Instalar docker windows 10:

https://www.youtube.com/watch?v=BK-C2RofmTE

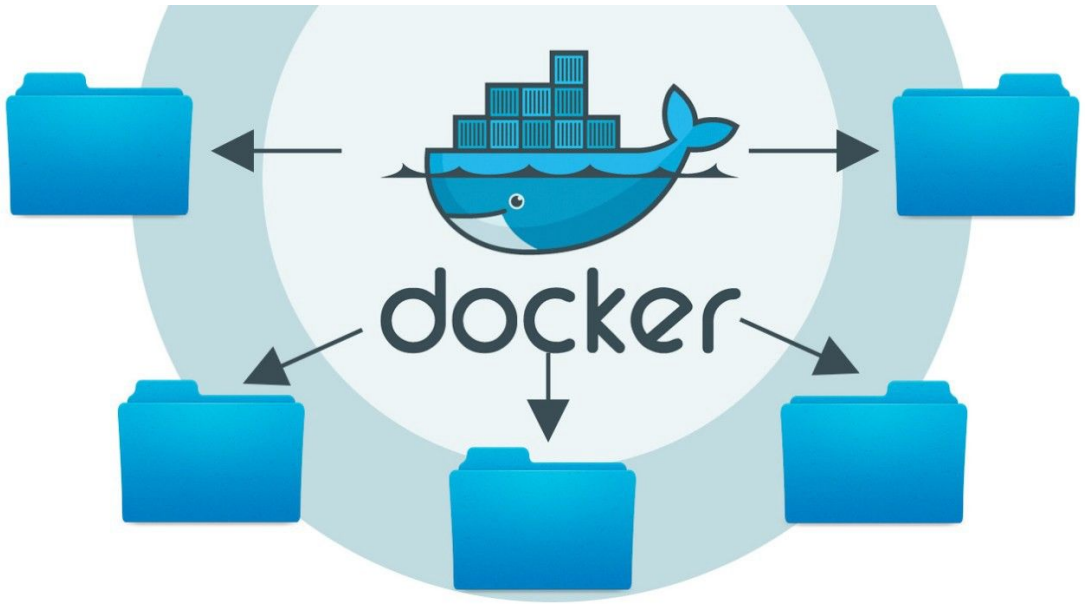
Instalar docker compose windows 10:

https://www.youtube.com/watch?v=6cm49WRH5Ik

Instalar docker compose Ubuntu:

sudo apt install docker-compose

Volúmenes de docker.



Cuando un contenedor es borrado, toda la información contenida en él, desaparece. Para tener almacenamiento persistente en nuestros contenedores, que no se elimine al borrar el contenedor, es necesario utilizar volúmenes de datos (data volume). Un volumen es un directorio o un fichero en el docker engineque se monta directamente en el contenedor. Podemos montar varios volúmenes en un contenedor y en varios contenedores podemos montar un mismo volumen.

Tenemos dos alternativas para gestionar el almacenamiento en docker:

- Usando volúmenes de datos
- Usando contenedores de volúmenes de datos

Volúmenes de datosPermalink

Los volúmenes de datos tienen las siguientes características:

- Son utilizados para guardar e intercambiar información de forma independientemente a la vida de un contenedor.

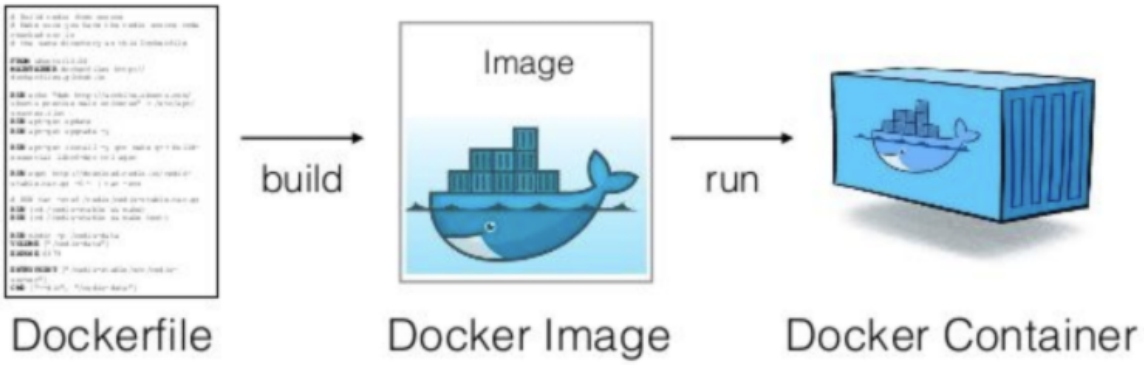
- Nos permiten guardar e intercambiar información entre contenedores.
- Cuando borramos el contenedor, no se elimina el volumen asociado.
- Los volúmenes de datos son directorios del host montados en un directorio del contenedor, aunque también se pueden montar ficheros.
- En el caso de montar en un directorio ya existente de un contenedor un volumen de datos , su contenido no será eliminado.

https://www.josedomingo.org/pledin/2016/05/gestion-del-almacenamiento-en-docker/

Dockerfile

Docker can build images automatically by reading the instructions from a Dockerfile. A Dockerfile is a text document that contains all the commands a user could call on the command line to assemble an image. Using docker build users can create an automated build that executes several command-line instructions in succession.

