



XMPP

XEP-0412: XMPP Compliance Suites 2019

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This document defines XMPP protocol compliance levels.

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1 Introduction

The [XMPP Standards Foundation \(XSF\)](#)¹ defines protocol suites for the purpose of compliance testing and software certification. This document specifies compliance levels for XMPP clients and servers; it is hoped that this document will advance the state of the art, and provide guidance and eventual certification to XMPP client and server authors.

This document defines **Categories** based on typical use cases (Core, Web, IM, Mobile) and **Levels** (Core, Advanced) based on functionality in the respective category.

Unless explicitly noted, support for the listed specifications is REQUIRED for compliance purposes. A feature is considered supported if all comma separated feature providers listed in the "Providers" column are implemented (unless otherwise noted).

2 Compliance Categories

2.1 Core Compliance Suite

¹The XMPP Standards Foundation (XSF) is an independent, non-profit membership organization that develops open extensions to the IETF's Extensible Messaging and Presence Protocol (XMPP). For further information, see <<https://xmpp.org/about/xmpp-standards-foundation>>.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Core features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RFC 6120 RFC 6120: Extensible Messag- ing and Presence Protocol (XMPP): Core < http://tools.ietf.org/html/rfc6120 > RFC 7622 RFC 7622: Extensible Messag- ing and Presence Protocol (XMPP): Address Format < http://tools.ietf.org/html/rfc7622 > is not listed due to the unclear interop- erability impact of using PRECIS and Stringprep in the same ecosystem.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
TLS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RFC 7590 RFC 7590: Use of Transport Layer Security (TLS) in the Extensible Messag- ing and Presence Proto- col (XMPP)
Direct TLS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Server support of XEP-0368 means having the ability to accept direct TLS connec- tions.	<input type="checkbox"/>	< http://tools.ietf.org/html/rfc7590 > SRV records for XMPP over TLS (XEP-0368) XEP- 0368: SRV records for XMPP over TLS < https://xmpp.org/extensions/x0368.html >.
Feature discovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Service Discovery (XEP-0030) XEP-0030: Service Discovery < https://xmpp.org/extensions/x0030.html >.
Feature broadcasts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Entity Ca- pabilities (XEP-0115) XEP-0115: Entity Ca- pabilities < https://xmpp.org/extensions/x0115.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Server Extensibility	<input type="checkbox"/>	N/A	<input type="checkbox"/>	N/A	Jabber Component Protocol (XEP-0114) XEP-0114: Jabber Component Protocol < https://xmpp.org/extensions/x0114.html >.
Event publishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> While 'Personal Eventing Protocol' does not require all the features of 'Publish-Subscribe' to be available on the users' JIDs, and nor does this suite, it is desirable for this to be the case and it is expected that this will a requirement of future Compliance Suites.	<input type="checkbox"/>	Personal Eventing Protocol (XEP-0163) XEP-0163: Personal Eventing Protocol < https://xmpp.org/extensions/x0163.html >.

2.2 Web Compliance Suite

To be considered XMPP web compliant, all features from the core compliance category must be met, as well as all features in this suite.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Web Connection Mechanisms	<input type="checkbox"/> Support can be enabled via an external component or an internal server module/-plugin. If claiming compliance using such an addition, the necessary components/-modules/-plugins MUST be detailed.	<input type="checkbox"/> Only one of the recommended providers must be implemented for compliance.	<input type="checkbox"/> Support can be enabled via an external component or an internal server module/-plugin. If claiming compliance using such an addition, the necessary components/-modules/-plugins MUST be detailed.	<input type="checkbox"/> Only one of the recommended providers must be implemented for compliance.	RFC 7395 RFC 7395: An Extensible Messaging and Presence Protocol (XMPP) Subprotocol for Web-Socket -<http://tools.ietf.org/html/rfc7395> XMPP Over BOSH (XEP-0206) XEP-0206: XMPP Over BOSH -<https://xmpp.org/extensions/0206.html> . (See also: BOSH (XEP-0124) XEP-0124: Bidirectional-streams Over Synchronous HTTP -<https://xmpp.org/extensions/0124.html> .)

