

1. Comprueba la versión de Docker:

```
docker --version
```

```
C:\Users\Noelia Gonzales>docker --version
Docker version 27.3.1, build ce12230
```

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

```
docker pull httpd
```

```
C:\Users\Noelia Gonzales>docker pull httpd
Using default tag: latest
latest: Pulling from library/httpd
Digest: sha256:3198c1839e1a875f8b83803083758a7635f1ae999f0601f30f2f3b8ce2ac99e3
Status: Image is up to date for httpd:latest
docker.io/library/httpd:latest

C:\Users\Noelia Gonzales>
```

3. Consulta las imágenes descargadas:

```
docker images
```

```
C:\Users\Noelia Gonzales>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
postgres      13        aedabd10a05c   8 days ago    620MB
httpd         latest    3198c1839e1a   2 weeks ago    174MB
mysql         8.0       f483084b3708   4 weeks ago    1.07GB

C:\Users\Noelia Gonzales>
```

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

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

```
C:\Users\Noelia Gonzales>docker run -it -d -p 8080:80 httpd
c45a0e6dbc23fd16ebacae55bc1d83213514a04dc8b8e2bb6300dc7b5ff9f2f3

C:\Users\Noelia Gonzales>
```

5. Consulta todas los contenedores creadores:

```
docker ps
```

```
docker ps -a
```

```
C:\Users\Noelia Gonzales>docker run -it -d -p 8080:80 httpd
c45a0e6dbc23fd16ebacae55bc1d83213514a04dc8b8e2bb6300dc7b5ff9f2f3

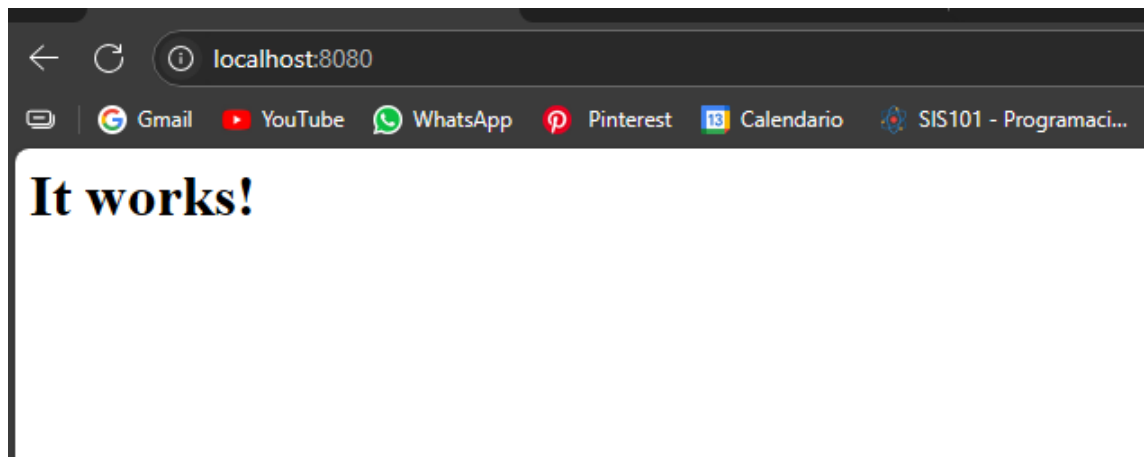
C:\Users\Noelia Gonzales>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                    NAMES
c45a0e6dbc23   httpd     "httpd-foreground"      26 seconds ago Up 25 seconds  0.0.0.0:8080->80/tcp    determined_swartz

C:\Users\Noelia Gonzales>docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                    NAMES
c45a0e6dbc23   httpd     "httpd-foreground"      41 seconds ago Up 39 seconds  0.0.0.0:8080->80/tcp    determined_swartz
a93a517c1ea7   postgres  "docker-entrypoint.s..." 4 days ago    Exited (255) 2 days ago  0.0.0.0:5450->5432/tcp  db_server11

C:\Users\Noelia Gonzales>
```

