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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 32bit. This document introduces an IMAP extension that allows for message and body part sizes to be 63bit.

The client wishing to use this extension MUST issue ENABLE 64BIT command. 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](#)].


```
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 ["<" number "." nz-number ">"] /
                  "BODY.PEEK" section ["<" number "." nz-number ">"]

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

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

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

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>

literal8         = <defined in RFC 4466>
                  ; Alexey: this needs updating as well
```

7. Security Considerations

TBD.

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

8. IANA Considerations

IMAP4 capabilities are registered by publishing a standards track or IESG approved experimental RFC. The registry is currently located at:

<http://www.iana.org/assignments/imap-capabilities>

This document requests that IANA adds to the above registry to include the entry for 64BIT capability pointing to this document.

9. Acknowledgments

TBD

10. Normative References

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- [RFC3516] Nerenberg, L., "IMAP4 Binary Content Extension", [RFC 3516](#), DOI 10.17487/RFC3516, April 2003, <<https://www.rfc-editor.org/info/rfc3516>>.
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- [RFC5161] Gulbrandsen, A., Ed. and A. Melnikov, Ed., "The IMAP ENABLE Extension", [RFC 5161](#), DOI 10.17487/RFC5161, March 2008, <<https://www.rfc-editor.org/info/rfc5161>>.

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