The Hypertext Transfer Protocol (HTTP) Status Code 308 (Permanent Redirect)
draft-reschke-http-status-308-07

Abstract

This document specifies the additional HyperText Transfer Protocol (HTTP) Status Code 308 (Permanent Redirect).

Editorial Note (To be removed by RFC Editor before publication)

Distribution of this document is unlimited. Although this is not a work item of the HTTPbis Working Group, comments should be sent to the Hypertext Transfer Protocol (HTTP) mailing list at ietf-http-wg@w3.org [1], which may be joined by sending a message with subject "subscribe" to ietf-http-wg-request@w3.org [2].

Discussions of the HTTPbis Working Group are archived at <http://lists.w3.org/Archives/Public/ietf-http-wg/>.

XML versions, latest edits, and the issues list for this document are available from <http://greenbytes.de/tech/webdav/#draft-reschke-http-status-308>.

Test cases related to redirection in general and the status code 308 in particular can be found at <http://greenbytes.de/tech/tc/httpredirects/#l-308>.

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1. Introduction

HTTP defines a set of status codes for the purpose of redirecting a request to a different URI ([RFC3986]). The history of these status codes is summarized in Section 7.3 of [draft-ietf-httpbis-p2-semantics], which also classifies the existing status codes into four categories.

The first of these categories contains the status codes 301 (Moved Permanently), 302 (Found), and 307 (Temporary Redirect), which can be classified as below:

+-------------------------------------------+-----------+-----------+
|                                           | Permanent | Temporary |
+-------------------------------------------+-----------+-----------+
| Allows changing the request method from   | 301       | 302       |
| POST to GET                               |           |           |
| Does not allow changing the request       | -         | 307       |
| method from POST to GET                   |           |           |
+-------------------------------------------+-----------+-----------+

Section 7.3.7 of [draft-ietf-httpbis-p2-semantics] states that HTTP does not define a permanent variant of status code 307; this specification adds the status code 308, defining this missing variant (Section 3).

2. Notational Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

3. 308 Permanent Redirect

The target resource has been assigned a new permanent URI and any future references to this resource SHOULD use one of the returned URIs. Clients with link editing capabilities ought to automatically re-link references to the effective request URI (Section 5.5 of [draft-ietf-httpbis-p1-messaging]) to one or more of the new references returned by the server, where possible.

Caches MAY use a heuristic (see [draft-ietf-httpbis-p6-cache], Section 2.3.1.1) to determine freshness for 308 responses.

The new permanent URI SHOULD be given by the Location field in the response ([draft-ietf-httpbis-p2-semantics], Section 10.5). A response payload can contain a short hypertext note with a hyperlink to the new URI(s).
Note: This status code is similar to 301 Moved Permanently (Section 7.3.2 of [draft-ietf-httpbis-p2-semantics]), except that it does not allow rewriting the request method from POST to GET.

4. Deployment Considerations

Section 4 of [draft-ietf-httpbis-p2-semantics] requires recipients to treat unknown 3xx status codes the same way as status code 300 Multiple Choices ([draft-ietf-httpbis-p2-semantics], Section 7.3.1). Thus, servers will not be able to rely on automatic redirection happening similar to status codes 301, 302, or 307.

Therefore, initial use of status code 308 will be restricted to cases where the server has sufficient confidence in the clients understanding the new code, or when a fallback to the semantics of status code 300 is not problematic. Server implementers are advised not to vary the status code based on characteristics of the request, such as the User-Agent header field ("User-Agent Sniffing") -- doing so usually results in both hard to maintain and hard to debug code and would also require special attention to caching (i.e., setting a "Vary" response header field, as defined in Section 3.5 of [draft-ietf-httpbis-p6-cache]).

Note that many existing HTML-based user agents will emulate a refresh when encountering an HTML <meta> refresh directive ([HTML]). This can be used as another fallback. For example:

Client request:

GET / HTTP/1.1
Host: example.com
Server response:

HTTP/1.1 308 Permanent Redirect
Content-Type: text/html; charset=UTF-8
Location: http://example.com/new
Content-Length: 454

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
<html>
  <head>
    <title>Permanent Redirect</title>
    <meta http-equiv="refresh" content="0; url=http://example.com/new">
  </head>
  <body>
    The document has been moved to
  </body>
</html>

5. Security Considerations

All security considerations that apply to HTTP redirects apply to the
308 status code as well (see Section 12 of [draft-ietf-httpbis-p2-semantics]).

6. IANA Considerations

The registration below shall be added to the HTTP Status Code
Registry (defined in Section 4.2 of [draft-ietf-httpbis-p2-semantics]
and located at <http://www.iana.org/assignments/http-status-codes>):

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>308</td>
<td>Permanent Redirect</td>
<td>Section 3 of this specification</td>
</tr>
</tbody>
</table>

7. Acknowledgements

The definition for the new status code 308 re-uses text from the
HTTP/1.1 definitions of status codes 301 and 307.

Furthermore, thanks to Ben Campbell, Cyrus Daboo, Eran Hammer-Lahav,
8. References

8.1. Normative References


8.2. Informative References


Appendix A. Implementations (to be removed by RFC Editor before publication)


Curl (the library): no change was needed (test case: <https://github.com/bagder/curl/blob/master/tests/data/test1325>).

Firefox: now in "nightly" builds, scheduled for release in Firefox 14 (see <https://bugzilla.mozilla.org/show_bug.cgi?id=714302>).

Safari: automatically redirects 3xx status codes when a Location header field is present, but does not preserve the request method.

Appendix B. Change Log (to be removed by RFC Editor before publication)

B.1. Since draft-reschke-http-status-308-00

Updated HTTPbis reference. Added Appendix A. Added and resolved issue "refresh".

B.2. Since draft-reschke-http-status-308-01

Added URI spec reference.

B.3. Since draft-reschke-http-status-308-02

Tune HTML example. Expand "Implementations" section. Added and resolved issue "respformat" (align with new proposed text for 307 in HTTPbis P2).

B.4. Since draft-reschke-http-status-308-03

Added and resolved issue "uaconfirm".

B.5. Since draft-reschke-http-status-308-04

Added and resolved issue "missingconsiderations". Added request message to example. Updated the Safari implementation note.
B.6. Since draft-reschke-http-status-308-05

Add informative HTML reference. Update HTTPbis references.

B.7. Since draft-reschke-http-status-308-06

Added and resolved issues "consistency307" and "sniffing". Updated Firefox implementation status.

Appendix C. Resolved issues (to be removed by RFC Editor before publication)

Issues that were either rejected or resolved in this version of this document.

C.1. consistency307

In Section 3:

Type: edit

ben@nostrum.com (2012-03-16): The 307 definition includes an explicit post about that behavior not being allowed. Section 3 of this doc does neither.

Resolution: Import (part of the) note from status code 307 description.

C.2. sniffing

In Section 4:

Type: edit

rjsparks@nostrum.com (2012-03-15): Would it be worth adding something to the draft explicitly discouraging UA sniffing? A reference to something that already explores why that’s not a good idea perhaps?

Resolution: Add advice not to attempt UA sniffing.

Appendix D. Open issues (to be removed by RFC Editor prior to publication)

D.1. edit

Type: edit

julian.reschke@greenbytes.de (2011-04-15): Umbrella issue for
editorial fixes/enhancements.

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