

Actividad 1 - Tema 6

Wuke Zhang

2-ASIR

Bueno, en esta actividad voy a simular la distribución de una conexión de base de datos con mi máquina principal windows y una máquina virtual Ubuntu.

En windows tengo el mysql workbench, por lo seguiremos estos pasos.

1-. En ubuntu instalamos mysql .

```
wuke123@DESKTOP-DC3KKHF:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  bridge-utils containedr libmariadb3 liburing2 mariadb-common ubuntu-fan
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  akonadi-backend-sqlite libaiol libcgi-fast-perl libcgi-pm-perl libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl
  libfcgi0ldbl libhtml-template-perl libmecab2 mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
  libipc-sharedcache-perl mailx tinycs
The following packages will be REMOVED:
  akonadi-backend-mysql mariadb-client-core-10.6 mariadb-server-core-10.6
The following NEW packages will be installed:
  akonadi-backend-sqlite libaiol libcgi-fast-perl libcgi-pm-perl libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl
wuke123@DESKTOP-DC3KKHF:~$ sudo netstat -tulnp | grep mysql
tcp6      0      0 :::33060                :::*                    LISTEN     1123/mysqlld
tcp6      0      0 :::3306                  :::*                    LISTEN     1123/mysqlld
wuke123@DESKTOP-DC3KKHF:~$ sudo mysql_secure_installation
```

2-. Entramos a mysql

```
wuke123@DESKTOP-DC3KKHF:~$ sudo mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.41-0ubuntu0.22.04.1 (Ubuntu)

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.
```

3-.Configurar MySQL y crear el usuario

```
mysql> -- Crear usuario con privilegios
mysql> CREATE USER 'tuusuario'@'%' IDENTIFIED BY 'tucontraseña';
mysql> GRANT ALL PRIVILEGES ON *.* TO 'tuusuario'@'%';
mysql> FLUSH PRIVILEGES;Query OK, 0 rows affected (0.02 sec)

mysql> GRANT ALL PRIVILEGES ON *.* TO 'tuusuario'@'%';
Query OK, 0 rows affected (0.00 sec)
```

4-.Modificar la configuración de MySQL

```
wuke123@DESKTOP-DC3KKHF:~$ sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
Cambiar bind-address de 127.0.0.1 a 0.0.0.0
# Busca la línea bind-address y modifícala
# Cambiar bind-address de 127.0.0.1 a 0.0.0.0
```

```
# Instead of skip-networking the default is now to listen
# localhost which is more compatible and is not less secu
bind-address          = 0.0.0.0
mysqlx-bind-address   = 127.0.0.1
#
```

5-. Obtenemos la ip de la máquina Ubuntu.

```
wuke123@DESKTOP-DC3KKHF:~$ ip addr show eth0
4: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
    link/ether 00:15:5d:75:48:cb brd ff:ff:ff:ff:ff:ff
    inet 172.19.15.195/20 brd 172.19.15.255 scope global eth0
        valid_lft forever preferred_lft forever
    inet6 fe80::215:5dff:fe75:48cb/64 scope link
        valid_lft forever preferred_lft forever
```

6-. Configurar la conexión distribuida:

En MySQL Workbench de Windows:

- File -> New Connection
- Hostname: [IP de WSL2]
- Port: 3306
- Username: tuusuario
- Password: tucontraseña

Connection Name: WSL2

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: 172.19.15.195 Port: 3306 Name or IP address of the server host - and TCP/IP port.

Username: tuusuario Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

7-. Comprobamos que funcione

```
mysql> CREATE DATABASE test_distribuida;
test_dERROR 1007 (HY000): Can't create database 'test_distribuida'; database exists
mysql> USE test_distribuida;
EATE TABLE tabla_wsl (id INT PRIMARY KEY, dato VARCHAR(50));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> CREATE TABLE tabla_wsl (id INT PRIMARY KEY, dato VARCHAR(50));
Query OK, 0 rows affected (0.02 sec)
```

The screenshot shows a SQL IDE interface. On the left is a 'SCHEMAS' navigator showing a tree structure with 'sys', 'test_distribuida' (expanded to show 'tabla_wsl' and 'tabla_windows'), 'Views', 'Stored Procedures', and 'Functions'. The main area is a 'Query 1' editor with the following SQL code:

```
1 • USE test_distribuida;
2 • CREATE TABLE IF NOT EXISTS tabla_windows (
3   id INT PRIMARY KEY,
4   dato VARCHAR(50)
5 );
```

On the right, there is a 'SQLAdditions' panel with a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

At the bottom, the 'Output' window shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	13:48:18	CREATE TABLE IF NOT EXISTS tabla_windows (id INT PRIMARY KEY...	Error Code: 1046. No database selected Select the default DB to be used by...	0.000 sec
2	13:48:36	USE test_distribuida	0 row(s) affected	0.000 sec
3	13:48:36	CREATE TABLE IF NOT EXISTS tabla_windows (id INT PRIMARY KEY...	0 row(s) affected, 1 warning(s): 1050 Table 'tabla_windows' already exists	0.000 sec

This is a close-up of the 'SCHEMAS' navigator from the previous screenshot. It shows the tree structure under 'test_distribuida':

- test_distribuida
 - Tables
 - tabla_windows (selected)
 - tabla_wsl
 - Columns
 - Indexes
 - Foreign Keys
 - Triggers
 - Views
 - Stored Procedures
 - Functions

Ya puedo trabajar con la misma conexión tanto desde ubuntu y tener los cambios en windows.