



# Liberty ID-WSF 1.1 Static Conformance Requirements

Version: 1.0

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**Abstract:**

Defines the static conformance requirements for the Liberty Alliance ID-WSF 1.1 specifications.

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## 35 1. Overview

36 Static conformance requirements (SCR) describe features that are mandatory and optional for implementations  
37 conforming to the Liberty Alliance Identity Web Service Framework (ID-WSF) Specifications:

- 38 • [LibertySOAPBinding \(v1.2\)](#)
- 39 • [LibertySecMech \(v1.2\)](#)
- 40 • [LibertyDisco \(v1.2\)](#)
- 41 • [LibertyInteract \(v1.1\)](#)
- 42 • [LibertyPAOS \(v1.1\)](#)
- 43 • [LibertyAuthn \(v1.1\)](#)
- 44 • [LibertyClientProfiles \(v1.1\)](#)
- 45 • [LibertyMetadata \(v1.1\)](#)
- 46 • [LibertyProtSchema \(v1.2-errata-v3.0\)](#)
- 47 • [LibertyBindProf \(v1.2-errata-v2.0\)](#)
- 48 • [LibertyAuthnContext \(v1.3\)](#)

49 This document defines these requirements. This is a normative document with several non-normative explanatory  
50 sections.

### 51 1.1. Definitions and Motivation

52 The Liberty specifications define a large number of features and variations. Applications often do not require all  
53 the features within a specification. It is also possible that implementations may not be able to implement all the  
54 features. In these cases, it may be desirable to partition the specifications into subsets of functionality. A profile is  
55 a subset of the overall specifications that includes all of the functionality necessary to satisfy the requirements of a  
56 particular community of users. This document identifies several Liberty conformance profiles based on subsets of  
57 these specifications according to the following guidelines:

- 58 • The number of conformance profiles should be kept small.
- 59 • The profiles should correspond to the major roles within the specifications: Web Service Consumer (WSC), Web  
60 Service Provider (WSP), Discovery Service (DS), Interaction Service (IS), and Identity Provider (IdP).
- 61 • The SCR should distinguish between software implementations and deployments. Allow deployments to option-  
62 ally configure features that are mandatory in the conformance profiles.
- 63 • The SCR should place more stringent requirements on service providers as compared with service consumers to  
64 promote interoperability.
- 65 • Implementations conforming to one (or more) profiles should be able to interoperate with another conforming  
66 implementation of a complementary profile.

67 The resulting profiles are described below by means of tables indicating mandatory and optional features, with  
68 references to the appropriate sections of the specification documents.

## 69 **1.2. Notation**

70 The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD  
71 NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this specification are to be interpreted as described in  
72 [RFC2119]: "they MUST only be used where it is actually required for interoperation or to limit behavior which has  
73 potential for causing harm (e.g., limiting retransmissions)."

74 The normative sections of this document are identified with special formatting as indicated here:

75       **EXAMPLE**     This is an example of the format of the normative requirements. Each requirement is identified  
76                       by a requirement identifier ("EXAMPLE" in this example).

## 77 2. Conformance Profiles

### 78 2.1. Profile Matrix

79 The following tables summarize the features that comprise the conformance profiles. The detailed specifications for  
80 each profile follow in subsequent sections.

81 **Table 1. Abstract Profile Matrix**

Feature	WSC Common	WSP Common
Basic SOAP Binding	MUST	MUST
Basic Security Mechanisms	MUST	MUST
Interaction Header		MUST

82 **Table 2. Concrete Profile Matrix**

Feature	ID-FF SP WSC	LUAD WSC	ID-FF SP WSP	LUAD WSP	ID-FF IdP	ID-WSF IdP	DS	IS
WSC Common	MUST	MUST						
WSP Common			MUST	MUST			MUST	MUST
ID-FF SP WSC SOAP Binding	MUST							
ID-FF SP WSC Security Mechanisms	MUST							
Interaction Redirect	MUST		OPT				OPT	
Interaction Service			OPT	OPT			OPT	MUST
ID-FF DS Bootstrap Authentication Service	MUST				MUST			
SSO Service		MUST				MUST		
Service Registration		OPT				OPT		
Service Discovery			OPT	OPT			MUST	OPT
Service Invocation	MUST	MUST	MUST	MUST				
PAOS	OPT			OPT			OPT	OPT
LUAD		MUST		MUST			OPT	OPT

