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How to install mysql server 5.7 on Ubuntu 16.04 LTS (Xenial Xerus)

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MySQL is a popular database management system used for my web applications. How do I install MySQL server version 5.7 on Ubuntu Linux 16.04 LTS (Xenial Xerus)?
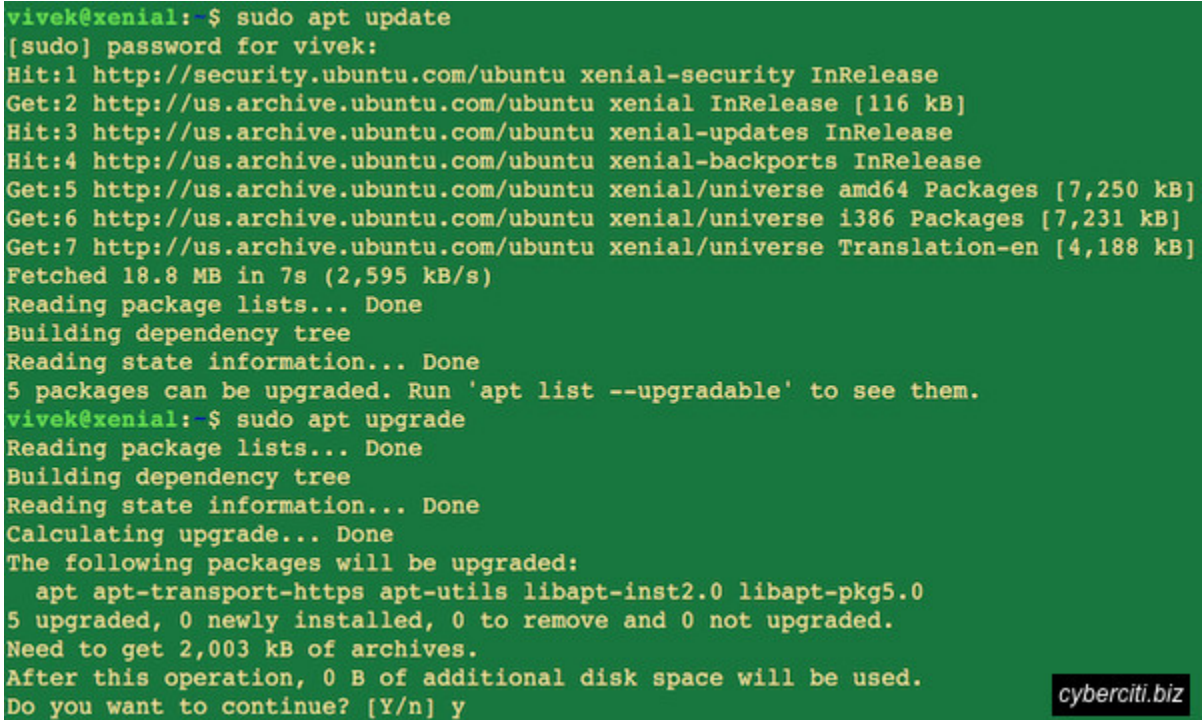
This tutorial will introduce **how to install, configure and manage MySQL on a Ubuntu Linux 16.04 LTS (Xenial Xerus)**. The latest version of MySQL database server is 5.7 and can be installed using the apt-get command or apt command:

1. mysql-server – Metapackage depending on the latest version (server)
2. mysql-client – Metapackage depending on the latest version (client)

Step 1: Update your system by typing the following commands:

```
$ sudo apt update
$ sudo apt upgrade
```



```
vivek@xenial:~$ sudo apt update
[sudo] password for vivek:
Hit:1 http://security.ubuntu.com/ubuntu xenial-security InRelease
Get:2 http://us.archive.ubuntu.com/ubuntu xenial InRelease [116 kB]
Hit:3 http://us.archive.ubuntu.com/ubuntu xenial-updates InRelease
Hit:4 http://us.archive.ubuntu.com/ubuntu xenial-backports InRelease
Get:5 http://us.archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [7,250 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu xenial/universe i386 Packages [7,231 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu xenial/universe Translation-en [4,188 kB]
Fetched 18.8 MB in 7s (2,595 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
5 packages can be upgraded. Run 'apt list --upgradable' to see them.
vivek@xenial:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages will be upgraded:
  apt apt-transport-https apt-utils libapt-inst2.0 libapt-pkg5.0
5 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 2,003 kB of archives.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
```

