XEP-0435: Reminders

Marcos De Vera Piquero
mailto:marcos@tenak.net
xmpp:marcos@tenak.net

2020-03-31
Version 0.1.0

<table>
<thead>
<tr>
<th>Status</th>
<th>Type</th>
<th>Short Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred</td>
<td>Standards Track</td>
<td>NOT_YET_ASSIGNED</td>
</tr>
</tbody>
</table>

This specification provides a way to set up reminders.
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 Glossary .................................. 1

3 Requirements .......................... 1

4 Discovering support ................. 1

5 Use Cases ............................... 2
   5.1 Creating a reminder ................. 2
   5.2 Server sends a reminder .......... 3
   5.3 Client cancels a reminder ....... 4

6 Internationalization Considerations 4

7 Security Considerations .............. 5

8 IANA Considerations ................. 5

9 XMPP Registrar Considerations ...... 5

10 XML Schema .......................... 5
1 Introduction

It is sometimes useful, while reading some conversations, to be reminded about it at some point in the future. This specification proposes a mechanism to allow clients to set up such reminders.

2 Glossary

Reminder An automatically generated message addressed to an entity sent at a given time. Its goal is to remind the creating entity about something.

3 Requirements

This protocol requires handling of dates and times, as such it conforms to XMPP Date and Time Profiles (XEP-0082) ¹.

4 Discovering support

An entity may wish to discover if a service supports the Reminders feature; in order to do so, it sends a service discovery information query to the server.

Listing 1: Client requests information about a server

```xml
<iq from='juliet@capulet.net/balcony' id='disco1' to='capulet.net' type='get'>
  <query xmlns='http://jabber.org/protocol/disco#info'/>
</iq>
```

If the server supports the Reminders feature, it MUST specify the 'urn:xmpp:reminders:0' feature in its service discovery information features as specified in Service Discovery (XEP-0030) ².

Listing 2: Server advertises support for reminders

```xml
<iq to='juliet@capulet.net/balcony' id='disco1' from='capulet.net' type='result'>
  <query xmlns='http://jabber.org/protocol/disco#info'/>
  <feature var='urn:xmpp:reminders:0'/>
</iq>
```

5 Use Cases

For end users, this provides a way to be reminded about stuff while being in a conversation, without the need to leave it and go to some calendar application or similar and create a full event there. By setting a reminder, a user will be notified by the server at whatever given time the reminder is created with and with whatever the description was set for such a reminder.

5.1 Creating a reminder

A user wants to create a new reminder. For creating a reminder, an entity MUST send an IQ stanza with the 'type' attribute with a value of "set" and a direct <reminder/> child qualified by the "urn:xmpp:reminders:0" namespace.

Listing 3: User creates a new reminder

```xml
<iq from='juliet@capulet.net/balcony'
    to='capulet.net'
    id='abc123'
    type='set'>
  <reminder xmlns='urn:xmpp:reminders:0'>
    <date>2020-02-19T23:41:00Z</date>
    <text xml:lang='en'>Please go sleep before it's too late</text>
  </reminder>
</iq>
```

Listing 4: Server acknowledges the reminder creation

```xml
<iq id='abc123'
    from='juliet@capulet.net/balcony'
    to='capulet.net'
    type='result'>
  <reminder xmlns='urn:xmpp:reminders:0' id='d414cec2-5369-11ea-9455-8b8d265047d9'>
    <date>2020-02-19T23:41:00Z</date>
    <text xml:lang='en'>Please go sleep before it's too late</text>
  </reminder>
</iq>
```

Whenever the reminder's data sent by a client is not complete or in an invalid format, the server MUST send an error stanza of type 'modify' and a 'bad-request' condition.
Listing 5: Server sends a bad-request error response

```xml
<iq id='bad1'
   to='capulet.net'
   from='juliet@capulet.net/balcony'
   type='set'>
   <reminder xmlns='urn:xmpp:reminders:0'>
     <date>Tomorrow at noon</date>
     <text xml:lang='en'>Lunch at Romeo’s</text>
   </reminder>
</iq>

<iq id='bad1'
   to='juliet@capulet.net/balcony'
   from='capulet.net'
   type='error'>
   <error type='modify'>
     <bad-request xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
   </error>
</iq>
```

In the event of a client trying to set a reminder in the past, the server MUST send an error stanza of type ‘modify’ and a ‘gone’ condition.

Listing 6: Server sends a gone error response

```xml
<iq id='bad2'
   to='capulet.net'
   from='juliet@capulet.net/balcony'
   type='set'>
   <reminder xmlns='urn:xmpp:reminders:0'>
     <date>2000-01-01T00:00:00Z</date>
     <text xml:lang='en'>New Year’s party</text>
   </reminder>
</iq>

<iq id='bad2'
   to='juliet@capulet.net/balcony'
   from='capulet.net'
   type='error'>
   <error type='modify'>
     <gone xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
   </error>
</iq>
```

5.2 Server sends a reminder

Whenever the time for a reminder arrives, the server MUST send a message with the reminder to the creating entity.
Listing 7: Server sends a reminder

```
<message from='capulet.net' to='juliet@capulet.net/balcony' id='reminder1'>
  <reminder xmlns='urn:xmpp:reminders:0' id='d414cec2-5369-11ea-9455-8b8d265047d9'>
    <date timezone='UTC'>2020-02-19T23:41:00Z</date>
    <text xml:lang='en'>Please go sleep before it's too late</text>
  </reminder>
</message>
```

After sending a reminder, the server MAY choose to delete it from its storage.

5.3 Client cancels a reminder

There may be the case where a user wants to cancel an already set reminder. To do so, the client MUST send an IQ stanza of type 'set' with a 'reminder' child containing the 'id' attribute of the reminder to be deleted, without any additional child.

Listing 8: Client deletes a reminder

```
<iq id='abc2' from='juliet@capulet.net/balcony' to='capulet.net' type='set'>
  <reminder xmlns='urn:xmpp:reminders:0' id='d414cec2-5369-11ea-9455-8b8d265047d9'/>
</iq>
```

Listing 9: Server acknowledges a reminder deletion

```
<iq id='abc2' from='juliet@capulet.net/balcony' to='capulet.net' type='result'>
  <reminder xmlns='urn:xmpp:reminders:0' id='d414cec2-5369-11ea-9455-8b8d265047d9'/>
</iq>
```

6 Internationalization Considerations

As stated in the requirements, the 'date' element MUST contain a valid XMPP Date and Time Profiles (XEP-0082)\(^3\) DateTime value.

7 Security Considerations

This document introduces no additional security considerations above and beyond those defined in the documents on which it depends.

8 IANA Considerations

No interaction with the Internet Assigned Numbers Authority (IANA) is required as a result of this document.

9 XMPP Registrar Considerations

This specification defines the following XML namespace:

- urn:xmpp:reminders:0

Upon advancement of this specification from a status of Experimental to a status of Draft, the XMPP Registrar shall add the foregoing namespace to the registry located at <https://xmpp.org/registrar/namespaces.html>, as described in Section 4 of XMPP Registrar Function (XEP-0053).

10 XML Schema

TODO

---

4The 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/>.

5The 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/>.