THE Ultimate Htaccess

htaccess is a very ancient configuration file that controls the Web Server running your website, and is one of the most powerful configuration files you will ever come across. .htaccess has the ability to control access/settings for the HyperText Transfer Protocol () using Password Protection, 301 Redirects, rewrites, and much much more. This is because this configuration file was coded in the earliest days of the web (HTTP), for one of the first Web Servers ever! Eventually these Web Servers (configured with htaccess) became known as the World Wide Web, and eventually grew into the Internet we use today.  This is not an *introduction to htaccess*. This is a guide for using htaccess to the fullest. Originally (2003) this guide was known in certain hacker circles and hidden corners of the net as an *ultimate htaccess* due to the powerful htaccess tricks and tips to bypass security on a webhost, and also because many of the htaccess examples were pretty impressive back then in that group.

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Htaccess - Evolved

The Hyper Text Transfer Protocol (HTTP) was initiated at the CERN in Geneve (Switzerland), where it emerged (together with the HTML presentation language) from the need to exchange scientific information on a computer network in a simple manner. The first public HTTP implementation only allowed for plain text information, and almost instantaneously became a replacement of the GOPHER service. One of the first text-based browsers was LYNX which still exists today; a graphical HTTP client appeared very quickly with the name NCSA Mosaic. Mosaic

was a popular browser back in 1994. Soon the need for a more rich multimedia experience was born, and the markup language provided support for a growing multitude of media types.

AskApache Htaccess Journey

Skip this - still under edit I discovered these tips and tricks mostly while working as a network security penetration specialist hired to find security holes in web hosting environments. Shared hosting is the most common and cheapest form of web-hosting where multiple customers are placed on a single machine and "share" the resources (CPU/RAM/SPACE). The machines are configured to basically ONLY do HTTP and FTP. No shells or any interactive logins, no ssh, just FTP access. That is when I started examining htaccess files in great detail and learned about the incredible untapped power of htaccess. For 99% of the worlds best Apache admins, they don't use .htaccess much, if AT ALL. It's much easier, safer, and faster to configure Apache using the httpd.conf file instead. However, this file is almost never readable on shared-hosts, and I've never seen it writable. So the only avenue left for those on shared-hosting was and is the .htaccess file, and holy freaking fiber-optics.. it's almost as powerful as httpd.conf itself! Most all .htaccess code works in the httpd.conf file, but not all httpd.conf code works in .htaccess files, around 50%. So all the best Apache admins and programmers never used .htaccess files. There was no incentive for those with access to httpd.conf to use htaccess, and the gap grew. It's common to see "computer gurus" on forums and mailing lists rail against all uses and users of .htaccess files, smugly announcing the well known problems with .htaccess files compared with httpd.conf - I wonder if these "gurus" know the history of the htaccess file, like it's use in the earliest versions of the HTTP Server-NCSA's HTTPd, which BTW, became known as Apache HTTP. So you could easily say that htaccess files predates Apache itself. Once I discovered what .htaccess files could do towards helping me enumerate and exploit security vulnerabilities even on big shared-hosts I focused all my research into .htaccess files, meaning I was reading the venerable Apache HTTP Source code 24/7! I compiled every released version of the Apache Web Server, ever, even NCSA's, and focused on enumerating the most powerful htaccess directives. Good times! Because my focus was on protocol/file/network vulnerabilites instead of web dev I built up a nice toolbox of htaccess tricks to do unusual things. When I switched over to webdev in 2005 I started using htaccess for websites, not research. I documented most of my favorites and rewrote the htaccess guide for webdevelopers. After some great encouragement on various forums and nets I decided to start a blog to share my work with everyone, AskApache.com was registered, I published my guide, and it was quickly plagiarized and scraped all over the net. Information is freedom, and freedom is information, so this blog has the least restrictive copyright for you. Feel free to modify, copy, republish, sell, or use anything on this site ;)

What Is .htaccess

Specifically, `.htaccess` is the default file name of a special configuration file that provides a number of directives (commands) for controlling and configuring the Apache Web Server, and also to control and configure modules that can be built into the Apache installation, or included at run-time like mod_rewrite (for htaccess rewrite), mod_alias (for htaccess redirects), and mod_ssl (for controlling SSL connections). **Htaccess** allows for decentralized management of Web Server configurations which makes life very easy for web hosting companies and especially their savvy consumers. They set up and run "server farms" where many hundreds and thousands of web hosting

customers are all put on the same Apache Server. This type of hosting is called "virtual hosting" and without .htaccess files would mean that every customer must use the same exact settings as everyone else on their segment. So that is why any half-decent web host allows/enables *(DreamHost, Powweb, MediaTemple, GoDaddy) .htaccess files*, though few people are aware of it. Let's just say that if I was a customer on your server-farm, and .htaccess files were enabled, my websites would be a LOT faster than yours, as these configuration files allow you to fully take advantage of and utilize the resources allotted to you by your host. If even 1/10 of the sites on a server-farm took advantage of what they are paying for, the providers would go out of business.

> **SKIP:** History of Htaccess in 1st Apache. One of the design goals for this server was to maintain external compatibility with the NCSA 1.3 server --- that is, to read the same configuration files, to process all the directives therein correctly, and in general to be a drop-in replacement for NCSA. On the other hand, another design goal was to move as much of the server's functionality into modules which have as little as possible to do with the monolithic server core. The only way to reconcile these goals is to move the handling of most commands from the central server into the modules. However, just giving the modules command tables is not enough to divorce them completely from the server core. The server has to remember the commands in order to act on them later. That involves maintaining data which is private to the modules, and which can be either per-server, or per-directory. Most things are per-directory, including in particular access control and authorization information, but also information on how to determine file types from suffixes, which can be modified by AddType and DefaultType directives, and so forth. In general, the governing philosophy is that anything which can be made configurable by directory should be; per-server information is generally used in the standard set of modules for information like Aliases and Redirects which come into play before the request is tied to a particular place in the underlying file system. Another requirement for emulating the NCSA server is being able to handle the **per-directory configuration files, generally called .htaccess files**, though even in the NCSA server they can contain directives which have nothing at all to do with access control. Accordingly, after URI -> filename translation, but before performing any other phase, the server walks down the directory hierarchy of the underlying filesystem, following the translated pathname, to read any .htaccess files which might be present. The information which is read in then has to be merged with the applicable information from the server's own config files (either from the `<directory></directory>` sections in access.conf, or from defaults in srm.conf, which actually behaves for most purposes almost exactly like `<directory></directory>`). Finally, after having served a request which involved **reading .htaccess files**, we need to discard the storage allocated for handling them. That is solved the same way it is solved wherever else similar problems come up, by tying those structures to the per-transaction resource pool.

Creating Htaccess Files

Htaccess files use the default filename "`.htaccess`" but any unix-style file name can be specified from the main server config using the `AccessFileName` directive. The file isn't `.htaccess.txt`, its literally just named `.htaccess`.

Htaccess Scope

Unlike the main server configuration files like httpd.conf, **Htaccess files are read on every request** therefore changes in these files take immediate effect. Apache searches all directories and subdirectories that are htaccess-enabled for an .htaccess file which results in performance loss due

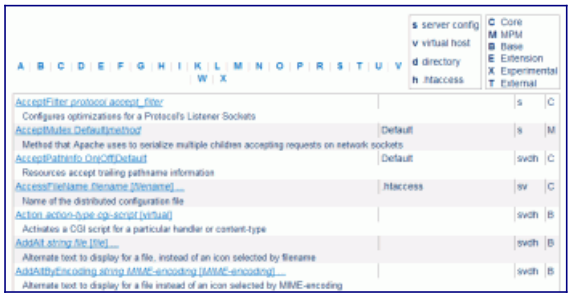
to file accesses. I've never noticed a performance loss but OTOH, I know how to use them. If you do have access to your main server configuration file, you should of course use that instead, and lucky for you ALL the .htaccess tricks and examples can be used there as well (just not vice versa).

Htaccess File Syntax

Htaccess files follow the same syntax as the main Apache configuration files, for powerusers here's an apache.vim for VI. The one main difference is the context of the directive, which means whether or not that directive is ALLOWED to be used inside of an .htaccess file. Htaccess files are incredibly powerful, and can also be very dangerous as some directives allowed in the main configuration files would allow users/customers to completely bypass security/bandwidth-limits/resource-limits/file-permissions, etc.. About 1/4 of all Apache directives cannot be used inside an .htaccess file (also known as a per-directory context config). The Apache Developers are well-regarded throughout the world as being among some of the best programmers, ever. To enable a disallowed directive inside a .htaccess file would require modifying the source code and re-compiling the server (which they allow and encourage if you are the owner/admin).

Htaccess Directives

Don't ask why, but I personally downloaded each major/beta release of the Apache HTTPD source code from version 1.3.0 to version 2.2.10 (all 63 Apache versions!), then I **configured and compiled each version for a custom HTTPD installation built from source**. This allowed me to find **every directive allowed in .htaccess files** **and** **every variable in .htaccess files** for each particular version, which has never been done before, or since. **YES!** *I think that is so cool..*
An .htaccess directive is basically a command that is specific to a module or builtin to the core that performs a specific task or sets a specific setting for how Apache serves your WebSite. Directives placed in Htaccess files **apply to the directory they are in, and all sub-directories**. Here's the 3 top links (*official Apache Docs*) you will repeatedly use, bookmark/print/save them.



1. Terms Used to Describe Directives
2. Official List of Apache Directives
3. Directive Quick-Reference -- with Context

Main Server Config Examples

Now lets take a look at some htaccess examples to get a feel for the syntax and some general ideas at the capabilities. Some of the best examples for .htaccess files are included with Apache for main server config files, so lets take a quick look at a couple of them on our way down to the

actual .htaccess examples further down the page (this site has thousands, take your time). The basic syntax is **a line starting with # is a comment, everything else are directives followed by the directive argument**. **httpd-multilang-errordoc.conf**: The configuration below implements multi-language error documents through content-negotiation Here are the rest of them if you wanna take a look. (httpd-mpm.conf, httpd-default.conf, httpd-ssl.conf, httpd-info.conf, httpd-vhosts.conf, httpd-dav.conf)

Example .htaccess Code Snippets

Here are some specific examples, this is the most popular section of this page. Updated frequently.

Redirect Everyone Except IP address to alternate page

```
ErrorDocument 403 http://www.yahoo.com/
Order deny,allow
Deny from all
Allow from 208.113.134.190
```

When developing sites

This lets google crawl the page, lets me access without a password, and lets my client access the page WITH a password. It also allows for XHTML and CSS validation! (w3.org)

```
AuthName "Under Development"
AuthUserFile /web/sitename.com/.htpasswd
AuthType basic
Require valid-user
Order deny,allow
Deny from all
Allow from 208.113.134.190 w3.org htmlhelp.com googlebot.com
Satisfy Any
```

Fix double-login prompt

Redirect non-https requests to https server and ensure that **.htpasswd authorization** can only be entered across HTTPS

```
SSLOptions +StrictRequire
SSLRequireSSL
SSLRequire %{HTTP_HOST} eq "askapache.com"
ErrorDocument 403 https://askapache.com
```

Set Timezone of the Server (GMT)

```
SetEnv TZ America/Indianapolis
```

Administrator Email for ErrorDocument

```
SetEnv SERVER_ADMIN webmaster@google.com
```

`ServerSignature` for `ErrorDocument`

```
ServerSignature off | on | email
```

Charset and Language headers

Article: Setting Charset in htaccess, and article by *Richard Ishida*

```
AddDefaultCharset UTF-8
DefaultLanguage en-US
```

Disallow Script Execution

```
Options -ExecCGI
AddHandler cgi-script .php .pl .py .jsp .asp .htm .shtml .sh .cgi
```

Deny Request Methods

```
RewriteCond %{REQUEST_METHOD} !^(GET|HEAD|OPTIONS|POST|PUT)
RewriteRule .? - [F]
```

Force "File Save As" Prompt

```
AddType application/octet-stream .avi .mpg .mov .pdf .xls .mp4
```

Show CGI Source Code

```
RemoveHandler cgi-script .pl .py .cgi
AddType text/plain .pl .py .cgi
```

Serve all .pdf files on your site using .htaccess and mod_rewrite with the php script.

```
RewriteCond %{REQUEST_FILENAME} -f
RewriteRule ^(.+)\.pdf$  /cgi-bin/pdf.php?file=$1 [L,NC,QSA]
```

Rewrite to www

```
RewriteCond %{REQUEST_URI} !^/(robots\.txt|favicon\.ico|sitemap\.xml)$
RewriteCond %{HTTP_HOST} !^www\.askapache\.com$ [NC]
RewriteRule ^(.*)$ https://www.askapache.com/$1 [R=301,L]
```

Rewrite to www dynamically

```
RewriteCond %{REQUEST_URI} !^/robots\.txt$ [NC]
RewriteCond %{HTTP_HOST} !^www\.[a-z-]+\.[a-z]{2,6} [NC]
RewriteCond %{HTTP_HOST} ([a-z-]+\.[a-z]{2,6})$   [NC]
RewriteRule ^/(.*)$ http://%1/$1 [R=301,L]
```

301 Redirect Old File

```
Redirect 301 /old/file.html https://www.askapache.com/new/file/
```

301 Redirect Entire Directory

```
RedirectMatch 301 /blog(.*) https://www.askapache.com/$1
```

Protecting your php.cgi

```
<FilesMatch "^php5?\.(ini|cgi)$">
Order Deny,Allow
Deny from All
Allow from env=REDIRECT_STATUS
</FilesMatch>
```

Set Cookie based on Request

This code sends the `Set-Cookie` header to create a cookie on the client with the value of a matching item in 2nd parantheses.

```
RewriteRule ^(.*)(de|es|fr|it|ja|ru|en)/$ - [co=lang:$2:.askapache.com:7200:/]
```

Set Cookie with env variable

```
Header set Set-Cookie "language=%{lang}e; path=/;" env=lang
```

