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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>.

Status of This Memo

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Internet-Draft

HTTP Status Code 308

March 2012

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Table of Contents

1.	Introduction	3
2.	Notational Conventions	3
3.	308 Permanent Redirect	3
4.	Deployment Considerations	4
5.	Security Considerations	5
6.	IANA Considerations	5
7.	Acknowledgements	5
8.	References	6
8.1.	Normative References	6
8.2.	Informative References	6
Appendix A.	Implementations (to be removed by RFC Editor before publication)	7
Appendix B.	Change Log (to be removed by RFC Editor before publication)	7
B.1.	Since draft-reschke-http-status-308-00	7
B.2.	Since draft-reschke-http-status-308-01	7
B.3.	Since draft-reschke-http-status-308-02	7
B.4.	Since draft-reschke-http-status-308-03	7
B.5.	Since draft-reschke-http-status-308-04	7
B.6.	Since draft-reschke-http-status-308-05	8
B.7.	Since draft-reschke-http-status-308-06	8
Appendix C.	Resolved issues (to be removed by RFC Editor before publication)	8
C.1.	consistency307	8

C.2.	sniffing	8
Appendix D.	Open issues (to be removed by RFC Editor prior to publication)	8
D.1.	edit	8

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 [\[draft-ietf-httpbis-p2-semantic\]](#), 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 POST to GET	301	302
Does not allow changing the request method from POST to GET	-	307

Section 7.3.7 of [\[draft-ietf-httpbis-p2-semantic\]](#) 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-semantic](#)], [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-semantic](#)]), except that it does not allow rewriting the request method from POST to GET.

4. Deployment Considerations

Section 4 of [[draft-ietf-httpbis-p2-semantic](#)] requires recipients to treat unknown 3xx status codes the same way as status code 300 Multiple Choices ([[draft-ietf-httpbis-p2-semantic](#)], [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

Reschke

Expires September 27, 2012

[Page 4]

Internet-Draft

HTTP Status Code 308

March 2012

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</a>.
    </p>
  </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-semantic](#)]).

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-semantic](#)] 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 Ben Campbell, Cyrus Daboo, Eran Hammer-Lahav,

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

8. References

8.1. 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., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 1: URIs, Connections, and Message Parsing", [draft-ietf-httpbis-p1-messaging-19](#) (work in progress), March 2012.

[[draft-ietf-httpbis-p2-semantics](#)] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 2: Message Semantics", [draft-ietf-httpbis-p2-semantics-19](#) (work in progress), March 2012.

[[draft-ietf-httpbis-p6-cache](#)] Fielding, R., Ed., Lafon, Y., Ed., Nottingham, M., Ed., and J. Reschke, Ed., "HTTP/1.1, part 6: Caching", [draft-ietf-httpbis-p6-cache-19](#) (work in progress), March 2012.

[8.2](#). Informative References

[HTML] Raggett, D., Le Hors, A., and I. Jacobs, "HTML 4.01 Specification", W3C Recommendation REC-html401-19991224, December 1999, <<http://www.w3.org/TR/1999/REC-html401-19991224>>.

Latest version available at <<http://www.w3.org/TR/html401>>.

Reschke

Expires September 27, 2012

[Page 6]

Internet-Draft

HTTP Status Code 308

March 2012

URIs

[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: 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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