
Question

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How can a custom soap header element be signed?

Working on a project to call a web service and the soap header has custom header elements that need to be signed. i reviewed the %soap.inc and didn't see any appropriate macro

EBS and IDP elements need to be signed

Applying a Digital Signature to Specific Message Parts

By default, when you create and add a digital signature to the WS-Security header element, the signature is applied to the SOAP body, the <Timestamp> element in the header (if present), and any WS-Addressing header elements. To specify the parts to which the signature applies, use any of the procedures described earlier with one variation: When you create the signature, use the second argument (*signatureOptions*) to specify the message parts to sign. Specify this argument as a binary combination of any of the following macros (which are contained in the %soap.inc file):

- %SOAPWSIncludeNone
- %SOAPWSIncludeDefault (which equals %SOAPWSIncludeSoapBody + %SOAPWSIncludeTimestamp + %SOAPWSIncludeAddressing)
- %SOAPWSIncludeSoapBody
- %SOAPWSIncludeTimestamp
- %SOAPWSIncludeAddressing
- %SOAPWSIncludeAction
- %SOAPWSIncludeFaultTo
- %SOAPWSIncludeFrom
- %SOAPWSIncludeMessageId
- %SOAPWSIncludeRelatesTo
- %SOAPWSIncludeReplyTo
- %SOAPWSIncludeTo
- %SOAPWSIncludeRMHeaders (see the chapter "Using WS-ReliableMessaging")

To combine macros, use plus (+) and minus (-) signs. For example:

here's a provided header sample

APPENDIX H: SOAP Header IDP Security Model Example

```
<soapenv:Header>

<ns2:EBS wsu:Id="id-1" xmlns:ns2="http://ebs.health.ontario.ca/" >
  <SoftwareConformanceKey>444361ee-277f-7732-c684-7a9923jfgh1b</SoftwareConformanceKey>
  <AuditId>35870880-3701-47b7-a34d-439ee754d211</AuditId>
</ns2:EBS>
<ns2:IDP wsu:Id="id-2" xmlns:ns2="http://idp.ebs.health.ontario.ca/" >
  <ServiceUserMUID>4523894</ServiceUserMUID>
</ns2:IDP>
<wsse:Security SOAP-ENV:mustUnderstand="1">
  <wsu:Timestamp wsu:Id="id-3">
    <wsu:Created>2012-06-20T17:58:42.580Z</wsu:Created>
    <wsu:Expires>2012-06-20T17:59:12.580Z</wsu:Expires>
  </wsu:Timestamp>
  <wsse:UsernameToken wsu:Id="id-4">
    <wsse:Username>SUTESTDEVONE@YAHOO.CA</wsse:Username>
    <wsse:Password Type="wsse:PasswordText">Cliffsammy12!</wsse:Password>
  </wsse:UsernameToken>
  <wsse:BinarySecurityToken EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
    wsu:Id="X509-
```

this a sample output that I created.

my first pass was \$\$\$\$SOAPWSIncludeDefault+\$\$\$SOAPWSIncludeAddressing

Result : Beautify XML

```
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <SOAP-ENV:Envelope
3   xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/'
4   xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
5   xmlns:s='http://www.w3.org/2001/XMLSchema'
6   xmlns:types='http://hcv.health.ontario.ca/'
7   xmlns:wsse='http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd'
8   xmlns:wsu='http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd'
9 >
10 <SOAP-ENV:Header>
11   <hdr:EBS />
12   <hdr:IDP />
13   <Security
14     xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
15     <Timestamp
16       xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" wsu:Id="Timestamp-25F2CA1A-37C1-11EA-882B-00505698DEF8">
17       <Created>2020-01-15T18:02:09Z</Created>
18       <Expires>2020-01-15T18:07:09Z</Expires>
19     </Timestamp>
20     <UsernameToken />
21     <BinarySecurityToken wsu:Id="SecurityToken-25F2B642-37C1-11EA-882B-00505698DEF8"
22       EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
23       >MIIDDDCCAfSgAwIBAgIQEFP9BYKm1Z1DRSJiQw6EZjANBgkqhkiG9w0BAQUFADASMRAwDgYDVQQDEwdvbDgwNTE0MCAXDTEwMDExNDIwNTU0N1oYDzIxMTkxMjIwMjA1NTQ2WjASMRAwDgYDVQQDEwdvbDgwNTE0MII
24       BIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAAurYzFRQ/uM+0B2pXnBa/j0zy7b1XW3U
25       +hNKYVfMRuxoQa
26       +GAJn0JVQnDrTosZ8CNUzuaZh1tKMEfEaqLrp1rjD4gugjemY19dkqhTmLv16817QW5L2wpOiW0dCjqRCR
27       IZbeHZGdKZ1/1aCRka9BvaCW4mbaOAB3d8r0Rxn5psTOAYL1NGGvgaMusEwR5Wuh2
28     </BinarySecurityToken>
29   </Security>
30 </Header>
```

[#SOAP #Caché](#)

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