



1 **GÉANT Data Protection Code of**  
2 **Conduct**  
3 **SAML 2.0 profile**



4 For Service Providers established in European Union, European Economic Area and  
5 countries with adequate data protection pursuant to Article 25.6 of the directive 95/46/EC

6 **Version 1.1, 24 October 2014**

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## 12 1. Introduction

13 This profile defines REQUIRED, RECOMMENDED, and OPTIONAL behavior for deployments supporting the  
14 Data Protection Code of Conduct. This deployment profile is based on the Organization for the Advancement of  
15 Structured Information Standards (OASIS) SAML 2.0 specifications [SAML2 Core, SAML2META]. It also  
16 references elements defined in [SAML2MDUI], and makes use of an Entity Category element defined in Entity  
17 Category Specification: Data Protection Code of Conduct [CoCEntityCategory]. The requirements from those  
18 specifications are not repeated here except where deemed necessary to highlight a point of discussion or draw  
19 attention to an issue addressed in errata, but remain implied.

20 This document is supplemented by the non-normative Notes on Implementation of INFORM/CONSENT GUI  
21 Interfaces [CoCGUI] document which outlines the current best practice in the implementation and deployment  
22 of Identity Provider side modules for attribute release and user consent.

23 Note that the SAML features that are optional, or lack mandatory processing rules, are assumed to be optional  
24 and out of scope of this profile if not otherwise precluded or given specific processing rules.

25 The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT",  
26 "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

## 27 2. SAML Metadata Requirements for SP Entities

### 28 1. mdui Requirements:

- 29 1. SPs MUST provide at least one `mdui:PrivacyStatementURL` value.
- 30 2. It is RECOMMENDED that SPs provide at least one `mdui:DisplayName` value.
- 31 3. It is RECOMMENDED that SPs provide at least one `mdui:Description` value.
- 32 4. For all mdui elements, at least an English version of the element MUST be available, indicated  
33 by an `xml:lang="en"` attribute.

### 34 2. Attribute-related Requirements:

- 35 1. SPs MUST provide `RequestedAttribute` elements describing attributes (and, optionally,  
36 requested values) relevant for the SP. The `RequestedAttribute` elements MUST include  
37 the optional `isRequired="true"` to indicate that the attribute is necessary.
- 38 2. If the SP requires just one or some particular value(s) of an attribute (such as,  
39 `eduPersonAffiliation="member"`), the SP MUST use the `saml:AttributeValue`  
40 element to indicate that value(s).
- 41 3. SPs MUST provide an Entity Category attribute [CoCEntityCategory] value asserting compliance with  
42 the Code of Conduct.

## 43 2.1 Display name

44 A short descriptive name of the service, if possible without abbreviations. It SHOULD be meaningful both to the  
45 users of the service and to readers not affiliated with the service.

46 This value may be displayed by various GUIs in order to identify the service.

47 Examples:

- 48 • Helsinki University's Moodle learning management system
- 49 • University of Tübingen's Weblicht tool for linguistics research

## 50 2.2 Description

51 A description which summarises the service provided. It SHOULD be meaningful both to the users of the  
52 service and to readers not affiliated with the service.

53 This value may be displayed by various GUIs in order to summarise the purpose for which the service  
54 processes personal data.

55 It is RECOMMENDED that the length of the description is no longer than 140 characters.

56 Examples:

- 57 • SAS-download gives access to SAS®-software for qualified users.
- 58 • bibliotek.dk gives access to all public Danish libraries, and allows users to search for and order  
59 materials.
- 60 • WebLicht is a chaining tool for linguistics research. It provides an execution environment for automatic  
61 annotation of text corpora.

## 62 2.3 Privacy Statement URL

63 A URL which resolves to a document that is the service's Privacy Policy.

64 This value may be displayed by various GUIs as a clickable link for the end user to provide more information on  
65 how the service processes personal data. See Privacy policy guidelines for Service Providers  
66 [CoCPrivacyPolicy] for more information.

67 The `PrivacyStatementURL` MUST resolve to a document which is available to browser users without  
68 requiring authentication of any kind.

