XEP-0296: Best Practices for Resource Locking

Matthew Miller
mailto:linuxwolf@outer-planes.net
xmpp:linuxwolf@outer-planes.net

2011-08-18
Version 0.2

<table>
<thead>
<tr>
<th>Status</th>
<th>Type</th>
<th>Short Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred</td>
<td>Informational</td>
<td>NOT_YET_ASSIGNED</td>
</tr>
</tbody>
</table>

This document specifies best practices to be followed by Jabber/XMPP clients about when to lock into, and unlock away from, resources.
Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2020 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. **General Rules**  
   1.1 Initial Conversation State  
   1  
   1.2 Locking a Conversation  
   1  
   1.3 Unlocking a Conversation  
   1  
   1.4 Interactions with Chat States  
   2

3. **User Agent Implementation Notes**  
   3.1 User Experience Considerations  
   2  
   3.2 Idle Conversations  
   2  
   3.3 Overall Inactivity  
   2

4. **Security Considerations**  
   3

5. **IANA Considerations**  
   3

6. **XMPP Registrar Considerations**  
   3
1 Introduction

The goal of this specification is to provide implementation guidance for XMPP clients to
improve the user experience when maintaining a chat conversation between the user and a
conversee. Section 5.1 of XMPP IM \(^1\) defines the concept of a "one-to-one chat session” and
recommends that clients support the behavior described there, including:

1. Send the first message in a chat session to the bare JID <localpart@domain.tld> of the
   intended recipient
2. Send messages to the full JID <localpart@domain.tld/resource> only after receiving a
   reply from the recipient (this is called "locking" into that full JID).
3. Send messages to the bare JID again if the presence of the recipient changes in any way
   (this is called "unlocking" from the full JID).

However, following only these guidelines can still lead to "disjointed" chat conversations in
clients, especially if multiple resources are in play.
This specification reinforces the recommendations from XMPP-IM and provides additional
implementation guidance to developers of XMPP clients.

2 General Rules

2.1 Initial Conversation State

A client MUST start conversations in the unlocked state. In this state, a client MUST send
<message/>s to a conversee’s bare JID.

2.2 Locking a Conversation

Once a client receives a chat <message/> from the conversee, whether or not this client
initiated the conversation, it MUST lock the conversation. The client MUST remember the
conversee’s full JID and send further correspondence to this full JID until one of the unlocking
conditions are met.

2.3 Unlocking a Conversation

A client MUST unlock a chat session from a resource when one of the following conditions is
met:

• A `<message/>` from the same bare JID, but a different resource, is received. In this case, the client SHOULD lock to the new resource; or the client MAY revert to the initial state, sending any following correspondence to the conversee’s bare JID.

• any `<presence/>` update from any resource for the conversee’s bare JID, including `<presence type='unavailable'/>`. The client SHOULD revert to the initial state, sending any following correspondence to the conversee’s bare JID.

### 2.4 Interactions with Chat States

If a client supports [Chat State Notifications (XEP-0085)](https://xmpp.org/extensions/xep-0085.html), then the following additional considerations apply:

• If a client receives a `<message/>` with a `<gone xmlns='http://jabber.org/protocol/chatstates'/>` chat state, it SHOULD unlock the conversation.

### 3 User Agent Implementation Notes

This section is non-normative, but provides additional guidelines for clients that interact directly with users.

#### 3.1 User Experience Considerations

To further improve the user experience, clients are strongly encouraged to implement Chat State Notifications and adhere to the recommendations from [Best Practices for Message Threads (XEP-0201)](https://xmpp.org/extensions/xep-0201.html).

#### 3.2 Idle Conversations

A client MAY take into account the lack of activity of a conversation. Exactly how much inactivity constitutes an idle conversation is left to implementations to determine.

#### 3.3 Overall Inactivity

A client MAY take into account the overall lack of activity of a user, in which case it is RECOMMENDED the client send a `<presence/>` update to trigger any conversations to unlock. The exact conditions and `<presence/>` information conveyed is left to implementations to determine.

---


4 Security Considerations

This document introduces no known security vulnerabilities.

5 IANA Considerations

This document requires no interaction with the Internet Assigned Numbers Authority (IANA) \(^4\).

6 XMPP Registrar Considerations

This document requires no interaction with the XMPP Registrar \(^5\).

\(^4\)The 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/>.

\(^5\)The 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/>.