6. Comprueba el funcionamiento del contenedor desde el host:

<http://localhost:8080>



7. Ejecuta la terminal de Linux dentro del contenedor:

Ls

`docker exec -it 2e50e06a5c84`

```
C:\Users\Noelia Gonzales>docker exec -it c45a0e6dbc23fd16ebacae55bc1d832
13514a04dc8b8e2bb6300dc7b5ff9f2f3 bash
root@c45a0e6dbc23:/usr/local/apache2# ls
bin build cgi-bin conf error htdocs icons include logs modules
```

8. Borra el contenedor creado:

`docker rm CONTAINER_ID`

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

`docker rm 2e50e06a5c84`

```
C:\Users\Noelia Gonzales>docker rm c45a0e6dbc23
Error response from daemon: cannot remove container "/determined_swartz"
: container is running: stop the container before removing or force remo
ve

C:\Users\Noelia Gonzales>docker stop c45a0e6dbc23
c45a0e6dbc23

C:\Users\Noelia Gonzales>docker rm c45a0e6dbc23
c45a0e6dbc23

C:\Users\Noelia Gonzales>
```

9. Comprueba que el contenedor ha sido eliminado:

`docker ps -a`

```
C:\Users\Noelia Gonzales>docker ps -a
CONTAINER ID   IMAGE      PORTS          COMMAND                  CREATED    STATU
S              PORTS          NAMES
a93a517c1ea7   postgres:13  "docker-entrypoin...  6 days ago  Exite
d (255) 4 days ago  0.0.0.0:5450->5432/tcp  db_server11

C:\Users\Noelia Gonzales>
```

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

`docker rmi IMAGE_ID`

docker images

docker rmi a8ea074f4566

docker rmi -f a8ea074f4566 (forzar el borrado)

```
C:\Users\Noelia Gonzales>docker rmi 3198c1839e1a
Untagged: httpd:latest
Deleted: sha256:3198c1839e1a875f8b83803083758a7635f1ae999f0601f30f2f3b8c
e2ac99e3

C:\Users\Noelia Gonzales>docker images
REPOSITORY    TAG        IMAGE ID      CREATED       SIZE
postgres      13         aedabd10a05c  10 days ago  620MB
mysql         8.0       f483084b3708  4 weeks ago  1.07GB

C:\Users\Noelia Gonzales>docker rmi 3198c1839e1a
Error response from daemon: No such image: 3198c1839e1a:latest

C:\Users\Noelia Gonzales>docker rmi -f 3198c1839e1a
Error response from daemon: No such image: 3198c1839e1a:latest

C:\Users\Noelia Gonzales>
```

11. Reinicia el contenedor:

docker restart CONTAINER_ID

docker ps -a

docker restart 2e50e06a5c84

```

C:\Users\Noelia Gonzales>docker pull httpd
Using default tag: latest
latest: Pulling from library/httpd
4f4fb700ef54: Download complete
d2b1a5ae8cd3: Download complete
40712a21826a: Download complete
7e8bbac53823: Download complete
779ccd583397: Download complete
Digest: sha256:3198c1839e1a875f8b83803083758a7635f1ae999f0601f30f2f3b8ce2ac99e3
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest

C:\Users\Noelia Gonzales>docker run -d --name webtest -p 8080:80 httpd
cf16ee9a65bb058338df7dec4f5d6f3f0e3bd1e402697d4e7446988c538c2e4

C:\Users\Noelia Gonzales>docker restart webtest
webtest

C:\Users\Noelia Gonzales>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
cf16ee9a65bb   httpd          "httpd-foreground"      20 seconds ago Up 6 seconds   0.0.0.0:8080->80/tcp    webtest
a93a517c1ea7   postgres:13    "docker-entrypoint.s..." 6 days ago    Exited (255) 4 days ago  0.0.0.0:5450->5432/tcp    db_server11

C:\Users\Noelia Gonzales>

```

12. Detén y levanta el contenedor:

docker stop CONTAINER_ID

docker stop 2e50e06a5c84

docker ps (comprueba que está parado el contenedor)

docker start 2e50e06a5c84

docker ps

```

C:\Users\Noelia Gonzales>docker stop cf16ee9a65bb
cf16ee9a65bb

C:\Users\Noelia Gonzales>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES

C:\Users\Noelia Gonzales>docker start cf16ee9a65bb
cf16ee9a65bb

C:\Users\Noelia Gonzales>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
cf16ee9a65bb   httpd          "httpd-foreground"      About a minute ago Up 7 seconds   0.0.0.0:8080->80/tcp    webtest

C:\Users\Noelia Gonzales>

