



# XMPP

## XEP-0256: Last Activity in Presence

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This specification defines a way to use the Last Activity extension in XMPP presence notifications.

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## 1 Use Cases

[Last Activity \(XEP-0012\)](#)<sup>1</sup> defines a method for determining the last time that an XMPP entity was active. This document specifies that an online client MAY include last activity information when sending a presence update. Including such information essentially means "when I sent this presence notification I had last been active at time T".

There are two primary use cases:

1. When a client sends initial presence to start a presence session, the last activity notation indicates when that client terminated its previous presence session.
2. When a client changes from available to "away" or "xa", the last activity notation indicates when that client was last active during the current presence session.

The following sections show examples of each use case.

### 1.1 Initial Presence

When a client begins a presence session, it can indicate when that particular client was last online. It does this by sending initial presence with a last activity notation.

Listing 1: Last Indication in Initial Presence

```
<presence from='juliet@capulet.com/balcony'>  
  <query xmlns='jabber:iq:last' seconds='86511' />  
</presence>
```

This can be read as "I'm now online and I was last online at this client 24 hours and 111 seconds ago".

Including last activity information in an initial presence notification enables [Publish-Subscribe \(XEP-0060\)](#)<sup>2</sup> and [Personal Eventing Protocol \(XEP-0163\)](#)<sup>3</sup> nodes to optimize item delivery (e.g., by sending only the items that were published after a subscriber went offline the last time) and enables [Multi-User Chat \(XEP-0045\)](#)<sup>4</sup> rooms to optimize the delivery of discussion history messages.

### 1.2 Away and Extended Away

When a client automatically sets the user's <show/> value to "away" or "xa" (extended away), it can indicate when that particular was last active during the current presence session.

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<sup>1</sup>XEP-0012: Last Activity <<https://xmpp.org/extensions/xep-0012.html>>.

<sup>2</sup>XEP-0060: Publish-Subscribe <<https://xmpp.org/extensions/xep-0060.html>>.

<sup>3</sup>XEP-0163: Personal Eventing Protocol <<https://xmpp.org/extensions/xep-0163.html>>.

<sup>4</sup>XEP-0045: Multi-User Chat <<https://xmpp.org/extensions/xep-0045.html>>.

Listing 2: Last Indication in Auto-Away

```
<presence from='juliet@capulet.com/balcony'>
  <show>away</show>
  <query xmlns='jabber:iq:last' seconds='600' />
</presence>
```

This can be read as "I just went away and I was last active 10 minutes ago".

If one of the user's contacts receives that presence notification with delayed delivery (see [Delayed Delivery \(XEP-0203\)](#)<sup>5</sup>) on login in response to a presence probe as described in [XMPP IM](#)<sup>6</sup>, the contact will then know how long the user has been idle (i.e., the number of seconds since the delayed delivery timestamp, plus the iq:last seconds). Thus the contact does not need to send an iq:last query.

Listing 3: Last Indication in Auto-Away With Delayed Delivery

```
<presence from='juliet@capulet.com/balcony' to='romeo@montague.net'>
  <show>away</show>
  <query xmlns='jabber:iq:last' seconds='600' />
  <delay xmlns='urn:xmpp:delay'
    from='capulet.com'
    stamp='2002-09-10T23:41:07Z' />
</presence>
```

## 2 Security Considerations

Including a last activity notation in presence notifications can enable those who receive such notifications to determine exactly when a user has stopped interacting with his or her XMPP client, but this information is in essence already available if the user publishes timely presence updates. Therefore, this specification introduces no new vulnerabilities.

## 3 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)<sup>7</sup>.

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<sup>5</sup>XEP-0203: Delayed Delivery <<https://xmpp.org/extensions/xep-0203.html>>.

<sup>6</sup>RFC 6121: Extensible Messaging and Presence Protocol (XMPP): Instant Messaging and Presence <<http://tools.ietf.org/html/rfc6121>>.

<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/>>.

## 4 XMPP Registrar Considerations

This document requires no interaction with the [XMPP Registrar](#)<sup>8</sup>.

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<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/>.