### 83 2.2. Web Service Consumer (WSC) Common Conformance Profile

84 This section defines the common conformance requirements for all Web Service Consumer Profiles.

#### 85 2.2.1. Basic SOAP Binding

86 Conforming WSCs MUST support the following SOAP Binding features

87 **wsc-soapbind-001** The WSC MUST conform to the requirements for sending SOAP-bound ID-\* messages and  
88 receiving their responses, as described in sections 4 and 5 of [[LibertySOAPBinding](#)]. This  
89 includes support for sending and processing the Correlation Header, and for failing if any  
90 unsupported Header is received with a `mustUnderstand` attribute set to true.

91 **wsc-soapbind-002** The WSC MUST support processing of the ServiceInstanceUpdate Header, as described in  
92 section 6.4 of [[LibertySOAPBinding](#)]. Specifically, the WSC MUST (a) be able to retry an  
93 operation as specified by a ServiceInstanceUpdate Header received in combination with an  
94 EndpointMoved Fault and (b) be able to accept new credentials for use in subsequent operations  
95 as specified by a ServiceInstanceUpdate Header received in combination with a normal response  
96 Body.

### 97 **2.2.2. Basic Security Mechanisms**

98 Conforming WSCs MUST be able to construct and send ID-WSF messages using the following Security Mechanisms:

99 **wsc-secmech-001** The WSC MUST be able to construct and send ID-WSF messages using null and TLS peer  
100 entity authentication mechanisms, as described in section 6.2 of [[LibertySecMech](#)].

101 **wsc-secmech-002** The WSC MUST be able to construct and send ID-WSF messages using null and Bearer  
102 message authentication mechanisms, as described in section 6.3 of [[LibertySecMech](#)].

103 Combined, these requirements correspond to the following set of Security Mechanism URIs:

- 104 • urn:liberty:security:2003-08:null:null
- 105 • urn:liberty:security:2004-04:null:Bearer
- 106 • urn:liberty:security:2003-08:TLS:null
- 107 • urn:liberty:security:2004-04:TLS:Bearer

## 108 **2.3. Web Service Provider (WSP) Common Conformance Profile**

109 This section defines the common conformance requirements for all Web Service Provider Profiles.

### 110 **2.3.1. Basic SOAP Binding**

111 Conforming WSPs MUST support the following SOAP Binding features

112 **wsp-soapbind-001** The WSP MUST conform to the requirements for receiving SOAP-bound ID-\* messages and  
113 sending their responses, as described in sections 4 and 5 of [[LibertySOAPBinding](#)]. This  
114 includes support for sending and processing the Correlation Header, and for failing if any  
115 unsupported Header is received with a `mustUnderstand` attribute set to true.

### 116 **2.3.2. Basic Security Mechanisms**

117 Conforming WSPs MUST be able to receive and process ID-WSF messages using the following Security Mechanisms

118 **wsp-secmech-001** The WSP MUST be able to receive and process ID-WSF messages using null and TLS peer  
119 entity authentication mechanisms, as described in section 6.2 of [[LibertySecMech](#)].

120 **wsp-secmech-002** The WSP MUST be able to receive and process ID-WSF messages using either null or Bearer  
121 or both x509 and SAML message authentication mechanisms, as described in section 6.3 of  
122 [[LibertySecMech](#)].

