Dockers 101 – Series 5 of N – Using docker-setting up a MySQL/MariaDB container

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• Requirement:

 Lets imagine that as a DevOps, you have been asked to create a container to run MySQL/MariaDB, and try different docker commands to run MySQL/MariaDB in foreground, background, with specific port binding, with dynamic port binding, persisting data and logs from container to a volume on host

Strategy:

- search the name of image on docker hub
- o run the MySQL/MariaDB container in background as its a database and will take time to setup
- run MySQL/MariaDB in background
- o run MySQL/MariaDB with specific port
- run MySQL/MariaDB with dynamic port
- run MySQL/MariaDB with volume persistance

Solution:

- Login to your Host machine(in my case a CentOS 7 machine)
- Make a directory "mymariadb" and go to the directory mkdir mymariadb && cd mymariadb
- o How to
 - search for an image using filters and limits- docker search –filter "is-official=true" –limit 5 mariadb
 - o run an image
 - in interactive mode docker run –name mymariadb-fg -e
 MYSQL_ROOT_PASSWORD=mypasswordfg -it mariadb:latest
 - in background mode docker run –name mymariadb-bg -e
 MYSQL ROOT PASSWORD=mypasswordbg -d mariadb:latest

- Check logs -
 - **docker logs -f 506290cb3cba** # show continuous logs as it generates

• Using docker-compose:

```
GNU nano 2.3.1

version: '3.1'

services:
    db:
        image: mariadb
        restart: always
        environment:
            MYSQL_ROOT_PASSWORD: mypassword

adminer:
    image: adminer
    restart: always
    ports:
        - 8080:8080
```

```
version: '3.1'

services:

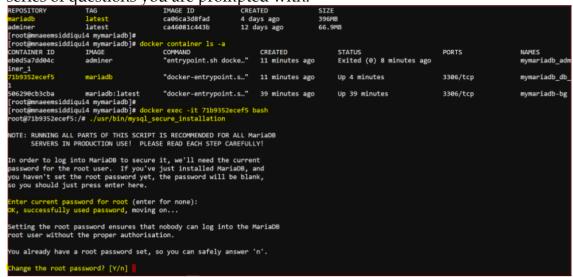
db:
    image: mariadb
    restart: always
    environment:
        MYSQL_ROOT_PASSWORD: testpass

adminer:
    image: adminer
    restart: always
    ports:
    - 8080:8080
```

• Create a file 'docker-compose.yml' and copy the above content and save.

```
[root@mnaeemsiddigui4 user]# cd mymariadb
[root@mnaeemsiddiqui4 mymariadb]# nano docker-compose.yml
[root@mnaeemsiddiqui4 mymariadb]# ls
docker-compose.vml
[root@mnaeemsiddiqui4 mymariadb]# docker-compose version
docker-compose version 1.20.1, build 5d8c71b
docker-py version: 3.1.4
CPython version: 3.6.4
OpenSSL version: OpenSSL 1.0.1t 3 May 2016
[root@mnaeemsiddiqui4 mymariadb]# docker-compose up
Creating network "mymariadb default" with the default driver
Pulling adminer (adminer:latest)...
latest: Pulling from library/adminer
605ce1bd3f31: Pull complete
2f5aa494661d: Pull complete
7963c90c835a: Pull complete
a3f2a1640434: Pull complete
df6e3b1fa4c7: Pull complete
70f0c1f6fed9: Pull complete
48d1a0bf6b63: Pull complete
96b160f5ff2b: Pull complete
b85911ab8d07: Pull complete
40e0cfadb213: Pull complete
292dbb160cf5: Pull complete
a78747f6af10: Pull complete
44af7d387956: Pull complete
745228577747: Pull complete
458b7bb3a50a: Pull complete
Digest: sha256:5fbd1d76c2aeb0f8a895705b18f039b18f327c13c588eaadd76f96dbebdaf2bd
Status: Downloaded newer image for adminer:latest
Creating mymariadb_adminer_1 ... done
Creating mymariadb_db_1
```

• run 'docker exec -it <container-id>' e.g. docker exec -it 71b9352ecef5 bash and follow the series of questions you are prompted with.



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