



# XMPP

## XEP-0296: Best Practices for Resource Locking

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

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## 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](#)<sup>1</sup> 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:

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<sup>1</sup>RFC 6121: Extensible Messaging and Presence Protocol (XMPP): Instant Messaging and Presence <<http://tools.ietf.org/html/rfc6121>>.

- 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 \(XEP-0085\)](#)<sup>2</sup>, 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 \(XEP-0201\)](#)<sup>3</sup>.

## 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.

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<sup>2</sup>XEP-0085: Chat State Notifications <<https://xmpp.org/extensions/xep-0085.html>>.

<sup>3</sup>XEP-0201: Best Practices for Message Threads <<https://xmpp.org/extensions/xep-0201.html>>.

## 4 Security Considerations

This document introduces no known security vulnerabilities.

## 5 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](http://www.iana.org/)<sup>4</sup>.

## 6 XMPP Registrar Considerations

This document requires no interaction with the [XMPP Registrar](https://xmpp.org/registrar/)<sup>5</sup>.

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<sup>4</sup>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/>.

<sup>5</sup>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/>.