Fig.01: Before you begin, update your Ubuntu server

Step 2: Install mysql version 5.7 on Ubuntu 16.04

Type the following command:

```
$ sudo apt install mysql-server mysql-client
```

Sample outputs:

```
  Reading package lists... Done
```

```
   Building dependency tree
   Reading state information... Done
   The following additional packages will be installed:
     libdbd-mysql-perl libdbi-perl libhtml-template-perl libmysqlclient18
     libterm-readkey-perl mysql-client-5.7 mysql-client-core-5.7 mysql-common
     mysql-server-5.7 mysql-server-core-5.7
   Suggested packages:
     libclone-perl libmldbm-perl libnet-daemon-perl libsql-statement-perl
     libipc-sharedcache-perl mailx tinyca
   The following NEW packages will be installed:
     libdbd-mysql-perl libdbi-perl libhtml-template-perl libmysqlclient18
     libterm-readkey-perl mysql-client mysql-client-5.7 mysql-client-core-5.7
     mysql-common mysql-server mysql-server-5.7 mysql-server-core-5.7
   0 upgraded, 12 newly installed, 0 to remove and 0 not upgraded.
   Need to get 21.7 MB of archives.
   After this operation, 155 MB of additional disk space will be used.
   Do you want to continue? [Y/n] y
```

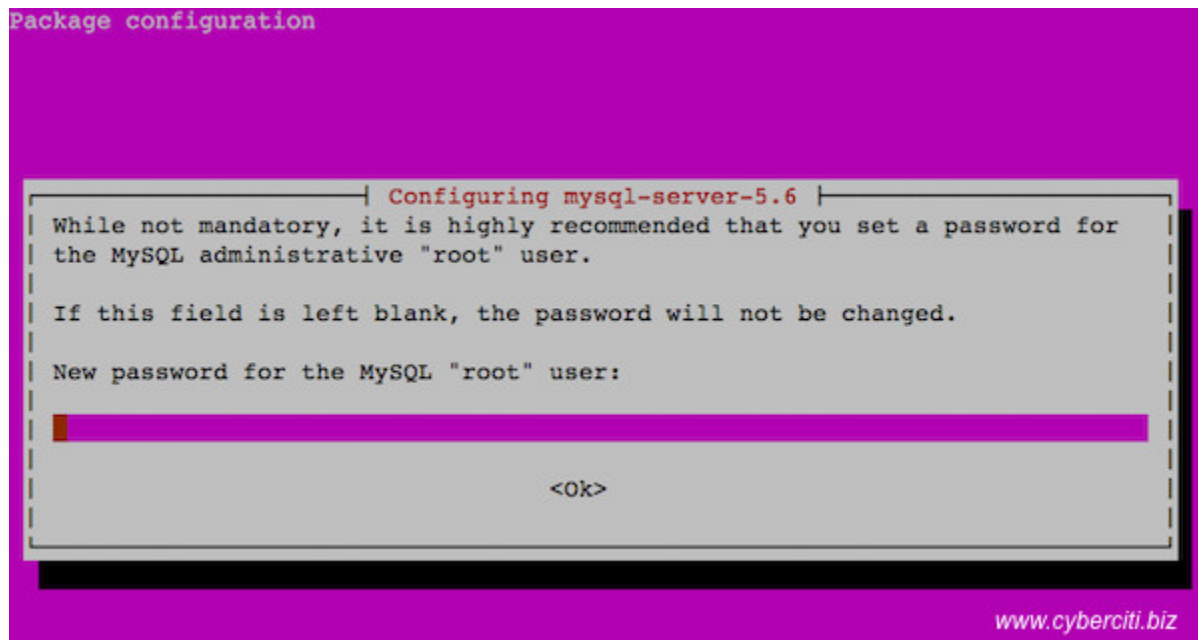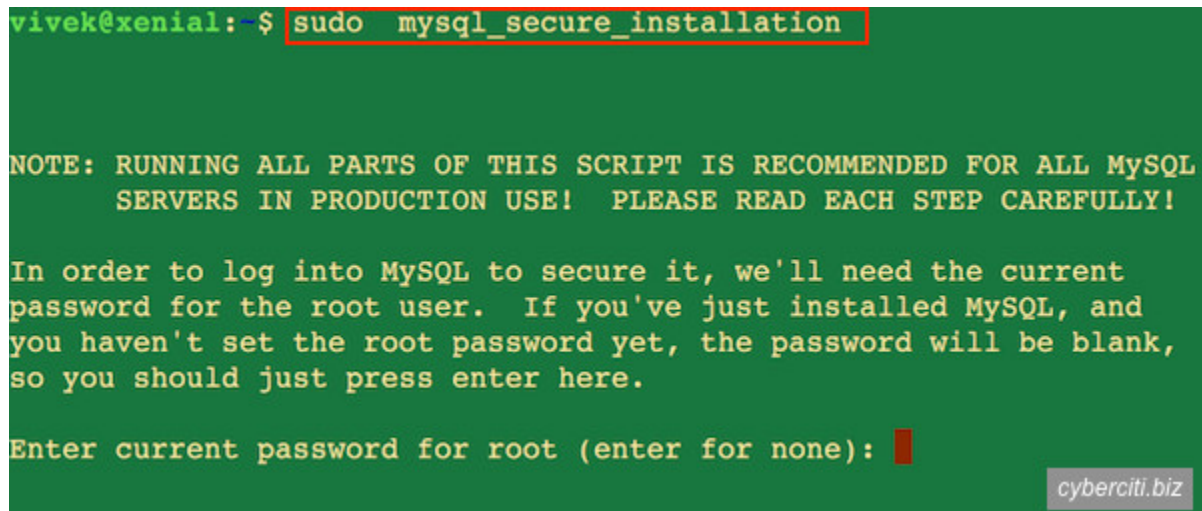You need to type the password for the MySQL root user:

