```
[joe@db-thegummibear:~]$ echo "Check to see if mysql is listening"
Check to see if mysql is listening
[joe@db-thegummibear:~]$ netstat -natp | grep 3306
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
tcp 0 0 127.0.0.1:3306 0.0.0.0:* LISTEN
```

```
[joe@db-thegummibear:~]$ echo "ONly listening on the localhost address. We need to fix that"
ONly listening on the localhost address. We need to fix that
[joe@db-thegummibear:~]$
```
joe@db-thegummibear:~$ sudo vi /etc/mysql/mysql.conf.d/mysqld.cnf
pid-file       = /var/run/mysqld/mysqld.pid
socket        = /var/run/mysqld/mysqld.sock
port          = 3306
basedir       = /usr
datadir       = /var/lib/mysql
tmpdir        = /tmp
lc-messages-dir = /usr/share/mysql
skip-external-locking
#
# 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
#
# * Fine Tuning
#
key_buffer_size          = 16M
max_allowed_packet      = 16M
thread_stack            = 192K
thread_cache_size       = 8
# This replaces the startup script and checks MyISAM tables if needed
# the first time they are touched
myisam-recover-options  = BACKUP
#max_connections       = 100
pid-file = /var/run/mysqld/mysqld.pid
socket = /var/run/mysqld/mysqld.sock
port = 3306
basedir = /usr
datadir = /var/lib/mysql
tmpdir = /tmp
lc-messages-dir = /usr/share/mysql
skip-external-locking
#
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure.
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# This replaces the startup script and checks MyISAM tables if needed
# the first time they are touched
myisam-recover-options = BACKUP
#max_connections = 100
"/etc/mysql/mysql.conf.d/mysqld.cnf" 104L, 3029C written
joe@db-thegummibear:~$ sudo service mysql restart
joe@db-thegummibear:~$
joe@db-thegummibear:~$ netstat -natp | grep 3306
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
tcp6 0 0 :::3306 :::*            LISTEN   -
joe@db-thegummibear:~$
Now on the web server, going to test remote connectivity
joe@www-thegummibear:~$ mysql -h db.thegummibear.com -u harry -p
The program 'mysql' can be found in the following packages:
* mysql-client-core-5.7
* mariadb-client-core-10.0
Try: sudo apt install <selected package>
joe@www-thegummibear:~$ sudo apt-get install mysql-client
joe@www-thegummibear:~$ mysql -h db.thegummibear.com -u harry -p
Enter password:
ERROR 1130 (HY000): Host '144.38.199.165' is not allowed to connect to this MySQL server
joe@www-thegummibear:~$
joe@www-thegummibear:~$ echo "that is ok, this might not be a connectivity issue, rather a permissions issue"
that is ok, this might not be a connectivity issue, rather a permissions issue
joe@www-thegummibear:~$
joe@db-thegummibear:~$ echo "back on the mysql server. Lets look at permissions"
back on the mysql server. Lets look at permissions
joe@db-thegummibear:~$
joe@db-theGummiBear:$ mysql -u root -p

Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.15-0ubuntu0.16.04.1 (Ubuntu)

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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 from user;

<table>
<thead>
<tr>
<th>User</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>debian-sys-maint</td>
<td>localhost</td>
</tr>
<tr>
<td>harry</td>
<td>localhost</td>
</tr>
<tr>
<td>lucius</td>
<td>localhost</td>
</tr>
<tr>
<td>mysql.sys</td>
<td>localhost</td>
</tr>
<tr>
<td>root</td>
<td>localhost</td>
</tr>
</tbody>
</table>

5 rows in set (0.00 sec)

mysql>
joe@db-thegummibear:~$ echo "only harry from localhost has been granted permissions"
only harry from localhost has been granted permissions
joe@db-thegummibear:~$
### Select User, Host from db

<table>
<thead>
<tr>
<th>User</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>harry</td>
<td>localhost</td>
</tr>
<tr>
<td>lucius</td>
<td>localhost</td>
</tr>
<tr>
<td>mysql.sys</td>
<td>localhost</td>
</tr>
</tbody>
</table>

3 rows in set (0.00 sec)

### Select User, Host from user

<table>
<thead>
<tr>
<th>User</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>debian-sys-maint</td>
<td>localhost</td>
</tr>
<tr>
<td>harry</td>
<td>localhost</td>
</tr>
<tr>
<td>lucius</td>
<td>localhost</td>
</tr>
<tr>
<td>mysql.sys</td>
<td>localhost</td>
</tr>
<tr>
<td>root</td>
<td>localhost</td>
</tr>
</tbody>
</table>

5 rows in set (0.00 sec)

mysql>
we can change that by once again using the GRANT statement

we can change that by once again using the GRANT statement
mysql> GRANT ALL PRIVILEGES ON hogwarts.* to 'harry'@'www.thegummibear.com' IDENTIFIED BY 'alohamora';
Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql>


```sql
mysql> Select User, Host from db;
+---------+-----------+
| User    | Host      |
|---------+-----------+
| harry   | localhost |
| lucius  | localhost |
| mysql.sys | localhost |
| harry   | www.the gum mibear.com |
+---------+-----------+
4 rows in set (0.00 sec)

mysql> Select User, Host from user;
+---------+-----------+
| User    | Host      |
|---------+-----------+
| debian-sys-maint | localhost |
| harry   | localhost |
| lucius  | localhost |
| mysql.sys | localhost |
| root    | localhost |
| harry   | www.the gum mibear.com |
+---------+-----------+
6 rows in set (0.01 sec)
```

```
joe@www-thegummibear:~$ echo "Back on WWW, lets try connecting again"
Back on WWW, lets try connecting again
joe@www-thegummibear:~$ mysql -h db.thegummibear.com -u harry -p
Enter password:
ERROR 1130 (HY000): Host '144.38.199.165' is not allowed to connect to this MySQL server
joe@www-thegummibear:~$ echo "We allowed www.thegummibear.com. When connecting to mysql, it looks like it connects using our IP"
We allowed www.thegummibear.com. When connecting to mysql, it looks like it connects using our IP
joe@www-thegummibear:~$
mysql> GRANT ALL PRIVILEGES ON hogwarts.* to 'harry'@'144.38.199.165' IDENTIFIED BY 'alohamora';
Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql> Select User, Host from db;
ERROR 1046 (2N000): No database selected

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 db;

+---------+---------+
| User    | Host    |
+---------+---------+
| harry   | 144.38.199.165 |
| harry   | localhost |
| lucius  | localhost |
| mysql.sys | localhost |
| harry   | www.thegummibear.com |
+---------+---------+
5 rows in set (0.01 sec)

mysql>
joe@www-thegummibear:~$ echo "Back on WWW, try again."
Back on WWW, try again.
joe@www-thegummibear:~$ mysql -h db.thegummibear.com -u harry -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 5.7.15-0ubuntu0.16.04.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql>
joe@www-thegummibear:~$ echo "Yay, we connected"
Yay, we connected
joe@www-thegummibear:~$
mysql> show databases;
+------------------+
| Database         |
+------------------+
| information_schema |
| hogwarts         |
+------------------+
2 rows in set (0.00 sec)

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>
mysql> select * from spells;
+---+
| x |
+---+
| 4 |
| 55|
| 44|
+---+
3 rows in set (0.00 sec)

mysql>
mysql> quit
Bye
joe@www-thegummibear:~$