

El primer comando que he usado después de crear el Dockerfile para crear la imagen.

```
Successfully tagged mysql:1.0
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker build -t mysql:1.0 .
```

Ahora corremos la imagen

```
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker run -td --name mysql -p 3036:3036 -v /home/francisco/docker/mysql/datos:/var/lib/mysql mysql:1.0
313623ed5126ace6afae7a513ac9b1d5f2ed7ddd11fdd6fa65270d174659545d
francisco@francisco-VirtualBox:~/docker/mysql$
```

Entramos dentro del contenedor

```
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker exec -ti mysql "/bin/bash"
root@313623ed5126:/#
```

Instalamos mysql-server

```
root@4d86e9a5528d:/# apt-get install mysql-server
```

Levantar MySQL porque está parado

```
root@4d86e9a5528d:/# service mysql start
* Starting MySQL database server mysqld
root@4d86e9a5528d:/#
```

Configuraremos la contraseña del administrador con la seguridad de mysql

```
All done!
root@4d86e9a5528d:/# mysql_secure_installation
```

Pondremos de contraseña mysql

Accedemos al mysql con mysql -u root -p

```
root@4d86e9a5528d:/# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 12
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Ahora vamos a crear la base de datos prueba

```
mysql> create database prueba;
Query OK, 1 row affected (0.00 sec)

mysql>
```

Crearemos el usuario Docker con permisos totales

```
mysql> grant all privileges on prueba.* to docker identified by 'docker';
Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)

mysql> █
```

Usamos la base de datos y creamos las tablas

```
mysql> use prueba;
Database changed
mysql> create table ejemplo1(campo1 varchar(10)primary key);
Query OK, 0 rows affected (0.03 sec)

mysql> create table ejemplo2(campo2 varchar(10)primary key);
Query OK, 0 rows affected (0.02 sec)

mysql> create table ejemplo3(campo3 varchar(10)primary key);
Query OK, 0 rows affected (0.01 sec)

mysql> █
```

Accedemos a la base de datos desde el exterior con el usuario Docker

```
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker exec -ti mysql mysql -u docker -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| prueba |
+-----+
2 rows in set (0.00 sec)

mysql> █
```

```
mysql> use prueba;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_prueba |
+-----+
| ejemplo1          |
| ejemplo2          |
| ejemplo3          |
+-----+
3 rows in set (0.00 sec)

mysql> █
```

Ahora vamos a pagar el contenedor para demostrar los datos persistentes

```
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker container stop 4d86e9a5528d
4d86e9a5528d
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker container start 4d86e9a5528d
4d86e9a5528d
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker exec -ti mysql mysql -u docker -p
Enter password:
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (111)
francisco@francisco-VirtualBox:~/docker/mysql$ █
```

Debemos reiniciar el servicio

```
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker exec -ti mysql /bin/bash
root@4d86e9a5528d:/# service mysql start
 * Starting MySQL database server mysqld
No directory, logging in with HOME=/

root@4d86e9a5528d:/# █
```

Volvemos a acceder desde el exterior

```

francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker exec -ti mysql mysql -u docker -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use prueba;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_prueba |
+-----+
| ejemplo1          |
| ejemplo2          |
| ejemplo3          |
+-----+
3 rows in set (0.00 sec)

mysql>

```

Como vemos funciona la persistencia de datos

Vamos a guardar un estado actual de la imagen

```

francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker commit -a "francisco francisco.torres.hig@gmail.com" -m "mysql-server" mysql mysql:1.0
sha256:22476920e4666ea725a9243db301bd7d9b028d2fc58cfe86dfbb43515e6d5551
francisco@francisco-VirtualBox:~/docker/mysql$ sudo docker images

```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
mysql	1.0	22476920e466	10 seconds ago	760MB

Ya tendríamos nuestra imagen con el servidor instalado