XEP-0307: Unique Room Names for Multi-User Chat

Peter Saint-Andre
mailto:stpeter@stpeter.im
xmpp:stpeter@jabber.org
https://stpeter.im/

Status	Type	Short Name
Deferred	Standards Track	muc-unique

This specification defines an XMPP protocol extension for requesting a unique room ID from a multi-user chat service.

Legal

Copyright

This XMPP Extension Protocol is copyright © 1999 – 2024 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

Multi-User Chat (XEP-0045) [1] defines the protocol for groupchat in XMPP. In some situations, the room creator may want to request a unique room name before attempting to create the room (e.g., to avoid the possibility of a room conflict). Naturally, one way to do so is for the creator's client to generate a globally unique identifier, for example as defined in RFC 4122 [2]. Another way is for the client to ask the MUC service for a unique room ID (which the service will thus reserve for that user).

2 Protocol

The room creator requests a unique room name by sending an IQ-get to the service itself, containing an empty <unique/> element qualified by the 'http://jabber.org/protocol/muc#unique' namespace:

Listing 1: Entity Requests Unique Room Name

```
<iq from='crone1@shakespeare.lit/desktop'
    id='unique1'
    to='chat.shakespeare.lit'
    type='get'>
  <unique xmlns='http://jabber.org/protocol/muc#unique'/>
</iq>
```

If the service supports this feature, it SHOULD return a unique room name as the XML character data of the <unique/> element (but not create the room):

Listing 2: Service Returns Unique Room Name

```
<iq from='chat.shakespeare.lit'
    id='unique1'
    to='crone1@shakespeare.lit/desktop'
    type='result'>
  <unique xmlns='http://jabber.org/protocol/muc#unique'>
    6d9423a55f499b29ad20bf7b2bdea4f4b885ead1
  </unique>
</iq>
```

The service MAY refuse to return a unique room name to entities that are not entitled to create rooms, entities that have sent an excessive number of requests for unique room names, etc.

The service MAY use any algorithm that ensures the creation of a room name that will be permanently unique in the context of the service (e.g., a cryptographic hash of the requesting

---

[1] XEP-0045: Multi-User Chat <https://xmpp.org/extensions/xep-0045.html>.

[2] RFC 4122: A Universally Unique IDentifier (UUID) URN Namespace <http://tools.ietf.org/html/rfc4122>.

JID, datetime, and random salt), or simply use a UUID as defined by RFC 4122 [3].
The room creator would then use the XML character data of the <unique/> element as the
node identifier portion of the room JID it requests:

Listing 3: Owner Creates Room With Unique Name

```
<presence
    from='crone1@shakespeare.lit/desktop'
    to='6d9423a55f499b29ad20bf7b2bdea4f4b885ead1@chat.shakespeare.lit/
        firstwitch'>
  <x xmlns='http://jabber.org/protocol/muc'/>
</presence>
```

3 Determining Support

If a MUC service supports the protocol specified herein, it MUST advertise that fact by return-
ing a feature of "http://jabber.org/protocol/muc#unique" in response to Service Discovery
(XEP-0030) [4] information requests (see Protocol Namespaces regarding issuance of one or
more permanent namespaces).

Listing 4: Service discovery information request

```
<iq from='crone1@shakespeare.lit/desktop'
    id='disco1'
    to='chat.shakespeare.lit'
    type='get'>
  <query xmlns='http://jabber.org/protocol/disco#info'/>
</iq>
```

Listing 5: Service discovery information response

```
<iq from='chat.shakespeare.lit'
    id='disco1'
    to='crone1@shakespeare.lit/desktop'
    type='result'>
  <query xmlns='http://jabber.org/protocol/disco#info'>
    [...]
    <feature var='http://jabber.org/protocol/muc#unique'/>
    [...]
  </query>
</iq>
```

---

[3]RFC 4122: A Universally Unique IDentifier (UUID) URN Namespace <http://tools.ietf.org/html/rfc4122>.
[4]XEP-0030: Service Discovery <https://xmpp.org/extensions/xep-0030.html>.

4 XML Schema

```
<?xml version='1.0' encoding='UTF-8'?>

<xs:schema
    xmlns:xs='http://www.w3.org/2001/XMLSchema'
    targetNamespace='http://jabber.org/protocol/muc#unique'
    xmlns='http://jabber.org/protocol/muc#unique'
    elementFormDefault='qualified'>

  <xs:element name='unique' type='xs:string'/>

</xs:schema>
```