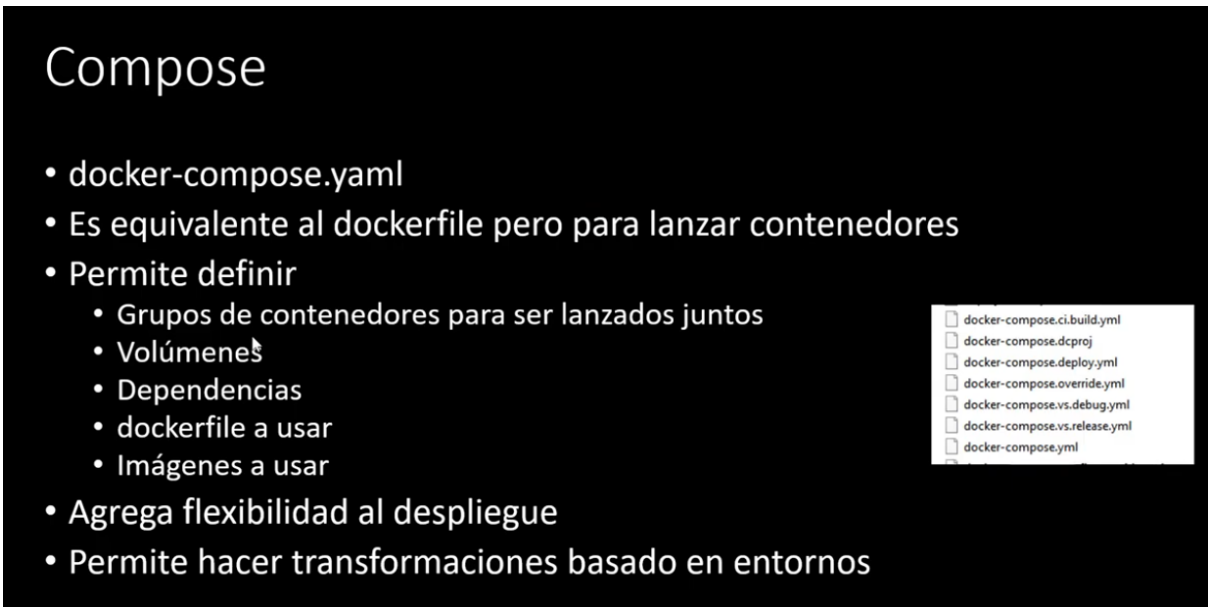
Definir como creo la imagen



https://docs.docker.com/engine/reference/builder/

Docker Compose

Saber cómo configurar un contenedor a partir de una imagen o comandos que se basen en una imagen
Comunicar contenedores para usar una sola aplicación.



Ejercicio: Mysql

1. sudo docker pull mysql/mysql-server:latest
2. sudo docker images
3. sudo docker run --name=[container_name] -d [image_tag_name]

Replace **[container_name]** with the name of your choice. If you do not provide a name, Docker generates a random one.

The **-d** option instructs Docker to run the container as a service in the background.

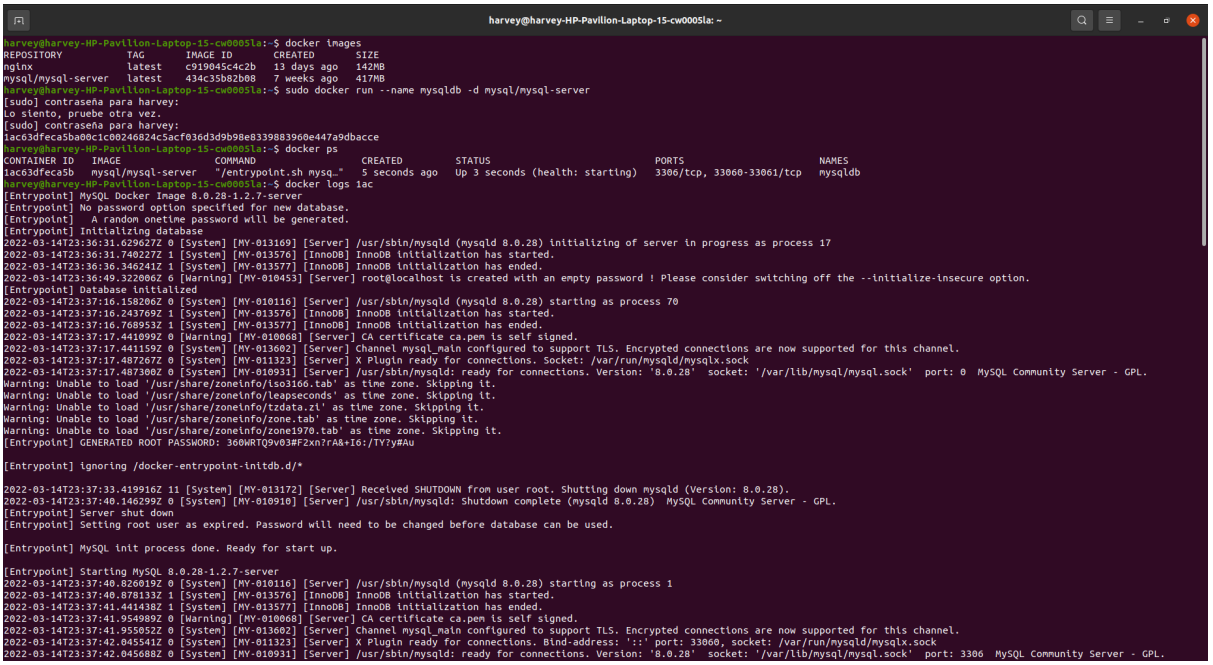
Replace **[image_tag_name]** with the name of the image downloaded in Step 1.

4. sudo docker run --name=[container_name] -d mysql/mysql-server:latest
5. docker ps
6. apt-get install mysql-client
7. sudo docker logs [container_name]
8. sudo docker exec -it [container_name] bash
9. mysql -u root -p
10. mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY '[newpassword]';
11. Comandos en sql:

- show databases;
- create database miprueba;
- use miprueba;
- create table persona (id_persona int, nombrepersona varchar(50), correopersona varchar(50));
- show tables;
- create table estudiante (id_estudiante int, nombreestudiante varchar(50), correoestudiante varchar(50));

- show tables;
- describe persona;
- insert into persona (id_persona, nombrepersona, correopersona) values (1,'persona1', 'correo1');
- insert into persona (id_persona, nombrepersona, correopersona) values (2,'persona2', 'correo2');
- describe estudiante;
- insert into estudiante (id_estudiante, nombreestudiante, correoestudiante) values (1,'estudiante1', 'correo1');
- insert into estudiante (id_estudiante, nombreestudiante, correoestudiante) values (2,'estudiante2', 'correo2');
- select * from persona;
- select * from estudiante;
- exit

