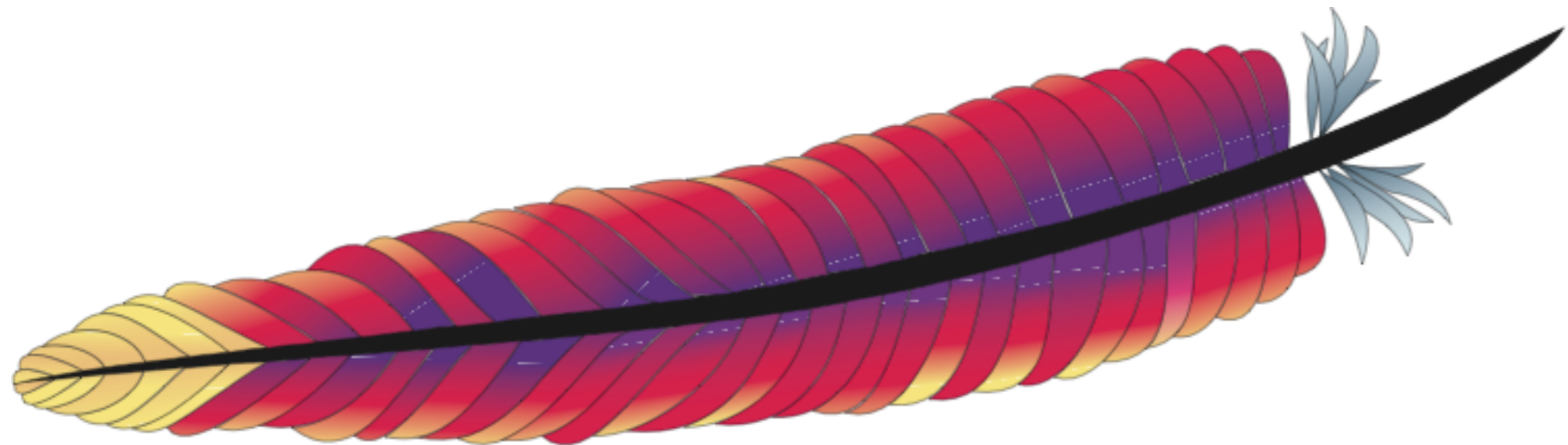


Apache HTTP Server

Entwicklungsprozesse in Open-Source-Projekten



Tobias Schmidt, 03. Februar 2010

Gliederung

1. Apache HTTP Server

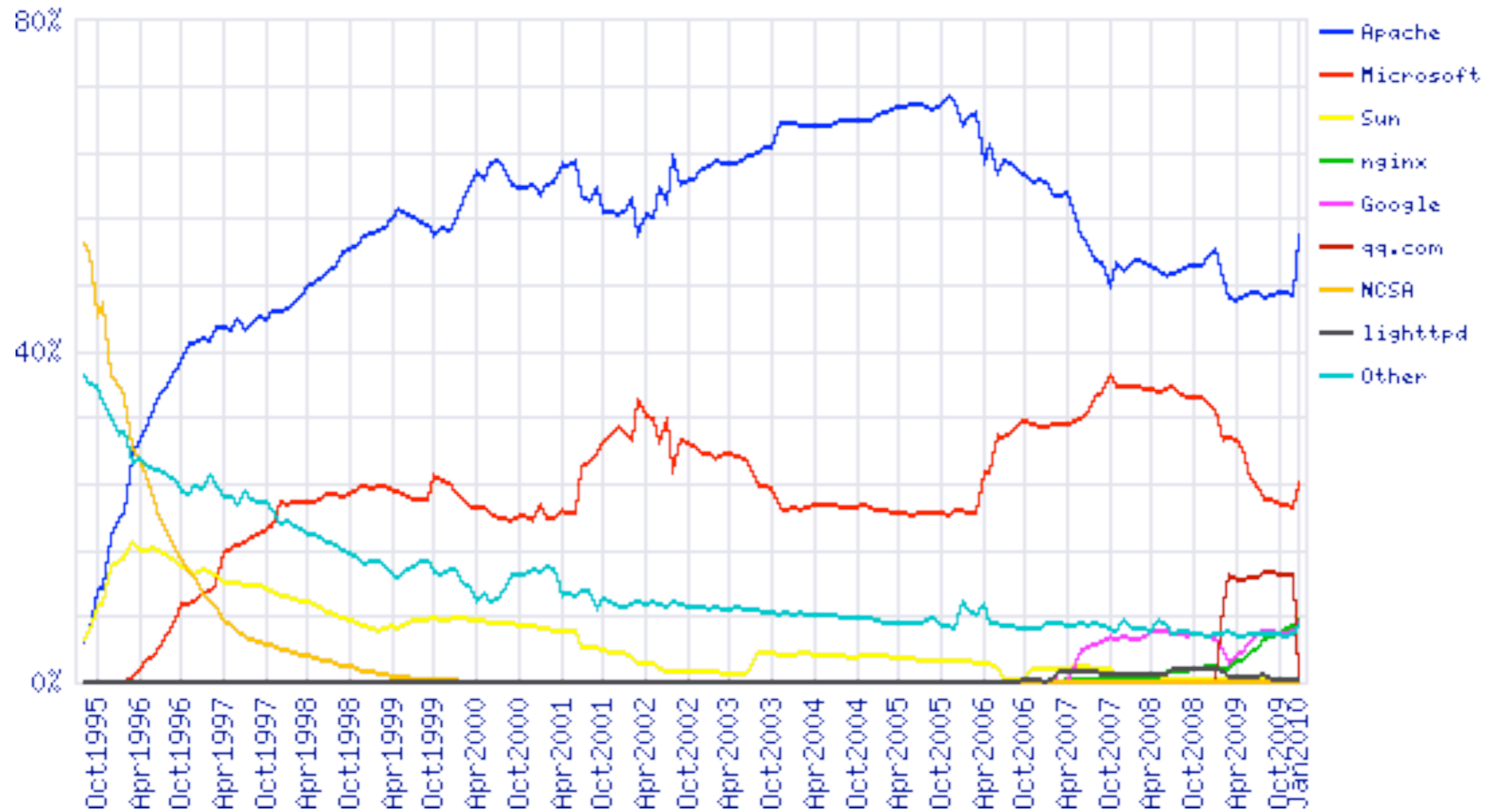
- Informationen
- Struktur
- Entwicklung

2. GNU-Autoconf

3. GNU-M4

4. Bug #44798

Apache HTTP Server



http://news.netcraft.com/archives/web_server_survey.html

Apache HTTP Server (1/3)

- Codebase: NCSA HTTPd
- April 1995: 0.6.2 (erster offizieller Release)
- Dezember 1995: 1.0
- Oktober 2009: 2.2.14 (aktuell)
- Linux, Unix, Mac OS X, Windows, ...

Apache HTTP Server (2/3)

- Modularer Aufbau (*Authorisierung, Authentifizierung, Verschlüsselung, Proxy, Filter, Rewrite, Komprimierung, Log, ...*)
- API für Module
- Server Side Includes (SSI)
- Virtual Hosting
- Apache Portable Runtime (APR)
- Autoconf

Apache HTTP Server (3/3)

- Apache Software Foundation (ASF)
- Apache-Lizenz 2.0
- Mailing-Lists
- Bugtracker (Bugzilla)
- Versionsverwaltung (SVN)
- odd/even Release Strategie

GNU Autoconf

- Sammlung von M4 Makros um automatisch configure Shell-Skripte zu erstellen
- für Benutzer, nicht Maintainer gedacht
- David MacKenzie (1991)
- GNU Build System

```
checking for gcc... no
checking for cc... no
checking for cc... no
checking for cl... no
configure: error: no acceptable C compiler found in $PATH
```

GNU M4

- Makroprozessor (Turing-vollständig)
- Dennis Ritchie und Brian Kernighan (1977)
- GNU M4 von René Seindal (1990)
- *define, eval, incr, ifdef, divert, dnl, include, ...*
- substituieren der Parameter

GNU M4

```
define(`H2_COUNT', 0)
define(`H2', `define(`H2_COUNT', incr(H2_COUNT))' dnl
`<h2>H2_COUNT.$1</h2>')
```

H2(Erstes Kapitel)

H2(Zweites Kapitel)

H2(Schluss)

<h2>1. Erstes Kapitel</h2>

<h2>2. Zweites Kapitel</h2>

<h2>3. Schluss</h2>

Bug #44798

Mismatch between online documentation and configure --help

According to `./configure --help` there's an option `--enable-http`, but according to the [online documentation](#) there's no `--enable-http`, but a `--disable-http`.

