



XMPP

XEP-0387: XMPP Compliance Suites 2018

Sam Whited

<mailto:sam@samwhited.com>
<xmpp:sam@samwhited.com>
<https://blog.samwhited.com/>

Jonas Schäfer

<mailto:jonas@wielicki.name>
<xmpp:jonas@wielicki.name>

2018-01-25
Version 1.0.0

Status	Type	Short Name
Draft	Standards Track	CS2018

This document defines XMPP protocol compliance levels.

Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2018 by the [XMPP Standards Foundation](#) (XSF).

Permissions

Permission is hereby granted, free of charge, to any person obtaining a copy of this specification (the "Specification"), to make use of the Specification without restriction, including without limitation the rights to implement the Specification in a software program, deploy the Specification in a network service, and copy, modify, merge, publish, translate, distribute, sublicense, or sell copies of the Specification, and to permit persons to whom the Specification is furnished to do so, subject to the condition that the foregoing copyright notice and this permission notice shall be included in all copies or substantial portions of the Specification. Unless separate permission is granted, modified works that are redistributed shall not contain misleading information regarding the authors, title, number, or publisher of the Specification, and shall not claim endorsement of the modified works by the authors, any organization or project to which the authors belong, or the XMPP Standards Foundation.

Warranty

NOTE WELL: This Specification is provided on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE.

Liability

In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall the XMPP Standards Foundation or any author of this Specification be liable for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising from, out of, or in connection with the Specification or the implementation, deployment, or other use of the Specification (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if the XMPP Standards Foundation or such author has been advised of the possibility of such damages.

Conformance

This XMPP Extension Protocol has been contributed in full conformance with the XSF's Intellectual Property Rights Policy (a copy of which can be found at <https://xmpp.org/about/xsf/ipr-policy>) or obtained by writing to XMPP Standards Foundation, P.O. Box 787, Parker, CO 80134 USA).

Contents

1	Introduction	1
2	Compliance Levels	1
2.1	Core Compliance Suite	1
2.2	Web Compliance Suite	4
2.3	IM Compliance Suite	6
2.4	Mobile Compliance Suite	14
3	Implementation Notes	16
4	Security Considerations	16
5	IANA Considerations	17
6	XMPP Registrar Considerations	17
7	Acknowledgements	17

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. 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 Levels

2.1 Core Compliance 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 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 >

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
TLS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>RFC 7590 RFC 7590: Use of Transport Layer Security (TLS) in the Extensible Messag- ing and Presence Proto- col (XMPP) <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/xep-0368.html>.Server support means having the ability to accept direct TLS connec- tions. Service Discovery (XEP-0030) XEP-0030: Service Discovery <https://xmpp.org/extensions/xep-0030.html>.</p>
Feature discovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Feature broadcasts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Entity Capabilities (XEP-0115) XEP-0115: Entity Capabilities < https://xmpp.org/extensions/x0115.html >.
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 >.

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
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 suite 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 suite 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/

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
User Avatars	N/A	<input type="checkbox"/> Not required for command line or terminal based interfaces. While 'User Avatars' is more modern, 'vCard-Based Avatars' is more widely deployed. Although it is suggested that to maximise interoperability with existing software a client fully supports both it is sufficient to claim	N/A	<input type="checkbox"/> Not required for command line or terminal based interfaces. While 'User Avatars' is more modern, 'vCard-Based Avatars' is more widely deployed. Although it is suggested that to maximise interoperability with existing software a client fully supports both it is sufficient to claim	User Avatar (XEP-0084): XEP-0084: User Avatar < https://xmpp.org/extensions/0084.html >.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"/> Not required for command line or terminal based interfaces.	<input type="checkbox"/>	<input type="checkbox"/> Not required for command line or terminal based interfaces.	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"/>	Message 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	Support can be enabled via an external component or an internal server module/plugin. If claiming compliance using such an addition, the necessary components/plugins MUST be detailed.	Support for the Entity Use Cases and Occupant Use Cases is REQUIRED; support for the remaining use cases is RECOMMENDED	Support can be enabled via an external component or an internal server module/plugin. If claiming compliance using such an addition, the necessary components/plugins MUST be detailed.	Support for the Entity Use Cases and Occupant Use Cases is REQUIRED; support for the remaining use cases is RECOMMENDED	Multi-User Chat (XEP-0045) XEP-0045: Multi-User Chat < https://xmpp.org/extensions/0045.html >. Implementation note that future versions of these compliance suites may rely on Mediated Information eXchange (MIX) (XEP-0369) XEP-0369: Mediated Information eXchange (MIX) < https://xmpp.org/extensions/0369.html >. Instead, Direct MUC

Feature	Core Server	Core Client	Advanced Server	Advanced Client	Providers
Bookmarks	<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. < https://xmpp.org/extensions/0048.html >.

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
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 >.
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 >.

2.4 Mobile Compliance Suite

To be considered XMPP mobile compliant, all features from the core compliance suite 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

The author would like to thank Guus der Kinderen, Dele Olajide, Marc Laporte, Dave Cridland, Daniel Gultsch, Florian Schmaus, Tobias Markmann, and Georg Lukas for their suggestions.

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/>.