Imágenes:



```
harvey@harvey-HP-Pavilion-Laptop-15-cw0005la:~$ sudo docker exec -it 1ac bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 15
Server version: 8.0.28

Copyright (c) 2000, 2022, Oracle and/or its affiliates.

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> ALTER USER 'root'@'localhost' IDENTIFIED BY '0000';
Query OK, 0 rows affected (0.16 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
4 rows in set (0.01 sec)

mysql> create database miprueba;
Query OK, 1 row affected (0.20 sec)

mysql> use miprueba;
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql> create table persona (id_persona int, nombrepersona varchar(50), correopersona varchar(50))
    -> ;
Query OK, 0 rows affected (0.34 sec)

mysql> show tables;
+--------------------+
| Tables_in_miprueba |
+--------------------+
| persona            |
+--------------------+
1 row in set (0.00 sec)

mysql> create table estudiante (id_estudiante int, nombreestudiante varchar(50),
 correoestudiante varchar(50));
Query OK, 0 rows affected (0.35 sec)
```

```
harvey@harvey-HP-Pavilion-Laptop-15-cw0005la: ~

mysql> show tables;
+--------------------+
| Tables_in_miprueba |
+--------------------+
| estudiante         |
| persona            |
+--------------------+
2 rows in set (0.00 sec)

mysql> describe persona;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| id_persona    | int         | YES  |     | NULL    |       |
| nombrepersona | varchar(50) | YES  |     | NULL    |       |
| correopersona | varchar(50) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> insert into persona (id_persona, nombrepersona, correopersona) values (1,'persona1', 'correo1');
Query OK, 1 row affected (0.07 sec)

mysql> insert into persona (id_persona, nombrepersona, correopersona) values (2,'persona2', 'correo2');
Query OK, 1 row affected (0.05 sec)

mysql> describe estudiante;
+------------------+-------------+------+-----+---------+-------+
| Field            | Type        | Null | Key | Default | Extra |
+------------------+-------------+------+-----+---------+-------+
| id_estudiante    | int         | YES  |     | NULL    |       |
| nombreestudiante | varchar(50) | YES  |     | NULL    |       |
| correoestudiante | varchar(50) | YES  |     | NULL    |       |
+------------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> insert into estudiante (id_estudiante, nombreestudiante, correoestudiante) values (1,'estudiante1', 'correo1');
Query OK, 1 row affected (0.07 sec)

mysql> insert into estudiante (id_estudiante, nombreestudiante, correoestudiante) values (2,'estudiante2', 'correo2');
Query OK, 1 row affected (0.08 sec)

mysql> select * from persona;
+------------+--------------+---------------+
| id_persona | nombrepersona | correopersona |
+------------+--------------+---------------+
|          1 | persona1     | correo1       |
|          2 | persona2     | correo2       |
+------------+--------------+---------------+
2 rows in set (0.00 sec)
```

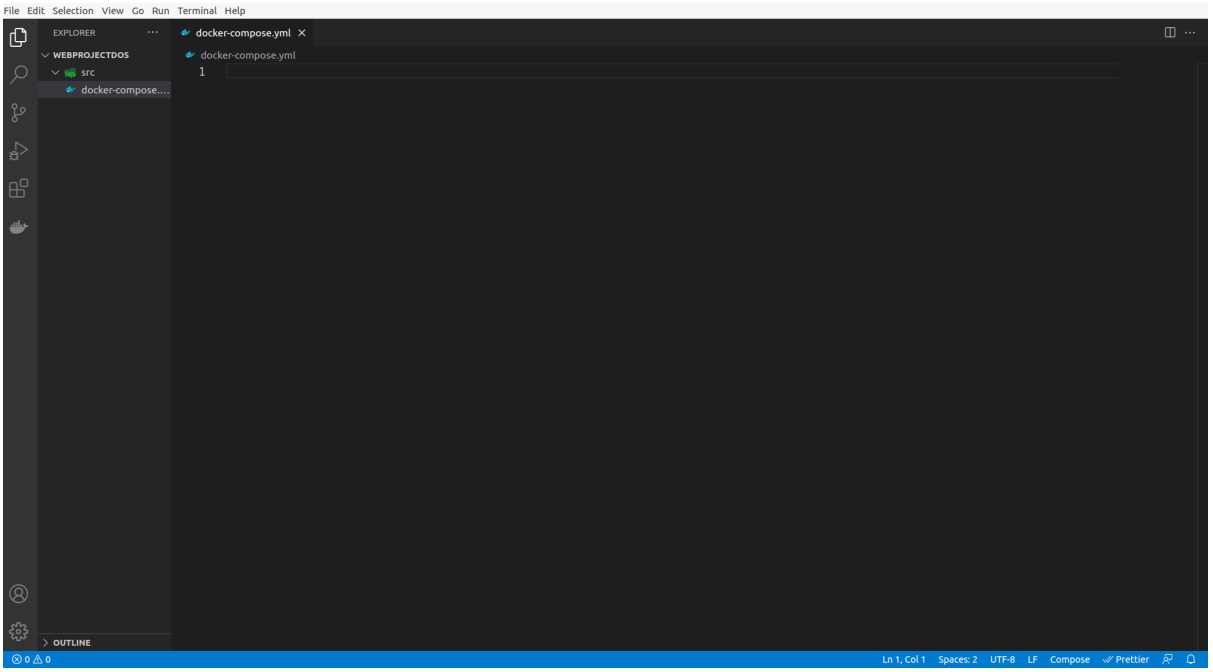
```
mysql> select * from persona;
+------------+--------------+---------------+
| id_persona | nombrepersona | correopersona |
+------------+--------------+---------------+
|          1 | persona1     | correo1       |
|          2 | persona2     | correo2       |
+------------+--------------+---------------+
2 rows in set (0.00 sec)

mysql> select * from estudiante;
+---------------+-----------------+------------------+
| id_estudiante | nombreestudiante | correoestudiante |
+---------------+-----------------+------------------+
|             1 | estudiante1     | correo1          |
|             2 | estudiante2     | correo2          |
+---------------+-----------------+------------------+
2 rows in set (0.00 sec)

mysql> exit
Bye
bash-4.4# exit
```