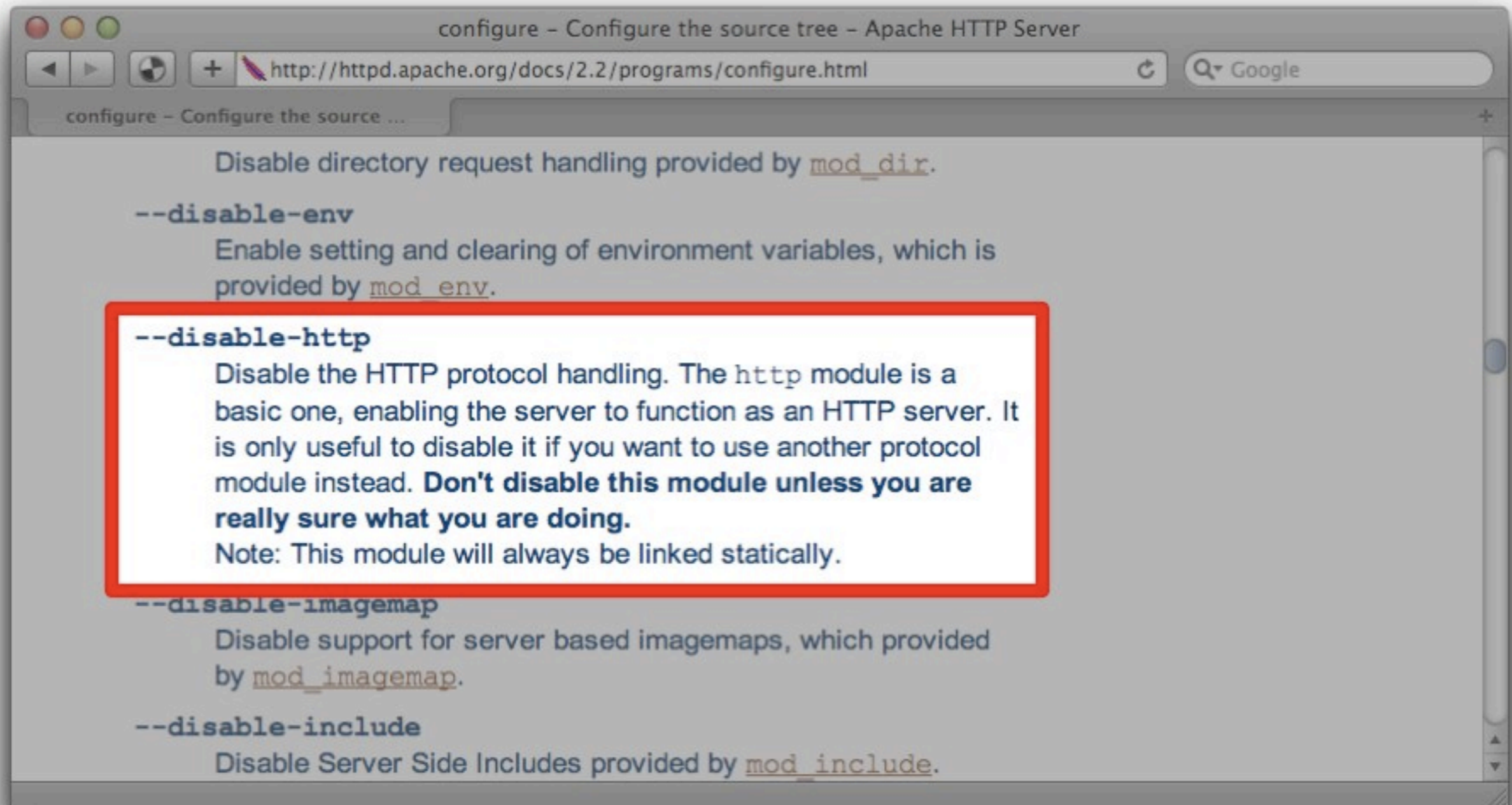
What is correct ?

