IMAP4 Extension for Returning MYRIGHTS Information in Extended LIST
draft-ietf-extra-imap-list-myrighnts-07

Abstract

This document defines an extension to the Internet Message Access Protocol (IMAP) LIST command that allows the client to request the set of rights that the logged-in user has been granted on mailboxes, along with other information typically returned by the LIST command.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at https://datatracker.ietf.org/drafts/current/.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on December 9, 2018.

Copyright Notice

Copyright (c) 2018 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust’s Legal Provisions Relating to IETF Documents (https://trustee.ietf.org/license-info) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.
Table of Contents

1. Introduction .............................................. 2
2. Conventions Used in This Document ...................... 2
3. MYRIGHTS Return Option to LIST Command ................ 3
4. Examples .................................................... 3
5. Formal Syntax .............................................. 4
6. Security Considerations ................................... 4
7. Privacy Considerations .................................... 4
8. IANA Considerations ...................................... 4
   8.1. Registration of IMAP capability LIST-MYRIGHTS ....... 4
   8.2. Registration of LIST-EXTENDED option MYRIGHTS .... 5
9. Acknowledgments ............................................ 5
10. References ............................................... 5
   10.1. Normative References ................................. 5
   10.2. Informative References .............................. 6
   10.3. URIs ................................................ 6
Appendix A. Change History (To be removed by RFC Editor before publication) ......................... 6
Authors’ Addresses ........................................... 7

1. Introduction

IMAP [RFC3501] clients typically fetch the set of rights granted on mailboxes so they can expose the allowed functionality to the logged-in user. In order to do that, the client is forced to issue a LIST or LSUB command to list all available mailboxes, followed by a MYRIGHTS command for each mailbox found. This document defines an extension to the to IMAP LIST command that is identified by the capability string "LIST-MYRIGHTS". The LIST-MYRIGHTS extension allows the client to request the set of rights that the logged-in user has been granted on mailboxes, along with other information typically returned by the LIST command.

2. Conventions Used in This Document

In examples, "C:" indicates lines sent by a client that is connected to a server. "S:" indicates lines sent by the server to the client.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [1] [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.
3. MYRIGHTS Return Option to LIST Command

[RFC4314] defines the MYRIGHTS command which is used by an IMAP client to determine the set of rights that the logged-in user has been granted on a given mailbox. Frequently, a client will have to look up the rights for some or all of the mailboxes returned by the LIST command. Doing so in multiple MYRIGHTS commands wastes bandwidth and can degrade performance if the client does not pipeline the requests.

This document extends the LIST command with a new "MYRIGHTS" return option [RFC5258], which allows the client to request all of the desired information in a single command. For each listable mailbox matching the list pattern and selection options, the server MUST return an untagged LIST response and SHOULD also return an untagged MYRIGHTS response containing the set of rights granted to the logged-in user. The ordering of the responses is significant only in that the server MUST NOT send a MYRIGHTS response for a given mailbox before it sends the LIST response for that mailbox.

If the server is unable to look up the set of rights for a given mailbox, it does not send the MYRIGHTS reply for that mailbox.

Client authors ought to note that generating the MYRIGHTS responses for a large number of mailboxes may be an expensive operation for the server. Clients SHOULD use a suitable match pattern and/or selection option to limit the set of mailboxes returned to only those whose rights in which they are interested.

4. Examples

In this example the "bar" mailbox doesn’t exist, so it has no MYRIGHTS reply.

C: A01 LIST "" % RETURN (MYRIGHTS)
S: * LIST () "." "INBOX"
S: * MYRIGHTS "INBOX" lrs
S: * LIST () "." "foo"
S: * MYRIGHTS "foo" lrs
S: * LIST (\NonExistent) "." "bar"
S: A01 OK List completed.
In this example the LIST reply for the "foo" mailbox is returned because it has matching children, but no MYRIGHTS reply is returned because "foo" itself doesn’t match the selection criteria.

C: A02 LIST (SUBSCRIBED RECURSIVEMATCH) "" % RETURN (MYRIGHTS)
S: * LIST (\Subscribed) "." "INBOX"
S: * MYRIGHTS "INBOX" lrswipkxtedca
S: * LIST () "." "foo" (CHILDINFO ("SUBSCRIBED"))
S: A02 OK List completed.