## 69 **2.4 Requested Attribute**

70 Zero or more elements specifying attributes and, when applicable, attribute values requested by this service.  
71 Having no `RequestedAttribute` element in place implies the service does not request any attributes.

72 If the Service Provider supports both SAML 1.x and SAML 2.0 protocols, it SHOULD list requested attributes  
73 using only the SAML 2.0 attribute naming conventions [`MACEDirAttrProf`].

- 74 • Note: The underlying SAML 2.0 metadata standard is unable to express the attribute requirements of  
75 such a Service Provider. The recommendation above is intended to minimise the chance of  
76 interoperability problems arising. It is further RECOMMENDED that such a Service Provider uses the  
77 SAML 2.0 protocol when possible rather than SAML 1.x.

78 A necessary attribute is indicated using the `isRequired="true"` XML attribute. In the context of this Data  
79 protection Code of Conduct, an attribute is required only if it is both relevant and necessary for enabling access  
80 to the service.

81 `isRequired="false"` or a missing `isRequired` XML attribute indicates the attribute is optional (relevant,  
82 but only useful or desirable).

83 See What attributes are relevant for a Service Provider [`CoCAAttributes`] document for assistance on the  
84 necessary and optional attributes. See also Data protection good practice for Home Organisations  
85 [`CoCHomeOrg`] document for a good practice on managing the release of attributes flagged as necessary or  
86 optional.

87 Note: Introduction to Code of Conduct [`CoCIntroduction`] proposes to defer the support to attributes flagged as  
88 optional to Phase 2.

## 89 **2.5 Entity Category: Data protection Code of Conduct**

90 An Entity Category attribute as defined in the Entity Category Specification: Data Protection Code of Conduct  
91 [`CoCEntityCategory`].

## 92 **3. SAML Metadata Requirements for IDP Entities**

93 IdPs MUST provide an Entity Category support attribute [`CoCEntityCategory`] value asserting that they are  
94 willing to interact with Service Providers conforming to the Code of Conduct.

## 95 **4. Examples**

96 Only related elements and attributes are presented.

## 97 Example (Service Provider):

```
98 <EntityDescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" entityID="https://filesender.example.org/">
99   <Extensions>
100     <EntityAttributes xmlns="urn:oasis:names:tc:SAML:metadata:attribute">
101       <Attribute xmlns="urn:oasis:names:tc:SAML:2.0:assertion"
102         Name="http://macedir.org/entity-category"
103         NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format-uri">
104         <AttributeValue>http://www.geant.net/uri/dataprotection-code-of-conduct/v1</AttributeValue>
105       </Attribute>
106     </EntityAttributes>
107   </Extensions>
108   <SPSSODescriptor>
109     <Extensions>
110       <UIInfo xmlns="urn:oasis:names:tc:SAML:metadata:ui">
111         <DisplayName xml:lang="fi">FileSender</DisplayName>
112         <DisplayName xml:lang="en">FileSender</DisplayName>
113         <Description xml:lang="fi">FileSender tarjoaa helpon tavan jakaa suuria tiedostoja.</Description>
114         <Description xml:lang="en">FileSender offers an easy way to share large files with anyone.</Description>
115         <PrivacyStatementURL xml:lang="fi">https://filesender.example.org/privacy-fi.html</PrivacyStatementURL>
116         <PrivacyStatementURL xml:lang="en">https://filesender.example.org/privacy-en.html</PrivacyStatementURL>
117       </UIInfo>
118     </Extensions>
119     <AttributeConsumingService>
120       <RequestedAttribute
121         FriendlyName="displayName"
122         Name="urn:oid:2.16.840.1.113730.3.1.241"
123         NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format-uri"
124         isRequired="true"/>
125       <RequestedAttribute
126         FriendlyName="eduPersonPrincipalName"
127         Name="urn:oid:1.3.6.1.4.1.5923.1.1.1.6"
128         NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format-uri"
129         isRequired="true"/>
130       <RequestedAttribute
131         FriendlyName="mail"
132         Name="urn:oid:0.9.2342.19200300.100.1.3"
133         NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format-uri"
134         isRequired="true"/>
135     </AttributeConsumingService>
136   </SPSSODescriptor>
137 </EntityDescriptor>
138
```

