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             Internet Message Access Protocol (IMAP) - STATUS=SIZE Extension
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Abstract

   This document adds a new capability called "STATUS=SIZE" to the
   Internet Message Access Protocol (IMAP). It allows retrieving the
   total storage size of a mailbox with a single STATUS command rather
   than retrieving and summing the sizes of all individual messages in
   that mailbox.

Status of This Memo

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

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   material or to cite them other than as "work in progress."

   This Internet-Draft will expire on March 19, 2018.

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1. Introduction

   This document extends Internet Message Access Protocol (IMAP)
   [IMAP4rev1] with a new capability called "STATUS=SIZE". To determine
   the total storage size of a mailbox, an IMAP client currently needs
   to retrieve all message sizes individually using the FETCH command
   with the RFC822.SIZE data item. The "STATUS=SIZE" capability
   provides a more efficient means to achieve this. It extends the
   STATUS command with a new "SIZE" data item, which indicates the total
   size of all messages in the target mailbox. This way, this
   information can be queried with just one STATUS command. When the
   "LIST-STATUS" IMAP capability [LIST-STATUS] is also available, the
   SIZE data item can be queried for many mailboxes at once using just
   one LIST command.

   This capability is particularly useful for IMAP clients that do not
   cache the state of the message store, such as most webmail clients.
   Without the "STATUS=SIZE" capability, such clients need to fetch all
   message sizes from the server when the size of a mailbox needs to be
   determined, for example when the user requests detailed quota usage
   information. The "QUOTA" capability [QUOTA] is no help in that
   scenario, since the provided QUOTAROOT command can only yield the
   "STORAGE" resource usage of a whole quota root, but not for a single
   mailbox within that root.

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", "MAY", and "OPTIONAL" in this
document are to be interpreted as described in [KEYWORDS].

3. STATUS Command and Response Extensions

   This extension defines one new status data item for the STATUS
   command and response:

   SIZE
      The total size of the mailbox in octets. This MUST be equal to
      the sum of the values of the RFC822.SIZE FETCH message data item
      [IMAP4rev1] of all messages in the mailbox.

   Example:

   C: A01 STATUS frop (MESSAGES SIZE UIDNEXT)
   S: * STATUS frop (MESSAGES 8 SIZE 44421 UIDNEXT 242344)
   S: A01 OK STATUS completed

   The same information can be obtained by using the following commands,
   albeit less efficient:

   C: A02 SELECT "frop"
   S: * FLAGS (\Answered \Flagged \Deleted \Seen \Draft)
   S: * 8 EXISTS
   S: * 1 RECENT
   S: * OK [UNSEEN 7] First unseen.
   S: * OK [UIDVALIDITY 1364851417] UIDs valid
   S: * OK [UIDNEXT 242344] Predicted next UID
   S: * OK [HIGHESTMODSEQ 3914] Highest
   S: A02 OK [READ-WRITE] Select completed.
   C: A03 FETCH 1:* (RFC822.SIZE)
   S: * 1 FETCH (RFC822.SIZE 3224)
   S: * 2 FETCH (RFC822.SIZE 1222)
   S: * 3 FETCH (RFC822.SIZE 444)
   S: * 4 FETCH (RFC822.SIZE 4516)
   S: * 5 FETCH (RFC822.SIZE 544)
   S: * 6 FETCH (RFC822.SIZE 922)
   S: * 7 FETCH (RFC822.SIZE 31126)

```
S: * 8 FETCH (RFC822.SIZE 2423)
S: A03 OK Fetch completed.
```

When the LIST-STATUS IMAP capability [LIST-STATUS] is also available,
the STATUS command can be combined with the LIST command to further
improve efficiency. This way, the sizes of many mailboxes can be
queried with just one LIST command.

Example:

```
C: A04 LIST "" % RETURN (STATUS (MESSAGES SIZE))
S: * LIST () "."  "INBOX"
S: * STATUS "INBOX" (MESSAGES 17 SIZE 16234)
S: * LIST () "." "frop"
S: * STATUS "frop" (MESSAGES 8 SIZE 44421)
S: A04 OK List completed.
```

4. Formal Syntax

   The following syntax specification augments the grammar specified in
   [IMAP4rev1]. It uses the Augmented Backus-Naur Form (ABNF) notation
   as specified in [ABNF]. Elements not defined here are taken from
   [IMAP4rev1].

   capability =/ "STATUS=SIZE"

   status-att =/ "SIZE"

   [FIXME: Interaction with 64BIT capability]

5. Security Considerations

   There are no known additional security issues with this extension
   beyond those described in the base protocol described in [IMAP4rev1].

6. IANA Considerations

   The IANA is requested to add "STATUS=SIZE" to the "IMAP Capabilities"
   registry located at <http://www.iana.org/assignments/imap-

capabilities>.

7. Acknowledgements

    Thanks to Alexey Melnikov and Michael Slusarz for reviews and
    suggestions.

    More reviews are appreciated.

8. References

8.1. Normative References

    [ABNF]   Crocker, D. and P. Overell, "Augmented BNF for Syntax
                Specifications: ABNF", STD 68, RFC 5234, January 2008.

    [IMAP4rev1]
                Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION
                4rev1", RFC 3501, March 2003.

    [KEYWORDS]
                Bradner, S., "Key words for use in RFCs to Indicate
                Requirement Levels", BCP 14, RFC 2119, March 1997.

    [LIST-STATUS]
                Melnikov, A. and T. Sirainen, "IMAP4 Extension for
                Returning STATUS Information in Extended LIST", RFC 5819,
                March 2010.

8.2. Informative References

    [QUOTA]   Myers, J., "IMAP4 QUOTA extension", RFC 2087, January
                1997.

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