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Abstract:

The SCA Web Service binding specified in this document applies to the services and references of an SCA composites. It defines the manner in which a service can be made available as a web service, and in which a reference can invoke a web service.

This binding is a WSDL-based binding; that means it either references an existing WSDL binding or allows one to specify enough information to generate one. When an existing WSDL binding is not referenced, rules defined in this document allow one to generate a WSDL binding.

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1 Introduction

The SCA Web Service binding specified in this document applies to the services and references of composites and components [SCA-Assembly]. It defines the manner in which a service can be made available as a web service, and in which a reference can invoke a web service.

This binding is a WSDL-based binding; that means it either references an existing WSDL binding or can be configured to specify enough information to generate one. When an existing WSDL binding is not referenced, rules defined in this document allow one to generate a WSDL binding.

The Web Service binding can point to an existing WSDL [WSDL] document, separately authored, that specifies the details of the WSDL binding to be used to provide or invoke the web service. In this case the SCA web services binding allows anything that is valid in a WSDL binding, including rpc-encoded style and binding extensions. It is the responsibility of the SCA system provider to ensure support for all options specified in the WSDL binding. Interoperation of such services is not guaranteed.

The SCA Web Service binding also provides attributes that can be used to provide the details of a WSDL SOAP binding. This allows a WSDL document to be synthesized in the case that one does not already exist. In this case only WS-I compliant mapping is supported.

The SCA Web Service binding can be further customized through the use of SCA Policy Sets. For example, a requirement to conform to a WS-I profile [WSI-Profiles] could be represented with a policy set.

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 [RFC2119].

This specification uses predefined namespace prefixes throughout; they are given in the following list. Note that the choice of any namespace prefix is arbitrary and not semantically significant.

Table 1-1 Prefixes and Namespaces used in this specification

<i>Prefix</i>	<i>Namespace</i>	<i>Notes</i>
xs	"http://www.w3.org/2001/XMLSchema"	Defined by XML Schema 1.0 specification
wsa	"http://www.w3.org/2005/08/addressing"	Defined by WS-Addressing 1.0
wsp	"http://www.w3.org/ns/ws-policy"	Defined by WS-Policy 1.5
wsrmp	"http://docs.oasis-open.org/ws-rx/wsrmp/200702"	Defined by WS-ReliableMessaging Policy 1.2
soap11	"http://schemas.xmlsoap.org/soap/envelope/"	Defined by SOAP 1.1
soap12	"http://www.w3.org/2005/08/addressing"	Defined by SOAP 1.2
wsdl	"http://www.w3.org/ns/wsdl-instance"	Defined by WSDL 2.0
wsoap11	"http://schemas.xmlsoap.org/wsdl/soap/"	Defined by WSDL 1.1 [WSDL11]
wsoap12	"http://schemas.xmlsoap.org/wsdl/soap12/"	Defined by [WSDL11-SOAP12]
sca	"http://docs.oasis-open.org/ns/opencsa/sca/200712"	Defined by the SCA specifications

26 1.2 Normative References

- 27 [RFC2119] S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*,
28 <http://www.ietf.org/rfc/rfc2119.txt>, IETF RFC 2119, March 1997.
- 29 [SCA-Assembly] <http://docs.oasis-open.org/opencsa/sca-assembly/sca-assembly-1.1-spec.pdf>
- 30 [SCA-Policy] <http://docs.oasis-open.org/opencsa/sca-policy/sca-policy-1.1-spec.pdf>
- 31 [SCA-JCAA] <http://docs.oasis-open.org/opencsa/sca-j/sca-javacaa-1.1-spec.pdf>
- 32 [WSDL11] E. Christensen et al, *Web Service Description Language (WSDL) 1.1*,
33 <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>, W3C Note, March 15 2001.
- 34 [WSDL] E. Christensen et al, *Web Service Description Language (WSDL) 1.1*,
35 <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>, W3C Note, March 15 2001.
- 36 R. Chinnici et al, *Web Service Description Language (WSDL) Version 2.0 Part 1: Core*
37 *Language*, <http://www.w3.org/TR/2007/REC-wsdl20-20070626/>, W3C
38 Recommendation, June 26 2007.
- 39 [WSI-Profiles] <http://www.ws-i.org/Profiles/BasicProfile-1.1.html>
40 <http://www.ws-i.org/Profiles/AttachmentsProfile-1.0.html>
41 <http://www.ws-i.org/Profiles/SimpleSoapBindingProfile-1.0.html>
42 <http://www.ws-i.org/Profiles/BasicSecurityProfile-1.0.html>
- 43 [JAX-WS] <http://jcp.org/en/jsr/detail?id=224>
- 44 [SOAP] <http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>
45 <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>
- 46 [SOAP12Adjuncts] SOAP Version 1.2 Part 2: Adjuncts (Second Edition)
47 <http://www.w3.org/TR/soap12-part2/>
- 48 [WS-Addr] <http://www.w3.org/TR/2006/REC-ws-addr-core-20060509/>
- 49 [WSDL11-SOAP12] <http://www.w3.org/Submission/wsdl11soap12/>
50

