

Documentation Complète de la Configuration du Serveur de base de données

A. Installation et Configuration de Docker

- Mise à Jour des Paquets Debian avec les commandes

sudo apt update

sudo apt upgrade

- Installation de Docker sur Debian :

sudo apt install docker-ce

- Vérification de l'Installation de Docker :

docker --version

sudo systemctl status docker

B. Mise en Place du Serveur MySQL dans Docker

- Téléchargement de l'Image MySQL :

docker pull mysql

- Création et Lancement du Conteneur MySQL :

***docker run --name mysql-container -e
MYSQL_ROOT_PASSWORD=mon_mot_de_passe -p 3306:3306 -d
mysql***

- Configuration de Redémarrage Automatique du Conteneur :

docker update --restart always mysql-container

C. Configuration Initiale de MySQL

- Connexion au Conteneur MySQL :

docker exec -it mysql-container bash

- Connexion à MySQL :

mysql -u root -p

D. Création de la Base de Données et des Tables

- Exécution du Script SQL pour la Base de Données e_commerce :

- Copie du script SQL dans le conteneur :

docker cp /chemin/vers/script.sql mysql-container:/chemin/dans/conteneur

- Exécution du script dans MySQL :

source /chemin/dans/conteneur/script.sql

E. Gestion des Utilisateurs et des Privilèges(contrôles ACL) :

- Création de l'Utilisateur admin et Attribution de Privilèges :

```
bash-4.4# mysql -u "admin" -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 19
Server version: 8.2.0 MySQL Community Server - GPL

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owners.

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

```
mysql> show GRANTS FOR 'admin'@'%';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'admin
'@'%' at line 2
mysql> show GRANTS FOR "admin"@"%";
SHOW GRANTS FOR "admin"@"%";
">
"> show GRANTS FOR "admin"@"%";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'admin
"@"%";

show GRANTS FOR "admin"@'%' at line 2
mysql>
mysql>
mysql> SHOW GRANTS FOR 'admin'@'%' ;
+-----+
| Grants for admin@% |
+-----+
| GRANT USAGE ON *.* TO `admin`@`%` |
+-----+
1 row in set (0.01 sec)

mysql>
```

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CREATE USER 'admin'@'%' IDENTIFIED BY 'password';

GRANT ALL PRIVILEGES ON e_commerce.* TO 'admin'@'%' ;

FLUSH PRIVILEGES;

```
ERROR 1046 (3D000): NO database selected
mysql> grant all privileges on e_commerce.* to 'admin'@'%' ;
Query OK, 0 rows affected (0.04 sec)

mysql> show grants for 'admin'@'%' ;
+-----+
| Grants for admin@% |
+-----+
| GRANT USAGE ON *.* TO `admin`@`%` |
| GRANT ALL PRIVILEGES ON `e_commerce`.* TO `admin`@`%` |
+-----+
2 rows in set (0.00 sec)

mysql>
```

F. Mise en Place des Sauvegardes Automatisées

- Création d'un Script de Sauvegarde avec mysqldump :

Contenu du script :

```
#!/bin/bash

# Paramètres de connexion MySQL
DB_CONTAINER_NAME="mysql-container"
DB_USERNAME="admin"
DB_PASSWORD="ynovparis"
DB_NAME="e_commerce"

# Emplacement et nom de fichier pour la sauvegarde
BACKUP_PATH="e_commerce_backup"
BACKUP_FILENAME="backup_${DB_NAME}_$(date
+%Y%m%d_%H%M%S).sql"

# Commande de sauvegarde
docker exec $DB_CONTAINER_NAME /usr/bin/mysqldump -u
$DB_USERNAME --password=$DB_PASSWORD $DB_NAME >
$BACKUP_PATH/$BACKUP_FILENAME

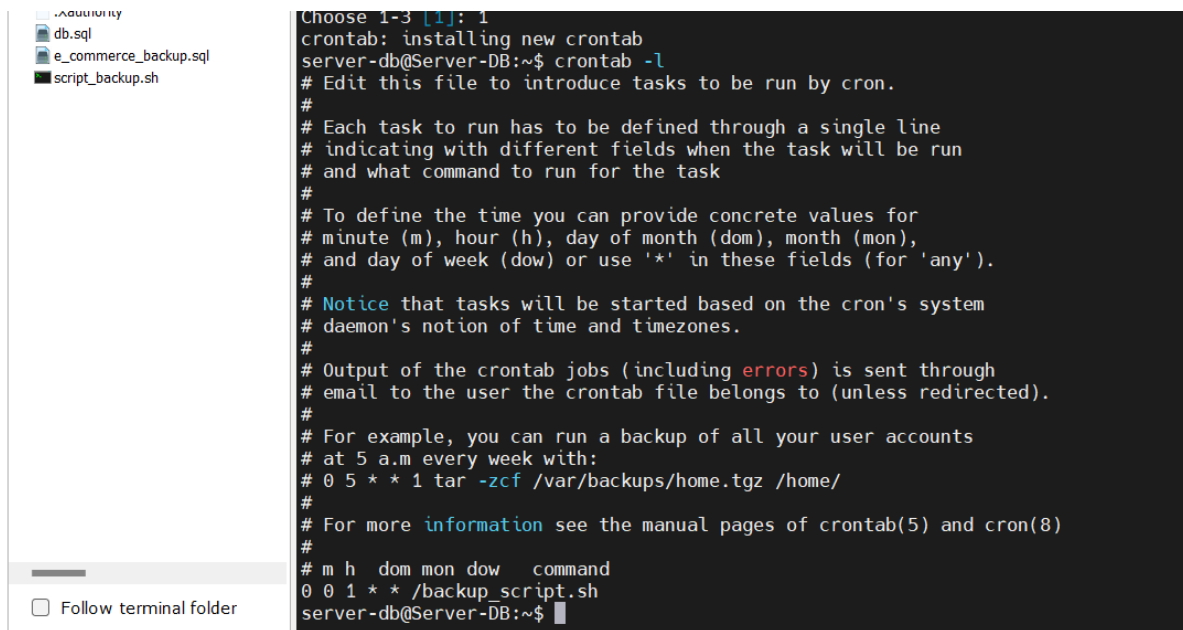
# Afficher un message
echo "La sauvegarde de la base de données a été effectuée avec succès :
$BACKUP_PATH/$BACKUP_FILENAME"
```

- Mise en place d'une tâche **cron** pour exécuter automatiquement le script de sauvegarde backup :

```
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow command
0 0 1 * * /backup_script.sh
```

`0 0 1 * * /chemin/vers/backup_script.sh` signifie

à minuit le premier jour de chaque mois backup_script va être exécuté.



```
Choose 1-3 [1]: 1
crontab: installing new crontab
server-db@Server-DB:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
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#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow   command
0 0 1 * * /backup_script.sh
server-db@Server-DB:~$
```