NEW   NEW Introducing DigitalOcean Managed MongoDB — a fully managed, database as a service for modern apps

Community

☰

TUTORIAL

How To Reset Your MySQL or MariaDB Root Password

Ubuntu   CentOS   MySQL   Debian   MariaDB   Ubuntu 16.04   Databases

By Mateusz Papiernik
Last Validated on May 5, 2020 • Originally Published on December 20, 2016   👁 824.3k

This article uses Ubuntu 16.04
This distro reached end of life (EOL) on Apr 2021.

Ubuntu 16.04 ⌄

We recommend upgrading to a more modern version. Read upgrade instructions.

Introduction

Forgetting passwords happens to the best of us. If you forget or lose the root password
to your MySQL or MariaDB database, you can still gain access and reset the password if
you have access to the server and a `sudo`-enabled user account.

This tutorial will cover how to reset the root password for older and newer versions of
MySQL and MariaDB.

Prerequisites

To recover your root MySQL/MariaDB password, you will need:

- Access to the Linux server running MySQL or MariaDB with a sudo user.

Step 1 — Identifying the Database Version

Most modern Linux distributions ship with either MySQL or MariaDB, a popular drop-in
replacement which is fully compatible with MySQL. Depending on the database used and
its version, you'll need to use different commands to recover the root password.

You can check your version with the   SCROLL TO TOP   nd:

```
$ mysql --version
```

You'll see some output like this with MySQL:

```
MySQL output
mysql  Ver 14.14 Distrib 5.7.16, for Linux (x86_64) using  EditLine wrapper
```

Or output like this for MariaDB:

```
MariaDB output
mysql  Ver 15.1 Distrib 5.5.52-MariaDB, for Linux (x86_64) using readline 5.1
```

Make note of which database and which version you're running, as you'll use them later. Next, you need to stop the database so you can access it manually.

Step 2 — Stopping the Database Server

To change the root password, you have to shut down the database server beforehand.

You can do that for MySQL with:

```
$ sudo systemctl stop mysql
```

And for MariaDB wtih:

```
$ sudo systemctl stop mariadb
```

After the database server is stopped, you'll access it manually to reset the root password.

Step 3 — Restarting the Database Server Without Permission Checking

If you run MySQL and MariaDB without loading information about user privileges, it will allow you to access the database command line with root privileges without providing a password. This will allow you to gain access to the database without knowing it.

To do this, you need to stop the data_____ f____ _____ ___ng the *grant tables*, which store user privilege information. Because this is _ ____ __ _____ __y risk, you should also skip

SCROLL TO TOP

networking as well to prevent other clients from connecting.

Start the database without loading the grant tables or enabling networking:

```
$ sudo mysqld_safe --skip-grant-tables --skip-networking &
```

The ampersand at the end of this command will make this process run in the background so you can continue to use your terminal.

Now you can connect to the database as the root user, which should not ask for a password.

```
$ mysql -u root
```

You'll immediately see a database shell prompt instead.

MySQL prompt

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

mysql>
```

MariaDB prompt

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

MariaDB [(none)]>
```

Now that you have root access, you can change the root password.

Step 4 — Changing the Root Password

One simple way to change the root password for modern versions of MySQL is using the `ALTER USER` command. However, this command won't work right now because the grant tables aren't loaded.

Let's tell the database server to reload the grant tables by issuing the `FLUSH PRIVILEGES` command.

```
mysql> FLUSH PRIVILEGES;
```                        SCROLL TO TOP

Now we can actually change the root password.

For **MySQL 5.7.6 and newer** as well as **MariaDB 10.1.20 and newer**, use the following command.

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'new_password';
```

For **MySQL 5.7.5 and older** as well as **MariaDB 10.1.20** and older, use:

```
mysql> SET PASSWORD FOR 'root'@'localhost' = PASSWORD('new_password');
```

Make sure to replace `new_password` with your new password of choice.

Note: If the `ALTER USER` command doesn't work, it's usually indicative of a bigger problem. However, you can try `UPDATE ... SET` to reset the root password instead.

```
mysql> UPDATE mysql.user SET authentication_string = PASSWORD('new_password') WHERE User = 'ro
```

Remember to reload the grant tables after this.

In either case, you should see confirmation that the command has been successfully executed.

