

Create New Database Super User

- For security, MySQL & MariaDB do not permit logins to the root user account from web based tools; you can only log in to them from the command line on the server. This prevents attackers from trying to log in to this account by brute force attacking the password
- MySQL/MariaDB commands are not case-sensitive. The commands are typically written in upper-case though, to distinguish them from the options, such as table names or user names, which are also part of a command
- Don't forget the ; at the end of the database commands. If you forget to enter it and press Enter, it will go down to the next line. Simply press ; and hit Enter again

```
sudo mysql -u root -p
```

From the linux command line, log in to the mysql root account. The database will prompt you for the password

```
CREATE USER 'jupiter'@'%' IDENTIFIED BY  
'2the_Blue_Sky';
```

Create a new user (*jupiter*) and give it a password (*2the_Blue_Sky*)

This new user account has no privileges to do anything on the database yet. The next thing is to grant it the necessary privileges. There are several privileges a user account can have:

- **ALL PRIVILEGES** - a full root access to the databases. If no database is specified, it has global access across the system.
- **CREATE** - create new tables or databases
- **DROP** - delete tables or databases
- **DELETE** - delete rows from tables
- **INSERT** - insert rows into tables
- **SELECT** - use the SELECT command to read through databases
- **UPDATE** - update table rows
- **GRANT OPTION** - grant or remove other users' privileges

```
GRANT ALL PRIVILEGES ON *.* TO 'jupiter'@'%'  
WITH GRANT OPTION;
```

Grant the user account full privileges to everything on the database, with permission to set up other users' privileges also

```
FLUSH PRIVILEGES;
```

Finally, reload the privileges for the changes to take effect

- **Note:** this root user will not be used when setting up web applications, it is only for administering the database. Each web application you install gets its own user account with restricted privileges.
- This is a security principle that limits, or contains, the damage an attacker could do if they were to hack your application

Other useful commands:

After logging into the database...

```
SELECT user, host FROM mysql.user;
```

See the list of users on the database, and what hosts they can log in from:

localhost = the servers command line

% = any computer, including from across the network

```
SHOW GRANTS FOR username;
```

Check the privileges for a username

To check if you have MySQL or MariaDB installed (not that it will make a difference – all the commands and how you use it will be the same):

From the Linux command line...

```
sudo mysql --version
```

Check the version of the database server

```
dpkg -l | grep -e mysql-server -e mariadb-  
server
```

Search the package manager for MySQL or MariaDB

```
sudo mysql -u root -p
```

Once you log in to the server, the welcome message should say whether it is MySQL or MariaDB