

Database Systems Lab

MariaDB Quickstart

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About this Guide

- ▶ This guide explains how to install and access MariaDB Server.
- ▶ The setup process (steps 1, 2, 3) is different for each operating system.
- ▶ See <https://mariadb.org/> for detailed instructions.
- ▶ Placeholders like <user>, <password>, and <db> have to be replaced in commands.

Installation

Preferably, you always use package managers to install software:

Linux (Debian)	<code>sudo apt install mariadb-server</code>
Linux (Fedora)	<code>sudo dnf install mariadb-server</code>
Linux (Arch)	<code>sudo pacman -S mariadb</code>
MacOS	<code>brew install mariadb</code>
Windows	<code>winget install MariaDB.Server</code> (or download MSI)

Enable Automatic Launch

Automatically start MariaDB when your system boots:

Linux (default)	<code>sudo systemctl enable mariadb</code>
MacOS	<code>brew services start mariadb</code>
Windows	Use System Services GUI

Start the Server

Start the MariaDB server manually (if it is not running):

Linux (default)	<code>sudo systemctl start mariadb</code>
MacOS	<code>mysql.server start</code>
Windows	Use System Services GUI

Create User

To allow access to MariaDB, you need to create a user account and grant privileges:

```
1  -- Open MariaDB as root
2  $ sudo mysql -u root -p
3
4  -- Create user
5  CREATE USER '<user>'@'localhost' IDENTIFIED BY '
    <password>';
6  GRANT ALL PRIVILEGES ON *.* TO '<user>'@'
    localhost';
7  FLUSH PRIVILEGES;
8  EXIT;
```

Optionally, use % instead of localhost (and change file my.cnf) to allow access from other machines (not required for the practicum).

Create Database

Create databases and tables, and insert data:

```
1  -- Login as new user
2  $ mysql -u <user> -p
3
4  -- Create database
5  CREATE DATABASE IF NOT EXISTS <db>;
6  USE <db>;
7
8  -- Create table
9  CREATE TABLE Person (id int, email text, name
10                        text, age int);
11
12 -- Use table
13 INSERT INTO Person (id, email, name, age) VALUES
    (1, "a", "b", 20);
SELECT * FROM Person WHERE age > 18;
```

Helpful Commands

Working with databases, tables, and users:

Use database	USE <db>;
Show table structure	DESCRIBE <table>;
List all databases	SHOW DATABASES;
List all tables in a database	SHOW TABLES;
List columns in a table	SHOW COLUMNS FROM <table>;
List indexes for a table	SHOW INDEX FROM <table>;
List privileges for a user	SHOW GRANTS FOR <user>;
List queries/connections	SHOW PROCESSLIST;

See also: <https://mariadb.com/docs/server/server-usage/basics/mariadb-advanced-sql-guide-1>