

How to Manage a Database and its Table(s) in MariaDB?

written by sysadmin | 2 June 2025

After [installing MariaDB on your Linux server](#), you must know some basic MariaDB commands.

Problem

How to manage a database and its table(s) in MariaDB?

Solution

Below are the basic commands of MariaDB to manage a database and its table(s):

1. Access to the MariaDB database

Use the format below to access MariaDB:

```
mariadb -h ip_address -u username -p
```

If you access MariaDB from the server using the root user directly, type the command below:

```
mariadb -u root -p
```

Enter the password for the root in MariaDB, and if the password is appropriate then you can access MariaDB as in the image below:

```
sysadmin@ubuntu2404:~$ mariadb -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 42
Server version: 11.7.2-MariaDB-ubu2404 mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]>
```

Access to 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.

2. Creating a new database

Use the format below to create a new database:

```
CREATE DATABASE database_name;
```

You can see the options for this command [on this page](#). For example, if you want to create a new database called **db_office**, use the command below;

```
CREATE DATABASE db_office;
```

```
MariaDB [(none)]> CREATE DATABASE db_office;
Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]>
```


Create a new database

3. See the entire database

Type the command below to see all the databases stored in MariaDB:

SHOW DATABASES;

```
MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database          |
+-----+
| db_office         |
| information_schema|
| mysql             |
| performance_schema|
| sys               |
+-----+
5 rows in set (0.002 sec)
```



Display all databases

4. Select a database


Use the format below to select the database you want to access:

```
USE db_name;
```

For example, if you want to access the db_office database, then type the command below:

```
USE db_office;
```

```
MariaDB [(none)]> USE db_office;
Database changed
MariaDB [db_office]> |
```



Select the database

5. Create a table

Use the format below to create a new table:

```
CREATE TABLE table_name (name_of_column1 column_data_type1, name_of_column2
column_data_type2, ...);
```

You can see the options for this command [on this page](#). Type

the command below to create an employee table:

```
CREATE TABLE employee (name varchar (100), age int (3));
```

```
MariaDB [db_office]> CREATE TABLE employee (name VARCHAR(100), age INT(3))  
Query OK, 0 rows affected (0.074 sec)
```

Create a new table

You can see data types that can be used [on this page](#).

6. Display the entire table(s)

Use the command below to display the entire table in a database:

```
SHOW TABLES;
```

```
MariaDB [db_office]> SHOW TABLES;  
+-----+  
| Tables_in_db_office |  
+-----+  
| employee            |  
+-----+  
1 row in set (0.003 sec)
```

Show all tables

7. Display the table structure

Use the command below to display the table structure:

```
DESC table_name;
```

For example, if you want to see the employee table structure, then use the command below:

```
DESC employee;
```

```
MariaDB [db_office]> DESC employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(100)  | YES  |     | NULL    |      |
| age   | int(3)        | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.004 sec)
```

Display a table structure

8. Add a column

Use the format below to make a column in table:

```
ALTER TABLE db_name ADD COLUMN column_name type (nnn);
```

You can see the options for this command [on this page](#). For example, if you want to add to the city column in the employee table, use the command below:

```
ALTER TABLE employee ADD COLUMN city VARCHAR (100);
```

```
MariaDB [db_office]> ALTER TABLE employee ADD COLUMN city VARCHAR (100);
Query OK, 0 rows affected (0.063 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_office]> DESC employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(100)  | YES  |     | NULL    |      |
| age   | int(3)        | YES  |     | NULL    |      |
| city  | varchar(100)  | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.002 sec)
```

Add a new column

9. Insert data into the table

Use the format below to enter data in a table:

```
INSERT INTO table_name (Column1, Column2,..., ColumnN) VALUES (Value1,...ValueN),
(Value1,...ValueN);
```

You can see the options for this command [on this page](#). Type the command below if you want to insert 2 data to the employee table:

```
INSERT INTO employee (name,age,city) VALUES ('bob',21,'New York'),
('John',22,'Chicago');
```

```
MariaDB [db_office]> INSERT INTO employee (name,age,city) VALUES ('bob',21,'New York'), ('John',22,'Chicago');
Query OK, 2 rows affected (0.008 sec)
Records: 2 Duplicates: 0 Warnings: 0
```

Insert data into the table

INFO

If you want to insert a value in the form of a number, the number does not have to be flanked with an apostrof ('...') sign, whereas if it is a character or a combination of characters and numbers, it must be flanked with an apostrof ('...').

10. Displays data in a table

Use the format below to display all data in a table:

```
SELECT option1 FROM table_name option2;
```

You can see the options for this command [on this page](#). For example, use the command below to display all data in the employee table:

```
SELECT * FROM employee;
```


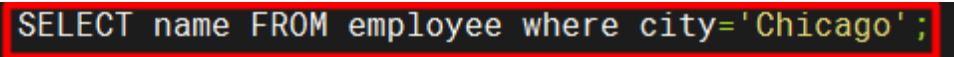
```
MariaDB [db_office]> SELECT * FROM employee;
+----+-----+-----+
| name | age  | city   |
+----+-----+-----+
| bob  | 21  | New York |
| John | 22  | Chicago |
+----+-----+-----+
2 rows in set (0.002 sec)
```

Display all the data

Or, if you want to display the name of the user who lives in the city of Chicago then use the command below:

```
SELECT name FROM employee where city='Chicago';
```

```
MariaDB [db_office]> SELECT name FROM employee where city='Chicago';
+-----+
| name |
+-----+
| John |
+-----+
1 row in set (0.003 sec)
```