51 1.3 Non-Normative References

- 52 [WSI-AP] <http://www.ws-i.org/Profiles/AttachmentsProfile-1.0.html>
- 53 [MTOM] <http://www.w3.org/TR/2005/REC-soap12-mtom-20050125/>
- 54 [WS-RM] <http://docs.oasis-open.org/ws-rx/wsrn/200702/wsrn-1.2-spec-cd-01.html>

2 Web Service Binding Schema

The Web Service binding element is defined by the following pseudo-schema.

```
<binding.ws name="xs:NCName"?
  requires="list of xs:QName"?
  policySets="list of xs:QName"?
  uri="xs:anyURI"?
  wsdlElement="xs:anyURI"?
  wsdl:wsdlLocation="list of xs:anyURI pairs"?
  ...>
<endpointReference>...</endpointReference>*
...
</binding.ws>
```

- */binding.ws/@name* - as defined in the SCA Assembly Specification [SCA-Assembly].
- */binding.ws/@requires* - as defined in the SCA Assembly Specification [SCA-Assembly].
- */binding.ws/@policySets* - as defined in the SCA Assembly Specification [SCA-Assembly].
- */binding.ws/@uri* - the resolution algorithm of Section 2.1 below describes how this attribute is interpreted.
- */binding.ws/@wsdlElement* – when present this attribute specifies the URI of a WSDL element. This attribute points to the specified element in an existing WSDL document. The URI can have the following forms:
 - Service:
`<WSDL-namespace-URI>#wsdl.service(<service-name>)`
In this case, the SCA runtime MUST make all the ports in the WSDL Service that have equivalent portTypes with the SCA service or reference available to the SCA service or reference.
 - Port (WSDL 1.1):
`<WSDL-namespace-URI>#wsdl.port(<service-name>/<port-name>)`
In this case, the port in the WSDL 1.1 Service identified by the `<binding.ws>` element MUST implement a portType that is equivalent to the one specified for the SCA service or reference. The identified port MUST be made available to the SCA service or reference by the SCA runtime.
 - Endpoint (WSDL 2.0):
`<WSDL-namespace-URI>#wsdl.endpoint(<service-name>/<endpoint-name>)`
In this case, the endpoint in the WSDL 2.0 Service identified by the `<binding.ws>` element MUST have an equivalent portType with the SCA service or reference. The identified endpoint MUST be made available to the SCA service or reference by the SCA runtime.
 - Binding:
`<WSDL-namespace-URI>#wsdl.binding(<binding-name>)`
In this case, the WSDL binding identified by the `<binding.ws>` element MUST implement a portType that is equivalent to the one specified for the SCA service or reference. The SCA runtime MUST make the service or reference available via the specified WSDL binding. In this case, the endpoint address URI for an SCA reference MUST be specified by either the *@uri* attribute on the binding or a WS-Addressing *EndpointReference* element, except where the SCA Assembly specification states that the *@uri* attribute can be omitted. The endpoint address URI for an SCA service or the callback

98 element of an SCA reference is determined as specified in section 2.1. For the *callback* element of an
99 SCA service, the binding MUST NOT specify an endpoint address URI or a WS-Addressing
100 EndpointReference..