Custom ErrorDocuments

```
ErrorDocument 100 /100_CONTINUE
ErrorDocument 101 /101_SWITCHING_PROTOCOLS
ErrorDocument 102 /102_PROCESSING
ErrorDocument 200 /200_OK
ErrorDocument 201 /201_CREATED
ErrorDocument 202 /202_ACCEPTED
ErrorDocument 203 /203_NON_AUTHORITATIVE
ErrorDocument 204 /204_NO_CONTENT
ErrorDocument 205 /205_RESET_CONTENT
ErrorDocument 206 /206_PARTIAL_CONTENT
ErrorDocument 207 /207_MULTI_STATUS
ErrorDocument 300 /300_MULTIPLE_CHOICES
ErrorDocument 301 /301_MOVED_PERMANENTLY
ErrorDocument 302 /302_MOVED_TEMPORARILY
ErrorDocument 303 /303_SEE_OTHER
ErrorDocument 304 /304_NOT_MODIFIED
ErrorDocument 305 /305_USE_PROXY
ErrorDocument 307 /307_TEMPORARY_REDIRECT
ErrorDocument 400 /400_BAD_REQUEST
ErrorDocument 401 /401_UNAUTHORIZED
ErrorDocument 402 /402_PAYMENT_REQUIRED
ErrorDocument 403 /403_FORBIDDEN
ErrorDocument 404 /404_NOT_FOUND

ErrorDocument 405 /405_METHOD_NOT_ALLOWED
ErrorDocument 406 /406_NOT_ACCEPTABLE
ErrorDocument 407 /407_PROXY_AUTHENTICATION_REQUIRED
ErrorDocument 408 /408_REQUEST_TIME_OUT
ErrorDocument 409 /409_CONFLICT
ErrorDocument 410 /410_GONE
ErrorDocument 411 /411_LENGTH_REQUIRED
ErrorDocument 412 /412_PRECONDITION_FAILED
ErrorDocument 413 /413_REQUEST_ENTITY_TOO_LARGE
ErrorDocument 414 /414_REQUEST_URI_TOO_LARGE
ErrorDocument 415 /415_UNSUPPORTED_MEDIA_TYPE
ErrorDocument 416 /416_RANGE_NOT_SATISFIABLE
ErrorDocument 417 /417_EXPECTATION_FAILED
ErrorDocument 422 /422_UNPROCESSABLE_ENTITY
ErrorDocument 423 /423_LOCKED
ErrorDocument 424 /424_FAILED_DEPENDENCY
ErrorDocument 426 /426_UPGRADE_REQUIRED
ErrorDocument 500 /500_INTERNAL_SERVER_ERROR
ErrorDocument 501 /501_NOT_IMPLEMENTED
ErrorDocument 502 /502_BAD_GATEWAY
ErrorDocument 503 /503_SERVICE_UNAVAILABLE
ErrorDocument 504 /504_GATEWAY_TIME_OUT
ErrorDocument 505 /505_VERSION_NOT_SUPPORTED
ErrorDocument 506 /506_VARIANT_ALSO_VARIES
ErrorDocument 507 /507_INSUFFICIENT_STORAGE
```

```
ErrorDocument 510 /510_NOT_EXTENDED
```

Implementing a Caching Scheme with .htaccess

```
# year
<FilesMatch "\.(ico|pdf|flv|jpg|jpeg|png|gif|swf|mp3|mp4)$">
Header set Cache-Control "public"
Header set Expires "Thu, 15 Apr 2010 20:00:00 GMT"
Header unset Last-Modified
</FilesMatch>
#2 hours
<FilesMatch "\.(html|htm|xml|txt|xsl)$">
Header set Cache-Control "max-age=7200, must-revalidate"
</FilesMatch>
<FilesMatch "\.(js|css)$">
SetOutputFilter DEFLATE
Header set Expires "Thu, 15 Apr 2010 20:00:00 GMT"
</FilesMatch>
```

Password Protect single file

```
<Files login.php>
AuthName "Prompt"
AuthType Basic
AuthUserFile /web/askapache.com/.htpasswd
Require valid-user
</Files>
```

Password Protect multiple files

```
<FilesMatch "^(private|phpinfo).*$">
AuthName "Development"
AuthUserFile /.htpasswd
AuthType basic
Require valid-user
</FilesMatch>
```

Send Custom Headers

```
Header set P3P "policyref="https://www.askapache.com/w3c/p3p.xml""
Header set X-Pingback "https://www.askapache.com/xmlrpc.php"
Header set Content-Language "en-US"
Header set Vary "Accept-Encoding"
```

Blocking based on User-Agent Header

```
SetEnvIfNoCase ^User-Agent$ .*(craftbot|download|extract|stripper|sucker|ninja|
clshttp|webspider|leacher|collector|grabber|webpictures) HTTP_SAFE_BADBOT
SetEnvIfNoCase ^User-Agent$ .*(libwww-perl|aesop_com_spiderman) HTTP_SAFE_BADBOT
Deny from env=HTTP_SAFE_BADBOT
```

Blocking with RewriteCond

```
RewriteCond %{HTTP_USER_AGENT} ^.*(craftbot|download|extract|stripper|sucker|
ninja|clshttp|webspider|leacher|collector|grabber|webpictures).*$ [NC]
RewriteRule . - [F,L]
```

.htaccess for mod_php

```
SetEnv PHPRC /location/todir/containing/phpinifile
```

.htaccess for php as cgi

```
AddHandler php-cgi .php .htm
Action php-cgi /cgi-bin/php5.cgi
```

Shell wrapper for custom php.ini

```
#!/bin/sh
export PHP_FCGI_CHILDREN=3
exec php5.cgi -c /abs/php5/php.ini
```

Add values from HTTP Headers

```
SetEnvIfNoCase ^If-Modified-Since$ "(.+)" HTTP_IF_MODIFIED_SINCE=$1
SetEnvIfNoCase ^If-None-Match$ "(.+)" HTTP_IF_NONE_MATCH=$1
SetEnvIfNoCase ^Cache-Control$ "(.+)" HTTP_CACHE_CONTROL=$1
SetEnvIfNoCase ^Connection$ "(.+)" HTTP_CONNECTION=$1
SetEnvIfNoCase ^Keep-Alive$ "(.+)" HTTP_KEEP_ALIVE=$1
SetEnvIfNoCase ^Authorization$ "(.+)" HTTP_AUTHORIZATION=$1
SetEnvIfNoCase ^Cookie$ "(.+)" HTTP_MY_COOKIE=$1
```

Stop hotlinking

```
RewriteCond %{HTTP_REFERER} !^$
RewriteCond %{HTTP_REFERER} !^http://(www\.)?askapache\.com/.*$ [NC]
RewriteRule \.(gif|jpg|swf|flv|png)$ https://www.askapache.com/feed.gif
[R=302,L]
```

Example .htaccess Files

Here are some samples and examples taken from different .htaccess files I've used over the years. Specific solutions are farther down on this page and throughout the site.

```
# Set the Time Zone of your Server
SetEnv TZ America/Indianapolis

# ServerAdmin:  This address appears on some server-generated pages, such as
error documents.
SetEnv SERVER_ADMIN webmaster@askapache.com

# Possible values for the Options directive are "None", "All", or any
combination of:
#  Indexes Includes FollowSymLinks SymLinksifOwnerMatch ExecCGI MultiViews
Options -ExecCGI -MultiViews -Includes -Indexes FollowSymLinks

# DirectoryIndex: sets the file that Apache will serve if a directory is
requested.
DirectoryIndex index.html index.php /index.php

# Action lets you define media types that will execute a script whenever
# a matching file is called. This eliminates the need for repeated URL
# pathnames for oft-used CGI file processors.
# Format: Action media/type /cgi-script/location
# Format: Action handler-name /cgi-script/location
#
Action php5-cgi /bin/php.cgi

# AddHandler allows you to map certain file extensions to "handlers":
# actions unrelated to filetype. These can be either built into the server
# or added with the Action directive (see below)
```

```
#
# To use CGI scripts outside of ScriptAliased directories:
# (You will also need to add "ExecCGI" to the "Options" directive.)
#
AddHandler php-cgi .php .inc

# Commonly used filename extensions to character sets.
AddDefaultCharset UTF-8

# AddType allows you to add to or override the MIME configuration
AddType 'application/rdf+xml; charset=UTF-8' .rdf
AddType 'application/xhtml+xml; charset=UTF-8' .xhtml
AddType 'application/xhtml+xml; charset=UTF-8' .xhtml.gz
AddType 'text/html; charset=UTF-8' .html
AddType 'text/html; charset=UTF-8' .html.gz
AddType application/octet-stream .rar .chm .bz2 .tgz .msi .pdf .exe
AddType application/vnd.ms-excel .csv
AddType application/x-httpd-php-source .phps
AddType application/x-pilot .prc .pdb
AddType application/x-shockwave-flash .swf
AddType application/xrds+xml .xrdf
AddType text/plain .ini .sh .bsh .bash .awk .nawk .gawk .csh .var .c .in .h .asc
.md5 .sha .sha1
AddType video/x-flv .flv

# AddEncoding allows you to have certain browsers uncompress information on the
fly. Note: Not all browsers support this.
AddEncoding x-compress .Z
AddEncoding x-gzip .gz .tgz

# DefaultType: the default MIME type the server will use for a document.
DefaultType text/html

# Optionally add a line containing the server version and virtual host
# name to server-generated pages (internal error documents, FTP directory
# listings, mod_status and mod_info output etc., but not CGI generated
# documents or custom error documents).
# Set to "EMail" to also include a mailto: link to the ServerAdmin.
# Set to one of:  On | Off | EMail
ServerSignature Off

## MAIN DEFAULTS
Options +ExecCGI -Indexes
DirectoryIndex index.html index.htm index.php
DefaultLanguage en-US
AddDefaultCharset UTF-8
ServerSignature Off

## ENVIRONMENT VARIABLES
SetEnv PHPRC /webroot/includes
SetEnv TZ America/Indianapolis

SetEnv SERVER_ADMIN webmaster@askapache.com

## MIME TYPES
AddType video/x-flv .flv
AddType application/x-shockwave-flash .swf
AddType image/x-icon .ico

## FORCE FILE TO DOWNLOAD INSTEAD OF APPEAR IN BROWSER
# http://www.htaccesselite.com/addtype-addhandler-action-vf6.html
AddType application/octet-stream .mov .mp3 .zip
```

```
## ERRORDOCUMENTS
# http://askapache.com/htaccess/apache-status-code-headers-errordocument.html
ErrorDocument 400 /e400/
ErrorDocument 401 /e401/
ErrorDocument 402 /e402/
ErrorDocument 403 /e403/
ErrorDocument 404 /e404/

# Handlers be builtin, included in a module, or added with Action directive
# default-handler: default, handles static content (core)
#   send-as-is: Send file with HTTP headers (mod_asis)
#   cgi-script: treat file as CGI script (mod_cgi)
#    imap-file: Parse as an imagemap rule file (mod_imap)
#   server-info: Get server config info (mod_info)
#  server-status: Get server status report (mod_status)
#    type-map: type map file for content negotiation (mod_negotiation)
#  fastcgi-script: treat file as fastcgi script (mod_fastcgi)
#
# https://www.askapache.com/php/custom-phpini-tips-and-tricks/

## PARSE AS CGI
AddHandler cgi-script .cgi .pl .spl

## RUN PHP AS APACHE MODULE
AddHandler application/x-httpd-php .php .htm

## RUN PHP AS CGI
AddHandler php-cgi .php .htm

## CGI PHP WRAPPER FOR CUSTOM PHP.INI
AddHandler phpini-cgi .php .htm
Action phpini-cgi /cgi-bin/php5-custom-ini.cgi

## FAST-CGI SETUP WITH PHP-CGI WRAPPER FOR CUSTOM PHP.INI
AddHandler fastcgi-script .fcgi
AddHandler php-cgi .php .htm
Action php-cgi /cgi-bin/php5-wrapper.fcgi

## CUSTOM PHP CGI BINARY SETUP
AddHandler php-cgi .php .htm
Action php-cgi /cgi-bin/php.cgi

## PROCESS SPECIFIC FILETYPES WITH CGI-SCRIPT
Action image/gif /cgi-bin/img-create.cgi

## CREATE CUSTOM HANDLER FOR SPECIFIC FILE EXTENSIONS
AddHandler custom-processor .ssp
Action custom-processor /cgi-bin/myprocessor.cgi

### HEADER CACHING
# https://www.askapache.com/htaccess/speed-up-sites-with-htaccess-caching/
<FilesMatch "\.(flv|gif|jpg|jpeg|png|ico)$">
Header set Cache-Control "max-age=2592000"
</FilesMatch>
<FilesMatch "\.(js|css|pdf|swf)$">
Header set Cache-Control "max-age=604800"
</FilesMatch>
<FilesMatch "\.(html|htm|txt)$">
Header set Cache-Control "max-age=600"
</FilesMatch>
<FilesMatch "\.(pl|php|cgi|spl|scgi|fcgi)$">
Header unset Cache-Control
</FilesMatch>
```

```
## ALTERNATE EXPIRES CACHING
# htaccesselite.com/d/use-htaccess-to-speed-up-your-site-discussion-vt67.html
ExpiresActive On
ExpiresDefault A604800
ExpiresByType image/x-icon A2592000
ExpiresByType application/x-javascript A2592000
ExpiresByType text/css A2592000
ExpiresByType text/html A300

<FilesMatch "\.(pl|php|cgi|spl|scgi|fcgi)$">
ExpiresActive Off
</FilesMatch>

## META HTTP-EQUIV REPLACEMENTS
<FilesMatch "\.(html|htm|php)$">
Header set imagetoolbar "no"
</FilesMatch>
```

