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IMAP4 IDLE command
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Abstract

The Internet Message Access Protocol requires a client to poll the server for changes to the selected mailbox (new mail, deletions). It's often more desirable to have the server transmit updates to the client in real time. This allows a user to see new mail immediately. It also helps some real-time applications based on IMAP, which might otherwise need to poll extremely often (such as every few seconds). (While the spec actually does allow a server to push EXISTS responses asynchronously, a client can't expect this behaviour and must poll.)

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This document specifies the syntax of an IDLE command, which will allow a client to tell the server that it's ready to accept such real-time updates.

Note

This document is intended to be an update to the existing "IDLE" extension to the IMAP protocol, available from the RFC repository as <ftp://ftp.isi.edu/in-notes/rfc2177.txt>.

This document and other IMAP extensions are being discussed on the imapext mailing list at <mailto:ietf-imapext@imc.org>. Subscription requests can be sent to <mailto:ietf-imapext-request@imc.org?body=subscribe> (send an email message with the word "subscribe" in the body). More information on the mailing list along with a WWW archive of back messages is available at <http://www.imc.org/ietf-imapext/>.

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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 [[Keywds](#)].

[2.](#) Specification

IDLE Command

Arguments: none

Responses: continuation data will be requested; the client sends the continuation data "DONE" to end the command

Result: OK - IDLE completed after client sent "DONE"

NO - failure: the server will not allow the IDLE command at this time

BAD - command unknown or arguments invalid

The IDLE command may be used with any IMAP4 server implementation that returns "IDLE" as one of the supported capabilities to the CAPABILITY command. If the server does not advertise the IDLE capability, the client MUST NOT use the IDLE command and must poll for mailbox updates. In particular, the client MUST continue to be able to accept unsolicited untagged responses to ANY command (not

just to the IDLE command), as specified in the base IMAP specification.

The IDLE command is sent from the client to the server when the client is ready to accept unsolicited messages from the server. The server requests a response to the IDLE command using the continuation ("+") response. The IDLE command remains active until the client responds to the continuation, and as long as an IDLE command is active, the server is now free to send ANY untagged responses. IMAP servers will frequently send unsolicited responses such as these:

- o EXISTS, to inform the client about a change in the number of messages in the currently-selected mailbox.
- o EXPUNGE, to inform the client that a message has been expunged.
- o FETCH, to inform the client about a change in the status of a message (usually to convey flag changes).
- o RECENT, to inform the client that the number of messages with the \Recent flag has changed. This response often accompanies EXISTS.

But note again that what the server may send is not limited to that list -- ANY untagged response may appear.

The IDLE command is terminated by the receipt of a "DONE"

continuation from the client; such response satisfies the server's continuation request. At that point, the server MAY send any remaining queued untagged responses and then MUST immediately send the tagged response "OK" to the IDLE command and prepare to process other commands. As in the base specification, the processing of any new command may cause the sending of unsolicited untagged responses, subject to the ambiguity limitations. The client MUST NOT send a command while the server is waiting for the DONE, since the server will not be able to distinguish a command from a continuation. If the server receives anything other than "DONE" from the client, this is a protocol violation and the server SHOULD terminate the IDLE command with a tagged response of "BAD".

The server MAY consider a client inactive if it has an IDLE command running, and if such a server has an inactivity timeout it MAY log

the client off implicitly at the end of its timeout period. Because of that, clients using IDLE are advised to terminate the IDLE and re-issue it at least every 29 minutes to avoid being logged off. This still allows a client to receive immediate mailbox updates even though it need only "poll" at half hour intervals.

[3.](#) Example

The following is an example of an IMAP session using IDLE.

```
C: A001 SELECT INBOX
S: * FLAGS (Deleted Seen)
S: * 3 EXISTS
S: * 0 RECENT
```

S: * OK [UIDVALIDITY 1]
S: A001 OK SELECT completed
C: A002 IDLE
S: + idling
...time passes; another client sets a flag on message 2...
S: * 2 FETCH (FLAGS (\Seen \Answered \Flagged))
...time passes; new mail arrives...
S: * 4 EXISTS
C: DONE
S: A002 OK IDLE terminated
...another client expunges message 2 now...
C: A003 FETCH 4 ALL
S: * 4 FETCH (...)
S: A003 OK FETCH completed
C: A004 IDLE
S: * 2 EXPUNGE
S: * 3 EXISTS
S: + idling
...time passes; another client expunges message 3...
S: * 3 EXPUNGE
S: * 2 EXISTS
...time passes; new mail arrives...
S: * 3 EXISTS
C: DONE
S: A004 OK IDLE terminated
C: A005 FETCH 3 ALL
S: * 3 FETCH (...)
S: A005 OK FETCH completed
C: A006 IDLE

The following syntax specification uses the augmented Backus-Naur Form (BNF) notation as specified in [[ABNF](#)]. Non-terminals referenced but not defined below are as defined by [[IMAP4](#)].

```
command_auth  =/  idle  
                ; Valid only in Authenticated or Selected state
```

```
idle          =   "IDLE" CRLF "DONE"
```

5. Changes since [RFC 2177](#)

1. Updated references to current versions.
2. Updated ABNF to current syntax.
3. Added example of unsolicited FETCH response.
4. Clarified that ANY response may come from the server during IDLE, and gave examples of the most common responses.
5. Clarified that anything other than "DONE" is "BAD".

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6. Security Considerations

There are no known security issues with this extension.

7. Normative References

- [ABNF] Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", [RFC 4234](#), October 2005.
- [IMAP4] Crispin, M., "Internet Message Access Protocol - Version 4rev1", [RFC 3501](#), March 2003.
- [Keywds] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [RFC 2119](#), March 1997.

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