Conformance Requirements for the OASIS Security Assertion Markup Language (SAML) V2.0 – Errata Composite

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Abstract:
The SAML V2.0 Conformance specification provides the technical requirements for SAML V2.0 conformance and specifies the entire set of documents comprising SAML V2.0. This document, known as an "errata composite", combines corrections to reported errata with the original specification text. By design, the corrections are limited to clarifications of ambiguous or conflicting specification text. This document shows deletions from the original specification as struck-through text, and additions as colored underlined text. The "[Err]" designations embedded in the text refer to particular errata and their dispositions.

Status:
This errata composite document is a working draft based on the original OASIS Standard document that had been produced by the Security Services Technical Committee and approved by the OASIS membership on 1 March 2005. While the errata corrections appearing here are non-normative, they reflect changes specified by the Approved Errata document (currently at Working Draft revision 02), which is on an OASIS standardization track. In case of any discrepancy between this document and the Approved Errata, the latter has precedence. See also the Errata Working Document (currently at revision 39), which provides background on the changes specified here.

This document includes corrections for errata E11, E25, E28, E29, E42, and E50, and E74.

Committee members should submit comments and potential errata to the security-services@lists.oasis-open.org list. Others should submit them by following the instructions at http://www.oasis-open.org/committees/comments/form.php?wg_abbrev=security.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights web page for the Security Services TC (http://www.oasis-open.org/committees/security/ipr.php).
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1 Introduction

This normative specification describes features that are mandatory and optional for implementations claiming conformance to SAML V2.0 and also specifies the entire set of documents comprising SAML V2.0.

1.1 Overview and Specification of SAML V2.0

The SAML V2.0 standard consists of the following documents:

- This specification: Conformance Requirements for the OASIS Security Assertion Markup Language (SAML) V2.0
- Assertions and Protocols for the OASIS Security Assertion Markup Language (SAML) V2.0 [SAMLCore]
  - SAML assertions schema [SAMLAssn-xsd]
  - SAML protocols schema [SAMLProt-xsd]
- Bindings for the OASIS Security Assertion Markup Language (SAML) V2.0 [SAMLBind]
- Profiles for the OASIS Security Assertion Markup Language (SAML) V2.0 [SAMLProf]
  - SAML ECP profile schema [SAMLECP-xsd]
  - SAML X.500/LDAP attribute profile schema [SAMLX500-xsd]
  - SAML DCE PAC attribute profile schema [SAMLDCE-xsd]
  - SAML XACML attribute profile schema [SAMLXAC-xsd]
- Metadata for the OASIS Security Assertion Markup Language (SAML) V2.0 [SAMLMeta]
  - SAML metadata schema [SAMLMeta-xsd]
- Authentication Context for the OASIS Security Assertion Markup Language (SAML) V2.0 [SAMLAuthnCxt]
  - SAML authentication context schema [SAMLAC-xsd]
  - SAML authentication context schema types [SAMLACTyp-xsd]
  - SAML context class schema for Internet Protocol [SAMLAC-IP]
  - SAML context class schema for Internet Protocol Password [SAMLAC-IPP]
  - SAML context class schema for Kerberos [SAMLAC-Kerb]
  - SAML context class schema for Mobile One Factor Unregistered [SAMLAC-MOFU]
  - SAML context class schema for Mobile Two Factor Unregistered [SAMLAC-MTFU]
  - SAML context class schema for Mobile One Factor Contract [SAMLAC-MOFC]
  - SAML context class schema for Mobile Two Factor Contract [SAMLAC-MTFC]
  - SAML context class schema for Password [SAMLAC-Pass]
  - SAML context class schema for Password Protected Transport [SAMLAC-PPT]
  - SAML context class schema for Previous Session [SAMLAC-Prev]
  - SAML context class schema for Public Key – X.509 [SAMLAC-X509]
  - SAML context class schema for Public Key – PGP [SAMLAC-PGP]
  - SAML context class schema for Public Key – SPKI [SAMLAC-SPKI]
  - SAML context class schema for Public Key – XML Signature [SAMLAC-XSig]
  - SAML context class schema for Smartcard [SAMLAC-Smart]
  - SAML context class schema for Smartcard PKI [SAMLAC-SmPKI]
  - SAML context class schema for Software PKI [SAMLAC-SwPKI]
The term “SAML V2.0” or “SAML2” is often used informally to refer to the standard specified by the above documents, or subsets thereof. However, the SAML V2.0 standard should be formally identified in other documents by a normative reference to this document.