2.3 IM Compliance Suite

To be considered XMPP IM compliant, all features from the core compliance category must be met, as well as all features in this suite.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Core features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RFC 6121 RFC 6121: Ex-ten- sible Mes- sag- ing and Pres- ence Pro- to- col (XMPP): In- stant Mes- sag- ing and Pres- ence < http://tools.ietf.org/html/
User Avatars	N/A	<input type="checkbox"/>	N/A	<input type="checkbox"/> Not re- quired for com- mand line or ter- minal based inter- faces.	User Avatar (XEP- 0084) XEP- 0084: User Avatar < https://xmpp.org/extensions/0084.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
User Avatar Compatibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Not required for command line or terminal based interfaces.	User Avatar to vCard-Based Avatars Con- version (XEP-0398) XEP-0398: User Avatar to vCard-Based Avatars Con- version < https://xmpp.org/extensions/0398.html >., vCard-Based Avatars (XEP-0153) XEP-0153: vCard-Based Avatars < https://xmpp.org/extensions/0153.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
vcard-temp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	vcard-temp (XEP-0054) XEP-0054: vcard-temp < https://xmpp.org/extensions/0054.html >.
Outbound Message Synchronization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Carbons (XEP-0280) XEP-0280: Message Carbons < https://xmpp.org/extensions/0280.html >.
User Blocking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blocking Command (XEP-0191) XEP-0191: Blocking Command < https://xmpp.org/extensions/0191.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Group Chat	<p>Support can be enabled via an external component or an internal server module/plugin. If claiming compliance using such an addition, the necessary components/mod-ules/plugins MUST be de-tailed.</p>	<p>Support for the Entity Use Cases and Occu-pant Use Cases is RE-QUIRED; support for the main-ing use cases is REC-OM-MENDED</p>	<p>Support can be en-abled via an exter-nal com-po-nent or an inter-nal server mod-ule/-plugin. If re-claim-ing com-pliance using such an addi-tion, the nec-essary com-po-nents/-mod-ules/-plugins MUST be de-tailed.</p>	<p>Support for the Entity Use Cases and Occu-pant Use Cases is RE-QUIRED; support for the main-ing use cases is REC-OM-MENDED</p>	<p>Multi-User Chat (XEP-0045) XEP-0045: Multi-User Chat <https://xmpp.org/extensions/0045.html>.Implementation should take note that future ver-sions of these com-pliance suites may rely on Medi-ated Infor-mation eX-change (MIX) (XEP-0369) XEP-0369: Medi-ated Infor-mation eX-change (MIX) <https://xmpp.org/extensions/0369.html>. in- stead, Direct MUC</p>

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Advanced Group Chat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bookmark Storage (XEP-0048) XEP-0048: Bookmark Storage or an internal server module/plugin. If claiming compliance using such an addition, the necessary components/modules/plugins MUST be detailed.
					Bookmark Storage (XEP-0048) XEP-0048: Bookmark Storage < https://xmpp.org/extensions/0048.html >., Message Archive Management (XEP-0313) XEP-0313: Message Archive Management < https://xmpp.org/extensions/0313.html >.Support for requesting history from a MUC archive as opposed to from the user's account., MUC Self-Ping (Schrödinger's Chat) (XEP-0410)

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Persistent Storage of Private Data via PubSub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Best Practices for Persistent Storage of Private Data via Publish-Subscribe (XEP-0223) XEP-0223: Best Practices for Persistent Storage of Private Data via Publish-Subscribe < https://xmpp.org/extensions/0223.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Private XML Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Private XML Storage (XEP-0049) XEP-0049: Private XML Storage < https://xmpp.org/extensions/0049.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Session Resumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stream Management (XEP-0198) XEP-0198: Stream Management < https://xmpp.org/extensions/0198.html >.
Stanza Acknowledgements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stream Management (XEP-0198) XEP-0198: Stream Management < https://xmpp.org/extensions/0198.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Message Acknowledgements	N/A	<input type="checkbox"/>	N/A	<input type="checkbox"/>	Message Delivery Receipts (XEP-0184) XEP-0184: Message Delivery Receipts < https://xmpp.org/extensions/0184.html >.
History Storage / Retrieval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Message Archive Management (XEP-0313) XEP-0313: Message Archive Management < https://xmpp.org/extensions/0313.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Chat States	N/A	<input type="checkbox"/>	N/A	<input type="checkbox"/>	Chat State Notifications (XEP-0085) XEP-0085: Chat State Notifications < https://xmpp.org/extensions/0085.html >.
Message Correction	N/A	<input type="checkbox"/>	N/A	<input type="checkbox"/>	Last Message Correction (XEP-0308) XEP-0308: Last Message Correction < https://xmpp.org/extensions/0308.html >.

2.4 Mobile Compliance Suite

To be considered XMPP mobile compliant, all features from the core compliance category must be met, as well as all features in this suite.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Session Resumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stream Management (XEP-0198) XEP-0198: Stream Management < https://xmpp.org/extensions/0198.html >.
Stanza Acknowledgements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stream Management (XEP-0198) XEP-0198: Stream Management < https://xmpp.org/extensions/0198.html >.
Client State Indication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client State Indication (XEP-0352) XEP-0352: Client State Indication < https://xmpp.org/extensions/0352.html >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Third Party Push Notifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Support can be enabled via an external component or an internal server module/plugin. If claiming compliance using such an addition, the necessary components/modules/plugins MUST be detailed.	<input type="checkbox"/>	Push Notifications (XEP-0357) XEP-0357: Push Notifications < https://xmpp.org/extensions/0357.html >.

3 Implementation Notes

Some of the protocol specifications referenced herein have their own dependencies; developers need to consult the relevant specifications for further information.

4 Security Considerations

This document introduces no additional security considerations above and beyond those defined in the documents on which it depends.

5 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)².

6 XMPP Registrar Considerations

This document requires no interaction with the [XMPP Registrar](#)³.

7 Acknowledgements

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²The Internet Assigned Numbers Authority (IANA) is the central coordinator for the assignment of unique parameter values for Internet protocols, such as port numbers and URI schemes. For further information, see <http://www.iana.org/>.

³The XMPP Registrar maintains a list of reserved protocol namespaces as well as registries of parameters used in the context of XMPP extension protocols approved by the XMPP Standards Foundation. For further information, see <https://xmpp.org/registrar/>.