

Documentation Complète de la Configuration du Serveur de base de données

A. Installation et Configuration de Docker

Nous allons installer Debian dans notre serveur sans interface graphique, afin d'optimiser les ressources du système.

- 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
mysqlcontainer:/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;

```
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_$(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 à minuit le premier jour de chaque mois 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`

Accounting
db.sql
e_commerce_backup.sql
script_backup.sh

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```
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:~$
```