

How to install PHP 7 fpm on Alpine Linux

Author: Vivek Gite Last updated: January 4, 2019 [1 comment](#)

I am a new user of Alpine Linux. How do I install PHP 7.x along with Nginx web server on Alpine Linux?

Nginx is a free and open source web server. You need nginx to display static or dynamic web pages. Nginx can also act as a reverse proxy and load balancer. PHP is a free and open source server side programming language. This tutorial shows how to install PHP 7.x along with nginx on Alpine Linux.

Step 1: Install the Nginx web server

Type the following [apk command](#) to [install nginx server on an Alpine Linux](#):

```
# apk update && apk upgrade  
# apk add nginx
```

Step 2: Install PHP 7 fpm on Alpine Linux

Type the following [apk command](#) to install the PHP 7.x language runtime engine:

```
# apk add php7 php7-fpm php7-opcache
```

Sample outputs:



```
root@alpine-www:~ # apk add php7 php7-fpm php7-opca  
(1/6) Installing php7-common (7.1.5-r0)  
(2/6) Installing libedit (20170329.3.1-r2)  
(3/6) Installing libxml2 (2.9.4-r4)  
(4/6) Installing php7 (7.1.5-r0)  
(5/6) Installing php7-fpm (7.1.5-r0)  
(6/6) Installing php7-opcache (7.1.5-r0)  
Executing busybox-1.26.2-r5.trigger  
OK: 30 MiB in 31 packages
```

Fig.01: Installing PHP 7

Step 3: Install the PHP 7.x modules

Add popular PHP modules such as MySQL, GD and others:

```
# apk add php7-gd php7-mysqli php7-zlib php7-curl
```

Sample outputs:



```
root@alpine-www:~ # apk add php7-gd php7-mysqli php7-zlib php7-  
(1/25) Installing ca-certificates (20161130-r2)  
(2/25) Installing libssh2 (1.8.0-r1)  
(3/25) Installing libcurl (7.54.0-r0)  
(4/25) Installing php7-curl (7.1.5-r0)  
(5/25) Installing libxau (1.0.8-r1)  
(6/25) Installing libbsd (0.8.3-r3)  
(7/25) Installing libxdmcp (1.1.2-r3)  
(8/25) Installing libxcb (1.12-r0)  
(9/25) Installing libx11 (1.6.5-r0)  
(10/25) Installing libxext (1.3.3-r1)  
(11/25) Installing libice (1.0.9-r1)  
(12/25) Installing libuuid (2.28.2-r2)  
(13/25) Installing libsm (1.2.2-r0)  
(14/25) Installing libxt (1.1.5-r0)  
(15/25) Installing libxpm (3.5.12-r0)  
(16/25) Installing libbz2 (1.0.6-r5)  
(17/25) Installing libpng (1.6.29-r1)  
(18/25) Installing freetype (2.7.1-r1)  
(19/25) Installing libjpeg-turbo (1.5.1-r0)  
(20/25) Installing libwebp (0.6.0-r0)  
(21/25) Installing php7-gd (7.1.5-r0)  
(22/25) Installing php7-openssl (7.1.5-r0)  
(23/25) Installing php7-mysqlnd (7.1.5-r0)  
(24/25) Installing php7-mysqli (7.1.5-r0)  
(25/25) Installing php7-zlib (7.1.5-r0)  
Executing busybox-1.26.2-r5.trigger  
Executing ca-certificates-20161130-r2.trigger  
OK: 40 MiB in 56 packages  
root@alpine-www:~ #
```

Fig.02: Installing PHP 7 modules

To [search other modules run the following apk command](#). Run:

```
# apk search php7
```

```
# apk search php7 | more
```

