.htaccess QUICK GUIDE

- WHITEPAPER -

- **Authentication**
- **Redirects**
- **Rewrite URLs**
- **Controls different server settings**
- **Error types**
- **MIME types**
- **Cache control**

Authentication

Folders

- ```
  AuthUserFile path_to_file/.htpasswd
  AuthName "Message"
  AuthType Basic
  require user user_name
  ```
- Or just use password protect directory din cpanel (simple version)

IPs

- `allow from xxx.xxx.xxx.xxx`
- `deny from xxx.xxx.xxx.xxx`
- If you need to ban everyone use: deny from all
- If you need the root index file to be something else then index.html or index.php use this in the .htaccess file maintaining the order in which they are interpreted (from left to right):
- DirectoryIndex index.php index.html wellcome.html

Block direct access to a folder (ex: pictures)

- Options –Indexes

Bucharest, Romania
contact@roagency.com
  ```

Hotlinking pictures

- ```
  RewriteEngine on
  RewriteCond %{HTTP_REFERER} !^http(s)?://(www\.)?yourdomain.com [NC]
  RewriteRule \.(jpg|jpeg|png|gif)$ http://www.altdomeniu.com/poza_default.jpg [NC,R,L]
  ```
- Note: make sure the default picture is not in the same place as the hot linking to avoid an infinite loop

Deny by reffer

- ```
  RewriteEngine on
  # Options +FollowSymlinks
  RewriteCond %{HTTP_REFERER} otherdomain\.com [NC,OR]
  RewriteCond %{HTTP_REFERER} anotherdomain\.com
  RewriteRule .* - [F]
  ```

Authentication - examples

```
# Protect files
<Files ~ "^(.*)\.(inc|inc\.php|tpl|sql|pl)$">
  Order deny,allow
  Deny from all
</Files>
# Protect directories
<Files ~
"^(files|images|include|lang|libs(/.+)?|temp(/.+)?|templates(/.+)?|javascripts(/.+)?)$">
  Order deny,allow
  Deny from all
</Files>
```

Pictures or upload folders have the most common vulnerabilities. Add to pictures the following:

```
<Files ~ "^(.*)\.(inc|inc\.php|tpl|sql|pl|html|php)$">
  Order deny,allow
  Deny from all
</Files>
```

```
# secure htaccess file
<Files .htaccess>
order allow,deny
deny from all
</Files>
```

```
# prevent viewing of a specific file
<Files secretfile.jpg>
 order allow,deny
 deny from all
</Files>
```

```
# why not come visit me directly?
RewriteCond %{HTTP_REFERER} \.opendirviewer\. [NC,OR]
# this prevents stoopid cross-site discovery attacks..
RewriteCond %{THE_REQUEST} \?\ HTTP/ [NC,OR]
# please stop pretending to be the Googlebot..
RewriteCond %{HTTP_REFERER} users\.skynet\.be.* [NC,OR]
# really, we need a special page for these twats..
RewriteCond %{QUERY_STRING} \=\|w\| [NC,OR]
RewriteCond %{THE_REQUEST} etc/passwd [NC,OR]
RewriteCond %{REQUEST_URI} owssvr\.dll [NC,OR]
# you can probably work these out..
RewriteCond %{QUERY_STRING} \=\|w\| [NC,OR]
RewriteCond %{THE_REQUEST} \/\*\ HTTP/ [NC,OR]
# etc..
RewriteCond %{HTTP_USER_AGENT} Sucker [NC]
RewriteRule . abuse.txt [L]
########## Begin - Rewrite rules to block out some common exploits
## If you experience problems on your site block out the operations listed below
## This attempts to block the most common type of exploit `attempts` to Joomla!
#
# Block out any script trying to set a mosConfig value through the URL
RewriteCond %{QUERY_STRING} mosConfig_[a-zA-Z_]{1,21}(=|\%3D) [OR]
# Block out any script trying to base64_encode crap to send via URL
RewriteCond %{QUERY_STRING} base64_encode.*\(.*\) [OR]
# Block out any script that includes a <script> tag in URL
RewriteCond %{QUERY_STRING} (\<|%3C).*script.*(\>|%3E) [NC,OR]
# Block out any script trying to set a PHP GLOBALS variable via URL
RewriteCond %{QUERY_STRING} GLOBALS(=|\[|\%[0-9A-Z]{0,2}) [OR]
# Block out any script trying to modify a _REQUEST variable via URL
RewriteCond %{QUERY_STRING} _REQUEST(=|\[|\%[0-9A-Z]{0,2})
# Send all blocked request to homepage with 403 Forbidden error!
RewriteRule ^(.*)$ index.php [F,L]
########## End - Rewrite rules to block out some common exploits

