

```

# Apache Server Configs v2.2.0 | MIT License
# https://github.com/h5bp/server-configs-apache

# (!) Using `.htaccess` files slows down Apache, therefore, if you have access
# to the main server config file (usually called `httpd.conf`), you should add
# this logic there: http://httpd.apache.org/docs/current/howto/htaccess.html.

<filesMatch "\.(html|html|js|css)$">
FileETag None
<ifModule mod_headers.c>
Header unset ETag
Header set Cache-Control "max-age=0, no-cache, no-store, must-revalidate"
Header set Pragma "no-cache"
Header set Expires "Wed, 11 Jan 1984 05:00:00 GMT"
</ifModule>
</filesMatch>

# #####
# # CROSS-ORIGIN RESOURCE SHARING (CORS) #
# #####

# -----
# | Cross-domain AJAX requests |
# -----

# Allow cross-origin AJAX requests.
# http://code.google.com/p/html5security/wiki/CrossOriginRequestSecurity
# http://enable-cors.org/

# <IfModule mod_headers.c>
#   Header set Access-Control-Allow-Origin "*"
# </IfModule>

# -----
# | CORS-enabled images |
# -----

# Send the CORS header for images when browsers request it.
# https://developer.mozilla.org/en-US/docs/HTML/CORS_Enabled_Image
# http://blog.chromium.org/2011/07/using-cross-domain-images-in-webgl-and.html
# http://hacks.mozilla.org/2011/04/using-cors-to-load-web-fonts-from-google-font-apis/

```

```
# http://nacks.mozilla.org/2011/11/using-cors-to-load-webgl-textures-from-cross-domain-images/
```

```
<IfModule mod_setenvif.c>  
  <IfModule mod_headers.c>  
    <FilesMatch "\.(curl|gif|ico|jpe?g|png|svgz?|webp)$">  
      SetEnvIf Origin ":" IS_CORS  
      Header set Access-Control-Allow-Origin "*" env=IS_CORS  
    </FilesMatch>  
  </IfModule>  
</IfModule>
```

```
# -----  
# | Web fonts access |  
# -----
```

```
# Allow access to web fonts from all domains.
```

```
<IfModule mod_headers.c>  
  <FilesMatch "\.(eot|otf|tt[cf]|woff)$">  
    Header set Access-Control-Allow-Origin "*"  
  </FilesMatch>  
</IfModule>
```

```
# #####  
# # ERRORS #  
# #####
```

```
# -----  
# | 404 error prevention for non-existing redirected folders |  
# -----
```

```
# Prevent Apache from returning a 404 error as the result of a rewrite  
# when the directory with the same name does not exist.  
# http://httpd.apache.org/docs/current/content-negotiation.html#multiviews  
# http://www.webmasterworld.com/apache/3808792.htm
```

```
Options -MultiViews
```

```
# -----  
# | Custom error messages / pages |  
# ..
```

```

# -----

# Customize what Apache returns to the client in case of an error.
# http://httpd.apache.org/docs/current/mod/core.html#errordocument

# ErrorDocument 404 /404.html

# #####
# # INTERNET EXPLORER #
# #####

# -----
# | Better website experience |
# -----

# Force Internet Explorer to render pages in the highest available mode
# in the various cases when it may not.
# http://hsivonen.iki.fi/doctype/ie-mode.pdf

<IfModule mod_headers.c>
    Header set X-UA-Compatible "IE=edge"
    # `mod_headers` cannot match based on the content-type, however, this
    # header should be send only for HTML pages and not for the other resources
    <FilesMatch "\.(appcache|atom|crx|css|curl|eot|f4[abpv]|flv|gif|htc|icol|jpe?
gl|jsl|json|ld)?
|m4[av]|manifest|map|mp4|oex|og[agv]|opus|otf|pdf|png|rdf|rss|safariextz|svgz?
|swf|tt[cf]|vcf|vtt|webapp|web[mp]|woff|xml|xpi)$">
        Header unset X-UA-Compatible
    </FilesMatch>
</IfModule>

# -----
# | Cookie setting from iframes |
# -----

# Allow cookies to be set from iframes in Internet Explorer.
# http://msdn.microsoft.com/en-us/library/ms537343.aspx
# http://www.w3.org/TR/2000/CR-P3P-20001215/

# <IfModule mod_headers.c>
#   Header set P3P "policyref=\"/w3c/p3p.xml\", CP=\"IDC DSP COR ADM DEVI TAIi PSA PSD

