**MySQL Command**

**0-** Install Mysql Database

You can either install MySQL or MariaDB server when deploying a LAMP stack. To install the MySQL server, run the command below.

$ sudo apt install -y mysql-server

To set up a MariaDB server, execute the command below.

$ sudo apt install -y mariadb-server mariadb-client

Irrespective of the database that you've chosen, run the command below to secure it.

$ sudo mysql\_secure\_installation

Enter the below choices and press ENTER in each prompt to proceed.

### MySQL Server

Would you like to setup VALIDATE PASSWORD component?

Press y|Y for Yes, any other key for No: n

Please set the password for root here.

New password: EXAMPLE\_PASSWORD

Re-enter new password: EXAMPLE\_PASSWORD

Remove anonymous users? (Press y|Y for Yes, any other key for No) : y

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y

Remove test database and access to it? (Press y|Y for Yes, any other key for No): y

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y

### MariaDB Server

Enter current password for root (enter for none): ENTER

Set root password? [Y/n]: Y

New password: EXAMPLE\_PASSWORD

Re-enter new password: EXAMPLE\_PASSWORD

Remove anonymous users? [Y/n] Y

Disallow root login remotely? [Y/n] Y

Remove test database and access to it? [Y/n] Y

Reload privilege tables now? [Y/n] Y

Once you've secure the installation, login to the RDMS as root:

$ sudo mysql -u root -p

Enter your database server root password and press ENTER to proceed. Then, type the command below to create your first test\_database database.

MySQL server.

mysql> CREATE database test\_database;

MariaDB server.

MariaDB [(none)]> CREATE database test\_database;

Output.

Query OK, 1 row affected (0.00 sec)

Next, list the databases in the server by running the SHOW DATABASES command.

MySQL server.

mysql> SHOW DATABASES;

MariaDB server.

MariaDB [(none)]> SHOW DATABASES;

Your test\_database should be in the list below.

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

| Database |

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

| information\_schema |

| mysql |

| performance\_schema |

| sys |

| test\_database |

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

5 rows in set (0.01 sec)

Create a test\_user and assign full privileges to the database you've just created. You'll require the details of this user when testing database connectivity with PHP. Replace EXAMPLE\_PASSWORD with a strong value.

MySQL server.

mysql> CREATE USER 'test\_user'@'localhost' IDENTIFIED WITH mysql\_native\_password BY 'EXAMPLE\_PASSWORD';

GRANT ALL PRIVILEGES ON test\_database.\* TO 'test\_user'@'localhost';

FLUSH PRIVILEGES;

EXIT;

MariaDB server.

MariaDB [(none)]> CREATE USER 'test\_user'@'localhost' IDENTIFIED BY 'EXAMPLE\_PASSWORD';

GRANT ALL PRIVILEGES ON test\_database.\* TO 'test\_user'@'localhost';

FLUSH PRIVILEGES;

EXIT;

Your database server is now ready and you can move ahead to installing a scripting language.

**1-** Stop the mysql

sudo service mysql stop

**2-** Start the mysql

sudo service mysql start

**3-** Restart the mysql

sudo service mysql restart

**4-** Change root user password

sudo mysql -u root -p

SET PASSWORD FOR root@localhost = PASSWORD('yourpassword');

**Apache Command**

**0-** Install Apache2 Web Server

**SSH to your Ubuntu server as a non-root user, then update the package information index and upgrade your packages.**

**sudo apt update && sudo apt -y upgrade**

**Next, run the command below to install the Apache Web server.**

**$ sudo apt install -y apache2**

**Visit the URL below on a web browser and replace the 192.0.2.1 with the public IP address of your server or domain name.**

* [**http://192.0.2.1**](https://www.vultr.com/docs/install-linux-apache-mysql-and-php-lamp-on-ubuntu-20-04-lts/?utm_source=performance-max-apac&utm_medium=paidmedia&obility_id=16876059738&utm_adgroup=&utm_campaign=&utm_term=&utm_content=&gclid=CjwKCAjw_YShBhAiEiwAMomsEH1Bi_z0Yw_vPtKmCD4tghjDb7peTv7S45npiabtKtlp6qHfAaOunhoCy7gQAvD_BwE#)

**1-** Start the Apache

sudo service apache2 start

**2-** Stop the Apache

sudo service apache2 stop

**3-** Restart the Apache

sudo service apache2 restart

**PHP Command**

**In this step, you'll install the PHP package. Run the command below.**

**$ sudo apt install -y php**

**Since most web applications rely on some PHP extensions, install the most common ones using the command below.**

**$ sudo apt install -y php-{common,mysql,xml,xmlrpc,curl,gd,imagick,cli,dev,imap,mbstring,opcache,soap,zip,intl}**

**Restart the Apache webserver to load PHP.**

**$ sudo systemctl restart apache2**

**To test PHP, create an info.php file in the root directory of your web server.**

**$ sudo nano /var/www/html/info.php**

**Then, enter the information below into the file.**

**<?php**

**phpinfo();**

**Save and close the file by pressing CTRL + X, then Y and ENTER. Then, in a web browser, visit the URL below and replace 192.0.2.1 with your server's correct public IP address.**

[**http://192.0.2.1/info.php**](https://www.vultr.com/docs/install-linux-apache-mysql-and-php-lamp-on-ubuntu-20-04-lts/?utm_source=performance-max-apac&utm_medium=paidmedia&obility_id=16876059738&utm_adgroup=&utm_campaign=&utm_term=&utm_content=&gclid=CjwKCAjw_YShBhAiEiwAMomsEH1Bi_z0Yw_vPtKmCD4tghjDb7peTv7S45npiabtKtlp6qHfAaOunhoCy7gQAvD_BwE#)

**Next, test PHP connectivity with the database that you created earlier. Open a new file for editing using nano.**

**$ sudo nano /var/www/html/database\_test.php**

**Then, enter the information below into the file.**

**<?php**

**$conn = new mysqli('localhost', 'test\_user', 'EXAMPLE\_PASSWORD', 'test\_database');**

**if ($conn->connect\_error) {**

**die("Database connection failed: " . $conn->connect\_error);**

**}**

**echo "Database connection was successful";**

**Save and close the file. Then, visit the address below in a web browser and replace 192.0.2.1 with your server's correct public IP address.**

[**http://192.0.2.1/database\_test.php**](https://www.vultr.com/docs/install-linux-apache-mysql-and-php-lamp-on-ubuntu-20-04-lts/?utm_source=performance-max-apac&utm_medium=paidmedia&obility_id=16876059738&utm_adgroup=&utm_campaign=&utm_term=&utm_content=&gclid=CjwKCAjw_YShBhAiEiwAMomsEH1Bi_z0Yw_vPtKmCD4tghjDb7peTv7S45npiabtKtlp6qHfAaOunhoCy7gQAvD_BwE#)

**You should get the output below that shows that the script has successfully connected to the database.**

**echo "Database connection was successful";**

****