MYSQL

How to Install MySQL Server on Ubuntu 20.04 Tutorial (Step by Step)

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In MySQL
Comments

How to Install MySQL Server on Ubuntu 20.04. In this tutorial we will introduce what MySQL is and move onto installation phase on Ubuntu 20.04. We will learn how to create a database and user in MySQL, create a table in MySQL and how to remove a table, database and user. Let's get started.

What is MySQL

MySQLis a free, open source and one of the most popular relational database management systems. It is used to create, store and manipulate the data for many web based applications including data warehousing, e-commerce and logging applications. It is developed by Michael Widenius and is based on Structured Query Language (SQL). It is a simple but high performance database and is easier to set up and administer than larger systems. MySQL server is the major component of the LAMPand LEMP stack, which is a software stack to deploy web applications and websites.

Also Read
MySQL vs PostgreSQL – What's the Difference (Pros and Cons)

MySQL Features

- Free and open source.
- Dual password support.

- JSON document validation.
- Query language support.
- Secure and portable.
- Ease of use.
- Support for large databases.
- Quick and reliable.

Follow this post below and we will show you how to install MySQL Server on Ubuntu 20.04.

Also Read
How to Setup MySQL Server + phpMyadmin on Linux in Azure/AWS/GCP

Install MySQL Server on Ubuntu 20.04

At the time of writing this tutorial, the latest version of MySQL is MySQL 8. By default, it is available in the Ubuntu 20.04 default repository. You can install it by just running the following command:

```
apt-get install mysql-server -y
```

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After installing the MySQL server, start the MySQL service and enable it to start at system reboot:

```
systemctl start mysql
systemctl enable mysql
```

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Now, check the status of the MySQL server using the following command:

```
systemctl status mysql
```

Copy

Sample output:

- `mysql.service - MySQL Community Server`

```
 Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor
 preset: enabled)
 Active: active (running) since Thu 2021-11-04 07:13:07 UTC; 14s ago
 Main PID: 1560 (mysqld)
 Status: "Server is operational"
 Tasks: 38 (limit: 2353)
 Memory: 354.3M
 CGroup: /system.slice/mysql.service
 └─1560 /usr/sbin/mysqld


 Nov 04 07:13:06 ubuntu2004 systemd[1]: Starting MySQL Community
 Server...
 Nov 04 07:13:07 ubuntu2004 systemd[1]: Started MySQL Community
 Server.
```

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You can also verify the MySQL server version using the following command:

```
 mysql -V
```

Copy

You should see the MySQL version in the following output:

```
 mysql Ver 8.0.27-0ubuntu0.20.04.1 for Linux on x86_64 ((Ubuntu))
```

Copy

To check the detailed information of the MySQL server package, run the following command:

```
 apt show mysql-server
```

Copy

Sample output:

```
 Package: mysql-server
 Version: 8.0.27-0ubuntu0.20.04.1
```

```
Priority: optional
Section: database
Source: mysql-8.0
Origin: Ubuntu
Maintainer: Ubuntu Developers <ubuntu-devel-discuss@lists.ubuntu.com>
Original-Maintainer: Debian MySQL Maintainers <pkg-mysql-
maint@lists.alioth.debian.org>
Bugs: https://bugs.launchpad.net/ubuntu/+filebug
Installed-Size: 113 kB
Depends: mysql-server-8.0
Homepage: http://dev.mysql.com/
Task: lamp-server
Download-Size: 9,548 B
APT-Manual-Installed: yes
```

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To check the MySQL server log for any error, run the following command:

```
tail -f /var/log/mysql/error.log
```

Copy

Also Read

How to Install MySQL Server on Ubuntu 21.04 (Step by Step Tutorial)

Secure the MySQL Installation

By default, the MySQL server is not secured. So it is recommended to secure MySQL and set a root password. You can do it by running the following script:

```
mysql_secure_installation
```

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You will be asked to set a MySQL root password as shown below:

```
Securing the MySQL server deployment.


Connecting to MySQL using a blank password.
```

```
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?


Press y|Y for Yes, any other key for No:
Please set the password for root here.


New password:


Re-enter new password:
```

Copy

Set your MySQL root password and press **Enter**. You will be asked to remove the anonymous users:

```
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL without having to have
a user account created for them. This is intended only for
testing, and to make the installation go a bit smoother.
You should remove them before moving into a production
environment.


Remove anonymous users? (Press y|Y for Yes, any other key for No) : Y
```

Copy

Press **Y**and hit **Enter**. You will be asked to disallow root login remotely:

```
Success.



Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.
```

```
Disallow root login remotely? (Press y|Y for Yes, any other key for
No) : Y
Success.
```

Copy

Press **Y**and hit **Enter**. You will be asked to remove the test database:

```
By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.



Remove test database and access to it? (Press y|Y for Yes, any other
key for No) : Y
```

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Press **Y**and hit **Enter**. You will be asked to reload the privileges tables:

```
- Dropping test database...
Success.


- Removing privileges on test database...
Success.


Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.


Reload privilege tables now? (Press y|Y for Yes, any other key for
No) : Y
```

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Press **Y**and hit **Enter**to complete the script.