Display the data with a condition

11. Update data

Use the format below to update data in a table:

```
UPDATE table_name SET columnX=valueX WHERE columnY=valueY;
```

You can see the options for this command [on this page](#). For example, if you want to update the age of the employee named Bob, use the command below:

```
UPDATE employee SET age=23 WHERE name='bob';
```

```
MariaDB [db_office]> SELECT * FROM employee;
```

```
+-----+-----+-----+
| name | age | city |
+-----+-----+-----+
| bob  | 21 | New York |
| John | 22 | Chicago |
+-----+-----+-----+
2 rows in set (0.004 sec)
```

```
MariaDB [db_office]> UPDATE employee SET age=23 WHERE name='bob';
```

```
Query OK, 1 row affected (0.046 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
MariaDB [db_office]> SELECT * FROM employee;
```

```
+-----+-----+-----+
| name | age | city |
+-----+-----+-----+
| bob  | 23 | New York |
| John | 22 | Chicago |
+-----+-----+-----+
2 rows in set (0.001 sec)
```



Update data

12. Delete Data

Use the format below to delete one or more rows of a table:

```
DELETE FROM table_name WHERE column=value;
```

You can see the options for this command [on this page](#). For example, if you want to delete the data where the user is in Chicago, then use the command below:

```
DELETE FROM employee WHERE city='Chicago';
```

```
MariaDB [db_office]> SELECT * FROM employee;
```

```
+-----+-----+-----+
| name | age | city   |
+-----+-----+-----+
| bob  | 23 | New York |
| John | 22 | Chicago |
+-----+-----+-----+
2 rows in set (0.003 sec)
```

```
MariaDB [db_office]> DELETE FROM employee WHERE city = 'Chicago';
Query OK, 1 row affected (0.055 sec)
```

```
MariaDB [db_office]> SELECT * FROM employee;
```

```
+-----+-----+-----+
| name | age | city   |
+-----+-----+-----+
| bob  | 23 | New York |
+-----+-----+-----+
1 row in set (0.003 sec)
```



Delete the data

13. Delete the column

Use the format below to make changes in the table:

```
ALTER TABLE db_name DROP COLUMN column_name;
```

If you want to delete the column, for example, city, you can use the following command:

```
ALTER TABLE employee DROP COLUMN city;
```

```
MariaDB [db_office]> DESC employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(100) | YES  |     | NULL    |      |
| age   | int(3)        | YES  |     | NULL    |      |
| city  | varchar(100) | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [db_office]> ALTER TABLE employee DROP COLUMN city;
Query OK, 0 rows affected (0.022 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_office]> DESC employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(100) | YES  |     | NULL    |      |
| age   | int(3)        | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [db_office]> 
```



Delete the column

14. Empty the table

You can delete all data in a table with the format as below:

```
TRUNCATE table_name;
```

You can see the options for this command [on this page](#). For example, if you want to delete all the data in the employee table, then type the command below:

```
TRUNCATE employee;
```

```
MariaDB [db_office]> SELECT * FROM employee;
+-----+-----+-----+
| name | age | city      |
+-----+-----+-----+
| bob  | 23 | New York  |
+-----+-----+-----+
1 row in set (0.004 sec)

MariaDB [db_office]> TRUNCATE employee;
Query OK, 0 rows affected (0.073 sec)

MariaDB [db_office]> SELECT * FROM employee;
Empty set (0.007 sec)
```

Truncate the table

15. Change a table name

You can change the name of the table using the format below:

```
RENAME TABLE old_table_name TO new_table_name;
```

You can see the options for this command [on this page](#). Use the command below if, for example, you want to change the name of the employee table to employees:

```
RENAME TABLE employee to employees;
```

```
MariaDB [db_office]> SHOW TABLES;
+-----+
| Tables_in_db_office |
+-----+
| employee            |
+-----+
1 row in set (0.003 sec)

MariaDB [db_office]> RENAME TABLE employee to employees;
Query OK, 0 rows affected (0.082 sec)

MariaDB [db_office]> SHOW TABLES;
+-----+
| Tables_in_db_office |
+-----+
| employees           |
+-----+
1 row in set (0.004 sec)
```



Rename the table

16. Delete a table

Use the format below to delete a table:

```
DROP TABLE table_name;
```

You can see the options for this command [on this page](#). For example, if you want to delete the employee table, then use the command below:

```
DROP TABLE employees;
```

```
MariaDB [db_office]> SHOW TABLES;
+-----+
| Tables_in_db_office |
+-----+
| employees           |
+-----+
1 row in set (0.003 sec)

MariaDB [db_office]> DROP TABLE employees;
Query OK, 0 rows affected (0.087 sec)

MariaDB [db_office]> SHOW TABLES;
Empty set (0.002 sec)
```



Delete the table

17. Delete a database

To delete a database, use the format below:

```
DROP DATABASE database_name;
```

You can see the options for this command [on this page](#). For example, if you want to delete the db_office database, then type the command below:

```
DROP DATABASE db_office;
```

```
MariaDB [db_office]> SHOW DATABASES;
+-----+
| Database           |
+-----+
| db_office          |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+-----+
5 rows in set (0.006 sec)

MariaDB [db_office]> DROP DATABASE db_office;
Query OK, 0 rows affected (0.072 sec)

MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database           |
+-----+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+-----+
4 rows in set (0.002 sec)
```



Delete the database

18. Quit from the database

To quit from the database, run the command below:

```
\q
```

```
MariaDB [(none)]> \q
Bye
sysadmin@docker:~$
```



Quit from the database

Note

[The next article](#) will explain how to access a database using a user.

References

MariaDB.com
bertvv.github.io
zuar.com
educba.com
gist.github.com