Fig.02: During the installation process set the password for the MySQL root account

Step 3: Run mysql_secure_installation to secure your installation

For all production server you must run the following command:

```
$ sudo mysql_secure_installation
```

Sample outputs:

Fig,03: Harden MySQL server on Ubuntu
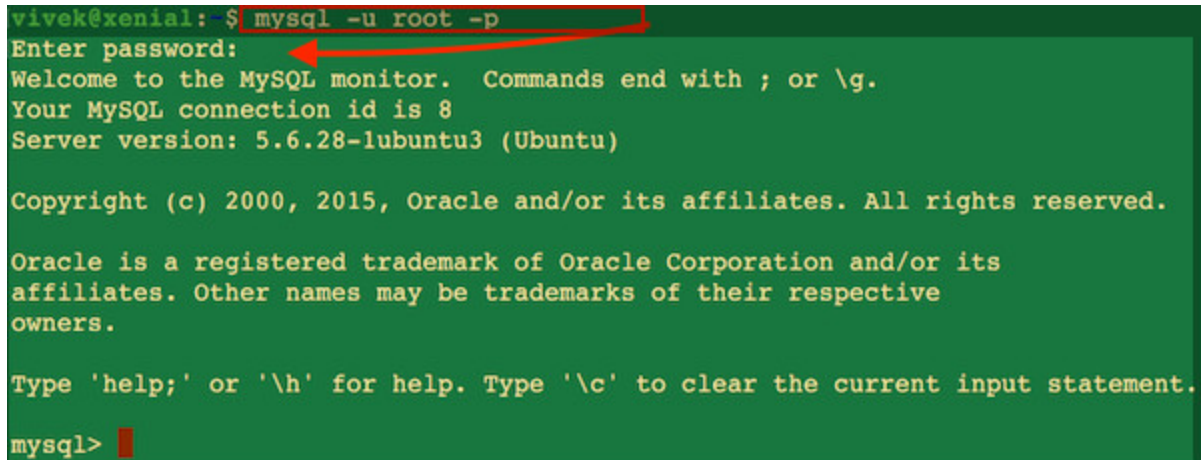
The mysql_secure_installation command will change the root password, disable and remove anonymous users from MySQL server, turn off the MySQL root user login remotely, delete test database, and reload privilege tables on the system. If you've completed all of the steps and answer yes to these questions. Your MySQL installation should now be secure.

Step 4: How do I use MySQL server?