Here are some default MOD_REWRITE code examples.

```
## REWRITE DEFAULTS
RewriteEngine On
RewriteBase /

## REQUIRE SUBDOMAIN
RewriteCond %{HTTP_HOST} !^$
RewriteCond %{HTTP_HOST} !^subdomain\.askapache\.com$ [NC]
RewriteRule ^/(.*)$ http://subdomain.askapache.com/$1 [L,R=301]

## SEO REWRITES
RewriteRule ^(.*)/ve/(.*)$ $1/voluntary-employee/$2 [L,R=301]
RewriteRule ^(.*)/hsa/(.*)$ $1/health-saving-account/$2 [L,R=301]

## WORDPRESS
RewriteCond %{REQUEST_FILENAME} !-f  # Existing File
RewriteCond %{REQUEST_FILENAME} !-d  # Existing Directory
RewriteRule . /index.php [L]

## ALTERNATIVE ANTI-HOTLINKING
RewriteCond %{HTTP_REFERER} !^$
RewriteCond %{HTTP_REFERER} !^http://(subdomain\.)?askapache\.com/.*$ [NC]
RewriteRule ^.*\.(bmp|tif|gif|jpg|jpeg|jpe|png)$ - [F]

## REDIRECT HOTLINKERS
RewriteCond %{HTTP_REFERER} !^$
RewriteCond %{HTTP_REFERER} !^http://(subdomain\.)?askapache\.com/.*$ [NC]
RewriteRule ^.*\.(bmp|tif|gif|jpg|jpeg|jpe|png)$ http://google.com [R]

## DENY REQUEST BASED ON REQUEST METHOD
RewriteCond %{REQUEST_METHOD} ^(TRACE|TRACK|OPTIONS|HEAD)$ [NC]
RewriteRule ^.*$ - [F]

## REDIRECT UPLOADS
RewriteCond %{REQUEST_METHOD} ^(PUT|POST)$ [NC]
RewriteRule ^(.*)$ /cgi-bin/form-upload-processor.cgi?p=$1 [L,QSA]

## REQUIRE SSL EVEN WHEN MOD_SSL IS NOT LOADED
RewriteCond %{HTTPS} !=on [NC]
RewriteRule ^.*$ https://%{SERVER_NAME}%{REQUEST_URI} [R,L]

### ALTERNATATIVE TO USING ERRORDOCUMENT
# http://www.htaccesselite.com/d/htaccess-errordocument-examples-vt11.html
RewriteCond %{REQUEST_FILENAME} !-f
```

```
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule ^.*$ /error.php [L]

## SEO REDIRECTS
Redirect 301 /2006/oldfile.html http://subdomain.askapache.com/newfile.html
RedirectMatch 301 /o/(.*)$ http://subdomain.askapache.com/s/dl/$1
```

Examples of protecting your files and securing with password protection.

```
#
# Require (user|group|valid-user) (username|groupname)
#
## BASIC PASSWORD PROTECTION
AuthType basic
AuthName "prompt"
AuthUserFile /.htpasswd
AuthGroupFile /dev/null
Require valid-user

## ALLOW FROM IP OR VALID PASSWORD
Require valid-user
Allow from 192.168.1.23
Satisfy Any

## PROTECT FILES
<FilesMatch "\.(htaccess|htpasswd|ini|phps|fla|psd|log|sh)$">
Order Allow,Deny
Deny from all
</FilesMatch>

## PREVENT HOTLINKING
SetEnvIfNoCase Referer "^http://subdomain.askapache.com/" good
SetEnvIfNoCase Referer "^$" good
<FilesMatch "\.(png|jpg|jpeg|gif|bmp|swf|flv)$">
Order Deny,Allow
Deny from all
Allow from env=good
ErrorDocument 403 http://www.google.com/intl/en_ALL/images/logo.gif
ErrorDocument 403 /images/you_bad_hotlinker.gif
</FilesMatch>

## LIMIT UPLOAD FILE SIZE TO PROTECT AGAINST DOS ATTACK
#bytes, 0-2147483647(2GB)
LimitRequestBody 10240000

## MOST SECURE WAY TO REQUIRE SSL
# https://www.askapache.com/htaccess/apache-ssl-in-htaccess-examples/
SSLOptions +StrictRequire
SSLRequireSSL
SSLRequire %{HTTP_HOST} eq "askapache.com"
ErrorDocument 403 https://askapache.com

## COMBINED DEVELOPER HTACCESS CODE-USE THIS
<FilesMatch "\.(flv|gif|jpg|jpeg|png|ico|js|css|pdf|swf|html|htm|txt)$">
Header set Cache-Control "max-age=5"
</FilesMatch>
AuthType basic
AuthName "Ooops! Temporarily Under Construction..."
AuthUserFile /.htpasswd
AuthGroupFile /dev/null
Require valid-user      # password prompt for everyone else
Order Deny,Allow
Deny from all
```

```
Allow from 192.168.64.5   # Your, the developers IP address
Allow from w3.org      # css/xhtml check jigsaw.w3.org/css-validator/
Allow from googlebot.com   # Allows google to crawl your pages
Satisfy Any        # no password required if host/ip is Allowed

## DONT HAVE TO EMPTY CACHE OR RELOAD TO SEE CHANGES
ExpiresDefault A5 #If using mod_expires
<FilesMatch "\.(flv|gif|jpg|jpeg|png|ico|js|css|pdf|swf|html|htm|txt)$">
Header set Cache-Control "max-age=5"
</FilesMatch>

## ALLOW ACCESS WITH PASSWORD OR NO PASSWORD FOR SPECIFIC IP/HOSTS
AuthType basic
AuthName "Ooops! Temporarily Under Construction..."
AuthUserFile /.htpasswd
AuthGroupFile /dev/null
Require valid-user      # password prompt for everyone else
Order Deny,Allow
Deny from all
Allow from 192.168.64.5   # Your, the developers IP address
Allow from w3.org      # css/xhtml check jigsaw.w3.org/css-validator/
Allow from googlebot.com   # Allows google to crawl your pages
Satisfy Any        # no password required if host/ip is Allowed
```

Advanced Mod_Rewrites

Here are some specific htaccess examples taken mostly from my WordPress Password Protection plugin, which does alot more than password protection as you will see from the following mod_rewrite examples. These are a few of the mod_rewrite uses that BlogSecurity declared **pushed the boundaries of Mod_Rewrite!** Some of these snippets are quite exotic and unlike anything you may have seen before, also only for those who understand them as they can kill a website pretty quick.

Directory Protection

Enable the DirectoryIndex Protection, preventing directory index listings and defaulting. [Disable]

```
Options -Indexes
DirectoryIndex index.html index.php /index.php
```

Password Protect wp-login.php

Requires a valid user/pass to access the login page[401]

```
<Files wp-login.php>
Order Deny,Allow
Deny from All
Satisfy Any
AuthName "Protected By AskApache"
AuthUserFile /web/askapache.com/.htpasswda1
AuthType Basic
Require valid-user
</Files>
```

Password Protect wp-admin

Requires a valid user/pass to access any non-static (css, js, images) file in this directory.[401]

```
Options -ExecCGI -Indexes +FollowSymLinks -Includes
DirectoryIndex index.php /index.php
Order Deny,Allow
Deny from All
Satisfy Any
AuthName "Protected By AskApache"
AuthUserFile /web/askapache.com/.htpasswda1
AuthType Basic
Require valid-user
<FilesMatch "\.(ico|pdf|flv|jpg|jpeg|mp3|mpg|mp4|mov|wav|wmv|png|gif|swf|css|js)
$">
Allow from All
</FilesMatch>
<FilesMatch "(async-upload)\.php$">
<IfModule mod_security.c>
SecFilterEngine Off
</IfModule>
Allow from All
</FilesMatch>
```

Protect wp-content

Denies any Direct request for files ending in .php with a 403 Forbidden.. May break plugins/themes [401]

```
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /wp-content/.*$ [NC]
RewriteCond %{REQUEST_FILENAME} !^.+flexible-upload-wp25js.php$
RewriteCond %{REQUEST_FILENAME} ^.+\.(php|html|htm|txt)$
RewriteRule .? - [F,NS,L]
```

Protect wp-includes

Denies any Direct request for files ending in .php with a 403 Forbidden.. May break plugins/themes [403]

```
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /wp-includes/.*$ [NC]
RewriteCond %{THE_REQUEST} !^[A-Z]{3,9}\ /wp-includes/js/.+/.+\ HTTP/ [NC]
RewriteCond %{REQUEST_FILENAME} ^.+\.php$
RewriteRule .? - [F,NS,L]
```

Common Exploits

Block common exploit requests with 403 Forbidden. These can help alot, may break some plugins. [403]

```
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ ///.*\ HTTP/ [NC,OR]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*\?\=?(http|ftp|ssl|https):/.*\ HTTP/
[NC,OR]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*\?\?.*\ HTTP/ [NC,OR]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*\.(asp|ini|dll).*\ HTTP/ [NC,OR]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*\.(htpasswd|htaccess|aahtpasswd).*\
HTTP/ [NC]
RewriteRule .? - [F,NS,L]
```

Stop Hotlinking

Denies any request for static files (images, css, etc) if referrer is not local site or empty. [403]

```
RewriteCond %{HTTP_REFERER} !^$
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteCond %{HTTP_REFERER} !^https://www.askapache.com.*$ [NC]
RewriteRule \.(ico|pdf|flv|jpg|jpeg|mp3|mpg|mp4|mov|wav|wmv|png|gif|swf|css|js)$
- [F,NS,L]
```

Safe Request Methods

Denies any request not using GET,PROPFIND,POST,OPTIONS,PUT,HEAD[403]

```
RewriteCond %{REQUEST_METHOD} !^(GET|HEAD|POST|PROPFIND|OPTIONS|PUT)$ [NC]
RewriteRule .? - [F,NS,L]
```

Forbid Proxies

Denies any POST Request using a Proxy Server. Can still access site, but not comment. See Perishable Press [403]

```
RewriteCond %{REQUEST_METHOD} =POST
RewriteCond %{HTTP:VIA}%{HTTP:FORWARDED}%{HTTP:USERAGENT_VIA}%
{HTTP:X_FORWARDED_FOR}%{HTTP:PROXY_CONNECTION} !^$ [OR]
RewriteCond %{HTTP:XPROXY_CONNECTION}%{HTTP:HTTP_PC_REMOTE_ADDR}%
{HTTP:HTTP_CLIENT_IP} !^$
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteRule .? - [F,NS,L]
```

Real wp-comments-post.php

Denies any POST attempt made to a non-existing wp-comments-post.php[403]

```
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*/wp-comments-post\.php.*\ HTTP/ [NC]
RewriteRule .? - [F,NS,L]
```

HTTP PROTOCOL

Denies any badly formed HTTP PROTOCOL in the request, 0.9, 1.0, and 1.1 only[403]

```
RewriteCond %{THE_REQUEST} !^[A-Z]{3,9}\ .+\ HTTP/(0\.9|1\.0|1\.1) [NC]
RewriteRule .? - [F,NS,L]
```

SPECIFY CHARACTERS

Denies any request for a url containing characters other than "a-zA-Z0-9.+/-?=&" - REALLY helps but may break your site depending on your links. [403]

```
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteCond %{THE_REQUEST} !^[A-Z]{3,9}\ [a-zA-Z0-9\.\+_/\-\?\=\&]+\ HTTP/ [NC]
RewriteRule .? - [F,NS,L]
```

BAD Content Length

Denies any POST request that doesnt have a Content-Length Header[403]

```
RewriteCond %{REQUEST_METHOD} =POST
RewriteCond %{HTTP:Content-Length} ^$
```

```
RewriteCond %{REQUEST_URI} !^/(wp-admin/|wp-content/plugins/|wp-includes/).*
[NC]
RewriteRule .? - [F,NS,L]
```

BAD Content Type

Denies any POST request with a content type other than application/x-www-form-urlencoded| multipart/form-data[403]

```
RewriteCond %{REQUEST_METHOD} =POST
RewriteCond %{HTTP:Content-Type} !^(application/x-www-form-urlencoded|
multipart/form-data.*(boundary.*)?)$ [NC]
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteRule .? - [F,NS,L]
```

Missing HTTP_HOST

Denies requests that dont contain a HTTP HOST Header.[403]

```
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteCond %{HTTP_HOST} ^$
RewriteRule .? - [F,NS,L]
```

Bogus Graphics Exploit

Denies obvious exploit using bogus graphics[403]

```
RewriteCond %{HTTP:Content-Disposition} \.php [NC]
RewriteCond %{HTTP:Content-Type} image/.+ [NC]
RewriteRule .? - [F,NS,L]
```

No UserAgent, Not POST

Denies POST requests by blank user-agents. May prevent a small number of visitors from POSTING. [403]

```
RewriteCond %{REQUEST_METHOD} =POST
RewriteCond %{HTTP_USER_AGENT} ^-?$
RewriteCond %{REQUEST_URI} !^/(wp-login.php|wp-admin/|wp-content/plugins/|wp-
includes/).* [NC]
RewriteRule .? - [F,NS,L]
```

No Referer, No Comment

Denies any comment attempt with a blank HTTP_REFERER field, highly indicative of spam. May prevent some visitors from POSTING. [403]

```
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.*/wp-comments-post\.php.*\ HTTP/ [NC]
RewriteCond %{HTTP_REFERER} ^-?$
RewriteRule .? - [F,NS,L]
```

Trackback Spam

Denies obvious trackback spam. See Holy Shmoly! [403]

```
RewriteCond %{REQUEST_METHOD} =POST
```

```
RewriteCond %{HTTP_USER_AGENT} ^.*(opera|mozilla|firefox|msie|safari).*$ [NC]
RewriteCond %{THE_REQUEST} ^[A-Z]{3,9}\ /.+/trackback/?\ HTTP/ [NC]
RewriteRule .? - [F,NS,L]
```

Map all URIs except those corresponding to existing files to a handler

```
RewriteCond %{DOCUMENT_ROOT}%{REQUEST_URI} !-d
RewriteCond %{DOCUMENT_ROOT}%{REQUEST_URI} !-f
RewriteRule . /script.php
```

Map any request to a handler

In the case where all URIs should be sent to the same place (including potentially requests for static content) the method to use depends on the type of the handler. For php scripts, use: For other handlers such as php scripts, use:

```
RewriteCond %{REQUEST_URI} !=/script.php
RewriteRule .* /script.php
```