Sample outputs:

```
php7-intl-7.1.5-r0
php7-openssl-7.1.5-r0
php7-dba-7.1.5-r0
php7-sqlite3-7.1.5-r0
php7-pear-7.1.5-r0
php7-tokenizer-7.1.5-r0
php7-phpdbg-7.1.5-r0
cacti-php7-1.0.0-r1
xapian-bindings-php7-1.4.3-r2
php7-litespeed-7.1.5-r0
php7-gmp-7.1.5-r0
php7-pdo_mysql-7.1.5-r0
php7-pcntl-7.1.5-r0
php7-common-7.1.5-r0
php7-xsl-7.1.5-r0
php7-fpm-7.1.5-r0
php7-imagick-3.4.3-r2
php7-mysqlnd-7.1.5-r0
php7-enchanted-7.1.5-r0
php7-pspell-7.1.5-r0
php7-redis-3.1.2-r1
php7-snmp-7.1.5-r0
php7-doc-7.1.5-r0
php7-fileinfo-7.1.5-r0
php7-mbstring-7.1.5-r0
php7-dev-7.1.5-r0
php7-pear-mail_mime-1.10.0-r0
php7-xmlrpc-7.1.5-r0
php7-embed-7.1.5-r0
php7-xmlreader-7.1.5-r0
php7-pear-mdb2_driver_mysql-1.5.0b4-r0
php7-pdo_sqlite-7.1.5-r0
php7-pear-auth_sasl2-0.2.0-r0
php7-exif-7.1.5-r0
php7-recode-7.1.5-r0
php7-opcache-7.1.5-r0
php7-ldap-7.1.5-r0
php7-posix-7.1.5-r0
php7-pear-net_socket-1.1.0-r0
php7-session-7.1.5-r0
php7-gd-7.1.5-r0
php7-gettext-7.1.5-r0
php7-mailparse-3.0.2-r1
php7-json-7.1.5-r0
php7-xml-7.1.5-r0
php7-7.1.5-r0
php7-iconv-7.1.5-r0
php7-sysvshm-7.1.5-r0
php7-curl-7.1.5-r0
php7-shmop-7.1.5-r0
php7-odbc-7.1.5-r0
php7-phar-7.1.5-r0
php7-pdo_pgsql-7.1.5-r0
php7-imap-7.1.5-r0
php7-pear-mdb2_driver_pgsql-1.5.0b4-r0
php7-pdo_dblib-7.1.5-r0
php7-pgsql-7.1.5-r0
php7-pdo_odbc-7.1.5-r0
```

```
php7-xdebug-2.5.3-r1
php7-zip-7.1.5-r0
php7-apache2-7.1.5-r0
php7-cgi-7.1.5-r0
php7-ctype-7.1.5-r0
php7-amqp-1.9.0-r0
php7-mcrypt-7.1.5-r0
php7-wddx-7.1.5-r0
php7-pear-net_smtp-1.8.0-r1
php7-bcmath-7.1.5-r0
php7-calendar-7.1.5-r0
php7-tidy-7.1.5-r0
php7-dom-7.1.5-r0
php7-sockets-7.1.5-r0
php7-zmq-1.1.3-r1
php7-memcached-3.0.3-r1
php7-soap-7.1.5-r0
php7-apcu-5.1.8-r1
php7-sysvmsg-7.1.5-r0
php7-zlib-7.1.5-r0
php7-imagick-dev-3.4.3-r2
php7-ftp-7.1.5-r0
php7-sysvsem-7.1.5-r0
php7-pear-net_idna2-0.2.0-r1
php7-pdo-7.1.5-r0
php7-pear-auth_sasl-1.1.0-r0
php7-bz2-7.1.5-r0
php7-mysqli-7.1.5-r0
php7-pear-net_smtp-doc-1.8.0-r1
php7-simplexml-7.1.5-r0
php7-xmlwriter-7.1.5-r0
```

Or use the [grep command](#) along with the [apk command](#):

```
# apk search php7 | grep -i gd
```

Step 4: Start the php-fpm7 server

Make sure the nginx and php-fpm7 starts when system reboots:

```
# rc-update add nginx default
* service nginx added to runlevel default
# rc-update add php-fpm7 default
* service php-fpm7 added to runlevel default
```