https://phoenixnap.com/kb/mysql-docker-container

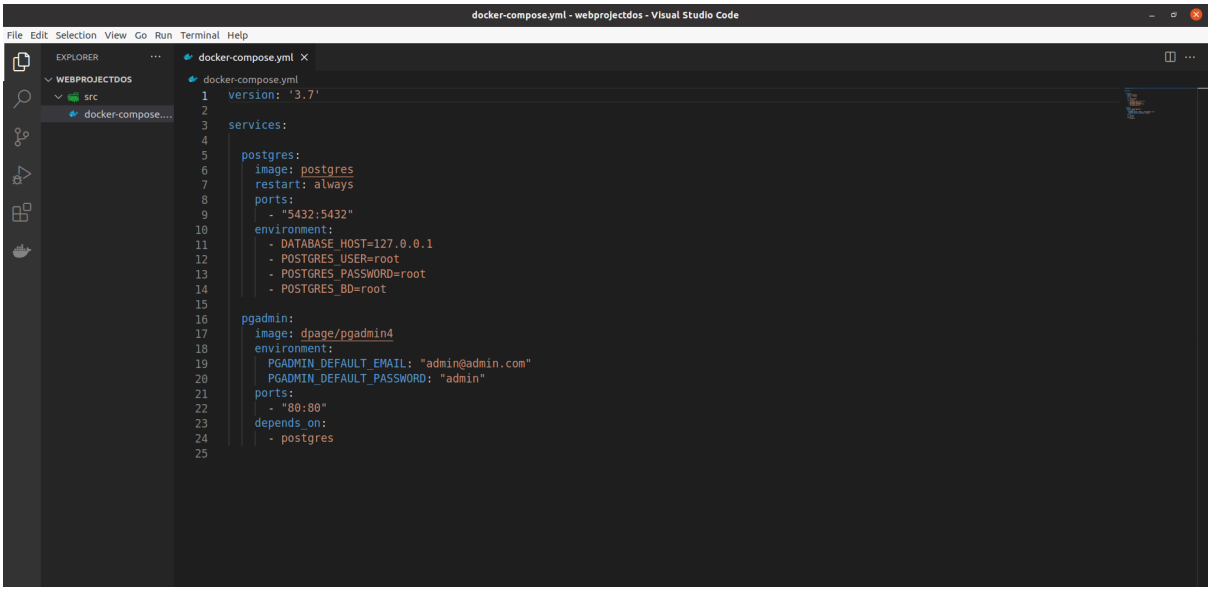
Taller: PgAdmin y postgres

1. Crear una nueva carpeta llamada webprojectdos.

2. Abrir dicha carpeta con visualstudio
3. Dentro de la carpeta principal crear una nueva carpeta llamada src y dentro de ella un archivo llamado docker-compose.yml



4. Visitar la siguiente página: https://docs.docker.com/compose/compose-file/compose-versioning/, para verificar la última versión de docker compose.
5. En el archivo docker-compose.yml agregar lo siguiente:

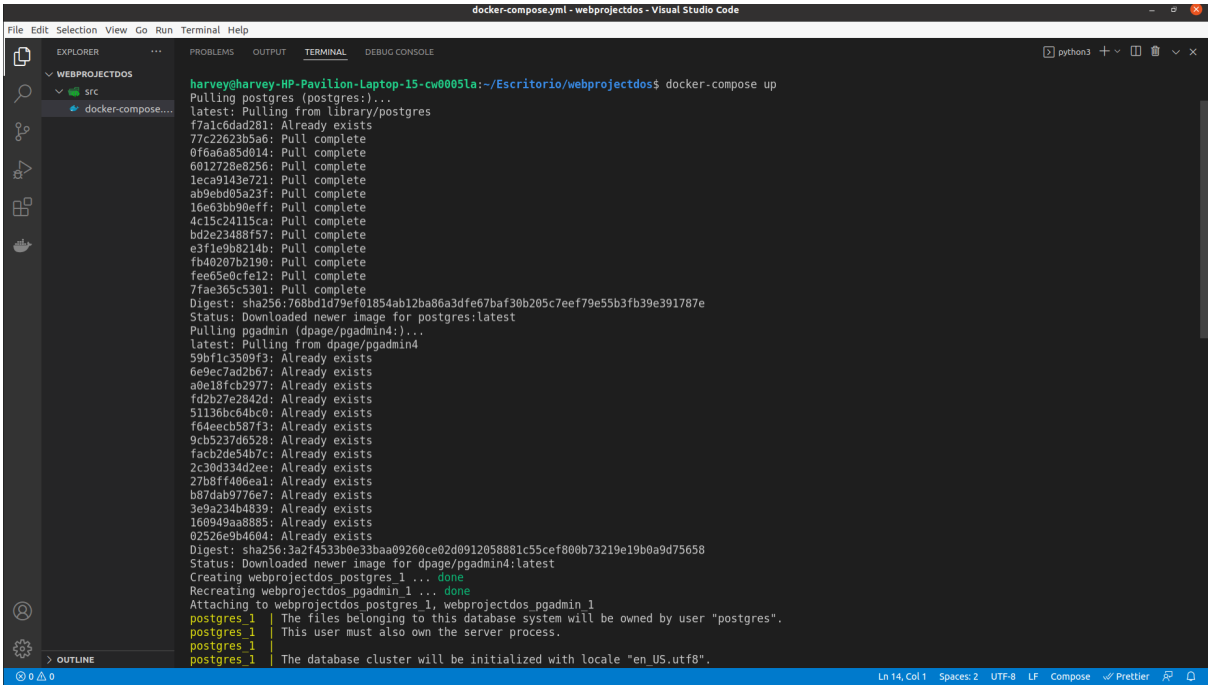


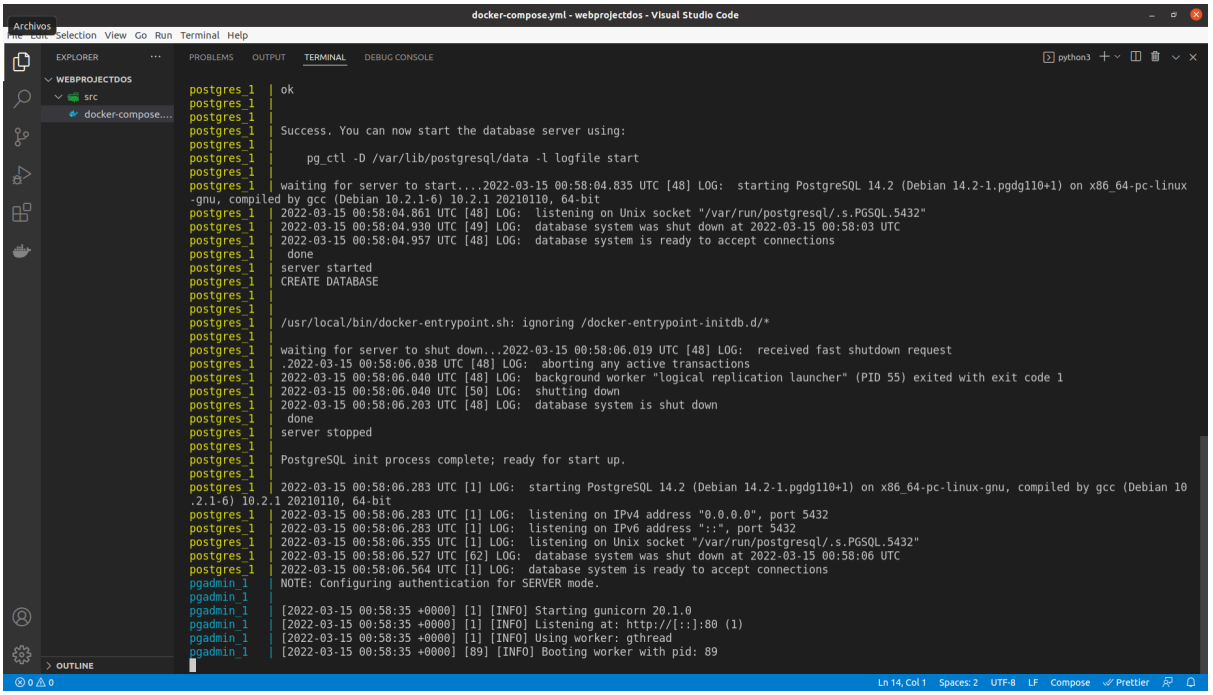
https://gist.github.com/FaztTech/ecd7ccf20d04e090f8896ad9f74810e4

6. Los enlaces de referencia son: https://www.pgadmin.org/docs/pgadmin4/latest/container_deployment.html

https://hub.docker.com/r/dpage/pgadmin4/
https://hub.docker.com/_/postgres
https://docs.docker.com/compose/compose-file/compose-versioning/

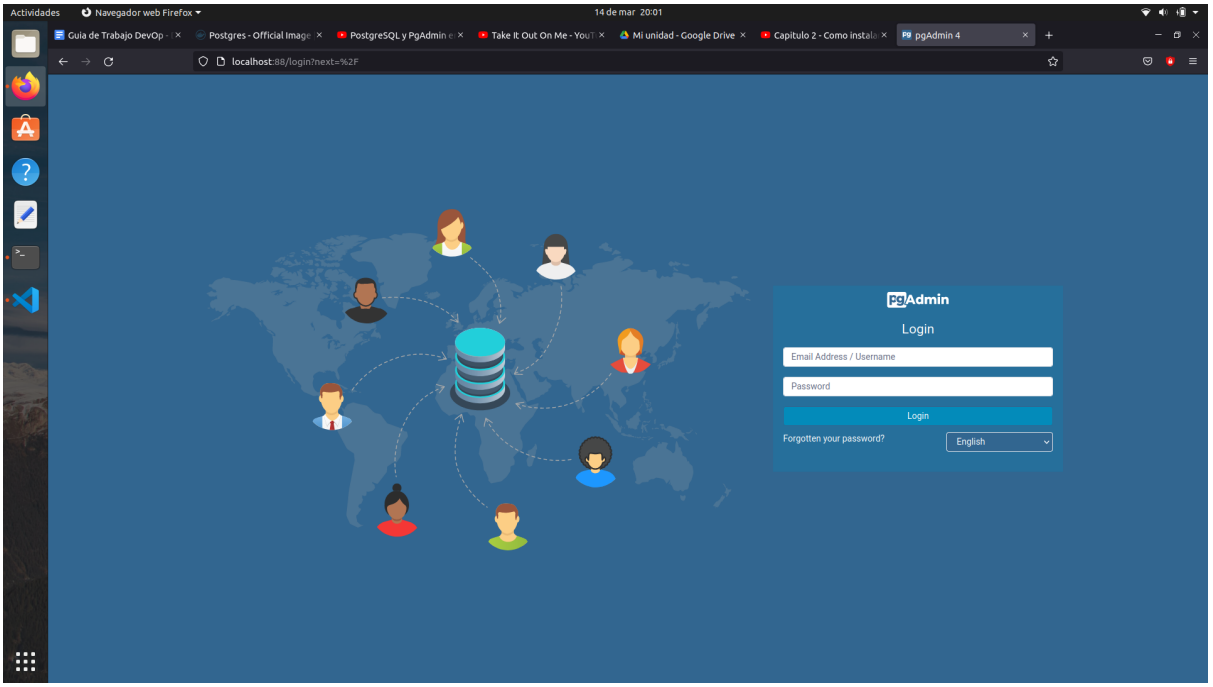
7. Abrir una terminal y ejecutar el siguiente comando: docker-compose up

