

# How to set up MediaWiki 1.26 with Lighttpd 1.4 on Ubuntu 14.04

This tutorial goes through how to set up MediaWiki 1.26.2 with Lighttpd 1.4.39 on Ubuntu 14.04.

## About MediaWiki

Written in PHP, MediaWiki is a free and open-source software that allows anyone to create and edit their own personal wiki site. It was originally built for Wikipedia using a backend database such as MySQL to process and display stored data.

If you are unfamiliar with backend databases, read [this](#) article first.

## About Lighttpd

Lighttpd is an open-source web server optimized for speed-critical environments while remaining standards-compliant, secure and flexible. It is used to power many heavy-duty sites such as YouTube, Wikipedia, Meebo, etc.

## Prerequisites

Before setting up the latest MediaWiki with Lighttpd on Ubuntu 14.04, make sure you have already:

- Created an Ubuntu 14.04 server with SSH access. To create an Ubuntu server, review this [tutorial](#).
- Downloaded MediaWiki 1.26.2.
- Downloaded Lighttpd 1.4.39.
- Downloaded PHP-FPM.
- Installed MySQL. To install MySQL, review this [tutorial](#).

## Step 1 - Install Lighttpd

Lighttpd is the web server that makes the wiki pages available on the Internet.

To install Lighttpd, type this command in the Terminal:

```
$ sudo apt-get install lighttpd
```

After the installation completes, make sure that the lighttpd placeholder web page is displayed on the Internet.

To find your server's IP address, type this command:

```
$ ifconfig eth0 | grep inet | awk '{print $2}'
```

Next, open a browser and navigate to the server's IP address:

```
http://server_ip_address
```

## Step 2 - Install PHP-FPM

PHP-FPM (FastCGI Process Manager) controls the processing for the website and has performance benefits for sites with heavy traffic. For more information about PHP, visit this [site](#).

This configuration requires PHP to connect with a MySQL database, thus you need to install `php5-fpm` and `php5-mysql` using the command:

```
$ sudo apt-get install php5-fpm php5-mysql
```

To support images, caching, and localization for international data on the wiki site, you should also install three additional PHP modules `php5-gd`, `php5-xcache`, and `php5-intl` using the command:

```
$ sudo apt-get install php5-gd php5-xcache php5-intl
```

## Step 3 - Configure MySQL and create Credentials for MediaWiki

After the MySQL database is installed, the database needs to be initialized, secured, and configured. When these steps are completed, the database is ready to store data for the wiki site.

To initialize the MySQL database, use the command:

```
$ sudo mysql_install_db
```

To secure the installation, use the command:

```
$ sudo mysql_secure_installation
```

To use MySQL for the wiki site, create the database and a database user. In order to create a database, first login to MySQL using the command:

```
mysql -u root -p
```

You will see your terminal prompt change to `mysql>`.

Now everything is ready to create the database. The default name in MediaWiki's configuration is `my_wiki`, but you can choose any database name.

```
CREATE DATABASE my_wiki;
```

You should see the output:

```
Query OK, 1 row affected (0.00 sec)
```

Next, create a database user for the MediaWiki installation:

```
GRANT INDEX, CREATE, SELECT, INSERT, UPDATE, DELETE, ALTER, LOCK TABLES ON my_wiki.* TO 'sammy'@'localhost' IDENTIFIED BY 'password';
```

Change the first highlighted variable to your database name, the second variable to the username you want to use, and the last variable to a secure password. You should see the output:

```
Query OK, 0 rows affected (0.00 sec)
```

Next, we need to flush the MySQL privileges.

```
FLUSH PRIVILEGES;
```

The output should be:

```
Query OK, 0 rows affected (0.00 sec)
```

Last, we will need to exit the MySQL shell:

```
exit
```

The output should be:

```
Bye
```

## Step 4 - Configure PHP-FPM and Lighttpd

In order to enable `php5-fpm` in Lighttpd and allow the wiki site to benefit from the improved performance of PHP-FPM, the PHP-FPM and Lighttpd configuration files must be updated. To restore the original file, copy each file prior to making any changes. To edit the files, use a Linux text editor such as **nano**.

## Update php.ini

First, navigate to the directory:

```
$ cd /etc/php5/fpm
```

Copy the `php.ini` configuration file:

```
$ sudo cp php.ini php.ini.BAK
```

Next, open the `php.ini` file in a text editor and use the search function to find `;cgi.fix_pathinfo=1`

which is the last line in a larger block of code. For example:

```
$ sudo vi ./php.ini
```

Delete the semicolon prefix from `;cgi.fix_pathinfo=1`. The result will look like the following sample. Save and close the file.

```
; cgi.fix_pathinfo provides *real* PATH_INFO/PATH_TRANSLATED support for CGI. PHP's
; previous behaviour was to set PATH_TRANSLATED to SCRIPT_FILENAME, and to not grok
; what PATH_INFO is. For more information on PATH_INFO, see the cgi specs. Setting
; this to 1 will cause PHP CGI to fix its paths to conform to the spec. A setting
; of zero causes PHP to behave as before. Default is 1. You should fix your scripts
; to use SCRIPT_FILENAME rather than PATH_TRANSLATED.
; http://php.net/cgi.fix-pathinfo
cgi.fix_pathinfo=1
```

Restart the `php5-fpm` service for the changes to take effect:

```
$ sudo service php5-fpm restart
```

## Update 15-fastcgi-php.conf

In order to use `php5-fpm`, the `15-fastcgi-php.conf` configuration file must be updated.