```
Output
Query OK, 0 rows affected (0.00 sec)
```

The password has been changed, so you can now stop the manual instance of the database server and restart it as it was before.

Step 5 — Restart the Database Server Normally

First, stop the instance of the database server that you started manually in Step 3. This command searches for the PID, or process ID, of MySQL or MariaDB process and sends `SIGTERM` to tell it to exit smoothly after performing clean-up operations. You can learn more in this Linux process managen.

SCROLL TO TOP

For MySQL, use:

```
$ sudo kill `cat /var/run/mysqld/mysqld.pid`
```

For MariaDB, use:

```
$ sudo kill `/var/run/mariadb/mariadb.pid`
```

Then, restart the service using `systemctl`.

For MySQL, use:

```
$ sudo systemctl start mysql
```

For MariaDB, use:

```
$ sudo systemctl start mariadb
```

Now you can confirm that the new password has been applied correctly by running:

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

The command should now prompt for the newly assigned password. Enter it, and you should gain access to the database prompt as expected.

Conclusion

You now have administrative access to the MySQL or MariaDB server restored. Make sure the new root password you choose is strong and secure and keep it in safe place.

About the authors

Mateusz Papiernik

Creating bespoke software ∘ CTO & co-founder @ Makimo. I'm a   SCROLL TO TOP
software enginner & a geek. .
making impossible things possible.

Hazel Virdó

Editor

And I need tea.

Still looking for an answer?

| Ask a question | Search for more help |

RELATED

Join the DigitalOcean Community

Join 1M+ other developers and:
- Get help and share knowledge in Q&A
- Subscribe to topics of interest
- Get courses & tools that help you grow as a developer or small business owner

Join Now

How To Install the Deno JavaScript Runtime on Ubuntu 20.04

Tutorial

How To Get Total Result Count in Laravel Eloquent

Tutorial

Comments

38 Comments

NUCUTA January 19, 2017

This tutorial made my mysql database to not function. now I can't even restart it, my site doesn't even work now because it can't connect to the database.

Reply   Report

SCROLL TO TOP

mati January 19, 2017

0

Please be more specific. At which step or steps did you encounter problems? Did you see any error messages? What happens when you try to restart the database?

The set of commands in the tutorial can result in setting a wrong root password by accident, but cannot result in corrupting the database and/or server configuration.

To help you with your problem more details are necessary.

Reply   Report

NUCUTA January 19, 2017

0

It says now when I am trying

mysql -u root -p

ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (2 "No such file or directory")

Reply   Report

mati January 19, 2017

0

This means the database is not running at all. Please try `systemctl restart mysql` to restart MySQL and if it fails post the results of `tail /var/log/mysql/error.log`.

Reply   Report

NUCUTA January 19, 2017

0

okay it's working, but still the root password isn't changed.

Reply   Report

mati January 19, 2017

0

Maybe you have omitted one of the steps by accident. Try following the tutorial again step by step. If you don't feel like doing this on a production server, create a fresh droplet with MySQL only to verify the steps in a safe environment first.

Reply   Report

francojoint January 27, 2017

0

Thank you very much for this tutorial. On CentOS with MySQL 5.7.17 when I launch the mysqld*safe –skip-grant-tables –skip-networking I get the folloqing message: mysqld*safe Directory '/var/run/mysqld' for UNIX socket file don't exist. After this, MySQL doesn't start so when I try mysql -u root I get as an answer ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (2). I'm stuck there as I cannot restart MySQL with –skip-grant-tab'   '   '   '.... Any clue?

SCROLL TO TOP

Reply   Report

abierbrauer February 5, 2017

3   do this before:

    sudo mkdir /var/run/mysqld; sudo chown mysql /var/run/mysqld

    Reply   Report

NUCUTA February 14, 2017

0   I didn't omit any part, I found that when you are logged into the root account of the operating system, mysql no longer asks to enter the password of the root account of mysql.

Reply   Report

javedusmani7 February 23, 2017

0   Thanks for your article, This is a very useful post for us. For information only, Other may users also have a look at this link [http://www.ipragmatech.com/forgot-mysql-root-password](http://), this link also contains very easy step to reset the password.

Reply   Report

webdevf9d57c185 February 24, 2017

1   I dunno, this didn't work for me.

For Step 2, the server is using MariaDB but none of the mariadb-specific commands worked. Also it doesn't know what 'systemctl' is. I figured out though that I could stop the database with 'sudo service mysql stop' - that definitely stopped the service.

In Step 3, 'sudo mysqld_safe –skip-grant-tables –skip-networking &' did something, but it didn't kick me back to the command line. Although I didn't have to ctrl-c it either, just when I tried typing the next bit was when the new line appeared. Don't know if that's a problem or not, I'm just not used to command line stuff.

In Step 4, 'FLUSH PRIVELEGES;' said the query was ok, but 0 rows affected. Then again, I don't know if this is supposed to affect any rows. Next, the recommended way of changing the password did not work. I used the method where it says it's indicative of bigger problems (whatever that means), and that did work and affect 1 row. Or it didn't work because the guide says it should say 0 rows affected?

For Step 5, neither of the sudo kill commands worked. And of course the systemctl commands don't work to restart the database, so I did 'sudo service start mysql'. It said MariaDB started.

Then I tried the final step with 'mysql -u root -p' but it says the password is wrong. So I don't know what I changed (if anything) but yeah, the guide didn't work for me. At least I don't have the same problems as NUCUTA?

SCROLL TO TOP

Edit:

I managed to change the password following Rackspace's guide (https://support.rackspace.com/how-to/mysql-resetting-a-lost-mysql-root-password/). It's almost the same, don't know if the different order of mysql commands made a difference. I still used my own commands to start/stop the mysql service though - 'sudo service mysql start' or 'sudo service mysql stop'

Reply   Report

shyaminayesh April 2, 2017

0   I had the same problem when I forgot one of my MySQL instance root password. I reset it using this guide.

https://www.fossgeek.org/server-configuration/reset-mysql-root-password/

It's working fine & In my case I had a CentOS 6 box. :)

Reply   Report

Pwby June 4, 2017

0   Amaizing tutorial partner, rly! Thanks you so much..

Reply   Report

pacomaass June 14, 2017

0   Thank you the tutorial was actually very helpful.

I just have one question, in step 4 there is a note saying:
"Note: If the ALTER USER command doesn't work, it's usually indicative of a **bigger problem**."

What's the **bigger problem** that's mentioned and how can i solve it.

Reply   Report

olairet June 30, 2017

0   In Step 5, to prevent mysql> from freezing, it's best to write: quit or \q and then restart: 'sudo systemctl start mysql, instead of writing: sudo kill `cat /var/run/mysqld/mysqld.pid`

Reply   Report

> **P4** September 26, 2017
>
> 0   On the other hand I need to issue `sudo kill $(sudo cat /var/run/mysqld/mysqld.pid)` or actually `sudo kill (sudo cat /var/run/mysqld/mysqld.pid)` since my default shell is fish.
>
> Reply   Report

vadiaz July 26, 2017

0   If you just run mysql command und   SCROLL TO TOP   be granted access without asked for password, because socket authentication enabled for root@localhost.

The only way to set password is to swtch to native authentication like:

ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql*native*password BY 'test';

Reply   Report

Artistan September 26, 2017

0   It was a bit touchy, but it worked for me.. Here is my short version....

https://gist.github.com/Artistan/7665d26aabd5f03772f6c0e6769a37ad

Reply   Report

daryllukas October 17, 2017

4   If you get the following error after running the `mysqld_safe` command..

