# **Docker compose**

# Etape 1: Création sans docker-compose

Par exemple, pour créer un conteneur nginx, avec un volume spécifique et un réseau spécifique, nous devrions faire :

1. Créer un volume

```
docker volume create --name vol_nginx
```

```
vagrant@mydocker:~$ docker volume create --name vol_nginx
vol_nginx
```

2. Affichez les volumes

```
docker volume 1s
```

```
vagrant@mydocker:~$ docker volume 1s
DRIVER VOLUME NAME
local vol_nginx
```

3. Créez un réseau

```
docker network create net_nginx
```

```
vagrant@mydocker:~$ docker network create net_nginx
0378cec87ced67268bc93a774b7f305992ebeb3f3c246de96e5defde6e9c429b
```

4. Affichez les réseaux

```
docker network ls
```

```
omydocker:~$ docker network ls
NETWORK ID
                    NAME
                                                               SCOPE
                                         DRIVER
35437d685315
                    bridge
                                         bridge
                                                               local
eca043e15001
                                                               local
                    host
                                         host
0378cec87ced
                    net_nginx
                                         bridge
                                                               local
1ddbe38e11d1
                                         nul1
                                                               local
                    none
```

5. Lancer le conteneur

```
docker run -d -p 80:80 \
    -v vol_nginx:/var/www \
    --network net_nginx \
    -e VARIABLE=truc \
    --name nginx nginx
```

# 6. Vérifiez dans un navigateur



## 7. Supprimez les ressources

### Conteneurs

```
docker container stop $(docker container ls -aq)
```

```
docker container rm $(docker container ls -aq)
```

### **Volumes**

```
docker volume rm $(docker volume ls -q)
```

#### Réseau

docker network rm net\_nginx

## Etape 2 : Comparaison avec docker-compose, on commence par le fichier

Créez un répertoire compose, dans ce répertoire créez un fichier docker-compose.yml

Ajouter le contenu suivant :

```
version: '2'
volumes:
 vol nginx:
networks:
 net nginx:
services:
 nginx:
   image: nginx
    container name: nginx
   volumes:
     - vol nginx:/var/www
    environment:
      - VARIABLE=truc
   ports:
     - "80:80"
    networks:
      - net nginx
```

Puis on lance le tout :

```
docker-compose up -d
```

```
vagrant@mydocker:~/compose$ vagrant@mydocker:~/compose$ docker-compose up -d
Creating network "compose_net_nginx" with the default driver
Creating volume "compose_vol_nginx" with default driver
Creating nginx ...
Creating nginx ... done
```

# Vérifiez dans un navigateur



# Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to <a href="nginx.org">nginx.org</a>. Commercial support is available at <a href="nginx.com">nginx.com</a>.

Thank you for using nginx.

# Etape 3: MySQL + GUI

https://docs.docker.com/samples/library/mysql/

1. Créez un répertoire ex : doc-compose

Dans ce répertoire créez un fichier docker-compose.yml et ajouter le contenu suivant

### docker-compose.yml

```
version: '2.0'
services:
   adminer:
    image: adminer
   restart: always
   ports:
        - 8080:8080
   db:
    image: mysql:5.6
   restart: always
   environment:
        MYSQL_ROOT_PASSWORD: azerty
```

### **Exécution**

Ouvrir un terminal T1 dans le répertoire doc-compose

```
docker-compose up
```

### Ouvrir un autre terminal T2

```
docker ps
```

```
CONTATNER TO
                    TMAGE
                                         COMMAND
                                                                    CREATED
                                                                                         STATUS
                                          "entrypoint.sh docke..."
0c84654cf087
                    adminer
                                                                    2 minutes ago
                                                                                         Up 2 minutes
                                                                                                              0.0.0.0:8080->8080/tcp
                                                                                                                                        doccompose\_adminer\_1
 58db1a45aba
                                          "docker-entrypoint.s..
                                                                    2 minutes ago
                                                                                         Up 2 minutes
                                                                                                              3306/tcp
                                                                                                                                        doccompose db 1
```

```
docker exec -it <id container mysql> bash
```

```
vagrant@mydocker:~$ docker exec -it 45 bash
root@458db1a45aba:/#
```

```
mysql -u root -p
```

```
root@458db1a45aba:/# mysql -u root -p
Enter password:
Welcome to the MysQL monitor. Commands end with ; or \g.
Your MysQL connection id is 1
Server version: 5.6.45 MySQL Community Server (GPL)

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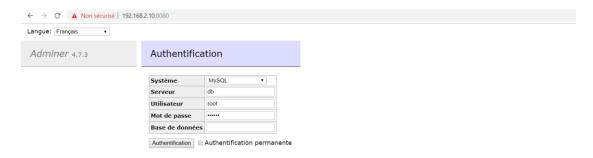
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

show databases;

Exit

```
mysql> exit
Bye
root@458db1a45aba:/#
```

Ouvrir un navigateur sur l'url : <a href="http://192.168.2.10:8080/">http://192.168.2.10:8080/</a>



#### Nous obtenons



# Revenir dans le terminal T1

ctrl+c
docker-compose down
docker ps