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# **itsziget/httpd24 Documentation**

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## Contents:

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<b>1</b>	<b>Features</b>	<b>3</b>
<b>2</b>	<b>Environment variables</b>	<b>5</b>
2.1	Variables . . . . .	5
<b>3</b>	<b>Examples</b>	<b>9</b>
3.1	Using SSL certificate . . . . .	9
3.2	HTTP Authentication . . . . .	10
3.3	Simplest way to use PHP-FPM . . . . .	10
3.4	Use the rewrite engine . . . . .	11
3.5	Forward the admin page to another site: . . . . .	11
3.6	Get real client IP behind reverse proxy . . . . .	12



Have you heard about [Docker](#) (Container engine)? Well, if you ever had problem with installing dependencies on the same machine for different projects, you should. If you need an [Apache HTTPD](#) web server, you can run it in seconds if you have Docker installed on your machine.

Unfortunately, you almost always need to customize it and create a new image with your own configuration. Just think of the need of [PHP FPM](#) or other modules disabled by default. This documentation is about an enhanced version of the HTTPD 2.4 image inherited from the official version. It provides a way to customize the configuration by environment variables. PHP FPM configuration was the first reason of creating this Docker image but now it is just an option among many.



# CHAPTER 1

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## Features

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- Change some default server settings like `ServerName`, `ServerAdmin`, `DocumentRoot` and `LogLevel`
- Configure `HTTPD` to connect `PHP FPM` and increase timeout if you need.
- Turn `SSL` on or off easily. You can even generate a self-signed certificate to test locally and optionally redirect all `HTTP` requests to `HTTPS`.
- Do you use `Reverse proxy` front of the web server? You may want to log the original client IP address in the `HTTPD` container instead of the proxy's IP. You are free to use [ProxyProtocol](#) or set [RemoteIPInternalProxy](#).
- Turn `HTTP Basic` authentication on or off. You can mount your own `htpasswd` file or generate it automatically from environment variable.
- Use `HTTPD` as reverse proxy to proxy one url to another.
- Mount your own configuration or copy that into your own image and enable or disable it.
- Run any custom command when `httpd` is ready to run but before it actually runs, so you can change anything before that.
- Enable/Disable modules or custom and built-in configurations without changing `httpd.conf` manually



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## Environment variables

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Some variables have boolean values. Those values can be set various ways.

Valid values for **true**: “true”, “1”, “on”, “yes”

Valid values for **false**: “false”, “0”, “off”, “no”

Each of them is case insensitive.

### 2.1 Variables

**SRV\_ADMIN** (default: “you@example.com”) “ServerAdmin” directive’s value.

**SRV\_ALLOW\_OVERRIDE** (default: “false”) Set it to “true” to enable overriding some configuration from .htaccess. See **SRV\_ENABLE\_MODULE** to enable rewrite module.

**SRV\_AUTH** (default: “false”) Set this to “true” if you need HTTP Basic authentication using an htpasswd file. Without **SRV\_AUTH\_USERS** you need to create the htpasswd file manually.

**SRV\_AUTH\_NAME** (default: “Private Area”) This is the value of AuthName directive.

#### **SRV\_AUTH\_USERS**

(default: “”) Set the users and their passwords line by line where the user and the password are separated by only one space.

Example:

```
SRV_AUTH_USERS=”admin1 secretpassword\  
admin2 secretpassword2”
```

**SRV\_DOCROOT** (default: “/usr/local/apache2/htdocs”) The value after DocumentRoot directive. This variable helps you change the document root and it’s Directory block.

**SRV\_ENABLE\_CONFIG** (default: "") Pass the name of configurations you want to enable separated by space. There are 3 type of configuration.

- Official configuration files in “conf/extra” directory. The name of them starts with the name of configuration and ends with “.conf”. For example: httpd-default.conf. `SRV_ENABLE_CONFIG="httpd-default httpd-ssl"` will enable httpd-default.conf and httpd-ssl.conf. You will rarely need it.
- Custom configurations of itsziget/httpd24. These are in “conf/custom-extra” directory. To enable these configurations you would need to prefix them with “@”. Example: `SRV_ENABLE_CONFIG="@php"` These are controlled by environment variables so you don’t need to enable them this way.
- Your custom configuration can be saved to “conf/custom-extra/user” directory. If you want to enable them, prefix the configuration names with “@user/”. Example: `SRV_ENABLE_CONFIG="@user/my-conditional-redirect"`. Of course, the filename must ends with “.conf”. See `SRV_DISABLE_CONFIG` to disable configurations.

### **SRV\_ENABLE\_MODULE**

(default: "") Just like `SRV_ENABLE_CONFIG`, but this is to enable modules like rewrite.

Example: `SRV_ENABLE_MODULE="rewrite dav ssl"`

To disable modules enabled by default use `SRV_DISABLE_MODULE`.

### **SRV\_DISABLE\_CONFIG**

(default: "") Disable configurations enabled by default. It will comment out the configuration’s include.

Example: `SRV_DISABLE_CONFIG="proxy-html"`

### **SRV\_DISABLE\_MODULE:**

(default: "") If you want to disable every module you don’t really need, this variable is for you.