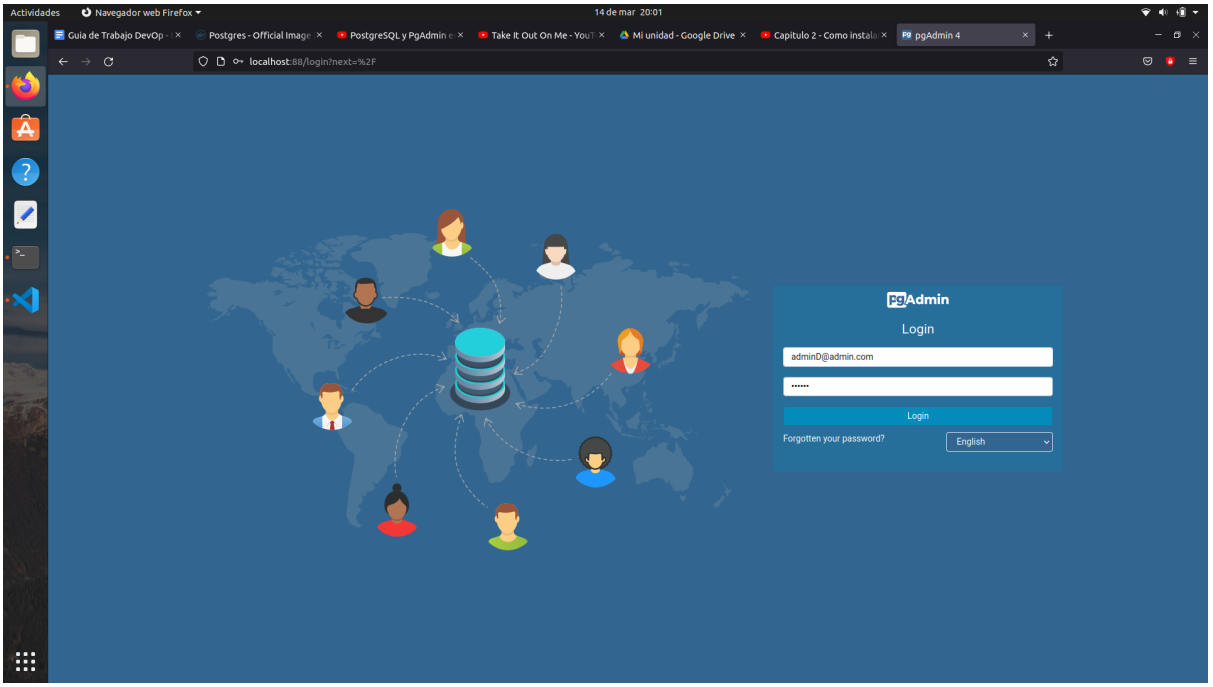




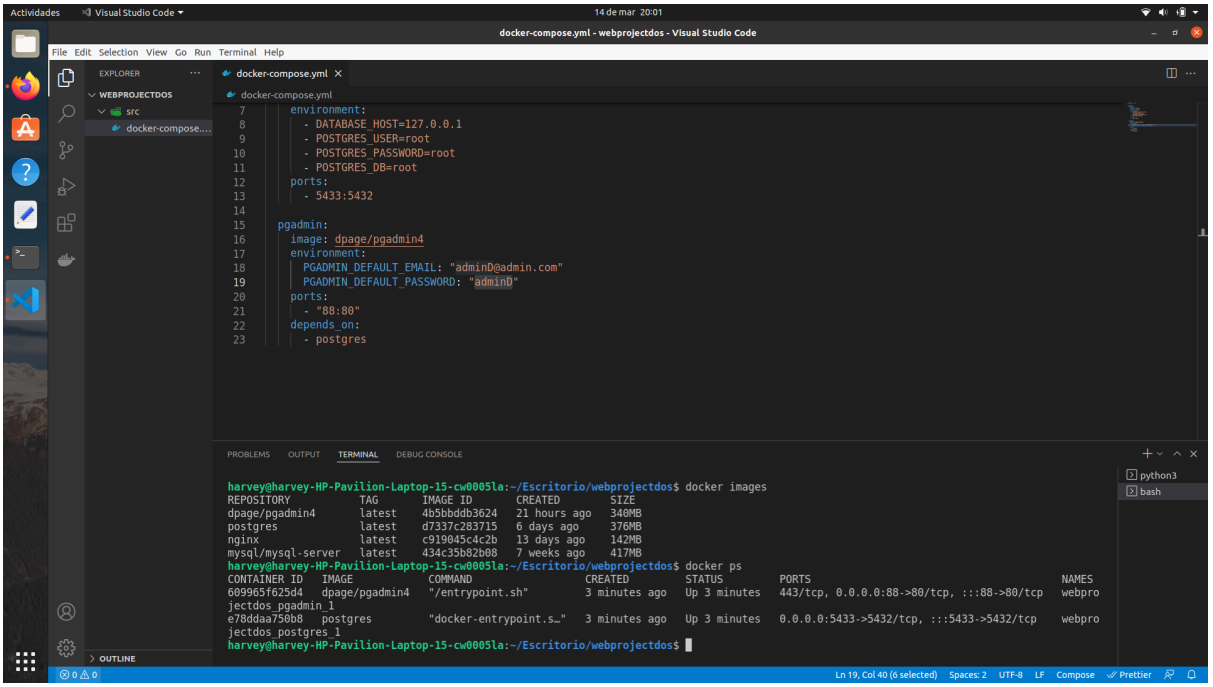
Descarga postgres y pgadmin

8. Abrir un navegador y acceder a localhost (se debe agregar el puerto en caso de ser necesario) e iniciar sesión con las respectivas credenciales.

