Update to Private Header Field P-Visited-Network-ID in Session Initiation Protocol (SIP) Requests and Responses
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Abstract

The Third Generation Partnership Project (3GPP) has identified cases where the private header field P-Visited-Network-ID SIP private header extensions, which is defined in RFC 7315 and updated by RFC 7976, needs to be included in SIP requests and responses. This document updates RFC 7976, in order to allow inclusion of the P-Visited-Network-ID header field in responses.

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1. Introduction

The Third Generation Partnership Project (3GPP) has identified cases where different Session Initiation Protocol (SIP) [RFC3261] private header extensions referred to as "P-" header fields, and defined in [RFC7315], need to be included in SIP requests and responses which is currently not allowed according to [RFC7315]. This document updates [RFC7315], to allow the inclusion of the affected "P-" header fields in such requests and responses. This document also makes updates for [RFC7976] to fix misalignments that occurred when [RFC7315] was updated for specific "P-" header fields which are mainly used in (and in most cases, only defined for) networks defined by the 3GPP. The updates defined in this document will not cause backward-compatibility problems in 3GPP networks which are using [TS.3GPP.24.229].

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].

3. Applicability of P-Visited-Network-ID in responses

In [RFC7976] section 3. "Updates to RFC 7315" the P-Visited-Network-ID header field was restricted to the following: The P-Visited-Network-ID header field can appear in all SIP methods except ACK, BYE, CANCEL, NOTIFY, PRACK, INFO, and UPDATE. This document allows the use of the P-Visited-Network-ID header field additionally within Responses as follows: Any SIP Response message, except for a 100 (Trying), MAY contain a P-Visited-Network-ID header field. The P-Visited-Network-ID header field is not needed in the 100 (Trying) responses, since they are transmitted hop by hop, not end to end.
4. Security Considerations

The security considerations for these "P-" header fields are defined in [RFC7315]. This specification allows some header fields to be present in messages where they were previously not allowed, and the security considerations and assumptions described in [RFC7315] (e.g., regarding only sending information to trusted entities) also apply to those messages. That does not cause any security issues, but implementors need to be aware that implementations may not have been updated according to this document, and take proper actions if a header field does not occur, in a message where it should occur or occurs in a message where it should not occur. The security and privacy considerations for the P-Visited-Network-ID header field are similar to those for the other SIP responses discussed in [RFC7315].

5. Acknowledgments

The author would like to acknowledge the constructive feedback provided by Michael Kreipl

6. Normative References


3rd Generation Partnership Project, "3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3", TS 24.229, V 14.4.0, March 2017.

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