Additional non-normative documents, such as a Technical Overview [SAMLTechOvw], are available to provide assistance to developers and others in understanding SAML. These documents are available at the SAML website, http://www.oasis-open.org/committees/security.

SAML V2.0 defines a number of named profiles. Each profile (other than attribute profiles) describes details of selected SAML message flows and can also be viewed as indivisible functionality that could be implemented by a software component. Implementation of a profile involves use of a binding for each message exchange included in the profile. A binding can be viewed as a specific implementation technique for achieving a message exchange.

Section 2 of this document enumerates all of the different profiles defined by [SAMLProfiles]. For each profile, the relevant SAML V2.0 message flows are listed, and for each message flow the set of possible bindings is also described. The combination of profile, message exchange and a selected binding is termed a SAML V2.0 feature.

Section 3 describes the conformance matrix for SAML V2.0. A number of different operational modes or roles are identified. The conformance matrix describes the feature set that must be implemented by each operational mode.

1.2 Notation

The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this specification are to be interpreted in this specification and all of the SAML V2.0 specifications as described in IETF RFC 2119 [RFC 2119]:

...they MUST only be used where it is actually required for interoperability or to limit behavior which has potential for causing harm (e.g., limiting retransmissions)...

These keywords are thus capitalized when used to unambiguously specify requirements over protocol and application features and behavior that affect the interoperability and security of implementations. When these words are not capitalized, they are meant in their natural-language sense.
2 SAML V2.0 Profiles and Possible Implementations

The following table enumerates all of the profiles defined by the SAML profiles specification [SAMLProf]. For each profile, the message protocol flows (defined in the assertions and protocols specification [SAMLCore]) found within the profile are also described. For each message flow, a list of relevant bindings (defined in the bindings specification [SAMLBind]) is given in the final column.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Message Flows</th>
<th>Binding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web SSO</td>
<td><code>&lt;AuthnRequest&gt;</code> from SP to IdP</td>
<td>HTTP redirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td></td>
<td>IdP <code>&lt;Response&gt;</code> to SP</td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td>Enhanced Client/Proxy SSO</td>
<td>ECP to SP, SP to ECP to IdP</td>
<td>PAOS</td>
</tr>
<tr>
<td></td>
<td>IdP to ECP to SP, SP to ECP</td>
<td>PAOS</td>
</tr>
<tr>
<td>Identity Provider Discovery</td>
<td>Cookie setter</td>
<td>HTTP</td>
</tr>
<tr>
<td></td>
<td>Cookie getter</td>
<td>HTTP</td>
</tr>
<tr>
<td>Single Logout</td>
<td><code>&lt;LogoutRequest&gt;</code></td>
<td>HTTP redirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td></td>
<td><code>&lt;LogoutResponse&gt;</code></td>
<td>HTTP redirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOAP</td>
</tr>
<tr>
<td>Name Identifier Management</td>
<td><code>&lt;ManageNameIDRequest&gt;</code></td>
<td>HTTP redirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td></td>
<td><code>&lt;ManageNameIDResponse&gt;</code></td>
<td>HTTP redirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP POST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTTP artifact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOAP</td>
</tr>
<tr>
<td>[E28]Artifact Resolution</td>
<td><code>&lt;ArtifactResolve&gt;</code></td>
<td>SOAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;ArtifactResponse&gt;</code></td>
</tr>
<tr>
<td>Authentication Query</td>
<td><code>&lt;AuthNQuery&gt;</code>, <code>&lt;Response&gt;</code></td>
<td>SOAP</td>
</tr>
<tr>
<td>Profile</td>
<td>Message Flows</td>
<td>Binding</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Attribute Query</td>
<td>&lt;AttributeQuery&gt;, &lt;Response&gt;</td>
<td>SOAP</td>
</tr>
<tr>
<td>Authorization Decision Query</td>
<td>&lt;AuthzDecisionQuery&gt;, &lt;Response&gt;</td>
<td>SOAP</td>
</tr>
<tr>
<td>Assertion Query/Request</td>
<td>Artifact resolution:</td>
<td>SOAP</td>
</tr>
<tr>
<td></td>
<td>&lt;ArtifactResolve&gt;, &lt;ArtifactResponse&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Authentication query:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;AuthnQuery&gt;, &lt;Response&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attribute query:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;AttributeQuery&gt;, &lt;Response&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Authorization decision query:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;AuthzDecisionQuery&gt;, &lt;Response&gt;</td>
<td></td>
</tr>
<tr>
<td>Request for Assertion by Identifier</td>
<td>&lt;AssertionIDRequest&gt;, &lt;Response&gt;</td>
<td>SOAP</td>
</tr>
<tr>
<td>Name Identifier Mapping</td>
<td>&lt;NameIDMappingRequest&gt;, &lt;NameIDMappingResponse&gt;</td>
<td>SOAP</td>
</tr>
<tr>
<td>[E28] SAML URI binding</td>
<td>GET, HTTP Response</td>
<td>HTTP</td>
</tr>
<tr>
<td>UUID attribute profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DCE PAC attribute profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X.500 attribute profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XACML attribute profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[E28] Metadata</td>
<td>Consumption</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exchange</td>
<td></td>
</tr>
</tbody>
</table>
3 Conformance

