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A Uniform Resource Name (URN) Namespace for Extensions to the Extensible Messaging and Presence Protocol (XMPP)

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Abstract

This document describes a Uniform Resource Name (URN) namespace for uniquely identifying Extensible Markup Language (XML) formats and protocols that provide extensions to the Extensible Messaging and Presence Protocol (XMPP) and are defined in specifications published by the XMPP Standards Foundation (XSF).

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1. Introduction

While the Extensible Messaging and Presence Protocol (XMPP), as specified in [XMPP-CORE] and [XMPP-IM], provides basic messaging and presence functionality, the fact that XMPP is at root a technology for streaming Extensible Markup Language [XML] data makes it possible to include virtually any structured information within XMPP, as long as such information is qualified by appropriate XML namespaces [XML-NAMES]. When sent over XMPP, such structured data formats and protocols are generally referred to as "XMPP extensions".

A large number of such XMPP extensions exist. The main standards development organization in which such extensions are defined is the XMPP Standards Foundation (XSF) (formerly the Jabber Software Foundation), which contributed XMPP to the Internet Standards process. Typically, such extensions are defined within the XSF's XMPP Extension Protocol (XEP) specification series. To date, the XML namespaces defined within the Jabber/XMPP community have used names of the form "jabber:*" (deprecated since early 2002) and "http://jabber.org/protocol/*" (not including names of the form "urn:ietf:params:xml:ns:xmpp-*" specified in the XMPP RFCs). However, it is desirable that names associated with future XMPP extensions be both unique and persistent, which is not necessarily the case with names that are also HTTP URLs. Therefore, in accordance with the process defined in [MECHANISMS], this document registers a formal namespace identifier (NID) for Uniform Resource Names [URN] associated with XMPP extensions published in the XSF's XEP series and for XML namespaces registered with the XSF's XMPP Registrar function [REGISTRAR].

2. Specification Template

Namespace ID:

The Namespace ID "xmpp" is requested.

Registration Information:

Version 1
Date: 2007-04-27

Declared Registrant of the Namespace:

Registering organization
Organization: XMPP Standards Foundation
Address: P.O. Box 1641, Denver, CO 80201 USA

Designated contact
Role: XMPP Registrar
Email: registrar@xmpp.org

Declaration of Syntactic Structure:

The Namespace Specific String (NSS) of all URNs that use the "xmpp" NID shall have the following structure:

urn:xmpp:{ShortName}:{SubName}

The keywords have the following meaning:

(1) the "ShortName" is a required US-ASCII string that conforms to the URN syntax requirements (see RFC 2141) and defines a particular protocol or format that is used as an XMPP extension.

(2) the "SubName" is an optional US-ASCII string that conforms to the URN syntax requirements (see RFC 2141) and defines a particular subset of the relevant protocol or format.

The XSF's XMPP Registrar function shall be responsible for managing the assignment of both "ShortName" and "SubName" strings and maintaining a registry of resulting namespaces at <http://www.xmpp.org/registrar/namespaces.html>. The XMPP Registrar may also assign URNs in sub-trees below the level of the ShortName or SubName as needed for use in various XMPP extensions.

Relevant Ancillary Documentation:

Information about the XSF's XMPP Registrar function can be found at <http://www.xmpp.org/extensions/xep-0053.html> and <http://www.xmpp.org/registrar/>.

Identifier Uniqueness Considerations:

The XMPP Registrar is already responsible for managing the assignment of XML namespace names of the form "http://jabber.org/protocol/{ShortName}" and "http://jabber.org/protocol/{ShortName}#{SubName}" (e.g., "http://jabber.org/protocol/pubsub" and "http://jabber.org/protocol/disco#info"). In order to assign namespace names in the context of the "xmpp" NID, the XMPP Registrar shall simply modify the syntax of the namespace names it assigns from

"http://jabber.org/protocol/{ShortName}" and
"http://jabber.org/protocol/{ShortName}#{SubName}" to
"urn:xmpp:{ShortName}" and "urn:xmpp:{ShortName}:{SubName}".

