
7 Profile Agreement

In order for an RMD to perform the processing necessary to protect the Sequences for which it is responsible it must be aware of the particular security composition profile in effect for each Sequence. In order for the RMS to be certain that the RMD is actually protecting the Sequence in the desired manner the RMS must have a specific indication that the RMD understands and will conform to the particular security composition profile being used by the RMS for that Sequence. Both of these requirements mandate a mechanism by which the RMS and RMD can communicate the desired and effective security composition profile for a particular Sequence.

7.1 Security Composition Element

The desired security composition profile for a Sequence is indicated by extending the `<wsrm:CreateSequence>` message to include a `<wsrmp:SecurityComposition>` element. The following exemplar defines its syntax:

```
<wsrmp:SecurityComposition [wsrmp:Optional="false"]?...>
  <wsrmp:Identifier> xs:anyURI </wsrmp:Identifier>
  <wsse:SecurityTokenReference>
    ...
  </wsse:SecurityTokenReference> ?
  ...
</wsrmp:SecurityComposition>
```

`/wsrmp:SecurityComposition`

This element contains information about the desired security composition for the Sequence corresponding to the `<wsrm:CreateSequence>` message in which it appears.

`/wsrmp:SecurityComposition/@wsrmp:Optional`

This optional attribute is used to indicate whether the RMS considers the indicated security composition profile to be an optional or mandatory property of the requested Sequence. If the value of this attribute is "true" the indicated security composition profile can be considered optional by the RMD. If the value of this attribute is "false" or if this attribute is not present, the indicated security composition profile can not be considered optional by the RMD.

`/wsrmp:SecurityComposition/wsrmp:Identifier`

This REQUIRED element MUST contain an absolute URI that uniquely identifies the desired security composition profile.

`/wsrmp:SecurityComposition/wsse:SecurityTokenReference`

This optional element allows security composition profiles that make use of WS-Security to communicate an explicit reference to the security token to be used within the context of the profile.

`/wsrmp:SecurityComposition/{any}`

This extensibility mechanism allows different types of information, based on schema, to be passed. It is presumed that security composition profiles in addition to the ones defined in this document will use this extension point to communicate profile-specific information to the RMD.

`/wsrmp:SecurityComposition/@{any}`

This is an extensibility mechanism to allow additional attributes, based on schemas, to be added to the element.

If the RMD supports and agrees to abide by the security composition profile referenced in the `<wsrmp:SecurityComposition>` element it MUST return a

44 <wsrm:SecurityCompositionResponse> element (see below) in the corresponding
 45 <wsrm:CreateSequenceResponse> message.

46 If the RMD does not support or, for whatever reason, declines to abide by the security composition
 47 profile referenced in the <wsrm:SecurityComposition> element and the Optional attribute of the
 48 <wsrm:SecurityComposition> element is either not present or has a value of "false", then the
 49 RMD MUST return a <wsrm:CreateSequenceRefused> fault to the RMS.

50 If the RMD does not support or declines to abide by the security composition profile referenced in the
 51 <wsrm:SecurityComposition> element and the Optional attribute of the
 52 <wsrm:SecurityComposition> element has a value of "true", then the RMD MUST attempt to
 53 create the Sequence as per normal and it MUST NOT include a
 54 <wsrm:SecurityCompositionResponse> element (see below) in the corresponding
 55 <wsrm:CreateSequenceResponse> message.

56 Note that, as with any extension element, the <wsrm:SecurityComposition> element can be
 57 annotated with the wsrm:mustUnderstand attribute to indicate to the receiving party (the RMD in this
 58 case) that it must understand the semantics of the <wsrm:SecurityComposition> element.

59 7.2 Security Composition Response Element

60 The RMD indicates to the RMS that it supports and agrees to abide by a particular security composition
 61 profile by extending the <wsrm:CreateSequenceResponse> that it returns to the RMS to include a
 62 <wsrm:SecurityCompositionResponse> element. The following exemplar defines the syntax of this
 63 element:

```
64 <wsrm:SecurityCompositionResponse ...>
65   <wsrm:Identifier> xs:anyURI </wsrm:Identifier>
66   ...
67 </wsrm:SecurityCompositionResponse>
```

68 /wsrm:SecurityCompositionResponse

69 This element contains information about the security composition profile in effect for the Sequence
 70 corresponding to the <wsrm:CreateSequenceResponse> message in which it appears.

71 /wsrm:SecurityCompositionResponse/wsrm:Identifier

72 This REQUIRED element MUST contain an absolute URI that uniquely identifies the effective security
 73 composition profile. The value of this element must be identical to the value of the corresponding
 74 /wsrm:SecurityComposition:/wsrm:Identifier element.

75 /wsrm:SecurityCompositionResponse/{any}

76 This extensibility mechanism allows different types of information, based on schema, to be passed. It is
 77 presumed that security composition profiles in addition to the ones defined in this document will use this
 78 extension point to communicate profile-specific information to the RMS.

79 /wsrm:SecurityCompositionResponse/@{any}

80 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added to the
 81 element.

82 Note the the absence of a <wsrm:SecurityCompositionResponse> element in a
 83 <wsrm:CreateSequenceResponse> message MUST be interpreted by the RMS as an indication that the
 84 requested composition profile is not in effect for the Sequence.