

The IMAP Move Extension
[draft-ietf-imapmove-command-00.txt](#)

Status of this Memo

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This Internet-Draft expires in December 2012.

Abstract

The MOVE extension provides a new command, UID MOVE, which moves one or more messages from the selected mailbox to a named mailbox.

1. Conventions Used in This Document

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](#)].

Formal syntax is defined by [[RFC5234](#)].

Example lines prefaced by "C:" are sent by the client and ones prefaced by "S:" by the server.

2. Overview

This document defines an IMAP extension to move messages from one mailbox to another. This function (very common in MUA UIs) is not provided by stock IMAP, and clients have to use a combination of UID STORE, UID COPY and EXPUNGE, and cope with partial failures and side effects.

Only UID MOVE is defined, not MOVE. There are three reasons for this. First, MOVE poses some difficult questions with regard to expunges. Second, in a survey of user agents that provide move in the user interface, all were seen to use UID commands anyway. Third, a server implementer reported that implementing move based on message sequence numbers would be more difficult than UID MOVE.

If MSN-based move is found to be needed (rather than just neat), it can be defined by a future document.

3. UID MOVE

The UID MOVE command takes two arguments: a set of UIDs and a named mailbox. It moves each message included in the UID set to the named mailbox.

The UID MOVE command has the same effect as a sequence of UID COPY, UID STORE +FLAGS \DELETED and UID EXPUNGE, with three differences:

First, each message SHOULD either be moved or unaffected. The server SHOULD NOT leave a message in neither or both mailboxes afterwards (even if the server returns a tagged NO response).

Second, the messages MUST NOT have the \Deleted flag set in the target mailbox.

Third, the server is not required to send FETCH FLAGS responses for the messages it expunges.

UID MOVE is the same as the three-command sequence in all other respects, which implies that extensions which affect the three-command sequence also affect UID MOVE, and that response codes such as COPYUID, TRYCREATE and so on should be sent as appropriate.

An example:

```
C: a UID MOVE 42:69 forble
S: * 22 EXPUNGE
S: (more expunges)
S: a OK [COPYUID 432432 42:69 1202:1229] Done
```

Note that the server may send EXPUNGES for other messages as well, if any happen to have been expunged at the same time.

Implementers will need to read [[RFC4315](#)] to understand what UID EXPUNGE does. Implementing [[RFC4315](#)] is not necessary.

4. Interaction with other extensions

This section points out how other IMAP extensions interact with this.

4.1. [RFC 2087](#), QUOTA

The QUOTA extension (defined by [[RFC2087](#)]) may interact with MOVE, on some servers, in the sense that a MOVE command may succeed where COPY would cause a quota overrun. This may be user-visible, but should not be MUA-visible.

4.2. [RFC 4314](#), ACL

Since UID MOVE is defined as equivalent to UID STORE, UID COPY and UID EXPUNGE, it requires the same ACL rights as the union of those three commands.

4.3. RFC 4315, UIDPLUS

Since UID MOVE is defined by reference to UID COPY, the server has to send COPYUID for UID MOVE, exactly as it does for UID COPY.

4.3. RFC 5162, QRESYNC

The QRESYNC extension defined by [[RFC5162](#)] directs the server to send VANISHED rather than EXPUNGE for the UID EXPUNGE command. Since UID MOVE is defined by by reference to UID EXPUNGE, UID MOVE is also affected.

5. Formal Syntax

The following syntax specification uses the Augmented Backus-Naur Form (ABNF) notation as specified in [[RFC5234](#)]. [[RFC3501](#)] defines the non-terminals "capability", "command", "set" and "mailbox".

Except as noted otherwise, 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.

```
capability    =/ "MOVE"
```

```
command-select =/ "UID MOVE" SP set SP mailbox
```

6. Security Considerations

This document is believed to add no security problems. It does however relieve a problem with the base specification, since client authors have to devise and implement complicated algorithms to handle partial failures of the STORE/COPY/EXPUNGE trio. Problems with these algorithms can lead to mail loss.

7. IANA Considerations

The IANA is requested to add MOVE to the "IMAP 4 Capabilities" registry, <http://www.iana.org/assignments/imap4-capabilities>.

8. Acknowledgements

An extension like this has been proposed many times, by many people. This document is based on several of those, most recently that by Witold Krecicki. Witold, Alexey Melnikov, Bron Gondwana, Adrien W. de Croy, Barry Leiba and others provided valuable comments.

9. Normative References

- [RFC2119] Bradner, "Key words for use in RFCs to Indicate Requirement Levels", [RFC 2119](#), Harvard University, March 1997.
- [RFC3501] Crispin, "Internet Message Access Protocol - Version 4rev1", [RFC 3501](#), University of Washington, June 2003.
- [RFC4315] Crispin, "Internet Message Access Protocol (IMAP) - UIDPLUS extension", [RFC 4315](#), University of Washington, December 2005.
- [RFC5234] Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", [RFC 5234](#), January 2008.

10. Informative References

- [RFC2087] Myers, "IMAP4 QUOTA extension", [RFC 2087](#), January 1997.
- [RFC4315] Melnikov, "IMAP4 Access Control List (ACL) Extension", [RFC 4314](#), December 2005.
- [RFC5162] Melnikov, "IMAP4 Extensions for Quick Mailbox Resynchronization", [RFC 5162](#), Isode Ltd, March 2008.

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(RFC Editor: Please delete everything after this point)

RFC Editor: If this document contains no code components when you receive it, then please remove the sentence which starts with "code components". Thank you.

Open Issues

Delete the \deleted rule?

I'd like to have other text to replace the sentence about needed and neat.

Add MSN-based move now? It seems we have about ten servers who can do MSN move easily, one perhaps with some difficulty, and one client which wants it.

Add 3501-like requirements/results paragraphs.

Changes since -00

- Fixed two bad nouns. Mailboxes aren't messages.
- Adrien's server can easily do UID MOVE but not so easily MSN-based moves.

Changes since -01

- Changed to Informative, on Barry's suggestion. Or did I ask him? Whatever.
- Removed the 'reasons to avoid', it was doubleplusungood.

Changes since [draft-gulbrandsen-imap-move-02](#)

- Various wording changes from Barry's review.
- Open issue: Delete the \deleted rule?
- Back to PS, informative didn't fly in the IESG
- Turned into a WG document in order to get write access to the IMAP4 capabilities registry

- Mention VANISHED in 5162
- Added bad boilerplate to please idnits. This document contains no code.