Example: `SRV_DISABLE_MODULE="autoindex"`

**SRV\_LOGLEVEL** (default: “warn”) The server’s log level

**SRV\_NAME** (default: “localhost.localdomain”) To change ServerName directive’s value.

**SRV\_PHP** (default: “false”) If it is “true”, requested PHP scripts will be sent to PHP FPM. PHP FPM’s hostname is “php” by default. In the same docker network you can name the PHP container as “php” or use “php” as the name of Docker Compose service. You can customize the hostname by `SRV_PHP_HOST`.

**SRV\_PHP\_DISABLE\_REUSE** (default: “true”) When you upgrade the PHP container, the container’s IP can change. To make sure HTTPD use the new IP to connect, you need to set “disablereuse=on” for FCGI proxy. To turn it off, set this variable’s value to “true”. You can use “on” and “off” too.

**SRV\_PHP\_HOST** (default: “php”) The hostname of your PHP FPM service.

**SRV\_PHP\_PORT** (default: 9000) The port number of PHP FPM service.

**SRV\_PHP\_TIMEOUT** (default: “60”) PHP FPM proxy timeout in seconds. When you want to use XDebug or other debug tools, or your PHP scripts running too long, you may want to increase the timeout.

**SRV\_PROXY\_FORWARD\_FROM** (default: “/”) You can use HTTPD as a reverse proxy to proxy some requests to another website. By default, all requests will be forwarded. You can change it, if you want: `SRV_PROXY_FORWARD_FROM="/admin/"`

**SRV\_PROXY\_FORWARD\_TO:** (default: "") If it is not an empty string, httpd will forward all requests from `SRV_PROXY_FORWARD_FROM` to the given URL.

**SRV\_PROXY\_PROTOCOL** (default: “false”) Behind a reverse proxy HTTPD will log the proxy’s IP address and your PHP scripts need to check X-Forwarded-For or X-Client-IP headers to determine the client IP. The [Proxy Protocol](#) helps you avoid it.

**SRV\_REVERSE\_PROXY\_CLIENT\_IP\_HEADER** (default: “X-Forwarded-For”) In case of reverse proxy front of the HTTPD, this is the HTTP header in which the proxy stores the real client IP. When `SRV_REVERSE_PROXY_DOMAIN` is set, you can see the real IP in server log.

**SRV\_REVERSE\_PROXY\_DOMAIN** (default: “”) If it is not empty, it can be an alternative to the proxy protocol. If you cannot use proxy protocol or you don’t want to, you can tell httpd the domain, IP or IP range of the reverse proxy server. Example: `SRV_REVERSE_PROXY_DOMAIN=“haproxy”` or `SRV_REVERSE_PROXY_DOMAIN=“10.42.0.0/16”`

**SRV\_SSL** (default: “false”) Whether you need SSL or not. You can set it to “true” and httpd will look for the SSL private key and certificate. To tell HTTPD where those files are, see `SRV_SSL_CERT` and `SRV_SSL_NAME`.

**SRV\_SSL\_AUTO** (default: “false”) In case of “true”, the container will generate a self-signed certificate for you before starting the server. Note that it can take some minutes and won’t be valid. Use it only for testing purposes.

**SRV\_SSL\_CERT** (default: “/usr/local/apache2/ssl/\${CERT\_NAME}.cert”) The path of the ssl certificate inside the container. If you set `SRV_SSL_LETSENCRYPT` to “true” it will change the value of `SRV_SSL_CERT` to “/etc/letsencrypt/live/\${CERT\_NAME}/fullchain.pem”.

**SRV\_SSL\_KEY** (default: “/usr/local/apache2/ssl/\${CERT\_NAME}.key”) The path of the SSL private key file inside the container. If you set `SRV_SSL_LETSENCRYPT` to “true” it will change the value of `SRV_SSL_CERT` to “/etc/letsencrypt/live/\${CERT\_NAME}/privkey.pem”.

**SRV\_SSL\_LETSENCRYPT** (default: “false”) In case of “true”, it changes the the value of `SRV_SSL_CERT` and `SRV_SSL_KEY` to be compatible with Let’s Encrypt.

**SRV\_SSL\_NAME** (default: “ssl”) The default SSL certificate is `/usr/local/apache2/ssl/ssl.crt` and the private key file is `/usr/local/apache2/ssl/ssl.crt`. You can change the file name by setting changing the value of this variable:

Example: `SRV_SSL_NAME=“custom”`

Then the file names will be changed to `custom.crt` and `custom.key`

There are some other variables too just to be compatible with other docker containers like [Nginx Proxy](#).

**VIRTUAL\_HOST** Nginx proxy and [Hosts gen](#) use this to determine the domain name of the containers. If you set this variable and `SRV_SSL_NAME`, `CERT_NAME`, `SRV_NAME` are not set, it can be used to set the name of ssl certificate. See `SRV_SSL_CERT` and `SRV_SSL_KEY`.

**CERT\_NAME** Nginx Proxy use this variable to choose the SSL certificate for the backend container if the certificate’s name is not the same as the domain.