```

```
IVRi IVDi COMi HIS OUR IND CNTV""
```

```
# </IfModule>
```

```
# #####  
# # MIME TYPES AND ENCODING #  
# #####
```

```
# -----  
# | Proper MIME types for all files |  
# -----
```

```
<IfModule mod_mime.c>
```

```
# Audio
```

```
AddType audio/mp4 m4a f4a f4b  
AddType audio/ogg oga ogg opus
```

```
# Data interchange
```

```
AddType application/json json map  
AddType application/ld+json jsonld
```

```
# JavaScript
```

```
# Normalize to standard type.  
# http://tools.ietf.org/html/rfc4329#section-7.2  
AddType application/javascript js
```

```
# Video
```

```
AddType video/mp4 f4v f4p m4v mp4  
AddType video/ogg ogv  
AddType video/webm webm  
AddType video/x-flv flv
```

```
# Web fonts
```

```
AddType application/font-woff woff  
AddType application/vnd.ms-fontobject eot
```

```
# Browsers usually ignore the font MIME types and simply sniff the bytes  
# to figure out the font type.  
# http://mimesniff.spec.whatwg.org/#matching-a-font-type-pattern
```

```
# Chrome however, shows a warning if any other MIME types are used for
```

the following fonts.

```
AddType application/x-font-ttf      ttc ttf
AddType font/opentype                otf
```

Make SVGZ fonts work on the iPad.

<https://twitter.com/FontSquirrel/status/14855840545>

```
AddType    image/svg+xml           svgz
AddEncoding gzip                    svgz
```

Other

```
AddType application/octet-stream    safariextz
AddType application/x-chrome-extension crx
AddType application/x-opera-extension oex
AddType application/x-web-app-manifest+json webapp
AddType application/x-xpinstall       xpi
AddType application/xml               atom rdf rss xml
AddType image/webp                    webp
AddType image/x-icon                  cur
AddType text/cache-manifest           appcache manifest
AddType text/vtt                      vtt
AddType text/x-component              htc
AddType text/x-vcard                  vcf
```

</IfModule>

```
# -----
# | UTF-8 encoding |
# -----
```

Use UTF-8 encoding for anything served as `text/html` or `text/plain`.

```
AddDefaultCharset utf-8
```

Force UTF-8 for certain file formats.

<IfModule mod_mime.c>

```
    AddCharset utf-8 .atom .css .js .json .jsonld .rss .vtt .webapp .xml
```