To log in as the root user, type:

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

When prompted, enter the MySQL root password, and you should see `mysql>` prompt as follows:

Fig.04: Your first login

Step 5: How do I create a new MySQL server database and user account?
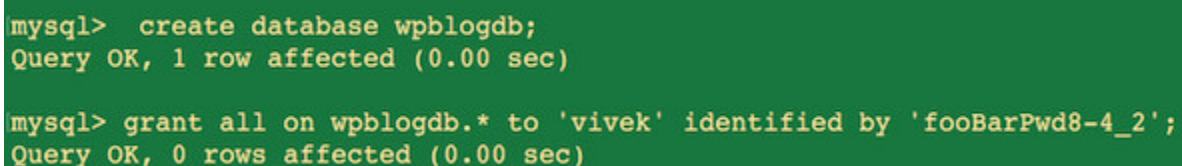
The sql syntax is as [follows to create a new mysql database and setup password](#):

```
CREATE DATABASE DATABASE-NAME-HERE;
GRANT ALL ON DATABASE-NAME-HERE.* TO 'DATABASE-USERNAME-HERE' IDENTIF
```

For example, create a wpblogdb as the database, vivek as the user, and fooBarPwd8-4_2 as the user's password, run (type at the mysql> prompt:)

```
mysql> create database wpblogdb;
mysql> grant all on wpblogdb.* to 'vivek' identified by 'fooBarPwd8-4_2';
mysql> quit;
```

Sample session:

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| wpblogdb           |
+--------------------+
4 rows in set (0.00 sec)

mysql> quit
Bye
vivek@xenial:~$
```

Fig.05: Mysql admin: New MySQL User and Database

Now, try to log in as vivek user, enter:

```
$ mysql -u USERNAME -p DB-NAME-HERE
$ mysql -u vivek -p wpblogdb
```

Sample session:

```
vivek@xenial:~$ mysql -u vivek -p wpblogdb
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 5.6.28-1ubuntu3 (Ubuntu)

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owners.

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| wpblogdb           |
+--------------------+
2 rows in set (0.00 sec)

mysql>
```
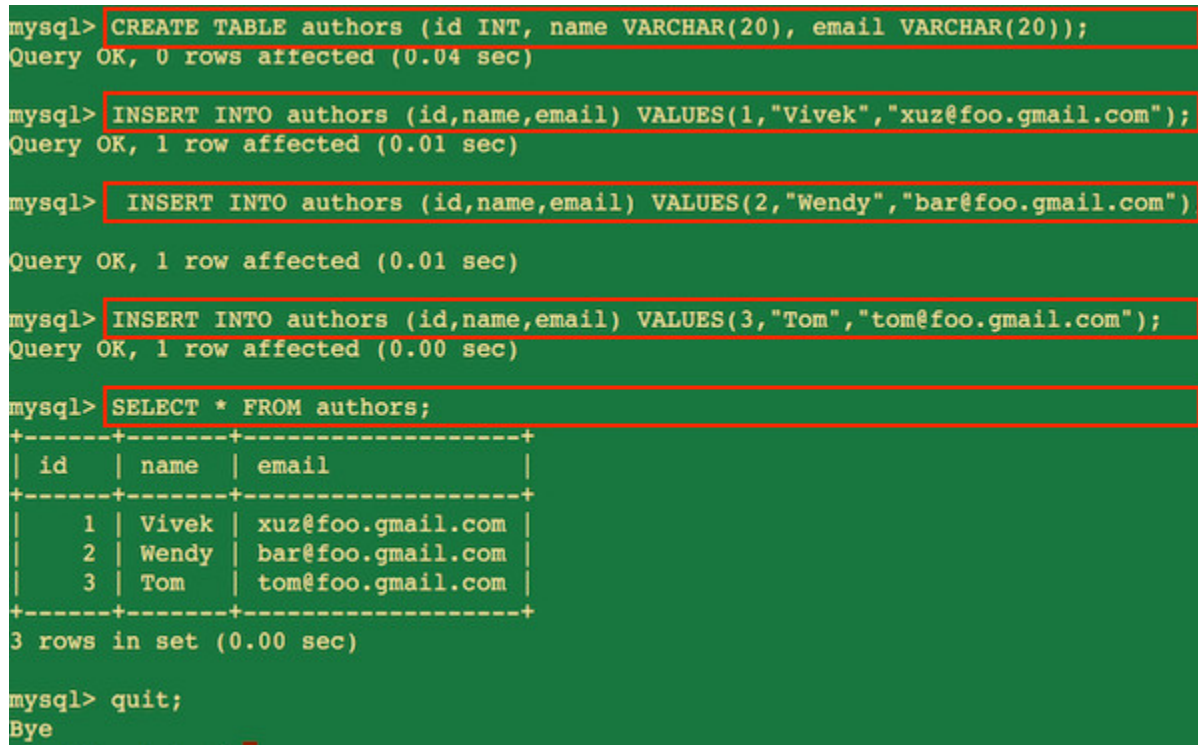
Fig.06: Log back in as vivek user and wpblogdb database

Of course [you can create a mysql tables and insert data too](#):

