

The IMAP Move Extension
[draft-gulbrandsen-imap-move-01.txt](#)

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This Internet-Draft expires in September 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 atomically 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.

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 MSN-based move would be more difficult than UID MOVE.

If MSN-based move is found to be needed (rather than 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 indicated by UID set to the named mailbox.

The UID MOVE command is the same as a sequence of UID COPY, UID STORE +FLAGS \DELETED and UID EXPUNGE, with two added requirements:

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.

An example:

```
C: a UID MOVE 42:69 forble
@S: a OK [COPYUID 432432 1202:1229] Done
```

4. Interaction with other extensions

This section is informational. There are no requirements in this section; it only points out how other documents interact with this.

4.1. [RFC 2087](#), QUOTA

The QUOTA extension 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 2086](#), 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 2359](#), UIDPLUS

Since UID MOVE is defined by reference to UID COPY, the server may send COPYUID for UID MOVE, just as for UID COPY.

5. Reasons to avoid this extension

Servers may want to avoid implementing this because atomicity requires holding one or more locks on several mailboxes at the same time. Maildir-based servers, in particular, might have problems locking sufficiently if the source and target mailboxes are on different file systems.

Clients may want to avoid implementing this if they already have a complex fallback/restart algorithm, and want to have it used, so that any problems are easily visible.

Fixme: Either unfuck this entire section or drop it. I would prefer to drop it.

6. Formal Syntax

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

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    =/ "UID MOVE" SP set SP mailbox
```

7. 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.

8. IANA Considerations

The IANA is requested to add MOVE to the list of IMAP extensions, <http://www.iana.org/assignments/imap4-capabilities>.

9. 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 and others provided valuable comments.

10. 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.

[RFC5234] Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", [RFC 5234](#), January 2008.

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(RFC Editor: Please delete everything after this point)

Open Issues

Only those noted as "fixme" in the text.

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