123 Combined, these requirements correspond to the following sets of Security Mechanism URIs:

124 • urn:liberty:security:2003-08:null:null

125 • urn:liberty:security:2003-08:TLS:null

126 or

127 • urn:liberty:security:2004-04:null:Bearer

128 • urn:liberty:security:2004-04:TLS:Bearer

129 or

130 • urn:liberty:security:2003-08:null:X509

131 • urn:liberty:security:2003-08:null:SAML

132 • urn:liberty:security:2003-08:TLS:X509

133 • urn:liberty:security:2003-08:TLS:SAML

### 134 **2.3.3. Interaction Header**

135 Conforming WSPs MUST support the following Interaction features:

136 **wsp-interact-001** The WSP MUST process the UserInteraction Header, as described in section 3 of [[LibertyIn-](#)  
137 [teract](#)].

## 138 **2.4. ID-FF Service Provider (SP) Web Service Consumer (WSC) Confor-** 139 **mance Profile**

140 This section defines the requirements for the ID-FF SP Web Service Consumer Profile.

### 141 **2.4.1. WSC Common**

142 Conforming ID-FF SP WSCs MUST support the Common WSC Profile

### 143 **2.4.2. ID-FF SP WSC SOAP Binding**

144 Conforming ID-FF SP WSCs MUST support the following additional SOAP Binding features:

145 **idffsp-wsc-soapbind-001** The ID-FF SP WSC MUST send the SOAP Binding Provider Header, as described in  
146 section 5.2 of [[LibertySOAPBinding](#)].



### 147 **2.4.3. Interaction Redirect**

148 Conforming ID-FF SP WSCs MUST support the following Interaction features:

149 **idffsp-wsc-interact-001** ID-FF SP WSCs MUST support redirect based user interaction, as described in section 4  
150 of [[LibertyInteract](#)].

### 151 **2.4.4. ID-FF SP WSC Security Mechanisms**

152 Conforming ID-FF SP WSCs MUST be able to construct and send ID-WSF messages using the following additional  
153 Security Mechanisms:

154 **idffsp-wsc-secmech-001** The WSC MUST be able to construct and send ID-WSF messages using x509 and SAML  
155 message authentication mechanisms, as described in section 6.3 of [[LibertySecMech](#)].

156 Combined with the peer entity authentication mechanisms required by the WSC Common Profile, this requirement  
157 corresponds to the following additional Security Mechanism URIs:

- 158 • urn:liberty:security:2003-08:null:X509
- 159 • urn:liberty:security:2003-08:null:SAML
- 160 • urn:liberty:security:2003-08:TLS:X509
- 161 • urn:liberty:security:2003-08:TLS:SAML

### 162 **2.4.5. ID-FF DS Bootstrap**

163 Conforming ID-FF SP WSCs MUST support Discovery Service Bootstrap:

164 **idffsp-wsc-bootstrap-001** The ID-FF SP WSC MUST support extraction of the Principal's's Discovery Service  
165 Resource Offering and any Credentials from the ID-FF assertion authenticating the Principal,  
166 as described in section 6 of [[LibertyDisco](#)].

### 167 **2.4.6. Service Discovery and Service Invocation**

168 Conforming ID-FF SP WSCs MUST support discovery and invocation of at least one ID-WSF service registered in a  
169 Principal's Discovery Service (see idffsp-wsc-bootstrap-001):

170 **idffsp-wsc-discinvk-001** The ID-FF SP WSC MUST support querying the Principal's Discovery Service to obtain  
171 the Resource Offering and any Credentials for at least one ID-WSF service, as described in  
172 section 6 of [[LibertyDisco](#)].

173 **idffsp-wsc-discinvk-002** The ID-FF SP WSC MUST support invocation of at least one discovered ID-WSF  
174 service.

---

## 175 **2.4.7. PAOS**

176 Conforming ID-FF SP WSCs MAY support discovery and invocation of PAOS services:

177 **idffsp-wsc-paos-001** The ID-FF SP WSC MAY support discovery and invocation of PAOS services, as described  
178 in [\[LibertyPAOS\]](#).

