

Imagen

for Windows/Linux

Build and Installation Instructions

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Introduction

This document describes how to build and install Imagen, Imagen Cache and Imagen Cache Plugin. If you are working under Linux please refer to the section Under Linux below. If you are working under Windows, please refer to the Under Windows section.

Under Linux

Building

If you have a source distribution (with or without the libraries) first you need to build Imagen.

According to your distribution the following options apply:

- ◆ Imagen sources only (without libraries)

The archive is `imagen-small-X.Y.JKL.tar.gz`, where `X.Y` is version number you have imagen only in source form, `JKL` is the build number.

- ◆ Imagen sources + Libraries

The archive is `imagen-all-X.Y.JKL.tar.gz` files where `X.Y` is version number you have imagen in source form with several libraries, `JKL` is the build number.

Build without libraries

Please note that Imagen requires some libraries to be installed and needs other libraries for its usual work (like working with PNG, JPEG, TIFF and other file formats). You must have these libraries installed before configuring Imagen. For list of libraries Imagen is tested with please refer to the **Appendixes** section.

Generally you need to follow some steps:

- ◆ Uncompress

```
tar xzvf imagen-small-X.Y.JKL.tar.gz
```

Please replace `x` and `y` with the correct version. This command will extract everything in a subdirectory named `imagen-small-X.Y.JKL`. You must invoke all following commands from that directory. i.e. you have to:

```
cd imagen-small-X.Y.JKL
```

- ◆ Configure the package

Imagen is configured by `autoconf`, which generates a script named `configure`. If you want to install into the default directories and with default build options you can type:

```
make configure
```

Probably you will give you an error that you need a certain library for the installation. Follow the syntax given you by the error message and specify where the library is installed. If you don't have it you have to download it. Check <http://imagen.netclime.com> site for the URLs.

- ◆ Compile it

You need make-like tool (preferably GNU Make). In most cases

```
make LIBRARIES=/path/to/libs/directory
```

does what you need.

◆ And Install

Type:

```
make install
```

The default install directory is `/usr/local/imagen`.

For removing the debug info refer to the Debug Info section

This will install the executables under the prefix you gave to the configure script.

The following files are installed:

bin/imagen	The executable file that constitutes imagen
bin/imagen.cfg	The default imagen configuration file is here
bin/imagenc	Standalone CGI script that can be used instead of imagen. It adds file cache of imagen result.
bin/imagenc.cfg	The cache configuration
bin/mod_imagen_cache.so	Apache module that implements the cache. Faster than the standalone cache.
bin/dispatcher.so	Imagen Cache Plugin module
bin/dispatcher.cfg	Imagen Cache Plugin configuration file

Full build with libraries

This distribution contains:

◆ Imagen

The imagen distribution is contained verbatim under the `src` directory.

◆ Additional Libraries

Several libraries are stored verbatim under the `lib` directory.

◆ Additional Build Scripts

Limited support for building and installing of everything is provided.

With this package you have two options:

◆ Manually setup libraries and then build Imagen

If you are familiar with the libraries you probably prefer to install them one by one. This is the only choice if the automated script does not work on your system. Please keep in mind the following:

- ◆ You must configure ImageMagick after installing the other libraries.
- ◆ When configuring Imagen the directory where ImageMagick had installed its executables (usually `/usr/local/bin`) must be in the path or the configuration will fail.

You probably will find useful the configure scripts and makefiles under the `lib` directory. These files constitute the automated build and specify tweaks needed to build libraries so Imagen will work then.

Currently Imagen is tested with ImageMagick 5.2.5 and ImageMagick 5.3.7.

The compilation of ImageMagick's versions higher than 5.2.5 must be compiled mandatory with the following flags, during the `./configure` execution:

`--with-magick-plus-plus` (in other ImageMagick distributions it's `--with-magick_plus_plus`)

`--disable-16bit-pixel` (in other ImageMagick's distributions it's `--with-quantum-depth=8`)

`--without-xml`

`--enable-lzw`

Please make sure that after executing `./configure` you will have the JPEG library included. Make sure you've installed a jpeg library's header files.