Hendrik Schmieder, 10. April 2008
https://issues.apache.org/bugzilla/show_bug.cgi?id=44798

Bug #44798

```
~/code/httpd-2.2.14 — bash — 77x16
~/code/httpd-2.2.14 $ ./configure --help | grep enable-http -A 5 -B 5
        Build a statically linked version of checkgid
--enable-static-htcacheclean
        Build a statically linked version of htcacheclean
--enable-static-httxt2dbm
        Build a statically linked version of httxt2dbm
--enable-http
        HTTP protocol handling
--disable-mime
        mapping of file-extension to MIME
--enable-dav
        WebDAV protocol handling
--disable-status
        process/thread monitoring
--disable-autoindex
        directory listing
--disable-asis
        as-is filetypes
~/code/httpd-2.2.14 $
```

Bug #44798



Bug #44798

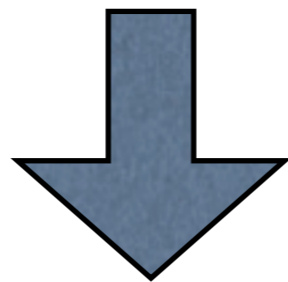
mod_http should only be built as a static module for now. this will hopefully be "fixed" at some point in the future by refactoring mod_http and moving some things to the core and vice versa so that the core does not depend upon mod_http.

modules/http/config2.m4

Bug #44798

- Makro `APACHE_MODULE` in `acinclude.m4`
- Zeile 214

```
define([optname],[--]ifelse($5,yes,disable,enable)[-]translit($1,_,-))
```



```
define([optname],[--]ifelse($5,yes,disable,$5,static,disable,enable)[-]translit($1,_,-))
```

Bug #44798

```
~/code/httpd-2.2.x-svn — bash — 77x16
~/code/httpd-2.2.x-svn $ ./configure --help | grep disable-http -A 5 -B 5
          Build a statically linked version of checkgid
--enable-static-htcacheclean
          Build a statically linked version of htcacheclean
--enable-static-httxt2dbm
          Build a statically linked version of httxt2dbm
--disable-http      HTTP protocol handling
--disable-mime      mapping of file-extension to MIME
--enable-dav        WebDAV protocol handling
--disable-status    process/thread monitoring
--disable-autoindex directory listing
--disable-asis      as-is filetypes
~/code/httpd-2.2.x-svn $
```

Bug #44798

- Patch: 3 Zeilen Code (2 Zeilen Doku entfernen)

[Tobias Schmidt](#) 2010-01-26 10:13:15 UTC

[Comment 1](#) [\[reply\]](#) [\[-\]](#)

[Created an attachment \(id=24894\)](#) [\[details\]](#)

Patch to fix autoconf macro APACHE_MODULE

The online documentation is correct. There is a problem in the Autoconf configuration, which leads to the wrong option name. The patch will fix this.

explanation:

mod_http requires to be a static module (see modules/http/config2.m4 line 7). Therefore the module default setting is 'static' instead of the normal 'yes' (see modules/http/config2.m4 line 17). The Autoconf macro APACHE_MODULE displays only for modules with default of 'yes' the correct label "--disable-<module>". Modules with other default values than 'yes' are labeled with "--enable-<module>" which is obviously wrong for the 'static' value.

Quellen

- <http://httpd.apache.org/>
- <http://apr.apache.org/>
- https://issues.apache.org/bugzilla/show_bug.cgi?id=44798
- <http://httpd.apache.org/docs/2.1/en/programs/configure.html>
- <http://www.gnu.org/software/autoconf/>
- <http://www.gnu.org/software/m4/m4.html>
- [http://de.wikipedia.org/wiki/M4_\(Programmiersprache\)](http://de.wikipedia.org/wiki/M4_(Programmiersprache)) (Stand: 10. Mai 2009)