

TAREA EVALUABLE 3 - SEGUNDA EVALUACIÓN

Autor: Mauro Fernández Vegas

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Despliegue de aplicaciones Web - CIFP La laboral 2022/2023

Ejercicio 2 - REDES Y ALMACENAMIENTO

Creo una red bridge llamada bdnet.

```
docker network create bdnet
```

```
cliente-mauro@clientemauro-VirtualBox:~$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
c1a02a2a877c        bridge              bridge              local
e28a5171630a        host                host                local
45a47407f98d        none                null                local
fd6923c1b362        red1                bridge              local
1710ec2266af        red_guestbook       bridge              local
cliente-mauro@clientemauro-VirtualBox:~$ docker network create bdnet
3c41a048da580600e4bb4082f92ee01b185c61eb51d5ea237cf5f89cac0aff78
cliente-mauro@clientemauro-VirtualBox:~$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
3c41a048da58        bdnet               bridge              local
c1a02a2a877c        bridge              bridge              local
e28a5171630a        host                host                local
45a47407f98d        none                null                local
fd6923c1b362        red1                bridge              local
1710ec2266af        red_guestbook       bridge              local
```

Ahora voy a crear un volumen con el que la base de datos será persistente. Lo llamaré ejercicio 2.

```
docker volume create ejercicio2
```

```
cliente-mauro@clientemauro-VirtualBox:~$ docker volume ls
DRIVER      VOLUME NAME
cliente-mauro@clientemauro-VirtualBox:~$ docker volume create ejercicio2
ejercicio2
```

Ahora que ya tengo creada la red y el volumen, ya puedo crear el contenedor con la imagen de mariadb. Siguiendo las instrucciones del ejercicio lo mapeo en el puerto 3306, declaro la variable de entorno para establecer la contraseña del usuario root y lo enlazo con la red y el volumen anteriormente creados.

```
docker run -d --name bbdd -p 3306:80 -v ejercicio2:/var/lib/mysql -e
MYSQL_ROOT_PASSWORD=root --network bdnet mariadb
```

Nota: para enlazar mariadb al volumen hay que utilizar la url `/var/lib/mysql`.

```
cliente-mauro@clientemauro-VirtualBox:~$ docker run -d --name bbdd -p 3306:80 -v ejercicio2:/var/lib/mysql -e MYSQL_ROOT_PASSWORD=root --network bdnet mariadb
131751efdd441bde54eeb4b7a4cca2376069cc6297356f96f60e91132d407ad1
```

Ya tengo el primer contenedor listo. Ahora voy a crear el segundo contenedor. Este contendrá la imagen del programa adminer, un gestor de bases de datos que funciona en php. Este contenedor debe estar linkeado al

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contenedor de la base de datos.

```
docker run --link bbdd:db -p 8080:8080 --network bdnet adminer
```

```
cliente-mauro@clientemauro-VirtualBox: $ docker run --link bbdd:db -p 8080:8080 --network bdnet adminer
[Mon Apr 10 01:21:53 2023] PHP 7.4.33 Development Server (http://[::]:8080) started
[Mon Apr 10 01:22:12 2023] [::ffff:172.21.0.1]:45500 Accepted
[Mon Apr 10 01:22:17 2023] [::ffff:172.21.0.1]:45500 Closed without sending a request; it was probably just an unused speculative preconnection
[Mon Apr 10 01:22:17 2023] [::ffff:172.21.0.1]:45500 Closing
[Mon Apr 10 01:22:24 2023] [::ffff:172.21.0.1]:52554 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52554 [200]: GET /
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52554 Closing
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52556 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52556 [200]: GET /?file=default.css&version=4.8.1
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52556 Closing
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52568 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52568 [200]: GET /?file=functions.js&version=4.8.1
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52568 Closing
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52574 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52574 [200]: GET /?file=favicon.ico&version=4.8.1
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52574 Closing
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52586 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52586 Closed without sending a request; it was probably just an unused speculative preconnection
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52586 Closing
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52590 Accepted
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52590 [200]: POST /?script=version
[Mon Apr 10 01:22:25 2023] [::ffff:172.21.0.1]:52590 Closing
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36860 Accepted
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36860 [302]: POST /
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36860 Closing
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36870 Accepted
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36870 [403]: GET /?server=db&username=ROOT&db=bbdd
[Mon Apr 10 01:24:21 2023] [::ffff:172.21.0.1]:36870 Closing
```

