

# The IMAP Notify Extension

## The IMAPire Strikes Back

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### Why.

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- IDLE covers only one mailbox
- IDLE is a command for not being a command, which can be rather difficult to fit into client
- Using IDLE requires throwing mode switches all the time
- IDLE is binary and inflexible: client cannot control what information it receives, it's nothing or a certain something.

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### NOTIFY syntax

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- "Notify me of that and that, and that, from now on":  
NOTIFY (INBOX (NewMessage (uid modseq) all ExpungeMessage))
- There's a list of event types
- Notifications use regular IMAP responses
- No mode switch, only unsolicited responses

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### How to use NOTIFY

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- Connect to server, log in

- Tell it what responses you want
- Establish shared state (SELECT, STATUS)
- Go on using regular imap commands
- Listen for unsolicited updates all the time

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## Event types and examples

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- Message added to mailbox: Client can be notified of a subset, and chooses how.
- Message changed in mailbox: Not there?
- Mailbox created
- Other event types from msgevent draft

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## Do we need 3842/SIP?

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- 3842 extends SIP much like NOTIFY extends IMAP
- SIP clients maintain some sort of connection to a server whenever it's interested in knowing about incoming calls, voicemail, etc.
- all LEMONADE clients speak IMAP, 99.7% speak SIP too (said Eric/Glenn)

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## 3842 example

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```
C: a1 notify (inbox (newmessage (uid
body.peek[header.fields (subject)])))
S: a OK blah
C: a3 status inbox (...) (and/or search)
S: ...appropriate responses...
Time passes
S: * 777 FETCH (UID 8888 BODY
```

```
[HEADER.FIELDS (Subject)] {48}
S: Subject: Pickpockets even in the WG
meetings!
S:
S: )
```

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## 3842/NOTIFY differences

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- IMAP NOTIFY seems better on bandwidth
- SIP is up all the time, how about IMAP on Lemonade devices?
- IMAP NOTIFY keeps mail content within a single security domain
- One is harder to implement than the other
- ... Really much the same.

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## Planned changes

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- Dropping the interaction with IDLE
- Lots of examples in the draft
- Make sure that re-NOTIFY doesn't notify doubly
- Whatever comes up while implementing
- Security considerations about 'notify \* \*' DoS

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## Open issues

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- Discovering shared state at outset may need lots of STATUS commands
- Some interaction with metadata/imap-sieve there?
- Concern about clients asking for high-traffic sets of events, still no real resolution to that

[any material that should appear in print but not on the slide]