SIMPLE Working Group
Internet-Draft
Updates: RFC 4975
(if approved)
Expires: May 22, 2010

C. Holmberg
Ericsson
S. Blau
Ericsson AB
November 18, 2009

Sesstion Matching Update for the Message Session Relay Protocol (MSRP)
draft-holmberg-simple-msrp-sessmatch-00.txt

Abstract

This document updates the session matching procedure defined in section 7.3 of RFC 4975, so that an MSRP UA only uses the session-id part of the MSRP URI in order to perform the consistency checks. The update allows intermediate network entities (ALGs) to modify the address information in the MSRP URI of the SDP a=path attribute, without the need for the intermediate to terminate and do the correlating modifications in the associated MSRP messages.

Status of this Memo

This Internet-Draft is submitted to IETF in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at http://www.ietf.org/ietf/1id-abstracts.txt.

The list of Internet-Draft Shadow Directories can be accessed at http://www.ietf.org/shadow.html.

This Internet-Draft will expire on May 22, 2010.

Copyright Notice

Copyright (c) 2009 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 BSD License.

Table of Contents

1. Introduction 3
2. Conventions 3
3. Applicability statement 3
4. Normative update of RFC 4975 3
4.1. General 4
4.2. RFC4975: 7.3 Receiving Requests 4
5. Security Considerations 4
6. IANA Considerations 4
7. Acknowledgements 5
8. References 5
8.1. Normative References 5
8.2. Informative References 5
Authors' Addresses 5

1. Introduction

MSRP [RFC4975] is designed to use MSRP relays [RFC4976] as a means for NAT traversal and policy enforcement.

Many networks in which MSRP usage is emerging also contain generic ALGs, which might control media relays and perform tasks such as performance monitoring, lawful intercept, address domain bridging, interconnect SLA policy enforcement, etc. An example here is the Interconnect Border Control Function (IBCF) [3GPP TS23.228] defined by 3GPP, which controls a media relay that handles all types of SIP session media (voice, video, MSRP, etc).

Due to the fact that MSRP UAs check consistence between address information in the MSRP messages and in the SDP a=path attribute, this forces the IBCF/media relay to act as an SDP aware MSRP B2BUA, whereas for basically all other UDP and TCP transported based media sessions it can acts as an SDP aware Relay- NAPT - which is much simpler than having to act as an MSRP B2BUA.

In order to use general NAT traversal methods, an ALGs, this document updates the session matching procedures defined in section 7.3 of [RFC4975], so that MSRP endpoints only use the session-id part when they compare the MSRP URI in the SDP a=path attribute with the corresponding MSRP URI in MSRP messages.

2. 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 BCP 14, RFC 2119 [RFC2119].

3. Applicability statement

This document updates section 7.3 (Receiving Requests) of [RFC4975]. An MSRP UA MUST implement the procedures defined in this document in order to interwork with remote MSRP UAs in a network where intermediate network entities might modify the address information in the MSRP URI of the SDP a=path attribute.

4. Normative update of RFC 4975

4.1. General

This section defines the updated text for section 7.3 (Receiving Requests) of [RFC4975].

4.2. RFC4975: 7.3 Receiving Requests

The receiving endpoint MUST first check the URI in the To-Path to make sure the request belongs to an existing session. When the request is received, the To-Path will have exactly one URI, of which the session-id component MUST map to an existing session that is associated with the connection on which the request arrived. If this is not true, then the receiver MUST generate a 481 error and ignore the request. Note that if the Failure-Report header field had a value of "no", then no error report would be sent.

5. Security Considerations

Due to the change of the session matching procedure, MSRP endpoints can only check that the session-id part of the MSRP URI carried in the MSRP messages matches the session-id which was provided in the associated SDP a=path attribute. Differing from [RFC4975], the host/domain part of the MSRP URI is thus not checked. However, since a man-in-the-middle would in any case be able to modify the domain information in both the SDP and the MSRP messages, this does not introduce any new security risk.

Even if MSRP entities do not use the MSRP URI domain part to perform session matching, if the domain information is different in the SDP a=path attribute and the associated MSRP messages the MSRP entities might be able to determine whether one or more intermediates have been inserted in the message path. With the current session matching procedures, intermediates would have to modify both the domain part of the MSRP URI both in the SDP a=path attribute and the associated MSRP messages, which means that MSRP entities cannot compare the domain information in order to determine whether intermediates have been inserted in the message path.

When intermediates are used, MSRP endpoints which uses security mechanisms might not be able to determine whether security is provided end-to-end. However, that issue is generic to all types of media.

6. IANA Considerations

This document updates section 7.3 of [RFC4975]

7. Acknowledgements

Thanks to Ben Campbell, Remi Denis-Courmont, Nancy Greene, Hadriel Kaplan, Adam Roach and Robert Sparks for their guidance and input in order to produce 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.

[RFC2606] Eastlake, D. and A. Panitz, "Reserved Top Level DNS Names", BCP 32, RFC 2606, June 1999.

[RFC3323] Peterson, J., "A Privacy Mechanism for the Session Initiation Protocol (SIP)", RFC 3323, November 2002.

[RFC4572] Lennox, J., "Connection-Oriented Media Transport over the Transport Layer Security (TLS) Protocol in the Session Description Protocol (SDP)", RFC 4572, July 2006.

[RFC4975] Campbell, B., Mahy, R., and C. Jennings, "The Message Session Relay Protocol (MSRP)", RFC 4975, September 2007.

[RFC4976] Jennings, C., Mahy, R., and A. Roach, "Relay Extensions for the Message Sessions Relay Protocol (MSRP)", RFC 4976, September 2007.

8.2. Informative References

Authors' Addresses

Christer Holmberg
Ericsson
Hirsalantie 11
Jorvas 02420
Finland

Email: christer.holmberg@ericsson.com

Staffan Blau
Ericsson AB
P.O Box 407
Sweden

Email: staffan.blau@ericsson.com