</IfModule>

```
# #####
# # URL REWRITES #
# #####
```

```
# -----
# | Rewrite engine |
# -----

# Turn on the rewrite engine and enable the `FollowSymLinks` option (this is
# necessary in order for the following directives to work).

# If your web host doesn't allow the `FollowSymLinks` option, you may need to
# comment it out and use `Options +SymLinksIfOwnerMatch`, but be aware of the
# performance impact.
# http://httpd.apache.org/docs/current/misc/perf-tuning.html#symlinks

# Also, some cloud hosting services require `RewriteBase` to be set.
# http://www.rackspace.com/knowledge_center/frequently-asked-question/why-is-mod-rewrite-
not-working-on-my-site

<IfModule mod_rewrite.c>
    Options +FollowSymLinks
    # Options +SymLinksIfOwnerMatch
    RewriteEngine On
    # RewriteBase /
</IfModule>

# -----
# | Suppressing / Forcing the `www.` at the beginning of URLs |
# -----

# The same content should never be available under two different URLs,
# especially not with and without `www.` at the beginning. This can cause
# SEO problems (duplicate content), and therefore, you should choose one
# of the alternatives and redirect the other one.

# By default `Option 1` (no `www.`) is activated.
# http://no-www.org/faq.php?q=class_b

# If you would prefer to use `Option 2`, just comment out all the lines
# from `Option 1` and uncomment the ones from `Option 2`.

# IMPORTANT: NEVER USE BOTH RULES AT THE SAME TIME!
```

```
# -----

# Option 1: rewrite www.example.com → example.com

<IfModule mod_rewrite.c>
    RewriteCond %{HTTPS} !=on
    RewriteCond %{HTTP_HOST} ^www\.(.+$) [NC]
    RewriteRule ^ http://%1%{REQUEST_URI} [R=301,L]
</IfModule>

# -----

# Option 2: rewrite example.com → www.example.com

# Be aware that the following might not be a good idea if you use "real"
# subdomains for certain parts of your website.

# <IfModule mod_rewrite.c>
#     RewriteCond %{HTTPS} !=on
#     RewriteCond %{HTTP_HOST} !^www\. [NC]
#     RewriteCond %{SERVER_ADDR} !=127.0.0.1
#     RewriteCond %{SERVER_ADDR} !=::1
#     RewriteRule ^ http://www.%{HTTP_HOST}%{REQUEST_URI} [R=301,L]
# </IfModule>

# #####
# # SECURITY #
# #####

# -----
# | Clickjacking |
# -----

# Protect website against clickjacking.

# The example below sends the `X-Frame-Options` response header with the value
# `DENY`, informing browsers not to display the web page content in any frame.

# This might not be the best setting for everyone. You should read about the
# other two possible values for `X-Frame-Options`: `SAMEORIGIN` & `ALLOW-FROM`.
# http://tools.ietf.org/html/rfc7034#section-2.1
```

```
# Keep in mind that while you could send the `X-Frame-Options` header for all
# of your site's pages, this has the potential downside that it forbids even
# non-malicious framing of your content (e.g.: when users visit your site using
# a Google Image Search results page).

# Nonetheless, you should ensure that you send the `X-Frame-Options` header for
# all pages that allow a user to make a state changing operation (e.g: pages
# that contain one-click purchase links, checkout or bank-transfer confirmation
# pages, pages that make permanent configuration changes, etc.).

# Sending the `X-Frame-Options` header can also protect your website against
# more than just clickjacking attacks: https://cure53.de/xfo-clickjacking.pdf.

# http://tools.ietf.org/html/rfc7034
# http://blogs.msdn.com/b/ieinternals/archive/2010/03/30/combating-clickjacking-with-x-
frame-options.aspx
# https://www.owasp.org/index.php/Clickjacking

# <IfModule mod_headers.c>
#     Header set X-Frame-Options "DENY"
#     <FilesMatch "\.(appcache|atom|crx|css|curl|eot|f4[abpv]|flv|gif|html|ico|jpe?
gl|js|json|ld)?
|m4[av]|manifest|map|mp4|oex|og[agv]|opus|otf|pdf|png|rdf|rss|safari-extend|svgz?
|swf|tt[cf]|vcf|vtt|webapp|web[mp]|woff|xml|xpi)$">
#         Header unset X-Frame-Options
#     </FilesMatch>
# </IfModule>

# -----
# | Content Security Policy (CSP) |
# -----

# Mitigate the risk of cross-site scripting and other content-injection attacks.

# This can be done by setting a `Content Security Policy` which whitelists
# trusted sources of content for your website.

# The example header below allows ONLY scripts that are loaded from the current
# site's origin (no inline scripts, no CDN, etc). This almost certainly won't
# work as-is for your site!
```

```

# -----

# For more details on how to craft a reasonable policy for your site, read:
# http://html5rocks.com/en/tutorials/security/content-security-policy (or the
# specification: http://w3.org/TR/CSP). Also, to make things easier, you can
# use an online CSP header generator such as: http://cspisawesome.com/.

# <IfModule mod_headers.c>
#     Header set Content-Security-Policy "script-src 'self'; object-src 'self'"
#     <FilesMatch "\.(appcache|atom|crx|css|curl|eot|f4[abpv]|flv|gif|html|icol|jpe?
gl|js|json|1d)?
|m4[av]|manifest|map|mp4|oexl|og[agv]|opus|otf|pdf|png|rdf|rss|safariextz|svgz?
|swf|tt[cf]|vcf|vtt|webapp|web[mp]|woff|xml|xpi)$">
#         Header unset Content-Security-Policy
#     </FilesMatch>
# </IfModule>

# -----
# | File access |
# -----

# Block access to directories without a default document.
# You should leave the following uncommented, as you shouldn't allow anyone to
# surf through every directory on your server (which may includes rather private
# places such as the CMS's directories).

<IfModule mod_autoindex.c>
    Options -Indexes
</IfModule>

# -----

# Block access to hidden files and directories.
# This includes directories used by version control systems such as Git and SVN.

<IfModule mod_rewrite.c>
    RewriteCond %{SCRIPT_FILENAME} -d [OR]
    RewriteCond %{SCRIPT_FILENAME} -f
    RewriteRule "(^|/)\." - [F]
</IfModule>

# -----

