

#016 Docker Databases

Introduction

this is part 16 from the journey it's a long journey(360 day) so go please check previous parts , and if you need to walk in the journey with me please make sure to follow because I may post more than once in 1 Day but surely I will post daily at least one 😊.

And I will cover lot of tools as we move on.

Docker and databases

This part will be very very short because we talk about volumes before. but there is a Database special volume.

I am going to use official postgres image in this.

if we go to [postgres](#) official image.

PGDATA

This optional variable can be used to define another location - like a subdirectory - for the database files. The default is `/var/lib/postgresql/data` . If the data volume you're using is a filesystem mountpoint (like with GCE persistent disks) or remote folder that cannot be chowned to the `postgres` user (like some NFS mounts), Postgres `initdb` recommends a subdirectory be created to contain the data.

For example:

```
$ docker run -d \
  --name some-postgres \
  -e POSTGRES_PASSWORD=mysecretpassword \
  -e PGDATA=/var/lib/postgresql/data/pgdata \
  -v /custom/mount:/var/lib/postgresql/data \
  postgres
```

This is an environment variable that is not Docker specific. Because the variable is used by the `postgres` server binary (see the [PostgreSQL docs](#)), the entrypoint script takes it into account.

```
docker run -d \
  --name some-postgres \
  -e POSTGRES_PASSWORD=mysecretpassword \
  -e PGDATA=/var/lib/postgresql/data/pgdata \
  -v /custom/mount:/var/lib/postgresql/data \
  postgres
```

we have a new tag here `-e` we didn't talk about before and it's out of the scope for today but in case you are curious

```
(base) in ~
> docker run --help | grep -e,
-a, --attach list          Attach to STDIN, STDOUT or STDERR
--blkio-weight uint16      Block IO (relative weight), between 10 and 1000, or
-c, --cpu-shares int       CPU shares (relative weight)
--cpuset-cpus string       CPUs in which to allow execution (0-3, 0,1)
--cpuset-mems string       MEMs in which to allow execution (0-3, 0,1)
-d, --detach              Run container in background and print container ID
-e, --env list            Set environment variables
-h, --hostname string      Container host name
```

```
docker run --help | grep -e,
```

| *grep* is a linux/unix thing , | it's called pipeline it takes the output of the first and passed to the other program *grep* is a built in program to search for a text in our case it's -e

-e This is an environment variable that is not Docker specific. Because the variable is used by the postgres server binary

we see that postgres default place to save data is `:/var/lib/postgresql/data` , it's vary between databases redis use another location , it depend on every database.

so `-v /custom/mount:/var/lib/postgresql/data` is our volume for postgres database.

again if you need to use any other database you should read documentation of docker image to see where it store here data.