

How to Manage the User(s) in MariaDB?

written by sysadmin | 4 June 2025

[The previous article](#) already explained how to create a database and a table in MariaDB. This article will explain how to manage the user(s) in MariaDB.

Problem

How to manage the user(s) in MariaDB?

Solution

Here are the commands to manage user(s) in MariaDB:

INFO

The use of capital letters in this article is only to distinguish between original commands from MariaDB and data from the user. You don't have to use the capital letters when running these commands, but you can use all lowercase letters.

1. Display all users

Type the command below to display all the users in MariaDB:

```
SELECT User,Host FROM mysql.user;
```

```
MariaDB [(none)]> SELECT user,host FROM mysql.user;
+-----+-----+
| User      | Host      |
+-----+-----+
| mariadb.sys | localhost |
| mysql      | localhost |
| root       | localhost |
+-----+-----+
3 rows in set (0.007 sec)
```

Display all users in MariaDB



You can see in the picture above that by default, there are only 3 users in MariaDB.

2. Create a user with a password

Use the format below to create a user with a password:

```
CREATE USER 'username'@'ip_address' IDENTIFIED BY 'password_user';
```

For example, If you want to create a user with the name james and its password 123456, then type the command below:

```
CREATE USER 'james'@'localhost' IDENTIFIED BY '123456';
```

If you want to create a John user with a qwerty password but the user can only access the database via the IP with subnet 192.168.56.0/24, type the command below:

```
CREATE USER 'john'@'192.168.56.%' IDENTIFIED BY 'qwerty';
```

But if you also want to create a judith user with a password 1q2w3e4r and the user can access the database from any network, then type the command below:

```
CREATE USER 'judith'@'%' IDENTIFIED BY '1q2w3e4r';
```

```

MariaDB [(none)]> CREATE USER 'james'@'localhost' IDENTIFIED BY '123456';
Query OK, 0 rows affected (0.051 sec)

MariaDB [(none)]> CREATE USER 'john'@'192.168.56.%' IDENTIFIED BY 'qwerty';
Query OK, 0 rows affected (0.043 sec)

MariaDB [(none)]> CREATE USER 'judith'@'%' IDENTIFIED BY '1q2w3e4r';
Query OK, 0 rows affected (0.047 sec)

MariaDB [(none)]> SELECT user,host FROM mysql.user;
+-----+-----+
| User      | Host      |
+-----+-----+
| judith    | %         |
| john      | 192.168.56.% |
| james     | localhost  |
| mariadb.sys | localhost  |
| mysql     | localhost  |
| root      | localhost  |
+-----+-----+
6 rows in set (0.004 sec)

```



Create the users

To see the options for this command, you can go [to this page](#).

4. Rename user

Use the format below to change the user name:

```
RENAME USER 'username1'@'ip_address' TO 'username2'@'ip_address'
```

For example, you want to change the name of james to bob by typing the command below:

```
RENAME USER 'james'@'localhost' TO 'bob'@'localhost';
```

```
MariaDB [(none)]> SELECT user,host FROM mysql.user;
```

User	Host
judith	%
john	192.168.56.%
james	localhost
mariadb.sys	localhost
mysql	localhost
root	localhost

6 rows in set (0.003 sec)

```
MariaDB [(none)]> RENAME USER 'james'@'localhost' TO 'bob'@'localhost';
```

Query OK, 0 rows affected (0.043 sec)

```
MariaDB [(none)]> SELECT user,host FROM mysql.user;
```

User	Host
judith	%
john	192.168.56.%
bob	localhost
mariadb.sys	localhost
mysql	localhost
root	localhost

6 rows in set (0.003 sec)



Rename the user

You can also change the IP address using the command:

```
RENAME USER 'bob'@'localhost' TO 'bob'@'192.168.56.%';
```

```
MariaDB [(none)]> SELECT user,host FROM mysql.user;
```

User	Host
judith	%
john	192.168.56.%
bob	localhost
mariadb.sys	localhost
mysql	localhost
root	localhost

```
6 rows in set (0.005 sec)
```

```
MariaDB [(none)]> RENAME USER 'bob'@'localhost' TO 'bob'@'192.168.56.%';  
Query OK, 0 rows affected (0.046 sec)
```

```
MariaDB [(none)]> SELECT user,host FROM mysql.user;
```

User	Host
judith	%
bob	192.168.56.%
john	192.168.56.%
mariadb.sys	localhost
mysql	localhost
root	localhost

```
6 rows in set (0.003 sec)
```



Rename the IP address

To see the options for this command, you can go [to this page](#).

