🏠
❯ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS
69bcd152b8ce   httpd     "httpd-foreground"      About a minute ago Up About a minute  0.0.0.0:8080→80/tcp, [::]:8080→80/tcp
exciting_roentgen
> niki > ⚡ > 🏠
❯

```

6. Comprueba el funcionamiento del contenedor desde el host:

> <http://localhost:8080>



It works!

7. Ejecuta la terminal de Linux dentro del contenedor:

> `ls`

> `docker exec -it 2e50e06a5c84`

```

> niki > ⚡ > 🏠
❯ docker exec -it 1d0dd2ef9f07c1b46d9206317181c528c0dfc2e2e0b2767443be51242f1c2570 /bin/bash
root@1d0dd2ef9f07:/usr/local/apache2# ls
bin build cgi-bin conf error htdocs icons include logs modules
root@1d0dd2ef9f07:/usr/local/apache2#

```

8. Borra el contenedor creado:

> `docker rm CONTAINER_ID`

> `docker stop 2e50e06a5c84` *(para el contenedor antes de borrarlo)*

```

> niki > ⚡ > 🏠
❯ docker stop 1d0dd2ef9f07c1b46d9206317181c528c0dfc2e2e0b2767443be51242f1c2570
1d0dd2ef9f07c1b46d9206317181c528c0dfc2e2e0b2767443be51242f1c2570
> niki > ⚡ > 🏠
❯

```

> `docker rm 2e50e06a5c84`

```

> niki > ⚡ > 🏠
❯ docker rm 1d0dd2ef9f07c1b46d9206317181c528c0dfc2e2e0b2767443be51242f1c2570
1d0dd2ef9f07c1b46d9206317181c528c0dfc2e2e0b2767443be51242f1c2570
> niki > ⚡ > 🏠
❯

```

9. Comprueba que el contenedor ha sido eliminado:

> `docker ps -a`

```
> niki > ⚡ > 🏠
❯ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS        NAMES
```

10. Borra la imagen usando la identificación del Comprueba que el contenedor ha sido eliminado:

> `docker rmi IMAGE_ID`

```
> niki > ⚡ > 🏠
❯ docker rmi sha256:199e3a0352645ad4ae027e853af5986bd5b4766c3a5e98987ad10d5922eb7465
Untagged: httpd:latest
Untagged: httpd@sha256:3198c1839e1a875f8b83803083758a7635f1ae999f0601f30f2f3b8ce2ac99e3
Deleted: sha256:199e3a0352645ad4ae027e853af5986bd5b4766c3a5e98987ad10d5922eb7465
Deleted: sha256:00573b19d7727f02c759d09e37596d7790e794d8044bbda01c82e4ef255a5a46
Deleted: sha256:84e29bd3c0d55e14757bab091c4081f900a13e91d88ebe65d7711411ac757385
Deleted: sha256:d75c7aed011141a372ee22ba367d8b7d6dfc111abd79544592065f98a57802c
Deleted: sha256:d39e6d1ae882eb3ae39fb74a830df8d28fcd5032b8eb94da68c5f488c51ece5d
Deleted: sha256:7def08ab353787eaf7f6c76df7a4de80178cd031f0b2e5267291b645d148600a
Deleted: sha256:e6a3842ebc7f5e41d8a38f19a0aa5ea56c255475695ac6682882420800cf5465
> niki > ⚡ > 🏠
❯
```

> `docker images`

```
> niki > ⚡ > 🏠
❯ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
node          24-alpine b15a96093dc9   6 days ago    168MB
mongo         latest    91dcc1438063   4 weeks ago    908MB
```

> `docker rmi -f a8ea074f4566` *(forzar el borrado)*