And for CGI scripts:

```
ScriptAliasMatch .* /var/www/script.cgi
```

Map URIs corresponding to existing files to a handler instead

```
RewriteCond %{DOCUMENT_ROOT}%{REQUEST_URI} -d [OR]
RewriteCond %{DOCUMENT_ROOT}%{REQUEST_URI} -f
RewriteCond %{REQUEST_URI} !=/script.php
RewriteRule .* /script.php
```

If the existing files you wish to have handled by your script have a common set of file extensions distinct from that of the hander, you can bypass mod_rewrite and use instead mod_actions. Let's say you want all .html and .tpl files to be dealt with by your script:

```
Action foo-action /script.php
AddHandler foo-action html tpl
```

Deny access if var=val contains the string foo.

```
RewriteCond %{QUERY_STRING} foo
RewriteRule ^/url - [F]
```

Removing the Query String

```
RewriteRule ^/url /url?
```

Adding to the Query String

Keep the existing query string using the Query String Append flag, but add var=val to the end.

```
RewriteRule ^/url /url?var=val [QSA]
```

Rewriting For Certain Query Strings

Rewrite URLs like http://askapache.com/url1?var=val to http://askapache.com/url2?var=val but don't rewrite if val isn't present.

```
RewriteCond %{QUERY_STRING} val
RewriteRule ^/url1 /url2
```

Modifying the Query String

Change any single instance of val in the query string to other_val when accessing /path. Note that %1 and %2 are back-references to the matched part of the regular expression in the previous RewriteCond.

```
RewriteCond %{QUERY_STRING} ^(.*)val(.*)$
RewriteRule /path /path?%1other_val%2
```

Best .htaccess Articles

.htaccess for Webmasters

- Process certain requests for files using a cgi script
- Process Requests with certain Request Methods
- Make any file be a certain filetype
- Use IfModule directive for robust code

Mod_Rewrite URL Rewriting

Undocumented techniques and methods will allow you to utilize mod_rewrite at an "expert level" by showing you how to unlock its secrets.

- Check for a key in QUERY_STRING
- Block access to files during certain hours of the day
- Rewrite underscores to hyphens for SEO URL
- Redirecting Wordpress Feeds to Feedburner

301 Redirects without mod_rewrite

- Redirect single url
- Redirect to new Domain

Secure PHP with .htaccess

 If you have a php.cgi or php.ini file in your /cgi-bin/ directory or other pub directory, try requesting them from your web browser. If your php.ini shows up or worse you are able to execute your php cgi, you'll need to secure it ASAP. This shows several ways to secure these files, and other interpreters like perl, fastCGI, bash, csh, etc.

.htaccess Cookie Manipulation

Fresh .htaccess code for you! Check out the Cookie Manipulation and environment variable usage with mod_rewrite! I also included a couple Mod_Security .htaccess examples. **Enjoy!**

- Mod_Rewrite .htaccess Examples
- Cookie Manipulation and Tests with mod_rewrite
- Setting Environment Variables
- Using the Environment Variable
- Mod_Security .htaccess Examples

.htaccess Caching

- Speed Up Sites with htaccess Caching
- htaccess time cheat sheet

Password Protection and Authentication

- Require password for single file
- Example .htaccess file for password protection

Control HTTP Headers

- Prevent Caching 100%
- Remove IE imagetoolbar without meta tag
- Add Privacy (P3P) Header to your site
- Add language and charset headers without meta tags

Blocking Spam and bad Bots

Want to block a bad robot or web scraper using .htaccess files? Here are 2 methods that illustrate blocking 436 various user-agents. You can block them using either SetEnvIf methods, or by using Rewrite Blocks.

PHP htaccess tips

By using some cool .htaccess tricks we can control PHP to be run as a cgi or a module. If php is run as a cgi then we need to compile it ourselves or use .htaccess to force php to use a local php.ini file. If it is running as a module then we can use various directives supplied by that modules in .htaccess

- When php run as CGI
- Use a custom php.ini with mod_php or php as a cgi
- When php run as Apache Module (mod_php)
- When cgi php is run with wrapper (FastCGI)

HTTP to HTTPS Redirects with mod_rewrite

 This is freaking sweet if you use SSL I promise you! Basically instead of having to check for HTTPS using a `RewriteCond %{HTTPS} =on` for every redirect that can be either HTTP or HTTPS, I set an environment variable once with the value "http" or "https" if HTTP or HTTPS is being used for that request, and use that env variable in the RewriteRule.

SSL in .htaccess

- Redirect non-https requests to https server
- Rewrite non-https to HTTPS without mod_ssl!
- Redirect everything served on port 80 to HTTPS URI

SetEnvIf and SetEnvIfNoCase in .htaccess

- Unique mod_setenvif Variables
- Populates HTTP_MY_ Variables with mod_setenvif variable values
- Allows only if HOST Header is present in request
- Add values from HTTP Headers

Site Security with .htaccess

chmod .htpasswd files 640, chmod .htaccess 644, php files 600, and chmod files that you really dont want people to see as 400. (NEVER chmod 777, try 766)

- CHMOD your files
- Prevent access to .htaccess and .htpasswd files
- Show Source Code instead of executing
- Securing directories: Remove ability to execute scripts
- .htaccess ErrorDocuments

Merging Notes

The order of merging is:

1. `<Directory>` (except regular expressions) and .htaccess done simultaneously (with .htaccess, if allowed, overriding `<Directory>`)
2. `<DirectoryMatch>` (and `<Directory ~>`)
3. `<Files>` and `<FilesMatch>` done simultaneously
4. `<Location>` and `<LocationMatch>` done simultaneously

My Favorite .htaccess Links

These are just some of my favorite .htaccess resources. I'm really into doing your own hacking to get knowledge and these links are all great resources in that respect. I'm really interested in new or unusual htaccess solutions or htaccess hacks using .htaccess files, so let me know if you find one.

NCSA HTTPd Tutorials Robert Hansen Here's a great Hardening HTAccess part 1, part 2, part 3 article that goes into detail about some of the rarer security applications for .htaccess files.

SAMAXES Some very detailed and helpful .htaccess articles, such as the ".htaccess - gzip and cache your site for faster loading and bandwidth saving." **PerishablePress** Stupid .htaccess tricks is probably the **best explanation online** for many of the best .htaccess solutions, including many from this page. Unlike me they are fantastic writers, even for technical stuff they are very readable, so its a good blog to kick back on and read. They also have a fantastic article detailing how to block/deny specific requests using mod_rewrite. **BlogSecurity** Mostly a site for... blog security (which is really any web-app security) this blog has a few really impressive articles full of solid information for Hardening WordPress with .htaccess among more advanced topics that can be challenging but effective. This is a good site to subscribe to their feed, they publish plugin exploits and wordpress core vulnerabilities quite a bit. **Check-These** Oldschool security/unix dude with some incredibly detailed mod_rewrite tutorials, helped me the most when I first got into this, and a great guy too. See: Basic Mod_Rewrite Guide, and Advanced Mod_Rewrite Tutorial **Reaper-X** Alot of .htaccess tutorials and code. See: Hardening Wordpress with Mod Rewrite and htaccess **jdMorgan** jdMorgan is the Moderator of the Apache Forum at WebmasterWorld, a great place for answers. In my experience he can answer any tough question pertaining to advanced .htaccess usage, haven't seen him stumped yet. **The W3C** Setting Charset in .htaccess is very informative. **Holy Shmoly!** A great blogger with analysis of attacks and spam. See: More ways to stop spammers and unwanted traffic. **Apache Week** A partnership with Red Hat back in the 90's that produced some excellent documentation. **Corz** Here's a resource that I consider to have some of the most creative and ingenious ideas for .htaccess files, although the author is somewhat of a character ;) Its a trip trying to navigate around the site, a fun trip. Its like nothing I've ever seen. There are only a few articles on the site, but the htaccess articles are very original and well-worth a look. See: htaccess tricks and tips.

Htaccess Directives

This is an AskApache.com exclusive *you won't find this anywhere else*.

AcceptFilter, AcceptMutex, AcceptPathInfo, AccessFileName, Action, AddAlt, AddAltByEncoding, AddAltByType, AddCharset, AddDefaultCharset, AddDescription, AddEncoding, AddHandler, AddIcon, AddIconByType, AddIconByEncoding, AddIconByEncoding, AddIconByType, AddInputFilter, AddLanguage, AddModuleInfo, AddOutputFilterByType, AddOutputFilter, AddOutputFilterByType, AddType, Alias, ScriptAlias, ServerAlias, AliasMatch, Allow, AllowOverride, AllowEncodedSlashes, _ROUTING__allow_GET, _ROUTING__allow_HEAD, _ROUTING__allow_POST, Allow, AllowOverride, AllowEncodedSlashes, AllowCONNECT, AllowEncodedSlashes, AllowMethods, AllowOverride, AllowOverrideList, Anonymous, Anonymous_LogEmail, Anonymous_NoUserID, Anonymous_Authoritative, Anonymous_LogEmail, Anonymous_MustGiveEmail, Anonymous_NoUserId, Anonymous_VerifyEmail, AssignUserID, AsyncRequestWorkerFactor, AuthAuthoritative, AuthBasicAuthoritative, AuthBasicFake, AuthBasicProvider, AuthBasicUseDigestAlgorithm, AuthDBDUserPWQuery, AuthDBDUserRealmQuery, AuthDBMAuthoritative, AuthDBMGroupFile, AuthDBMType, AuthDBMUserFile, AuthDefaultAuthoritative, AuthDigestAlgorithm, AuthDigestDomain, AuthDigestFile, AuthDigestGroupFile, AuthDigestNcCheck, AuthDigestNonceFormat, AuthDigestNonceLifetime, AuthDigestProvider, AuthDigestQop, AuthDigestShmemSize, AuthFormAuthoritative, AuthFormBody, AuthFormDisableNoStore, AuthFormFakeBasicAuth, AuthFormLocation,

AuthFormLoginRequiredLocation, AuthFormLoginSuccessLocation, AuthFormLogoutLocation, AuthFormMethod, AuthFormMimetype, AuthFormPassword, AuthFormProvider, AuthFormSitePassphrase, AuthFormSize, AuthFormUsername, AuthGroupFile, AuthLDAPAuthoritative, AuthLDAPAuthorizePrefix, AuthLDAPAuthzEnabled, AuthLDAPBindAuthoritative, AuthLDAPBindDN, AuthLDAPBindPassword, AuthLDAPCharsetConfig, AuthLDAPCompareAsUser, AuthLDAPCompareDNOnServer, AuthLDAPDereferenceAliases, AuthLDAPEnabled, AuthLDAPFrontPageHack, AuthLDAPGroupAttribute, AuthLDAPGroupAttributeIsDN, AuthLDAPGroupAttributeIsDN, AuthLDAPInitialBindAsUser, AuthLDAPInitialBindPattern, AuthLDAPMaxSubGroupDepth, AuthLDAPRemoteUserAttribute, AuthLDAPRemoteUserIsDN, AuthLDAPSearchAsUser, AuthLDAPSubGroupAttribute, AuthLDAPSubGroupClass, AuthLDAPURL, AuthMerging, AuthName, AuthnCacheContext, AuthnCacheEnable, AuthnCacheProvideFor, AuthnCacheProvider, AuthnCacheSOCache, AuthnCacheTimeout, AuthnzFcgiCheckAuthnProvider, AuthnzFcgiDefineProvider, AuthType, AuthUserFile, AuthzDBDLoginToReferer, AuthzDBDQuery, AuthzDBDRedirectQuery, AuthzDBMAuthoritative, AuthzDBMType, AuthzDefaultAuthoritative, AuthzGroupFileAuthoritative, AuthzLDAPAuthoritative, AuthzOwnerAuthoritative, AuthzSendForbiddenOnFailure, AuthzUserAuthoritative, BalancerGrowth, BalancerInherit, BalancerMember, BalancerNonce, BalancerPersist, BrowserMatch, BrowserMatchNoCase, BrowserMatchNoCase, BS2000Account, BufferedLogs, DeflateBufferSize, BufferSize, CacheDefaultExpire, CacheDetailHeader, CacheDirLength, CacheDirLevels, CacheDisable, CacheEnable, CacheExpiryCheck, cachefile, CacheForceCompletion, CacheGcClean, CacheGcDaily, CacheGcInterval, CacheGcMemUsage, CacheGcUnused, CacheHeader, CacheIgnoreCacheControl, CacheIgnoreHeaders, CacheIgnoreNoLastMod, CacheIgnoreQueryString, CacheIgnoreURLSessionIdentifiers, CacheKeyBaseURL, CacheLastModifiedFactor, CacheLock, CacheLockMaxAge, CacheLockPath, CacheMaxExpire, CacheMaxFileSize, CacheMinExpire, CacheMinFileSize, CacheNegotiatedDocs, CacheQuickHandler, CacheReadSize, CacheReadTime, CacheRoot, MCacheSize, CacheSocache, CacheSocacheMaxSize, CacheSocacheMaxTime, CacheSocacheMinTime, CacheSocacheReadSize, CacheSocacheReadTime, CacheStaleOnError, CacheStoreExpired, CacheStoreNoStore, CacheStorePrivate, CacheTimeMargin, CaseFilter, CaseFilterIn, CGIDScriptTimeout, CGIMapExtension, CGIPassAuth, CGIVar, CharsetDefault, CharsetOptions, CharsetSourceEnc, CheckCaseOnly, CheckSpelling, ChildperUserID, ChrootDir, ClientRecheckTime, ContentDigest, CookieDomain, CookieExpires, CookieLog, CookieName, CookieStyle, CookieTracking, CoreDumpDirectory, CustomLog, DAV, DAVDepthInfinity, DAVGenericLockDB, DAVLockDB, DAVMinTimeout, DBDExptime, DBDInitSQL, DBDKeep, DBDMax, DBDMin, DBDParams, DBDPersist, DBDPrepareSQL, DBDriver, DefaultIcon, DefaultLanguage, DefaultRuntimeDir, DefaultType, Define, DeflateBufferSize, DeflateCompressionLevel, DeflateFilterNote, DeflateInflateLimitRequestBody, DeflateInflateRatioBurst, DeflateInflateRatioLimit, DeflateMemLevel, DeflateWindowSize, Deny, Deny, DirectoryIndex, DirectorySlash, DirectoryCheckHandler, DirectoryIndex, DirectoryIndexRedirect, DirectoryMatch, DirectorySlash, VirtualDocumentRoot, DocumentRoot, DTracePrivileges, DumpIOInput, DumpIOLogLevel, DumpIOOutput, EnableExceptionHook, EnableMMAP, EnableSendfile, ErrorDocument, ErrorLog, ErrorLogFormat, ExpiresActive, ExpiresByType, ExpiresDefault, ExtendedStatus, ExtFilterDefine, ExtFilterOptions, FallbackResource, FancyIndexing, FileETag, Files, FilesMatch, FilterChain, FilterDeclare, FilterProtocol, FilterProvider, FilterTrace, ForceLanguagePriority, ForceType, ForensicLog, GlobalLog, GprofDir, AuthGroupFile, Group, AuthDBMGroupFile,

