This document defines a way remote entities may manage user’s roster to provide a simple way to keep rosters in sync.
Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2024 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).
1 Introduction

It’s often desirable for some XMPP based services to make it possible to manage user’s roster to provide some contacts there. The most obvious example of such kind of service is a gateway to some legacy IM system (see Gateway Interaction (XEP-0100) \(^1\)). The current way that’s recommended by the Gateway Interaction (XEP-0100) \(^2\) is to use the Roster Item Exchange (XEP-0144) \(^3\) to synchronize items that’s not suitable in certain situations.

2 Requirements

This document addresses the following requirements:

1. Make it possible for remote services or entities to manage user’s roster by the same mechanisms that described in the RFC 6121 \(^4\).

2. Provide a way for users to control which services have permission to manage their roster.

3 Glossary

Remote entity the entity that wants to modify user’s roster.

User the entity which roster the remote entity wants to have access to.

User’s server the XMPP server User connected to.


4 Use Cases

4.1 Remote entity asks for permission to manage user’s roster

In order to be able to make any changes to the user’s roster the remote entity MUST ask permission to do so first.

NOTE: in order to be able to perform the query, the remote entity MUST have a presence subscription to the User.

---


4 USE CASES

Listing 1: Remote entity asks for permission

```xml
<iq from='icq.example.com' to='juliet@example.com' type='set' id='roster_1'>
  <query xmlns='urn:xmpp:tmp:roster-management:0' reason='Manage_contacts_in_the_ICQ_contact_list' type='request'/>
</iq>
```

If the presence subscription is absent, the server MUST NOT proceed with the request but MUST respond with the "forbidden" error:

Listing 2: The remote entity has no presence subscription

```xml
<iq from='juliet@example.com' to='icq.example.com' type='error' id='roster_1'>
  <error type='modify'>
    <forbidden xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
    <text xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'>You must have a presence subscription to be able to request remote roster management service.</text>
  </error>
</iq>
```

The user's server SHOULD then generate a form request using Data Forms (XEP-0004)\(^5\) to client in order to ask user if they are OK with granting the permission to the remote entity. The "challenge" form field is generated by the server and is used to identify the client's response. The server also MUST immediately answer to the request IQ.

NOTE: if the entity is already granted with the permission, the server SHOULD immediately answer with a success response and skip querying the user.

Listing 3: Server asks user for the permission

```xml
<message from='example.com' to='juliet@example.com'>
  <body>icq.example.com wants to be able to manage your roster with following reason:
    Manage contacts in the ICQ contact list
    Do you want to allow it? Send "yes_5439123" or "no_5439123" back, pleas.</body>
  <x xmlns='jabber:x:data' type='form'>
    <title>Roster management permission request</title>
    <instructions>icq.example.com wants to be able to manage your roster with following reason:
      Manage contacts in the ICQ contact list.
      Do you allow it?</instructions>
    <field type='hidden' var='challenge'><value>5439123</value></field>
  </x>
</message>
```

4 USE CASES

The client can answer by submit the form or with a text message response:

Listing 4: Client responds with to the data form

```xml
<message from='juliet@example.com/home'
    to='example.com'
    xml:lang='en'>
    <x xmlns='jabber:x:data' type='submit'>
        <field var='FORM_TYPE'>
            <value>urn:xmpp:tmp:roster-management:0</value>
        </field>
        <field var='challenge'><value>5439123</value></field>
        <field var='answer'><value>1</value></field>
    </x>
</message>
```

Listing 5: Client responds with a text message response

```xml
<message from='juliet@example.com/home'
    to='example.com'
    xml:lang='en'>
    <body>yes 5439123</body>
</message>
```

4.1.1 The remote entity is allowed to manage roster

If the user allowed the roster management then the server MUST inform the remote entity that it has been granted the permission:

Listing 6: The server informs the remote entity that it’s allowed to manage the User’s roster

```xml
<iq from='juliet@example.com' to='icq.example.com' type='set' id='roster_2'>
    <query xmlns='urn:xmpp:tmp:roster-management:0' type='allowed'/>
</iq>
```
4.1.2 The remote entity is allowed to manage roster

If the user disallowed the roster management then the server MUST inform the remote entity that it hasn’t been granted the permission:

Listing 7: The server informs the remote entity that it’s allowed to manage the User’s roster

```xml
<iq from='juliet@example.com' to='icq.example.com' type='set' id='roster_2'>
  <query xmlns='urn:xmpp:tmp:roster-management:0' type='rejected'/>
</iq>
```

4.1.3 Reject the permission to manage roster

In order to reject the permission to manage roster it’s enough to reject entity’s presence subscription:

Listing 8: The user rejects entity’s presence subscription

```xml
<presence to='icq.example.com' type='unsubscribed'/>
```

If the presence subscription is restored then the permission is needed to be rerequested as defined above.

