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[HowTo] Install Apache, MariaDB (Mysql), PHP (LAMP) - Contributions / Tutorials - Manjaro Linux Forum

7–9 minutes

Difficulty: ★★☆☆☆

- **NOTE**: The phrase **`ip.x.y.z`** is a placeholder for the server address which can be a valid hostname or an IP address e.g.

192.168.1.10 24 May 2023

(Copenhagen) by @linux-aarhus

This tutorial walk you through **installing** and **configuring** Apache, MySQL, PHP (LAMP).

LAMP is the the acronym of Linux, Apache, MySQL/MariaDB, PHP/Perl/Python.

Important

Never add packages without a full system sync - to sync your system execute

```
sudo pacman -Syu
```

The commands in this guide requires root permissions and must

be prepended with sudo.

If you are confident you may find it more efficient to switch to root context

```
su -l root
```

Editing system files

System files are modified using the **micro** terminal editor but any terminal editor will do…

- To save files in **micro** editor press **Ctrl**+**s**
- To exit the **micro** editor press **Ctrl**+**q**
- To search in **micro** editor press **Ctrl**+**f**

Either install **micro** or substitute micro for your terminal editor of choice (install xsel and/or xclip for clipboard functionality - requires xorg - wayland has wl-clipboard)

```
pacman -S micro
```

Install Apache

Install Apache web server using command

```
pacman -S apache
```

Edit the `/etc/httpd/conf/httpd.conf` file,

```
micro /etc/httpd/conf/httpd.conf
```

Search for and comment the following line if it is not already

```
[...]
# LoadModule unique_id_module modules/
mod_unique_id.so
[...]
```

Search for **ServerAdmin** and replace with a valid email (best practice - not necessary in test environments)

```
[...]
ServerAdmin you@example.com
[...]
```

Next edit the **ServerName** variable to something meaningful - at the bare minimum use your server's IP address

```
[...]
ServerName ip.x.y.z:80
[...]
```

Save and close the file then enable and start the web service

```
systemctl enable --now httpd
```

Verify the status of the service

```
# systemctl status httpd
● httpd.service - Apache Web Server
     Loaded: loaded (/usr/lib/systemd/system/
httpd.service; enabled; preset: disabled)
     Active: active (running) since Fri
2022-11-11 13:03:33 CET; 4s ago
[...]
Nov 11 13:03:33 test systemd[1]: Started Apache
Web Server.
```

Test web service

Test the webservice by creating a sample page in the default web root in `/srv/http`

```
micro /srv/http/index.html
```

Add text - no need for our test to be strictly html compliant

```
<h2>It works!</h2>
```

Now, open your web browser and navigate to

```
http://ip.x.y.z
```

You should be greeted with the **It works** message.

Install MariaDB

MariaDB is the default implementation of MySQL in Manjaro. To install MariaDB execute

```
pacman -S mariadb
```

Initialize the MariaDB data directory prior to starting the service, by using the installer script (do not change --datadir)

```
mariadb-install-db --user=mysql --basedir=/usr
--datadir=/var/lib/mysql
```

When the script has completed enable and start the service

```
systemctl enable --now mariadb
```

You can verify the MariaDB service status (shortened)

```
# systemctl status mariadb
● mariadb.service - MariaDB 10.9.3 database
server
     Loaded: loaded (/usr/lib/systemd/system/
mariadb.service; enabled; preset: disabled)
     Active: active (running) since Fri
2022-11-11 13:09:51 CET; 10s ago
[...]
Nov 11 13:09:51 test systemd[1]: Started
MariaDB 10.9.3 database server.
```

Secure your MariaDB service

It is recommended to secure your database installation using the provided script. Read the prompts carefully - the root password **is not** your system password but for MariaDB.

```
mariadb-secure-installation
```

Install PHP

Manjaro uses the - at any time - latest php version. To install PHP and the apache PHP module

```
pacman -S php php-apache
```

Proceed to configure Apache PHP module by editing the file `/etc/httpd/conf/httpd.conf`

```
micro /etc/httpd/conf/httpd.conf
```