5. Alter user

Use the format below to change the user in MariaDB:

```
ALTER USER 'username' option1 option2 ... optionN;
```

For example, if you want to change the user james' password, then use the command below:

```
ALTER USER 'james'@'localhost' IDENTIFIED BY 'qwerty';
```

```
MariaDB [(none)]> ALTER USER 'james'@'localhost' IDENTIFIED BY 'qwerty';  
Query OK, 0 rows affected (0.006 sec)
```



Change the password using the alter command

To see the options for this command, you can go [to this page](#).

6. Grant a user

If you only make a user in Mariadb without giving access to the user, then the user will not be able to enter the existing database in Mariadb. By default, only the root user gets access to all databases in Mariadb. To add a user to have access, use the format below:

```
GRANT option1 ON option2 TO 'username'@'ip_address';
```

Option1 is for privileges options at a database or a table level, and option2 is for which database or table the user can access by the user. To see the options for this command, you can go [to this page](#). For example, the user bob can only access the db_office database and then use the command below:

```
GRANT ALL ON db_office.* TO 'bob'@'192.168.56.%';
```

If you want to provide access to the user john to only be able to do the **select** command for the employee table in the db_office database, then use the command below:

```
GRANT SELECT ON db_office.employees TO 'john'@'192.168.56.%';
```

and provide a judith user to access the entire database, use the command below:

```
GRANT ALL ON *.* TO 'judith'@'%';
```

You can also combine the grant command by giving a password to a user by typing the command below:

```
GRANT ALL ON db_office.* TO 'richard'@'192.168.56.%' IDENTIFIED BY 'qwerty';
```

To see the grant of a user, for example, a judith user, type the command below:

```
SHOW GRANTS for 'judith';
```

```
MariaDB [db_office]> SHOW GRANTS for 'judith';
+-----+-----+
| Grants for judith@% |
+-----+-----+
| GRANT ALL PRIVILEGES ON *.* TO `judith`@`%` IDENTIFIED BY PASSWORD '*DB469070DB0AD0CA0B93040D166D7FC4713D6961' |
+-----+-----+
1 row in set (0.000 sec)
```

Display grant for a user

Warning

If you want to see the grant of a user but you do not enter the IP address of the user's host, as in the picture above, then by default, MariaDB will assume '%' as the host. Therefore, it is recommended that you type the IP address of the user to display the grant status of the user.

If you want to see what grant access is given to a user but forget each IP host address from the user-user in MariaDB, then use this command:

```
select distinct concat('SHOW GRANTS FOR ', QUOTE(user), '@', QUOTE(host), ';') as query from mysql.user;
```

```
MariaDB [db_office]> select distinct concat('SHOW GRANTS FOR ', QUOTE(user), '@', QUOTE(host), ';') as query from mysql.user;
+-----+-----+
| query |
+-----+-----+
| SHOW GRANTS FOR 'judith'@'%'; |
| SHOW GRANTS FOR 'bob'@'192.168.56.%'; |
| SHOW GRANTS FOR 'john'@'192.168.56.%'; |
| SHOW GRANTS FOR 'richard'@'192.168.56.%'; |
| SHOW GRANTS FOR 'mariadb.sys'@'localhost'; |
| SHOW GRANTS FOR 'mysql'@'localhost'; |
| SHOW GRANTS FOR 'root'@'localhost'; |
+-----+-----+
7 rows in set (0.009 sec)
```

Display all grants for each user

7. Make a role

By default, if you have many users and sometimes these users have the same access, it is recommended to create a role. A role bundles many privileges together. Use the format below to create a role:

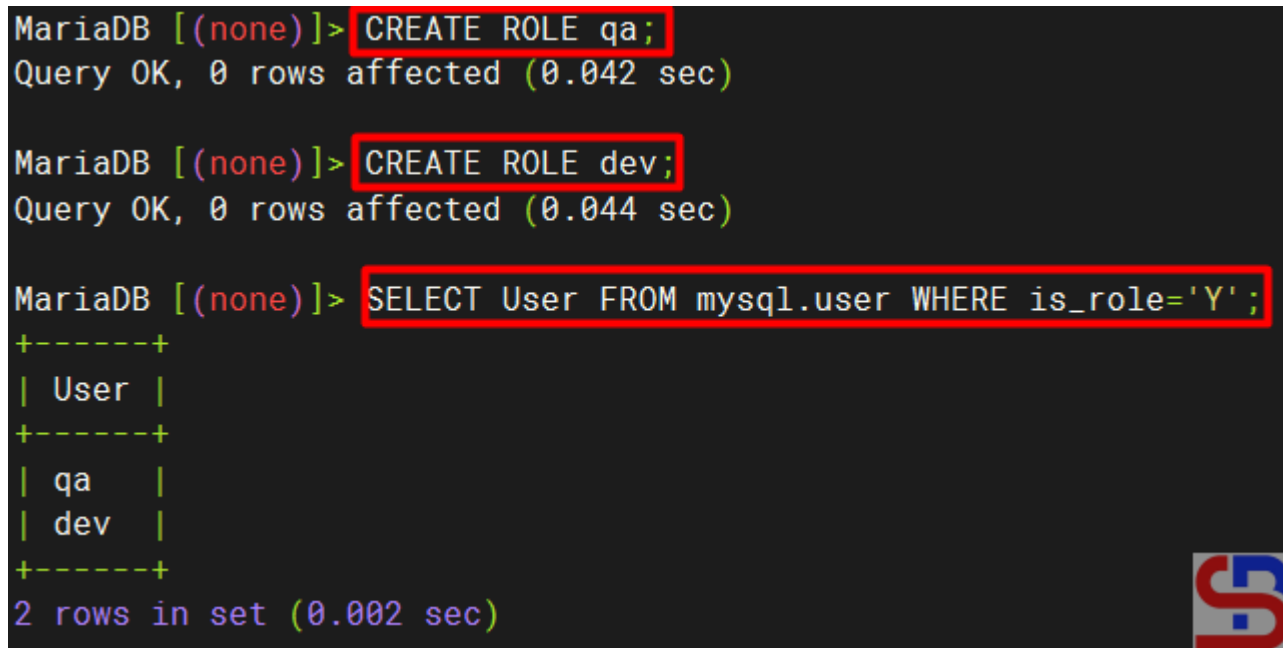
```
CREATE ROLE role_name;
```

To see the options in this command, please go [to this page](#). For example, if you want to make a qa and a dev role in MariaDB, then use the command below to make the role:

```
CREATE ROLE qa;  
CREATE ROLE dev;
```

To see all the roles in MariaDB, use the command below:

```
SELECT User FROM mysql.user WHERE is_role='Y';
```



The screenshot shows a MariaDB terminal session. The first two commands are `CREATE ROLE qa;` and `CREATE ROLE dev;`, both of which are highlighted with red boxes. The output for both is "Query OK, 0 rows affected (0.042 sec)" and "Query OK, 0 rows affected (0.044 sec)" respectively. The third command is `SELECT User FROM mysql.user WHERE is_role='Y';`, also highlighted with a red box. The output shows a table with two rows: 'qa' and 'dev'. The text "2 rows in set (0.002 sec)" is at the bottom. A small logo is visible in the bottom right corner of the terminal window.

```
MariaDB [(none)]> CREATE ROLE qa;  
Query OK, 0 rows affected (0.042 sec)  
  
MariaDB [(none)]> CREATE ROLE dev;  
Query OK, 0 rows affected (0.044 sec)  
  
MariaDB [(none)]> SELECT User FROM mysql.user WHERE is_role='Y';  
+-----+  
| User |  
+-----+  
| qa   |  
| dev  |  
+-----+  
2 rows in set (0.002 sec)
```

Create the role

After that, use the grant command to access the db_office database based on the roles as the command below:

```
GRANT SELECT ON db_office.* TO qa;  
GRANT ALL ON db_office.* TO dev;
```

Then enter the user bob into the qa role and judith into the dev role with the command below:

```
GRANT qa TO 'bob'@'192.168.56.%';  
GRANT dev to 'judith'@'%';
```

To see users who have entered into the roles in Mariadb, use the command below:

```
SELECT * FROM mysql.roles_mapping;
```

```
MariaDB [(none)]> GRANT SELECT ON db_office.* TO qa;  
Query OK, 0 rows affected (0.041 sec)  
  
MariaDB [(none)]> GRANT ALL ON db_office.* TO dev;  
Query OK, 0 rows affected (0.048 sec)  
  
MariaDB [(none)]> GRANT qa TO 'bob'@'192.168.56.%';  
Query OK, 0 rows affected (0.047 sec)  
  
MariaDB [(none)]> GRANT dev TO 'judith'@'%';  
Query OK, 0 rows affected (0.044 sec)  
  
MariaDB [(none)]> SELECT * FROM mysql.roles_mapping;  
+-----+-----+-----+-----+  
| Host      | User   | Role  | Admin_option |  
+-----+-----+-----+-----+  
| localhost | root   | qa    | Y            |  
| localhost | root   | dev    | Y            |  
| 192.168.56.% | bob    | qa    | N            |  
| %         | judith | dev    | N            |  
+-----+-----+-----+-----+  
4 rows in set (0.003 sec)
```

Grant role to the user

8. Delete access

If you want to delete access to a user, whether it's a role or a grant. Use the format below if you want to delete a user's role:

```
REVOKE role_name FROM 'user'@'ip_address';
```