```

```

# -----
# Block access to files that can expose sensitive information.

# By default, block access to backup and source files that may be left by some
# text editors and can pose a security risk when anyone has access to them.
# http://feross.org/cmsploit/

# IMPORTANT: Update the `FilesMatch` regular expression from below to include
# any files that might end up on your production server and can expose sensitive
# information about your website. These files may include: configuration files,
# files that contain metadata about the project (e.g.: project dependencies),
# build scripts, etc..

<FilesMatch "(^#.#|\.|(bak|config|dist|fla|in[ci]|log|psd|sh|sql|sw[op])|")$" >

    # Apache < 2.3
    <IfModule !mod_authz_core.c>
        Order allow,deny
        Deny from all
        Satisfy All
    </IfModule>

    # Apache ≥ 2.3
    <IfModule mod_authz_core.c>
        Require all denied
    </IfModule>

</FilesMatch>

# -----
# | Reducing MIME type security risks |
# -----

# Prevent some browsers from MIME-sniffing the response.

# This reduces exposure to drive-by download attacks and cross-origin data
# leaks, and should be left uncommented, especially if the web server is
# serving user-uploaded content or content that could potentially be treated
# as executable by the browser.

# http://www.w3.org/TR/html52/semantics-scripting.html#no-sniff-attribute

```

```
# http://www.s10esnare.net/nasegawayosuke/owasp-nasegawa
# http://blogs.msdn.com/b/ie/archive/2008/07/02/ie8-security-part-v-comprehensive-protection.aspx
# http://msdn.microsoft.com/en-us/library/ie/gg622941.aspx
# http://mimesniff.spec.whatwg.org/

<IfModule mod_headers.c>
    Header set X-Content-Type-Options "nosniff"
</IfModule>

# -----
# | Reflected Cross-Site Scripting (XSS) attacks |
# -----

# (1) Try to re-enable the Cross-Site Scripting (XSS) filter built into the
# most recent web browsers.
#
# The filter is usually enabled by default, but in some cases it may be
# disabled by the user. However, in Internet Explorer for example, it can
# be re-enabled just by sending the `X-XSS-Protection` header with the
# value of `1`.
#
# (2) Prevent web browsers from rendering the web page if a potential reflected
# (a.k.a non-persistent) XSS attack is detected by the filter.
#
# By default, if the filter is enabled and browsers detect a reflected
# XSS attack, they will attempt to block the attack by making the smallest
# possible modifications to the returned web page.
#
# Unfortunately, in some browsers (e.g.: Internet Explorer), this default
# behavior may allow the XSS filter to be exploited, thereby, it's better
# to tell browsers to prevent the rendering of the page altogether, instead
# of attempting to modify it.
#
# http://hackademix.net/2009/11/21/ies-xss-filter-creates-xss-vulnerabilities
#
# IMPORTANT: Do not rely on the XSS filter to prevent XSS attacks! Ensure that
# you are taking all possible measures to prevent XSS attacks, the most obvious
# being: validating and sanitizing your site's inputs.
#
# http://blogs.msdn.com/b/ie/archive/2008/07/02/ie8-security-part-iv-the-xss-filter.aspx
# http://blogs.msdn.com/b/ie/archive/2008/07/02/ie8-security-part-iv-the-xss-filter.aspx
```