The XMPP Registrar shall ensure the uniqueness of all XMPP URNs by checking such names against the list of existing namespace names, as documented in XEP-0053 (the controlling specification for the XMPP Registrar function). The XMPP Registrar shall, in all cases, directly ensure the uniqueness of the assigned strings and shall not assign secondary responsibility for management of any sub-trees. However, the XMPP Registrar may assign URNs in sub-trees below the level of the ShortName or SubName as needed for use in various XMPP extensions. The resulting URNs shall not be re-assigned.

Identifier Persistence Considerations:

The XMPP Registrar shall provide clear documentation of the registered uses of the "xmpp" NID in the form of XMPP Extension Protocol (XEP) specifications published at <http://www.xmpp.org/extensions/>, as well as a registry of the namespace names themselves at <http://www.xmpp.org/registrar/namespaces.html>.

Process of Identifier Assignment:

The XMPP Registrar's processes and procedures for identifier assignment are documented in XEP-0053, which is the controlling specification for the XMPP Registrar function. In particular, identifiers shall be issued only upon advancement of the relevant protocol specification to a status of Draft within the standards process, followed by the XMPP Standards Foundation (as specified in XEP-0001). The XMPP Registrar shall check all identifiers against the list of existing namespace names to ensure uniqueness and to encourage relevance and memorability. Assignment of URNs within the "xmpp" tree is reserved to the XMPP Standards Foundation, specifically to its XMPP Registrar function.

Process for Identifier Resolution:

The namespace is not currently listed with a Resolution Discovery System (RDS), but nothing about the namespace prohibits the future definition of appropriate resolution methods or listing with an RDS.

Rules for Lexical Equivalence:

No special considerations; the rules for lexical equivalence specified in RFC 2141 apply.

Conformance with URN Syntax:

No special considerations.

Validation Mechanism:

None specified.

Scope:

Global.

3. Namespace Considerations

The XMPP Standards Foundation has been developing Internet protocols since August 2001 and that work is expected to continue for the foreseeable future. The old-style "jabber:*" namespace names originally used in the Jabber open-source community were not proper URNs or URIs and thus were deprecated in early 2002. Since then, the namespace names assigned by the XMPP Registrar function of the XMPP Standards Foundation have been (equivalent to) specialized HTTP URLs whose authority component is "jabber.org". While that domain is currently under the control of the XMPP Standards Foundation, there is no guarantee that it will always remain so, thus potentially threatening the reliability and permanence of the assigned namespace names. The use of Uniform Resource Names with an appropriate Namespace ID will enable the XMPP Standards Foundation to assign cleaner, more general, more permanent, more reliable, and more controllable namespace names related to the XMPP extensions it defines, while keeping the tree of XMPP extensions produced by the XMPP Standards Foundation properly separate from the IETF tree used to define some of the core XMPP namespaces as well as namespaces related to XMPP extensions that may be produced in the future by the IETF.

4. Community Considerations

The XMPP standards development community will benefit from publication of this namespace by having more permanent and reliable names for the XML namespaces defined in XMPP Extension Protocol specifications produced by the XMPP Standards Foundation.

The standards process followed by the XSF is open to contributions from any interested individual; such a contribution takes the form of a proposal submitted to the XMPP Extensions Editor <mailto:editor@xmpp.org>, accepted by the XMPP Council <http://www.xmpp.org/council/>, and published in the XSF's XMPP Extension Protocol (XEP) series at <http://www.xmpp.org/extensions/>. Use of the proposed space for a particular XML format or protocol extension will be contingent upon advancement of the appropriate specification within the XSF's standards process (as documented in [XEP]) and issuance of a namespace name within the "xmpp" tree by the XMPP Registrar (as documented in [REGISTRAR]).

5. Security Considerations

This document introduces no additional security considerations beyond those associated with the use and resolution of URNs in general.

6. IANA Considerations

This document defines a URN NID registration of "xmpp", which has been entered into the IANA registry located at <http://www.iana.org/assignments/urn-namespaces>.

7. References

7.1. Normative References

[MECHANISMS] Daigle, L., van Gulik, D., Iannella, R., and P. Faltstrom, "Uniform Resource Names (URN) Namespace Definition Mechanisms", BCP 66, RFC 3406, October 2002.

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