AuthLDAPGroupAttribute, AuthLDAPGroupAttributeIsDN, AuthzGroupFileAuthoritative, H2AltSvc, H2AltSvcMaxAge, H2Direct, H2MaxSessionStreams, H2MaxWorkerIdleSeconds, H2MaxWorkers, H2MinWorkers, H2ModernTLSOnly, H2Push, H2PushDiarySize, H2PushPriority, H2SerializeHeaders, H2SessionExtraFiles, H2StreamMaxMemSize, H2TLSCoolDownSecs, H2TLSWarmUpSize, H2Upgrade, H2WindowSize, Header, RequestHeader, HeaderName, HeaderName, HeartbeatAddress, HeartbeatListen, HeartbeatMaxServers, HeartbeatStorage, HostnameLookups, IdentityCheck, IdentityCheckTimeout, IfDefine, IfModule, IfVersion, ImapBase, ImapDefault, ImapMenu, Include, IncludeOptional, IndexHeadInsert, IndexIgnore, IndexIgnoreReset, IndexOptions, IndexOrderDefault, IndexStyleSheet, InputSed, ISAPIAppendLogToErrors, ISAPIAppendLogToQuery, ISAPICacheFile, ISAPIFakeAsync, ISAPILogNotSupported, ISAPIReadAheadBuffer, KeepAlive, KeepAliveTimeout, MaxKeepAliveRequests, KeepAliveTimeout, KeptBodySize, LanguagePriority, ForceLanguagePriority, LDAPCacheEntries, LDAPCacheTTL, LDAPConnectionPoolTTL, LDAPConnectionTimeout, LDAPLibraryDebug, LDAPOpCacheEntries, LDAPOpCacheTTL, LDAPReferralHopLimit, LDAPReferrals, LDAPRetries, LDAPRetryDelay, LDAPSharedCacheFile, LDAPSharedCacheSize, LDAPTimeout, LDAPTrustedCA, LDAPTrustedCAType, LDAPTrustedClientCert, LDAPTrustedGlobalCert, LDAPTrustedMode, LDAPVerifyServerCert, LimitRequestBody, RLimitMEM, LimitRequestFields, LimitRequestFieldSize, LimitRequestLine, LimitExcept, LimitInternalRecursion, LimitRequestBody, LimitRequestFields, LimitRequestFieldsize, LimitRequestLine, LimitXMLRequestBody, LoadFile, LoadModule, Location, LocationMatch, LockFile, LogFormat, LogIOTrackTTFB, RewriteLogLevel, LogLevel, LogMessage, LuaAuthzProvider, Lua_____ByteCodeHack, LuaCodeCache, LuaHookAccessChecker, LuaHookAuthChecker, LuaHookCheckUserID, LuaHookFixups, LuaHookInsertFilter, LuaHookLog, LuaHookMapToStorage, LuaHookTranslateName, LuaHookTypeChecker, LuaInherit, LuaInputFilter, LuaMapHandler, LuaOutputFilter, LuaPackageCPath, LuaPackagePath, LuaQuickHandler, LuaRoot, LuaScope, MaxClientConnections, MaxClients, MaxConnectionsPerChild, MaxKeepAliveRequests, MaxMemFree, MaxRangeOverlaps, MaxRangeReversals, MaxRanges, MaxRequestsPerChild, MaxRequestsPerThread, MaxRequestWorkers, MaxSpareServers, MaxSpareThreads, MaxThreads, MaxThreadsPerChild, MCacheMaxObjectCount, MCacheMaxObjectSize, MCacheMaxStreamingBuffer, MCacheMinObjectSize, MCacheRemovalAlgorithm, MCacheSize, MemcacheConnTTL, MergeTrailers, MetaDir, MetaFiles, MetaSuffix, MimeMagicFile, MinSpareServers, MinSpareThreads, mmapfile, ModemStandard, ModMimeUsePathInfo, MultiviewsMatch, Mutex, NameVirtualHost, NoProxy, NumServers, NWSSLTrustedCerts, NWSSLUpgradeable, Options, RewriteOptions, IndexOptions, Order, IndexOrderDefault, Order, IndexOrderDefault, OutputSed, PassEnv, php_admin_flag, php_admin_value, php_flag, php_value, PidFile, Port, PrivilegesMode, FilterProtocol, Protocol, ProtocolEcho, Protocols, ProtocolsHonorOrder, ProxyPass, ProxyPassMatch, ProxyPassReverse, ProxyRequests, ProxyAddHeaders, ProxyBadHeader, ProxyBlock, ProxyDomain, ProxyErrorOverride, ProxyExpressDBMFile, ProxyExpressDBMType, ProxyExpressEnable, ProxyFtpDirCharset, ProxyFtpEscapeWildcards, ProxyFtpListOnWildcard, ProxyHCExpr, ProxyHCTemplate, ProxyHCTPsize, ProxyHTMLBufSize, ProxyHTMLCharsetOut, ProxyHTMLDoctype, ProxyHTMLEnable, ProxyHTMLEvents, ProxyHTMLExtended, ProxyHTMLFixups, ProxyHTMLInterp, ProxyHTMLLinks, ProxyHTMLMeta, ProxyHTMLStripComments, ProxyHTMLURLMap, ProxyIOBufferSize, ProxyMatch, ProxyMaxForwards, ProxyPass, ProxyPassMatch, ProxyPassReverse, ProxyPassInherit,

ProxyPassInterpolateEnv, ProxyPassMatch, ProxyPassReverse, ProxyPassReverseCookieDomain, ProxyPassReverseCookiePath, ProxyPreserveHost, ProxyReceiveBufferSize, ProxyRemote, ProxyRemoteMatch, ProxyRequests, ProxySCGIInternalRedirect, ProxySCGISendfile, ProxySet, ProxySourceAddress, ProxyStatus, ProxyTimeout, ProxyVia, QualifyRedirectURL, ReadmeName, Redirect, RedirectMatch, RedirectTemp, RedirectPermanent, RedirectMatch, RedirectPermanent, RedirectTemp, ReflectorHeader, RemoteIPHeader, RemoteIPInternalProxy, RemoteIPInternalProxyList, RemoteIPProxiesHeader, RemoteIPTrustedProxy, RemoteIPTrustedProxyList, RemoveCharset, RemoveEncoding, RemoveHandler, RemoveInputFilter, RemoveLanguage, RemoveOutputFilter, RemoveType, RequestHeader, RequestReadTimeout, RequestTimeout, Require, RewriteBase, RewriteCond, RewriteEngine, RewriteLock, RewriteLog, RewriteLogLevel, RewriteLogLevel, RewriteMap, RewriteOptions, RewriteRule, RLimitCPU, RLimitMEM, RLimitNPROC, Satisfy, ScoreboardFile, ScoreBoardFile, Script, ScriptAlias, ScriptAlias, ScriptAliasMatch, ScriptInterpreterSource, ScriptLog, ScriptLogBuffer, ScriptLogLength, Scriptsock, ScriptSock, SecureListen, SeeRequestTail, SerfCluster, SerfPass, ServerAdmin, ServerAlias, ServerLimit, ServerName, ServerPath, ServerRoot, ServerSignature, ServerTokens, Session, SessionCookieName, SessionCookieName2, SessionCookieRemove, SessionCryptoCipher, SessionCryptoDriver, SessionCryptoPassphrase, SessionCryptoPassphraseFile, SessionDBDCookieName, SessionDBDCookieName2, SessionDBDCookieRemove, SessionDBDDeleteLabel, SessionDBDInsertLabel, SessionDBDPerUser, SessionDBDSelectLabel, SessionDBDUpdateLabel, SessionEnv, SessionExclude, SessionHeader, SessionInclude, SessionMaxAge, SetEnvIfNoCase, SetEnv, SetEnvIf, SetEnvIfNoCase, SetEnvIf, SetEnvIfExpr, SetEnvIfNoCase, SetHandler, SetInputFilter, SetOutputFilter, SimpleProcCount, SimpleThreadCount, SSIAccessEnable, SSIEndTag, SSIErrorMsg, SSIEtag, SSILastModified, SSILegacyExprParser, SSIStartTag, SSITimeFormat, SSIUndefinedEcho, SSLLog, SSLLogLevel, StartServers, StartThreads, Substitute, SubstituteInheritBefore, SubstituteMaxLineLength, Suexec, SuexecUserGroup, ThreadLimit, ThreadsPerChild, ThreadStackSize, KeepAliveTimeout, AuthnCacheTimeout, TraceEnable, TransferLog, TrustedProxy, TypesConfig, UnDefine, UnsetEnv, UseCanonicalName, UseCanonicalPhysicalPort, User, AuthUserFile, UserDir, AuthDBMUserFile, Anonymous_NoUserID, UserDir, VHostCGIMode, VHostCGIPrivs, VHostGroup, VHostPrivs, VHostSecure, VHostUser, VirtualDocumentRoot, VirtualDocumentRootIP, VirtualHost, VirtualScriptAlias, VirtualScriptAliasIP, Win32DisableAcceptEx, XBitHack, xml2EncAlias, xml2EncDefault, xml2StartParse

Htaccess Variables

alias-forced-type, API_VERSION, ap-mime-exceptions-list, AP_PARENT_PID, AUTHN_PROVIDER_GROUP, AUTH_TYPE, BALANCER, BALANCER_NAME, BALANCER_ROUTE_CHANGED, BALANCER_SESSION_ROUTE, BALANCER_SESSION_STICKY, BALANCER_WORKER_NAME, BALANCER_WORKER_ROUTE, CACHE, CACHE_CONDITIONAL, CACHE_INVALIDATE, CACHE_OUT, CACHE_OUT_SUBREQ, CACHE_REMOVE_URL, CACHE_SAVE, CACHE_SAVE_SUBREQ, CERT, CERT_BASE64, CERT_DER, CERT_KEY3_DB, CERT_NICKNAME, CERT_PFX, CGI_APACHE_ROLE, CGI_ROLE, CLIENT_CERT_RFC4523_CEA, CLIENT_VERIFY, COMPRESS_METHOD, CONNECTION, CONN_LOG_ID, CONN_REMOTE_ADDR, CONTENT_LENGTH, CONTENT_SET,