Esta es una captura de los 2 contenedores funcionando:

```
cliente-mauro@clientemauro-VirtualBox: ~
hello-world latest feb5d9fea6a5 18 months ago 13.3kB
lesgn/guestbook latest 2bfc765647f1 2 years ago 898MB
cliente-mauro@clientemauro-VirtualBox: $ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
2922101dd9d   adminer       "entrypoint.sh php -..." 14 minutes ago Up 14 minutes 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp   epic_jepsen
a7167eb9aea6   adminer       "entrypoint.sh php -..." 14 minutes ago Created                                boring_germain
9ba10aabfa3b   adminer       "entrypoint.sh php -..." 15 minutes ago Created                                gifted_turing
44f73e77e549   adminer       "entrypoint.sh php -..." 16 minutes ago Created                                jolly_lichterman
131751efd444   mariadb      "docker-entrypoint.s..." 21 minutes ago Up 21 minutes 3306/tcp, 0.0.0.0:3306->80/tcp, :::3306->80/tcp   bbdd
cliente-mauro@clientemauro-VirtualBox: $
```

Ahora si abro el navegador y voy a la url `localhost:8080` entro en la interfaz del programa adminer. Me conecto con el usuario root.

for 0.0.0.0:3306 failed: port is already allocated.
[ERR] [0000] error waiting for container: context canceled
cliente-mauro@clientemauro-VirtualBox: \$ docker run --link bbdd:db -p 8080:8080 adminer
docker: Error response from daemon: Cannot link to /bbdd, as it does not belong to the default network.
[ERR] [0000] error waiting for container: context canceled
cliente-mauro@clientemauro-VirtualBox: \$ docker run --link bbdd:db -p 8080:8080 --network bdnet adminer

Adminer 4.8.1

Seleccionar Base de datos

DB:

Crear Base de datos Privilegios Lista de procesos Variables Estado

Versión MySQL: 5.5.5-10.11.2-MariaDB-1:10.11.2+maria-ubu2204 a través de la extensión de PHP MySQLi

Logueado como: root@172.21.0.3

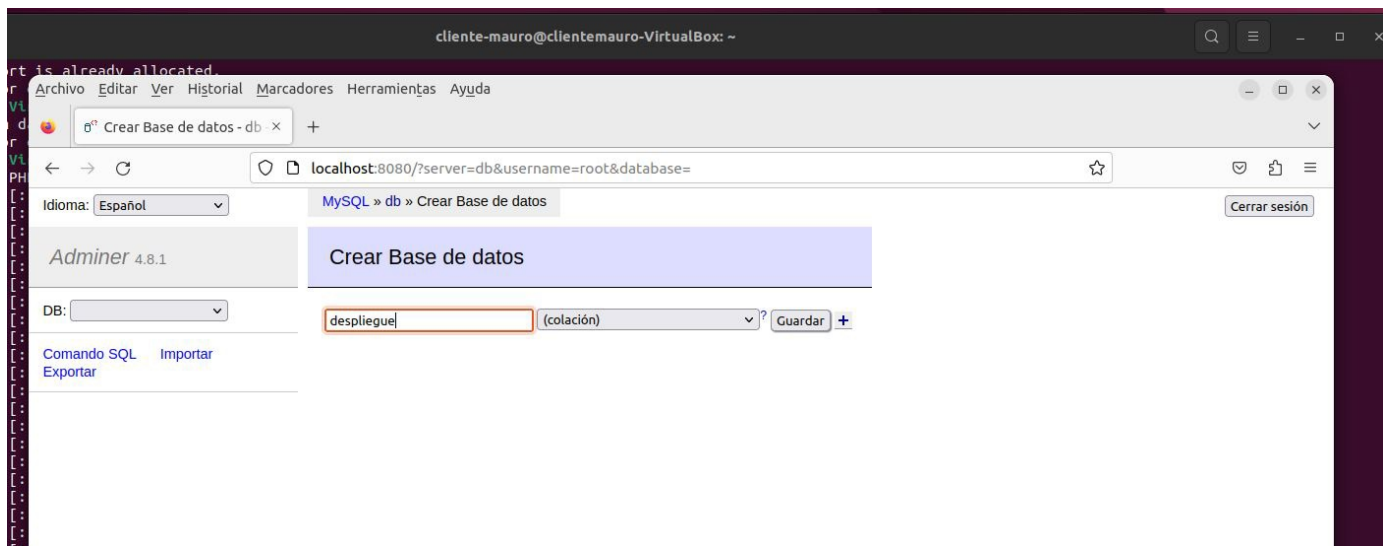
Base de datos	Colación	Tablas	Size	Compute
<input type="checkbox"/> information_schema	utf8mb3_general_ci	?	?	?
<input type="checkbox"/> mysql	utf8mb4_general_ci	?	?	?
<input type="checkbox"/> performance_schema	utf8mb3_general_ci	?	?	?
<input type="checkbox"/> sys	utf8mb3_general_ci	?	?	?

