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The Jabber-ID Header Field

Abstract

This document defines a header field that enables the author of an email or netnews message to include a Jabber ID in the message header block for the purpose of associating the author with a particular Extensible Messaging and Presence Protocol (XMPP) address.

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Table of Contents

1. Introduction	2
2. Syntax	3
3. Usage	3
3.1. Inclusion	3
3.2. Generation	3
3.3. Processing	4
3.4. Disposition	4
4. IANA Considerations	4
5. Security and Privacy Considerations	5
6. References	5
6.1. Normative References	5
6.2. Informative References	6
Appendix A. Acknowledgements	7

1. Introduction

The Extensible Messaging and Presence Protocol (XMPP), documented in [RFC6120], is a streaming XML technology that enables any two entities on a network to exchange well-defined but extensible XML elements (called "XML stanzas") in close to real time. Given XMPP's heritage in the Jabber open-source community, one of the primary uses for XMPP is instant messaging and presence as documented in [RFC6121], and XMPP addresses are still referred to as Jabber IDs.

Because almost all human users of Jabber/XMPP instant messaging and presence systems also use email systems [RFC5322] and because many also use netnews systems [RFC5536], it can be helpful for them to associate their Jabber IDs with the messages they author. The Jabber-ID header field provides a standard location for that information.

Members of the XMPP instant messaging and presence community have been experimenting with the Jabber-ID header field for many years. This document defines the syntax and usage of the Jabber-ID header field, including the information necessary to register the field in the Provisional Message Header Field Names registry maintained by the IANA.

2. Syntax

The syntax of the Jabber-ID header field is defined below using Augmented Backus-Naur Form [RFC5234], where the "pathxmpp" rule is defined in the XMPP URI specification [RFC5122] and the remaining rules are defined in the Internet Message Format specification [RFC5322]:

```
Jabber-ID = SP *WSP pathxmpp *WSP CRLF
```

Although a native XMPP address can contain virtually any Unicode character [UNICODE], the header of an email or netnews message is allowed to contain only printable ASCII characters (see Section 2 of [RFC5322]). Therefore, any characters outside the ASCII range [RFC20] in an XMPP address need to be converted to ASCII before inclusion in a Jabber-ID header field, in accordance with the rules defined in the XMPP URI specification [RFC5122]. In addition, characters allowed in XMPP localparts and XMPP resourceparts but disallowed by the relevant URI rules need to be percent-encoded in accordance with the rules defined in the URI specification [RFC3986].

3. Usage

3.1. Inclusion

The Jabber-ID header field is associated with the author of the message; see [RFC5322]. If the "From:" header field of an email message contains more than one mailbox, it is best not to add the Jabber-ID header field to the message. To reduce the possibility of confusion, it is best to include only one instance of the Jabber-ID header field in a given message.

3.2. Generation

For a user whose XMPP address is "juliet@example.com", the corresponding Jabber-ID header field would be:

```
Jabber-ID: juliet@example.com
```

As noted, non-ASCII characters in XMPP addresses need to be converted into ASCII before inclusion in a Jabber-ID header field. Consider the following XMPP address:

```
ji&#x159;i@&#x10D;echy.example
```

In the foregoing example, the string "ř" stands for the Unicode character LATIN SMALL LETTER R WITH CARON and the string "č" stands for the Unicode character LATIN SMALL LETTER C WITH CARON,

following the "XML Notation" used in [RFC3987] to represent characters that cannot be rendered in ASCII-only documents. For those who do not read Czech, this example could be anglicized as "george@czech-lands.example".

Following the rules in [RFC5122] and the Jabber-ID header field syntax, the resulting header field might be as shown below (note that this representation includes folding white space, which is allowed in accordance with the ABNF):

```
Jabber-ID:
    ji%C5%99i@%C4%8Dechy.example
```

3.3. Processing

Upon receiving an email message or netnews message containing a Jabber-ID header field, a user agent that supports the field ought to process the field by converting any escaped characters to characters outside the ASCII range in accordance with the rules defined in [RFC5122], thus yielding a Jabber ID that can be used for native communication on the XMPP network.

3.4. Disposition

A user agent that has processed a Jabber-ID header field can provide appropriate interface elements if it has independent information linking the author of the email or netnews message with the specified Jabber ID (e.g., via a user-controlled address book or automated directory lookup). Such interface elements might include an indicator of "presence" (i.e., that the author is online and available for communication via XMPP) if the user is subscribed to the presence of the author, and an element that enables the user to send an instant message or initiate a text chat session with the author.

4. IANA Considerations

The IANA has added "Jabber-ID" to the Provisional Message Header Field Names registry. The completed registration template follows.

Header field name: Jabber-ID

Applicable protocol: mail, netnews

Status: provisional

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Related information: See RFC 6120

5. Security and Privacy Considerations

Message headers are an existing standard and are designed to easily accommodate new types. Although the Jabber-ID header field could be forged, this problem is inherent in Internet email and netnews. However, because a forged Jabber-ID header field might break automated processing, applications are discouraged from depending on the Jabber-ID header field to indicate the authenticity of an email or netnews message, or the identity of its author or sender. Including the Jabber-ID header field among the signer header fields in DomainKeys Identified Mail (DKIM) can help to mitigate against forging of the header (see [RFC6376]).

Advertising XMPP addresses in email or netnews headers might make it easier for malicious users to harvest XMPP addresses and therefore to send unsolicited bulk communications to the users or applications represented by those addresses. Providing such a binding between an email address and a Jabber ID can also increase the possibility of drawing a connection between different kinds of communications traffic for purposes of surveillance and other breaches of privacy. Care ought to be taken in balancing the benefits of open information exchange against the potential costs of security and privacy weaknesses. An email or netnews user agent that is capable of including the Jabber-ID header field in outgoing email or netnews messages needs to provide an option for its user to disable inclusion of the Jabber-ID header field generally, on a per-recipient basis, and on a per-message basis.

The security and privacy considerations discussed in [RFC3986], [RFC3987], [RFC5122], [RFC6120], and [RFC6121] also apply to the Jabber-ID message header.

6. References

6.1. Normative References

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Appendix A. Acknowledgements

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