



# XMPP

## XEP-0319: Last User Interaction in Presence

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

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## 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 \(XEP-0082\)](#)<sup>1</sup>, indicated as value of the 'since' attribute in the `<idle/>` element.

Experience has shown a number of issues with [Last Activity in Presence \(XEP-0256\)](#)<sup>2</sup>:

- The use of relative durations is too vague. It requires additional information from [Delayed Delivery \(XEP-0203\)](#)<sup>3</sup> 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 [Last Activity in Presence \(XEP-0256\)](#)<sup>4</sup> 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 \(XEP-0312\)](#)<sup>5</sup>.

## 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.

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<sup>1</sup>XEP-0082: XMPP Date and Time Profiles [-<https://xmpp.org/extensions/xep-0082.html>](https://xmpp.org/extensions/xep-0082.html).

<sup>2</sup>XEP-0256: Last Activity in Presence [-<https://xmpp.org/extensions/xep-0256.html>](https://xmpp.org/extensions/xep-0256.html).

<sup>3</sup>XEP-0203: Delayed Delivery [-<https://xmpp.org/extensions/xep-0203.html>](https://xmpp.org/extensions/xep-0203.html).

<sup>4</sup>XEP-0256: Last Activity in Presence [-<https://xmpp.org/extensions/xep-0256.html>](https://xmpp.org/extensions/xep-0256.html).

<sup>5</sup>XEP-0312: PubSub Since [-<https://xmpp.org/extensions/xep-0312.html>](https://xmpp.org/extensions/xep-0312.html).

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

```
<presence from='juliet@capulet.com/balcony'>
  <show>away</show>
  <idle xmlns='urn:xmpp:idle:1' since='1969-07-21T02:56:15Z' />
</presence>
```

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, omitting the <idle/> element.

Listing 2: Presence Indicating Return to Device

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

## 3 XML Schema

```
<?xml version="1.0" encoding="utf-8"?>

<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 [XMPP Date and Time Profiles \(XEP-0082\)](#)<sup>6</sup> 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 \(IANA\)](#)<sup>7</sup>.

## 7 XMPP Registrar Considerations

### 7.1 Protocol Namespace

The [XMPP Registrar](#)<sup>8</sup> shall add 'urn:xmpp:idle:1' to its registry at <http://xmpp.org/registrar/namespaces.html>.

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<sup>6</sup>XEP-0082: XMPP Date and Time Profiles <https://xmpp.org/extensions/xep-0082.html>.

<sup>7</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>8</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/>.