First, navigate to the directory:

```
$ cd /etc/lighttpd/conf-available
```

Copy the `15-fastcgi-php.conf` configuration file:

```
$ sudo cp 15-fastcgi-php.conf 15-fastcgi-php.conf.BAK
```

Next, open `15-fastcgi-php.conf` in a text editor and change the socket path to

`/var/run/php5-fpm.sock` and delete all lines of code except for the following 10 lines of code.

After the edits are completed, `15-fastcgi-php.conf` will look like the following sample. Save and close the file.

```
# -*- depends: fastcgi -*-
# /usr/share/doc/lighttpd/fastcgi.txt.gz
```

```
#
http://redmine.lighttpd.net/projects/lighttpd/wiki/Docs:ConfigurationOptions#mod_fastcgi-fas
tcgi

## Start an FastCGI server for php (needs the php5-cgi package)
fastcgi.server += ( ".php" =>
    (
        "socket" => "/var/run/php5-fpm.sock",
        "broken-scriptfilename" => "enable"
    )
)
)
```

## Enable Lighttpd modules

There are two Lighttpd modules (`fastcgi` and `fastcgi-php`) that are necessary to enable the fastCGI configuration:

```
$ sudo lighttpd-enable-mod fastcgi
```

```
$ sudo lighttpd-enable-mod fastcgi-php
```

Next, reload the web server configuration:

```
$ sudo /etc/init.d/lighttpd force-reload
```

**Note:** Make sure that the response returned on the right side of your screen is **[OK]**. If **[failed]** is displayed, there might be a problem with the updated configuration files.

## Test the web server configuration

To confirm that the updated web server configuration is correct, create a file and insert a PHP function that displays a web page with details about the PHP configuration.

Change directories to the web root directory:

```
$ cd /var/www
```

Create a file named `info.php`:

```
$ sudo touch info.php
```

Use a text editor to open `info.php` and insert the PHP function:

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

Save and close the `info.php` file.

Open a browser and navigate to the `info.php` page:

```
http://server_ip_address/info.php
```

**Note:** If the configuration is correct, a page with all of the PHP settings is displayed. The Server API field at the top of the page will show FPM/FastCGI which indicates that PHP-FPM is configured.

## Step 5 - Setting up MediaWiki

This section will walk you through setting up MediaWiki so that it is ready to use.

First, Change to the `/tmp` directory:

```
$ cd /tmp
```

Use `wget` to download the compressed `*.tar.gz` file:

```
$ wget https://releases.wikimedia.org/mediawiki/1.26/mediawiki-1.26.2.tar.gz
```

**Note:** Some files might not download with the expected file name. If that occurs, use the `-O` option to specify the name of the downloaded file. For example:

```
$ wget -O mediawiki-1.26.2.tar.gz
```

```
https://releases.wikimedia.org/mediawiki/1.26/mediawiki-1.26.2.tar.gz
```

Extract the MediaWiki files from the compressed file which creates a directory named

```
mediawiki-1.26.2:
```

```
$ tar xvzf mediawiki-*.tar.gz
```

In the web root directory, create a new directory named `wiki`. This directory name is used in the URL for the wiki site.

```
$ sudo mkdir -p /var/www/wiki
```

Move the MediaWiki files to the `wiki` directory:

```
$ sudo mv mediawiki-1.26.2/* /var/www/wiki
```

Use a browser to complete the remainder of the MediaWiki configuration:

1. Open a browser and go to [http://server\\_ip\\_address/wiki/index.php](http://server_ip_address/wiki/index.php).
2. Enter the information and click continue to complete the MediaWiki setup.

### 3. Download the `LocalSettings.php` file.

The `LocalSettings.php` file is downloaded to your local computer and needs to be uploaded to the server's `/var/www/wiki` directory. The upload process will vary depending on which operating system is installed on your local computer.

After the `LocalSettings.php` file is uploaded to the server, set the file permissions so that everyone has at least read permission to access the wiki:

```
$ sudo chmod 644 /var/www/wiki/LocalSettings.php
```

Use a browser to access the Main Page of the wiki:

[http://server\\_ip\\_address/wiki/index.php?title=Main\\_Page](http://server_ip_address/wiki/index.php?title=Main_Page)

During the MediaWiki setup, a wiki administrator account was created. On the top-right side of the Main Page, click Login and confirm that you can login to the wiki using the account's credentials.

## Conclusion

You have now set up MediaWiki for sharing information within your organization or with the entire world. MediaWiki also allows you to customize your installation using the links on the MediaWiki homepage or you can start adding pages.