(/)

OFFICIAL REPOSITORY

php (/r/_/php/) ☆

Last pushed: 9 days ago

Repo Info (/_/php/)

Short Description

While designed for web development, the PHP scripting language also provides general-purpose use.

Full Description

Note: the description for this image is longer than the Hub length limit of 25000, so has been trimmed. The full description can be found at https://github.com/docker-library/docs/tree/master/php/README.md (https://github.com/docker-library/docs/tree/master/php/README.md). See docker/hub-beta-feedback#238 (https://github.com/docker/hub-beta-feedback/issues/238) for more information.

Supported tags and respective `Dockerfile` links

- `7.3.0RC5-cli-stretch`, `7.3-rc-cli-stretch`, `rc-cli-stretch`, `7.3.0RC5-stretch`, `7.3-rc-stretch`, `rc-stretch`, `7.3.0RC5-cli`, `7.3-rc-cli`, `rc-cli`, `7.3.0RC5`, `7.3-rc`, `rc` (*7.3-rc/stretch/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.3-rc/stretch/cli/Dockerfile)
- `7.3.0RC5-apache-stretch`, `7.3-rc-apache-stretch`, `rc-apache-stretch`, `7.3.0RC5-apache`, `7.3-rc-apache`, `rc-apache` (*7.3-rc/stretch/apache/Dockerfile*) (https://github.com/docker-library/php/blob/67efd89c36bf15cb5ba096213e0536b2cab5eb38/7.3-rc/stretch/apache/Dockerfile)
- `7.3.0RC5-fpm-stretch`, `7.3-rc-fpm-stretch`, `rc-fpm-stretch`, `7.3.0RC5-fpm`, `7.3-rc-fpm`, `rc-fpm` (*7.3-rc/stretch/fpm/Dockerfile*) (https://github.com/docker-

library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.3-rc/stretch/fpm/Dockerfile)

- `7.3.0RC5-zts-stretch`, `7.3-rc-zts-stretch`, `rc-zts-stretch`, `7.3.0RC5-zts`, `7.3-rc-zts`, `rc-zts` (*7.3-rc/stretch/zts/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.3-rc/stretch/zts/Dockerfile)
- `7.3.0RC5-cli-alpine3.8`, `7.3-rc-cli-alpine3.8`, `rc-cli-alpine3.8`, `7.3.0RC5-alpine3.8`, `7.3-rc-alpine3.8`, `rc-alpine3.8`, `7.3.0RC5-cli-alpine`, `7.3-rc-cli-alpine`, `rc-cli-alpine`, `7.3.0RC5-alpine`, `7.3-rc-alpine`, `rc-alpine` (*7.3-rc/alpine3.8/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.3-rc/alpine3.8/cli/Dockerfile)
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- `7.3.0RC5-zts-alpine3.8`, `7.3-rc-zts-alpine3.8`, `rc-zts-alpine3.8`, `7.3.0RC5-zts-alpine`, `7.3-rc-zts-alpine`, `rc-zts-alpine` (*7.3-rc/alpine3.8/zts/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.3-rc/alpine3.8/zts/Dockerfile)
- `7.2.12-cli-stretch`, `7.2-cli-stretch`, `7-cli-stretch`, `cli-stretch`, `7.2.12-stretch`, `7.2-stretch`, `7-stretch`, `stretch`, `7.2.12-cli`, `7.2-cli`, `7-cli`, `cli`, `7.2.12`, `7.2`, `7`, `latest` (*7.2/stretch/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.2/stretch/cli/Dockerfile)
- `7.2.12-apache-stretch`, `7.2-apache-stretch`, `7-apache-stretch`, `apache-stretch`, `7.2.12-apache`, `7.2-apache`, `7-apache`, `apache` (*7.2/stretch/apache/Dockerfile*) (https://github.com/docker-library/php/blob/67efd89c36bf15cb5ba096213e0536b2cab5eb38/7.2/stretch/apache/Dockerfile)
- `7.2.12-fpm-stretch`, `7.2-fpm-stretch`, `7-fpm-stretch`, `fpm-stretch`, `7.2.12-fpm`, `7.2-fpm`, `7-fpm`, `fpm` (*7.2/stretch/fpm/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.2/stretch/fpm/Dockerfile)
- `7.2.12-zts-stretch`, `7.2-zts-stretch`, `7-zts-stretch`, `zts-stretch`, `7.2.12-zts`, `7.2-zts`, `7-zts`, `zts` (*7.2/stretch/zts/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.2/stretch/zts/Dockerfile)

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- `7.1.24-cli-stretch`, `7.1-cli-stretch`, `7.1.24-stretch`, `7.1-stretch`, `7.1.24-cli`, `7.1-cli`, `7.1.24`, `7.1` (*7.1/stretch/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.1/stretch/cli/Dockerfile)
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`alpine` (*7.1/alpine3.8/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.1/alpine3.8/cli/Dockerfile)