```
> niki > ⚡ > 🏠
❗▶ docker rmi -f sha256:91dcc14380635cc7184b14c4839d0e4cbb98ecc1ba92558b531dec565d8772df
Untagged: mongo:latest
Deleted: sha256:91dcc14380635cc7184b14c4839d0e4cbb98ecc1ba92558b531dec565d8772df
Deleted: sha256:a52da7af5f61a0c33fd02e38b72b152361e932b14f8e58840ee02bfc04279915
Deleted: sha256:f722ca4f379119c02b74ce45f31b040a302ddcaa80cc8d314dbfbec7da3114fc
Deleted: sha256:8f3e9d8c18cccc7227d5de57ac3ac1ad040056c92b97824038c655d567309479
Deleted: sha256:cde1437b9450a7d5266124eb053ebce1f847596eac8e27655d4e00fd7b0ceed0
Deleted: sha256:6e3301ed551bc3ed63c36b0ab074b5d16166b797f33b84f3e43ec02fa731b7b2
Deleted: sha256:ce775a77db5c2b90d7c51231de5b5a03110c324a0c2b84e16ffde28653bd6d98
Deleted: sha256:104a626d3a1e7a2d21626486d456b1cb8fd569b803f1fb11cb901de30ac6b3f4
Deleted: sha256:cd9664b1462ea111a41bdad6f5ce077582cdc77e28683a4f6996dd03afcc56f5

> niki > ⚡ > 🏠
❗▶ docker images
REPOSITORY    TAG                IMAGE ID           CREATED           SIZE
node          24-alpine         b15a96093dc9      6 days ago       168MB

> niki > ⚡ > 🏠
❗▶
```

11. Reinicia el contenedor:

> docker restart CONTAINER_ID

```
> niki > ⚡ > 🏠
❗▶ docker restart 21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0

> niki > ⚡ > 🏠
❗▶
```

> docker ps -a

```
> niki > ⚡ > 🏠
❗▶ docker ps -a
CONTAINER ID   IMAGE             COMMAND                  CREATED        STATUS        PORTS        NAMES
21be86ae8ac8   httpd:latest     "httpd-foreground"     37 seconds ago Up 17 seconds 80/tcp       cranky_dewdney

> niki > ⚡ > 🏠
❗▶
```

12. Detén y levanta el contenedor:

> docker stop CONTAINER_ID

```
> niki > ⚡ > 🏠
❗▶ docker stop 21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0

> niki > ⚡ > 🏠
❗▶
```

> docker ps *(comprueba que está parado el contenedor)*

```
> niki > ⚡ > 🏠
❗▶ docker ps
CONTAINER ID   IMAGE             COMMAND                  CREATED        STATUS        PORTS        NAMES
21be86ae8ac8   httpd:latest     "httpd-foreground"     37 seconds ago Up 17 seconds 80/tcp       cranky_dewdney

> niki > ⚡ > 🏠
❗▶
```

> docker start 2e50e06a5c84


```

> niki > ⚡ > 📁 🏠
❗▶ docker start 21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
> niki > ⚡ > 📁 🏠
❗▶

```

13. Mata el contenedor:

> `docker kill 2e50e06a5c84`

```

> niki > ⚡ > 📁 🏠
❗▶ docker kill 21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
21be86ae8ac8b184a526c2352e33a1b5469cffa40c3aadae46314423de3848f0
> niki > ⚡ > 📁 🏠
❗▶

```

> `docker ps`

```

> niki > ⚡ > 📁 🏠
❗▶ docker ps
CONTAINER ID    IMAGE    COMMAND    CREATED    STATUS    PORTS    NAMES
> niki > ⚡ > 📁 🏠
❗▶

```

14. Visualiza los detalles de la red definida con los clústeres:

> `docker network`

```

> niki > ⚡ > 📁 🏠
❗▶ docker network
Usage: docker network COMMAND

Manage networks

Commands:
  connect      Connect a container to a network
  create       Create a network
  disconnect   Disconnect a container from a network
  inspect      Display detailed information on one or more networks
  ls           List networks
  prune        Remove all unused networks
  rm           Remove one or more networks

Run 'docker network COMMAND --help' for more information on a command.

```

> `docker network ls`

```
> niki > ⚡ > 📁 🏠
❗▶ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
6a29aaad44d8        bridge             bridge              local
9cf1da9586c8        host               host                local
00f0f868842d        none               null                local

> niki > ⚡ > 📁 🏠
❗▶
```

> docker ps

```
> niki > ⚡ > 📁 🏠
❗▶ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES

> niki > ⚡ > 📁 🏠
❗▶
```

15. Obtén información detallada sobre los recursos de Docker:

> docker info