## 179 **2.5. Liberty User Agent or Device (LUAD) Web Service Consumer (WSC)** 180 **Conformance Profile**

181 This section defines the requirements for the LUAD Web Service Consumer Profile.

### 182 **2.5.1. WSC Common**

183 Conforming LUAD WSCs MUST support the Common WSC Profile

### 184 **2.5.2. Authentication Service**

185 Conforming LUAD WSCs MUST support authentication via an IdP:

186 **luad-wsc-authsvc-001** The LUAD WSC MUST support invocation of an authentication service, as described in  
187 section 5 of [\[LibertyAuthn\]](#).

188 **luad-wsc-authsvc-002** The LUAD WSC MUST support the PLAIN and CRAM-MD5 authentication mecha-  
189 nisms, as referenced in appendix A of [\[LibertyAuthn\]](#).

190 **luad-wsc-authsvc-003** The LUAD WSC MUST support the password transforms Truncation, Lowercase, Upper-  
191 case, and Select, as described in appendix B of [\[LibertyAuthn\]](#).

### 192 **2.5.3. SSO Service**

193 Conforming LUAD WSCs MAY support SSO via an IdP:

194 **luad-wsc-ssosvc-001** The LUAD WSC MAY support invocation of an sso service, as described in section 6 of  
195 [\[LibertyAuthn\]](#).

### 196 **2.5.4. Service Discovery and Service Invocation**

197 Conforming LUAD WSCs MUST support discovery and invocation of at least one ID-WSF service registered in a  
198 Principal's Discovery Service:

199 **luad-wsc-discinvk-001** The LUAD WSC MUST support querying the Principal's Discovery Service to obtain the  
200 Resource Offering and any Credentials for at least one ID-WSF service, as described in section  
201 6 of [\[LibertyDisco\]](#).

202 **luad-wsc-discinvk-002** The LUAD WSC MUST support invocation of at least one discovered ID-WSF service.

### 203 **2.5.5. LUAD**

204 Conforming WSCs MUST support the LUAD-WSC profile:

205 **luad-wsc-luad-001** The WSC MUST support LUAD-WSC profile, as described in section 3 of [[LibertyClientPro-](#)  
206 files].

## 207 **2.6. ID-FF Service Provider (SP) Web Service Provider (WSP) Confor-** 208 **mance Profile**

209 This section defines the requirements for the ID-FF SP Web Service Provider Profile.

### 210 **2.6.1. WSP Common**

211 Conforming ID-FF SP WSPs MUST support the Common WSP Profile

### 212 **2.6.2. Interaction Redirect and Interaction Service**

213 Conforming ID-FF SP WSPs MAY optionally support the following Interaction features:

214 **idffsp-wsp-interact-001** The ID-FF SP WSP MAY support redirect based user interaction, as described in section  
215 4 of [[LibertyInteract](#)].

216 **idffsp-wsp-interact-002** The ID-FF SP WSP MAY support invocation of a user interaction service, as described  
217 in section 5 of [[LibertyInteract](#)]. Note that the ID-FF SP WSP takes on the role of a WSC in  
218 making interaction service calls, and so is bound by all of the requirements of the applicable  
219 WSC profile.

### 220 **2.6.3. Service Registration**

221 Conforming ID-FF SP WSPs MAY support registration with a Principal's Discovery Service using DS Modify  
222 InsertEntry:

223 **idffsp-wsp-registration-001** The ID-FF SP WSP MAY invoke DS Modify InsertEntry at a Principal's Discovery  
224 Service to register itself, as described in section 5.2 of [[LibertyDisco](#)]. Note that the ID-FF SP  
225 WSP takes on the role of a WSC in making DS calls, and so is bound by all of the requirements  
226 specified in the applicable WSC profile.

### 227 **2.6.4. Service Invocation**

228 Conforming ID-FF SP WSPs MUST support invocation by a WSC based on a resource offering and credentials  
229 discovered by WSC in a Principal's Discovery Service:

230 **idffsp-wsp-discinvk-001** The ID-FF SP WSP MUST support invocation by a WSC as a discovered ID-WSF  
231 service.