```

13. Mata el contenedor:

docker kill 2e50e06a5c84

docker ps

```
C:\Users\Noelia Gonzales>docker kill cf16ee9a65bb
cf16ee9a65bb

C:\Users\Noelia Gonzales>docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
```

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

docker network

docker network ls

docker ps

```
C:\Users\Noelia Gonzales>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.

C:\Users\Noelia Gonzales>docker network ls
NETWORK ID      NAME      DRIVER      SCOPE
32662e63227b    bridge    bridge      local
f72a340dac57    host      host        local
a97de175ca66    none      null        local

C:\Users\Noelia Gonzales>docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES

C:\Users\Noelia Gonzales>
```

15. Obtén información detallada sobre los recursos de Docker:

docker Info

```
C:\Users\Noelia Gonzales>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.
```

```
C:\Users\Noelia Gonzales>docker network ls
```

| NETWORK ID | NAME | DRIVER | SCOPE |
|--------------|--------|--------|-------|
| 32662e63227b | bridge | bridge | local |
| f72a340dac57 | host | host | local |
| a97de175ca66 | none | null | local |

```
C:\Users\Noelia Gonzales>docker ps
```

| CONTAINER ID | IMAGE | COMMAND | CREATED | STATUS | PORTS | NAMES |
|--------------|-------|---------|---------|--------|-------|-------|
|--------------|-------|---------|---------|--------|-------|-------|

```
C:\Users\Noelia Gonzales>|
```

| CONTAINER ID | IMAGE | COMMAND | CREATED | STATUS | PORTS | NAMES |
|--------------|-------|---------|---------|--------|-------|-------|
|--------------|-------|---------|---------|--------|-------|-------|

```
C:\Users\Noelia Gonzales>docker info
```

```
Client:
```

```
Version:      27.3.1
Context:      desktop-linux
Debug Mode:   false
```

```
Plugins:
```

```
  buildx: Docker Buildx (Docker Inc.)
```

```
    Version:  v0.17.1-desktop.1
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-buildx.exe
```

```
  compose: Docker Compose (Docker Inc.)
```

```
    Version:  v2.29.7-desktop.1
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-compose.exe
```

```
  debug: Get a shell into any image or container (Docker Inc.)
```

```
    Version:  0.0.37
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-debug.exe
```

```
  desktop: Docker Desktop commands (Alpha) (Docker Inc.)
```

```
    Version:  v0.0.15
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-desktop.exe
```

```
  dev: Docker Dev Environments (Docker Inc.)
```

```
    Version:  v0.1.2
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-dev.exe
```

```
  extension: Manages Docker extensions (Docker Inc.)
```

```
    Version:  v0.2.27
```

```
    Path:      C:\Program Files\Docker\cli-plugins\docker-extension.exe
```

```
  feedback: Provide feedback, right in your terminal! (Docker Inc.)
```

```
    Version:  v1.0.5
```

```
Path: C:\Program Files\ Docker\cli-plugins\docker-feedback.exe
init: Creates Docker-related starter files for your project (Docker Inc.)
Version: v1.3.0
Path: C:\Program Files\ Docker\cli-plugins\docker-init.exe
sbom: View the packaged-based Software Bill Of Materials (SBOM) for an
image (Anchore Inc.)
Version: 0.6.0
Path: C:\Program Files\ Docker\cli-plugins\docker-sbom.exe
scout: Docker Scout (Docker Inc.)
Version: v1.14.0
Path: C:\Program Files\ Docker\cli-plugins\docker-scout.exe
```

Server:

```
Containers: 2
Running: 0
Paused: 0
Stopped: 2
Images: 3
Server Version: 27.3.1
Storage Driver: overlayfs
driver-type: io.containerd.snapshotter.v1
Logging Driver: json-file
Cgroup Driver: cgroupfs
Cgroup Version: 2
Plugins:
Volume: local
```