Command to restart nginx and PHP7-fpm server

```
# rc-service nginx restart
# rc-service php-fpm7 restart
```

Sample outputs:



```
root@alpine-www:~ # rc-service nginx restart
* Caching service dependencies ...
* /run/nginx: creating directory
* /run/nginx: correcting owner
* Starting nginx ...
root@alpine-www:~ # rc-service php-fpm7 restart
* Checking /etc/php7/php-fpm.conf ...
* /run/php-fpm7: creating directory
* Starting PHP FastCGI Process Manager ...
root@alpine-www:~ #
```

Fig.03: Starting/Stopping PHP and Nginx services

Command to stop nginx and PHP7-fpm server

```
# rc-service nginx stop
# rc-service php-fpm7 stop
```

Command to start nginx and PHP7-fpm server

```
# rc-service nginx start
# rc-service php-fpm7 start
```

Step 5: Configure PHP 7

Update you virtual host config file as follows

```
# vi /etc/nginx/conf.d/ssl.newsletter.cyberciti.biz.conf
```

Append/edit in server context:

```
location ~ \.php$ {
    fastcgi_pass      127.0.0.1:9000;
    fastcgi_index     index.php;
    include           fastcgi.conf;
}
```

Save and close the file. Here is a full config file:

```
## START: SSL/HTTPS newsletter.cyberciti.biz ###
server {
    listen 443 http2;
```

```

server_name newsletter.cyberciti.biz;
ssl on;
ssl_certificate
/etc/nginx/ssl/letsencrypt/newsletter.cyberciti.biz/newsletter.cyberciti.biz.cer
;
    ssl_certificate_key
/etc/nginx/ssl/letsencrypt/newsletter.cyberciti.biz/newsletter.cyberciti.biz.key
;
    ssl_session_timeout 1d;
    ssl_session_cache shared:SSL:50m;
    ssl_session_tickets off;
    ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
    ssl_ciphers
ECDH+AESGCM:DH+AESGCM:ECDH+AES256:DH+AES256:ECDH+AES128:DH+AES:ECDH+3DES:DH+3DES
:RSA+AESGCM:RSA+AES:RSA+3DES:!aNULL:!MD5:!DSS;
    ssl_dhparam
/etc/nginx/ssl/letsencrypt/newsletter.cyberciti.biz/dhparams.pem;
    ssl_prefer_server_ciphers on;

## Improves TTFB by using a smaller SSL buffer than the nginx default
ssl_buffer_size 8k;

## Enables OCSP stapling
ssl_stapling on;
resolver 8.8.8.8;
ssl_stapling_verify on;

## Send header to tell the browser to prefer https to http traffic
#add_header Strict-Transport-Security max-age=31536000;

## SSL logs ##
access_log /var/log/nginx/newsletter.cyberciti.biz_ssl_access.log;
error_log /var/log/nginx/newsletter.cyberciti.biz_ssl_error.log;
#----- END SSL config -----##

root /var/www/localhost/htdocs;
index      index.html index.htm index.php;
server_name newsletter.cyberciti.biz;
# configure php
location ~ \.php$ {
    fastcgi_pass            127.0.0.1:9000;
    fastcgi_index            index.php;
    include                  fastcgi.conf;
}
# rest of your config ##
}
## END SSL newsletter.cyberciti.biz #####

```

Make sure you restart the nginx and php7:

```

# rc-service nginx restart
# rc-service php-fpm7 restart

```

Step 6: Test PHP 7

Create a php script file in your root directory such as /var/www/localhost/htdocs

```
# vi test.php
```

Add the following:

```

<?php
    phpinfo();
?>

```

Save and close the file. Test it:

`http://your-domain/test.php`

OR

`https://your-domain/test.php`

<https://www.cyberciti.biz/faq/how-to-install-php-7-fpm-on-alpine-linux/>