4.2 The remote entity requests current user’s roster

The remote entity being granted the permission to manage roster can request it from the User’s server using usual jabber:iq:roster protocol to be able to edit it:

Listing 9: The remote entity requests current roster

```xml
<iq from='icq.example.com' to='juliet@example.com' type='get' id='roster_5'>
  <query xmlns='jabber:iq:roster'/>
</iq>
```

The server MUST then answer with User’s roster including there only the items that belongs to the entity’s hostname:

Listing 10: The server responds with the roster

```xml
<iq to='icq.example.com' from='juliet@example.com' type='result' id='roster_5'>
  <query xmlns='jabber:iq:roster'>
    <item jid='123456789@icq.example.com' name='Romeo'/>
  </query>
</iq>
```
4.3 The user updates roster

If client updates roster and this update affects the remote entity’s contacts (i.e. belongs to its hostname) then the server MUST forward these items to the remote entity:

Listing 11: The user updates roster

```
<iq from='juliet@example.com/chamber' type='set' id='roster_3'>
  <query xmlns='jabber:iq:roster'>
    <item jid='123456789@icq.example.net' name='Romeo'
      subscription='both'>
      <group>Friends</group>
      <group>Lovers</group>
    </item>
  </query>
</iq>
```

Listing 12: The server sends push roster request to the remote entity

```
<iq from='juliet@example.com' to='icq.example.com' type='set' id='roster_3'>
  <query xmlns='jabber:iq:roster'>
    <item jid='123456789@icq.example.net' name='Romeo'
      subscription='both'>
      <group>Friends</group>
      <group>Lovers</group>
    </item>
  </query>
</iq>
```
4.4 The remote entity updates the user’s roster

The remote entity can also send the push query to the roster with the same semantics as specified for the jabber:iq:roster protocol described in the RFC 6121:

Listing 13: The remote entity sends push roster request

```xml
<iq to='juliet@example.com' type='set' id='roster_3'>
  <query xmlns='jabber:iq:roster'>
    <item jid='123456789@icq.example.net' name='Romeo' subscription='both'>
      <group>Friends</group>
      <group>Lovers</group>
    </item>
  </query>
</iq>
```

The server MUST then inform the remote entity of success or an error and in the case of success also forward the push request to all connected User’s resources. If the entity tries to make changes into the items it’s not allowed to, the server MUST NOT do any changes in the User’s roster but respond to the entity with an error:

Listing 14: The server responds with an error

```xml
<iq from='juliet@example.com' type='set' id='roster_3'>
  <forbidden xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
  <text xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'>You have tried to modify the item you don’t allowed to.</text>
</iq>
```

4.5 Client requests list of components with permissions to edit their roster

User can ask the server to provide a list of components or servers which have permissions to edit their roster.

Listing 15: User asks the server to get list of components which can edit their roster

```xml
<iq from='juliet@example.com/home' to='icq.example.com' type='get' id='roster_5'>
  <query xmlns='urn:xmpp:tmp:roster-management:0'/>
</iq>
```

In this case, server responds with list of components or servers which can edit user’s roster.

---

### Listing 16: Server responds with list of components which can edit user’s roster

```xml
<iq from='juliet@example.com/home' to='icq.example.com' type='result' id='roster_5'>
  <query xmlns='urn:xmpp:tmp:roster-management:0'>
    <item jid='icq.example.com' reason='Manage ICQ contacts.'/>
    <item jid='j2j.example.com' reason='Manage Jabber gateway contacts.'/>
  </query>
</iq>
```

Eventually, user can reject permission granted to component to edit their roster.

### Listing 17: User rejects permissions to edit his roster

```xml
<iq from='juliet@example.com/home' to='icq.example.com' type='set' id='roster_6'>
  <query xmlns='urn:xmpp:tmp:roster-management:0' type='reject'/>
</iq>
```

### 5 XML Schema

```
<?xml version='1.0' encoding='UTF-8'?>
<xs:schema
  xmlns:xs='http://www.w3.org/2001/XMLSchema
  targetNamespace='urn:xmpp:tmp:roster-management:0'
  xmlns='urn:xmpp:tmp:roster-management:0'
  elementFormDefault='qualified'>
  <xs:annotation>
    <xs:documentation>
      The protocol documented by this schema is defined in XEP-XXXX: http://www.xmpp.org/extensions/xep-xxxx.html
    </xs:documentation>
  </xs:annotation>
  <xs:element name='query'>
    <xs:complexType>
      <xs:attribute name='type' use='required'>
        <xs:simpleType base='xs:NMTOKEN'>
          <xs:enumeration value='request'/>
          <xs:enumeration value='allowed'/>
          <xs:enumeration value='rejected'/>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name='reason' use='optional' type='xs:string'/>
      <xs:sequence minOccurs='0'/>
    </xs:complexType>
  </xs:element>
</xs:schema>
```
<xs:element ref='item' minOccurs='0' maxOccurs='unbounded'/>
</xs:sequence>
</xs:complexType>
</xs:element>

<xs:element name='item'>
<xs:complexType>
<xs:simpleContent>
<xs:extension base='empty'>
<xs:attribute name='jid' type='fullJIDType' use='required'/>
<xs:attribute name='reason' type='xs:string' use='optional'/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
</xs:element>
</xs:schema>