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An HTTP Status Code to Indicate Request Noncomformity While Still Making Best-Effort Response
draft-sbarta-tolerating-00

Abstract

This document specifies a Hypertext Transfer Protocol (HTTP) status code for use when resource was accessed in a nonconforming manner but the request will be tolerated with reservation, while directing the client adhere to relevant protocols.

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1. Introduction

This document specifies Hypertext Transfer Protocol (HTTP) status code "397 Tolerating" for use when a server operator has received a request that violates standards for making such a request, but which the server will respond to under best-faith interpretation of client intent.

This status code can be used to alert clients of their standards breakage and the potential that future requests of this type might not be handled as desired by this or other internet servers in the future.

[RFC793] Section 2.10 discusses the Robustness Principle under which one should be liberal in what one accepts; in keeping with that principle, servers should make a best effort to handle non-conforming requests; this status code additionally provides a way to communicate to the client that it is doing so, and how to avoid potential breakage in the future.

2. Requirements

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. 397 Tolerating

This status code indicates that the server has found a standards violation in the client request, but will respond in good faith anyway to the most likely intended conforming request.

Responses using this status code SHOULD include an explanation, in the header, of the details of the standards breakage; what the client sent, versus what the client should have sent. For example:

```
HTTP/1.1 397 Tolerating
Link: <https://www.example.org/news>;
Content-Type: text/html
Request-Nonconformity: This request used the HTTP header "Referrer",
  which is most likely intended to be the standard HTTP header
  "Referer"; request will be handled on this assumption, and the
  client is advised to update code to "Referer" for future requests.
Request-Nonconformant-Part: Referrer: http://search.example.com
Request-Interpreted-As: Referer: http://search.example.com
Tolerated-Until: Fri, 30 Apr 2025 06:05:18 GMT
```

The use of the 397 status code does not imply an obligation to tolerate the nonconformity in the future. Servers MAY specify the tolerance’s ending time with the Tolerated-Until response header.

Clients SHOULD monitor their server logs for computer-initiated API requests in order to detect 397 responses and appropriately update their software in order to conform with relevant RFCs.

A 397 response MUST be followed by another HTTP response, similar to other 300-series HTTP status codes, where such response makes the best guess at what the client intended; in the example above, that would be the response the client would have received from "Referer".

4. IANA Considerations

The HTTP Status Codes Registry has been updated with the following entry:

- Code: 397
- Description: Tolerating
- Specification: RFC 8969

The Standard Header Registry has been updated with the following entries:

4.1. Request-Nonconformity

- Header Name: Request-Nonconformity
- Description: Human-readable explanation about what is wrong with the request.
- Reference: RFC 8969

4.2. Request-Nonconformant-Part

- Header Name: Request-Nonconformant-Part
- Description: Repeats back the part of the request that is non-conforming.
- Reference: RFC 8969

4.3. Request-Interpreted-As

- Header Name: Request-Interpreted-As
- Description: The corrected version of the non-conformant part that the server will interpret the request as.
- Reference: RFC 8969

4.4. Tolerated-Until

- Header Name: Tolerated-Until
- Description: The date and time, formatted per [RFC9110], after which the server will stop thusly correcting this request error.
- Reference: RFC 8969

4.5. Advisory

- Header Name: Advisory
- Description: Human-readable advice for the client regarding adaptation to relevant RFCs.
- Reference: RFC 8969

6. References

6.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <http://www.rfc-editor.org/info/rfc2119>.

[RFC9110] Fielding, R., Ed., and J. Reschke, Ed., "Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content", RFC 9110, DOI 10.17487/RFC79110, June 2014, <https://www.rfc-editor.org/info/rfc9110>.

6.2. Informative References

[RFC793] Postel, J., "DoD standard Transmission Control Protocol", RFC 793, DOI 10.17487/RFC0761, January 1980, <https://www.rfc-editor.org/info/rfc793>.

[RFC1122] Braden, R., Ed., "Requirements for Internet Hosts - Communication Layers", STD 3, RFC 1122, DOI 10.17487/RFC1122, October 1989, <https://www.rfc-editor.org/info/rfc1122>.

7. Security Considerations

XXX Todo

8. Acknowledgements

Thanks to the field of numerology for providing 97 as the number for tolerance.

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