



request
(e.g. https://www.mysite.com/some/path)

TLS server port , supports HTTP/2 and HTTP/1.1, via ALPN. A sensible set of suites, including ChaCha20_Poly1305, enabled by default.	SOCKS5 proxy (devlove only)
---	---------------------------------------

Domain resolution and long-scope URL re-writer
e.g. https://mysite.com/some/path -> https://WWW.mysite.com/some/path/



For a given electric domain **www.mysite.com**

Short-scope URL re-writer:
https://www.mysite.com/some/path -> https://www.mysite.com/some/path/
(doesn't re-write urls whose last component contains a ".", e.g. "styles.css")

URL resolver:
https://www.mysite.com/some/dashed-path/ -> **tries rel. URLs :**
 /some/dashed-path/index.html *(no consulting)* ,
 /some/_index.html *(consulting)* ,
 /_index.html *(consulting)*
consulting may authorize the URL or trigger 404:
 /some/_404.html
 /_404.html

https://www.mysite.com/some/resource.ext -> **only tries**
 /some/resource.ext *(no consulting)* ,

HTTP/1.1 reverse proxy
(used for consulting if some URLs are valid, and for normal reverse-proxied domains)

consults if a fetch can be handled, doing a HEAD request to an external application backend, for all URLs resolved to **.../_index.html** resources.
In the future, Link headers in this response will be honored to additionally push backend-originated resources.

consultant:
external backend

"FileServer" request/response handler

Cache manager

fetch sets

apex

The diagram illustrates a 'fetch set' tree. At the root is 'index.html' (labeled 'apex'). It branches into several resources: 'page.css', 'jquery.js', 'img1.png', and 'img2.svg'. 'page.css' further branches into '@import' statements for 'fonts.css', 'layout_general.css', and 'div_styles.css'. 'layout_general.css' imports 'page_1_background.png' and 'iconset_1.png'. 'div_styles.css' imports 'utils.css', which in turn imports 'background_1.png', 'background_2.png', and 'background_3.png'. 'img1.png' imports 'component_1.html'. 'img2.svg' imports 'component_1.html'. 'component_1.html' imports 'component_1.css' and 'component_1.js'. 'component_1.js' imports 'require.js', 'framework_apex.js', and 'framework_utilities.js'. 'require.js' imports 'framework_utilities.js'. 'framework_apex.js' imports 'framework_utilities.js' and 'framework_graphics.js'.

response
(possibly including PUSHed resources)

The cache contains fetch sets and individual files, it is versioned, and it is held in a Redis database that ShimmerCat can manage automatically. Hopefully it will fuel ShimmerCat's distributed capabilities soon.

LAB instrumentation for learning about fetch sets

LAB data analysis for inferring optimal resource delivery plan

Execution of PUSH, and normal file resp. handling

