

a. MySQL Changes – Commands/Changes to run, including execution of event.sql, to make a MySQL database that works with your XPerience Server running on the host (not VM).

- Modify the MySQL configuration file to allow remote connections by opening /etc/mysql/mysql.conf.d/mysqld.cnf with sudo nano and changing the bind-address from 127.0.0.1 to 0.0.0.0.
- Save the file and restart MySQL using sudo systemctl restart mysql to apply the changes
- Change event.sql to include a user with privileges that allows for remote access using 'event\_user'@'10.0.2.%' (based on vm ip address using ip addr)
- Run sudo systemctl restart mysql
- Run sudo ufw enable.
- Once enabled, run sudo ufw allow 3306/tcp to add a rule to allow MySQL connections and then reload with sudo ufw reload
- After that, check if firewall is active and MySQL is allowed by running sudo ufw status.
- MySQL (3306/tcp ALLOW Anywhere) should be listed in the output.
- Find IP address using ip addr
- Test the connection from host machine using & "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" -u event\_admin -p -h 10.0.2.15 -P 3306 (Windows)

b. Sockets – Screenshot of ss command on your Ubuntu VM showing all MySQL sockets.

```
vboxuser@UbuntuServer:/media/sf_xperience2.0$ sudo ss -tlnp | grep mysql
LISTEN 0      70          127.0.0.1:33060      0.0.0.0:*    users:((("mysqld",pid=7047,fd=21))
LISTEN 0      151         0.0.0.0:3306        0.0.0.0:*    users:((("mysqld",pid=7047,fd=24))
vboxuser@UbuntuServer:/media/sf_xperience2.0$
```

c. Program 3 updates:

Updated event.sql to:

- Use restrictive MySQL data types (VARCHAR(300), DATE, TIME, TEXT CHECK (CHAR\_LENGTH(description) BETWEEN 1 AND 65535))
- Made the database name 'Samudrala' (my last name)
- Drop the existing "event" table before recreating it