## 232 **2.7. Liberty User Agent or Device (LUAD) Web Service Provider (WSP)** 233 **Conformance Profile**

234 This section defines the requirements for the LUAD Web Service Provider Profile.

### 235 **2.7.1. WSP Common**

236 Conforming LUAD WSPs MUST support the Common WSP Profile

### 237 **2.7.2. Interaction Redirect and Interaction Service**

238 Conforming LUAD WSPs MAY optionally support the following Interaction features:

239 **luad-wsp-interact-001** The LUAD WSP MAY support invocation of a user interaction service, as described in  
240 section 5 of [[LibertyInteract](#)]. Note that the LUAD WSP takes on the role of a WSC in making  
241 interaction service calls, and so is bound by all of the requirements specified in the applicable  
242 WSC profile.

### 243 **2.7.3. Service Registration**

244 Conforming LUAD WSPs MAY support registration with a Principal's Discovery Service using DS Modify  
245 InsertEntry:

246 **luad-wsp-registration-001** The LUAD WSP MAY invoke DS Modify InsertEntry at a Principal's Discovery  
247 Service to register itself, as described in section 5.2 of [[LibertyDisco](#)]. Note that the LUAD  
248 WSP takes on the role of a WSC in making DS calls, and so is bound by all of the requirements  
249 specified in the applicable WSC profile.

### 250 **2.7.4. Service Invocation**

251 Conforming LUAD WSPs MUST support invocation by a WSC based on a resource offering and credentials  
252 discovered by the WSC in a Principal's Discovery Service:

253 **luad-wsp-discinvk-001** The LUAD WSP MUST support invocation by a WSC as a discovered ID-WSF service.

### 254 **2.7.5. PAOS**

255 Conforming LUAD WSPs MAY support advertisement and invocation via PAOS:

256 **luad-wsp-paos-001** The LUAD WSP MAY support advertisement and invocation via PAOS, as described in  
257 [[LibertyPAOS](#)].

### 258 **2.7.6. LUAD**

259 Conforming LUAD WSPs MUST support the LUAD-WSP profile:

260 **luad-wsp-luad-001** The LUAD WSP MUST support the LUAD-WSP profile, as described in section 4 of  
261 [[LibertyClientProfiles](#)].

## 262 **2.8. ID-FF Identity Provider (IdP) Conformance Profile**

263 This section defines the conformance requirements for the ID-FF Identity Provider Profile. By supporting this profile,  
264 ID-FF IdPs enable ID-FF SP WSCs.

### 265 **2.8.1. ID-FF DS Bootstrap**

266 Conforming ID-FF IdPs MUST support Discovery Service Bootstrap:

267 **idffidp-bootstrap-001** The ID-FF IdP MUST include the Principal's Discovery Service Resource Offering in ID-  
268 FF assertions, as described in section 6 of [[LibertyDisco](#)].

## 269 **2.9. ID-WSF Identity Provider (IdP) Conformance Profile**

270 This section defines the conformance requirements for the ID-WSF Identity Provider Profile. By supporting this  
271 profile, IdPs enable LUAD WSCs.

### 272 **2.9.1. Authentication Service**

273 Conforming IdPs MUST support authentication requests:

274 **idwsfidp-authsvc-001** The IdP MUST respond to authentication requests, as described in section 5 of [[LibertyAuthn](#)].  
275

276 **idwsfidp-authsvc-002** The IdP MUST support the PLAIN and CRAM-MD5 authentication mechanisms, as  
277 referenced in appendix A of [[LibertyAuthn](#)].

### 278 **2.9.2. SSO Service**

279 Conforming IdPs MAY support sso requests:

280 **idwsfidp-ssosvc-001** The IdP MAY respond to sso requests, as described in section 6 of [[LibertyAuthn](#)].

