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1
Un volumen de contenedor permite conservar los datos, aunque se elimine el contenedor Docker.

2.
Los volúmenes son creados y administrados por docker, a diferencia de bind mount están aislados de nuestra pc y son administrados por docker. Este es un sistema de archivos temporales, estos no se quedan guardados ni en el disco ni en el host de docker, solo se pueden usar mientras el contenedor exista.

3

```
estudiante@DAW1:~$ docker volume create
c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac
estudiante@DAW1:~$ docker volume ls
DRIVER      VOLUME NAME
local       2a7a45e89643637002388bebccf361728320630ddac849cd918d118b44a3d93c
local       6b0dde58db7e1e65c9263a10f66acb7ca04d1ec29ad43722065e8d79fe68dd84
local       6d0b0951fc6dde96783cdfe5002aa25a2ec7f4e773fa52b0175465d352add59c
local       6e7a1bad84fc8d7bf6fdcadb2c9493b3d2615fb06ded688b2d39be206c2c2960
local       63b6f173fb5bd5f070057e166a20dc1ddc215c9a361583aad9313d0f86245c79
local       83d498a3454f1b17c881c9d611b76ef7dfe57c94704bd345b43a4207c35e2f6e
local       95a5f6bdc384384da75a181c4ec883eb4340e3efecb4ea0ac9c1b5c743750bd7
local       43183b83e440ac200e996a20a267ce38ded9c2b8e11f9b00c794728406afe4df
local       c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac
local       dae5ddabedc286aee8c3b94288c71794969b73bcce220bc92812b5c6c993f6b0
local       de0ae49f5c0a8bcf19aef2f0ba5f1827ab2764fdd351a47efd4b4f11aba15ea2
local       e1d477f79035460a656ccab83b32b601a15fd21376a715f18540af73833d22a5
estudiante@DAW1:~$ docker volume inspect c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac
[
    {
        "CreatedAt": "2022-10-04T10:14:26+02:00",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac/_data",
        "Name": "c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac",
        "Options": {},
        "Scope": "local"
    }
]
```

-Línea 1 Fecha de creación
-Línea 2 El driver del volumen
-Línea 4 Ubicación
-Línea 5 Nombre
-Línea 6 Opciones del volumen

4.

```
estudiante@DAW1:~$ docker volume rm c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac
c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda28cac
estudiante@DAW1:~$ docker volume ls
DRIVER      VOLUME NAME
local       2a7a45e89643637002388bebccf361728320630ddac849cd918d118b44a3d93c
local       6b0dde58db7e1e65c9263a10f66acb7ca04d1ec29ad43722065e8d79fe68dd84
local       6d0b0951fc6dde96783cdfe5002aa25a2ec7f4e773fa52b0175465d352add59c
local       6e7a1bad84fc8d7bf6fdcadb2c9493b3d2615fb06ded688b2d39be206c2c2960
local       63b6f173fb5bd5f070057e166a20dc1ddc215c9a361583aad9313d0f86245c79
local       83d498a3454f1b17c881c9d611b76ef7dfe57c94704bd345b43a4207c35e2f6e
local       95a5f6bdc384384da75a181c4ec883eb4340e3efecb4ea0ac9c1b5c743750bd7
local       43183b83e440ac200e996a20a267ce38ded9c2b8e11f9b00c794728406afe4df
local       dae5ddabedc286aee8c3b94288c71794969b73bcce220bc92812b5c6c993f6b0
local       de0ae49f5c0a8bcf19aef2f0ba5f1827ab2764fdd351a47efd4b4f11aba15ea2
local       e1d477f79035460a656ccab83b32b601a15fd21376a715f18540af73833d22a5
estudiante@DAW1:~$
```

5.

docker run --
c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda
28cac apache -v /home/usuario/web:/usr/local/apache2/htdocs -p 80:80
httpd

docker run --
c94d94ef2411aa36becc2ee40b9bdcb61397be8e46cea5d6907feb72fda
28cac apache -p 80:80 --mount
type=bind,src=/home/usuario/web,dst=/usr/local/apache2/htdocs httpd

6.

```
estudiante@DAW1:~$ docker start mysql
mysql
estudiante@DAW1:~$ docker ps
CONTAINER ID   IMAGE        COMMAND           CREATED     STATUS        PORTS                                            NAMES
c8f21232b96d   mysql:5.7.22 "docker-entrypoint.s…"  8 days ago  Up 20 seconds  0.0.0.0:3306->3306/tcp, :::3306->3306/tcp  mysql
estudiante@DAW1:~$ docker stop mysql
mysql
estudiante@DAW1:~$ docker ps
CONTAINER ID   IMAGE    COMMAND   CREATED   STATUS    PORTS     NAMES
```

docker rm mysql

7.

```
estudiante@DAW1:~$ docker run -d --name web -p 3306:3306 httpd:2.4.54
Unable to find image 'httpd:2.4.54' locally
2.4.54: Pulling from library/httpd
31b3f1ad4ce1: Already exists
f29089ecfcbf: Pull complete
a9fcd580ef1c: Pull complete
a19138bf3164: Pull complete
5bfb2ce98078: Pull complete
Digest: sha256:71e882df50adc606c57e46e5deb3c933288e2c7775472a639326d9e4e40a47c2
Status: Downloaded newer image for httpd:2.4.54
c3516fd8a8fe7323193c966eb117fac5a8cbeffeb103d2e4f916c95e359a1dc7
estudiante@DAW1:~$
```

```
estudiante@DAW1:~$ docker ps -l
CONTAINER ID   IMAGE          COMMAND             CREATED          STATUS
  PORTS                                           NAMES
c3516fd8a8fe   httpd:2.4.54   "httpd-foreground"  2 minutes ago    Up 2 minutes
  80/tcp, 0.0.0.0:3306->3306/tcp, :::3306->3306/tcp   web
estudiante@DAW1:~$
```

8.
docker run -d –name Tomcat -p 999:999 httpd:10.1.0-jdk11-temurin-
jammy

docker ps -l

9.
docker stop $(docker ps -a -q)
docker rm $(docker ps -a -q)

10.
docker pull mariadb
docker volume create dataMariadb

11.
docker run -it -d –name db1:
/var/lib/mysql
 -p 3306:3306 -e MYSQL_ROOT_PASSWORD=root mariadb

12.
docker ps -

13.

```
estudiante@DAW1:-$ docker inspect mysql
[
    {
        "Id": "c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9",
        "Created": "2022-09-26T07:33:09.173974466Z",
        "Path": "docker-entrypoint.sh",
        "Args": [
            "mysqld"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 16805,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2022-10-04T09:38:39.86361111Z",
            "FinishedAt": "2022-10-04T08:37:14.015981506Z"
        },
        "Image": "sha256:6bb891430fb6e2d3b4db41fd1f7ece08c5fc769d8f4823ec33c7c7ba99679213",
        "ResolvConfPath": "/var/lib/docker/containers/c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9/resolv.conf",
        "HostnamePath": "/var/lib/docker/containers/c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9/hostname",
        "HostsPath": "/var/lib/docker/containers/c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9/hosts",
        "LogPath": "/var/lib/docker/containers/c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9/c8f21232b96dc951c54864d5b357257f9f418e1afe44857fe34e438bf0fe9cf9-json.log",
        "Name": "/mysql",
        "RestartCount": 0,
        "Driver": "overlay2",
        "Platform": "linux",
        "MountLabel": "",
        "ProcessLabel": "",
        "AppArmorProfile": "docker-default",
        "ExecIDs": null,
        "HostConfig": {
            "Binds": null,
```

14.
docker rmi mysql:8.0.22 mysql:5.7