

Network Working Group
Internet-Draft
Intended status: Standards Track
Expires: March 19, 2018

S. Bosch
Dovecot Oy
September 15, 2017

Internet Message Access Protocol (IMAP) - STATUS=SIZE Extension
draft-bosch-imap-status-size-00

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](#).

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 <http://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 March 19, 2018.

Copyright Notice

Copyright (c) 2017 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 (<http://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. STATUS Command and Response Extensions 3
- 4. Formal Syntax 4
- 5. Security Considerations 4
- 6. IANA Considerations 4
- 7. Acknowledgements 4
- 8. References 4
 - 8.1. Normative References 4
 - 8.2. Informative References 5
- Author's Address 5

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].

Bosch

Expires March 19, 2018

[Page 2]

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.

Author's Address

Stephan Bosch
Dovecot Oy
Lars Sonckin Kaari 10
Espoo 02600
Finland

Email: stephan.bosch@dovecot.fi

