Network Working Group   C. Boulton
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        A Session Description Protocol (SDP) Control Package Attribute
           draft-boulton-mmusic-sdp-control-package-attribute-07

Abstract

   This document defines a new Session Description Protocol (SDP) media-
   level attribute: "ctrl-package". The "ctrl-package" attribute
   conveys details of the SIP Control Framework extension packages that
   are supported by a client participating in an offer/answer exchange.

Status of this Memo

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

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1. Introduction

The MEDIACTRL work group of the IETF has defined a Media Control
Channel Framework[I-D.boulton-sip-control-framework]. The Media
Control Channel Framework introduces the concept of Control Packages
which are extensions to the core connection framework. The Control
Package extension documents allow for the base mechanism to be
extended for specific usages, in a similar way that RFC 3265
[RFC3265] has 'Event Packages'. A good example is the Basic IVR
Control Package[I-D.boulton-ivr-control-package] that is also defined
by the MEDIACTRL work group for basic Interactive Voice Response.

Control Packages are identified using a unique registered token in a
similar mechanism to other IETF technologies such as RFC 3265
[RFC3265]. The core Media Control Channel Framework provides a
dynamic, session level negotiation mechanism to decide on a common
set of Control Packages that are supported by both clients
participating in a control framework session. A mechanism does not
exist for clients to identify SIP Control Packages supported before
the control channel has been established.

This specification defines the SDP 'ctrl-package' media-level
attribute which provides an indication of Control Package extensions
that are supported.

2. Conventions and Terminology

In this document, BCP 14/RFC 2119 [RFC2119] defines the key words
"MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD",
"SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and
"OPTIONAL". In addition, BCP 15 indicates requirement levels for
compliant implementations.

3. **The Ctrl-Package Attribute**

   This specification defines a new media-level value attribute: 'ctrl-
   package'. Its formatting in SDP is described by the following
   ABNF[RFC5234].

ctrl-package-attribute = "a=ctrl-package:" 1*(SP ctrl-package-name) CRLF

    ctrl-package-name = token

             token = 1*(token-char)

        token-char = %x21 / %x23-27 / %x2A-2B / %x2D-2E / %x30-39
                     / %x41-5A / %x5E-7E

   The token-char and token elements are defined in RFC 4566 [RFC4566]
   but included here to provide support for the implementer of this SDP
   feature.

   The values of a 'ctrl-package' attribute consists of a token that has
   been appropriately defined by the Media Control Channel Framework
   extension procedures for Control packages. This includes appropriate
   registration. The 'ctrl-package' attribute serves as a complimentary
   mechanism to the Control Package extension negotiation mechanism that
   is defined in the Media Control Channel Framework. It serves as an
   initial hint to the negotiating endpoints on exactly what Control
   Packages are supported when creating a new control channel. This can
   be beneficial both from a resource allocation perspective and it
   could also result in two clients identifying they are not capable of
   successful control channel interactions. This would lead to early
   abandonment of control channel setup (for example, a client may
   choose to terminate the associated SIP dialog and not attempt to make
   the connection).

   It should be noted that the 'ctrl-package' attribute does not have
   any context outside the creation of a control channel using the Media
   Control Channel Framework. It is simply to provide two Media Control
   Framework clients an opportunity to convey supported Control
   Packages. The Media Control Channel Framework has its own dynamic
   negotiation mechanism that is used to negotiate session level
   supported Control Packages. Allowing such additional semantics
   during an active Control Framework session would result in confusing
   and conflicting operation. For this reason, the 'ctrl-package'
   attribute MUST only be used in association with the value of 'new'
   defined for the 'connection' attribute in the COMEDIA[RFC4145]
   specification. This ensures that no conflicts take place between the

signalling layer and the underlying media control channel. Once a
control channel has been established, the 'ctrl-package' attribute
(and changes to it) has no impact on the Media Control Channel
Framework session and should be ignored.

4. **The Ctrl-Package Attribute in the Offer/Answer Model**

   This specification does not define a means to discover whether or not
   the peer endpoint understands the 'ctrl-package' attribute because
   values contained in the attribute are informative and only intended
   as a hint at the offer/answer level.

   At the offer/answer level, the fact that an offer does not contain a
   'ctrl-package' attribute does not imply that the answer should not
   contain one. As a result, this also implies that an offer containing
   a 'ctrl-package' attribute does not imply that the answer should
   contain one.

5. **Example**

   The following is an example of an SDP session description that uses
   the 'ctrl-package' attribute:

     v=0
     o=originator 2890844526 2890842808 IN IP4 controller.example,com
     s=-
     i=A demo of the ctrl-package attribute
     c=IN IP4 controller.example.com
     t=0 0
     m=application 7575 TCP/ESCS
     a=setup:active
     a=connection:new
     a=ctrl-package:msc-basic-ivr/1.0

6. Security Considerations

Security Considerations to be included in later versions of this
document.

[7](#). IANA Considerations

Contact name: Chris Boulton cboulton@avaya.com.

Attribute name: "ctrl-package".

Type of attribute   Media level.

Subject to charset: Not.

Purpose of attribute: The 'ctrl-package' attribute indicates
supported Sip Control Framework extension documents that are
supported in an associated media session.

Allowed attribute values: A token.

8. Acknowledgments

   The authors would like to thank....

9. References

9.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate
           Requirement Levels", BCP 14, RFC 2119, March 1997.

[RFC4145] Yon, D. and G. Camarillo, "TCP-Based Media Transport in
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           Description Protocol", RFC 4566, July 2006.

[RFC5234] Crocker, D. and P. Overell, "Augmented BNF for Syntax
           Specifications: ABNF", STD 68, RFC 5234, January 2008.

9.2. Informative References

[I-D.boulton-ivr-control-package]
           Boulton, C., Melanchuk, T., and S. McGlashan, "A Basic
           Interactive Voice Response (IVR) Control Package for the
           Media Control Channel Framework",
           draft-boulton-ivr-control-package-06 (work in progress),
           February 2008.

[I-D.boulton-sip-control-framework]
           Boulton, C., "A Control Framework for the Session
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[RFC3265] Roach, A., "Session Initiation Protocol (SIP)-Specific
           Event Notification", RFC 3265, June 2002.

Author's Address

   Chris Boulton
   NS-Technologies

   Email: chris@ns-technologies.com