

Hypermedia and the Web

Overview of HTTP

HTTP is a request-response protocol.

HTTP/1.1 verbs:

GET
HEAD
POST
PUT
DELETE
OPTIONS
TRACE

WebDAV verbs:

COPY
MOVE
MKCOL
LOCK
UNLOCK
PROPFIND
PROPPATCH

More on these in a few weeks.

HTTP headers

General headers:

Can appear on request or response:

Date: date and time of message origination

Pragma: send directives to recipient of the message

(Pragma: no-cache – informs proxies in the path not to return a cached copy)

Request headers

Authorization: send authentication credentials

From: provide email address as identification (used by spiders, or agents)

If-Modified-Since: {date} - only send resource if modified since the given date. If resource hasn't changed, return 304 Not Modified response.

Referer: URI of the resource from which the Request-URI was obtained (source page of a link)

User-Agent: information about browser version, client machine operating system:

User-Agent: Mozilla/4.03 (Macintosh; I; 68K, Nav)

Often used by servers to provide browser-specific versions of Web pages.

Response headers:

Location: {url} – used to redirect the request to another location, or to identify where a new resource was created

Server – provides details about the server implementation

Server: Apache/1.x.y mod_perl mod_ssl mod_dav

WWW-Authenticate: used to issue a challenge to the client to provide authentication credentials

Entity headers:

Provides information about the body of the message.

Content-Type: MIME media type of the body

text/...

application/...

Content-Encoding: compression kind, if any

Content-Encoding: x-gzip

Content-Length: length of entity body, in bytes

Expires: after the given time, caches should consider the results to be stale

Last-Modified: the time at which the resource was last changed

Etag: entity tag – a unique identifier for the state of a resource

Response classes:

1xx informational

2xx success

200 OK

201 Created

3xx Redirection

301 Moved Permanently

302 Moved Temporarily

4xx client error

401 Unauthorized

403 Forbidden – often an OS permissions problem

404 Not Found – resource was deleted

5xx server errors