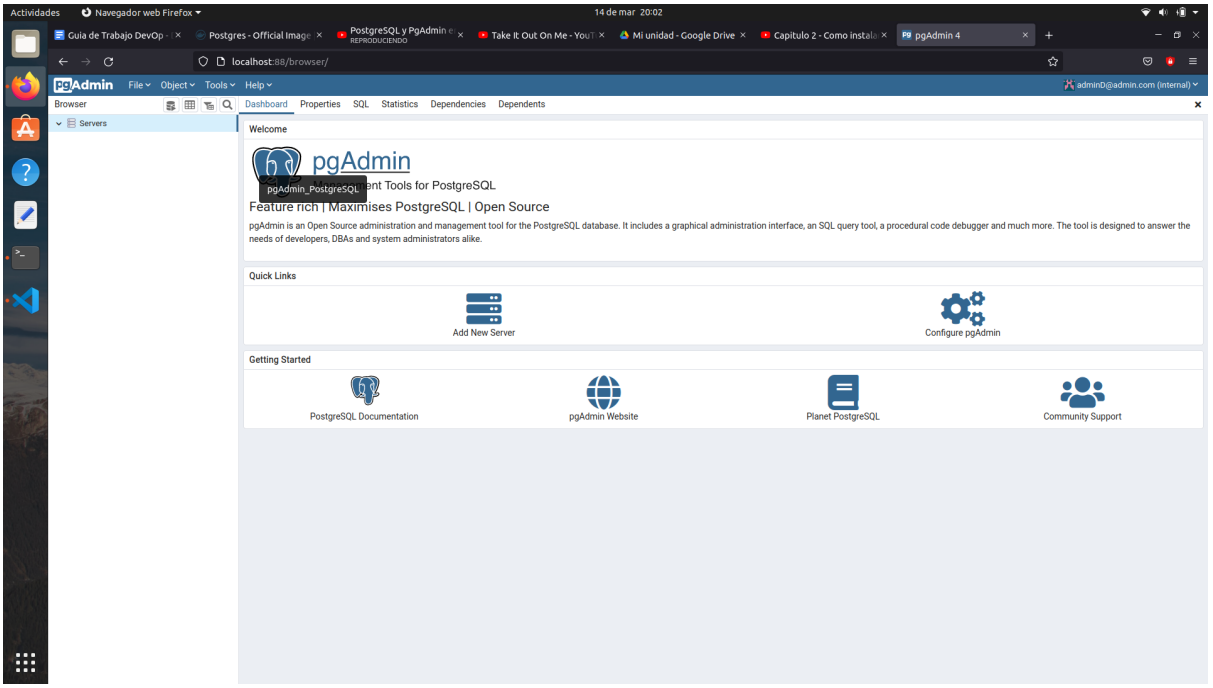


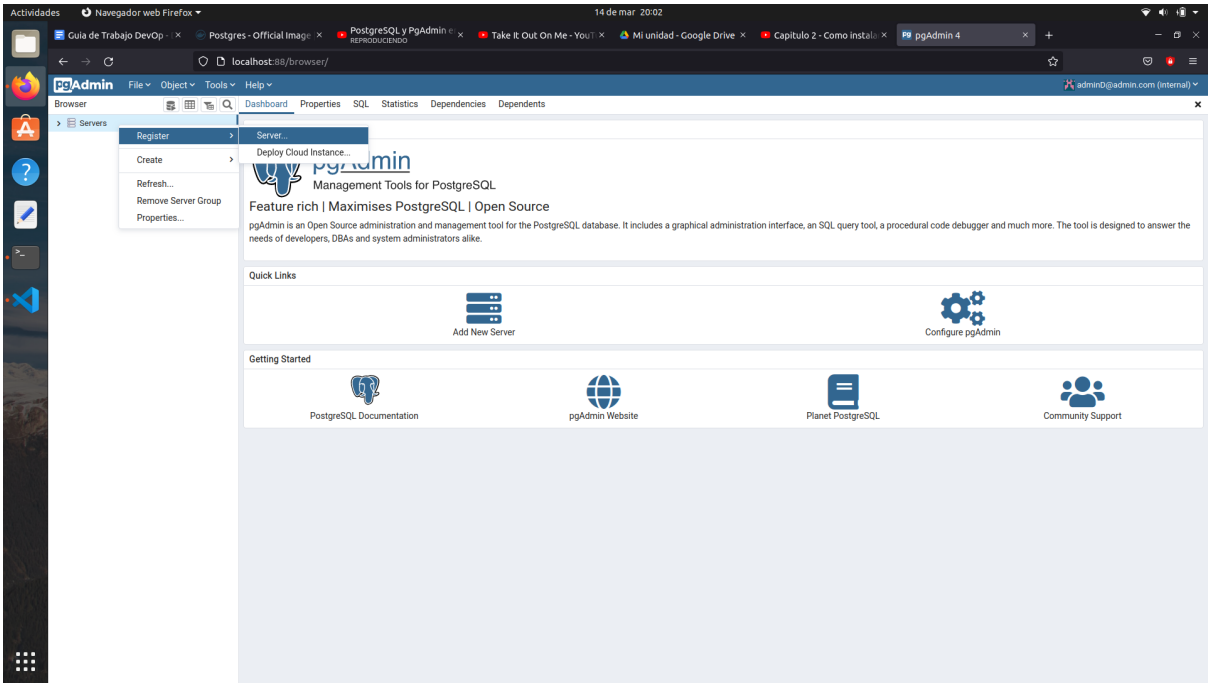


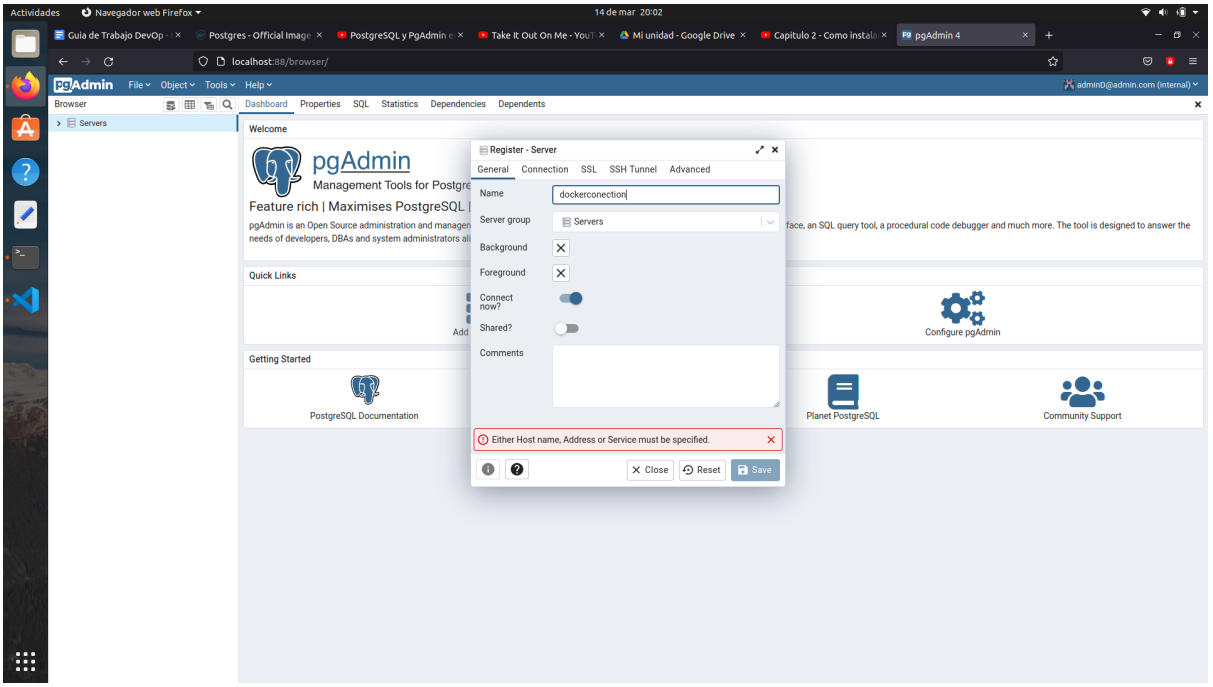
9. Verificamos que los contenedores estén corriendo con docker ps

