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Abstract

This is a study of IMAP 4rev2 and a specification describing how to make a gateway that accepts Phoenix clients and connects to IMAP servers.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

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1. Introduction

IMAP may be the most popular email fetching protocol in the world. more .... todo

1.1. Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

2. IMAP Commands

2.1. IMAP and Phoenix Commands

This table summarizes the IMAP and the Phoenix equivalent command

NOTE: Phoenix is a binary protocol, so the symbolic names are shown, not their numerical value.

NOTE: In Phoenix a mailbox is called a folder.

NOTE: In Phoenix a message is called a file.

IMAP	Phoenix	Breif Comment
CAPABILITY	CAPABILITY	Phoenix has CAPABILITY, done a little differently. With a Phoenix server, as soon as a client connection is made, a pre-authentication capability command is sent to the client. With a Phoenix client, as soon as the connection is established, a pre-authentication capability command is sent to the server. The client capabilities is more of a registration and IMAP ENABLE process, than a capability list. This specification is about an IMAP/POP3 like capability (registration) called EMAIL.
NOOP		Notifications from the Phoenix server are automatic once the Phoenix server registers for them. No equivalent needed. When in EMAIL mode (this specification), new message notifications are automatic.
IDLE		Notifications from the Phoenix server are automatic once the Phoenix server registers for them. No equivalent needed. When in EMAIL mode (this specification), new message notifications are automatic.
LOGOUT	BYE	When sent from a Phoenix client, the Phoenix server logs out the user and terminates the connection. The Phoenix client is responsible for ensuring that command replies that are important have been received before sending a BYE command. When sent from the Phoenix server, it means the server is shutting down and no further data will follow. The server then terminates the connection.
LOGIN	AUTH	The IMAP LOGIN command has exact equivalents in Phoenix.
STARTTLS		Phoenix is only transmitted over a secure connection, so it has no need for a STARTTLS command.

IMAP	Phoenix	Breif Comment
LIST	FOLDER_LIST	The FOLDER_LIST can list the entire hierarchy, or the details of a folder, or message, or all. The FOLDER_LIST command with no parameters returns the hierarchy of folders from the root. Plus it provides some information about each folder. The FOLDER_LIST command can also add a parameter that returns index information about each message, including, the status and size, and other information. This can be done for the entire tree, or specific folders. This associated folder and message data is called meta information in Phoenix. In addition, the FOLDER_LIST can add a parameter that is a set of header names that it wants back for each message (perhaps Subject, From, ...) So the client can get back the entire hierarchy of folders, and sufficient message information to display its initial information to a user. This also includes ID's that can be used to fetch any random message or part of a message, or its headers. All in one command, and one reply.
CREATE	FOLDER_CREATE	Functionally the same.
DELETE	FOLDER_DELETE	Functionally the same.
RENAME	FOLDER_RENAME	Functionally the same.
SUBSCRIBE	SUBSCRIBE	Phoenix supports a subscribe, but it is not used with EMAIL. With Phoenix email notifications are automatic.
EXAMINE		With Phoenix the FOLDER_LIST command provides what is needed to later use the folder.
SELECT		With Phoenix, there is no need for an open like command. You perform operations on folders and files (messages). Messages are marked are read or deleted by FILE_GET and FILE_DELETE. The client can change the status of a file by sending a META command, to change the meta information about a file or folder.

IMAP	Phoenix	Breif Comment
UNSELECT		With Phoenix, there is no need for an open like command. So no unselect (close) command.
FETCH	FILE_GET	With FILE_GET, you can one or more messages. And one or more parts of a message. The FOLDER_LIST command can optionally provide handles that can be used to fetch parts of messages.
STORE	META	The META command can get and alter the meta information about a file or folder.
COPY	FILE_COPY	They perform the same operation.
APPEND	FILE_CREATE	They perform the same operation.
SEARCH	SEARCH	They perform the same operation. Different semantics.
UID FETCH	FILE_GET	The Phoenix FILE_GET can get a message by ID (UID) or message sequence numbers. The default is by ID (UID).
UID STORE	META	The Phoenix META can change the status of messages by ID (UID) or message sequence numbers. The default is by ID (UID).
UID COPY	FILE_COPY	The Phoenix FILE_COPY can copy a message by ID (UID) or message sequence numbers. The default is by ID (UID).
UID APPEND	FILE_CREATE	The Phoenix FILE_CREATE can create a message by ID (UID) or message sequence numbers. The default is by ID (UID).
UID SEARCH	SEARCH	The Phoenix SEARCH can search messages by ID (UID) or message sequence numbers. The default is by ID (UID).
EXPUNGE	EXPUNGE	Functionally equivelant.
CLOSE		In Phoenix, you perform operations on a folder or file. It is never really opened or closed.
ENABLE		Done in Phoenix with the CAPABILTY command.

IMAP	Phoenix	Breif Comment
UNSUBSCRIBE		Phoenxi has an UNSUBSCRIBE command, but it is not used with EMAIL.
NAMESPACE		Phoenix uses the Rigistration/capability to enable or disable other protocols. Phoenix uses ACL (Access Control Lists) to determine if a folder or file is shared, public, or private.
STATUS	META	META does the same a STATUS, and more.

Table 1

3. IANA Considerations

This memo includes no request to IANA. [CHECK]

4. Security Considerations

This document should not affect the security of the Internet. [CHECK]

5. References

5.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/info/rfc2119>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <https://www.rfc-editor.org/info/rfc8174>.

5.2. Informative References

[exampleRefMin] Surname [REPLACE], Initials [REPLACE]., "Title [REPLACE]", 2006.

[exampleRefOrg] Organization [REPLACE], "Title [REPLACE]", 2025, <http://www.example.com/>.

Appendix A. Appendix 1 [REPLACE/DELETE]

This becomes an Appendix [REPLACE]

Acknowledgments

Contributors

Thanks to all of the contributors. [REPLACE]

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