#bots
deny from 69.46.23.47
deny from 95.168.183.203
deny from 173.212.
deny from 82.128.
deny from 80.47.173.57
#rss scrapers
deny from 193.223.101.0/24
deny from 195.216.223.2
deny from 195.225.58.0/24
deny from 195.78.124.19
deny from 205.234.106.213
deny from 207.210.125.224
deny from 208.109.181.212
deny from 208.113.204.150
deny from 62.217.235.0/24
deny from 64.120.55.188
deny from 64.34.174.17
deny from 66.197.98.188
deny from 66.77.232.122
deny from 67.19.227.18
deny from 70.87.131.70
deny from 72.21.46.250
deny from 74.112.128.0/24
deny from 74.220.207.120
deny from 74.54.196.210
deny from 74.54.58.178
deny from 74.63.112.0/24
deny from 74.86.186.66
deny from 75.126.76.142
deny from 75.127.76.157
deny from 79.112.117.169
deny from 79.112.88.87
deny from 80.86.106.162
deny from 81.181.124.12
deny from 86.105.192.199
deny from 86.121.189.246
deny from 86.122.4.70
deny from 88.191.60.78
deny from 89.123.250.158
```

Simple redirects

Simple redirect

- `redirect 301 /old-url.html http://www.domain.com/new-url.html`
- `RewriteRule (.*).html$ /$1.php` - all php can be accessed as .html

Redirect IP to site

- ```
  RewriteCond %{HTTP_HOST} ^89.36.197.101 [NC]
  RewriteRule ^(.*)$ http://www.domain.com/$1 [L,R=301]
  ```

Redirect folder from site (like forum) to another site

- ```
  RewriteCond %{HTTP_HOST} ^.*$
  RewriteRule ^forum/$ http://www.other-domain.com/ [R=301,L]
  ```

Non-www to www

- ```
  RewriteCond %{HTTP_HOST} ^domain.com [NC]
  RewriteRule ^(.*)$ http://www.domain.com/$1 [L,R=301]
  ```

Redirects info

- The [NC] code means "No Case", meaning match the url regardless of being in upper or lower case letters
- normally, the dot (.) means that one character is unspecified
- The ^(.*)$ is a little magic trick. Remember the meaning of the dot? If not, this can be any character (but only one). The .* means that you can have a lot of characters, not only one.
- L means this is the last rule in this run. After this rewrite the webserver will return a result. The R=301 means that the webserver returns a 301 moved permanently to the requesting browser or search engine.
- Use:
  ```
  Options +FollowSymLinks
  RewriteEngine On
  #Header unset ETag
  #FileETag None
  ```
  ```

REGEX

Escaping:

\char escape that particular char

For instance to specify special characters.. [].()\ etc.

Text:

```
.             Any single character  (on its own = the entire URI)
[chars]       Character class: One of following chars
[^chars]      Character class: None of following chars
text1|text2   Alternative: text1 or text2 (i.e. "or")
```

e.g. [^/] matches any character *except* **/**
(foo|bar)\.html matches **foo.html** *and* **bar.html**

Quantifiers:

```
? 0 or 1 of the preceding text
* 0 or N of the preceding text  (hungry)
+ 1 or N of the preceding text
```

e.g. (.+)\.html? matches **foo.htm** *and* **foo.html**
(foo)?bar\.html matches **bar.html** *and* **foobar.html**

Grouping:

(text) Grouping of text

Either to set the borders of an alternative or
for making backreferences where the **n**the group can
be used on the target of a RewriteRule with **$n**

e.g. ^(.*)\.html foo.php?bar=**$1**

Anchors:

```
^    Start of line anchor
$    End   of line anchor
```

An anchor explicitly states that the character *right next to it* MUST
be either the very first character ("^"), or the very last character ("$")
of the URI string to match against the pattern, e.g..