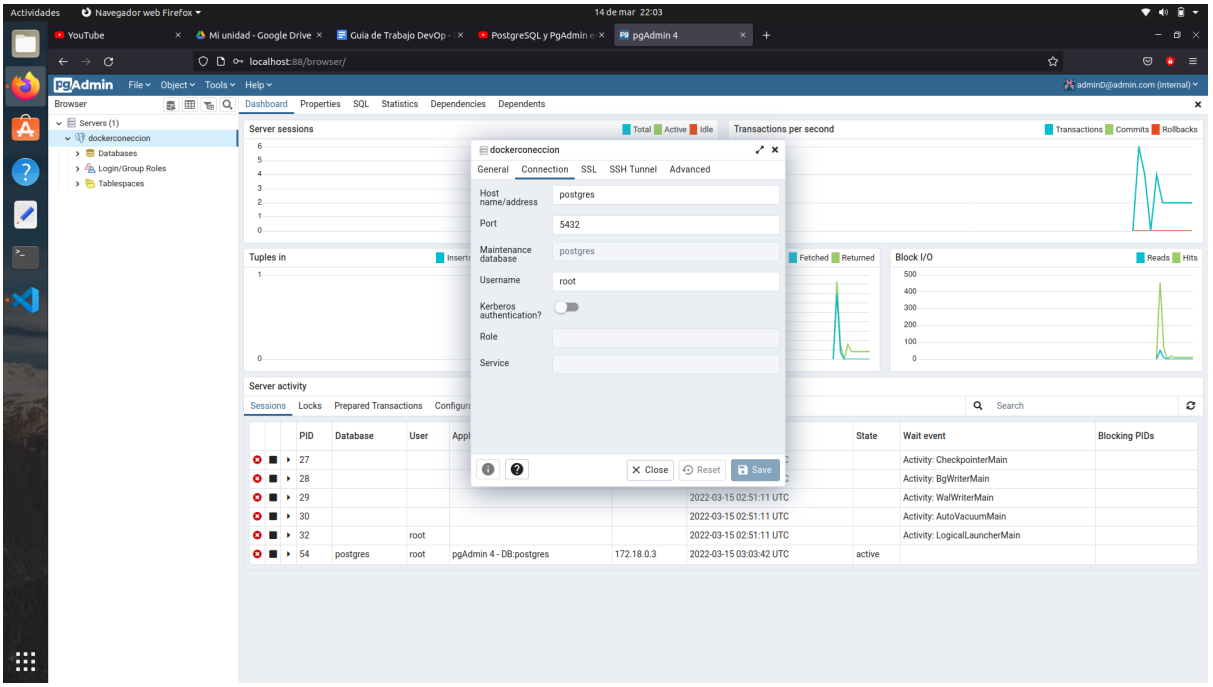


10. Configurar servidor en pgAdmin y validar que se encuentre la base de datos root.




Actividades
Navegador web Firefox
14 de mar 20:02
Guia de Trabajo DevOp
Postgres - Official Image
PostgreSQL y PgAdmin
Take It Out On Me - YouT
Mi unidad - Google Drive
Capitulo 2 - Como instala
pgAdmin 4
localhost:88/browser/
pgAdmin
File
Object
Tools
Help
adminD@admin.com (internal)
Browser
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Servers
Register
Server...
Deploy Cloud Instance...
Create
Refresh...
Remove Server Group
Properties...
pgAdmin
Management Tools for PostgreSQL
Feature rich | Maximises PostgreSQL | Open Source
pgAdmin is an Open Source administration and management tool for the PostgreSQL database. It includes a graphical administration interface, an SQL query tool, a procedural code debugger and much more. The tool is designed to answer the needs of developers, DBAs and system administrators alike.
Quick Links
Add New Server
Configure pgAdmin
Getting Started
PostgreSQL Documentation
pgAdmin Website
Planet PostgreSQL
Community Support


Actividades
Navegador web Firefox
14 de mar 20:02
localhost:88/browser/
pgAdmin
Browser
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Servers
Welcome
pgAdmin
Management Tools for Postgre
Feature rich | Maximises PostgreSQL
Register - Server
General
Connection
SSL
SSH Tunnel
Advanced
Name
dockerconection
Server group
Servers
Background
Foreground
Connect now?
Shared?
Comments
Either Host name, Address or Service must be specified.
Close
Reset
Save
Quick Links
Configure pgAdmin
Getting Started
PostgreSQL Documentation
Planet PostgreSQL
Community Support


Actividades
Navegador web Firefox
14 de mar 22:03
YouTube
Mi unidad - Google Drive
Guia de Trabajo DevOp
PostgreSQL y PgAdmin
pgAdmin 4
localhost:88/browser/
pgAdmin
File
Object
Tools
Help
adminD@admin.com (internal)
Browser
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Servers (1)
dockerconeccion
Databases
Login/Group Roles
Tablespaces
Server sessions
Total
Active
Idle
Transactions per second
Transactions
Commits
Rollbacks
Tuples in
Fetched
Returned
Block I/O
Reads
Hits
dockerconeccion
General
Connection
SSL
SSH Tunnel
Advanced
Host name/address
postgres
Port
5432
Maintenance database
postgres
Username
root
Kerberos authentication?
Role
Service
Close
Reset
Save
Server activity
Sessions
Locks
Prepared Transactions
Search
PID
Database
User
State
Wait event
Blocking PIDs
27
Activity: CheckpointerMain
28
Activity: BgWriterMain
29
2022-03-15 02:51:11 UTC
Activity: WalWriterMain
30
2022-03-15 02:51:11 UTC
Activity: AutoVacuumMain
32
root
2022-03-15 02:51:11 UTC
Activity: LogicalLauncherMain
54
postgres
root
pgAdmin 4 - DB:postgres
172.18.0.3
2022-03-15 03:03:42 UTC
active