

The IMAP Move Extension
[draft-ietf-imapmove-command-01.txt](#)

Status of this Memo

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This Internet-Draft expires in January 2013.

Abstract

The MOVE extension provides commands to move 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.

3. MOVE and UID MOVE

The UID MOVE command takes two arguments: a set of UIDs and a named mailbox. The MOVE command takes a set of MSNs and a named mailbox. Both commands move each message included in the set to the named mailbox.

The UID MOVE command has the same effect as a sequence of UID COPY, UID STORE +FLAGS.SILENT \DELETED and UID EXPUNGE, with the added requirement that 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).

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: * OK [COPYUID 432432 42:69 1202:1229]
S: * 22 EXPUNGE
S: (more expunges)
S: a OK 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.

Note that moving messages to the current mailbox is well-defined, so that MOVE is defined for all the cases where the COPY/STORE/EXPUNGE sequence is.

The MOVE command performs the same actions UID MOVE. Notably, the server may send EXPUNGE (or VANISHED) messages before the tagged response, so the client cannot safely send more commands with MSN arguments while the server is processing MOVE.

[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.

Servers authors who implement UIDPLUS are advised to send the COPYUID response code in an untagged OK before sending EXPUNGE for moved messages. (Sending it in the tagged OK, as described in the UIDPLUS specification, means that clients first receive an EXPUNGE for a message and afterwards COPYUID for the same message. It can be unnecessarily difficult to process that usefully.)

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 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

Add 3501-like requirements/results paragraphs.

Add text about the desirability of command atomicity.

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.

Changes since -00

- Added MSN-based move. The consensus seems mildly in favour. I think. We'll see once this is posted.
- Advise sending COPYUID earlier, to help clients. Requiring out of order processing is unnecessarily nasty.
- Note that moving to the source inbox has to work. I think it does have to work, but this is a draft, it says so on every page.