



XMPP

XEP-0149: Time Periods

Peter Saint-Andre
<mailto:xsf@stpeter.im>
<xmpp:peter@jabber.org>
<http://stpeter.im/>

2006-01-24
Version 1.0

Status	Type	Short Name
Active	Informational	N/A

This document defines a method to specify the valid time periods for states, events, and activities communicated via Jabber/XMPP protocols.

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	Requirements	1
3	Protocol	1
4	Examples	2
4.1	Basic Presence	2
4.2	User Activity	2
4.3	User Mood	3
5	Implementation Notes	3
6	Security Considerations	4
7	IANA Considerations	4
8	XMPP Registrar Considerations	4
8.1	SHIM Headers	4

1 Introduction

Certain events and states may last for only a limited period of time. For example, when a person changes his availability to "dnd" and his status to "In a Meeting", the person (or his calendaring application) may know that the meeting is expected to last for 90 minutes; because those who subscribe to the person's presence may find it helpful to know how long the person will be in the meeting, it might be desirable to include that time period information in the presence stanza sent when the person's availability changes. Similar considerations apply to other states, events, and activities, such as various forms of "extended presence" (see [Extended Presence Protocol Suite \(XEP-0119\)](#)¹).

This document defines a straightforward XMPP extension for encapsulating information about time periods, using new headers that adhere to the format specified in [Stanza Headers and Internet Metadata \(XEP-0131\)](#)².

2 Requirements

This document addresses the following requirements:

1. Provide the ability to specify time periods for states, events, and activities communicated via Jabber/XMPP protocols.
2. Conform to [XMPP Date and Time Profiles \(XEP-0082\)](#)³.

3 Protocol

In order to specify the time period for a state, event, or activity, the generating entity SHOULD include both "Start" and "Stop" SHIM headers that specify the dateTimes at which the time period starts and stops. The following rules apply:

1. All start and stop dates MUST conform to the dateTime profile specified in XEP-0082.
2. All dateTime information MUST be expressed in UTC (i.e., with no timezone offsets).
3. Start and stop times SHOULD be understood by the recipient as estimates or approximations.
4. If both a start time and a stop time are specified, the stop time MUST be later than the start time.

¹XEP-0119: Extended Presence Protocol Suite <<https://xmpp.org/extensions/xep-0119.html>>.

²XEP-0131: Stanza Headers and Internet Metadata <<https://xmpp.org/extensions/xep-0131.html>>.

³XEP-0082: XMPP Date and Time Profiles <<https://xmpp.org/extensions/xep-0082.html>>.

These SHIM headers MAY be included wherever appropriate; however, it is expected that they will be included mainly to further specify basic presence states (see [RFC 3921](#)⁴) and various "extended presence" states, events, and activities (see, for example, [User Mood \(XEP-0107\)](#)⁵ and [User Activity \(XEP-0108\)](#)⁶).

There is no requirement that the start time needs to be the time when the stanza is generated; for example, the start time may be retroactive to a dateTime in the past or may be an estimated dateTime in the future.

4 Examples

4.1 Basic Presence

In order to specify that a basic presence state will last for a specific time period, the entity that generates the presence stanza SHOULD include the desired SHIM headers.

Listing 1: Basic Presence With Time Period

```
<presence>
  <show>dnd</show>
  <status>In a Meeting</status>
  <headers xmlns='http://jabber.org/protocol/shim'>
    <header name='Stop'>2005-03-17T11:30:00Z</header>
  </headers>
</presence>
```

4.2 User Activity

An XMPP extension for user activity is specified in XEP-0108. It may be desirable to include time period information when publishing one's activity.

Listing 2: User Activity With Time Period

```
<iq type='set'
  from='juliet@capulet.com/balcony'
  to='pubsub.shakespeare.lit'
  id='activity1'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='generic/juliet-activity'>
      <item id='current'>
        <activity xmlns='http://jabber.org/protocol/activity'>
```

⁴RFC 3921: Extensible Messaging and Presence Protocol (XMPP): Instant Messaging and Presence <<http://tools.ietf.org/html/rfc3921>>.

⁵XEP-0107: User Mood <<https://xmpp.org/extensions/xep-0107.html>>.

⁶XEP-0108: User Activity <<https://xmpp.org/extensions/xep-0108.html>>.

```

    <relaxing>
      <partying/>
    </relaxing>
    <text xml:lang='en'>My best friend's birthday!</text>
  </activity>
  <headers xmlns='http://jabber.org/protocol/shim'>
    <header name='Start'>2005-03-17T19:00:00Z</header>
    <header name='Stop'>2005-03-17T23:00:00Z</header>
  </headers>
</item>
</publish>
</pubsub>
</iq>

```

4.3 User Mood

An XMPP extension for user mood is specified in XEP-0107. It may be desirable to include time period information when publishing one's mood.

Listing 3: User Mood With Time Period

```

<iq type='set'
  from='juliet@capulet.com/balcony'
  to='pubsub.shakespeare.lit'
  id='mood1'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='generic/juliet-mood'>
      <item id='current'>
        <mood xmlns='http://jabber.org/protocol/mood'>
          <annoyed/>
          <text>She has been bothering me *all day*!</text>
        </mood>
        <headers xmlns='http://jabber.org/protocol/shim'>
          <header name='Start'>2005-03-17T07:00:00Z</header>
        </headers>
      </item>
    </publish>
  </pubsub>
</iq>

```

Note that the start time is (intended to be) retroactive.

5 Implementation Notes

For the sake of interoperability, it may be desirable for certain kinds of implementations (e.g., gateways) to transform XMPP start and stop times into the formats used by other protocols

(e.g., the 'from' and 'until' attributes specified in [RFC 4480](#)⁷, see also [RFC 4481](#)⁸).

6 Security Considerations

It is possible that inclusion of time periods for particular states, events, or activities may reveal information that would enable a recipient to launch an attack while the sender is unavailable or away (e.g., if the sender specifies that he will be on vacation for the next three weeks, a recipient might therefore learn that this is a good time to break into the sender's house). Therefore, senders of time period information should balance the desire to share helpful information against the need for appropriate control over security-critical availability information.

7 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)⁹.

8 XMPP Registrar Considerations

8.1 SHIM Headers

The [XMPP Registrar](#)¹⁰ includes the following entries in its registry of SHIM headers (see <https://xmpp.org/registrar/shim.html>).

```
<header>
  <name>Start</name>
  <desc>The dateTime at which a state, event, or activity starts</desc>
  <doc>XEP-0149</doc>
</header>

<header>
```

⁷RFC 4480: RPID: Rich Presence Extensions to the Presence Information Data Format (PIDF) <http://tools.ietf.org/html/rfc4480>.

⁸RFC 4481: Timed Presence Extensions to the Presence Information Data Format (PIDF) to Indicate Status Information for Past and Future Time Intervals <http://tools.ietf.org/html/rfc4481>.

⁹The 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/>.

¹⁰The 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/>.

```
<name>Stop</name>  
<desc>The dateTime at which a state, event, or activity stops</desc>  
<doc>XEP-0149</doc>  
</header>
```