Search and locate the following and edit to read as below

```
[...]
#LoadModule mpm_event_module modules/
mod_mpm_event.so
LoadModule mpm_prefork_module modules/
mod_mpm_prefork.so
[...]
```

Scroll to the bottom of the file and add for current PHP

```
LoadModule php_module modules/libphp.so
AddHandler php-script .php
Include conf/extra/php_module.conf
```

Check your config

```
apachectl configtest
```

Save the file and restart the `httpd` service.

```
apachectl restart
```

Test PHP

Create a file `info.php` file in the web service root folder

```
micro /srv/http/info.php
```

With content

```
<?php phpinfo(); ?>
```

Save the file and open your web browser and navigate to `http://ip.x.y.z/info.php` which should then provide you with the current php configuration, enabled modules etc.

Install phpMyAdmin

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phpMyAdmin is a graphical MySQL/MariaDB administration tool that can be used to create, edit and delete databases. To install phpMyAdmin

```
pacman -S phpmyadmin
```

Create/Edit the file `/etc/php/conf.d/phpmariadb.ini`

```
micro /etc/php/conf.d/phpmariadb.ini
```

```
extension=bz2
extension=iconv
extension=mysqli
extension=pdo_mysql
```

Save and close the file. Verify your ini-file is loaded

```
php --ini
```

Create Apache configuration

Then create a new Apache configuration to be able to load

phpMyAdmin

```
micro /etc/httpd/conf/extra/phpmyadmin.conf
```

```
Alias /phpmyadmin "/usr/share/webapps/
phpMyAdmin"
<Directory "/usr/share/webapps/phpMyAdmin">
    DirectoryIndex index.php
    AllowOverride All
    Options FollowSymlinks
    Require all granted
</Directory>
```

Edit the Apache configuration

```
micro /etc/httpd/conf/httpd.conf
```

Include phpMyAdmin configuration at the very end of the file

```
[...]
Include conf/extra/phpmyadmin.conf
```

Save and close the httpd.conf - then test your config

```
apachectl configtest
```

Restart apache

```
apachectl restart
```

phpMyadmin config

Option 1

Edit the phpMyAdmin `/etc/webapps/phpmyadmin/config.inc.php` and add a value for **blowfish_secret**

```
micro /etc/webapps/phpmyadmin/config.inc.php
```

Generate a random number in hex format

```
openssl rand -hex 16
```

Add the value inside the empty quotation marks

```
$cfg['blowfish_secret'] = 'your-generated-value';
```

Add temp folder

```
$cfg['TempDir'] = '/tmp';
```

Save the file

Option 2

Use terminal tools to add the mentioned configuration values.

```
sed -i -e "/blowfish/s/''/'$(openssl rand -hex 16)'/gi" /etc/webapps/phpmyadmin/config.inc.php
echo "\$cfg['TempDir'] = '/tmp';" >> /etc/webapps/phpmyadmin/config.inc.php
```

Test phpMyAdmin

Open your browser and navigate to

```
http://ip.x.y.z/phpmyadmin
```

Using Nginx

If you want to use Nginx instead of Apache web server, refer the following article.

- https://ostechnix.com/install-nginx-mariadb-php-lemp-stack-on-arch-linux-2016/ 138

  Sources: http://www.ostechnix.com/install-apache-mariadb-php-lamp-stack-on-arch-linux-2016/ 275

Revision

- 13 April 2024 (Copenhagen) Fix various spelling errors by @cscs
- 5 January 2023 (Copenhagen) Added sed command to inject **blowfish_secret** into **config.inc.php** by @linux-aarhus
- 29 December 2022 (Copenhagen) Fix missing semicolon in **config.inc.php** by @linux-aarhus
- 12 November 2022 04:02 Rewritten using a simplified language by @linux-aarhus

- 6 November 2022 12:45
  Verified by @linux-aarhus using Manjaro XFCE
- Tutorial by @abusultanw in the old forum : Dead Link original link 116