**Create a simple database schema.**

**Presentation of MariaDB Database Schema**

A database schema consists of:

* a database name that groups all the objects together,
* one or several users with their associated access rights,
* a list of tables storing records,
* other objects like indexes, views, triggers, etc.

Note: A single **MariaDB** instance can host several databases.

**Prerequisites**

First, you need to [install a MariaDB database](https://www.certdepot.net/rhel7-install-mariadbmysql/).

**Procedure**

Then, you have to connect to the server with the password you created previously:

# **mysql -u root -p**

Enter password:

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 10

Server version: 5.5.35-MariaDB MariaDB Server

Copyright (c) 2000, 2013, Oracle, Monty Program Ab and others.

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

MariaDB [(none)]>

Then, you can create a database (here called **test**):

MariaDB [(none)]> **create database test;**

Query OK, 1 row affected (0.00 sec)

Note: Use the **drop database** command to remove a database.

Give permissions to the user called **user**:

MariaDB [(none)]> **grant all on test.\* to user@localhost identified by '';**

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> **flush privileges;**

Query OK, 0 rows affected (0.00 sec)

Note: There is a password associated with the **root** account required during the server installation process. Then, there is another password linked to the database owner (here **user**). It’s easier if both are the same but they don’t need to.

Exit the **MariaDB** command line:

MariaDB [(none)]> **quit**

Bye

Now, you can connect to your own database directly:

# **mysql -u user -p test**

Enter password:

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 12

Server version: 5.5.35-MariaDB MariaDB Server

Copyright (c) 2000, 2013, Oracle, Monty Program Ab and others.

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

MariaDB [test]>

To get the list of all the available databases, type:

MariaDB [test]> **show databases;**

+--------------------+

| Database |

+--------------------+

| information\_schema |

| test |

+--------------------+

2 rows in set (0.00 sec)

Note: You can go inside a database with the **use** command. For example, type **use test;** to go to your new database.

To create a table called **addresses**, type:

MariaDB [test]> **create table addresses(id int(10) unsigned, name varchar(20), address varchar(40));**

Query OK, 0 rows affected (0.14 sec)

Note: Use the **drop table** command to remove a table.

To get the list of all the tables created in your database, type:

MariaDB [test]> **show tables;**

+----------------+

| Tables\_in\_test |

+----------------+

| addresses |

+----------------+

1 row in set (0.00 sec)

To get a description of a particular table (here **addresses**), type:

MariaDB [test]> **desc addresses;**

+---------+------------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------+------------------+------+-----+---------+-------+

| id | int(10) unsigned | YES | | NULL | |

| name | varchar(20) | YES | | NULL | |

| address | varchar(40) | YES | | NULL | |

+---------+------------------+------+-----+---------+-------+

3 rows in set (0.00 sec)

To get the **create table** statement associated with the **addresses** table, type:

MariaDB [test]> **show create table addresses;**

+-----------+---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Table | Create Table |

+-----------+---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| addresses | CREATE TABLE `addresses` (

`id` int(10) unsigned DEFAULT NULL,

`name` varchar(20) DEFAULT NULL,

`address` varchar(40) DEFAULT NULL

) ENGINE=InnoDB DEFAULT CHARSET=latin1 |

+-----------+---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

1 row in set (0.00 sec)

**Useful Tip**

At the **MariaDB** prompt, you can get some information about the syntax by using the **help** command:

MariaDB [(none)]> **help drop table**

Name: 'DROP TABLE'

Description:

Syntax:

DROP [TEMPORARY] TABLE [IF EXISTS]

    tbl\_name [, tbl\_name] ...

    [RESTRICT | CASCADE]

DROP TABLE removes one or more tables. You must have the DROP privilege

for each table. All table data and the table definition are removed, so

be careful with this statement! If any of the tables named in the

argument list do not exist, MySQL returns an error indicating by name

which nonexisting tables it was unable to drop, but it also drops all

of the tables in the list that do exist.

...