## 281 **2.10. Discovery Service (DS) Conformance Profile**

282 This section defines the conformance requirements for the Discovery Service Profile.

### 283 **2.10.1. WSP Common**

284 Conforming DSs MUST support the Common WSP Profile

### 285 **2.10.2. Interaction Redirect and Interaction Service**

286 Conforming DSs MAY optionally support the following Interaction features:

287 **ds-interact-001** The DS MAY support redirect based user interaction, as described in section 4 of [[LibertyInteract](#)].  
288

289 **ds-interact-002** The DS MAY support invocation of a user interaction service, as described in section 5 of  
290 [\[LibertyInteract\]](#). Note that the DS takes on the role of a WSC in making interaction service  
291 calls, and so is bound by all of the requirements specified in the applicable WSC profile.

### 292 **2.10.3. Service Registration**

293 Conforming DSs MUST support Discovery Service Modify:

294 **ds-registration-001** The DS MUST process DS Modify InsertEntry requests, as described in section 5.2 of  
295 [\[LibertyDisco\]](#).

296 **ds-registration-002** The DS MUST process DS Modify RemoveEntry requests, as described in section 5.2 of  
297 [\[LibertyDisco\]](#).

298 Conforming DSs MUST support the following Discovery Service Modify Directives:

299 **ds-registration-003** The DS MUST support the EncryptResourceID directive, as described in section 5.2.1.1 of  
300 [\[LibertyDisco\]](#).

301 Conforming DSs MAY support the following Discovery Service Modify Directives:

302 **ds-registration-004** The DS MAY support the AuthenticateRequester, AuthorizeRequester and AuthenticateSes-  
303 sionContext directives, as described in section 5.2.1.1 of [\[LibertyDisco\]](#).

### 304 **2.10.4. Service Discovery**

305 Conforming DSs MUST support Discovery Service Queries:

306 **ds-discovery-001** The DS MUST process DS Query requests, as described in section 5.1 of [\[LibertyDisco\]](#).

### 307 **2.10.5. PAOS**

308 Conforming DSs MAY support advertisement and invocation via PAOS:

309 **ds-paos-001** The DS MAY support advertisement and invocation via PAOS, as described in [\[LibertyPAOS\]](#).

### 310 **2.10.6. LUAD**

311 Conforming DSs MAY support the LUAD-DS profile:

312 **ds-luad-001** The DS MAY support LUAD-DS profile, as described in section 5 of [\[LibertyClientProfiles\]](#).

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## 313 **2.11. Interaction Service (IS) Conformance Profile**

314 This section defines the conformance requirements for the Interaction Service Profile.

### 315 **2.11.1. WSP Common**

316 Conforming ISs **MUST** support the Common WSP Profile

### 317 **2.11.2. Interaction Service**

318 Conforming ISs **MUST** support interaction requests:

319 **is-interaction-001** The IS **MUST** respond to interaction requests, as described in section 5 of [[LibertyInteract](#)].

### 320 **2.11.3. Service Registration**

321 Conforming ISs **MAY** support registration with a Principal's Discovery Service using DS Modify InsertEntry:

322 **is-registration-001** The IS **MAY** invoke DS Modify InsertEntry at a Principal's Discovery Service to register  
323 itself, as described in section 5.2 of [[LibertyDisco](#)]. Note that the LUAD WSP takes on the  
324 role of a WSC in making DS calls, and so is bound by all of the requirements specified in the  
325 applicable WSC profile.

### 326 **2.11.4. PAOS**

327 Conforming ISs **MAY** support advertisement and invocation via PAOS:

328 **is-paos-001** The IS **MAY** support advertisement and invocation via PAOS, as described in [[LibertyPAOS](#)].

### 329 **2.11.5. LUAD**

330 Conforming ISs **MAY** support the LUAD-WSP profile:

331 **is-luad-001** The IS **MAY** support LUAD-WSP profile, as described in section 4 of [[LibertyClientProfiles](#)].

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