Selected (0)

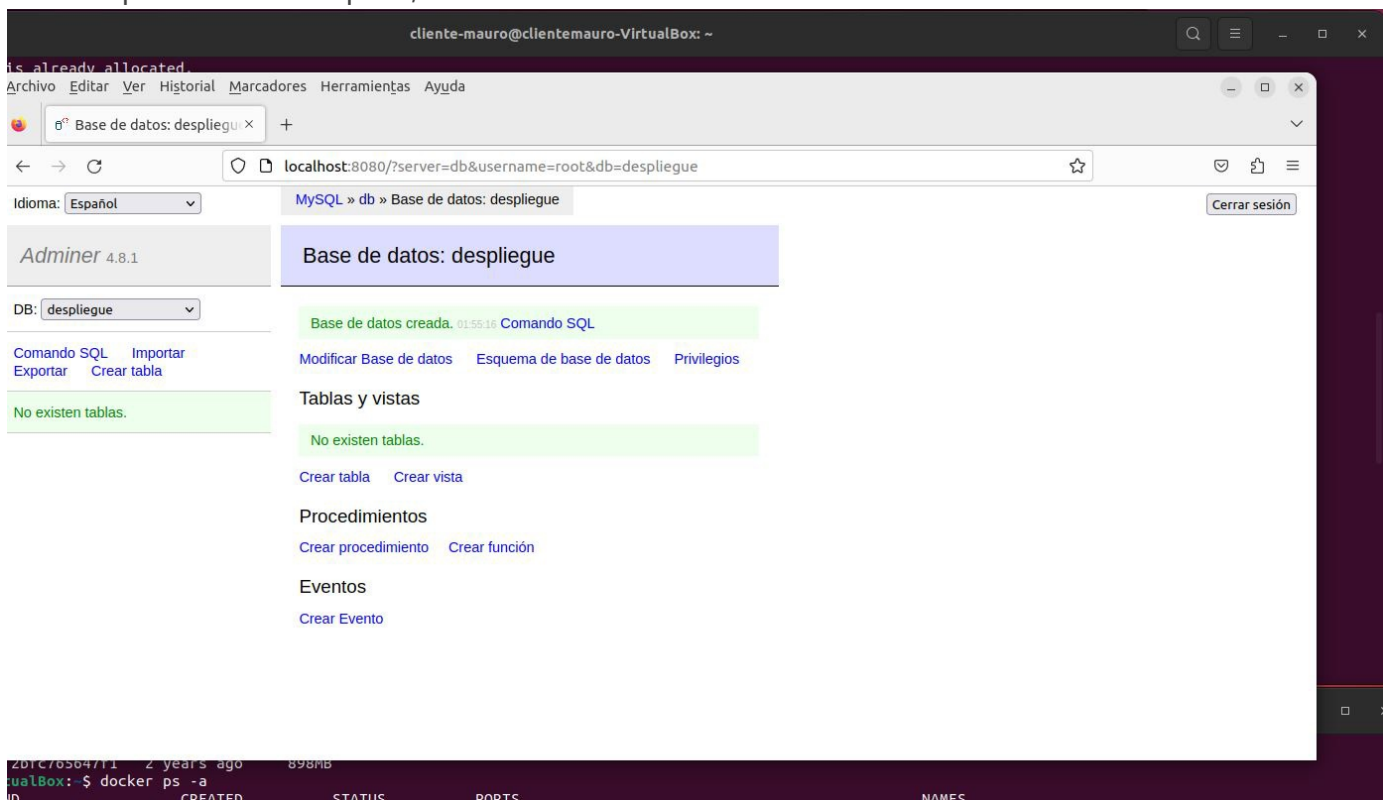
```
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
2922101dd9d   adminer       "entrypoint.sh php -..." 14 minutes ago Up 14 minutes 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp   epic_jepsen
a7167eb9aea6   adminer       "entrypoint.sh php -..." 14 minutes ago Created                                boring_germain
9ba10aabfa3b   adminer       "entrypoint.sh php -..." 15 minutes ago Created                                gifted_turing
44f73e77e549   adminer       "entrypoint.sh php -..." 16 minutes ago Created                                jolly_lichterman
131751efd444   mariadb      "docker-entrypoint.s..." 21 minutes ago Up 21 minutes 3306/tcp, 0.0.0.0:3306->80/tcp, :::3306->80/tcp   bbdd
cliente-mauro@clientemauro-VirtualBox: $
```

