

Carrying Q.850 Codes in Reason Header Fields in SIP (Session Initiation Protocol) Responses

Abstract

Although the use of the SIP (Session Initiation Protocol) Reason header field in responses is considered in general in RFC 3326, its use is not specified for any particular response code. Nonetheless, existing deployments have been using Reason header fields to carry failure-related Q.850 cause codes in SIP responses to INVITE requests that have been gatewayed to Public Switched Telephone Network (PSTN) systems. This document normatively describes the use of the Reason header field in carrying Q.850 cause codes in SIP responses.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <http://www.rfc-editor.org/info/rfc6432>.

Copyright Notice

Copyright (c) 2011 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

This document may contain material from IETF Documents or IETF Contributions published or made publicly available before November 10, 2008. The person(s) controlling the copyright in some of this material may not have granted the IETF Trust the right to allow modifications of such material outside the IETF Standards Process. Without obtaining an adequate license from the person(s) controlling the copyright in such materials, this document may not be modified outside the IETF Standards Process, and derivative works of it may not be created outside the IETF Standards Process, except to format it for publication as an RFC or to translate it into languages other than English.

Table of Contents

| | |
|----------------------------------|---|
| 1. Overview | 2 |
| 2. Terminology | 2 |
| 3. Applicability | 3 |
| 4. Security Considerations | 3 |
| 5. Acknowledgments | 3 |
| 6. Normative References | 3 |

1. Overview

Although the use of the SIP (Session Initiation Protocol) Reason header field in responses is considered in general in RFC 3326 [RFC3326], its use is not specified for any particular response code. Nonetheless, existing deployments have been using Reason header fields to carry failure-related Q.850 [Q.850] cause codes in SIP responses to INVITE requests that have been gatewayed to PSTN systems. This document normatively describes the use of the Reason header field in SIP responses to carry Q.850 [Q.850] cause codes.

2. Terminology

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].

This document uses terms from [RFC3261].

3. Applicability

This document allows SIP responses to carry Reason header fields as follows:

Any SIP Response message, with the exception of a 100 (Trying), MAY contain a Reason header field with a Q.850 [Q.850] cause code.

The Reason header field is not needed in the 100 (Trying) responses, since they are transmitted hop by hop, not end to end. SIP responses with Reason header fields carrying values other than Q.850 [Q.850] cause codes are outside of the scope of this document.

4. Security Considerations

This specification allows the presence of the Reason header field containing Q.850 [Q.850] cause codes in responses. The presence of the Reason header field in a response does not affect the treatment of the response. Nevertheless, there could be situations where a wrong Q.850 [Q.850] cause code could, for example, cause an announcement system to play the wrong information. To avoid such situations, it is RECOMMENDED that this header field be protected by a suitable integrity mechanism. The use of transport- or network-layer hop-by-hop security mechanisms, such as Transport Layer Security (TLS) or IPsec with appropriate cipher suites, can satisfy this requirement.

5. Acknowledgments

Thanks to Gonzalo Camarillo and Mary Barnes for the detailed review of this document.

Thanks to Paul Kyzivat, Mary Barnes, John Elwell, Keith Drage, and Thomas Belling, who provided helpful comments, feedback, and suggestions.

6. Normative References

- [Q.850] "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part", ITU Recommendation Q.850, May 1998.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

- [RFC3261] Rosenberg, J., Schulzrinne, H., Camarillo, G., Johnston, A., Peterson, J., Sparks, R., Handley, M., and E. Schooler, "SIP: Session Initiation Protocol", RFC 3261, June 2002.
- [RFC3326] Schulzrinne, H., Oran, D., and G. Camarillo, "The Reason Header Field for the Session Initiation Protocol (SIP)", RFC 3326, December 2002.

Authors' Addresses

Roland Jesske
Deutsche Telekom
Heinrich-Hertz-Strasse 3-7
Darmstadt 64307
Germany

Phone: +4961515812766
EMail: r.jesske@telekom.de

Laura Liess
Deutsche Telekom
Heinrich-Hertz-Strasse 3-7
Darmstadt 64307
Germany

Phone: +4961515812761
EMail: L.Liess@telekom.de