- 101 • */binding.ws/@wsdl:wsdlLocation* – when present this attribute specifies the location(s) of the WSDL
102 document(s) associated with specific namespace(s). This attribute MAY be specified by the binding in the
103 event that the <WSDL-namespace-URI> in the ‘endpoint’ attribute is not dereferencable, or when the
104 intended WSDL document is to be found at a different location than the one pointed to by the <WSDL-
105 namespace-URI>. The use of this attribute indicates that the WSDL binding points to an existing WSDL
106 document. The semantics of this attribute are specified in Section 7.1 of WSDL 2.0 [WSDL].
- 107 • */binding.ws/endpointReference* – when present this element provides the WS-Addressing [WS-Addr]
108 EndpointReference that specifies the endpoint for the service or reference. When this element is present
109 along with the @wsdlElement attribute on the parent element, the @wsdlElement attribute value MUST be
110 of the ‘Binding’ form as specified above, i.e. <WSDL-namespace-URI>#wsdl.binding(<binding-name>).
- 111 • */binding.ws/@{any}* - this is an extensibility mechanism to allow extensibility via attributes.
- 112 • */binding.ws/any* – this is an extensibility mechanism to allow extensibility via elements.

113

114 The SCA runtime MUST support all the attributes of the <binding.ws> element, namely @name, @uri,
115 @requires, @policySets @wsdlElement, and @wsdl:wsdlLocation.

116 The SCA runtime SHOULD support the element <endpointReference>. If an SCA runtime does not support the
117 element <endpointReference>, then it MUST reject an SCA WS Binding XML document (as defined in Section
118 5.1) that contains the element.

119 The <binding.ws> element MUST conform to the XML schema defined in sca-binding-webservice.xsd.

120 2.1 Endpoint URI resolution

121 The rules for resolving the URI at which an SCA service is hosted, or SCA reference targets, when used with
122 binding.ws (in precedence order) are:

- 123 1. The URIs in the endpoint(s) of the referenced WSDL
124 or
125 The URI specified by the *wsa:Address* element of the *endpointReference*,
- 126 2. The explicitly stated URI in the @uri attribute of the *binding.ws* element, which can be relative,
- 127 3. The structural URI as defined by the Assembly specification

128 An SCA runtime MUST follow rules listed above in determining the URI at which an SCA service is hosted or
129 an SCA reference is targeted.

130 The URI in the WSDL endpoint or in the *wsa:Address* of an EPR MAY be a relative URI, in which case it is
131 relative to the URI defined in (2) or (3). The *wsa:Address* element MAY be the empty relative URI, in which
132 case it uses the URI defined in (2) or (3) directly. This enables the EPR writer to specify reference parameters,
133 metadata and other EPR contents while letting the deployer choose the URI.

134 To reference a WSDL document and also specify an EPR, the @wsdlElement attribute MUST refer to a binding
135 element in the WSDL.

136 2.2 Interface mapping

137 When *binding.ws* is used on a service or reference with an interface that is not defined by *interface.wsdl*, then a
138 WSDL portType for the service or reference is derived from the interface by the rules defined for that SCA
139 interface type. An SCA runtime MUST raise an error if the interface does not map to a WSDL portType.

140 For example, for *interface.java*, the mapping to a WSDL portType is as defined in the SCA Java Common
141 Annotations and API Specification [SCA-JCAA].

142 *binding.ws* implementations can use appropriate standards, for example WS-I AP 1.0 [WSI-AP] or MTOM
143 [MTOM], to map interface parameters to binary attachments transparently to the target component.

144

145 2.3 Production of WSDL description for an SCA service

146 Any service hosted by an SCA runtime with one or more web service bindings with HTTP endpoints SHOULD
147 return a WSDL description of the service in response to an HTTP GET request with the “?wsdl” suffix to that
148 HTTP endpoint. If none of the web service bindings have HTTP endpoints, then some other means of obtaining
149 the WSDL description of the service SHOULD be provided by the SCA runtime. This can include out of band
150 mechanisms, for example publication to a UDDI registry.

151 Refer to section 4 for a detailed definition of the rules that SHOULD be used for generating the WSDL
152 description of an SCA service with one or more web service bindings.

153

154 2.4 Additional binding configuration data

155 SCA runtime implementations MAY provide additional metadata that is associated with a web service binding,
156 for example to enable JAX-WS [JAX-WS] handlers to be executed as part of the target component dispatch.
157 The specification of such metadata is SCA runtime-specific and is outside of the scope of this document.

158

159 2.5 Web Service Binding and SOAP Intermediaries

160 The Web Service binding does not provide any direct or explicit support for SOAP intermediaries [SOAP].

161

162 2.6 Support for WSDL extensibility

163 When a *binding.ws* element uses the @wsdlElement attribute, the details of the binding are specified by the
164 WSDL element referenced by the value of the attribute. Per the WSDL specification, WSDL allows for
165 extensibility via elements as well as attributes, and it specifies rules for processing such elements. This
166 specification does not constrain the use of such extensibility in WSDL and relies on the rules specified in the
167 WSDL specification for processing such extended elements.