CONTENT_TYPE, CONTEXT_DOCUMENT_ROOT, CONTEXT_PREFIX, DATE_GMT, DATE_LOCAL, DEFLATE, DOCUMENT_ARGS, DOCUMENT_NAME, DOCUMENT_PATH_INFO, DOCUMENT_ROOT, DOCUMENT_URI, downgrade-1.0, ENV, ENVVAR_SCRIPT_URI, ENVVAR_SCRIPT_URL, ERRFN_USERDATA_KEY, error-notes, ERROR_NOTES, FCGI_APACHE_ROLE, FCGI_ROLE, filter-errordocs, force-gzip, force-no-vary, force-proxy-request-1.0, force-response-1.0, forensic-id, GATEWAY_INTERFACE, GET, HANDLER, HTTP_ACCEPT, HTTP_ACCEPT_CHARSET, HTTP_ACCEPT_ENCODING, HTTP_ACCEPT_LANGUAGE, HTTP_CACHE_CONTROL, HTTP_CONNECTION, HTTP_COOKIE, HTTP_FORWARDED, HTTP_HOST, HTTP_KEEP_ALIVE, HTTP_PC_REMOTE_ADDR, HTTP_PROXY_CONNECTION, HTTP_REFERER, HTTP_REQUEST, HTTPS, HTTPS_HOST, HTTP_TE, HTTP_TRAILER, HTTP_TRANSFER_ENCODING, HTTP_UPGRADE, HTTP_USER_AGENT, HTTP_USER_AGENT, HTTP_WP_VERSION_FOLDER_NAME, If-Modified-Since, If-None-Match, INCLUDES, INFLATE, installpath, IPV6, IS_SUBREQ, KEY_BASE64, KEY_DER, KEY_PFX, LAST_MODIFIED, LDAP_BINDASUSER, mod_rewrite_rewritten, mod_userdir_user, no-cache, no-etag, no-gzip, nokeepalive, nwconv-ssl, ORIGIN, origin_is, ORIGIN_SUB_DOMAIN, ORIG_PATH_INFO, ORIG_PATH_TRANSLATED, ORIG_SCRIPT_FILENAME, ORIG_SCRIPT_NAME, PATH_INFO, PATH_TRANSLATED, PHP_SELF, PLATFORM, POST, Pragma, Profile, PROTO, Protocol, PROTOCOL, protossl, PROXY_CONNECTION, proxy-error-override, proxy-fcgi-pathinfo, proxy-flushall, PROXY_HTML_FORCE, proxy-initial-not-pooled, proxy-interim-response, proxy-nocanon, proxy-nokeepalive, proxy-noquery, proxy-scgi-pathinfo, proxy-sendchunked, proxy-sendchunks, proxy-sendcl, proxy-sendextracrlf, proxy-sendunchangedcl, proxy-source-port, proxy-status, proxy_timedout, P_SUFFIX, push-policy, PUT, QUERY_STRING, QUERY_STRING, QUERY_STRING_UNESCAPED, rate-limit, REDIRECT_BREAKPOINT, redirect-carefull, redirect-carefully, REDIRECT_ENVVAR_SCRIPT_URL, REDIRECT_QUERY_STRING, REDIRECT_REDIRECT_STATUS, REDIRECT_REMOTE_USER, REDIRECT_STATUS, REDIRECT_UNIQUE_ID, REDIRECT_URL, REDIRECT_X_REWRITE, REMOTE_ADDR, REMOTE_HOST, REMOTE_IDENT, remoteip-proxy-ip-list, REMOTE_PASSWD, REMOTE_PORT, REMOTE_USER, REQUEST_ACCESS, REQUEST_FILENAME, REQUEST_FILENAME, REQUEST_FILENAME, REQUEST_FILNAME, REQUEST_LOG_ID, REQUEST_METHOD, REQUEST_SCHEME, REQUEST_STATUS, REQUEST_TIME, REQUEST_URI, REQUEST_URI, REQUEST_URI, REQUEST_URL, RewriteBase, REWRITEBASE, rewrite-proxy, _ROUTING__allow_GET, _ROUTING__allow_HEAD, _ROUTING__allow_POST, SCRIPT_FILENAME, SCRIPT_GROUP, SCRIPT_NAME, SCRIPT_URI, SCRIPT_URL, SCRIPT_USER, SEARCH, SECURE_RENEG, SERVER_ADDR, SERVER_ADMIN, SERVER_NAME, SERVER_PORT, SERVER_PORT_SECURE, SERVER_PROTOCOL, SERVER_SIGNATURE, SERVER_SOFTWARE, SESSION_ID, session-route, session-sticky, short-lingering-close, site_dir, SRP_USER, SRP_USERINFO, ssl-access-forbidden, SSL_CIPHER, SSL_CIPHER_ALGKEYSIZE, SSL_CIPHER_EXPORT, SSL_CIPHER_USEKEYSIZE, SSL_CLIENT_A_KEY, SSL_CLIENT_A_SIG, SSL_CLIENT_CERT, SSL_CLIENT_CERT_RFC4523_CEA, SSL_CLIENT_I_DN, SSL_CLIENT_I_DN_C, SSL_CLIENT_I_DN_CN, SSL_CLIENT_I_DN_D, SSL_CLIENT_I_DN_G, SSL_CLIENT_I_DN_I, SSL_CLIENT_I_DN_L, SSL_CLIENT_I_DN_O, SSL_CLIENT_I_DN_OU, SSL_CLIENT_I_DN_S, SSL_CLIENT_I_DN_ST, SSL_CLIENT_I_DN_T, SSL_CLIENT_I_DN_UID,

SSL_CLIENT_M_SERIAL, SSL_CLIENT_M_VERSION, SSL_CLIENT_SAN_DNS, SSL_CLIENT_S_DN, SSL_CLIENT_S_DN_C, SSL_CLIENT_S_DN_CN, SSL_CLIENT_S_DN_D, SSL_CLIENT_S_DN_G, SSL_CLIENT_S_DN_I, SSL_CLIENT_S_DN_L, SSL_CLIENT_S_DN_O, SSL_CLIENT_S_DN_OU, SSL_CLIENT_S_DN_S, SSL_CLIENT_S_DN_ST, SSL_CLIENT_S_DN_T, SSL_CLIENT_S_DN_UID, SSL_CLIENT_V_END, SSL_CLIENT_VERIFY, SSL_CLIENT_V_REMAIN, SSL_CLIENT_V_START, SSL_COMPRESS_METHOD, SSL_PROTOCOL, ssl-renegotiate-forbidden, ssl-secure-reneg, SSL_SECURE_RENEG, SSL_SERVER_A_KEY, SSL_SERVER_A_SIG, SSL_SERVER_CERT, SSL_SERVER_I_DN, SSL_SERVER_I_DN_C, SSL_SERVER_I_DN_CN, SSL_SERVER_I_DN_D, SSL_SERVER_I_DN_G, SSL_SERVER_I_DN_I, SSL_SERVER_I_DN_L, SSL_SERVER_I_DN_O, SSL_SERVER_I_DN_OU, SSL_SERVER_I_DN_S, SSL_SERVER_I_DN_ST, SSL_SERVER_I_DN_T, SSL_SERVER_I_DN_UID, SSL_SERVER_M_SERIAL, SSL_SERVER_M_VERSION, SSL_SERVER_SAN_DNS, SSL_SERVER_S_DN, SSL_SERVER_S_DN_C, SSL_SERVER_S_DN_CN, SSL_SERVER_S_DN_D, SSL_SERVER_S_DN_G, SSL_SERVER_S_DN_I, SSL_SERVER_S_DN_L, SSL_SERVER_S_DN_O, SSL_SERVER_S_DN_OU, SSL_SERVER_S_DN_S, SSL_SERVER_S_DN_ST, SSL_SERVER_S_DN_T, SSL_SERVER_S_DN_UID, SSL_SERVER_V_END, SSL_SERVER_V_START, SSL_SESSION_ID, SSL_SESSION_RESUMED, SSL_SRP_USER, SSL_SRP_USERINFO, SSL_TLS_SNI, SSL_VERSION_INTERFACE, SSL_VERSION_LIBRARY, SSL_VERSION_LIBRARY_INTERFACE, SSL_VERSION_PRODUCT, static, SUB_PATH, THE_REQUEST, TIME, TIME_DAY, TIME_HOUR, TIME_MIN, TIME_MON, TIME_SEC, TIME_WDAY, TIME_YEAR, TLS_SNI, TZ, uds_path, UNIQUE_ID, UNMAPPED_REMOTE_USER, USERAGENT_VIA, USER_NAME, usingSSL, variant-list, VARIANTS, verbose-error-to, W3TC_DOMAIN, W3TC_ENC, W3TC_PREVIEW, W3TC_REF, W3TC_SSL, W3TC_UA, WRDFNC_ENC, WRDFNC_HTTPS, XAUTHORIZATION, X_FORWARDED_FOR, X-Forwarded-Proto, X-Forwarded-Server, X-Forwarded-SSL, XPROXY_CONNECTION, X-Requested-With, X-Wap-Profile, ZIP_EXT

Htaccess Modules

Here are most of the modules that come with Apache. Each one can have new commands that can be used in .htaccess file scopes. mod_actions, mod_alias, mod_asis, mod_auth_basic, mod_auth_digest, mod_authn_anon, mod_authn_dbd, mod_authn_dbm, mod_authn_default, mod_authn_file, mod_authz_dbm, mod_authz_default, mod_authz_groupfile, mod_authz_host, mod_authz_owner, mod_authz_user, mod_autoindex, mod_cache, mod_cern_meta, mod_cgi, mod_dav, mod_dav_fs, mod_dbd, mod_deflate, mod_dir, mod_disk_cache, mod_dumpio, mod_env, mod_expires, mod_ext_filter, mod_file_cache, mod_filter, mod_headers, mod_ident, mod_imagemap, mod_include, mod_info, mod_log_config, mod_log_forensic, mod_logio, mod_mem_cache, mod_mime, mod_mime_magic, mod_negotiation, mod_proxy, mod_proxy_ajp, mod_proxy_balancer, mod_proxy_connect, mod_proxy_ftp, mod_proxy_http, mod_rewrite, mod_setenvif, mod_speling, mod_ssl, mod_status, mod_substitute, mod_unique_id, mod_userdir, mod_usertrack, mod_version, mod_vhost_alias

Htaccess Software

Apache HTTP Server comes with the following programs.

`httpd`
: Apache hypertext transfer protocol server

`apachectl`
: Apache HTTP server control interface

`ab`
: Apache HTTP server benchmarking tool

`apxs`
: APache eXtenSion tool

`dbmmanage`
: Create and update user authentication files in DBM format for basic authentication

`fcgistarter`
: Start a FastCGI program

`htcacheclean`
: Clean up the disk cache

`htdigest`
: Create and update user authentication files for digest authentication

`htdbm`
: Manipulate DBM password databases.

`htpasswd`
: Create and update user authentication files for basic authentication

`httxt2dbm`
: Create dbm files for use with RewriteMap

`logresolve`
: Resolve hostnames for IP-addresses in Apache logfiles

log_server_status
: Periodically log the server's status

`rotatelogs`
: Rotate Apache logs without having to kill the server

split-logfile
: Split a multi-vhost logfile into per-host logfiles

`suexec`
: Switch User For Exec

Technical Look at .htaccess

Source: Apache API notes

Per-directory configuration structures

Let's look out how all of this plays out in mod_mime.c, which defines the file typing handler which emulates the NCSA server's behavior of determining file types from suffixes. What we'll be looking at, here, is the code which implements the AddType and AddEncoding commands. These commands can appear in .htaccess files, so they must be handled in the module's private per-directory data, which in fact, consists of two separate tables for MIME types and encoding information, and is declared as follows:

```
table *forced_types;      /* Additional AddTyped stuff */
```

```
table *encoding_types;    /* Added with AddEncoding... */
mime_dir_config;
```

When the server is reading a configuration file, or <Directory> section, which includes one of the MIME module's commands, it needs to create a mime_dir_config structure, so those commands have something to act on. It does this by invoking the function it finds in the module's `create per-dir config slot', with two arguments: the name of the directory to which this configuration information applies (or NULL for srm.conf), and a pointer to a resource pool in which the allocation should happen. (If we are reading a .htaccess file, that resource pool is the per-request resource pool for the request; otherwise it is a resource pool which is used for configuration data, and cleared on restarts. Either way, it is important for the structure being created to vanish when the pool is cleared, by registering a cleanup on the pool if necessary). For the MIME module, the per-dir config creation function just ap_pallocs the structure above, and a creates a couple of tables to fill it. That looks like this:

```
void *create_mime_dir_config (pool *p, char *dummy)
mime_dir_config *new = (mime_dir_config *) ap_palloc (p,
sizeof(mime_dir_config));

new->forced_types = ap_make_table (p, 4);
new->encoding_types = ap_make_table (p, 4);
```

Now, suppose we've just read in a .htaccess file. We already have the per-directory configuration structure for the next directory up in the hierarchy. If the .htaccess file we just read in didn't have any AddType or AddEncoding commands, its per-directory config structure for the MIME module is still valid, and we can just use it. Otherwise, we need to merge the two structures somehow. To do that, the server invokes the module's per-directory config merge function, if one is present. That function takes three arguments: the two structures being merged, and a resource pool in which to allocate the result. For the MIME module, all that needs to be done is overlay the tables from the new per-directory config structure with those from the parent:

```
void *merge_mime_dir_configs (pool *p, void *parent_dirv, void *subdirv)
mime_dir_config *parent_dir = (mime_dir_config *)parent_dirv;
mime_dir_config *subdir = (mime_dir_config *)subdirv;
mime_dir_config *new =  (mime_dir_config *)ap_palloc (p,
sizeof(mime_dir_config));
new->forced_types = ap_overlay_tables (p, subdir->forced_types, parent_dir-
>forced_types);
new->encoding_types = ap_overlay_tables (p, subdir->encoding_types, parent_dir-
>encoding_types);
```

As a note --- if there is no per-directory merge function present, the server will just use the subdirectory's configuration info, and ignore the parent's. For some modules, that works just fine (e.g., for the includes module, whose per-directory configuration information consists solely of the state of the XBITHACK), and for those modules, you can just not declare one, and leave the corresponding structure slot in the module itself NULL.

Command handling

Now that we have these structures, we need to be able to figure out how to fill them. That involves processing the actual AddType and AddEncoding commands. To find commands, the server looks in the module's command table. That table contains information on how many arguments the commands take, and in what formats, where it is permitted, and so forth. That information is

sufficient to allow the server to invoke most command-handling functions with pre-parsed arguments. Without further ado, let's look at the AddType command handler, which looks like this (the AddEncoding command looks basically the same, and won't be shown here):

```
char *add_type(cmd_parms *cmd, mime_dir_config *m, char *ct, char *ext)
if (*ext == '.') ++ext;
ap_table_set (m->forced_types, ext, ct);
```

This command handler is unusually simple. As you can see, it takes four arguments, two of which are pre-parsed arguments, the third being the per-directory configuration structure for the module in question, and the fourth being a pointer to a cmd_parms structure. That structure contains a bunch of arguments which are frequently of use to some, but not all, commands, including a resource pool (from which memory can be allocated, and to which cleanups should be tied), and the (virtual) server being configured, from which the module's per-server configuration data can be obtained if required. Another way in which this particular command handler is unusually simple is that there are no error conditions which it can encounter. If there were, it could return an error message instead of NULL; this causes an error to be printed out on the server's stderr, followed by a quick exit, if it is in the main config files; for a .htaccess file, the syntax error is logged in the server error log (along with an indication of where it came from), and the request is bounced with a server error response (HTTP error status, code 500). The MIME module's command table has entries for these commands, which look like this:

```
command_rec mime_cmds[] =
{ "AddType", add_type, NULL, OR_FILEINFO, TAKE2, "a mime type followed by a file
extension" },
{ "AddEncoding", add_encoding, NULL, OR_FILEINFO, TAKE2, "an encoding (e.g.,
gzip), followed by a file extension" },
```

