

HTTPD(8)

Table of Contents

- [1. NAME](#)
- [2. SYNOPSIS](#)
- [3. DESCRIPTION](#)
- [4. OPTIONS](#)
- [5. SETTING UP MINI-HTTPD](#)
- [6. AUTHOR](#)
- [7. RESOURCES](#)
- [8. COPYING](#)

1. NAME

httpd - a minimalistic high-performance web server

2. SYNOPSIS

httpd [*OPTIONS*]

3. DESCRIPTION

mini-httpd is a minimalistic web server designed for optimal performance, high security, and as little use of system resources as possible. Unlike most other web servers, mini-httpd does not require more than one process or system thread in order to handle an arbitrary number of requests concurrently. The current set of features includes:

1. HTTP/1.1 compliant "keep-connection" support.
2. Virtual hosting.
3. Recording all successful requests in the common Apache-style log-file format.
4. The ability to run in a chroot(2) sandbox.
5. Dropping all super-user privileges after acquiring the listening socket.
6. mini-httpd is configured entirely through the command line. There is no config file.

mini-httpd is limited to serving **static** pages from the hard disk. There is no support for CGI scripts or any kind of dynamic content. If you need a more sophisticated set-up, this software is not for you. If you really, really need additional features, well, you have the source code. For further

details on how to configure the web server, refer to the section "Setting up mini-httpd" section below.

4. OPTIONS

-h

Show command line syntax and exit.

-d, --debug

Enable additional debugging messages. Debugging is only available if mini-httpd has been compiled with the `--with-debug` configure option. Otherwise, the debug messages are not included in the binary.

--version

Show mini-httpd's version string and exit.

-p, --port=NUMBER

Tell mini-httpd on which port to listen for incoming requests. The default port number is 80.

-r, --change-root=PATH

When started with super-user privileges, mini-httpd will `chroot(2)` to the directory provided with this option. Please note that once the process's root directory has been changed, all other paths are interpreted relative to the new root directory! If you specify `-r /usr/local/mini-httpd`, for example, the document root `/usr/local/httpd/htdocs` has to be given as `/htdocs`. Keep that in mind when specifying the other paths! The default `chroot`-directory is the prefix provided to configure when mini-httpd was built. Usually, that is `/usr/local/mini-httpd`. If you want to disable `chroot()`ing altogether, provide the empty string: `-r ""`. This is not recommended, however.

--document-root=PATH

This option sets the document root directory. When an access to, say, <http://example.org/index.html> comes in, mini-httpd will try to access the file `example.org/index.html` in this directory. Note that hostnames must be spelled in all lower-case in the file system! The default location is `/htdocs`.

***-l, --logfile-directory=PATH**

This option sets the directory mini-httpd uses to create the access-log files. In this directory, one file per hostname will be created. The default location is `/logs`.

***-s, --server-string=STRING**

This option sets the version string mini-httpd returns with the `Server:` header in HTTP replies. The default string is "mini-httpd" — no actual version number is revealed. If you want to disable the

Server: header altogether, specify the empty string: -s "".

-u, --uid=NUMBER

This option sets the numeric user id mini-httpd will `setuid()` to when called with super-user privileges. This is necessary because mini-httpd must be started as root in order to be able to `bind()` to port 80. But you don't want the server to run as root the whole time! A good choice is usually user id "2" (daemon). If this option is unset, mini-httpd will continue to use the user id it has been started under.

-g, --gid=NUMBER*

This option sets the numeric group id mini-httpd will `setgid()` to when called with super-user privileges. (See --uid for further details.)

--default-page=PATH

This option sets the filename mini-httpd accesses when a request for a directory is received. The default is `index.html`. This means, that a request for <http://example.org/> will result in the file `example.org/index.html` being returned.

-D, --no-detach

This option tells mini-httpd not to detach from the controlling terminal, but to run in the foreground. This is useful mostly for debugging purposes. The default is to detach.

-H, --default-hostname=HOSTNAME

This option sets default hostname mini-httpd uses when a pre-HTTP/1.1 request comes in, which does not provide the `Host:` header. If the default hostname is empty or this option is omitted, mini-httpd will reject such requests.

5. SETTING UP MINI-HTTPD

Setting up mini-httpd is pretty easy, because the program does have the least possible set of features. It may look weird at first, especially if you know other web servers like Apache, but it's really not that difficult. The following instructions assume you've installed mini-httpd using the default prefix, `/usr/local/mini-httpd`. Not that it matters much, though, because you can set all paths at the command line.

It's important to understand that mini-httpd changes the process's root directory to `/usr/local/mini-httpd` once it has initialized its internals. Thus, all files related to your web service must reside within this directory (or below). You cannot symlink to some path outside that hierarchy, or some thing.

First of all, choose an user id you'll run mini-httpd under. A sensible

choice is daemon, but you can as well use nobody or any other user id you see fit. Find out which numeric user id this user has on your system by calling the `id(1)` command:

```
$ id daemon
uid=2(daemon) gid=2(daemon) groups=2(daemon),1(bin)
```

Now you'll need to create two directories in `/usr/local/mini-httpd`: `htdocs` and `logs`. The first directory will contain the actual web documents in one subdirectory per (virtual) host you want to provide. The second directory will contain the access logs written by mini-httpd. Consequently, mini-httpd's user must be allowed to read `htdocs` and to write to `logs`. The following commands will ensure that:

```
# mkdir htdocs logs
# chown daemon.daemon htdocs logs
```

Now create a directory in `htdocs`, which is called like the hostname, your web service should be provided under. Make sure you use all lower-case characters! If your web server is accessed as, say, `example.com` and `www.example.com`, do the following:

```
# mkdir htdocs/example.org
# ln -s htdocs/example.org htdocs/www.example.org
# chown daemon.daemon htdocs/example.org htdocs/www.example.org
```

If you're unsure what hostname to use for testing purposes, `localhost` is usually a safe bet. :-)

Copy the HTML documents to the `htdocs/example.org` directory and ensure that mini-httpd has permission to access them! Finally, start mini-httpd as root, using the following command line:

```
# /usr/local/mini-httpd/bin/httpd --uid 2
```

That's it. You may now direct your favorite browser to <http://example.org/> and see what happens.

In case you want to try mini-httpd with some port other than 80, add the `--port` option to the command line: `--port 8080`. Furthermore, you might want to add the `--debug` switch to turn on the debugging messages in mini-httpd. That is particularly helpful in case mini-httpd is not behaving as you're expecting.

Once you have accessed the web site, you'll find the appropriate access-log file in the `logs` directory; one file per virtual host.

If you want to add more virtual hosts to mini-httpd, just create the corresponding directory in `htdocs`.

6. AUTHOR

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7. RESOURCES

Savannah: <http://savannah.nongnu.org/projects/mini-httpd>

Main web site: <http://www.nongnu.org/mini-httpd/>

8. COPYING

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