

TP Docker MySQL

Nom: KADDOUR BAKIR Riham

Objectif

Mettre en place un conteneur MySQL avec Docker, créer une base de données, insérer des données et tester la persistance à travers le redémarrage du conteneur.

Étapes et commandes

4. Créer un conteneur MySQL propre

```
docker run -d
--name mysql-demo
-e MYSQL_ROOT_PASSWORD=pass123
-v mysql_data:/var/lib/mysql
mysql:8
```

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker run -d \
--name mysql-demo \
-e MYSQL_ROOT_PASSWORD=pass123 \
-v mysql_data:/var/lib/mysql \
mysql:8
2f90072a021893b56b2a65d4bd1f71c99b692031d0f08807e0aa99d411b513e8
```

5. Vérifier que le conteneur fonctionne

```
docker ps
```

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
2f90072a0218	mysql:8	"docker-entrypoint.s..."	25 seconds ago	Up 25 sec
ports	3306/tcp, 33060/tcp			
	mysql-demo			
b4b9bbefcf88	gcr.io/k8s-minikube/kicbase:v0.0.48	"/usr/local/bin/entr..."	34 minutes ago	Up 34 mir
utes	127.0.0.1:32768->22/tcp, 127.0.0.1:32769->2376/tcp, 127.0.0.1:32770->5000/tcp, 127.0.0.1:32771->8443/tcp, 127.0.0.1:32772->32443/tcp	minikube		

6. Se connecter au conteneur MySQL

```
docker exec -it mysql-demo mysql -uroot -p
```

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker exec -it mysql-demo mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.4.7 MySQL Community Server - GPL

Copyright (c) 2000, 2025, 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> CREATE DATABASE testdb;
```

7. Créer une base de données

```
CREATE DATABASE testdb;
SHOW DATABASES;
```

```
mysql> CREATE DATABASE testdb;
Query OK, 1 row affected (0.01 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| testdb |
+-----+
5 rows in set (0.01 sec)
```

8. Créer une table et insérer des données

```
USE testdb;
CREATE TABLE users (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(50),
  email VARCHAR(50)
);
INSERT INTO users (name, email) VALUES
('Alice', '[alice@example.com](mailto:alice@example.com)'),
('Bob', '[bob@example.com](mailto:bob@example.com)');
SELECT * FROM users;
```

```
mysql> USE testdb;
mysql> CREATE TABLE users (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(50),
  email VARCHAR(50)
);
mysql> INSERT INTO users (name, email) VALUES
('Alice', '[alice@example.com](mailto:alice@example.com)'),
('Bob', '[bob@example.com](mailto:bob@example.com)');
mysql> SELECT * FROM users;
Query OK, 0 rows affected (0.02 sec)
```

9. Arrêter et redémarrer le conteneur

```
docker stop mysql-demo
docker start mysql-demo
```

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker stop mysql-demo
mysql-demo
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker start mysql-demo
mysql-demo
```

10. Vérifier la persistance des données

```
docker exec -it mysql-demo mysql -uroot -p
USE testdb;
SELECT * FROM users;
```

Toutes les données doivent toujours être présentes.

```
mysql-demo
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker exec -it mysql-demo mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.4.7 MySQL Community Server - GPL

Copyright (c) 2000, 2025, 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> USE testdb;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SELECT * FROM users;
+-----+-----+-----+
| id | name | email |
+-----+-----+-----+
| 1 | Alice | alice@example.com |
| 2 | Bob | bob@example.com |
+-----+-----+-----+
```

11. Créer un deuxième conteneur en partageant les données

```
docker stop mysql-demo
docker run -d
--name mysql-demo2
-e MYSQL_ROOT_PASSWORD=pass123
-v mysql_data:/var/lib/mysql
mysql:8
```

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker run -d \
--name mysql-demo2 \
-e MYSQL_ROOT_PASSWORD=pass123 \
-v mysql_data:/var/lib/mysql \
mysql:8
6a9d4f7afe8577f2b1d1e01e43e9362ccc92acf54ec26a1caad38bee35b910a8
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker stop mysql-demo
```

12. Accéder aux données depuis le deuxième conteneur

```
docker exec -it mysql-demo2 mysql -uroot -p
USE testdb;
SELECT * FROM users;
```

Les mêmes données doivent être accessibles.

```
kaddourbakirriham@cloudshell:~/2decembre (discovergirl)$ docker exec -it mysql-demo2 mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.4.7 MySQL Community Server - GPL

Copyright (c) 2000, 2025, 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> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| testdb |
+-----+
5 rows in set (0.01 sec)

mysql> USE testdb;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SELECT * FROM users;
+-----+
| id | name | email |
+-----+
| 1 | Alice | alice@example.com |
| 2 | Bob | bob@example.com |
+-----+
```