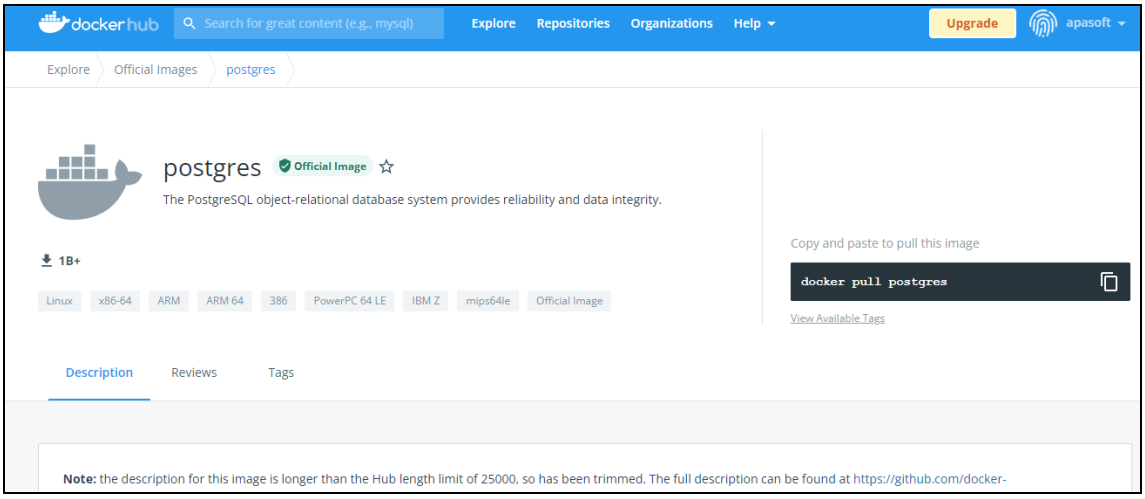
Prácticas Docker

1. Variables

- Vamos a realizar un ejemplo de variables con la imagen de postgres



- Podemos comprobar dentro de la documentación de Docker hub que la imagen de Postgres dispone de una serie de variables para poder construir nuestra base de datos:

Environment Variables

The PostgreSQL image uses several environment variables which are easy to miss. The only variable required

Warning: the Docker specific variables will only have an effect if you start the container with a data directory container startup.

POSTGRES_PASSWORD

This environment variable is required for you to use the PostgreSQL image. It must not be empty or undefine The default superuser is defined by the `POSTGRES_USER` environment variable.

Note 1: The PostgreSQL image sets up `trust` authentication locally so you may notice a password is not req However, a password will be required if connecting from a different host/container.

Note 2: This variable defines the superuser password in the PostgreSQL instance, as set by the `initdb` scrip environment variable that may be used by the `psql` client at runtime, as described at https://www.postgres specified as a separate environment variable.

POSTGRES_USER

This optional environment variable is used in conjunction with `POSTGRES_PASSWORD` to set a user and its pass a database with the same name. If it is not specified, then the default user of `postgres` will be used.

Be aware that if this parameter is specified, PostgreSQL will still show `The files belonging to this databa` refers to the Linux system user (from `/etc/passwd` in the image) that the `postgres` daemon runs as, and a "Arbitrary `--user` Notes" for more details.

POSTGRES_DB

This optional environment variable can be used to define a different name for the default database that is cr `POSTGRES_USER` will be used.

- Por tanto vamos a crear un contenedor postres con los siguientes datos:
  - base de datos: pt1
  - Usuario de base de datos: usudb1
  - Password: Lepanto
- Primero, nos descargamos la imagen

```
docker pull postgres
Using default tag: latest
latest: Pulling from library/postgres
c229119241af: Already exists
3ff4ca332580: Pull complete
5037f3c12de6: Pull complete
0444ef779945: Pull complete
47098a4166e7: Pull complete
```

```
203cca980fab: Pull complete
a479b6c0e001: Pull complete
1eaa9abe8ca4: Pull complete
cad613328fe3: Pull complete
1ce5087aacfa: Pull complete
b133d2355caa: Pull complete
b2694eb85faf: Pull complete
503b75e1e236: Pull complete
Digest:
sha256:e3d8179786b8f16d066b313f381484a92efb175d1ce8355dc18
0fee1d5fa70ec
Status: Downloaded newer image for postgres:latest
docker.io/library/postgres:latest
```

- Comprobamos que la tenemos

```
docker images | grep postgres
postgres          latest    1ee973e26c65   13 days ago    376MB
```

- Creamos un contenedor con los datos indicados previamente:

```
docker run -d --name postgres1 -e POSTGRES_USER=usudb1 -e
POSTGRES_DB=pt1 -e POSTGRES_PASSWORD=lepanto postgres
f50741945fe034e5ee243cafa2a1ac16831c128ee784cb5e48db4c3e8f
e3be9b
```

- Comprobamos que está funcionando

```
docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED
STATUS              PORTS      NAMES
f50741945fe0   postgres   "docker-entrypoint.s…"   About a
minute ago   Up About a minute   5432/tcp   postgres1
```

- Vamos ahora a entrar dentro del contenedor para comprobar que todo está correcto

```
docker exec -it postgres1 bash
root@f50741945fe0:/#
```

- Invocamos al comando en modo línea para conectarnos a postgres que se denomina PSQL. Le indicamos además el usuario y la base de datos con la que queremos conectarnos, y de esa manera comprobamos que efectivamente se ha creado de forma correcta todo lo que hemos indicado anteriormente

```
psql -U usudb1 pt1
psql (14.2 (Debian 14.2-1.pgdg110+1))
Type "help" for help.

pt1=#
```

- Una vez dentro comprobamos por ejemplo que existen las bases de datos. Para hacerlo lanzamos el comando \l

```
pt1=# \l
                                 List of databases
   Name    | Owner  | Encoding |  Collate   |   Ctype    | Access privileges
-----------+--------+----------+------------+------------+-------------------
 postgres  | usudb1 | UTF8     | en_US.utf8 | en_US.utf8 |
 pt1       | usudb1 | UTF8     | en_US.utf8 | en_US.utf8 |
 template0 | usudb1 | UTF8     | en_US.utf8 | en_US.utf8 | =c/usudb1         +
           |        |          |            |            | usudb1=CTc/usudb1
 template1 | usudb1 | UTF8     | en_US.utf8 | en_US.utf8 | =c/usudb1         +
           |        |          |            |            | usudb1=CTc/usudb1
(4 rows)
```