Creo una base de datos llamada despliegue con la interfaz del adminer.

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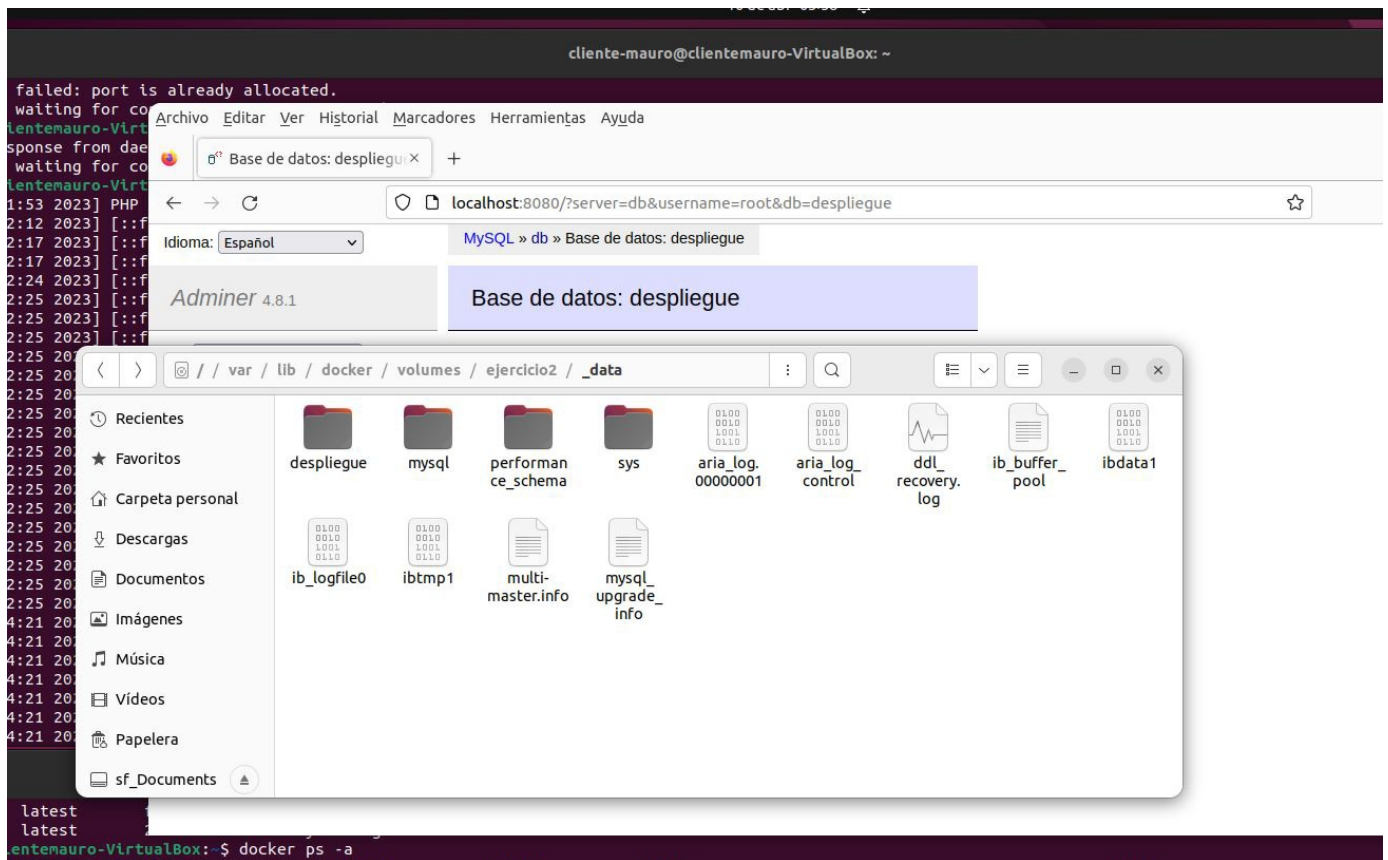
Como se puede ver en la captura, me crea la base de datos correctamente.



