joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571

~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
joe@db-2021:~$ echo "We want to enable mysql so that remote connections can be made to
the database"
We want to enable mysql so that remote connections can be made to the database
joe@db-2021:~$
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
joe@db-2021:~$ netstat -natp
(No info could be read for "-p": geteuid()=1001 but you should be root.)
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Pro
gram name
tcp        0      0 127.0.0.53:53           0.0.0.0:*               LISTEN      -

tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      -

tcp        0      0 127.0.0.1:33060         0.0.0.0:*               LISTEN      -

tcp        0      0 127.0.0.1:3306          0.0.0.0:*               LISTEN      -

tcp        0     28 144.38.199.55:22        144.38.198.18:51840     ESTABLISHED -

tcp6       0      0 :::22                   :::*                    LISTEN      -

joe@db-2021:~$ echo "only listening on localhost address"
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571

~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
joe@db-2021:~$ sudo vi /etc/mysql/mysql.conf.d/mysqld.cnf
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
# Here is entries for some specific programs
# The following values assume you have at least 32M ram

[mysqld]
#
# * Basic Settings
#
user            = mysql
# pid-file      = /var/run/mysqld/mysqld.pid
# socket        = /var/run/mysqld/mysqld.sock
# port          = 3306
# datadir       = /var/lib/mysql


# If MySQL is running as a replication slave, this should be
# changed. Ref https://dev.mysql.com/doc/refman/8.0/en/server-system-variables.html#sys
var_tmpdir
# tmpdir                = /tmp
#
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure.
bind-address            = 127.0.0.1
mysqlx-bind-address     = 127.0.0.1
#
# * Fine Tuning
#
key_buffer_size         = 16M
"/etc/mysql/mysql.conf.d/mysqld.cnf" 78L, 2220C                   31,1          17%
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
# Here is entries for some specific programs
# The following values assume you have at least 32M ram

[mysqld]
#
# * Basic Settings
#
user            = mysql
# pid-file      = /var/run/mysqld/mysqld.pid
# socket        = /var/run/mysqld/mysqld.sock
# port          = 3306
# datadir       = /var/lib/mysql


# If MySQL is running as a replication slave, this should be
# changed. Ref https://dev.mysql.com/doc/refman/8.0/en/server-system-variables.html#sys
var_tmpdir
# tmpdir                = /tmp
#
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure.
#bind-address           = 127.0.0.1
mysqlx-bind-address     = 127.0.0.1
#
# * Fine Tuning
#
key_buffer_size         = 16M
"/etc/mysql/mysql.conf.d/mysqld.cnf" 78L, 2221C written                31,1          17%
```

```
joe@db-2021:~$ sudo service mysql restart
joe@db-2021:~$ netstat -natp
(No info could be read for "-p": geteuid()=1001 but you should be root.)
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Pro
gram name
tcp        0      0 127.0.0.53:53           0.0.0.0:*               LISTEN      -

tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      -

tcp        0      0 127.0.0.1:33060         0.0.0.0:*               LISTEN      -

tcp        0     28 144.38.199.55:22        144.38.198.18:51840     ESTABLISHED -

tcp6       0      0 :::22                   :::*                    LISTEN      -

tcp6       0      0 :::3306                 :::*                    LISTEN      -

joe@db-2021:~$
```

joe — root@www-thegummibear: ~ — ssh ◂ ssh yavin — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571

~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
root@www-thegummibear:~# echo "From the webserver I am going to test and see if we can
connect to the database"
From the webserver I am going to test and see if we can connect to the database
root@www-thegummibear:~#
```

joe — root@www-thegummibear: ~ — ssh ◂ ssh yavin — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571

~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
root@www-thegummibear:~# apt install -y mysql-client
```

joe — root@www-thegummibear: ~ — ssh ◂ ssh yavin — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
root@www-thegummibear:~# mysql -u harry -p -h db.thegummibear.com
Enter password:
ERROR 1130 (HY000): Host 'www.thegummibear.com' is not allowed to connect to this MySQL
 server
root@www-thegummibear:~# echo "In the above command , -u is the user we want to connect
 as, -p will prompt us for password, -h is the host we want to connect to"
In the above command , -u is the user we want to connect as, -p will prompt us for pass
word, -h is the host we want to connect to
root@www-thegummibear:~# echo "Clearly there is still a problem"
Clearly there is still a problem
root@www-thegummibear:~#
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
joe@db-2021:~$ echo "Back on database machine. Let's examine our users"
Back on database machine. Let's examine our users
joe@db-2021:~$ sudo mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.26-0ubuntu0.20.04.3 (Ubuntu)

Copyright (c) 2000, 2021, 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>
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
mysql> use mysql;
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 User,Host from user;
+------------------+-----------+
| User             | Host      |
+------------------+-----------+
| debian-sys-maint | localhost |
| harry            | localhost |
| mysql.infoschema | localhost |
| mysql.session    | localhost |
| mysql.sys        | localhost |
| root             | localhost |
+------------------+-----------+
6 rows in set (0.00 sec)

mysql> harry is only allowd to connect form the localhost
```

joe — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 — 87×29

~ — joe@db-2021: ~ — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin

```
mysql> create user 'harry'@'www.thegummibear.com' identified by 'Griffindor123?';
Query OK, 0 rows affected (0.02 sec)

mysql> grant all privileges on hogwarts.* to 'harry'@'www.thegummibear.com';
Query OK, 0 rows affected (0.05 sec)

mysql> select User,Host from user;
+------------------+----------------------+
| User             | Host                 |
+------------------+----------------------+
| debian-sys-maint | localhost            |
| harry            | localhost            |
| mysql.infoschema | localhost            |
| mysql.session    | localhost            |
| mysql.sys        | localhost            |
| root             | localhost            |
| harry            | www.thegummibear.com |
+------------------+----------------------+
7 rows in set (0.00 sec)

mysql>
```

joe — root@www-thegummibear: ~ — ssh ◂ ssh yavin — 104×29

...: /home/joe — ssh jfrancom@ssh.cs.dixie.edu -L 6571:cleopatra:6571 | ~ — root@www-thegummibear: ~ — ssh ◂ ssh yavin | ~ — joe@yavin: ~ — -bash

```
root@www-thegummibear:~# echo "now test if harry can connect again. Once you login see if you can access
 the hogwarts database and/or any tables within it"
now test if harry can connect again. Once you login see if you can access the hogwarts database and/or a
ny tables within it
root@www-thegummibear:~# mysql -u harry -p -h db.thegummibear.com
```