This document defines a protocol for making annotations about roster items and other entities.
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 The storage:rosternotes Namespace 1
3 Security Considerations 2
4 IANA Considerations 2
5 XMPP Registrar Considerations 3
6 XML Schema 3
1 Introduction

Many modern IM clients offer functionality that enables users to make notes about items in their roster. This comes in handy if users don’t have meaningful information in their vCard or if you need to remember additional things related to a roster item. This specification defines a protocol for storing annotations about a given set of entities. Its primary goal is to enable users to store some personal piece of information with their roster items. Private XML Storage (XEP-0049) provides with a convenient method for storing user data on the server using the 'jabber:iq:private' namespace; all we need to do is define a namespace and schema for storing this sort of information. For this the 'storage' element introduced in Bookmark Storage (XEP-0048) is reused, and a new namespace of 'storage:rosternotes' is added.

2 The storage:rosternotes Namespace

Annotations are stored using server-side private XML storage (the 'jabber:iq:private' namespace). A storage element marked by the storage:rosternotes namespace contains a collection of one or more <note/> elements, each representing a note about a given entity. For any given JID there MUST NOT be more than one note. The 'jid' attribute of the <note/> element SHOULD be used without a resource. Along with the annotation a client MAY choose to store creation time ('cdate') and modification time ('mdate') as attributes to the <note/> element containing the note; these attributes MUST conform to the DateTime profile specified in XMPP Date and Time Profiles (XEP-0082) and the timezone SHOULD be UTC.

Listing 1: Storing Annotations

```xml
<iq type='set' id='a1'>
  <query xmlns='jabber:iq:private'>
    <storage xmlns='storage:rosternotes'>
      <note jid='hamlet@shakespeare.lit'
        cdate='2004-09-24T15:23:21Z'
        mdate='2004-09-24T15:23:21Z'>Seems to be a good writer</note>
      <note jid='juliet@capulet.com'
        cdate='2004-09-27T17:23:14Z'
        mdate='2004-09-28T12:43:12Z'>Oh my sweetest love ...</note>
    </storage>
  </query>
</iq>
```

4 IANA CONSIDERATIONS

Note: All notes are stored as a "bundle" within the same <storage/> element. Retrieving notes uses the protocol described in XEP-0049.

Listing 2: Retrieving Annotations

```xml
<iq type='get' id='a2'>
  <query xmlns='jabber:iq:private'>
    <storage xmlns='storage:rosternotes'/>
  </query>
</iq>
```

Listing 3: Server response

```xml
<iq type='result' id='a2'>
  <query xmlns='jabber:iq:private'>
    <storage xmlns='storage:rosternotes'>
      <note jid='juliet@capulet.com' cdate='2004-09-27T17:23:14Z' mdate='2004-09-28T12:43:12Z'>Oh my sweetest love ...</note>
    </storage>
  </query>
</iq>
```

For error conditions please refer to XEP-0049.

3 Security Considerations

Security considerations related to private XML storage are described in XEP-0049.

4 IANA Considerations

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

---

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/>.
5 XMPP Registrar Considerations

No namespaces or parameters need to be registered with the XMPP Registrar as a result of this document.

6 XML Schema

```xml
<?xml version='1.0' encoding='UTF-8'?>
<xs:schema
    xmlns:xs='http://www.w3.org/2001/XMLSchema'
    targetNamespace='storage:rosternotes'
    xmlns='storage:rosternotes'
    elementFormDefault='qualified'>
  <xs:annotation>
    <xs:documentation>
      The protocol documented by this schema is defined in XEP-0145: http://www.xmpp.org/extensions/xep-0145.html
    </xs:documentation>
  </xs:annotation>
  <xs:element name='storage'>
    <xs:complexType>
      <xs:sequence>
        <xs:element ref='note' minOccurs='0' maxOccurs='unbounded'/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name='note'>
    <xs:complexType>
      <xs:simpleContent base='xs:string'>
        <xs:extension>
          <xs:attribute name='jid' type='xs:string' use='required'/>
          <xs:attribute name='cdate' type='xs:dateTime' use='optional'/>
          <xs:attribute name='mdate' type='xs:dateTime' use='optional'/>
        </xs:extension>
      </xs:simpleContent>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

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/>.
</xs:schema>