- `7.1.24-fpm-alpine3.8`, `7.1-fpm-alpine3.8`, `7.1.24-fpm-alpine`, `7.1-fpm-alpine` (*7.1/alpine3.8/fpm/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.1/alpine3.8/fpm/Dockerfile)
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- `7.0.32-cli-stretch`, `7.0-cli-stretch`, `7.0.32-stretch`, `7.0-stretch`, `7.0.32-cli`, `7.0-cli`, `7.0.32`, `7.0` (*7.0/stretch/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.0/stretch/cli/Dockerfile)
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- `7.0.32-cli-alpine3.7`, `7.0-cli-alpine3.7`, `7.0.32-alpine3.7`, `7.0-alpine3.7`, `7.0.32-cli-alpine`, `7.0-cli-alpine`, `7.0.32-alpine`, `7.0-alpine` (*7.0/alpine3.7/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.0/alpine3.7/cli/Dockerfile)
- `7.0.32-fpm-alpine3.7`, `7.0-fpm-alpine3.7`, `7.0.32-fpm-alpine`, `7.0-fpm-alpine` (*7.0/alpine3.7/fpm/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.0/alpine3.7/fpm/Dockerfile)

- `7.0.32-zts-alpine3.7`, `7.0-zts-alpine3.7`, `7.0.32-zts-alpine`, `7.0-zts-alpine` (*7.0/alpine3.7/zts/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/7.0/alpine3.7/zts/Dockerfile)
- `5.6.38-cli-stretch`, `5.6-cli-stretch`, `5-cli-stretch`, `5.6.38-stretch`, `5.6-stretch`, `5-stretch`, `5.6.38-cli`, `5.6-cli`, `5-cli`, `5.6.38`, `5.6`, `5` (*5.6/stretch/cli/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/5.6/stretch/cli/Dockerfile)
- `5.6.38-apache-stretch`, `5.6-apache-stretch`, `5-apache-stretch`, `5.6.38-apache`, `5.6-apache`, `5-apache` (*5.6/stretch/apache/Dockerfile*) (https://github.com/docker-library/php/blob/67efd89c36bf15cb5ba096213e0536b2cab5eb38/5.6/stretch/apache/Dockerfile)
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- `5.6.38-fpm-jessie`, `5.6-fpm-jessie`, `5-fpm-jessie` (*5.6/jessie/fpm/Dockerfile*) (https://github.com/docker-library/php/blob/b99209cc078ebb7bf4614e870c2d69e0b3bed399/5.6/jessie/fpm/Dockerfile)
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Quick reference

- **Where to get help**:
  the Docker Community Forums (https://forums.docker.com/), the Docker Community Slack (https://blog.docker.com/2016/11/introducing-docker-community-directory-docker-community-slack/), or Stack Overflow (https://stackoverflow.com/search?tab=newest&q=docker)

- **Where to file issues**:
  https://github.com/docker-library/php/issues (https://github.com/docker-library/php/issues)

- **Maintained by**:
  the Docker Community (https://github.com/docker-library/php)

- **Supported architectures**: (more info (https://github.com/docker-library/official-images#architectures-other-than-amd64))
  `amd64` (https://hub.docker.com/r/amd64/php/), `arm32v5` (https://hub.docker.com/r/arm32v5/php/), `arm32v6` (https://hub.docker.com/r/arm32v6/php/), `arm32v7` (https://hub.docker.com/r/arm32v7/php/), `arm64v8` (https://hub.docker.com/r/arm64v8/php/), `i386` (https://hub.docker.com/r/i386/php/), `ppc64le` (https://hub.docker.com/r/ppc64le/php/), `s390x` (https://hub.docker.com/r/s390x/php/)

- **Published image artifact details**:
  repo-info repo's `repos/php/` directory (https://github.com/docker-library/repo-info/blob/master/repos/php) (history (https://github.com/docker-library/repo-info/commits/master/repos/php))
  (image metadata, transfer size, etc)

- **Image updates**:
  official-images PRs with label `library/php` (https://github.com/docker-library/official-images/pulls?q=label%3Alibrary%2Fphp)
  official-images repo's `library/php` file (https://github.com/docker-library/official-images/blob/master/library/php) (history (https://github.com/docker-library/official-images/commits/master/library/php))

- **Source of this description**:
  docs repo's `php/` directory (https://github.com/docker-library/docs/tree/master/php) (history (https://github.com/docker-library/docs/commits/master/php))

- **Supported Docker versions**:
  the latest release (https://github.com/docker/docker-ce/releases/latest) (down to 1.6 on a best-effort basis)

What is PHP?

