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The "application/soap+xml" media type

Status of this Memo

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Abstract

This document defines the "application/soap+xml" media type which can be used to describe SOAP 1.2 messages serialized as XML 1.0.

1. Introduction

SOAP version 1.2 (SOAP) is a lightweight protocol intended for exchange of structured information between peers in a decentralized, distributed environment. It defines an extensible messaging framework that contains a message construct based on XML technologies that can be exchanged over a variety of underlying protocols.

This specification defines the media type "application/soap+xml" which can be used to identify SOAP 1.2 message envelopes that have been serialized with XML 1.0. Such serializations are useful as the basis of "wire formats" for SOAP 1.2 Protocol Binding Specifications [W3C.REC-soap12-part1-20030624], or in other situations where an XML serialization of a SOAP envelope is required.

The "application/soap+xml" media type explicitly identifies SOAP 1.2 message envelopes that have been serialised with XML 1.0; message envelopes with a different SOAP namespace version or using another XML serialisation MUST NOT use it.

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].

2. Registration

MIME media type name: application
MIME subtype name: soap+xml
Required parameters: none
Optional parameters:

"charset": This parameter has identical semantics to the charset parameter of the "application/xml" media type as specified in RFC 3023 [RFC3023].

"action": This optional parameter can be used to specify the URI that identifies the intent of the message. In SOAP 1.2, it serves a similar purpose as the SOAPAction HTTP header field did in SOAP 1.1. Namely, its value identifies the intent of the message.

The value of the action parameter is an absolute URI-reference as defined by RFC 2396 [RFC2396], which MUST be non-empty. SOAP places no restrictions on the specificity of the URI or that it is resolvable. Although the purpose of the action parameter is to indicate the intent of the SOAP message there is no mechanism for automatically computing the value based on the SOAP envelope. In other words, the value has to be determined out of band. It is recommended that the same value be used to identify sets of message types that are logically connected in some manner, for example part of the same "service". It is strongly RECOMMENDED that the URI be globally unique and stable over time.

Use of the action parameter is OPTIONAL. SOAP Receivers MAY use it as a hint to optimize processing, but SHOULD NOT require its presence in order to operate.

Encoding considerations: Identical to those of "application/xml" as described in RFC 3023 [RFC3023], section 3.2, as applied to the SOAP envelope infoset.

Security considerations: Because SOAP can carry application defined data whose semantics is independent from that of any MIME wrapper (or context within which the MIME wrapper is used), one should not expect to be able to understand the semantics of the SOAP message based on the semantics of the MIME wrapper alone. Therefore, whenever using the "application/soap+xml" media type, it is strongly RECOMMENDED that the security implications of the context within which the SOAP message is used is fully understood. The security implications are likely to involve both the specific SOAP binding to an underlying protocol as well as the application-

defined semantics of the data carried in the SOAP message (though one must be careful when doing this, as discussed in SOAP 1.2 Part 1 [W3C.REC-soap12-part1-20030624], section Binding to Application-Specific Protocols).

Also, see SOAP 1.2 Part 1 [W3C.REC-soap12-part1-20030624], the entire section Security Considerations.

In addition, as this media type uses the "+xml" convention, it shares the same security considerations as described in RFC 3023 [RFC3023], section 10.

The action parameter is not a security mechanism, and SHOULD NOT be used for authentication. If the action parameter is used to make decisions (e.g., dispatch, filtering), it is RECOMMENDED that the basis for such decisions should be confirmed by examining the SOAP Envelope.

Interoperability considerations: There are no known interoperability issues.

Published specification: SOAP 1.2 Part 1 [W3C.REC-soap12-part1-20030624] and SOAP 1.2 Part 2 [W3C.REC-soap12-part2-20030624].

Applications which use this media type: Various SOAP 1.2 conformant toolkits use this media type.

Additional information:
File extension: SOAP messages are not required or expected to be stored as files.
Fragment identifiers: Identical to that of "application/xml" as described in RFC 3023 [RFC3023], section 5.
Base URI: As specified in RFC 3023 [RFC3023], section 6. Also see SOAP 1.2 Part 1 [W3C.REC-soap12-part1-20030624], section Use of URIs in SOAP.
Macintosh File Type code: TEXT
Person and email address to contact for further information: World Wide Web Consortium <web-human@w3.org>
Intended usage: COMMON
Author/Change controller: The SOAP 1.2 specification set is a work product of the World Wide Web Consortium's XML Protocol Working Group. The W3C has change control over these specifications.

3. Security Considerations

See the "Security Considerations" section of the registration template found in Section 2.

4. Normative References

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

[RFC2396] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, August 1998.

[RFC3023] Murata, M., St.Laurent, S., and D. Kohn, "XML Media Types", RFC 3023, January 2001.

[W3C.REC-soap12-part1-20030624] Hadley, M., Mendelsohn, N., Moreau, J., Nielsen, H., and M. Gudgin, "SOAP Version 1.2 Part 1: Messaging Framework", W3C REC REC-soap12-part1-20030624, June 2003.

[W3C.REC-soap12-part2-20030624] Moreau, J., Nielsen, H., Gudgin, M., Hadley, M., and N. Mendelsohn, "SOAP Version 1.2 Part 2: Adjuncts", W3C REC REC-soap12-part2-20030624, June 2003.

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