5. Formal Syntax

The following syntax specification uses the augmented Backus-Naur Form (BNF) as described in [RFC5234]. Terms not defined here are taken from [RFC5258].

return-option =/ "MYRIGHTS"

6. Security Considerations

In addition to the security considerations described in [RFC4314], this extension makes it a bit easier for clients to overload the server by requesting MYRIGHTS information for a large number of mailboxes. However, as already noted in the introduction, existing clients already try to do that by generating a large number of MYRIGHTS commands for each mailbox in which they are interested. While performing MYRIGHTS information retrieval for big lists of mailboxes, a server implementation needs to make sure that it can still serve other IMAP connections and yield execution to other connections, when necessary.

7. Privacy Considerations

This specification does not introduce any additional privacy concerns beyond those described in [RFC4314].

8. IANA Considerations

8.1. Registration of IMAP capability LIST-MYRIGHTS

This document defines the "LIST-MYRIGHTS" IMAP capability to be added to the "IMAP Capabilities" registry:
<https://www.iana.org/assignments/imap-capabilities/imap-capabilities.xhtml#imap-capabilities-1>.
8.2. Registration of LIST-EXTENDED option MYRIGHTS

This section registers the "MYRIGHTS" option to be added to the "LIST-EXTENDED options" registry: <https://www.iana.org/assignments/imap-list-extended/imap-list-extended.xhtml#imap-list-extended-1>.

LIST-EXTENDED option name: MYRIGHTS

LIST-EXTENDED option type: RETURN

LIST-EXTENDED option description: Causes the LIST command to return MYRIGHTS responses in addition to LIST responses.

Published specification: RFC XXXX, Section 3

Security considerations: RFC XXXX, Section 6

Intended usage: COMMON

Person and email address to contact for further information:
Kenneth Murchison <murch@fastmail.com>

Owner/Change controller: IESG <iesg@ietf.org>

9. Acknowledgments

This document is based largely on [RFC5819]. The authors would like to thank the authors of that document for providing both inspiration and some borrowed text for this document. The authors would also like to thank the following individuals for contributing their ideas and support for writing this specification: Barry Leiba.

10. References

10.1. Normative References


10.2. Informative References


10.3. URIs


Appendix A. Change History (To be removed by RFC Editor before publication)

Changes from draft-ietf-extra-imap-list-myrights-06:

- Editorial fix.

Changes from draft-ietf-extra-imap-list-myrights-05:

- Updated Keywords boilerplate.
- Referenced security concerns in RFC 4314.
- Reworded first sentence in second paragraph of Section 3.
- Added informative reference to RFC5819.

Changes from draft-ietf-extra-imap-list-myrights-04:
Changes from \texttt{draft-ietf-extra-imap-list-myrights-03}:

- Added references for "IMAP" and "return option".

Changes from \texttt{draft-ietf-extra-imap-list-myrights-02}:

- Fixed a typo in the Abstract.

Changes from \texttt{draft-ietf-extra-imap-list-myrights-01}:

- WGLC editorial changes from Barry Leiba.

- Removed 'n' right from example.

- Added advice to client authors regarding expense of calculating MYRIGHTS.

- Replicated Security Considerations section from \texttt{RFC 5819}.

Changes from \texttt{draft-ietf-extra-imap-list-myrights-00}:

- Corrected contact email address in IANA registration.

- Fixed typos (extra SP) in examples.

Changes from \texttt{draft-murchison-imap-list-myrights-01}:

- Renamed document to be a work product of the EXTRA WG.

- Updated authors' addresses.

Changes from \texttt{draft-murchison-imap-list-myrights-00}:

- Augmented Introduction with mention of "LIST-MYRIGHTS" capability string.

- Minor editorial changes.

Authors' Addresses

Kenneth Murchison
FastMail Pty Ltd
Level 2, 114 William Street
Melbourne, VIC 3000
Australia

Email: murch@fastmailteam.com
Bron Gondwana
FastMail Pty Ltd
Level 2, 114 William Street
Melbourne, VIC 3000
Australia

Email: brong@fastmailteam.com