Here's a taste of that famous Apache source code that builds the directives allowed in .htaccess file context, the key that tells whether its enabled in .htaccess context is the DIR_CMD_PERMS and then the OR_FILEINFO, which means a directive is enabled dependent on the AllowOverride directive that is only allowed in the main config. First Apache 1.3.0, then Apache 2.2.10

mod_autoindex

```
AddIcon, add_icon, BY_PATH, DIR_CMD_PERMS, an icon URL followed by one or more
filenames
AddIconByType, add_icon, BY_TYPE, DIR_CMD_PERMS, an icon URL followed by one or
more MIME types
AddIconByEncoding, add_icon, BY_ENCODING, DIR_CMD_PERMS, an icon URL followed by
one or more content encodings
AddAlt, add_alt, BY_PATH, DIR_CMD_PERMS, alternate descriptive text followed by
one or more filenames
AddAltByType, add_alt, BY_TYPE, DIR_CMD_PERMS, alternate descriptive text
followed by one or more MIME types
AddAltByEncoding, add_alt, BY_ENCODING, DIR_CMD_PERMS, alternate descriptive
text followed by one or more content encodings
IndexOptions, add_opts, DIR_CMD_PERMS, RAW_ARGS, one or more index options
IndexIgnore, add_ignore, DIR_CMD_PERMS, ITERATE, one or more file extensions
AddDescription, add_desc, BY_PATH, DIR_CMD_PERMS, Descriptive text followed by
one or more filenames
HeaderName, add_header, DIR_CMD_PERMS, TAKE1, a filename
ReadmeName, add_readme, DIR_CMD_PERMS, TAKE1, a filename
FancyIndexing, fancy_indexing, DIR_CMD_PERMS, FLAG, Limited to 'on' or 'off'
(superseded by IndexOptions FancyIndexing)
DefaultIcon, ap_set_string_slot, (void *) XtOffsetOf(autoindex_config_rec,
default_icon), DIR_CMD_PERMS, TAKE1, an icon URL
```

mod_rewrite

```
RewriteEngine, cmd_rewriteengine, OR_FILEINFO, On or Off to enable or disable
(default)
RewriteOptions, cmd_rewriteoptions, OR_FILEINFO, List of option strings to set
RewriteBase, cmd_rewritebase, OR_FILEINFO, the base URL of the per-directory
context
RewriteCond, cmd_rewritecond, OR_FILEINFO, an input string and a to be applied
regexp-pattern
RewriteRule, cmd_rewriterule, OR_FILEINFO, an URL-applied regexp-pattern and a
substitution URL
RewriteMap, cmd_rewritemap, RSRC_CONF, a mapname and a filename
RewriteLock, cmd_rewritelock, RSRC_CONF, the filename of a lockfile used for
inter-process synchronization
RewriteLog, cmd_rewritelog, RSRC_CONF, the filename of the rewriting logfile
RewriteLogLevel, cmd_rewriteloglevel, RSRC_CONF, the level of the rewriting
logfile verbosity (0=none, 1=std, .., 9=max)
RewriteLog, fake_rewritelog, RSRC_CONF, [DISABLED] the filename of the rewriting
logfile
RewriteLogLevel, fake_rewritelog, RSRC_CONF, [DISABLED] the level of the
rewriting logfile verbosity
```

The entries in these tables are:

- The name of the command
- The function which handles it a (void *) pointer, which is passed in the cmd_parms structure to the command handler --- this is useful in case many similar commands are handled by the same function.
- A bit mask indicating where the command may appear. There are mask bits corresponding to each AllowOverride option, and an additional mask bit, RSRC_CONF, indicating that the command may appear in the server's own config files, but not in any .htaccess file.
- A flag indicating how many arguments the command handler wants pre-parsed, and how they should be passed in. TAKE2 indicates two pre-parsed arguments. Other options are TAKE1, which indicates one pre-parsed argument, FLAG, which indicates that the argument should be On or Off, and is passed in as a boolean flag, RAW_ARGS, which causes the server to give the command the raw, unparsed arguments (everything but the command name itself). There is also ITERATE, which means that the handler looks the same as TAKE1, but that if multiple arguments are present, it should be called multiple times, and finally ITERATE2, which indicates that the command handler looks like a TAKE2, but if more arguments are present, then it should be called multiple times, holding the first argument constant.
- Finally, we have a string which describes the arguments that should be present. If the arguments in the actual config file are not as required, this string will be used to help give a more specific error message. (You can safely leave this NULL).

Finally, having set this all up, we have to use it. This is ultimately done in the module's handlers, specifically for its file-typing handler, which looks more or less like this; note that the per-directory configuration structure is extracted from the request_rec's per-directory configuration vector by using the ap_get_module_config function.

Side notes --- per-server configuration, virtual servers, etc.

The basic ideas behind per-server module configuration are basically the same as those for per-directory configuration; there is a creation function and a merge function, the latter being invoked

where a virtual server has partially overridden the base server configuration, and a combined structure must be computed. (As with per-directory configuration, the default if no merge function is specified, and a module is configured in some virtual server, is that the base configuration is simply ignored). The only substantial difference is that when a command needs to configure the per-server private module data, it needs to go to the cmd_parms data to get at it. Here's an example, from the alias module, which also indicates how a syntax error can be returned (note that the per-directory configuration argument to the command handler is declared as a dummy, since the module doesn't actually have per-directory config data):

Litespeed Htaccess support

Unlike other lightweight web servers, Apache compatible per-directory configuration overridden is fully supported by LiteSpeed Web Server. With .htacess you can change configurations for any directory under document root on-the-fly, which in most cases is a mandatory feature in shared hosting environment. It is worth noting that *enabling .htaccess support in LiteSpeed* Web Server will not degrade server's performance, comparing to Apache's 40% drop in performance. Continue Reading.. sorta
https://www.askapache.com/htaccess/

Apache .htaccess tutorial for beginners | Learn URL rewriting and basics of mod_rewrite – helponnet.com

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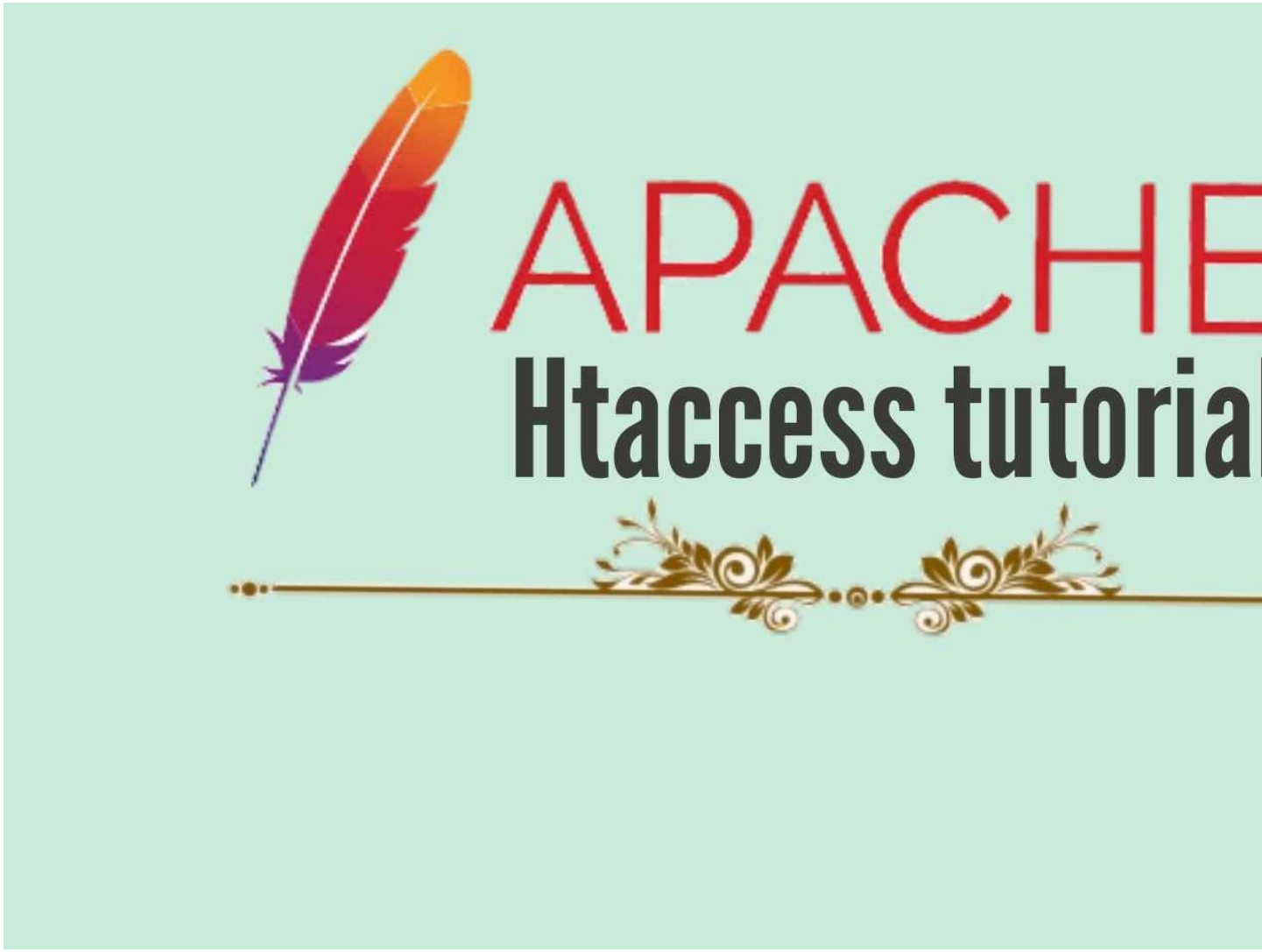

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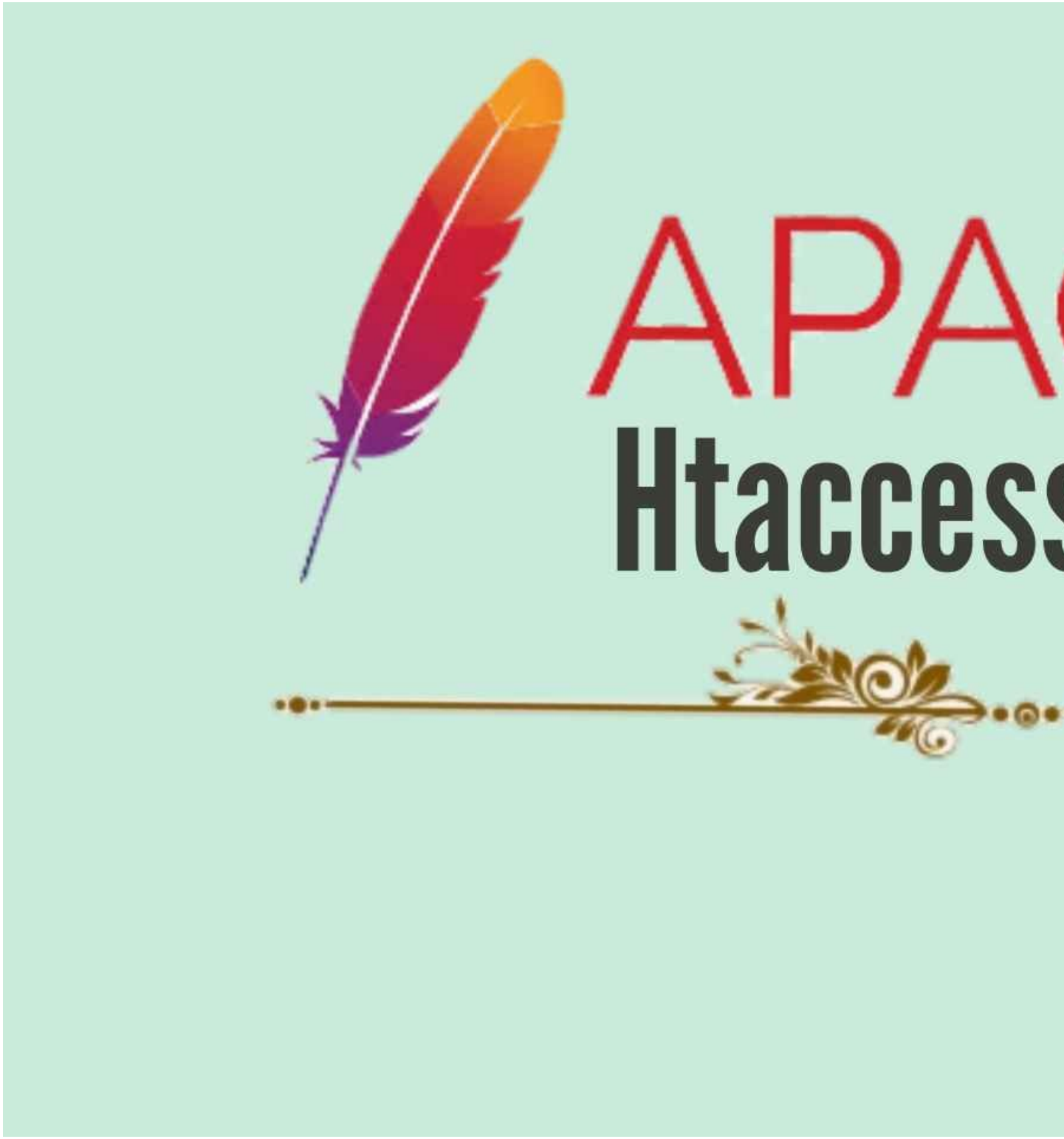
Last Updated on August 18, 2021 by Amit



