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IMAP4 Extension for Returning MYRIGHTS Information in Extended LIST

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 is an Internet Standards Track document.

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Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <https://www.rfc-editor.org/info/rfc8440>.

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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 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 [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] that 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 in whose rights 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" lrswipkxtecda
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" lrswipkxtecda
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 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 that has been added to the "IMAP Capabilities" registry [CAPABILITIES].

8.2. Registration of LIST-EXTENDED Option MYRIGHTS

This section registers the "MYRIGHTS" option that has been added to the "LIST-EXTENDED options" registry [EXTENDED].

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 8440, Section 3

Security considerations: RFC 8440, Section 6

Intended usage: COMMON

Person and email address to contact for further information:
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Owner/Change controller: IESG <iesg@ietf.org>

9. References

9.1. Normative References

[CAPABILITIES]

IANA, "Internet Message Access Protocol (IMAP) Capabilities Registry", <<https://www.iana.org/assignments/imap-capabilities/imap-capabilities>>.

[EXTENDED]

IANA, "Internet Message Access Protocol (IMAP) LIST EXTENDED Registry", <<https://www.iana.org/assignments/imap-list-extended>>.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.

[RFC3501] Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1", RFC 3501, DOI 10.17487/RFC3501, March 2003, <<https://www.rfc-editor.org/info/rfc3501>>.

[RFC4314] Melnikov, A., "IMAP4 Access Control List (ACL) Extension", RFC 4314, DOI 10.17487/RFC4314, December 2005, <<https://www.rfc-editor.org/info/rfc4314>>.

[RFC5234] Crocker, D., Ed. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, DOI 10.17487/RFC5234, January 2008, <<https://www.rfc-editor.org/info/rfc5234>>.

[RFC5258] Leiba, B. and A. Melnikov, "Internet Message Access Protocol version 4 - LIST Command Extensions", RFC 5258, DOI 10.17487/RFC5258, June 2008, <<https://www.rfc-editor.org/info/rfc5258>>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.

9.2. Informative References

[RFC5819] Melnikov, A. and T. Sirainen, "IMAP4 Extension for Returning STATUS Information in Extended LIST", RFC 5819, DOI 10.17487/RFC5819, March 2010, <<https://www.rfc-editor.org/info/rfc5819>>.

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