



XMPP

XEP-0036: Pub-Sub Subscriptions

Peter Millard

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

2003-04-22
Version 0.2

Status	Type	Short Name
Retracted	Standards Track	None

A proposal for the subscribe half of a publish-subscribe protocol within Jabber.

Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2020 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	Narrative	1
3	Protocol Details	2
4	Author Note	3

1 Introduction

The Jabber community needs a cohesive standard for publish-subscribe functionality. Certainly there is interest in developing such a standard, as witness the number of proposals written on this topic ([Jabber Event Notification Service \(XEP-0021\)](#)¹, [Publish/Subscribe \(XEP-0024\)](#)², XEP-0028). Unfortunately, past discussion of this issue has been clouded by confusion over requirements and even terminology. This XEP seeks to clarify the situation somewhat and to provide a protocol for the subscribe half of publish-subscribe functionality within Jabber.

2 Narrative

Traditional pub-sub consists of event notification. This makes it possible for entities to publish data and for other interested entities to receive notification when the data is published. The following are some likely applications of pub-sub functionality within Jabber:

- Auction and trading systems
- Online catalogs
- Document workflow systems
- Network management systems
- NNTP over Jabber
- Groupchat

In such systems, a subscriber would request to receive notifications about data the subscriber is interested in. We define a "topic" as an object that defines the relationship between a publisher and its subscribers. Specifically, a topic contains three essential collections of information:

1. A description of the information that will be provided
2. A list of subscribers to items that fit the description
3. One or more items that fit the description

We define an "item" as an instance of data published by the publisher that fits the description associated with a topic. Each item MAY possess a unique identifier that enables the data to be tracked. (NOTE: This XEP does not address the durability of items, i.e., data storage.)

¹XEP-0021: Jabber Event Notification Service <<https://xmpp.org/extensions/xep-0021.html>>.

²XEP-0024: Publish/Subscribe <<https://xmpp.org/extensions/xep-0024.html>>.

A topic is addressed by means of a unique "topic ID". A topic ID is simply a string with no required semantic meaning. While a topic ID may have semantic meaning (e.g., '/instruments/guitars/electric' or 'rec.music.dylan'), such meaning is not necessary and a topic ID may be any random string (e.g., 'a1gh83jfn342092'). The only requirement is that a topic ID be unique within the context of a specific pub-sub domain (e.g., pubsub.jabber.org).

3 Protocol Details

Listing 1: Protocol

```

<iq type="set" from="pgm@jabber.org" to="pubsub.jabber.org" id="1">
  <query xmlns="jabber:iq:pubsub">
    <subscribe>
      <topic id="12345"/>
      <topic id="/presence/dizzyd@jabber.org"/>
    </subscribe>
  </query>
</iq>

<iq type="set" from="pgm@jabber.org" to="pubsub.jabber.org" id="1">
  <query xmlns="jabber:iq:pubsub">
    <unsubscribe>
      <topic id="12345"/>
    </unsubscribe>
  </query>
</iq>

<iq type="set" to="pubsub.jabber.org" id="1">
  <query xmlns="jabber:iq:pubsub">
    <publish>
      <topic id="12345">
        <item>some kind of cdata goes here</item>
      </topic>
    </publish>
  </query>
</iq>

<iq type="set" to="pubsub.jabber.org" id="1">
  <query xmlns="jabber:iq:pubsub">
    <createtopic>
      <topic id="new_topic">
        <profile>
          <!--- is this even remotely close?? -->
          <publisher>pgm@jabber.org</publisher>
          <publisher>dizzyd@jabber.org</publisher>
        </profile>
      </topic>
    </createtopic>
  </query>
</iq>

```

```
        <topic id="another_topic">
.....<profile>
.....<publisher/>
.....</profile>
.....</topic>
.....</createtopic>
.....</query>
</iq>

<iq_type="set" _to="pubsub.jabber.org" _id="1">
.....<query_xmlns="jabber:iq:pubsub">
.....<removetopic>
.....<topic_id="12345"/>
.....</removetopic>
.....</query>
</iq>
```

4 Author Note

Peter Millard, co-author of this specification, died on April 26, 2006.