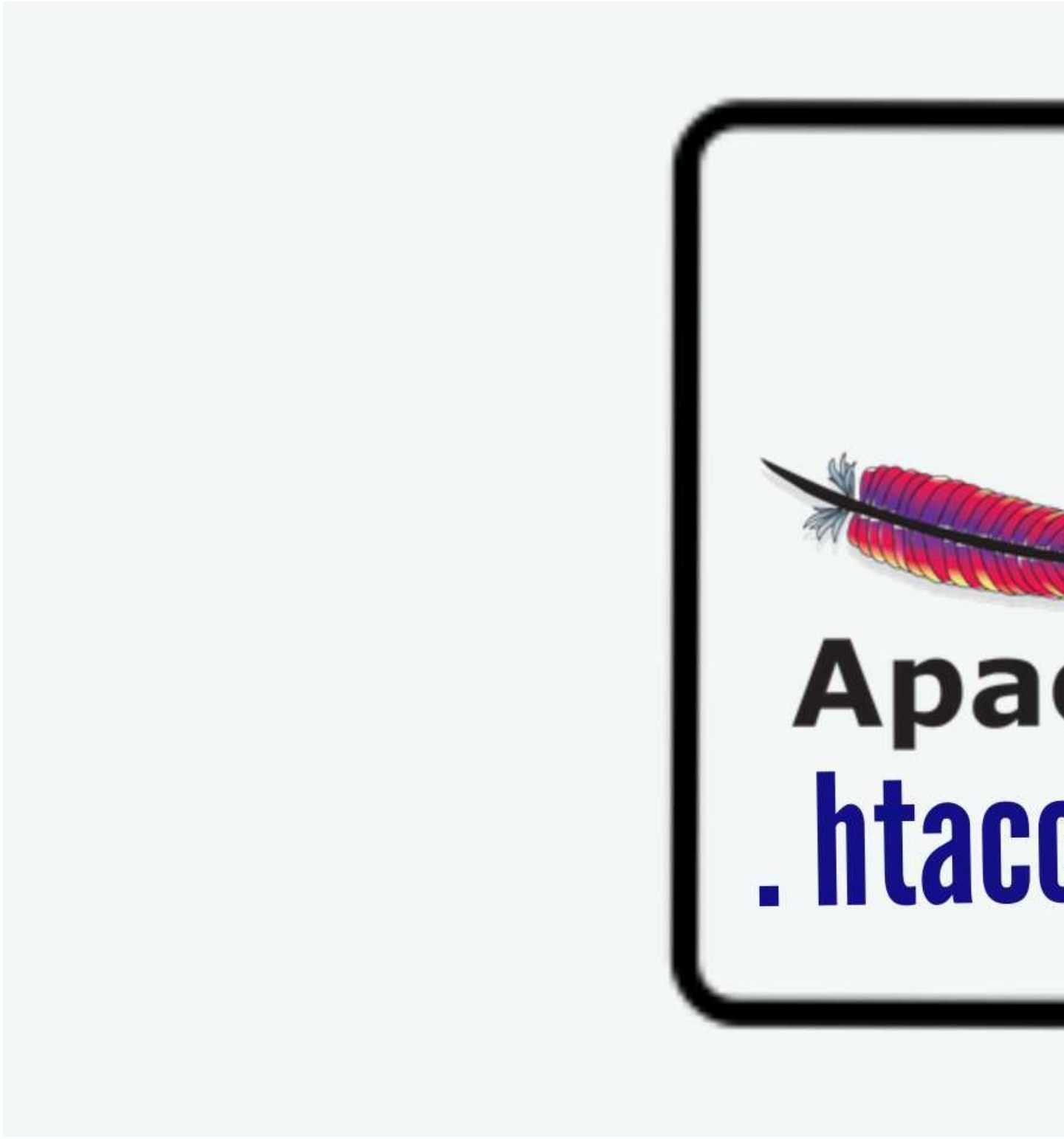
htaccess has always been a confusing topic for all Apache users especially for newbies who are learning to write RewriteRules to modify URLs via an htaccess file. The reason why some people find it confusing is because the Apache mod-rewrite documentation is hard to follow and there are no easy to follow **htaccess step by step tutorial** available on the internet.
I often see users struggling with their RewriteRule code on StackOverflow and I help them fix issues when I can.

In this 10 minute read article I am going to post an htaccess short step by step tutorial for people who wish to learn some basics of URL rewriting on Apache server.

If you follow this tutorial from top to the bottom then I am sure you will learn alot about URL rewriting and you will have some basic idea to create your own RewriteRules.

Table of contents

What is an .htaccess file?



It’s a directory level configuration file used by Apache web server to modify URLs , directory appearance and other server settings.

.htaccess is a dot prefix file.
The name starts with a single dot **.** and ends with **htaccess** .

You can change the name to make it look something like **htaccess.txt** from your server.config file.
The benefit of using an htaccess file is that it's easy to edit and available on all types of hosting services.

The downside of using an .htaccess file is that it slows down your server performance as it's read on each request but that's not going to be a big issue for you.
You can see the world's largest CMS WordPress also uses an htaccess file to shorten the blog URLs.

An htaccess file is easy to maintain and set-up that's why many web developers prefer to use it rather then editing the main configuration file.

Apache mod-rewrite

Rewrite module aka mod-rewrite is a powerful Apache module that provides URLs rewriting functionalitis to Apache users.
The official documentation of mod_rewrite is available on Apache mod_rewrite.
Mod-rewrite provides URL rewriting directives such as

RewriteEngine
RewriteBase
RewriteRule
RewriteCond
All these directives are used in an htaccess file to manipulate incoming URL requests and other settings on the server.

You will learn more about these directives later in this article but for now just focus on what the **Rewrite module** is and how to enable it.
Almost all live web hosting providers will provide you Apache server with pre-installed mod-rewrite. But in some rearest cases if it's not already installed then you can ask your service provider to enable it for you or you can also enable it yourself by modifying the server configuration file that's located in **/etc/httpd/conf/httpd.conf** .
Open this file for editing and replace the line to this will then make it possible to use mod-rewrite in an htaccess file.

To verify whether your server supports mod-rewrite in htaccess , you can do the following :

- Create an .htaccess in your public_html folder.
- Put some random texts to your htaccess file like "fooooobarrr" .
- Now, visit any URL on your site.

If it generates a **500 internal server** error then the mod-rewrite is **enabled** on your server otherwise if you don't get any error then you will need to enable this using the easy method I mentioned above.

Let's create our first Hello-world RewriteRule

If you are learning to write htaccess rules while following this article , then I suggest you start learning with an empty htaccess file as with an empty Htaccess you can delete the code if

something goes wrong or you want to test a different code, this will improve your learning experience.

Create an htaccess file on your document root and put the following contents in that file :

```
RewriteEngine on
RewriteRule ^helloWorld$ /index.php
```

Save the htaccess file and type the following URL into your browser address bar :
`https://yourdomain.com/helloWorld`
You will see the real rewrite mazic happening now.
The rule will internally map your URL path **/helloWorld** to the destination file **/index.php**.
The redirection happens behind the screen. You will see contents of the **index.php** file on the **/helloWorld** path.

Congratulations , you have written your first **helloWorld** rule successfully.
Now let's understand how the code above works. Let's understand it line by line.

- **RewriteEngine on** : This directive turns on the engine for rewriting URLs.
  This directive should be placed once **at the top of your htaccess**.
  There is no need to add "RewriteEngine" with each rule, just one single line at the top is enough.
- **RewriteRule ^helloWorld$ /index.php** : This is a RewriteRule directive provided by mod-rewrite. This line rewrites the request from **/helloWorld** to **/index.php** .
  You might have noticed one thing that our Rule's pattern doesn't start with a leading slash / .

  This is because RewriteRule uses a relative path in its pattern so **^/helloWorld$** will not work in htaccess but in a server.config file.

Okay, now I hope you have had some basic idea about how to create a simpe RewriteRule.
Now we will learn about other parts of a RewriteRule.

Mod-rewrite Flags

Flags are optional in RewriteRule but you will need to use them in most cases.
Flags provide additional instructions to a RewriteRule.
For example a RewriteRule with **[R]** flag tells the rule to make an external redirection of URLs.

See a list of most commonly used flags in mod-rewrite .

Flags are used inside sequere brackets [] .
You can use multiple flags with a RewriteRule seperating them by a comma char **,**.

Flags are optional in RewriteRule but you will most often need to use them in Rule to change the URL rewriting behaviour.

You will needv to use [NC] flag in the following Rule:

```
RewriteRule ^foobar$ /index.php
```

NC stands for NoCase, this flag is used to match both uppercase and lowercase chars in URI.
With NC, the rule above will match the following both URIs :

`/foobar`
and
`/fOObAr`
otherwise without this flag, by default RewriteRule only matches the case sensitive URI string.

You can learn more about flags on this post .

Conditions in RewriteRule

You can use conditions with your RewriteRule to rewrite or redirect your site URLs based on some specific conditions.

RewriteCond directive is used for this purpose.
With RewriteCond you can rewrite your URL based on host , https , request URI headers.

Check this post to learn more about using RewriteCond directive.
You can use if/else logic for RewriteRule .

The following Rule uses RewriteCond to redirect the URL based on host header. The condition used in this rule can also be read as
"If **host** ==**example.com** then **Redirect** .

```
RewriteEngine on
RewriteCond %{HTTP_HOST} ^example.com$
RewriteRule ^foobar$ /index.php [R]
```

This rule will redirect /foobar to /index.php if the condition is met.

You can use multiple conditions with a single RewriteRule .

```
RewriteEngine on
RewriteCond %{HTTP_HOST} ^example.com$ [OR]
RewriteCond %{HTTP_HOST} ^www.example.com$
RewriteRule ^foobar$ /index.php [R]
```

The conditions above uses [OR] flag. This makes one of the conditions optional. So you can read it as :
"If host ==example.com OR host==www.example.com" then Redirect.

To redirect http URLs to https , you need a condition logic. That checks if the incoming URL is using **http** scheme , then redirect the URL to use **https** :

```
RewriteEngine on

RewriteCond %{REQUEST_SCHEME} ^http$
RewriteRule (.*) https://example.com/$1 [R]
```

I hope now you have had some basic idea of how conditions work and how to use them with RewriteRule.

Regex in mod-rewrite

Mod-rewrite directives RewriteRule and RewriteCond use a regular expression based pattern that makes the match easier.
With a Regex based pattern a single RewriteRule can match multiple URIs.

If you want to learn Regex , you can follow this tutorial .

The following rule with regex pattern can either match **/helloWorld** or **/hello ladies** :

```
RewriteEngine on
RewriteRule ^(helloWorld|hello ladies)$ /index.php
```

The match is saved in **$n** variable . Since we have one capture group in the rule above , the match is saved in **$1** .

You can use the matched value in the destination string of RewriteRule.

```
RewriteEngine on
RewriteRule ^(helloWorld|hello ladies)$ /index.php?q=$1
```

The rule above rewrites **/helloWorld** to **/index.php?q=helloWorld**

You can use Regular expressions with RewriteCond :

```
RewriteCond %{HTTP_HOST} ^(www\.)example.com$
```

The condition above checks both **www** and **non-www** domain .

Isn't it easier with Regex?

Comments in htaccess code

In any programming languages , comments are used to explain the block of code. Like in PHP we use # to write a single line comment and **/*…*/** for multiple lines.
In htaccess , you can only comment out a single line using the hash character # .

Anything that goes after # is treated as a comment in htaccess.

```
#This is a comment.
#This is another comment.
```

To explain an htaccess code you can start your comment with a # character but keep in mind that the # is a single line comment. To add multiple line comments you will need to start each line with a hash character like the example shown below

```
#redirect http to https
#This rule also reditects non-www to www at the same time
RewriteCond %{HTTPS} off [OR]
RewriteCond %{HTTP_HOST} !^www
RewriteRule (.*) https://www.example.com/$1 [L,R]
```

Error handling with htaccess

With an htaccess file you can handle server errors with just a few lines of code.
On Apache there are different types of server errors . Some most common errors are :

- 403 (Forbidden error)
- 404 (Not found error)
- 410 (Gone)
- 500 (Internal server error)
- 503 (Server unavailable) .

With an htaccess file you can easily handle these server errors using **ErrorDocument** directive which is part of Apache core module.
403 is the error status code which represents a “Forbidden error” (Access to the resource is denied) .

To redirect your site URLs to a different location when this error occurs, you can use the following code in htaccess :

```
ErrorDocument 403 /403.php
```

Here **403.php** is the file that is called when you request something that is protected on your server.

The code below handles 404 “not found” URLs.

```
ErrorDocument 404 /404.php
```

The same code format is used to handle other server errors except 500 (Internal server error) . You need to handle it from your main server configuration file.

RewriteRule code examples

WWW to non-www

With the following rule you can redirect your **www** subdomain to root domain :

```
RewriteEngine on
RewriteCond %{HTTP_HOST} ^www\.example\.com$ [NC]
RewriteRule (.*) https://example.com/$1 [R=301,L]
```

Redirect non-www to www (naked domain to www subdomain)

If you want to redirect your root domain to www subdomain , here is the rule you can use to enforce **www** on your website :

```
RewriteEngine on
RewriteCond %{HTTP_HOST} ^example\.com$ [NC]
RewriteRule (.*) https://www.example.com/$1 [R=301,L]
```

Change directory index file

By default , your server shows **index.html** , **index.php** or whatever index file exists to client when a directory is direct accessed , but you can change this behaviour by simply using the following line in htaccess , read more about DirectoryIndex

```
DirectoryIndex somefile.php
```

Access all files without adding an extension at the end

If you need visit your file URLs without adding extension at the end , for example : to visit **/file.php** as **/file** you can use the short code below in your htaccess :

```
Options +Multiviews
```

Enforce SSL

You can redirect your insecure traffic (http) to the secure version (https) using this rule :

```
RewriteEngine on
RewriteCond %{HTTPS} off [NC]
RewriteRule (.*) https://example.com/$1 [R=301,L]
```

Add a trailing slash

To add a trailing slash to your URLs , you can use the following :

```
RewriteEngine on
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule !/$ %{REQUEST_URI}/ [R,L]
```

Allow non-php extension

If you want to access your .PHP files without using extension at the end , you can use :

```
RewriteEngine on
RewriteCond %{REQUEST_FILENAME}.php -f
RwriteRule ^(.+?)/?$ /$1.php [L]
```

More rules : 5 Awasome htaccess rules you can just copy & paste .

.htaccess tutorial pdf

This htaccess tutorial is available for download as PDF format. You can Download this htaccess tutorial as .pdf and use it for personal and educational purposes only.

I hope this tutorial was helpful. If there is anything that you couldn't understand or you need my help with htaccess , you can post a comment bellow.

Thank you so much reading this.

https://helponnet.com/2021/04/15/htaccess-tutorial-for-beginers/