This specification defines a way to communicate time of last user interaction with her system using XMPP presence notifications.
Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2024 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).
1 Introduction

This protocol describes a way to communicate a user’s last interaction time with other XMPP entities over <presence/> stanzas. For the purposes of this document, user interaction here refers to a human end user interacting with her device by means of a keyboard, mouse, touch screen, and so on. Based on this information XMPP clients can display the time a contact went idle or a duration for how long a contact has been idle, thereby allowing end users to estimate the expected responsiveness of their contacts.

This protocol uses absolute timestamps formatted according to the DateTime profile of XMPP Date and Time Profiles (XEP-0082)\(^1\), indicated as value of the 'since' attribute in the <idle/> element.

Experience has shown a number of issues with Last Activity in Presence (XEP-0256)\(^2\):

- The use of relative durations is too vague. It requires additional information from Delayed Delivery (XEP-0203)\(^3\) to provide a reliable user experience.
- Distinguishing between the idle and last online use cases is very difficult.
- It is desirable to have idle time indicated for <presence/> <show/> values other than "away" and "xa".

Updating XEP-0256 directly would be problematic as it would break compatibility with existing implementations. Instead a new protocol is described for handling the idle time use case; the last online use case is handled by PubSub Since (XEP-0312)\(^4\).

2 Use Cases

There are two main use cases for this extension, explained in more detail in the following sections.

2.1 Presence with Last Interaction

After a user has not interacted with her device for some amount of time the user wants to inform her contacts about this fact. The client sends a <presence/> stanza with time of last interaction.

Listing 1: Time of Last User Interaction in Auto-Away

---


The amount of time the user has to be idle before a client sends this enhanced presence is application-specific; it is suggested that a sensible default interval of 5 minutes be used.

2.2 Presence Indicating User Coming Back From Idle

When a user comes back and uses her device again the client informs user's contacts by sending a normal presence stanza like shown in the following example, omiting the <idle/> element.

Listing 2: Presence Indicating Return to Device

```xml
<presence from='juliet@capulet.com/balcony'/>
</presence>
```

3 XML Schema

```xml
<xs:schema
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified"
  targetNamespace="urn:xmpp:idle:1"
  xmlns="urn:xmpp:idle:1">
  <xs:annotation>
    <xs:documentation>
      The protocol documented by this schema is defined in XEP-0319: http://www.xmpp.org/extensions/xep-0319.html
    </xs:documentation>
  </xs:annotation>

  <xs:element name="idle">
    <xs:complexType>
      <xs:attribute name="since" use="required" type="xs:dateTime"/>
    </xs:complexType>
  </xs:element>
</xs:schema>
```
4 Acknowledgements

Thanks to Florian Schmaus, Christian Schudt, and Lance Stout for their helpful comments.

5 Security Considerations

The security considerations of XEP-0082 apply to this protocol. This specification introduces no new security or privacy concerns. While including a last user interaction notation in <presence/> updates can enable recipients to determine exactly when a user has stopped interacting with her XMPP client or even their system, this information is in essence already available if the user’s client publishes timely presence updates.

6 IANA Considerations

This document requires no interaction with the Internet Assigned Numbers Authority (IANA)\(^5\).

7 XMPP Registrar Considerations

7.1 Protocol Namespace

The XMPP Registrar\(^6\) shall add 'urn:xmpp:idle:1' to its registry at http://xmpp.org/registrar/namespaces.html.

---

\(^5\)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/>.

\(^6\)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/>.