```
mysql> CREATE TABLE authors (id INT, name VARCHAR(20), email VARCHAR(20));
mysql> INSERT INTO authors (id,name,email) VALUES(1,"Vivek","xuz@foo.gmail.com");
mysql> INSERT INTO authors (id,name,email) VALUES(2,"Wendy","bar@foo.gmail.com");
mysql> INSERT INTO authors (id,name,email) VALUES(3,"Tom","tom@foo.gmail.com");
mysql> SELECT * FROM authors;
mysql> quit;
```

Sample outputs:

Fig.07: Create a demo authors table in wpblogdb database

How do I start MySQL server?

```
$ sudo systemctl start mysql
```

OR

```
$ sudo systemctl start mysql.service
```

How do I stop MySQL server?

```
$ sudo systemctl stop mysql
```

OR

```
$ sudo systemctl stop mysql.service
```

How do I restart MySQL server?

```
$ sudo systemctl restart mysql
```

OR

```
$ sudo systemctl restart mysql.service
```

How do I find out if MySQL running/active?

```
$ sudo systemctl status mysql.service
```

Sample outputs:

```
  â mysql.service - MySQL Community Server
     Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor pres
     Active: active (running) since Mon 2016-03-28 14:20:54 CDT; 8s ago
    Process: 24181 ExecStartPost=/usr/share/mysql/mysql-systemd-start post (
```

```
    Process: 24176 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (cc
   Main PID: 24180 (mysqld_safe)
      Tasks: 23 (limit: 512)
     Memory: 106.1M
        CPU: 514ms
     CGroup: /system.slice/mysql.service
             â"œâ"€24180 /bin/sh /usr/bin/mysqld_safe
             â""â"€24528 /usr/sbin/mysqld --basedir=/usr --datadir=/var/lib/

Mar 28 14:20:53 xenial systemd[1]: Starting MySQL Community Server...
Mar 28 14:20:53 xenial mysqld_safe[24180]: 160328 14:20:53 mysqld_safe Can
Mar 28 14:20:53 xenial mysqld_safe[24180]: 160328 14:20:53 mysqld_safe Log
Mar 28 14:20:53 xenial mysqld_safe[24180]: 160328 14:20:53 mysqld_safe Sta
Mar 28 14:20:54 xenial systemd[1]: Started MySQL Community Server.
```

How do I reset the mysql root account password?

You need to type the following command, if you would like to change the MySQL root password:

```
$ sudo dpkg-reconfigure mysql-server-5.7
```

See "Recover the MySQL root Password" for more information.

A note about MySQL server configuration

You may edit the `/etc/mysql/my.cnf` file to configure the basic settings such as TCP/IP port, IP address binding, and other options. However, The MySQL database server configuration file on the Ubuntu 16.04 LTS is located at `/etc/mysql/mysql.conf.d` `/mysqld.cnf` and one can edit using a text editor such as vi or nano:

```
$ sudo vi /etc/mysql/mysql.conf.d/mysqld.cnf
```

OR

```
$ sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
```

After making a change to `/etc/mysql/mysql.conf.d/mysqld.cnf` the MySQL server will need to be restarted:

```
$ sudo systemctl restart mysql.service
```

And, there you have it, the MySQL database version 5.7 installed and working correctly on the latest version of Ubuntu Linux 16.04 LTS. For more information see MySQL 5.7 Reference Manual.

Posted by: Vivek Gite

The author is the creator of nixCraft and a seasoned sysadmin and a trainer for the Linux operating system/Unix shell scripting. He has worked with global clients and in various industries, including IT, education, defense and space research, and the nonprofit sector. Follow him on Twitter, Facebook, Google+.

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🗨 19 comment

Jouni "rautamiekka" JÃ¤rvinen   March 29, 2016 at 12:50 am

Don't install vanilla Oracle MySQL, and don't install 5.6, install MariaDB 10.1 which is combination of 5.6 and 5.7. It sports new engines for special purposes in addition to TokuDB, an improved InnoDB.

Julian Alarcon   March 29, 2016 at 3:30 pm

Hey

Your post is now outdated, MySQL default version now is 5.7 in Ubuntu 16.04, but there is still 5.6 version available.

Vivek Gite   March 29, 2016 at 5:46 pm

No. I checked it again:

