

INTERNET-DRAFT
Intended Status: Standards Track
Expires: March 30, 2013

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September 26, 2012

**Conference Focus Indicating CCMP Support
draft-yusef-dispatch-ccmp-indication-01**

Abstract

The Centralized Conferencing Manipulation Protocol document defines a way for a client to discover a conference control server that supports CCMP. However, it does not define a way for a client involved in a conference to determine if the conference focus supports CCMP. This information would allow a CCMP-enabled client that joins a conference using SIP to also register for the XCON conference event package and take advantage of CCMP operations on the conference.

This draft describes a few options to address the above limitation with the pros and cons for each approach, and recommends two to be used depending on the need of the UA.

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1 Introduction

[RFC 5239](#) defines a framework for Centralized Conferencing, which allows participants to exchange media in a centralized unicast conference. The framework also outlines a set of conferencing protocols for building advanced conferencing applications.

The CCMP protocol [[RFC 6503](#)] allows authenticated and authorized users to create, manipulate and delete conference objects. Operations on conferences include adding and removing participants, changing their roles, as well as adding and removing media streams and associated end points.

The CCMP protocol defines a way for a client to determine if a conference control server supports CCMP, but it does not define a way for a client to determine if a conference focus supports CCMP.

This document defines two mechanisms to address the above limitation. Other mechanisms that we considered are listed in [Appendix A](#).

1.1 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 [RFC 2119](#) [[RFC2119](#)].

[2](#) Solutions

This section defines the mechanisms that can be used to discover that a focus supports CCMP.

[2.1](#) Call-Info

This approach uses the Call-Info header in various requests and responses.

The Call-Info header consists of two parts: a URI and a parameter. The purpose of the URI is to provide the XCON-URI of the focus, and the purpose of the parameter is to indicate that the focus supports CCMP.

While the XCON-URI by itself should be enough to indicate that the focus supports CCMP, the purpose with a value of 'ccmp' provides an easier way for a UA that is not interested in the URI to discover that the focus supports CCMP without parsing the URI.

The Call-Info header, with the XCON-URI and the purpose parameter with the 'ccmp' value, can be used with any INVITE request or response and with a response to an OPTIONS request.

[2.2](#) Service URI purpose

This approach defines an additional URI 'purpose' of 'ccmp' associated with a 'service-uris' element in the SIP conferencing event package. The XCON-URI for the conference is included in the 'uri' element, per the following example:

```
<service-uris>
  <entry>
    <uri>XCON:conf1@example.com</uri>
    <purpose>ccmp</purpose>
  </entry>
</service-uris>
```

3 Security Considerations

These proposals introduce no additional security considerations beyond those which are applicable to each of the mechanisms described herein.

4 IANA Considerations

This document defines the 'ccmp' value for the "purpose" parameter of the Call-Info header field. A reference to this RFC (in double brackets) needs to be added to the existing "purpose" Call-Info parameter entry in the SIP Parameters registry, which currently looks as follows:

Header Field	Parameter Name	Values	Reference
-----	-----	-----	-----
Call-Info	purpose	Yes	[RFC3261] [RFC5367]

5 Acknowledgments

The authors would like to thank Alan Johnston, Robert Sparks, and Cullen Jennings for their careful review and feedback.

Special thanks to Adam Roach for his thorough review, comments, and suggestions.

6 References

6.1 Normative References

[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.

[RFC5239] Barnes, M., Boulton, C., and O. Levin, "A Framework for Centralized Conferencing", [RFC 5239](#), June 2008.

[RFC4575] Rosenberg, J., Schulzrinne, H., and O. Levin, Ed., "A Session Initiation Protocol (SIP) Event Package for Conference State", [RFC 4575](#), August 2006.

[RFC6503] Barnes M., Boulton, C., Romano S P., and Schulzrinne H., "Centralized Conferencing Manipulation Protocol", [RFC6503](#), March 2012.

[Appendix A](#). Other Approaches Considered

[A.1](#) Feature Tag

This approach defines a feature parameter 'ccmp' to express that a SIP dialog belongs to a conference that supports CCMP. The use of feature parameters in Contact header fields to describe the characteristics and capabilities of a UA is described in the User Agent Capabilities document.

The focus behavior regarding the handling of the 'ccmp' feature is the same as the handling of the 'isfocus' feature parameter. In session establishment, a focus **MUST** include the 'ccmp' feature parameter in the Contact header field unless the focus wishes to hide the fact that it is a focus.

The pros of this approach is a one step discovery of the focus and its ccmp support, and the fact that it can be used in response to an OPTIONS request, and that it enables the discovery of the ccmp capability by any network element that does not need the conference event package. The cons is the definition of a new feature parameter.

[A.2](#) Conference URI purpose

Define an additional URI 'purpose' of 'ccmp' associated with a 'confs-uris' element in the SIP conferencing event package.

ccmp: Indicates that the conference focus represented by this URI supports ccmp, which allows a client to use the CCMP protocol to manipulate the conference. This URI **MUST** be an XCON-URI as defined in the xcon-data-model.

```
<conf-uris>
  <entry>
    <uri>XCON:conf1@example.com</uri>
    <display-text>whatever</display-text>
    <purpose>ccmp</purpose>
  </entry>
</conf-uris>
```

The pro of the SIP conference event package options is the use of an existing mechanism for extending the <purpose> field of the <service-uris> or <conf-uris> elements. The con is the requirement that the client register for the conference event package. However, given that clients that want to take advantage of CCMP would most likely register for the conference event packages.

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