This section describes the technical conformance requirements for SAML V2.0.

3.1 Operational Modes

This document uses the phrase “operational mode” to describe a role that a software component can play in conforming to SAML. The operational modes are as follows:

- IdP – Identity Provider
- IdP Lite – Identity Provider Lite
- SP – Service Provider
- SP Lite – Service Provider Lite
- ECP – Enhanced Client/Proxy
- SAML Attribute Authority
- SAML Authorization Decision Authority
- SAML Authentication Authority
- SAML Requester

3.2 Feature Matrix

The following matrices identify unique sets of conformance requirements by means of a triple taken from Table 1 with the form: profile, message(s), binding. The message component is not always included when it is obvious from context.
Table 2: Feature Matrix

<table>
<thead>
<tr>
<th>Feature</th>
<th>IdP</th>
<th>IdP Lite</th>
<th>SP</th>
<th>SP Lite</th>
<th>ECP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web SSO, &lt;AuthnRequest&gt;, HTTP redirect</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Web SSO, &lt;Response&gt;, HTTP POST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Web SSO, &lt;Response&gt;, HTTP artifact</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Artifact Resolution, SOAP</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Enhanced Client/Proxy SSO, PAOS</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
</tr>
<tr>
<td>Name Identifier Management <a href="IdP-initiated">E11</a>, HTTP redirect (IdP-initiated)</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>N/A</td>
</tr>
<tr>
<td>Name Identifier Management (IdP-initiated), SOAP (IdP-initiated)</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>OPTIONAL</td>
<td>MUST NOT</td>
<td>N/A</td>
</tr>
<tr>
<td>Name Identifier Management (SP-initiated), HTTP redirect</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>N/A</td>
</tr>
<tr>
<td>Name Identifier Management (SP-initiated), SOAP (SP-initiated)</td>
<td>MUST</td>
<td>MUST NOT</td>
<td>OPTIONAL</td>
<td>MUST NOT</td>
<td>N/A</td>
</tr>
<tr>
<td>Single Logout (IdP-initiated), HTTP redirect</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Single Logout (IdP-initiated), SOAP</td>
<td>MUST</td>
<td>OPTIONAL</td>
<td>MUST</td>
<td>OPTIONAL</td>
<td>N/A</td>
</tr>
<tr>
<td>Single Logout (SP-initiated), HTTP redirect</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>N/A</td>
</tr>
<tr>
<td>Single Logout (SP-initiated), SOAP</td>
<td>MUST</td>
<td>OPTIONAL</td>
<td>MUST</td>
<td>OPTIONAL</td>
<td>N/A</td>
</tr>
<tr>
<td>Identity Provider Discovery (cookie)</td>
<td>MUST</td>
<td>MUST</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>N/A</td>
</tr>
<tr>
<td>[E29]Request for Assertion by Identifier</td>
<td>OPTIONAL</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SAML URI Binding</td>
<td>OPTIONAL</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>[E25]Metadata Structures</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>N/A</td>
</tr>
<tr>
<td>Metadata Interoperation</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The following table summarizes operational modes that extend the IdP or SP modes defined above. These are to be understood as a combination of an IdP or SP mode from the table above with the corresponding extended feature set below.
Table 3: Extended IdP, SP

<table>
<thead>
<tr>
<th>Feature</th>
<th>IdP Extended</th>
<th>SP Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Provider proxy (Section 3.4.1.5 [SAMLCore])</td>
<td>MUST</td>
<td>MUST</td>
</tr>
<tr>
<td>Name identifier mapping, SOAP</td>
<td>MUST</td>
<td>MUST</td>
</tr>
</tbody>
</table>

The following table summarizes conformance requirements for SAML authorities and requesters.