^foo(.*) matches **foo** and **foobar** but *not* **eggfoo**
(.*)l$ matches **fool** and **cool**, but *not* **foo**

Redirects

Redirect in case of language (not really recommended)

- ```
  RewriteEngine on
  RewriteCond %{HTTP:Accept-Language} (en|ro) [NC]
  RewriteRule .* - [F,L]
  ```

Redirect HTTP TO HTTPS

- ```
  RewriteEngine On
  RewriteCond %{HTTPS} off
  RewriteRule (.*) https://%{HTTP_HOST}%{REQUEST_URI}
  ```

or for one particular folder

- ```
  RewriteEngine On
  RewriteCond %{SERVER_PORT} 80
  RewriteCond %{REQUEST_URI} some folder
  RewriteRule ^(.*)$ https://www.domain.com/somefolder/$1 [R,L]
  ```

Redirects - examples

- ```
  RewriteRule ^print-([^/]+)\.html$ /print.php?idu=$1 [QSA,L]
  RewriteRule ^print-([^/]+)-pag([^/]+)\.html$ /print.php?idu=$1&pag=$2
  [QSA,L]
  ```

For a site with categories and subcategories:

Note: Rule order in .htaccess matters and they can override each other.

- ```
  RewriteRule ^([^/]+)/([^/]+)_pag([^/]+)/([^/]+)_([^/]+)/$
  /index2_mod.php?categ=$1&subcateg=$2&pag=$3&id=$5 [QSA,L]
  ```

- ```
  RewriteRule ^([^/]+)/([^/]+)/([^/]+)_([^/]+)/$
  /index2_mod.php?categ=$1&subcateg=$2&id=$4 [QSA,L]
  ```

- ```
  RewriteRule ^([^/]+)/([^/]+)_pag([^/]+)/$ /index_mod.php?subcateg=$2&pag=$3
  [QSA,L]
  ```

- ```
  RewriteRule ^([^/]+)/([^/]+)/$ /index_mod.php?categ=$1&subcateg=$2 [QSA,L]
  ```

- ```
  RewriteRule ^([^/]+)/$ /index_mod.php?categ=$1 [QSA,L]
  ```
  ```

http://www.example.com/view.php?cat=articles&a=10&page=20&lang=en

can be accessed from

http://www.example.com/en/articles/10-2

by adding this code

```
RewriteEngine On
RewriteRule ^([a-z]*)/([a-z]*)/([1-9]+)(-[1-9]+)?
$  http://www.example.com/view.php?cat=$2&a=$3&page=$4&lang=$1 [L]
```

- `RedirectMatch 301 ^/(.*)\.htm$ http://www.askapache.com/$1.html`
- `RedirectMatch 301 ^/200([0-9])/([^01])(.*)$ http://www.askapache.com/$2$3`
- `RedirectMatch 301 ^/category/(.*)$ http://www.askapache.com/$1`
- `RedirectMatch 301 ^/(.*)/htaccesselite-ultimate-htaccess-article.html(.*)`
  `http://www.askapache.com/htaccess/htaccess.html`
- `RedirectMatch 301 ^/(.*)\.html/1/(.*) http://www.askapache.com/$1.html$2`
- `RedirectMatch 301 ^/manual/(.*)$ http://www.php.net/manual/$1`
- `RedirectMatch 301 ^/dreamweaver/(.*)$ http://www.askapache.com/tools/$1`
- `RedirectMatch 301 ^/z/(.*)$ http://static.askapache.com/$1`
- ```
  RewriteCond %{QUERY_STRING} ^topic=(.*)$
  RewriteRule ^index\.php$ /topic/%1? [R=301,L]
  ```
- ```
  RewriteCond %{HTTP_HOST} ^www\.example\.com [NC]
  RewriteRule ^(.*)$ http://example.com/$1 [L,R=301]
  ```

Server rules (cache control)

- ```
  ################ Expires Control ################
  # Turn on Expires and set default to 0
  ExpiresActive On
  ExpiresDefault A0
  <FilesMatch "\.(flv|gif|jpg|jpeg|png|ico|swf|mp3|mp4)$">
  # A2592000 means 1 month in the future (60*60*24*30=2592000)
  ExpiresDefault A2592000
  Header append Cache-Control "public"
  </FilesMatch>
  <FilesMatch "\.(js|css)$">
  ExpiresDefault A2592000
  Header append Cache-Control "proxy-revalidate"
  </FilesMatch>
  <FilesMatch "\.(css)">
      ForceType application/x-httpd-php
        php_value auto_prepend_file /home/imaginel/public_html/gzip_css.php
  </FilesMatch>
  <FilesMatch "\.(js)">
      ForceType application/x-httpd-php
        php_value auto_prepend_file /home/imaginel/public_html/gzip_css.php
  </FilesMatch>