```
run docker --help for more information
> niki > ⚡ > 📁 🏠
❗▶ docker info
Client:
Version:      28.3.2
Context:      desktop-linux
Debug Mode:   false
Plugins:
ai: Docker AI Agent - Ask Gordon (Docker Inc.)
   Version:   v1.9.11
   Path:      C:\Program Files\Docker\cli-plugins\docker-ai.exe
buildx: Docker Buildx (Docker Inc.)
   Version:   v0.26.1-desktop.1
   Path:      C:\Program Files\Docker\cli-plugins\docker-buildx.exe
cloud: Docker Cloud (Docker Inc.)
   Version:   v0.4.18
   Path:      C:\Program Files\Docker\cli-plugins\docker-cloud.exe
compose: Docker Compose (Docker Inc.)
   Version:   v2.39.1-desktop.1
   Path:      C:\Program Files\Docker\cli-plugins\docker-compose.exe
debug: Get a shell into any image or container (Docker Inc.)
   Version:   0.0.42
   Path:      C:\Program Files\Docker\cli-plugins\docker-debug.exe
desktop: Docker Desktop commands (Docker Inc.)
   Version:   v0.2.0
   Path:      C:\Program Files\Docker\cli-plugins\docker-desktop.exe
extension: Manages Docker extensions (Docker Inc.)
   Version:   v0.2.29
   Path:      C:\Program Files\Docker\cli-plugins\docker-extension.exe
init: Creates Docker-related starter files for your project (Docker Inc.)
   Version:   v1.4.0
   Path:      C:\Program Files\Docker\cli-plugins\docker-init.exe
mcp: Docker MCP Plugin (Docker Inc.)
   Version:   v0.13.0
   Path:      C:\Program Files\Docker\cli-plugins\docker-mcp.exe
model: Docker Model Runner (EXPERIMENTAL) (Docker Inc.)
   Version:   v0.1.36
   Path:      C:\Program Files\Docker\cli-plugins\docker-model.exe
sbom: View the packaged-based Software Bill Of Materials (SBOM) for
   Version:   0.6.0
   Path:      C:\Program Files\Docker\cli-plugins\docker-sbom.exe
scout: Docker Scout (Docker Inc.)
   Version:   v1.18.2
   Path:      C:\Program Files\Docker\cli-plugins\docker-scout.exe

Server:
Containers: 1
```


17. Busca una imagen según el nombre:

>docker search mongo

```
> niki > ⚡ > ■ > 🏠
```

```
❗▶ docker search mongo
```

NAME	DESCRIPTION	STARS	OFFICIAL
mongo	MongoDB document databases provide high avai...	10617	[OK]
circleci/mongo	CircleCI images for MongoDB	16	
corpusops/mongo	https://github.com/corpusops/docker-images/	0	
rootpublic/mongo		0	
uselagoon/mongo		0	
ekesken/mongo	docker image for mongo that is configurable ...	1	
vepo/mongo	Mongo image with default settings	1	
litmuschaos/mongo		1	
jelastic/mongo	An image of the MongoDB database server main...	0	
arm64v8/mongo	MongoDB document databases provide high avai...	36	
zinobe/mongo	mongo with custom user	0	
s390x/mongo	MongoDB document databases provide high avai...	1	
kubedb/mongo		0	
cescoferraro/mongo	docker alpine mongo	0	
ccitest/mongo	CircleCI test images for Mongo	0	
amd64/mongo	MongoDB document databases provide high avai...	0	
excellalabs/mongo	Dockerfile and scripts to setup a production...	2	
sacashgit/mongo		0	
winamd64/mongo	MongoDB document databases provide high avai...	1	
healthcheck/mongo	https://github.com/docker-library/healthchec...	5	
mongodb/mongodb-community-server	The Official MongoDB Community Server	164	
pagarme/mongo		0	
pastvu/mongo		0	
sscpac/mongo	alpine mongo	0	
dreamquark/mongo	Mongo DB with custom entrypoints	0	

```
> niki > ⚡ > ■ > 🏠
```