Table 4: SAML Authority and Requester Matrix

<table>
<thead>
<tr>
<th>Feature</th>
<th>SAML Authentication Authority</th>
<th>SAML Attribute Authority</th>
<th>SAML Authorization Decision Authority</th>
<th>SAML Requester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication Query, SOAP</td>
<td>MUST</td>
<td>[E42]OPTIONAL</td>
<td>OPTIONAL N/A</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>Attribute Query, SOAP</td>
<td>OPTIONAL N/A</td>
<td>MUST</td>
<td>OPTIONAL N/A</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>Authorization Decision Query, SOAP</td>
<td>OPTIONAL N/A</td>
<td>OPTIONAL N/A</td>
<td>MUST</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>Request for Assertion by Identifier, SOAP</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>SAML URI Binding</td>
<td>MUST</td>
<td>MUST</td>
<td>MUST</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>Metadata Interoperation</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
<td>OPTIONAL</td>
</tr>
</tbody>
</table>

3.3 Implementation of SAML-Defined Identifiers

All relevant operational modes MUST implement the following SAML-defined identifiers:

- All Attribute Name Format identifiers defined in Section 8.2 of [SAMLCore]
- All Name Identifier Format identifiers defined in Section 8.3 of [SAMLCore]

Conforming SAML implementations MUST permit the use of all identifier constants described in Sections 8.2 and 8.3 when producing and consuming SAML messages. SAML message producers MUST be able to create messages and SAML message consumers MUST be able to process messages with any of the constants defined in these sections.

Sections 8.3.7 (persistent name identifiers) and 8.3.8 (transient name identifiers) define normative processing rules for the producer of such identifiers. All normative processing rules in Sections 8.3.7 and 8.3.8 MUST be supported by conforming implementations. The remaining identifiers in Sections 8.2 and 8.3 specify no normative processing rules. Hence, generation and consumption of these identifiers is meaningful only when the generating and consuming parties have externally-defined agreement on the semantic interpretation of the identifiers.

Note: In this context, "process" means that the implementation must successfully parse and handle the identifier without failing or returning an error. How the implementation
deals with the identifier once it is processed at this level is out of scope for this
specification.

A SAML implementation may provide the facilities described above through direct
implementation support for the identifiers or through the use of supported programming
interfaces. Interfaces provided for this purpose must allow the SAML implementation to
be programmatically extended to handle all identifiers in Sections 8.2 and 8.3 that are not
natively handled by the implementation.

3.4 Implementation of Encrypted Elements

All relevant operational modes MUST be able to process or generate the following encrypted elements in
any context where they are required to process or generate the corresponding unencrypted elements,
namely <saml:NameID>, <saml:Assertion>, or <saml:Attribute>:

- <saml:EncryptedID>
- <saml:EncryptedAssertion>
- <saml:EncryptedAttribute>

3.5 Security Models for SOAP and URI Bindings

The following security models are mandatory to implement for all profiles implemented using the SOAP
binding as well as for the SAML URI binding. SAML authorities and requesters MUST implement the
following authentication methods:

- No client or server authentication.
- HTTP basic authentication [RFC 2617] with and without SSL 3.0 or TLS 1.0 (see Section 3 below).
  The SAML requester MUST preemptively send the authorization header with the initial request.
- HTTP over SSL 3.0 or TLS 1.0 server authentication with server-side certificate.
- HTTP over SSL 3.0 or TLS 1.0 mutual authentication with both server-side and a client-side
certificate.

If a SAML authority uses SSL 3.0 or TLS 1.0, it MUST use a server-side certificate.

3.6 [E25]Metadata Structures

Implementations claiming conformance to SAML V2.0 may declare each operational mode’s conformance
to SAML V2.0 Metadata [SAMLMeta] through election of the Metadata Structures option.

