

IMAP4 non-synchronizing literals

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

1. Abstract

The Internet Message Access Protocol [IMAP4] contains the "literal" syntactic construct for communicating strings. When sending a literal from client to server, IMAP4 requires the client to wait for the server to send a command continuation request between sending the octet count and the string data. This document specifies an alternate form of literal which does not require this network round trip.

2. Conventions Used in this Document

In examples, "C:" and "S:" indicate lines sent by the client and server respectively.

3. Specification

The non-synchronizing literal is added as an alternate form of literal, and may appear in communication from client to server instead of the IMAP4 form of literal. The IMAP4 form of literal, used in communication from client to server, is referred to as a synchronizing literal.

Non-synchronizing literals may be used with any IMAP4 server implementation which returns "LITERAL+" as one of the supported capabilities to the CAPABILITY command. If the server does not advertise the LITERAL+ capability, the client must use synchronizing literals instead.

The non-synchronizing literal is distinguished from the original synchronizing literal by having a plus ('+') between the octet count and the closing brace ('}'). The server does not generate a command continuation request in response to a non-synchronizing literal, and

clients are not required to wait before sending the octets of a non-synchronizing literal.

The protocol receiver of an IMAP4 server must check the end of every received line for an open brace ('{') followed by an octet count, a plus ('+'), and a close brace ('}') immediately preceeding the CRLF. If it finds this sequence, it is the octet count of a non-synchronizing literal and the server MUST treat the specified number of following octets and the following line as part of the same command. A server MAY still process commands and reject errors on a line-by-line basis, as long as it checks for non-synchronizing literals at the end of each line.

```
Example:   C: A001 LOGIN {11+}
           C: FRED FOOBAR {7+}
           C: fat man
           S: A001 OK LOGIN completed
```

4. Formal Syntax

The following syntax specification uses the augmented Backus-Naur Form (BNF) notation as specified in [RFC-822] as modified by [IMAP4]. Non-terminals referenced but not defined below are as defined by [IMAP4].

```
literal      ::= "{" number ["+"] "}" CRLF *CHAR8
              ;; Number represents the number of CHAR8 octets
```

6. References

[IMAP4] Crispin, M., "Internet Message Access Protocol - Version 4", draft-crispin-imap-base-XX.txt, University of Washington, April 1996.

[RFC-822] Crocker, D., "Standard for the Format of ARPA Internet Text Messages", STD 11, RFC 822.

7. Security Considerations

There are no known security issues with this extension.

8. Author's Address

John G. Myers
Carnegie-Mellon University
5000 Forbes Ave.
Pittsburgh PA, 15213-3890

Email: jgm+@cmu.edu