```
2017-02-10T17:05:44.872874Z mysqld_safe Logging to '/var/log/mysql/error.log'.
2017-02-10T17:05:44.874547Z mysqld_safe Directory '/var/run/mysqld' for UNIX socket file dor
```

Try the following

```
mkdir -p /var/run/mysqld
chown mysql:mysql /var/run/mysqld
```

Tried on Ubuntu 16.04

Reply   Report

> **friedman5764** May 13, 2018
>
> 0   Exactly my error and your solution helped. Thanks million!
>
> **Reply**   Report
>
> **feliperomero3** October 23, 2018
>
> 0   This helped me too, thanks!
>   Ubuntu 18.04
>
> **Reply**   Report

andi November 3, 2017

0   This tutorial isn't working for MariaDB 10.2 as it makes the db no more working at all.

It is de facto like Nucuta has already described it
In either case, you should see confirmation that the command has been successfully
executed.

SCROLL TO TOP

Output
Query OK, 0 rows affected (0.00 sec)
The password has been changed, so you can now stop the manual instance of the database
server and restart it as it was before.

This means that nothing has been changed

root@go ~ # sudo mysqld*safe –skip-grant-tables –skip-networking &*
[1] 26402
*root@go ~ # 171103 17:43:52 mysqld*safe Logging to '/var/lib/mysql/go.oo2.cloud.err'.
171103 17:43:52 mysqld_safe Starting mysqld daemon with databases from /var/lib/mysql
mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 11
Server version: 10.2.10-MariaDB-10.2.10+maria~xenial mariadb.org binary distribution

Copyright © 2000, 2017, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.00 sec)

Reply   Report

⌃
♡   **atblogad1** November 15, 2017
0   Nice one, I get this error message:

```
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mys
```
◀ ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ ▶

Reply   Report

⌃
♡   **netdragoneng** September 17, 2018
0   Edit your my.cnf file (probably at /etc/mysql/mysql.conf.d/mysqld.cnf) to add the line
skip-grant-tables

Then restart mysql service normally and follow steps above starting with mysql -u root

Remember to remove skip-grant-tables later (security!!!)

Command:
sudo nano -w /etc/mysql/mysq'   SCROLL TO TOP
More info:

https://www.codero.com/knowledge-base/content/33/296/en/how-to-reset-your-root-mysql-password.html

Reply   Report

jrodriguez6 February 18, 2018

0

I have been trying to setup a Password and Privileges for my New Raspberry Pi 3. I'm using Raspbian GNU/Linux" VERSION="9 (stretch) with 10.1.23-MariaDB, for debian-linux.

You Instructions looked they would work but here are the Problems:

Step 3: sudo mysqld*safe –skip-grant-tables –skip-networking &*

[1] 2874

*pi@raspberrypi:~ $ 180218 12:39:56 mysqld*safe Logging to syslog.

180218 12:39:56 mysqld*safe A mysqld process already exists*

*[1]+ Exit 1 sudo mysqld*safe –skip-grant-tables –skip-networking

mysql -u root
ERROR 1698 (28000): Access denied for user 'root'@'localhost'

Step 4 Very End what is the command to save and get out of the MariaDB???

Nothing Works after: Restarting the Database Server Without Permission Checking Line Fails.

Can you help. I've tried for 5 days to get this Server Working. The Problems are with all the updates Raspbian has added to Apache2, MariaDB, PHP7, and PHPMyAdmin. I've reinstalled the OS 5 Times now.

Any help would really be appreciated.

Thanks

Joe

Reply   Report

DaveSpace April 8, 2018

0

Just tried this tutorial, but with some troubles at the step3, solved it with this tutorial:

https://askubuntu.com/questions/172514/how-do-i-uninstall-mysql

Reply   Report

satyamvats5 July 13, 2018

0

It is working perfectly fine, but until i restart. Whenever I restart my system it stops working. What should i do to make the changes permanent. By the way im using kali linux.

Reply   Report

pb193a587ccef4f520081d7428   SCROLL TO TOP

Didnt work for me,

0   at the → mysql -u root

I get this error and that's the end of it..cant continue

Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock'
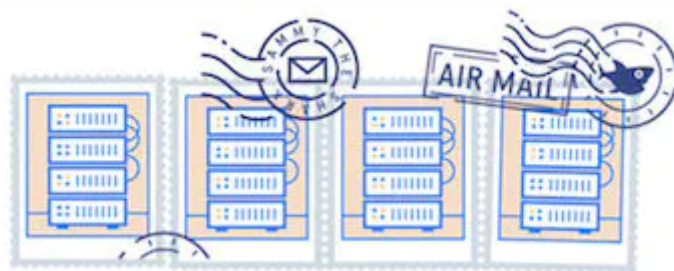
Reply   Report

AG85 August 19, 2018

0   Thanks a lot

Note : in some times in mariadb server you need to run mysql version commands
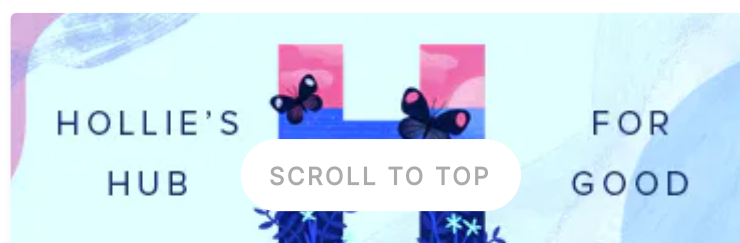
Reply   Report

Load More Comments

GET OUR BIWEEKLY NEWSLETTER

Sign up for Infrastructure as a
Newsletter.

HOLLIE'S   FOR

HUB   SCROLL TO TOP   GOOD

HOLLIE'S HUB FOR GOOD

Working on improving health and
education, reducing inequality,
and spurring economic growth?
We'd like to help.

BECOME A CONTRIBUTOR

You get paid; we donate to tech
nonprofits.

Featured on Community   Kubernetes Course   Learn Python 3   Machine Learning in Python
Getting started with Go   Intro to Kubernetes

DigitalOcean Products   Virtual Machines   Managed Databases   Managed Kubernetes   Block Storage
Object Storage   Marketplace   VPC   Load Balancers

Welcome to the developer cloud

DigitalOcean makes it simple to launch in the
cloud and scale up as you grow – whether you're
running one virtual machine or ten thousand.

Learn More

SCROLL TO TOP

Company

About

Leadership

Blog

Careers

Partners

Referral Program

Press

Legal

Security & Trust Center

Products

Pricing

Products Overview

Droplets

Kubernetes

Managed Databases

Spaces

Marketplace

Load Balancers

Block Storage

API Documentation

Documentation

Release Notes

Community

Tutorials

Q&A

Tools and Integrations

Tags

Product Ideas

Write for DigitalOcean

Presentation Grants

Hatch Startup Program

Shop Swag

Research Program

Open Source

Code of Conduct

Contact

Get Support

Trouble Signing In?

Sales

Report Abuse

System Status

SCROLL TO TOP