XEP-0462: PubSub Type Filtering

Timothée Jaussoin
mailto:edhelas@movim.eu
xmpp:edhelas@movim.eu

Maxime Buquet
mailto:pep@bouah.net
xmpp:pep@bouah.net

2022-04-22
Version 0.1.1

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This specification provides a way to filter PubSub nodes in a disco query.
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1 Introduction

Implementations have been able to declare a pubsub#type attribute on PubSub nodes for about as long as Publish-Subscribe (XEP-0060) has existed. This attribute doesn’t seem to be widely used in the community though, maybe due to the vagueness of its description, that has recently changed, or the lack of features associated with it. This specification provides a way for implementations to allow filtering on this attribute when discovering nodes on a PubSub service. Filtering is particularly useful for example combined with Microblogging Over XMPP (XEP-0277) and comment nodes that are created on the same service. When listing content nodes of a service, one may want to filter out comment nodes.

2 Requirements

- Allow querying only a subset of nodes in a disco items request, in the form of include/exclude

3 Use Cases

3.1 Discovering support

A service implementing this specification MUST advertize through Service Discovery (XEP-0030) a urn:xmpp:pubsub-filter:0 feature.

3.2 Sending a disco request

While requesting disco#items on a PubSub service, an entity might want to only get nodes of certain pubsub#type. To do so, it may add a filter child of namespace urn:xmpp:pubsub-filter:0 to the query element, containing a Data Forms (XEP-0004) form with FORM_TYPE set to urn:xmpp:pubsub-filter:0 and an included-types or excluded-types list-multi type field containing the various types it wants to filter.

When included-types is specified, a PubSub service MUST return nodes of matching pubsub#type in its response.

When excluded-types is specified, a PubSub service MUST return every node but those of matching pubsub#types in its response.

Both included and excluded fields MAY contain an empty value to designate nodes with an empty pubsub#type.

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Listing 1: Requesting disco#items with only nodes of the following types, including empty ones

```xml
<iq type='get' from='rosa@com.int/desktop' to='news.commons.social' id='disco1'>
  <query xmlns='http://jabber.org/protocol/disco#items'>
    <filter xmlns='urn:xmpp:pubsub-filter:0'>
      <x xmlns='jabber:x:data' type='submit'>
        <field var='FORM_TYPE' type='hidden'>
          <value>urn:xmpp:pubsub-filter:0</value>
        </field>
        <field type='list-multi' var='included-types'>
          <value>urn:xmpp:microblog:0</value>
          <value/></field>
      </x>
    </filter>
  </query>
</iq>
```

If both the included and excluded fields are specified, a service MUST return an error of type modify containing a bad-request element in the urn:ietf:params:xml:ns:xmpp-stanzas namespace.

Listing 2: Error returned when a requesting entity includes both fields

```xml
<iq type='error' from='news.com.int' to='peter@commons.social/desktop' id='error1'>
  <error type='modify'>
    <bad-request xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
  </error>
</iq>
```

4 IANA Considerations

None.

5 XMPP Registrar Considerations

None.
6 XML Schema

6.1 urn:xmpp:pubsub-filter:0

```xml
<xs:schema xmlns:xs='http://www.w3.org/2001/XMLSchema'
    xmlns:xdata='jabber:x:data'
    targetNamespace='urn:xmpp:pubsub-filter:0'
    xmlns='urn:xmpp:pubsub-filter:0'
    elementFormDefault='qualified'>
  <xs:annotation>
    <xs:documentation>
      The protocol documented by this schema is defined in XEP-XXXX: http://xmpp.org/extensions/xep-xxxx.html
    </xs:documentation>
  </xs:annotation>

  <xs:element name='filter'>
    <xs:complexType>
      <xs:choice xmlns:xdata='jabber:x:data'>
        <xs:element ref='xdata:x'/>
      </xs:choice>
    </xs:complexType>
  </xs:element>
</xs:schema>
```