



XMPP

XEP-0279: Server IP Check

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This specification defines a simple XMPP extension that enables a client to discover its external IP address.

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1 Introduction

There are times when a client might want or need to discover what its external Internet Protocol (IP) address is, e.g. when gathering transport candidates for [SOCKS5 Bytestreams](#)¹ or [Jingle ICE-UDP Transport Method](#)². One way to do so is for the client to ask the XMPP server to which it has connected. This simple specification defines such a method. The information provided by the server cannot necessarily be relied upon because there might be intermediate entities between the client and the server, but if the IP address returned by the server is different from the client's notion of its IP address then at the very least the client has received a hint that it might be behind a network address translator (NAT) and therefore cannot usefully provide its private IP address as a candidate for use in multimedia negotiations.

2 Protocol

First the client sends an IQ-get request to its server.

Listing 1: Client requests its IP address from the server

```
<iq from='romeo@montague.lit/orchard'  
  id='ik2s7159'  
  type='get'>  
  <ip xmlns='urn:xmpp:sic:0' />  
</iq>
```

The server then returns an IQ-result containing an <ip/> element whose XML character data specifies the client's IP address according to the server.

Listing 2: Server returns IP address

```
<iq id='ik2s7159'  
  to='romeo@montague.lit/orchard'  
  type='result'>  
  <ip xmlns='urn:xmpp:sic:0'>192.168.4.1</ip>  
</iq>
```

The IP address could be IPv4 or IPv6.

Listing 3: Server returns IPv6 address

```
<iq id='ik2s7159'  
  to='romeo@montague.lit/orchard'  
  type='result'>  
  <ip xmlns='urn:xmpp:sic:0'>2001:db8::9:1</ip>
```

¹XEP-0065: SOCKS5 Bytestreams <<http://xmpp.org/extensions/xep-0065.html>>.

²XEP-0176: Jingle ICE-UDP Transport Method <<http://xmpp.org/extensions/xep-0176.html>>.

```
</iq>
```

3 Determining Support

If an entity supports this protocol, it MUST report that by including a service discovery feature of "urn:xmpp:sic:0" in response to disco#info requests (see [Protocol Namespaces](#) regarding issuance of one or more permanent namespaces).

Listing 4: Service discovery information request

```
<iq from='romeo@montague.lit/orchard'
  id='ux71f395'
  to='montague.lit'
  type='get'>
  <query xmlns='http://jabber.org/protocol/disco#info' />
</iq>
```

Listing 5: Service discovery information response

```
<iq from='montague.lit'
  id='ux71f395'
  to='romeo@montague.lit/orchard'
  type='result'>
  <query xmlns='http://jabber.org/protocol/disco#info'>
    <feature var='urn:xmpp:sic:0' />
  </query>
</iq>
```

4 Security Considerations

[XMPP Core](#)³ specifies that client IP addresses shall not be made public. If a client requests its own IP address, that policy is not violated. However, a server MUST NOT return the IP address of another client (e.g., if a connected client sends a SIC request to the bare JID of another user); instead, it MUST return a <forbidden/> error.

5 IANA Considerations

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

³RFC 6120: Extensible Messaging and Presence Protocol (XMPP): Core <<http://tools.ietf.org/html/rfc6120>>.

⁴The 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/>>.

6 XMPP Registrar Considerations

6.1 Protocol Namespaces

This specification defines the following XML namespace:

- urn:xmpp:sic: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 <http://xmpp.org/registrar/namespaces.html>, as described in Section 4 of [XMPP Registrar Function](#)⁶.

6.2 Protocol 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.

7 XML Schema

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

<xs:schema
  xmlns:xs='http://www.w3.org/2001/XMLSchema'
  targetNamespace='urn:xmpp:sic:0'
  xmlns='urn:xmpp:sic:0'
  elementFormDefault='qualified'>

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

</xs:schema>
```

⁵The 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 <http://xmpp.org/registrar/>.

⁶XEP-0053: XMPP Registrar Function <http://xmpp.org/extensions/xep-0053.html>.