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Internet Message Access Protocol (IMAP) - MOVE extension draft-krecicki-imap-move-01.txt

Abstract

The MOVE extension of the Internet Message Access Protocol [\[IMAP4\] \(Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1," March 2003.\)](#) provides a feature intended to reduce the amount of time and resources used by usual complicated methods of moving messages between mailboxes by providing the capability of directly moving messages.

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1. Conventions Used in this Document

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

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [\[KEYWORDS\] \(Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," March 1997.\)](#).

2. Introduction and Overview

Most of IMAP clients are moving messages between mailboxes by use of sequence of COPY, STORE +FLAGS (\Deleted) and EXPUNGE commands. This, though functionally equivalent to moving messages, is a lot more complicated on the server side than simple move. When moving large amounts of messages this can create unnecessary loads and delays on server side. It also prohibits user from moving a message which is larger than the remnant of his quota

The MOVE extension allows simple single-command moving of messages between mailboxes without creating additional unnecessary server-side loads and without requiring user consideration about his quota limits when simply moving message and not changing the overall amount of data stored in his account. MOVE command can be implemented as an atomic operation which is impossible with three-commands sequence currently used.

The MOVE extension is present in any IMAP server implementation which returns "MOVE" as one of the supported capabilities to the CAPABILITY command.

The MOVE extension defines one additional command which MUST be supported by server that returns supports MOVE extension.

3. Additional commands

The following command definition is an extension to [\[IMAP4\] \(Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1," March 2003.\)](#) section 6.4.

3.1. MOVE command

Arguments: sequence set
 mailbox name

Data: untagged responses: EXPUNGE

Result: OK - move completed
 NO - move error: can't move those messages or to that mailbox
 BAD - command unknown or arguments invalid

The MOVE command moves messages from the currently selected mailbox to the end of the specified mailbox. Messages that are moved are expunged from selected mailbox. Any messages that are not included in the sequence set or do not exist are unaffected. All flags (including \Deleted) and message internal date are persistent through move. If the server does not support the MOVE capability, the client should fall back to using the regular COPY, STORE, EXPUNGE sequence. Additionally if MOVE command can be directly preceded by UID command, the sequence set argument is then treated as unique identifiers sequence instead of message sequence numbers as defined in [\[IMAP4\] \(Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1," March 2003.\)](#) paragraph 6.4.8.

Command EXPUNGE untagged responses reports that the specified message sequence number has been permanently removed from selected mailbox (and moved to specified mailbox) as defined in [\[IMAP4\] \(Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1," March 2003.\)](#) paragraph 7.4.1.

The MOVE command SHOULD be atomic and server SHOULD keep both mailboxes in consistent state at all times, at no time SHOULD the moved messages be visible by any concurrent session in both source and destination mailboxes or in none of these mailboxes. The server MUST assure that after successful operation all the moved messages are in the destination mailbox and no moved messages are in the source mailbox. The server SHOULD assure that after unsuccessful operation no messages are moved to the destination folder and all messages remain in source folder. In case of unsuccessful operation the server MUST assure that no messages that were being moved are expunged from source mailbox without being moved to destination mailbox.

Example: C: A003 MOVE 3000:3002 Trash
S: * 3002 EXPUNGE
S: * 3001 EXPUNGE
S: * 3000 EXPUNGE
S: A003 OK MOVE completed
C: A004 UID MOVE 4000:* Trash
S: * 3010 EXPUNGE
S: * 3009 EXPUNGE
S: * 3008 EXPUNGE
S: A004 OK MOVE completed

4. Response Codes

If the server supports both the UIDPLUS and MOVE extensions it SHOULD return COPYUID response code as a part of tagged OK response to a MOVE command, as defined in [\[UIDPLUS\] \(Crispin, M., "Internet Message Access Protocol \(IMAP\) - UIDPLUS extension," December 2005.\)](#) paragraph 4.3.

5. Formal Syntax

Formal syntax is defined using ABNF [\[ABNF\] \(Crocker, D., Ed. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF," November 1997.\)](#), extending the ABNF rules defined in [\[IMAP4\] \(Crispin, M., "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1," March 2003.\)](#). The IMAP4 ABNF should be imported first before attempting to validate these rules.

capability =/ "MOVE"

command-select =/ move

move = "MOVE" SP sequence-set SP mailbox

uid =/ "UID" SP move

6. IANA Considerations

This document constitutes registration of the MOVE capability in the imap4-capabilities.

7. References

[ABNF]	Crocker, D., Ed. and P. Overell , " Augmented BNF for Syntax Specifications: ABNF ," RFC 2234, November 1997 (TXT , HTML , XML).
[IMAP4]	Crispin, M., " INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1 ," RFC 3501, March 2003 (TXT).
[UIDPLUS]	Crispin, M., " Internet Message Access Protocol (IMAP) - UIDPLUS extension ," RFC 4315, December 2005 (TXT).
[KEYWORDS]	Bradner, S. , " Key words for use in RFCs to Indicate Requirement Levels ," BCP 14, RFC 2119, March 1997 (TXT , HTML , XML).

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