

```
joe@db:~$ echo "We need to allow other machines to reach this MySQL machine on it's public ip address"
```

We need to allow other machines to reach this MySQL machine on it's public ip address

```
joe@db:~$ echo "I am going to install a tool that will allow us to see what ports are open on this machine. You don't necessarily need to do this"
```

I am going to install a tool that will allow us to see what ports are open on this machine . You don't necessarily need to do this

```
joe@db:~$ sudo apt install net-tools -y
```

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

net-tools is already the newest version (1.60+git20181103.0eebece-1ubuntu5).

0 upgraded, 0 newly installed, 0 to remove and 29 not upgraded.

```
joe@db:~$ █
```

```
joe@db:~$ netstat -napt
```

```
(Not all processes could be identified, non-owned process info  
will not be shown, you would have to be root to see it all.)
```

```
Active Internet connections (servers and established)
```

| Proto | Recv-Q | Send-Q | Local Address | Foreign Address | State | PID/Program name |
|-------|--------|--------|---------------------|---------------------|-------------|------------------|
| tcp | 0 | 0 | 127.0.0.53:53 | 0.0.0.0:* | LISTEN | - |
| tcp | 0 | 0 | 127.0.0.1:3306 | 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 | 144.38.199.39:46326 | 144.38.192.6:80 | TIME_WAIT | - |
| tcp | 0 | 0 | 144.38.199.39:22 | 144.38.198.18:33562 | ESTABLISHED | - |
| tcp6 | 0 | 0 | :::22 | :::* | LISTEN | - |

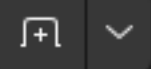
```
joe@db:~$ echo "MySQL runs on port 3306, you can see that 3306 only has the localhost address next to it above, thus we can only connect to port 3306 from the localhost"
```

```
MySQL runs on port 3306, you can see that 3306 only has the localhost address next to it above, thus we can only connect to port 3306 from the localhost
```

```
joe@db:~$ echo "We need to allow connections from anywhere"
```

```
We need to allow connections from anywhere
```

```
joe@db:~$
```



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

```
# 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#sysvar\_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
# max_allowed_packet = 64M
"/etc/mysql/mysql.conf.d/mysqld.cnf" 78L, 2220B written 31,1 18%
```

```
# 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#sysvar\_tmpdir
# tmpdir             = /tmp
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# Instead of skip-networking the default is now to listen only on
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bind-address         = 127.0.0.1
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# * Fine Tuning
#
key_buffer_size      = 16M
# max_allowed_packet = 64M
"/etc/mysql/mysql.conf.d/mysqld.cnf" 78L, 2221B written 31,1 18%
```

```
joe@db:~$ sudo service mysql restart
```

```
joe@db:~$ netstat -napt
```

(Not all processes could be identified, non-owned process info will not be shown, you would have to be root to see it all.)

Active Internet connections (servers and established)

| Proto | Recv-Q | Send-Q | Local Address | Foreign Address | State | PID/Program 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 | 168 | 144.38.199.39:22 | 144.38.198.18:33562 | ESTABLISHED | - |
| tcp6 | 0 | 0 | :::22 | :::* | LISTEN | - |
| tcp6 | 0 | 0 | :::3306 | :::* | LISTEN | - |

```
joe@db:~$ echo "Now look at the last line. It signifies that any ip can connect to port 3306. Yay"
```

Now look at the last line. It signifies that any ip can connect to port 3306. Yay

```
joe@db:~$ █
```



```
joe@db:~$ echo "I have already created some remote users, let's make sure they can connect"
```

```
I have already created some remote users, let's make sure they can connect
```

```
joe@db:~$ sudo mysql
```

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

```
Your MySQL connection id is 13
```

```
Server version: 8.0.33-0ubuntu0.22.04.4 (Ubuntu)
```

```
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```

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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>
```

```
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
```

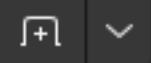
```
Database changed
```

```
mysql> select User,Host,Db from db;
```

```
+-----+-----+-----+
| User          | Host                               | Db          |
+-----+-----+-----+
| hermoine      | 144.38.199.32/255.255.255.240     | hogwarts   |
| mysql.session | localhost                          | performance_schema |
| mysql.sys     | localhost                          | sys        |
| tom           | 144.38.199.38                     | hogwarts   |
+-----+-----+-----+
```

```
4 rows in set (0.00 sec)
```

```
mysql> Tom should be able to access from that ip, hermoine from anywhere in that subnet
```

```
joe@www:~$ echo "On a remote client (my webserver), going to test access"
```

```
On a remote client (my webserver), going to test access
```

```
joe@www:~$ sudo apt update && sudo apt install mysql-client
```

```
joe@www: ~
joe@db: ~
joe@www: ~

joe@www:~$ mysql -u tom -p -h db.thegummibear.com
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.33-0ubuntu0.22.04.4 (Ubuntu)

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owners.

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

mysql> use hogwarts;
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> show tables;
+-----+
| Tables_in_hogwarts |
+-----+
| spells              |
+-----+
1 row in set (0.00 sec)

mysql> █
```



```
joe@www:~$ echo "Everything appeared to work ok"
```

```
Everything appeared to work ok
```

```
joe@www:~$ echo "mysql -u tom -p -h db.thegummibear.com"
```

```
mysql -u tom -p -h db.thegummibear.com
```

```
joe@www:~$ echo "In the above command, we put the username we want to login as, -p prompts  
for a password, -h followed by the database hostname we want to login to"
```

```
In the above command, we put the username we want to login as, -p prompts for a password,  
-h followed by the database hostname we want to login to
```

```
joe@www:~$
```

```
joe@www: ~
joe@db: ~
joe@www: ~

joe@www:~$ mysql -u hermoine -p -h db.thegummibear.com
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 15
Server version: 8.0.33-0ubuntu0.22.04.4 (Ubuntu)

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owners.

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

mysql> use hogwarts;
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 * from spells;
+-----+
| x     |
+-----+
|    44 |
|    55 |
|     2 |
+-----+
3 rows in set (0.00 sec)
```

```
mysql> exit
```

```
Bye
```

```
joe@www:~$ echo "Hermoine appears to be able to login remotely as well, but you should install mysql-tools on a different machine in your network and verify. After all, we allowed her to login from anywhere on our subnet"
```

```
Hermoine appears to be able to login remotely as well, but you should install mysql-tools on a different machine in your network and verify. After all, we allowed her to login from anywhere on our subnet
```

```
joe@www:~$ echo "Double check that tom cannot login from a different host. He should only be able to login from this one"
```

```
Double check that tom cannot login from a different host. He should only be able to login from this one
```

```
joe@www:~$
```