PHP is a server-side scripting language designed for web development, but which can also be used as a general-purpose programming language. PHP can be added to straight HTML or it can be used with a variety of templating engines and web frameworks. PHP code is usually processed by an interpreter, which is either implemented as a native module on the web-server or as a common gateway interface (CGI).

> wikipedia.org/wiki/PHP (http://en.wikipedia.org/wiki/PHP)

How to use this image

Create a `Dockerfile` in your PHP project

```
FROM php:7.2-cli
COPY . /usr/src/myapp
WORKDIR /usr/src/myapp
CMD [ "php", "./your-script.php" ]
```

Then, run the commands to build and run the Docker image:

```
$ docker build -t my-php-app .
$ docker run -it --rm --name my-running-app my-php-app
```

Run a single PHP script

For many simple, single file projects, you may find it inconvenient to write a complete `Dockerfile`. In such cases, you can run a PHP script by using the PHP Docker image directly:

```
$ docker run -it --rm --name my-running-script -v "$PWD":/usr/src/m
```

How to install more PHP extensions

Many extensions are already compiled into the image, so it's worth checking the output of `php -m` or `php -i` before going through the effort of compiling more.

We provide the helper scripts `docker-php-ext-configure`, `docker-php-ext-install`, and `docker-php-ext-enable` to more easily install PHP extensions.

In order to keep the images smaller, PHP's source is kept in a compressed tar file. To facilitate linking of PHP's source with any extension, we also provide the helper script `docker-php-source` to easily extract the tar or delete the extracted source. Note: if you do use `docker-php-source` to extract the source, be sure to delete it in the same layer of the docker image.

```
FROM php:7.2-cli
RUN docker-php-source extract \
    # do important things \
    && docker-php-source delete
```

PHP Core Extensions

For example, if you want to have a PHP-FPM image with `iconv` and `gd` extensions, you can inherit the base image that you like, and write your own `Dockerfile` like this:

```
FROM php:7.2-fpm
RUN apt-get update && apt-get install -y \
        libfreetype6-dev \
        libjpeg62-turbo-dev \
        libpng-dev \
    && docker-php-ext-install -j$(nproc) iconv \
    && docker-php-ext-configure gd --with-freetype-dir=/usr/include
    && docker-php-ext-install -j$(nproc) gd
```

Remember, you must install dependencies for your extensions manually. If an extension needs custom `configure` arguments, you can use the `docker-php-ext-configure` script like this example. There is no need to run `docker-php-source` manually in this case, since that is handled by the `configure` and `install` scripts.

See "Dockerizing Compiled Software" (https://tianon.xyz/post/2017/12/26/dockerize-compiled-software.html) for a description of the technique Tianon uses for determining the necessary build-time dependencies for any bit of software (which applies directly to compiling PHP extensions).

PECL extensions

Some extensions are not provided with the PHP source, but are instead available through PECL (https://pecl.php.net/). To install a PECL extension, use `pecl install` to download and compile it, then use `docker-php-ext-enable` to enable it:

```
FROM php:7.2-cli
RUN pecl install redis-4.0.1 \
    && pecl install xdebug-2.6.0 \
    && docker-php-ext-enable redis xdebug
```

```
FROM php:5.6-cli
RUN apt-get update && apt-get install -y libmemcached-dev zlib1g-de
    && pecl install memcached-2.2.0 \
    && docker-php-ext-enable memcached
```

It is *strongly* recommended that users use an explicit version number in their `pecl install` invocations to ensure proper PHP version compatibility (PECL does not check the PHP version compatiblity when choosing a version of the extension to install, but does when trying to install it).

For example, `memcached-2.2.0` has no PHP version constraints (https://pecl.php.net/package/memcached/2.2.0) (https://pecl.php.net/package/memcached/2.2.0)), but `memcached-3.0.4` requires PHP 7.0.0 or newer (https://pecl.php.net/package/memcached/3.0.4) (https://pecl.php.net/package/memcached/3.0.4)). When doing `pecl install memcached` (no specific version) on PHP 5.6, PECL will try to install the latest release and fail.

Beyond the compatibility issue, it's also a good practice to ensure you know when your dependencies receive updates and can control those updates directly.

Unlike PHP core extensions, PECL extensions should be installed in series to fail properly if something went wrong. Otherwise errors are just skipped by PECL. For example, `pecl install memcached-2.2.0 && pecl install redis-2.2.8` instead of `pecl install memcached-2.2.0 redis-2.2.8`. However, `docker-php-ext-enable memcached redis` is fine to be all in one command.

