

```

# 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.

# #####
# # 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/2011/11/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>

```

```
</ITModule>

# -----
# | 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#error.document

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|html|ico|jpe?
gl|js|json|ld)?
|m4[av]|manifest|map|mp4|oex|og[agv]|opus|otf|pdf|png|rdf|rss|safariextz|svg?
|swf|tt[cf]|vcl|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
IVAI IVDi CONi HIS OUR IND CNT\""
# </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[abpw]|flv|gif|htcl|icol|jpe?
gl|js|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-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[abpw]|flv|gif|htcl|icol|jpe?
al|is|ison|ld)?
```



```
# -----
# m4[av]| manifest| map| mp4| oexl| og[agv]| opus| otfl| pdf| png| rdf| rssl| safariextz| svgz?
# swfl| tt[cf]| vcf| vtt| webappl| 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/cmsexploit/

# 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
```

```
# This is the minimum number of files that will be scanned for 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 should be enable  
# especially if the web server is serving user uploaded content, content  
# that could potentially be treated by the browser as executable.
```

```
# 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/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|icol|jpe?  
gl|js|json|ld)?  
|m4[av]|manifest|map|mp4|oex|og[agv]|opus|otf|pdf|png|rdf|rss|safari-extend|svg?  
|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>

Redirects

```
RewriteRule ^lebenslauf.html$ /index.html#page-profile [R, NE]
RewriteRule ^talks.html$ /index.html#page-talks [R, NE]
RewriteRule ^publikationen.html$ /index.html#page-profile [R, NE]
RewriteRule ^fotos.html$ /index.html#page-photos [R, NE]
RewriteRule ^kontakt.html$ /index.html#page-contact [R, NE]
```