168 This specification requires that an SCA runtime MUST support the WSDL extensions defined in the namespace
169 associated with the prefix "sca" (as defined in section 1.1).

170 The SCA runtime MUST support the WSDL 1.1 binding extension for SOAP 1.1 over HTTP [WSDL11], as
171 identified by the WSDL element `wsoap11:binding` that has the @transport attribute with a value of
172 "http://schemas.xmlsoap.org/soap/http".

173 The SCA runtime SHOULD support the WSDL 1.1 binding extension for SOAP 1.2 over HTTP [WSDL11-
174 SOAP12], as identified by the WSDL element `wsoap12:binding` that has the @transport attribute with a value of
175 "http://schemas.xmlsoap.org/soap/http".

176 Because a WSDL document might contain extension elements that cannot be supported by the SCA runtime,
177 when using the @wsdlElement form of *binding.ws* it is not possible to determine whether the binding is
178 supported by the SCA runtime without parsing the referenced WSDL element and its dependent elements.

179 2.7 Intents listed in the bindingType

180 This specification places no requirements on the intents that are listed as either @alwaysProvides or
181 @mayProvides in the bindingType for *binding.ws*.

182 2.8 Intents and binding configuration

183 ~~The SCA runtime MUST support the SOAP.1_1 intent. The SCA runtime SHOULD support the SOAP.1_2~~
184 ~~intent. This binding mandates support for SOAP 1.1 and encourages SOAP 1.2 support. The <bindingType>~~
185 ~~element associated with this binding MUST include the SOAP.1_1 intent in its @mayProvides or~~
186 ~~@alwaysProvides attributes. The <bindingType> element associated with this binding SHOULD include the~~
187 ~~SOAP.1_2 intent in its @mayProvides attribute. For more details on the <bindingType> element see [SCA-~~
188 ~~Policy].~~

189 The SCA runtime MUST raise an error if the web service binding is configured with a policy intent(s) that
190 conflicts with a binding instance's configuration. For example, it is an error to use the SOAP policy intent in
191 combination with a WSDL binding that does not use SOAP.

3 Web Service Binding Examples

The following snippets show the sca.composite file for the MyValueComposite file containing the service element for the MyValueService and reference element for the StockQuoteService. Both the service and the reference use a Web Service binding.

3.1 Example Using WSDL documents

This example shows a service and reference using the SCA Web Service binding, using existing WSDL documents in both cases. In each case there is a single binding element, whose name defaults to the service/reference name.

The service's binding is defined by the WSDL document associated with the given URI. This service conforms to WS-I Basic Profile 1.1.

The reference's first binding is defined by the specified WSDL service in the WSDL document at the given location. The reference can use any of the WSDL service's ports/endpoints to invoke the target service. The reference's second binding is defined by the specified WSDL binding. The specific endpoint URI to be invoked is provided via the `@uri` attribute.

```
<?xml version="1.0" encoding="ASCII"?>
<composite xmlns="http://docs.oasis-open.org/ns/opencsa/sca/200712"
  name="MyValueComposite">
  <service name="MyValueService">
    <interface.java interface="services.myvalue.MyValueService"/>
    <binding.ws wsdlElement="http://www.example.org/MyValueService#
      wsdl.endpoint(MyValueService/MyValueServiceSOAP)"/>
    ...
  </service>
  ...
  <reference name="StockQuoteReference1">
    <interface.java interface="services.stockquote.StockQuoteService"/>
    <binding.ws wsdlElement="http://www.example.org/StockQuoteService#
      wsdl.service(StockQuoteService)"
      wsdl:wsdlLocation="http://www.example.org/StockQuoteService
        http://www.example.org/StockQuoteService.wsdl"/>
  </reference>
  <reference name="StockQuoteReference2">
    <interface.java interface="services.stockquote.StockQuoteService"/>
    <binding.ws wsdlElement="http://www.example.org/StockQuoteService#
      wsdl.binding(StockQuoteBinding)"
      wsdl:wsdlLocation="http://www.example.org/StockQuoteService
        http://www.example.org/StockQuoteService.wsdl"
      uri="http://www.example.org/StockQuoteService5"/>
  </reference>
</composite>
```

3.2 Examples Without a WSDL Document

The next example shows the simplest form of the binding element without WSDL document, assuming all defaults for portType mapping and SOAP binding synthesis. The service and reference each have a single binding element, whose name defaults to the service/reference name.