Next, log in to MySQL using a root user:

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

Copy

Once you are log in, you will get the following output:

```
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.27-0ubuntu0.20.04.1 (Ubuntu)


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owners.


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


mysql>
```

Copy

Now, check the MySQL status using the following command:

```
mysql> STATUS;
```

Copy

Sample output:

```
--------------
mysql Ver 8.0.27-0ubuntu0.20.04.1 for Linux on x86_64 ((Ubuntu))
```

```
Connection id: 10
Current database:
Current user: root@localhost
SSL: Not in use
Current pager: stdout
Using outfile: ''
Using delimiter: ;
Server version: 8.0.27-0ubuntu0.20.04.1 (Ubuntu)
Protocol version: 10
Connection: Localhost via UNIX socket
Server characterset: utf8mb4
Db characterset: utf8mb4
Client characterset: utf8mb4
Conn. characterset: utf8mb4
UNIX socket: /var/run/mysqld/mysqld.sock
Binary data as: Hexadecimal
Uptime: 3 min 25 sec


Threads: 2 Questions: 14 Slow queries: 0 Opens: 130 Flush tables: 3
Open tables: 49 Queries per second avg: 0.068
--------------
```

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To exit from the MySQL shell, run the following command:

```
mysql> EXIT;
```

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Also Read

MariaDB vs MySQL Performance Differences (Pros and Cons)

Create MySql Database and User

MySQLprovides a command line interface that allows you to create a database and user, and manage them easily. First, log in to the MySQL interface using the following command:

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

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Once you are log in, create a database named **testdb**using the following command:

```
mysql> CREATE DATABASE testdb;
```

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Please verify all MySQL databases using the following command:

```
mysql> SHOW DATABASES;
```

Copy

Sample output:

```
+--------------------+
| Database |
+--------------------+
| information_schema |
| mysql |
| performance_schema |
| sys |
| testdb |
+--------------------+
```

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Next, create a new MySQL user named **testuser**and set a password using the following command:

```
mysql> CREATE USER 'testuser'@'localhost' IDENTIFIED BY
'securepassword';
```

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If you want to grant specific privileges on **testdb**database, run:

```
mysql> GRANT SELECT, INSERT, UPDATE, DELETE ON testdb.* TO
'testuser'@'localhost';
```

Copy

To grant all privileges on **testdb**database, run:

```
mysql> GRANT ALL PRIVILEGES ON testdb.* TO 'testuser'@'localhost';
```

Copy

To list all MySQL users, run:

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

Copy

Sample output:

```
+------------------+-----------+
| user | host |
+------------------+-----------+
| debian-sys-maint | localhost |
| mysql.infoschema | localhost |
| mysql.session | localhost |
| mysql.sys | localhost |
| root | localhost |
| testuser | localhost |
+------------------+-----------+
```

Copy

To display all granted privileges, run:

```
mysql> SHOW GRANTS for testuser@localhost;
```

Copy

Sample output:

```
+-----------------------------------------------------------+
| Grants for testuser@localhost |
+-----------------------------------------------------------+
| GRANT USAGE ON *.* TO `testuser`@`localhost` |
| GRANT ALL PRIVILEGES ON `testdb`.* TO `testuser`@`localhost` |
```

```
+------------------------------------------------------------+
```

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Also Read

How to Install MySQL Server on Debian 10/11 (Installation Tutorial)

Create a Table in MySQL

To create a table in MySQL, you will need to switch to the database first. To switch the database to **testdb**, run:

```
mysql> USE testdb;
```

Copy

Next, create a new table named **students**, run:

```
mysql> CREATE table students


(
students_id int auto_increment primary key,
students_first_name varchar(500) NOT null,
students_last_name varchar(500) NOT null,
students_emailID varchar(500),
students_class_ID int default 9
);
```

Copy

Please insert some data in to students table using the following command:

```
mysql> INSERT INTO students (students_first_name, students_last_name,
students_emailid, students_class_id) values
('Milan','Shah','milanshah@gmail.com','01');
mysql> INSERT INTO students (students_first_name, students_last_name,
students_emailid, students_class_id) values ('Jay','Shah',
'jayshah@gmail.com', '01');
mysql> INSERT INTO students (students_first_name, students_last_name,
students_emailid, students_class_id) values
('Raj','Shah','rajshah@gmail.com','01');
```

Copy

To display all data from the table, run:

```
mysql> SELECT * FROM students;
```

Copy

You will get the following output:

```
+-------------+---------------------+--------------------+-----------
----------+-------------------+
| students_id | students_first_name | students_last_name |
students_emailID | students_class_ID |
+-------------+---------------------+--------------------+-----------
----------+-------------------+
| 1 | Milan | Shah | milanshah@gmail.com | 1 |
| 2 | Jay | Shah | jayshah@gmail.com | 1 |
| 3 | Raj | Shah | rajshah@gmail.com | 1 |
+-------------+---------------------+--------------------+-----------
----------+-------------------+
```

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Remove a Table, Database and User in MySQL

In order to delete a table, database and user in MySQL, you can use the DROP statement.

To delete a table, run the following command:

```
mysql> DROP TABLE students;
```

Copy

To delete a database, run the following command:

```
mysql> DROP DATABASE testdb;
```

Copy

To delete a user, run the following command:

```
mysql> DROP USER testuser@localhost;
```

Copy

Also Read

MySQL vs SQLite – What's the Difference? (Pros and Cons)

Uninstall MySQL

If you want to remove the MySQL database serverfrom your server, run the following command:

```
apt-get remove mysql-server --purge
```

Copy

After removing the MySQL database, some other unwanted dependencies are still persisting in your system. You can remove them by running the following command:

```
apt-get autoremove
```

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Next, remove all package cache with the following command:

```
apt-get clean
```

Copy

Great work! You have followed all the steps and learned how to Install MySQL Server on Ubuntu 20.04.