This document defines an XMPP protocol extension for communicating information about the web pages a user visits.
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. Protocol ................................................................. 1  
   2.1 Container Element and Child Elements .................... 1 
   2.2 Transport Mechanism .......................................... 2

3. Security Considerations ........................................... 3

4. IANA Considerations ................................................ 3

5. XMPP Registrar Considerations .................................... 3  
   5.1 Protocol Namespaces ........................................... 3 
   5.2 Namespace Versioning .......................................... 4

6. XML Schema .......................................................... 4
1 Introduction

Publish-Subscribe (XEP-0060) \(^1\) and Personal Eventing Protocol (XEP-0163) \(^2\) can be used to publish a wide variety of "extended presence" information about users. This document specifies an extended presence payload format that communicates information about the web pages a user visits. This information may be of interest to a user’s contacts and can also be used in social networking applications (e.g., co-browsing and web swarms).

2 Protocol

2.1 Container Element and Child Elements

Information about web pages is provided by the user (or automated integration with browsers or other systems) and is propagated on the network by the user’s client. The information container for web page data is a `<page/>` element that is qualified by the ‘urn:xmpp:browsing:0’ namespace (see Protocol Namespaces regarding issuance of one or more permanent namespaces). The web page information itself is provided as the XML character data of the following children of the `<page/>` element:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Example</th>
<th>Datatype</th>
<th>Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>description</td>
<td>The value of the &quot;description&quot; META tag</td>
<td>The weblog of Peter Saint-Andre</td>
<td>xs:string</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>keywords</td>
<td>The value of the &quot;keywords&quot; META tag</td>
<td>stpeter, Peter Saint-Andre, weblog, jabber, xmpp</td>
<td>xs:string</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>title</td>
<td>The value of the <code>&lt;title/&gt;</code> element</td>
<td>one small voice</td>
<td>xs:string</td>
<td>OPTIONAL</td>
</tr>
<tr>
<td>uri</td>
<td>The URI of the page (usually but not necessarily an HTTP URL)</td>
<td><a href="https://stpeter.im/xs:anyURI">https://stpeter.im/xs:anyURI</a></td>
<td>REQUIRED</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: The datatypes specified above are defined in XML Schema Part 2 \(^3\).

---

2.2 Transport Mechanism

When a user visits a web page, its client may publish that fact to a PEP node whose NodeID is "urn:xmpp:browsing:0" (see Protocol Namespaces regarding issuance of one or more permanent namespaces) or to a generic pubsub node. Because browsing information is not pure presence information and can change independently of the user’s availability, it SHOULD NOT be provided as an extension to the <presence/> stanza type.

```
Listing 1: User Publishes Browsing Information

<iq type='set' from='stpeter@jabber.org/work' id='browsing1'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:browsing:0'>
      <item id='da6abe63d1e5ed45a6de466732abff72e6fcc93'>
        <page xmlns='urn:xmpp:browsing:0'>
          <uri>https://stpeter.im/</uri>
        </page>
      </item>
    </publish>
  </pubsub>
</iq>
```

The browsing information is then delivered to all subscribers:

```
Listing 2: Browsing 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='urn:xmpp:browsing:0'>
      <item id='da6abe63d1e5ed45a6de466732abff72e6fcc93'>
        <page xmlns='urn:xmpp:browsing:0'>
          <uri>https://stpeter.im/</uri>
        </page>
      </item>
    </items>
  </event>
</message>
```

When the user stops browsing the page (e.g., by closing the browser window or tab), the user’s client SHOULD send an empty <page/> element with the same ItemID:

```
Listing 3: User Publishes Stop Information

<iq type='set' from='stpeter@jabber.org/work' id='browsing2'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:browsing:0'>
      <item id='da6abe63d1e5ed45a6de466732abff72e6fcc93'>
        <page xmlns='urn:xmpp:browsing:0'/>
      </item>
    </publish>
  </pubsub>
</iq>
```
3 Security Considerations

The web pages that a user visits may be sensitive. A client MUST provide a way for a user to configure which pages or types of pages will not be published (e.g., via user preferences).

4 IANA Considerations

This document requires no interaction with the Internet Assigned Numbers Authority (IANA)\(^4\).

5 XMPP Registrar Considerations

5.1 Protocol Namespaces

This specification defines the following XML namespace:

- `urn:xmpp:browsing:0`

Upon advancement of this specification from a status of Experimental to a status of Draft, the XMPP Registrar\(^5\) shall add the foregoing namespace to the registry located at

---

\(^4\)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/>.

\(^5\)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/>.
5.2 Namespace Versioning

If the protocol defined in this specification undergoes a revision that is not fully backwards-compatible with an older version, the XMPP Registrar shall increment the protocol version number found at the end of the XML namespaces defined herein, as described in Section 4 of XEP-0053.

6 XML Schema

```xml
<?xml version='1.0' encoding='UTF-8'?>
<xs:schema
   xmlns:xs='http://www.w3.org/2001/XMLSchema'
   targetNamespace='urn:xmpp:browsing:0'
   xmlns='urn:xmpp:browsing:0'
   elementFormDefault='qualified'>
   <xs:element name='page'>
      <xs:complexType>
         <xs:sequence minOccurs='0'>
            <xs:element name='description' type='xs:string' minOccurs='0'/>
            <xs:element name='keywords' type='xs:string' minOccurs='0'/>
            <xs:element name='title' type='xs:string' minOccurs='0'/>
            <xs:element name='uri' type='xs:anyURI'/>
         </xs:sequence>
      </xs:complexType>
   </xs:element>
</xs:schema>
```