



# XMPP

## XEP-0118: User Tune

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This specification defines a payload format for communicating information about music to which a user is listening, including the title, track number, collection, performer, composer, length, and user rating. The payload format is typically transported using the personal eventing protocol, a profile of XMPP publish-subscribe specified in XEP-0163.

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## 1 Introduction

This document defines a protocol for communicating information about the music to which a user is listening. Such information may be seen as a kind of "extended presence", and users may want to communicate such information to their contacts on the network as a fun add-on to traditional IM applications or to provide integration with common music-player applications.

## 2 Protocol

### 2.1 Container Element and Child Elements

Information about tunes is provided by the user and propagated on the network by the user's client. The information container for tune data is a <tune/> element that is qualified by the 'http://jabber.org/protocol/tune' namespace. The tune information itself is provided as the XML character data of the following children of the <tune/> element:

| Element   | Description   | Example   | Datatype           |
|-----------|---|---|--------------------|
| artist    | The artist of the song or piece   | Yes   | xs:string          |
| composer  | The composer of the song or piece   | □□□□□□□□<br>□□□□□□□□□□<br>□□□□□□□□□□<br>(Dmitri Shostakovich) | xs:string          |
| date      | The recording or publication date of the song or piece                    | 2003-02-15  | xs:string          |
| genre     | The genre of the song or piece  | Opera   | xs:string          |
| language  | The language of the song or piece, SHOULD be an ISO-639 three letter code | rus   | xs:string          |
| length    | The duration of the song or piece in seconds                              | 686   | xs:unsignedShort   |
| lyricist  | The lyricist of the song or piece   | William Shakespeare   | xs:string          |
| rating    | The user's rating of the song or piece, from 1 (lowest) to 10 (highest).  | 8   | xs:positiveInteger |
| performer | The performer of the song or piece  | □□□□□ □□□□□□□□<br>(Elena Zhidkova)                            | xs:string          |

| Element | Description  | Example   | Datatype  |
|---------|--|---|-----------|
| source  | The collection (e.g., album) or other source (e.g., a band website that hosts streams or audio files)  | Yessongs  | xs:string |
| title   | The title of the song or piece   | Heart of the Sunrise  | xs:string |
| track   | A unique identifier for the tune; e.g., the track number within a collection or the specific URI for the object (e.g., a stream or audio file) | 3   | xs:string |
| uri     | A URI or URL pointing to information about the song, collection, or artist   | <a href="http://www.yesworld.com/lyrics/Fragile.html#9">http://www.yesworld.com/lyrics/Fragile.html#9</a> | xs:string |

NOTE: The datatypes specified above are defined in [XML Schema Part 2](#)<sup>1</sup>.

## 2.2 Transport Mechanism

Tune information SHOULD be communicated and transported by means of the [Publish-Subscribe \(XEP-0060\)](#)<sup>2</sup> subset specified in [Personal Eventing Protocol \(XEP-0163\)](#)<sup>3</sup>. Because tune information is not pure presence information and can change independently of the user's availability, it SHOULD NOT be provided as an extension to <presence/>.

Listing 1: User Publishes Tune Information

```
<iq type='set'
  from='stpeter@jabber.org/14793c64-0f94-11dc-9430-000bcd821bfb'
  id='tunes123'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='http://jabber.org/protocol/tune'>
      <item>
        <tune xmlns='http://jabber.org/protocol/tune'>
          <artist>Yes</artist>
          <length>686</length>
          <rating>8</rating>
        </tune>
      </item>
    </publish>
  </pubsub>
</iq>
```

<sup>1</sup>XML Schema Part 2: Datatypes <<http://www.w3.org/TR/xmlschema11-2/>>.

<sup>2</sup>XEP-0060: Publish-Subscribe <<https://xmpp.org/extensions/xep-0060.html>>.