```
$ lsb_release -r
Release:        16.04
$ apt-cache search 5.? | grep mysql-server
mysql-server - MySQL database server (metapackage depending on the late
mysql-server-5.6 - MySQL database server binaries and system database s
mysql-server-core-5.6 - MySQL database server binaries
```

There is no 5.7 version. Here is a search result.

Ruud   April 27, 2016 at 10:48 pm

Anyone got an idea on how to change the datadir in MySQL?

The old way doesn't seem to work (even though I changed the data path in the apparmor config).

ank91   April 29, 2016 at 3:48 am

Thanks, you saved my day.

How do i configure mysql service for low RAM usage, right now it is taking around 800 MB RAM. Please help.

melina   May 12, 2016 at 6:11 pm

I have a problem. Didn't open the place that I need to type the password for the MySQL root user. How can I fix this?

QUHO   May 13, 2016 at 2:46 pm

Thanks! Very clear!
It works for me ;)

Tim Oh   May 15, 2016 at 8:44 pm

:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
Some packages could not be installed. This may mean that you have
requested an impossible situation or if you are using the unstable
distribution that some required packages have not yet been created
or been moved out of Incoming.
The following information may help to resolve the situation:

The following packages have unmet dependencies:
mysql-server : Depends: mysql-community-server (= 5.7.12-1ubuntu15.10) but it is not
going to be installed
E: Unable to correct problems, you have held broken packages.

Jay   May 27, 2016 at 10:47 am

Sorry, This is false advertising. I came here to get help installing 5.6 not 5.7 and certainly
not mariadb (ever tried going back?).
IMO 16.04 desktop maybe great, as a server it sucks.

ank91   July 26, 2016 at 5:34 am

Silent install script –

```
# Install MySQL Server in a Non-Interactive mode. Default root password wi
echo "mysql-server-5.7 mysql-server/root_password password root" | sudo de
echo "mysql-server-5.7 mysql-server/root_password_again password root" | s
sudo apt-get -y install mysql-server-5.7
```

IQRA ASLAM   September 2, 2016 at 5:13 am

I am having mysql 5.7 on my linux server Ubuntu16.04 . i am installing Atutor (a learning Management system) on my server .Every thing is fine but mysql 5.7 is find disabled or not found on it how can i fix this issue Please guide me i am in trouble.

Jonathan Nascimento   September 12, 2016 at 5:47 pm

Thank you very much! very good tutorial was of great help.

Nishanthi   October 5, 2016 at 2:42 pm

Wow ,this is what i am looking for very useful thanks

Nisith Palo   October 17, 2016 at 4:39 am

i finishing Run mysql_secure_installation to secure your installation then next it shows

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

All done!
nisith@nisith-inspiron-3521:~$ mysql -u root -p
Enter password:
ERROR 1698 (28000): Access denied for user 'root'@'localhost'
nisith@nisith-inspiron-3521:~$

Nisith Palo   November 3, 2016 at 7:44 am

Very very Thanks vivek.

Dario   January 4, 2017 at 5:43 am

Thanks for this posting. It saved my life. I was struggling with a wrong installation of
mysql and this article made it so easy for me!

John_Betong   April 8, 2017 at 10:42 am

Many thanks for the tutorial.
May I add:
*** DO NOT USE JUST NUMERICS FOR A PASSWORD ***.

Yes I know I am shouting but a numeric password is accepted but does not work as I
learned to my detriment. I just spent quite a few hours trying to find a solution.

scott   April 24, 2017 at 12:33 pm

Followed a link to get 5.6 and find an article on mysql 5.7 which I am more than capable of doing on my own just struggling with 5.6 as this is required by the business, next time can you correctly advertise or have your links accurately labelled or linking

Harish   May 30, 2017 at 11:41 am

I have tried so many links none of them rectify my error but this link successfully rectify thank you so much and make a great job

Comments are closed.

Tagged as: dpkg-reconfigure command, dpkg-reconfigure mysql-server-5.6, mysql_secure_installation command, systemctl command, Ubuntu Linux 16.04 LTS, Intermediate

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