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64bit body part and message sizes in IMAP4

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Abstract

This document defines an IMAPv4rev1 extension that extends the existing IMAPv4rev1 32 Bit message and body part sizes to 63 bit.

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[1.](#) Introduction

IMAP [[RFC3501](#)] only allows body parts or message sizes which are 32 bit. This document introduces an IMAP extension that allows for message and body part sizes to be 63 bit.

The client wishing to use this extension MUST issue ENABLE 64BIT. Refer [[RFC5161](#)] for the usage of ENABLE command.

[2.](#) Requirements Notation

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 [[RFC2119](#)].

In examples, "C:" and "S:" indicate lines sent by the client and server respectively. If a single "C:" or "S:" label applies to multiple lines, then the line breaks between those lines are for editorial clarity only and are not part of the actual protocol exchange.

3. 64bit Extension

An IMAP server that supports the 64bit extension advertises this by including the name 64BIT in its CAPABILITY list in the authenticated state. The server may also advertise this extension before the user has logged in. If this capability is omitted, no information is conveyed about the server's status of supporting this extension.

IMAP server should respond with BAD response for the 64bit message size messages sent by the IMAP client unless it issues "ENABLE 64BIT" in the current connection.

4. IMAP Protocol Changes

TBD.

5. Examples

```
C: t1 CAPABILITY
S: * CAPABILITY IMAP4rev1 ID 64BIT
S: t1 OK foo
C: t2 ENABLE 64BIT
S: * ENABLED 64BIT
S: t2 OK foo
```

6. Formal Syntax

The following syntax specification uses the Augmented Backus-Naur Form (ABNF) notation as specified in [\[ABNF\]](#).

Non-terminals referenced but not defined below are as defined by [\[RFC3501\]](#).

All alphabetic characters are case-insensitive. The use of upper or lower case characters to define token strings is for editorial clarity only. Implementations MUST accept these strings in a case-insensitive fashion.


```
body-extension  =/ number64
                  ; Alexey: I am not sure if this change is absolutely needed!

body-fld-lines  = number64

body-fld-octets = number64

fetch-att       =/ "BODY" section ["<" number64 "." nz-number64 ">"] /
                  "BODY.PEEK" section ["<" number64 "." nz-number64 ">"]

literal         = "{" number64 ["+"] "}" CRLF *CHAR8
                  ; number64 represents the number of CHAR8s.
                  ; NOTE: "+" can only present when LITERAL+/LITERAL-
                  ; is also advertised

literal8        = "~{" number64 ["+"] "}" CRLF *OCTET
                  ;; Updating RFC 4466 version.
                  ;; A string that might contain NULs.
                  ;; <number> represents the number of OCTETs
                  ;; in the response string.
                  ;; The "+" is only allowed when both LITERAL+/LITERAL-
                  ;; and BINARY extensions are supported by the server
                  ;; [RFC7888]

msg-att-static  =/ "RFC822.SIZE" SP number64

search-key      =/ "LARGER" SP number64 / "SMALLER" SP number64

number64        = 1*DIGIT
                  ; Unsigned 63-bit integer
                  ; (0 <= n <= 9,223,372,036,854,775,807)

nz-number64     = digit-nz *DIGIT
                  ; Unsigned 63-bit integer
                  ; (0 < n <= 9,223,372,036,854,775,807)

CHAR8           = <defined in RFC 3501>
```

7. Security Considerations

TBD.

This document doesn't raise any other security concerns not already raised by [[RFC3501](#)].

8. IANA Considerations

IANA is asked to add "64BIT" to the IMAP Capabilities registry, using this document as its reference.

9. Acknowledgments

TBD.

10. Normative References

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