<sup>3</sup>XEP-0163: Personal Eventing Protocol <<https://xmpp.org/extensions/xep-0163.html>>.

```

        <source>Yessongs</source>
        <title>Heart of the Sunrise</title>
        <track>3</track>
        <uri>http://www.yesworld.com/lyrics/Fragile.html#9</uri>
    </tune>
</item>
</publish>
</pubsub>
</iq>

```

The tune information is then delivered to all subscribers:

Listing 2: Tune Information is Delivered to All Subscribers

```

<message
  from='stpeter@jabber.org'
  to='maineboy@jabber.org'>
  <event xmlns='http://jabber.org/protocol/pubsub#event'>
    <items node='http://jabber.org/protocol/tune'>
      <item id='bffe6584-0f9c-11dc-84ba-001143d5d5db'>
        <tune xmlns='http://jabber.org/protocol/tune'>
          <artist>Yes</artist>
          <length>686</length>
          <rating>8</rating>
          <source>Yessongs</source>
          <title>Heart of the Sunrise</title>
          <track>3</track>
          <uri>http://www.yesworld.com/lyrics/Fragile.html#9</uri>
        </tune>
      </item>
    </items>
  </event>
</message>

```

In order to indicate that the user is no longer listening to any tunes (or has simply disabled publication), the user's client shall send an empty <tune/> element, which can be considered a "stop command" for user tunes:

Listing 3: User Disables Publishing

```

<iq type='set'
  from='stpeter@jabber.org/14793c64-0f94-11dc-9430-000bcd821bfb'
  id='tunes345'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='http://jabber.org/protocol/tune'>
      <item>
        <tune xmlns='http://jabber.org/protocol/tune' />
      </item>
    </publish>

```

```

</pubsub>
</iq>

```

Listing 4: Empty Tune Information is Delivered to All Subscribers

```

<message
  from='stpeter@jabber.org'
  to='maineboy@jabber.org'>
  <event xmlns='http://jabber.org/protocol/pubsub#event'>
    <items node='http://jabber.org/protocol/tune'>
      <item id='cbbb3f5a-0f9c-11dc-afe0-001143d5d5db'>
        <tune xmlns='http://jabber.org/protocol/tune' />
      </item>
    </items>
  </event>
</message>

```

### 3 Implementation Notes

To prevent a large number of updates when a user is skipping through tracks, an implementation SHOULD wait several seconds before publishing new tune information.

If the length is unknown (e.g., the user is listening to a stream), the <length/> element SHOULD NOT be included.

A typical interface for user ratings is to show one to five star icons such as     . If this interface is used, the numbers 2, 4, 6, 8, and 10 should be mapped to one, two, three, four, and five stars respectively, and odd numbers should be mapped to half stars (e.g., the number 9 would be mapped to four-and-a-half stars).

### 4 Security Considerations

The publication of user tune information is not known to introduce any new security considerations above and beyond those defined in XEP-0060: Publish-Subscribe.

### 5 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](http://www.iana.org)<sup>4</sup>.

<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/](http://www.iana.org).

## 6 XMPP Registrar Considerations

### 6.1 Protocol Namespaces

The [XMPP Registrar](#)<sup>5</sup> includes 'http://jabber.org/protocol/tune' in its registry of protocol namespaces.

## 7 XML Schema

```
<?xml version='1.0' encoding='UTF-8'?>
<xs:schema
  xmlns:xs='http://www.w3.org/2001/XMLSchema'
  targetNamespace='http://jabber.org/protocol/tune'
  xmlns='http://jabber.org/protocol/tune'
  elementFormDefault='qualified'>

  <xs:annotation>
    <xs:documentation>
      The protocol documented by this schema is defined in
      XEP-0118: http://www.xmpp.org/extensions/xep-0118.html
    </xs:documentation>
  </xs:annotation>

  <xs:element name='tune'>
    <xs:complexType>
      <xs:sequence minOccurs='0'>
        <xs:element name='artist' type='xs:string' minOccurs='0'/>
        <xs:element name='composer' type='xs:string' minOccurs='0'/>
        <xs:element name='date' type='xs:string' minOccurs='0'/>
        <xs:element name='genre' type='xs:string' minOccurs='0'/>
        <xs:element name='language' type='xs:string' minOccurs='0'/>
        <xs:element name='length' type='xs:unsignedShort' minOccurs='0'
          />
        <xs:element name='lyricist' type='xs:string' minOccurs='0'/>
        <xs:element name='performer' type='xs:string' minOccurs='0'/>
        <xs:element name='rating' minOccurs='0'>
          <xs:simpleType>
            <xs:restriction base='xs:positiveInteger'>
              <xs:maxInclusive value='10'/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

<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:element name='source' type='xs:string' minOccurs='0' />
<xs:element name='title' type='xs:string' minOccurs='0' />
<xs:element name='track' type='xs:string' minOccurs='0' />
<xs:element name='uri' type='xs:anyURI' minOccurs='0' />
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
```