241 The service is to be made available at a location determined by the deployment of this component. It will have
242 a single port address and SOAP binding, with a simple WS-I BasicProfile 1.1 compliant binding, and using the
243 default options for mapping the Java interface to a WSDL portType.

244 The reference indicates a service to be invoked which has a SOAP binding and portType that matches the
245 default options for binding synthesis and interface mapping. One particular use of this case would be where the
246 reference is to an SCA service with a web service binding which itself uses all the defaults.

247

```
248 <?xml version="1.0" encoding="ASCII"?>
249 <composite xmlns="http://docs.oasis-open.org/ns/opencsa/sca/200712"
250     name="MyValueComposite">
251
252     <service name="MyValueService">
253         <interface.java interface="services.myvalue.MyValueService"/>
254         <binding.ws/>
255         ...
256     </service>
257
258     ...
259
260     <reference name="StockQuoteService">
261         <interface.java interface="services.stockquote.StockQuoteService"/>
262         <binding.ws uri="http://www.example.org/StockQuoteService"/>
263     </reference>
264 </composite>
```

265 The next example shows the use of the binding element without a WSDL document, with multiple SOAP
266 bindings with non-default values. The SOAP 1.2 binding name defaults to the service name, the SOAP 1.1
267 binding is given an explicit name. The reference has a web service binding which uses SOAP 1.2, but
268 otherwise uses all the defaults for SOAP binding. The reference binding name defaults to the reference name.
269

270

```
271 <?xml version="1.0" encoding="ASCII"?>
272 <composite xmlns="http://docs.oasis-open.org/ns/opencsa/sca/200712"
273     name="MyValueComposite">
274
275     <service name="MyValueService">
276         <interface.java interface="services.myvalue.MyValueService"/>
277         <binding.ws name="MyValueServiceSOAP11" requires="SOAP.1_1"/>
278         <binding.ws requires="SOAP.1_2"/>
279         ...
280     </service>
281
282     ...
283
284     <reference name="StockQuoteService">
285         <interface.java interface="services.stockquote.StockQuoteService"/>
286         <binding.ws uri="http://www.example.org/StockQuoteService"
287             requires="SOAP.1_2"/>
288     </reference>
289 </composite>
```

290

291 3.3 Example PolicySet Providing The Conversation Intent

292 The following policy set applies to *binding.ws* and provides the conversation intent. The conversation intent is
293 provided by using WS-ReliableMessaging [WS-RM] protocol which has a concept of a Sequence. This
294 Sequence (which appears as a `wsm:Sequence` SOAP header in the message) is used as a correlation
295 mechanism, on the wire, to implement conversational semantics.

```
296 <policySet name="WSRM-Sequence-based-conversation"  
297     provides="sca:conversation"  
298     appliesTo="sca:binding.ws">  
299   <wsp:Policy>  
300     <wsrmp:RMAssertion  
301       xmlns:wsrmp="http://docs.oasis-open.org/ws-rx/wsrmp/200608"/>  
302   </wsp:Policy>  
303 </policySet>
```

304

4 Transport Binding

The `binding.ws` element provides numerous ways to specify exactly how messages ought to be transmitted from or to the reference or service. Those ways include references to WSDL binding elements from the `@wsdlElement` attribute, policy intents, and even vendor extensions within the `binding.ws` element. However, all of those ways to indicate how messages get carried happen to be optional. This section describes the defaults to be used if the specific transport details are not otherwise specified.

4.1 Intents

So as to narrow the range of choices for how messages are carried, the following policy intents affect the transport binding:

- `SOAP`
This indicates that messages **MUST** be transmitted using SOAP. One or more SOAP versions can be used.
- `SOAP.1_1`
Messages **MUST** be transmitted using only SOAP 1.1.
- `SOAP.1_2`
Messages **MUST** be transmitted using only SOAP 1.2.