Por último, voy a mostrar la carpeta donde se guardan los datos de la base de datos. URL:

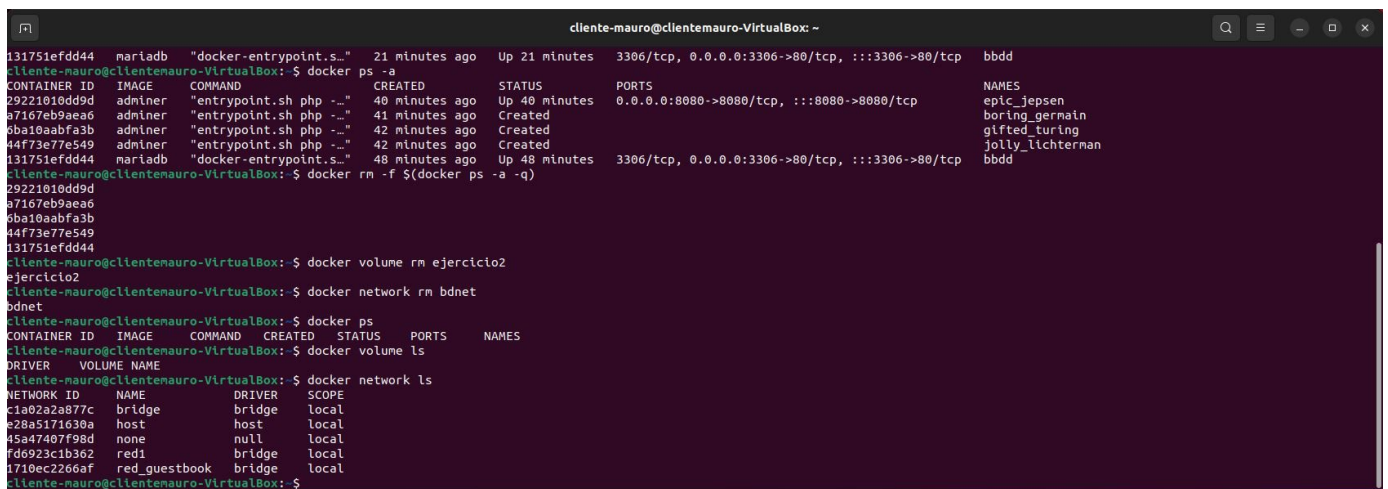
```
/var/lib/docker/volumes/ejercicio2/_data
```


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Para finalizar, como me pide el ejercicio borro todos los contenedores, volúmenes y redes utilizados.

```
docker rm -f $(docker ps -a -q)
docker volume rm ejercicio2
docker network rm bdnet
```



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