Other extensions

Some extensions are not provided via either Core or PECL; these can be installed too, although the process is less automated:

```
FROM php:5.6-cli
RUN curl -fsSL 'https://xcache.lighttpd.net/pub/Releases/3.2.0/xcac
    && mkdir -p xcache \
    && tar -xf xcache.tar.gz -C xcache --strip-components=1 \
    && rm xcache.tar.gz \
    && ( \
        cd xcache \
        && phpize \
        && ./configure --enable-xcache \
        && make -j "$(nproc)" \
        && make install \
    ) \
    && rm -r xcache \
    && docker-php-ext-enable xcache
```

The `docker-php-ext-*` scripts *can* accept an arbitrary path, but it must be absolute (to disambiguate from built-in extension names), so the above example could also be written as the following:

```
FROM php:5.6-cli
RUN curl -fsSL 'https://xcache.lighttpd.net/pub/Releases/3.2.0/xcac
    && mkdir -p /tmp/xcache \
    && tar -xf xcache.tar.gz -C /tmp/xcache --strip-components=1 \
    && rm xcache.tar.gz \
    && docker-php-ext-configure /tmp/xcache --enable-xcache \
    && docker-php-ext-install /tmp/xcache \
    && rm -r /tmp/xcache
```

Running as an arbitrary user

For running the Apache variants as an arbitrary user, there are several choices:

- If your kernel is version 4.11 or newer (https://github.com/moby/moby/issues/8460#issuecomment-312459310), you can add `--sysctl net.ipv4.ip_unprivileged_port_start=0` and then `--user` should work as it does for FPM.
- If you adjust the Apache configuration to use an "unprivileged" port (greater than 1024 by default), then `--user` should work as it does for FPM regardless of kernel version.
- Otherwise, setting `APACHE_RUN_USER` and/or `APACHE_RUN_GROUP` should have the desired effect (for example, `-e APACHE_RUN_USER=daemon` or `-e APACHE_RUN_USER=#1000` -- see the Apache `User` directive documentation for details on the expected syntax (https://httpd.apache.org/docs/2.4/mod/mod_unixd.html#user)).

For running the FPM variants as an arbitrary user, the `--user` flag to `docker run` should be used (which can accept both a username/group in the container's `/etc/passwd` file like `--user daemon` or a specific UID/GID like `--user 1000:1000`).

"E: Package 'php-XXX' has no installation candidate"

As of docker-library/php#542 (https://github.com/docker-library/php/pull/542), this image blocks the installation of Debian's PHP packages. There is some additional discussion of this change in docker-library/php#551 (comment) (https://github.com/docker-library/php/issues/551#issuecomment-354849074), but the gist is that installing Debian's PHP packages in this image leads to two conflicting installations of PHP in a single image, which is almost certainly not the intended outcome.

For those broken by this change and looking for a workaround to apply in the meantime while a proper fix is developed, adding the following simple line to your `Dockerfile` should remove the block (**with the strong caveat that this will allow the installation of a second installation of PHP, which is definitely not what you're looking for unless you *really* know what you're doing**):

```
RUN rm /etc/apt/preferences.d/no-debian-php
```

The *proper* solution to this error is to either use `FROM debian:XXX` and install Debian's PHP packages directly, or to use `docker-php-ext-install`, `pecl`, and/or `phpize` to install the necessary additional extensions and utilities.

Configuration

This image ships with the default `php.ini-development` (https://github.com/php/php-src/blob/master/php.ini-development) and `php.ini-production` (https://github.com/php/php-src/blob/master/php.ini-production) configuration files.

It is *strongly* recommended to use the production config for images used in production environments!

The default config can be customized by copying configuration files into the `$PHP_INI_DIR/conf.d/` directory.

Example

```
FROM php:7.2-fpm-alpine

# Use the default production configuration
RUN mv "$PHP_INI_DIR/php.ini-production" "$PHP_INI_DIR/php.ini"

# Override with custom opcache settings
COPY config/opcache.ini $PHP_INI_DIR/conf.d/
```

Image Variants

The `php` images come in many flavors, each designed for a specific use case.

Some of these tags may have names like jessie or stretch in them. These are the suite code names for releases of Debian (https://wiki.debian.org/DebianReleases) and indicate which release the image is based on.

`php:<version>-cli`

This variant contains the PHP CLI (https://secure.php.net/manual/en/features.commandline.php) tool with default mods. If you need a web server, this is probably not the image you are looking for. It is designed to be used both as a throw away container (mount your source code and start the container to start your app), as well as a base from which to build other images.

It also is the only variant which contains the (not recommended) `php-cgi` binary, which is likely necessary for some things like PPM (https://github.com/php-pm/php-pm).

Note that *all* variants of `php` contain the PHP CLI (`/usr/local/bin/php`).

`php:<version>-apache`

This image contains Debian's Apache httpd in conjunction with PHP (as `mod_php`) and uses `mpm_prefork` by default.

Apache with a `Dockerfile`

```
FROM php:7.2-apache
COPY src/ /var/www/html/
```

Where `src/` is the directory containing all your PHP code. Then, run the commands to build and run the Docker image:

` console
$

Docker Pull Command

```
docker pull php
```