



# XMPP

## XEP-0318: Best Practices for Client Initiated Presence Probes

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This specification defines a way to determine the time when a XMPP entity has last changed its presence. Using client initiated presence probes the current presence of subscribed XMPP users can be requested. In addition a protocol to request the uptime of servers and components is defined herein.

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## 1 Introduction

[RFC 6121](#)<sup>1</sup>, section 4.3, defines presence probes as a way for servers to actively ping for presence status of XMPP contacts. In some scenarios however, clients want to request an update on the status of a XMPP contact.

## 2 Rationale

While [RFC 6121](#)<sup>2</sup> specifically advises against (SHOULD NOT) clients sending presence probes to XMPP contacts, there are valid scenarios where XMPP clients want to send presence probes. According to [RFC 6121](#)<sup>3</sup>, contacts a client doesn't have presence information on, are expected to be offline and server aren't mandated to explicitly send offline presence to the client for offline users.

In addition, clients in constrained environments (i.e. mobile clients), could explicitly tell the server to filter out presence stanzas of certain kind, to keep communication to a minimum. One such protocol is [Stanza Interception and Filtering Technology \(XEP-0273\)](#)<sup>4</sup>.

This causes presence information to be outdated and any information, that might have been attached to the offline presence, i.e. [Delayed Delivery \(XEP-0203\)](#)<sup>5</sup>, to be missing at client side.

Sending presence probes from the client should be based on human request, i.e. opening a chat dialog to an offline contact when missing full presence information for that contact. Clients MUST NOT send presence probes to all contacts that they think are offline after login.

## 3 Use Cases

This section describes two major use cases of the described protocol, client initiated presence probes.

### 3.1 Requesting up-to-date Presence of a XMPP Entity

In some situations, after login, the client has incomplete presence information for offline contacts. The user might be interested in status text of the offline presence of a contact or when a contact went offline. This information can be requested, i.e. when the user opens a

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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>](http://tools.ietf.org/html/rfc6121).

<sup>2</sup>[RFC 6121: Extensible Messaging and Presence Protocol \(XMPP\): Instant Messaging and Presence <http://tools.ietf.org/html/rfc6121>](http://tools.ietf.org/html/rfc6121).

<sup>3</sup>[RFC 6121: Extensible Messaging and Presence Protocol \(XMPP\): Instant Messaging and Presence <http://tools.ietf.org/html/rfc6121>](http://tools.ietf.org/html/rfc6121).

<sup>4</sup>[XEP-0273: Stanza Interception and Filtering Technology <https://xmpp.org/extensions/xep-0273.html>](https://xmpp.org/extensions/xep-0273.html).

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

chat dialog to an offline user, using a client initiated presence probe and is described in the following two examples.

Initially a client requests the current presence information of a contact by sending out a presence probe.

Listing 1: Request for up-to-date Presence using Presence Probe

```
<presence from='juliet@capulet.com/balcony' to='romeo@montague.com'
  type='probe' />
```

The other side's server, in this example montague.com, then responds with the last known presence of the user, including [Delayed Delivery \(XEP-0203\)](#)<sup>6</sup> and other information provided by the user.

Listing 2: Presence Reply in Response to Presence Probe

```
<presence from='romeo@montague.com' to='juliet@capulet.com/balcony'
  type='unavailable'>
  <status>Going offline. Out of battery.</status>
  <delay xmlns='urn:xmpp:delay'
    from='romeo@montague.com/balcony'
    stamp='2012-09-10T23:41:07Z' />
</presence>
```

### 3.2 Requesting Uptime of a XMPP Server

XMPP servers typically don't have all the properties known from XMPP clients, like presence or rosters. However, [Server Buddies \(XEP-0267\)](#)<sup>7</sup> for example added rosters to XMPP servers. In a similar manner, this extension describes the use of presence for XMPP servers and XMPP components. Basically, when a XMPP server or component starts up it's expected to set its presence to online.

With this concept, any party could easily request the time a XMPP server or component went online, by sending a presence probe to it.

Listing 3: Request for Presence of a XMPP Server

```
<presence from='juliet@capulet.com/balcony' to='montague.com' type='
  probe' />
```

In response, the requester receives a presence stanza, which contains [Delayed Delivery \(XEP-0203\)](#)<sup>8</sup> information, indicating the time the server went online.

<sup>6</sup>XEP-0203: Delayed Delivery <<https://xmpp.org/extensions/xep-0203.html>>.

<sup>7</sup>XEP-0267: Server Buddies <<https://xmpp.org/extensions/xep-0267.html>>.

<sup>8</sup>XEP-0203: Delayed Delivery <<https://xmpp.org/extensions/xep-0203.html>>.

Listing 4: Response from XMPP Server indicating uptime

```
<presence from='montague.com' to='juliet@capulet.com/balcony'>
  <delay xmlns='urn:xmpp:delay'
    from='montague.com'
    stamp='2012-09-10T23:41:07Z' />
</presence>
```

## 4 Acknowledgements

Thanks to Kim Alvefur and Lance Stout for their helpful comments.

## 5 Security Considerations

Adding delayed delivery notation to the presence probe responses exposes information a user might not expect to have exposed. However, the information about last presence change is known to all entities subscribed to one's presence which are online. This extension just provides this information to XMPP entities which have been offline during the course of presence change.

The security considerations of [XMPP Date and Time Profiles \(XEP-0082\)](#)<sup>9</sup> apply here.

## 6 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)<sup>10</sup>.

## 7 XMPP Registrar Considerations

This document requires no interaction with the [XMPP Registrar](#)<sup>11</sup>.

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<sup>9</sup>XEP-0082: XMPP Date and Time Profiles <<https://xmpp.org/extensions/xep-0082.html>>.

<sup>10</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>11</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/>>.