◆ **Use the automated build**

The installation is a common "make-using" one.

Type the following sequence of commands:

```
make configure
make
make install
```

The default install directory is `/usr/local/imagen/`.

By default Imagen does not require static linkage so it will dynamically link to libraries that support it. The installation directory is stored in the executable file. Thus shared libraries will be searched there (if not found in the default places).

To link it statically type:

```
cd src; rm imagen; make imagen_LDFLAGS=-static; make install
```

By default the linkage is static.

Debug Info

According to the standard rules for building package Imagen is build with debug info (but still with optimizations). So before doing upload you may want to execute:

```
strip --strip-all executable_file
```

Where executable file is each of the executables found in the install directory.

Installation

Files

Imagen

- ◆ **imagen.cgi** – compiled CGI application
- ◆ **imagen.cfg** – the configuration file

Cache

- ◆ **imagenc.cgi** – compiled CGI application
- ◆ **mod_imagen_cache.so** – DSO for the Apache module
- ◆ **cache.cfg** – the configuration file

Dispatcher

- ◆ **dispatcher.so** – Imagen Cache Plugin
- ◆ **dispatcher.cfg** – the configuration file

Notes

Please note that the executables are produced without extension. We stated them here as having '.cgi' extension as this is common practice. Depending on your web server configuration, you may not need this rename, or you can choose to use different naming.

Imagen Standalone

If you intend to use Imagen directly, you can do so by installing it like any other CGI application. The following steps should be performed:

- ◆ Configure the web server to execute CGI applications.
- ◆ Copy the required files to the appropriate site folder.

NOTE: Even single invocation of Imagen can take lots of system resources for its operation. Thus, you should use this direct interface only when developing your scripts.

Imagen with Cache

After compiling and installing you have working versions of Imagen and its Cache. To use Imagen this way you need to only install the Cache, and update the Cache configuration file to reflect the location of the Imagen executable. You should review the configuration file for Imagen too. Please refer to config.doc for more information about the configuration files.

The cache is available in two forms:

- ◆ Standalone CGI Application
- ◆ Apache Module

Standalone CGI Application

The cache should be installed like any other CGI application. The following steps should be performed:

- ◆ Configure the web server to execute CGI applications.
- ◆ Copy the required files to the appropriate site folder.

Please read the Imagen Configuration Reference to configure the cache before using it.

Cache should have write permissions to the log file, stats file, cache files folder and locks folder.

Apache Module

- ◆ run the following Apache command:
- ◆ `/path/to/apache/bin/apxs -i -a -n imagen_cache /path/mod_imagen_cache.so`
- ◆ This should install the Imagen Cache DSO into Apache.
- ◆ restart Apache (`/path/to/apache/bin/apachectl restart`)
- ◆ specify directories and/or files, which you want to use Imagen Cache for (in the Apache configuration, by using **“SetHandler imagen-cache”**). (Note that after Apache configuration changes, you need to restart Apache).
- ◆ Cache should have write permissions to the log file, stats file, cache files folder and locks folder.
- ◆ configure Imagen Cache before using it.

Under Windows

Building

All you need to do is:

- ◆ Extract the distribution.
- ◆ Open the Microsoft Visual C++ 6.0 workspace file **imagen.dsw** found inside.
- ◆ Change the active configuration to "imagen – Win32 Release" (accessible through Build|Set Active Configuration... menu item)
- ◆ Rebuild (Build|Rebuild All)
- ◆ Change the active configuration to "cache – Win32 Release" (accessible through Build|Set Active Configuration... menu item)
- ◆ Rebuild (Build|Rebuild All)

To build the Imagen Cache IIS Plugin and Imagen Cache Plugin (Dispatcher) do:

- ◆ Open the Microsoft Visual C++ 6.0 workspace file **cache_iis.dsw**, located in `src\cache\cache_iis\` directory
- ◆ Change the active configuration to "cache_iis – Win32 Release" (accessible through Build|Set Active Configuration... menu item)
- ◆ Rebuild (Build|Rebuild All)
- ◆ Open the Microsoft Visual C++ 6.0 workspace file **dispatcher.dsw**, located in `src\cache\dispatcher\` directory
- ◆ Change the active configuration to "dispatcher – Win32 Release" (accessible through Build|Set Active Configuration... menu item)
- ◆ Rebuild (Build|Rebuild All)

The following files are now available:

<code>src\Release\imagen.exe</code>	The executable file that constitutes imagen
<code>src\imagen.cfg</code>	The default imagen configuration file is here

src\cache\Release\imagenc.exe	Standalone CGI script that can be used instead of imagen. It adds file cache of imagen results.
src\cache\imagenc.cfg	The cache configuration
src\cache\cache_iis\Release\imagenc.dll	IIS Imagen Cache module
src\cache\dispatcher\Release\dispatcher.dll	Imagen Cache Plugin
src\cache\dispatcher\dispatcher.cfg	The dispatcher configuration

Installation

Files

Imagen

- ◆ **imagen.exe** – compiled CGI application
- ◆ **imagen.cfg** – the configuration file

Cache

- ◆ **imagenc.exe** – compiled CGI application
- ◆ **imagenc.dll** – ISAPI extension for IIS
- ◆ **cache.cfg** – the configuration file

Dispatcher

- ◆ **dispatcher.dll** –ISAPI extention for Imagen Cache
- ◆ **dispatcher.cfg** – the configuration file

Imagen Standalone

If you intend to use imagen directly you can do so by installing it like any other CGI application. The following steps should be performed:

- ◆ Configure the web server to execute CGI applications.
- ◆ Copy the required files to the appropriate site folder.

NOTE: Even single invocation of Imagen can take lots of system resources for its operation. Thus, you should use this direct interface only when developing your scripts.

Imagen with Cache

To use Imagen with cache you need to only install the cache, and update the cache configuration file to reflect the location of the Imagen executable. You should review the configuration file for Imagen too. Please refer to Imagen Configuration Reference for more information about the configuration files.

The cache is available in two forms:

- ◆ Standalone CGI Application
- ◆ ISAPI Extension

Standalone CGI Application

The cache should be installed like any other CGI application. The following steps should be performed:

- ◆ Configure the web server to execute CGI applications.
- ◆ Copy the required files to the appropriate site folder.

Please read the *Configuration* section to configure the Cache before using it.

Cache should have write permissions to the log file, stats file, cache files folder and locks folder.

Installation under IIS: The CreateCGIWithNewConsole IIS flag should be set because Imagen Cache uses pipes.

ISAPI Extension

- ◆ copy the Cache files to a directory (for example \inetpub\imagen-bin)
- ◆ set imagenc.dll as executable for .img files in the IIS configuration for the appropriate web site
- ◆ executing CGIs should be set for the .img files directory
- ◆ Cache should have write permissions to the log file, stats file, cache files folder and locks folder
- ◆ stop and start the web site
- ◆ configure Imagen Cache before using it.

References

- ◆ Readme
- ◆ Configure

Appendixes

Tested Libraries

Imagen is tested to work with the following libraries:

- ◆ FreeType 1.3.1, FreeType 2.0 (download from <http://www.freetype.org/>)
- ◆ libpng 1.0.8, jpeg-6b tiff-v3.5.5, zlib-1.1.3 (download from <http://www.imagemagick.org/www/formats.html>)
- ◆ ImageMagick-5.2.5 (download from <http://www.imagemagick.org>)
- ◆ Libwww-5.3.2 (download from <http://www.w3.org/Library/>).