Plugins:

```
Volume: local
Network: bridge host ipvlan macvlan null overlay
Log: awslogs fluentd gcplogs gelf journald json-file local splunk sysl
```

og

```
Swarm: inactive
Runtimes: io.containerd.runc.v2 nvidia runc
Default Runtime: runc
Init Binary: docker-init
containerd version: 472731909fa34bd7bc9c087e4c27943f9835f111
runc version: v1.1.13-0-g58aa920
init version: de40ad0
Security Options:
seccomp
Profile: unconfined
cgroupns
Kernel Version: 6.6.87.2-microsoft-standard-WSL2
Operating System: Docker Desktop
OSType: linux
Architecture: x86_64
CPUs: 8
Total Memory: 7.653GiB
Name: docker-desktop
ID: a87f95e6-d9b0-4ec5-8963-6f8dae2d7540
Docker Root Dir: /var/lib/docker
Debug Mode: false
HTTP Proxy: http.docker.internal:3128
HTTPS Proxy: http.docker.internal:3128
No Proxy: hubproxy.docker.internal
Labels:
```

```

CPUs: 8
Total Memory: 7.653GiB
Name: docker-desktop
ID: a87f95e6-d9b0-4ec5-8963-6f8dae2d7540
Docker Root Dir: /var/lib/docker
Debug Mode: false
HTTP Proxy: http.docker.internal:3128
HTTPS Proxy: http.docker.internal:3128
No Proxy: hubproxy.docker.internal
Labels:
  com.docker.desktop.address=npipe://\\.\pipe\docker_cli
Experimental: false
Insecure Registries:
  hubproxy.docker.internal:5555
  127.0.0.0/8
Live Restore Enabled: false

WARNING: daemon is not using the default seccomp profile

C:\Users\Noelia Gonzales>

```

16. Revisa el historial de una imagen:

docker history httpd

```

C:\Users\Noelia Gonzales>docker history httpd
IMAGE          CREATED          CREATED BY                                      SIZE      COMMENT
3198c1839e1a   2 weeks ago     CMD ["httpd-foreground"]                      0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     EXPOSE map[80/tcp:{}]                          0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     COPY httpd-foreground /usr/local/bin/ # buil... 20.5kB    buildkit.dockerfile.v0
<missing>      2 weeks ago     STOPSIGNAL SIGWINCH                            0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     RUN /bin/sh -c set -eux; savedAptMark="$(a... 34.8MB    buildkit.dockerfile.v0
<missing>      2 weeks ago     ENV HTTPD_PATCHES=                             0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     ENV HTTPD_SHA256=58b8be97d9940ec17f7656c0c6b... 0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     ENV HTTPD_VERSION=2.4.65                       0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     RUN /bin/sh -c set -eux; apt-get install --... 7MB       buildkit.dockerfile.v0
<missing>      2 weeks ago     WORKDIR /usr/local/apache2                     4.1kB     buildkit.dockerfile.v0
<missing>      2 weeks ago     RUN /bin/sh -c mkdir -p "$HTTPD_PREFIX" && ... 16.4kB    buildkit.dockerfile.v0
<missing>      2 weeks ago     ENV PATH=/usr/local/apache2/bin:/usr/local/s... 0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     ENV HTTPD_PREFIX=/usr/local/apache2             0B        buildkit.dockerfile.v0
<missing>      2 weeks ago     # debian.sh --arch 'amd64' out/ 'trixie' '@1... 87.4MB    debuerreotype 0.15

C:\Users\Noelia Gonzales>|

```

17. Busca una imagen según el nombre:

docker search mongo


```

C:\Users\Noelia Gonzales>docker search mongo
NAME                                DESCRIPTION                                STARS    OFFICIAL
mongo                               MongoDB document databases provide high avai... 10619    [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
sacashgit/mongo                   0
excellalabs/mongo                  Dockerfile and scripts to setup a production... 2
winamd64/mongo                     MongoDB document databases provide high avai... 1
mongodb/mongodb-community-server   The Official MongoDB Community Server       164
healthcheck/mongo                  https://github.com/docker-library/healthchec... 5
pagarme/mongo                      0
pastvu/mongo                       0
sscpac/mongo                       alpine mongo                               0
mongodb/mongodb-atlas-local        Create, manage, and automate MongoDB Atlas L... 8

```