



# XMPP

## XEP-0145: Annotations

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This document defines a protocol for making annotations about roster items and other entities.

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## 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 \(XEP-0049\)](#)<sup>1</sup> 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 \(XEP-0048\)](#)<sup>2</sup> 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 \(XEP-0082\)](#)<sup>3</sup> and the timezone SHOULD be UTC.

Listing 1: Storing Annotations

```
<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>
```

<sup>1</sup>XEP-0049: Private XML Storage <<https://xmpp.org/extensions/xep-0049.html>>.

<sup>2</sup>XEP-0048: Bookmark Storage <<https://xmpp.org/extensions/xep-0048.html>>.

<sup>3</sup>XEP-0082: XMPP Date and Time Profiles <<https://xmpp.org/extensions/xep-0082.html>>.

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

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

Listing 3: Server response

```
<iq type='result' id='a2'>
  <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>
```

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 \(IANA\)](http://www.iana.org/)<sup>4</sup> is required as a result of this document.

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<sup>4</sup>The 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](#)<sup>5</sup> as a result of this document.

## 6 XML Schema

```
<?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>
        <xs:extension base='xs:string'>
          <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>
```

<sup>5</sup>The 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>
```