<http://blogs.msdn.com/b/ieinternals/archive/2011/01/31/controlling-the-internet-explorer-xss-filter-with-the-x-xss-protection-http-header.aspx>

https://www.owasp.org/index.php/Cross-site_Scripting_%28XSS%29

```
# <IfModule mod_headers.c>
```

```
#     #                                     (1)     (2)
```

```
#     Header set X-XSS-Protection "1; mode=block"
```

```
#     <FilesMatch "\.(appcache|atom|crx|css|curl|eot|f4[abpv]|flv|gif|html|ico|jpe?|j|j|json|ld)?
```

```
|m4[av]|manifest|map|mp4|oex|og[agv]|opus|otf|pdf|png|rdf|rss|safariextz|svgz?
```

```
|swf|tt[cf]|vcf|vtt|webapp|web[mp]|woff|xml|xpi)$">
```

```
#         Header unset X-XSS-Protection
```

```
#     </FilesMatch>
```

```
# </IfModule>
```

```
# -----  
# | Secure Sockets Layer (SSL) |  
# -----
```

```
# Rewrite secure requests properly in order to prevent SSL certificate warnings.  
# E.g.: prevent `https://www.example.com` when your certificate only allows  
# `https://secure.example.com`.
```

```
# <IfModule mod_rewrite.c>
```

```
#     RewriteCond %{SERVER_PORT} !^443
```

```
#     RewriteRule ^https://example-domain-please-change-me.com%{REQUEST_URI} [R=301,L]
```

```
# </IfModule>
```

```
# -----  
# | HTTP Strict Transport Security (HSTS) |  
# -----
```

```
# Force client-side SSL redirection.
```

```
# If a user types `example.com` in his browser, the above rule will redirect  
# him to the secure version of the site. That still leaves a window of  
# opportunity (the initial HTTP connection) for an attacker to downgrade or  
# redirect the request.
```

```
# The following header ensures that browser will ONLY connect to your server  
# via HTTPS, regardless of what the users type in the address bar.
```

```

# http://tools.ietf.org/html/draft-ietf-websec-strict-transport-sec-14#section-6.1
# http://www.html5rocks.com/en/tutorials/security/transport-layer-security/

# IMPORTANT: Remove the `includeSubDomains` optional directive if the subdomains
# are not using HTTPS.

# <IfModule mod_headers.c>
#   Header set Strict-Transport-Security "max-age=16070400; includeSubDomains"
# </IfModule>

# -----
# | Server software information                               |
# -----

# Avoid displaying the exact Apache version number, the description of the
# generic OS-type and the information about Apache's compiled-in modules.

# ADD THIS DIRECTIVE IN THE `httpd.conf` AS IT WILL NOT WORK IN THE `.htaccess`!

# ServerTokens Prod

# #####
# # WEB PERFORMANCE                                     #
# #####

# -----
# | Compression                                           |
# -----

<IfModule mod_deflate.c>

# Force compression for mangled headers.
# http://developer.yahoo.com/blogs/ydn/posts/2010/12/pushing-beyond-gzipping
<IfModule mod_setenvif.c>
  <IfModule mod_headers.c>
    SetEnvIfNoCase ^(\Accept-EncodXngl X-cept-Encodingl X(15)|^(15)|-(15))$
    ^((gzip|deflate)\s*,?\s*)+([X"]-){4,13}$ HAVE_Accept-Encoding
    RequestHeader append Accept-Encoding "gzip, deflate" env=HAVE_Accept-Encoding
  </IfModule>
</IfModule>