For example, if you want to delete the qa role from the user bob, use the command below:

```
REVOKE qa FROM 'bob'@'192.168.56.%';
```

```
MariaDB [db_office]> SELECT * FROM mysql.roles_mapping;
+-----+-----+-----+-----+
| Host      | User  | Role | Admin_option |
+-----+-----+-----+-----+
| localhost | root  | qa   | Y            |
| localhost | root  | dev  | Y            |
| 192.168.56.% | bob   | qa   | N            |
| %         | judith | dev  | N            |
+-----+-----+-----+-----+
4 rows in set (0.002 sec)

MariaDB [db_office]> REVOKE qa FROM 'bob'@'192.168.56.%';
Query OK, 0 rows affected (0.045 sec)

MariaDB [db_office]> SELECT * FROM mysql.roles_mapping;
+-----+-----+-----+-----+
| Host      | User  | Role | Admin_option |
+-----+-----+-----+-----+
| localhost | root  | qa   | Y            |
| localhost | root  | dev  | Y            |
| %         | judith | dev  | N            |
+-----+-----+-----+-----+
3 rows in set (0.002 sec)

MariaDB [db_office]>
```



Revoke a user's role

Use the format below if you want to delete a grant:

```
REVOKE option1 ON option2 FROM 'user'@'ip_address';
```

Option1 is for privileges options at a database or a table level, and option2 is for which database or table. If you want to see a deeper explanation of this command, go [to this](#)

[page](#). For example, if you want to delete richard's grant in the db_office database, then use the command below:

```
REVOKE ALL PRIVILEGES ON db_office.* FROM 'richard'@'192.168.56.%';
```

```
MariaDB [(none)]> SHOW GRANTS FOR 'richard'@'192.168.56.%';
+-----+
| Grants for richard@192.168.56.% |
+-----+
| GRANT USAGE ON *.* TO `richard`@`192.168.56.%` IDENTIFIED BY PASSWORD '*AA1420F182E88B9E5F874F6FBE7459291E8F4601' |
| GRANT ALL PRIVILEGES ON `db_office`.* TO `richard`@`192.168.56.%` |
+-----+
2 rows in set (0.002 sec)

MariaDB [(none)]> REVOKE ALL PRIVILEGES ON db_office.* FROM 'richard'@'192.168.56.%';
Query OK, 0 rows affected (0.042 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'richard'@'192.168.56.%';
+-----+
| Grants for richard@192.168.56.% |
+-----+
| GRANT USAGE ON *.* TO `richard`@`192.168.56.%` IDENTIFIED BY PASSWORD '*AA1420F182E88B9E5F874F6FBE7459291E8F4601' |
+-----+
1 row in set (0.004 sec)
```

Revoke the user's grant

9. Delete a user

To delete a user, use the format below:

```
DROP USER username;
```

If you want to see a deeper explanation of this command, please go [to this page](#). For example, if you want to delete the judith user in MariaDB, then use the command below:

```
DROP USER judith;
```

```
MariaDB [(none)]> SELECT USER,HOST FROM mysql.user;
```

User	Host
dev	
qa	
judith	%
bob	192.168.56.%
john	192.168.56.%
richard	192.168.56.%
mariadb.sys	localhost
mysql	localhost
root	localhost

```
9 rows in set (0.004 sec)
```

```
MariaDB [(none)]> DROP USER judith;
```

```
Query OK, 0 rows affected (0.059 sec)
```

```
MariaDB [(none)]> SELECT USER,HOST FROM mysql.user;
```

User	Host
dev	
qa	
bob	192.168.56.%
john	192.168.56.%
richard	192.168.56.%
mariadb.sys	localhost
mysql	localhost
root	localhost

```
8 rows in set (0.004 sec)
```



Delete the user

But if you find a user who has 2 names that are the same, but the IP host address is different, then you must use the format below:

```
DROP USER 'username'@'ip_address';
```

For example, you want to delete one of the user bobs that

has an IP 192.168.56.%, Then use the command below:

```
DROP USER 'bob'@'192.168.56.%';
```

```
MariaDB [(none)]> SELECT USER,HOST FROM mysql.user;
```

User	Host
dev	
qa	
bob	%
bob	192.168.56.%
john	192.168.56.%
richard	192.168.56.%
mariadb.sys	localhost
mysql	localhost
root	localhost

```
9 rows in set (0.003 sec)
```

```
MariaDB [(none)]> DROP USER 'bob'@'192.168.56.%';
```

Query OK, 0 rows affected (0.046 sec)

```
MariaDB [(none)]> SELECT USER,HOST FROM mysql.user;
```

User	Host
dev	
qa	
bob	%
john	192.168.56.%
richard	192.168.56.%
mariadb.sys	localhost
mysql	localhost
root	localhost

```
8 rows in set (0.004 sec)
```

Delete the user with a certain IP

Note

To provide grant access to one of the users, it must first be asked what his needs are for accessing a database so that the MariaDB database can be more secure.

References

mariadb.com
gist.github.com
cyberciti.biz
severalnines.com