With respect to each operational mode, such conformance entails the following:

- Implementing SAML metadata according to the extensible SAML V2.0 Metadata format in all cases
  where an interoperating peer has the option, as stated in SAML V2.0 specifications, of depending on
  the existence of SAML V2.0 Metadata. Electing the Metadata Structures option has the effect of
  requiring that such metadata be available to the interoperating peer. The Metadata Interoperation
  feature, described below, provides a means of satisfying this requirement.
- Referencing, consuming, and adhering to the SAML metadata, according to [SAMLMeta], of an
  interoperating peer when the known metadata relevant to that peer and the particular operation, and
  the current exchange, has expired or is no longer valid in cache, provided the metadata is available
  and is not prohibited by policy or the particular operation and that specific exchange.

3.7 Metadata Interoperation

Election of the Metadata Interoperation option requires the implementation to offer, in addition to any other
mechanism, the well-known location publication and resolution mechanism described in the SAML
metadata specification [SAMLMeta].
4 XML Digital Signature and XML Encryption

SAML V2.0 uses XML Signature [XMLSig] to implement XML signing and encryption functionality for integrity, and source authentication. SAML V2.0 uses XML Encryption [XMLEnc] to implement confidentiality, including encrypted identifiers, encrypted assertions, and encrypted attributes. [E50] The algorithms listed below as being required for SAML V2.0 conformance are based on the mandated algorithms in the W3C recommendations for XML Signature and for XML Encryption, but modified by the SSTC to ensure interoperability of conformant SAML implementations. While the SAML-defined set of algorithms is a minimal set for conformance, additional algorithms supported by XML Signature and XML Encryption MAY be used. Note, however, that the use of non-mandated algorithms may introduce interoperability issues if those algorithms are not widely implemented. As additional algorithms become mandated for use in XML Signature and XML Encryption, the set required for SAML conformance may be extended.

4.1 XML Signature Algorithms

XML Signature mandates use of the following algorithms in Section 6.1; therefore they MUST be implemented by compliant SAML V2.0 implementations:

- Digest: SHA1
- MAC: HMAC-SHA1
- XML Canonicalization: CanonicalXML (Without comments),
- Transform: Enveloped Signature

In addition, to enable interoperability, the following MUST be implemented by compliant SAML V2.0 implementations:

- Signature: RSAwithSHA1 (recommended in XML Signature but needed for interoperability)

Although XML Signature mandates the DSAwithSHA1 signature algorithm, it is not required by SAML V2.0, but is RECOMMENDED.

4.2 XML Encryption Algorithms

XML Encryption mandates use of the following algorithms in Sections 5.2.1 and 5.2.2; therefore they MUST be implemented by compliant SAML V2.0 implementations:

- Block Encryption: TRIPLE DES, AES-128, AES-256.
- Key Transport: RSA-v1.5, RSA-OAEP
5 Use of SSL 3.0 or TLS 1.0

In any SAML V2.0 use of SSL 3.0 [SSL3] or TLS 1.0 [RFC 2246], servers MUST authenticate to clients using a X.509 v3 certificate. The client MUST establish server identity based on contents of the certificate (typically through examination of the certificate’s subject DN field). The set of algorithms required for SAML V2.0 conformance is equivalent to that defined in SAML V1.0 and SAML V1.1. These mandated algorithms were chosen by the SSTC because of their wide implementation support in the industry. While the algorithms defined below are the minimal set for SAML conformance, additional algorithms supported by SSL 3.0 and TLS 1.0 MAY be used.

5.1 SAML SOAP and URI Binding

TLS-capable implementations MUST implement the TLS_RSA_WITH_3DES_EDE_CBC_SHA cipher suite and MAY implement the TLS_RSA_AES_128_CBC_SHA cipher suite [AES].

FIPS TLS-capable implementations MUST implement the corresponding TLS_RSA_FIPS_WITH_3DES_EDE_CBC_SHA cipher suite and MAY implement the corresponding TLS_RSA_FIPS_AES_128_CBC_SHA cipher suite [AES].

SSL-capable implementations MUST implement the SSL_RSA_WITH_3DES_EDE_CBC_SHA cipher suite.

FIPS SSL-capable implementations MUST implement the FIPS cipher suite corresponding to the SSL RSA_WITH_3DES_EDE_CBC_SHA cipher suite.

5.2 Web SSO Profiles of SAML

SSL-capable implementations of the Web SSO profile of SAML MUST implement the SSL_RSA_WITH_3DES_EDE_CBC_SHA cipher suite. TLS-capable implementations MUST implement the TLS_RSA_WITH_3DES_EDE_CBC_SHA cipher suite.
6 References


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