### 3.1 Using SSL certificate

#### 3.1.1 With Let's Encrypt without custom certificate name

```
docker run -d \  
  --env SRV_SSL="true" \  
  --env SRV_LETSENCRYPT="true" \  
  --env SRV_NAME=YOURDOMAIN \  
  -v /etc/letsencrypt:/etc/letsencrypt \  
  -p 443:443 \  
  itsziget/httpd24:2.0
```

#### 3.1.2 With Let's Encrypt and custom certificate name

```
docker run -d \  
  --env SRV_SSL="true" \  
  --env SRV_LETSENCRYPT="true" \  
  --env SRV_NAME=YOURDOMAIN \  
  --env CERT_NAME=CUSTOMCERTNAME \  
  -v /etc/letsencrypt:/etc/letsencrypt \  
  -p 443:443 \  
  itsziget/httpd24:2.0
```

#### 3.1.3 You can mount custom certificate two ways

```
docker run -d \  
  --env SRV_SSL="true" \  
  -v /path/to/custom.key:/usr/local/apache2/ssl.key \  
  itsziget/httpd24:2.0
```

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```
-v /path/to/custom.crt:/usr/local/apache2/ssl.crt \  
-p 443:443 \  
itsziget/httpd24:2.0
```

or

```
docker run -d \  
  --env SRV_SSL="true" \  
  --env SRV_CERT=/ssl.crt \  
  --env SRV_CERT_KEY=/ssl.key \  
  -v /path/to/custom.key:/ssl.key \  
  -v /path/to/custom.crt:/ssl.crt \  
  -p 443:443 \  
  itsziget/httpd24:2.0
```

## 3.2 HTTP Authentication

```
docker run --rm -i itsziget/httpd24 /bin/bash -c "htpasswd -nb YOURUSERNAME_\  
→YOURPASSWORD" >> .htpasswd  
docker run -d \  
  -v `pwd`/.htpasswd:/usr/local/apache2/.htpasswd \  
  --env SRV_AUTH="true" \  
  -p 80:80 \  
  itsziget/httpd24:2.0
```

or just generate htpasswd inside the container

```
docker run -d \  
  --env SRV_AUTH="true" \  
  --env SRV_AUTH_USERS="admin1 password1\  
admin2 password2"  
  -p 80:80 \  
  itsziget/httpd24:2.0
```

## 3.3 Simplest way to use PHP-FPM

### 3.3.1 Legacy way

```
mkdir -p src  
echo "<?php phpinfo(); " > src/index.php  
docker run -d \  
  -v $PWD/src:/usr/local/apache2/htdocs \  
  --name php \  
  php:7.1-fpm  
docker run -d \  
  --volumes-from php \  
  --env SRV_PHP="true" \  
  -p "80:80" \  
  --link php \  
  itsziget/httpd24:2.0
```

### 3.3.2 Recommended way

```
mkdir -p src
echo "<?php phpinfo();" > src/index.php
docker network create phptest
docker run -d \
  -v $PWD/src:/usr/local/apache2/htdocs \
  --name php \
  --network phptest \
  php:7.1-fpm
docker run -d \
  --volumes-from php \
  --env SRV_PHP=1 \
  -p "80:80" \
  --network phptest \
  itsziget/httpd24:2.0
```

### 3.3.3 Reusing the network of the HTTPD container

```
mkdir -p src
echo "<?php phpinfo();" > src/index.php
docker run -d \
  -v $PWD/src:/usr/local/apache2/htdocs \
  --name php \
  -p "80:80" \
  php:7.1-fpm
docker run -d \
  --volumes-from php \
  --env SRV_PHP=1 \
  --env SRV_PHP_HOST=localhost \
  --network container:php \
  itsziget/httpd24:2.0
```

## 3.4 Use the rewrite engine

```
docker run -d \
  -v $PWD/src:/usr/local/apache2/htdocs \
  -p 80:80 \
  --env SRV_ENABLE_MODULES="rewrite" \
  --env SRV_ALLOW_OVERRIDE="true" \
  itsziget/httpd24:2.0
```

## 3.5 Forward the admin page to another site:

```
docker run -d \
  -v $PWD/src:/usr/local/apache2/htdocs \
  -p 80:80 \
  --env SRV_PROXY_FORWARD_FROM="/admin/" \
  --env SRV_PROXY_FORWARD_TO="http://admin.mysite.tld/" \
  itsziget/httpd24:2.0
```

## 3.6 Get real client IP behind reverse proxy

### 3.6.1 Proxy protocol

```
docker run -d \  
  -v $PWD/src:/usr/local/apache2/htdocs \  
  -p 80:80 \  
  --env SRV_PROXY_PROTOCOL="true" \  
  itsziget/httpd24:2.0
```

### 3.6.2 Client IP header

```
docker run -d \  
  -v $PWD/src:/usr/local/apache2/htdocs \  
  -p 80:80 \  
  --env SRV_REVERSE_PROXY_CLIENT_IP_HEADER="X-Forwarded-For" \  
  --env SRV_REVERSE_PROXY_DOMAIN="haproxy" \  
  itsziget/httpd24:2.0
```