
Linux For Composer Documentation

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Configure and run Linux for PHP containers without ever touching the Docker command line!

You can create a custom configuration for each PHP project you have and launch the Linux for PHP containers directly from within your projects' working directories!

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1.2 What’s New

1.2.1 What’s New in Version 1.0.2 (2019-01-15)

- Updates the PHP versions to the Linux for PHP 8.1.3 pre-compiled versions.

1.2.2 What's New in Version 1.0.1 (2019-01-13)

- Fixes an issue whereby the Linux for Composer PID file could be deleted by the 'composer update' command.
- Fixes an issue with the JSON formatting of the main configuration file.

1.2.3 What's New in Version 1.0.0 (2018-11-07)

- Adds a new 'commit' feature when stopping containers.
- Adds official documentation.
- Fixes an issue with Docker commands on Windows 10.

1.3 Installation

1.3.1 Prerequisites

Linux for Composer runs in the default Docker environment of each supported platform (operating system).

- Unix/Mac/Linux: bash,
- Windows 10: PowerShell,
- Windows 8: bash (Docker Toolbox).

1.3.2 Installation using Composer

To install the **Linux for Composer** package, you can simply run the following commands:

```
$ composer require --dev linuxforphp/linuxforcomposer
$ php vendor/bin/linuxforcomposer.phar
```

Note: On Windows, please use the PHAR file in the `vendor/linuxforphp/linuxforcomposer/bin` folder.

You can install **Linux for Composer** for your entire system by copying the binary in a folder that is in your **PATH**:

```
$ cp vendor/linuxforphp/linuxforcomposer/bin/linuxforcomposer.phar /usr/local/bin/
↪ linuxforcomposer
```

You would then be able to invoke the binary directly from within the working directories of your PHP projects:

```
$ cd /my/favorite/php/project
$ linuxforcomposer docker:run start
```

Once installed, you will now be able to configure the `linuxforcomposer.json` file according to the specific needs of your project.

1.4 Configuration

Here are the main configuration settings:

1.4.1 PHP Versions

php-versions (Required - Default: none)

A list of the available pre-compiled versions can be found in the Linux for PHP repository on [Docker Hub](#).

If you choose many versions, **Linux for Composer** will start a detached container for each chosen version.

If you choose only one version, enter `/bin/bash` in the script section (see [Scripts](#)) and do not ask for the ‘detached’ mode in the modes section (see [Modes](#)), you will get an interactive shell.

Finally, if you enter a version number like `7.4.0` (without the ‘dev’ part), **Linux for Composer** will COMPILE the latest version from source!!! Now, that’s really bleeding edge, isn’t it?

1.4.2 Modes

modes (Optional - Default: detached mode)

There are three possible modes when running Docker containers with **Linux for Composer**:

- Detached
- Interactive
- TTY

Whenever, you ask for the detached mode, it will take precedence over any other mode that you ask for in the `linuxforcomposer.json` file.

1.4.3 Ports

ports (Optional - Default: none)

You can share ports from the host system with your containers.

If you enter many port mappings for each shared port, **Linux for Composer** will share each mapping with one container in the order they were given. For example, ‘port1’ contains two mappings (8181:80 and 8282:80) and so does ‘port2’ (13306:3306 and 13307:3306). The first element of each mapping (8181:80 and 13306:3306) will be given to container 1, which corresponds to the first given PHP version in the `php-versions` section (see [PHP Versions](#)). The second element of each mapping (8282:80 and 13307:3306) will be given to container 2.

1.4.4 Volumes

volumes (Optional - Default: none)

You can share volumes between the host and your containers.

Note: Each volume will be shared with each and every container.

Linux/Unix/Mac users can insert Bash environment variables in this part of the JSON file. For example, you can share your current working directory with your containers by entering: “`${PWD}:/srv/www`”. This will make your working directory available to the web server inside the Linux for PHP container.

On Windows 10 (PowerShell), please share the volume by using the following format:

```
"c:/Users/test:/srv/test"
```

On Windows 8 (Bash), please use the following format:

```
"/c/Users/test:/srv/test"
```

Note: Windows users must make sure to turn volume sharing on in the Docker settings.

1.4.5 Scripts

script (Optional - Default: 'lfphp')

You can enter any command that you wish to execute as soon as the Linux for PHP container has finished starting. The most common ones are 'lfphp' and '/bin/bash'.

But, you could also execute a PHP script directly or launch one of the recipes from the Linux for PHP documentation.

For example, to install Blackfire.io automatically, you could enter:

```
"/bin/bash -c \"lfphp-get blackfire ; /bin/bash\""
```

Another example would be to install a PHP Framework:

```
"/bin/bash -c \"lfphp-get php-frameworks ; /bin/bash\""
```

Please don't forget the single quotes at the beginning and the end of the string, and to escape the double quotes to avoid invalidating your JSON!

On Windows (both 8 - Bash - and 10 - PowerShell), it is necessary to invert the quotes and double quotes, as follows:

```
"/bin/bash -c 'lfphp-get php-frameworks ; /bin/bash'\""
```

If you are using multiple commands while compiling a new version of PHP simultaneously, please omit the first call to Bash, as follows:

```
\"lfphp-get php-frameworks ; /bin/bash\""
```

1.4.6 Thread-Safety

thread-safe (Optional - Default: 'false')

It is possible to run a Zend thread-safe ('true') or a non-thread safe ('false') version of PHP.

1.5 Usage

1.5.1 linuxforcomposer docker:run start

Once you are done modifying the JSON file, you can start the container or containers by issuing the following command:

```
$ php vendor/bin/linuxforcomposer.phar docker:run start
```

1.5.2 linuxforcomposer docker:run stop

In order to stop all the containers that were started using **Linux for Composer**, please enter the following command:

```
$ php vendor/bin/linuxforcomposer.phar docker:run stop
```

The `docker:run stop` command will automatically ask you if you want to commit each and every container that you have started before stopping and removing them.

```

vagrant@zend: /workspace/projects/linuxforcomposer
File Edit View Search Terminal Help
vagrant@zend:/workspace/projects/linuxforcomposer$ php app.php docker:run stop
CONTAINER ID    IMAGE                PORTS                NAMES                CREA
TED            STATUS              PORTS                NAMES                38 m
da35c3ce583d    asclinux/linuxforphp-8.1:src  "/bin/bash -c 'lfphp-"  38 m
inutes ago     Up 20 seconds        0.0.0.0:8181->80/tcp    angry_gates
Commit container da35c3ce583d? (y/N)

```

If you do wish to save them, you will be asked to give each commit a unique name and you will also be asked if you wish to save the new name to the `linuxforcomposer.json` file for use the next time you start containers with **Linux for Composer**.

```
vagrant@zend: /workspace/projects/linuxforcomposer
File Edit View Search Terminal Help
vagrant@zend:/workspace/projects/linuxforcomposer$ php app.php docker:run stop
CONTAINER ID      IMAGE               COMMAND             CREATED
da35c3ce583d      asclinux/linuxforphp-8.1:src  "/bin/bash -c 'lfphp-" 38 m
inutes ago        Up 20 seconds      0.0.0.0:8181->80/tcp  angry_gates
Commit container da35c3ce583d? (y/N)y
Please enter the name of the new commit: 7.2.11-zftest
Save to linuxforcomposer.json file? (y/N)y
```

CHAPTER 2

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