139 Example (Identity Provider):

```

140 <EntityDescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" entityID="https://idp.example.org/">
141   <Extensions>
142     <EntityAttributes xmlns="urn:oasis:names:tc:SAML:metadata:attribute">
143       <Attribute xmlns="urn:oasis:names:tc:SAML:2.0:assertion"
144         Name="http://macedir.org/entity-category-support"
145         NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
146         <AttributeValue>http://www.geant.net/uri/dataprotection-code-of-conduct/v1</AttributeValue>
147       </Attribute>
148     </EntityAttributes>
149   </Extensions>
150 </EntityDescriptor>

```

151 **References**

152	<b>[CoCAttributes]</b>	Data protection Code of Conduct, "What Attributes Are Relevant for a Service Provider", < <a href="https://wiki.refeds.org/display/CODE/What+attributes+are+relevant+for+a+Service+Provider">https://wiki.refeds.org/display/CODE/What+attributes+are+relevant+for+a+Service+Provider</a> >
153		
154	<b>[CoCEntityCategory]</b>	Data protection Code of Conduct, "Entity Category Specification", Version 1.1, 24 October 2014
155	<b>[CoCGUI]</b>	Data protection Code of Conduct, "Notes on Implementation of INFORM/CONSENT GUI Interfaces", < <a href="https://wiki.refeds.org/pages/viewpage.action?pageId=1606095">https://wiki.refeds.org/pages/viewpage.action?pageId=1606095</a> >
156		
157	<b>[CoCHomeOrg]</b>	Data protection Code of Conduct, "Data Protection Good Practice for Home Organisations", < <a href="https://wiki.refeds.org/display/CODE/Data+protection+good+practice+for+Home+Organisations">https://wiki.refeds.org/display/CODE/Data+protection+good+practice+for+Home+Organisations</a> >
158		
159		
160	<b>[CoCIntroduction]</b>	Data protection Code of Conduct, "Introduction to Code of Conduct", < <a href="https://wiki.refeds.org/display/CODE/Introduction+to+Code+of+Conduct">https://wiki.refeds.org/display/CODE/Introduction+to+Code+of+Conduct</a> >
161		
162	<b>[CoCPrivacyPolicy]</b>	Data protection Code of Conduct, "Privacy Policy Guidelines for Service Providers", < <a href="https://wiki.refeds.org/display/CODE/Privacy+policy+guidelines+for+Service+Providers">https://wiki.refeds.org/display/CODE/Privacy+policy+guidelines+for+Service+Providers</a> >
163		
164	<b>[MACEDirAttrProf]</b>	MACE-Dir, "SAML Attribute Profiles", April 2008.
165	<b>[SAML2 Core]</b>	OASIS, "Assertions and Protocol for the OASIS Security Markup Language (SAML) V2.0", 15 March 2005. Document Identifier: saml-core-2.0-os, < <a href="http://docs.oasis-open.org/security/saml/v2.0/saml-core-2.0-os.pdf">http://docs.oasis-open.org/security/saml/v2.0/saml-core-2.0-os.pdf</a> >
166		
167		
168	<b>[SAML2META]</b>	Metadata for the OASIS Security Assertion Markup Language (SAML) V2.0, with various addenda, and in associated specifications.
169		
170	<b>[SAML2MDUI]</b>	SAML V2.0 Metadata Extensions for Login and Discovery User Interface Version 1.0.

## 171 Document History

### 172 **Changes from Version 1.0 Errata 1, 10 June 2014**

- 173 • Introduced a mandatory Entity Category support attribute for Identity Providers.
- 174 • Corrected links in the References section.

175

### 176 **Changes from Version 1.0, 14 June 2013**

- 177 • Removed white space characters from the <AttributeValue>, <mdui:DisplayName>, <mdui:Description> and  
178 <mdui:PrivacyStatementURL> elements in the Examples section and reformatted the example.