4.2 Default Transport Binding Rules

4.2.1 WS-I Basic Profile Alignment

To align to WS-I Basic Profile, the resulting WSDL port needs to be all document-literal, or all rpc-literal binding (R2705). This means, for any given portType, for all messages referenced by all operations in that portType, either

- that every message part references an XML Schema type (rpc-literal pattern)
- or that every message references exactly zero or one XML Schema elements (document-literal pattern)

For a service element, the portType from the service's interface or derived from the service's interface **MUST** fit one of these two patterns. The rest of this section assumes the short-hand reference of an "rpc-literal" or "document-literal" pattern, depending on which of the two bullet points above it matches.

4.2.2 Default Transport Binding Rules

In the event that the transport details are not otherwise determined, an SCA runtime **MUST** enable the following configuration:

- HTTP-based transfer protocol
- Bindings for SOAP 1.1 **MUST** be provided and additional bindings **MAY** be provided, unless policy is applied that explicitly restricts this.
- "literal" format as described in section 3.5 of [WSDL11]
- For document literal pattern, each message uses "document" style, as per section 3.5 of [WSDL11].
- For rpc-literal pattern, each message uses "rpc" style, as per section 3.5 of [WSDL11]. In this case, the child elements of the SOAP Body element **MUST** be namespace qualified with a non-empty namespace name. This namespace **SHOULD** be the structural URI associated with the binding.
- For SOAP 1.1 messages, the SOAPAction HTTP header described in section 6.1.1 represents the empty string, in quotes ("").

- 343
- 344
- 345
- For SOAP 1.2 messages, the SOAP Action feature described in section 6.5 of [SOAP12Adjuncts] does not appear.
 - All WSDL message parts are carried in the SOAP body

5 Conformance

346

347 The XML schema pointed to by the RDDL document at the namespace URI, defined by this specification, are
348 considered to be authoritative and take precedence over the XML schema defined in the appendix of this
349 document.

350 There are two categories of artifacts for which this specification defines conformance:

351 a) SCA WS Binding XML Document

352 b) SCA Runtime

353

5.1 SCA WS Binding XML Document

354

355 An SCA WS Binding XML document is an SCA Composite Document, or an SCA
356 ComponentType Document, as defined by the SCA Assembly specification Section 13.1
357 [SCA-Assembly], that uses the <binding.ws> element.

358 An SCA WS Binding XML document MUST be a conformant SCA Composite Document or
359 a SCA ComponentType Document, as defined by the SCA Assembly specification [SCA-
360 ASSEMBLY], and MUST comply with all the applicable requirements specified in this
361 specification.

362

5.2 SCA Runtime

363

364 An implementation that claims to conform to the requirements of an SCA Runtime defined in this specification
365 has to meet the following conditions:

- 366 1. The implementation MUST comply with all statements in Appendix XXX: Conformance Items related
367 to an SCA Runtime, notably all “MUST” statements have to be implemented.
- 368 2. The implementation MUST conform to the SCA Assembly Model Specification Version 1.1 [SCA-
369 Assembly], and to the SCA Policy Framework Version 1.1 [SCA-Policy].
- 370 3. The implementation MUST reject a SCA WS Binding XML Document that is not conformant per
371 Section 5.1.

372 [ask3][ask4]

373

374

A. Web Services Binding XML Schema: sca-binding-webservice.xsd

375

```
376 <?xml version="1.0" encoding="UTF-8"?>
377 <!-- (c) Copyright OASIS 2006, 2008 -->
378 <schema xmlns="http://www.w3.org/2001/XMLSchema"
379       targetNamespace="http://docs.oasis-open.org/ns/opencsa/sca/200712"
380       xmlns:sca="http://docs.oasis-open.org/ns/opencsa/sca/200712"
381       xmlns:wsdli="http://www.w3.org/ns/wsdli-instance"
382       xmlns:wsa="http://www.w3.org/2005/08/addressing"
383       elementFormDefault="qualified">
384
385     <import namespace="http://www.w3.org/ns/wsdli-instance"
386           schemaLocation="http://www.w3.org/2007/05/wsdli/wsdli20-instance.xsd"
387     />
388     <import namespace="http://www.w3.org/2005/08/addressing"
389           schemaLocation="http://www.w3.org/2006/03/addressing/ws-addr.xsd"
390     />
391     <include schemaLocation="sca-core.xsd"/>
392
393     <element name="binding.ws" type="sca:WebServiceBinding"
394           substitutionGroup="sca:binding"/>
395     <complexType name="WebServiceBinding">
396       <complexContent>
397         <extension base="sca:Binding">
398           <sequence>
399             <element name="endpointReference"
400                   type="wsa:EndpointReference"
401                   minOccurs="0" maxOccurs="unbounded"/>
402             <any namespace="##other" processContents="lax"
403                 minOccurs="0" maxOccurs="unbounded"/>
404           </sequence>
405           <attribute name="wsdlElement" type="anyURI" use="optional"/>
406           <attribute ref="wsdli:wsdliLocation" use="optional"/>
407           <anyAttribute namespace="##any" processContents="lax"/>
408         </extension>
409       </complexContent>
410     </complexType>
411
412 </schema>
```

