**The Hypertext Transfer Protocol (HTTP) Status Code 308 (Permanent
                          Redirect)
               draft-reschke-http-status-308-05**

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>.

Status of This Memo

   This Internet-Draft is submitted in full conformance with the
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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 7.3.8 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 4.3 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 9.5). A
response payload can contain a short hypertext note with a hyperlink
to the new URI(s).

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.

   Note that many existing HTML-based user agents will emulate a refresh
   when encountering an HTML <meta> refresh directive. 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>
           <p>
              The document has been moved to
              <a href="http://example.com/new"
              >http://example.com/new.
           </p>
        </body>
     </html>

5. Security Considerations

All security considerations that apply to HTTP redirects apply to the
308 status code as well (see Section 11 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>):

```
+-------+--------------------+-------------------------------+
| Value | Description        | Reference                     |
+-------+--------------------+-------------------------------+
| 308   | Permanent Redirect | Section 3 of this specification |
+-------+--------------------+-------------------------------+
```

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 Cyrus Daboo, Bjoern Hoehrmann, Subramanian
Moonesamy, and Peter Saint-Andre for feedback on this document.

8. Normative References

[RFC2119]   Bradner, S., "Key words for use in
                                 RFCs to Indicate Requirement
                                 Levels", BCP 14, RFC 2119,
                                 March 1997.

[RFC3986]   Berners-Lee, T., Fielding, R., and
                                 L. Masinter, "Uniform Resource
                                 Identifier (URI): Generic Syntax",
                                 STD 66, RFC 3986, January 2005.

[draft-ietf-httpbis-p1-messaging] Fielding, R., Ed., Gettys, J.,
                                 Mogul, J., Frystyk, H., Masinter,
                                 L., Leach, P., Berners-Lee, T.,
                                 Lafon, Y., Ed., and J. Reschke,
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                                 Connections, and Message Parsing",
                                 draft-ietf-httpbis-p1-messaging-18
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[draft-ietf-httpbis-p2-semantics] Fielding, R., Ed., Gettys, J.,

                                    Mogul, J., Frystyk, H., Masinter,
                                    L., Leach, P., Berners-Lee, T.,
                                    Lafon, Y., Ed., and J. Reschke,
                                    Ed., "HTTP/1.1, part 2: Message
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                                    draft-ietf-httpbis-p2-semantics-18
                                    (work in progress), January 2012.

   [draft-ietf-httpbis-p6-cache]   Fielding, R., Ed., Gettys, J.,
                                    Mogul, J., Frystyk, H., Masinter,
                                    L., Leach, P., Berners-Lee, T.,
                                    Lafon, Y., Ed., Nottingham, M.,
                                    Ed., and J. Reschke, Ed.,
                                    "HTTP/1.1, part 6: Caching",
                                    draft-ietf-httpbis-p6-cache-18
                                    (work in progress), January 2012.

   [1]   <mailto:ietf-http-wg@w3.org>

   [2]   <mailto:ietf-http-wg-request@w3.org?subject=subscribe>

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

   Chrome: Feature requested in Chromium Issue 109012
   (<http://code.google.com/p/chromium/issues/detail?id=109012>).

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

   Firefox: Feature requested in Bugzilla bug 714302
   (<https://bugzilla.mozilla.org/show_bug.cgi?id=714302>), patch
   available.

   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.

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. **missingconsiderations**

   In Section 3:

   Type: change

   stpeter@stpeter.im (2012-02-10): According to HTTPbis Part 2, need to
   explain the request conditions, interactions with response headers,
   and implications for caches. If certain default behavior is assumed,
   it would be good to make that explicit.

   Resolution (2012-02-13): Added missing caching considerations.

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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