```

```
# Compress all output labeled with one of the following MIME-types
# (for Apache versions below 2.3.7, you don't need to enable 'mod_filter'
# and can remove the '<IfModule mod_filter.c>' and '</IfModule>' lines
# as 'AddOutputFilterByType' is still in the core directives).
```

```
<IfModule mod_filter.c>
```

```
    AddOutputFilterByType DEFLATE application/atom+xml \
                                application/javascript \
                                application/json \
                                application/ld+json \
                                application/rss+xml \
                                application/vnd.ms-fontobject \
                                application/x-font-ttf \
                                application/x-web-app-manifest+json \
                                application/xhtml+xml \
                                application/xml \
                                font/opentype \
                                image/svg+xml \
                                image/x-icon \
                                text/css \
                                text/html \
                                text/plain \
                                text/x-component \
                                text/xml
```

```
</IfModule>
```

```
</IfModule>
```

```
# -----
# | Content transformations |
# -----
```

```
# Prevent mobile network providers from modifying the website's content.
# http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html #sec14.9.5.
```

```
# <IfModule mod_headers.c>
#   Header set Cache-Control "no-transform"
# </IfModule>
```

```
# -----
# | ETags |
```

```

# -----

# Remove `ETags` as resources are sent with far-future expires headers.
# http://developer.yahoo.com/performance/rules.html#etags.

# `FileETag None` doesn't work in all cases.
<IfModule mod_headers.c>
    Header unset ETag
</IfModule>

FileETag None

# -----
# | Expires headers |
# -----

# The following expires headers are set pretty far in the future. If you
# don't control versioning with filename-based cache busting, consider
# lowering the cache time for resources such as style sheets and JavaScript
# files to something like one week.

<IfModule mod_expires.c>

    ExpiresActive on
    ExpiresDefault "access plus 1 month"

# CSS
    ExpiresByType text/css "access plus 1 year"

# Data interchange
    ExpiresByType application/json "access plus 0 seconds"
    ExpiresByType application/ld+json "access plus 0 seconds"
    ExpiresByType application/xml "access plus 0 seconds"
    ExpiresByType text/xml "access plus 0 seconds"

# Favicon (cannot be renamed!) and cursor images
    ExpiresByType image/x-icon "access plus 1 week"

# HTML components (HTCs)
    ExpiresByType text/x-component "access plus 1 month"

```

```

# HTML
ExpiresByType text/html "access plus 0 seconds"

# JavaScript
ExpiresByType application/javascript "access plus 1 year"

# Manifest files
ExpiresByType application/x-web-app-manifest+json "access plus 0 seconds"
ExpiresByType text/cache-manifest "access plus 0 seconds"

# Media
ExpiresByType audio/ogg "access plus 1 month"
ExpiresByType image/gif "access plus 1 month"
ExpiresByType image/jpeg "access plus 1 month"
ExpiresByType image/png "access plus 1 month"
ExpiresByType video/mp4 "access plus 1 month"
ExpiresByType video/ogg "access plus 1 month"
ExpiresByType video/webm "access plus 1 month"

# Web feeds
ExpiresByType application/atom+xml "access plus 1 hour"
ExpiresByType application/rss+xml "access plus 1 hour"

# Web fonts
ExpiresByType application/font-woff "access plus 1 month"
ExpiresByType application/vnd.ms-fontobject "access plus 1 month"
ExpiresByType application/x-font-ttf "access plus 1 month"
ExpiresByType font/opentype "access plus 1 month"
ExpiresByType image/svg+xml "access plus 1 month"

```

```
</IfModule>
```

```

# -----
# | Filename-based cache busting |
# -----

```

```

# If you're not using a build process to manage your filename version revving,
# you might want to consider enabling the following directives to route all
# requests such as "/css/style.12345.css" to "/css/style.css".

```

```
# To understand why this is important and a better idea than *.css?v231, read:
```

```
# http://stevesouder.com/blog/2008/08/23/rewriting-filenames-dont-use-querystring

# <IfModule mod_rewrite.c>
#   RewriteCond %{REQUEST_FILENAME} !-f
#   RewriteRule ^(.+)%(\d+)\.(js|css|png|jpe?g|gif)$ $1.$3 [L]
# </IfModule>

# -----
# | File concatenation |
# -----

# Allow concatenation from within specific style sheets and JavaScript files.

# e.g.:
#
# If you have the following content in a file
#
#   <!--#include file="libs/jquery.js" -->
#   <!--#include file="plugins/jquery.timer.js" -->
#
# Apache will replace it with the content from the specified files.

# <IfModule mod_include.c>
#   <FilesMatch "\.combined\.js$" >
#     Options +Includes
#     AddOutputFilterByType INCLUDES application/javascript application/json
#     SetOutputFilter INCLUDES
#   </FilesMatch>
#   <FilesMatch "\.combined\.css$" >
#     Options +Includes
#     AddOutputFilterByType INCLUDES text/css
#     SetOutputFilter INCLUDES
#   </FilesMatch>
# </IfModule>
```