413

414 B. Appendix - WSDL Generation

415 Due to the number of factors that determine how a WSDL might be generated, including compatibility with
416 existing WSDL uses, precise details cannot be specified. For example, implementation decisions can affect the
417 way WSDL might be generated. For reference, and consistency, this section suggests non-normative choices for
418 some of the various details involved in generating WSDL. For brevity, the following definitions apply:

- 419 • component name = the value of the @name attribute of the component element containing the
420 binding.ws element
- 421 • service name = the value of the @name attribute of the service element containing the binding.ws
422 element
- 423 • binding name = the value of @name attribute of the binding.ws element, or the default if no @name
424 attribute is present
- 425 • SOAP version = either "SOAP11" or "SOAP12" as appropriate

426 With those definitions in place, here are the suggested choices:

- 427 • wsdl:definitions/@name = <component name> + "." + <service name>
- 428 • wsdl:definitions/@targetNamespace = <structural URI for the service>
- 429 • import each WSDL 1.1 portType, rather than putting them inline
- 430 • wsdl:binding/@name = <binding name> + <SOAP version> + "Binding"
- 431 • wsdl:service/@name = <service name>
- 432 • wsdl:port/@name = <binding name> + <SOAP version> + "Port"

433 **C. Acknowledgements**

434 The following individuals have participated in the creation of this specification and are gratefully acknowledged:

435 **Participants:**

436 [Participant Name, Affiliation | Individual Member]

437 [Participant Name, Affiliation | Individual Member]

438

D. Non-Normative Text

E. Revision History

441 [optional; should not be included in OASIS Standards]

Revision	Date	Editor	Changes Made
1	2007-09-25	Anish Karmarkar	Applied the OASIS template + related changes to the Submission
2	2008-04-02	Anish Karmarkar	<ul style="list-style-type: none"> * Partially applied the resolution of issue 14 in the conformance section. * Applied resolution to issue 9. * Applied resolution to issue 15. * Applied resolution to issue 16. * Applied resolution to issue 10. * Applied resolution to issue 8. * Applied resolution to issue 3.
3	2008-06-12	Simon Holdsworth	<ul style="list-style-type: none"> * Completed application of resolution to issue 10 * Applied most of the editorial changes from Eric Johnson's review
4	2008-08-13	Anish Karmarkar	<ul style="list-style-type: none"> * Applied rest of Eric Johnson's ed review comments. * Applied resolution of issue 13. * Reapplied resolution of issue 15 (it was not applied correctly before) * Applied resolution of issue 19. * Applied resolution of issue 30. * Applied resolution of issue 32. * Applied resolution of issue 36. * Applied resolution of issue 38.
cd01-rev1	2008-10-16	Simon Holdsworth	Applied resolution of issue 41.
cd01-rev2	2008-10-20	Anish Karmarkar	Added rfc2119 statements.
cd01-rev3	2008-11-19	Anish Karmarkar	Incorporated feedback from Bryan, Eric & Dave
cd01-rev3	2008-12-02	Anish Karmarkar	Removed 'required' word associated with description of pseudo-schema + changed section 2.6 (wsdl extensibility) per the TC decision. Both of these were associated with issue 51 (2119 stmts)
cd01-rev5	2009-02-06	Simon Holdsworth	<ul style="list-style-type: none"> Applied resolution of issue 11 Applied resolution of issue 49 Applied action item 20080904-1
cd02	2009-02-16	Simon Holdsworth	Renamed, applied editorial issues

Page: 5

[ask1]Mentioning portType here does not seem appropriate.

Page: 5

[ask2]Dave would like to get rid of this.

Page: 16

[ask3]Moved to the top of the section and modified to match the Java CAA wordings

Page: 16

[ask4]Moved to section 5.1 and to section 2