  # explicitly disable caching for scripts and other dynamic files
  <FilesMatch ".(pl|php|cgi|spl|scgi|fcgi)$">
  Header unset Cache-Control
  </FilesMatch>
  ```

Gzip and cookies

- ```
  php_value output_handler ob_gzhandler
  php_value session.use_only_cookies 1
  ```

You should always remember to backup .htaccess file before adding lines.
A 500 server error is never fun.

Error pages

Most used line is to define a custom 404 page

- `ErrorDocument 404 "/404.php"`

In case of maintenance

- ```
  ErrorDocument 503 "The site is now under maintenance. We are working to restore it as soon as possible. "
  RewriteEngine On
  # TO ALLOW YOURSELF TO VISIT THE SITE, CHANGE 111 222 333 444 TO YOUR IP ADDRESS.
  RewriteCond %{REMOTE_ADDR} !^94\.53\.11\.114$
  RewriteRule .* - [R=503,L]
  ```

Mime types

Mp3 si swf not working? Try:

AddType application/x-shockwave-flash swf

Types of files:

AddType text/html .html .htm
AddType text/plain .txt
AddType text/richtext .rtx
AddType text/tab-separated-values .tsv
AddType text/x-setext .etx
AddType text/x-server-parsed-html .shtml .sht
AddType application/macbinhex-40 .hqx
AddType application/netalivelink .nel
AddType application/netalive .net
AddType application/news-message-id
AddType application/news-transmission
AddType application/octet-stream .bin .exe
AddType application/oda .oda
AddType application/pdf .pdf
AddType application/postscript .ai .eps .ps
AddType application/remote-printing
AddType application/rtf .rtf
AddType application/slate
AddType application/zip .zip
AddType application/x-mif .mif
AddType application/wita
AddType application/wordperfect5.1
AddType application/x-csh .csh
AddType application/x-dvi .dvi
AddType application/x-hdf .hdf
AddType application/x-latex .latex
AddType application/x-netcdf .nc .cdf
AddType application/x-sh .sh
AddType application/x-tcl .tcl
AddType application/x-tex .tex
AddType application/x-texinfo .texinfo .texi
AddType application/x-troff .t .tr .roff
AddType application/x-troff-man .man
AddType application/x-troff-me .me
AddType application/x-troff-ms .ms
AddType application/x-wais-source .src
AddType application/x-bcpio .bcpio
AddType application/x-cpio .cpio
AddType application/x-gtar .gtar
  ```

AddType application/x-shar .shar
AddType application/x-sv4cpio .sv4cpio
AddType application/x-sv4crc .sv4crc
AddType application/x-tar .tar
AddType application/x-ustar .ustar
AddType application/x-director .dcr
AddType application/x-director .dir
AddType application/x-director .dxr
AddType application/x-onlive .sds
AddType application/x-httpd-cgi .cgi
AddType image/gif .gif .GIF
AddType image/ief .ief
AddType image/jpeg .jpeg .jpg .jpe .JPG
AddType image/tiff .tiff .tif
AddType image/x-cmu-raster .ras
AddType image/x-portable-anymap .pnm
AddType image/x-portable-bitmap .pbm
AddType image/x-portable-graymap .pgm
AddType image/x-portable-pixmap .ppm
AddType image/x-rgb .rgb
AddType image/x-xbitmap .xbm
AddType image/x-xpixmap .xpm
AddType image/x-xwindowdump .xwd
AddType audio/basic .au .snd
AddType audio/x-aiff .aif .aiff .aifc
AddType audio/x-wav .wav
AddType audio/x-pn-realaudio .ram
AddType audio/x-midi .mid
AddType video/mpeg .mpeg .mpg .mpe
AddType video/quicktime .qt .mov
AddType video/x-msvideo .avi
AddType video/x-sgi-movie .movie
AddType message/external-body
AddType message/news
AddType message/partial
AddType message/rfc822
AddType multipart/alternative
AddType multipart/appledouble
AddType multipart/digest
AddType multipart/mixed
AddType multipart/parallel
AddType x-world/x-vrml .wrl

Resources

Where can I learn more about .htaccess?

URL Rewriting Guide:

- http://httpd.apache.org/docs/1.3/misc/rewriteguide.html

Mod rewrite reference document:

- http://httpd.apache.org/docs/1.3/mod/mod_rewrite.html

Regular Expressions:

- http://en.wikipedia.org/wiki/Regular_expression
- http://perishablepress.com/press/2006/01/10/stupid-htaccess-tricks/