Better email – fully open source

Neil Jenkins & Bron Gondwana
Email is Dead
4.1 billion email accounts

2.5 billion users

Source: Radicatti Group (2013)
Open – no vendor lock-in
The reports of email’s death have been greatly exaggerated.
Cyrus IMAPd
Cyrus 2.2+CVS (2005)

• Buggy
• monitorcyrus to watch logs
• Skiplist and BDB errors
• Local patches
Cyrus 2.3.x (2006-2009)

- Replication: checkreplication
- CONDSTORE
- Kernel bug
- Fixed skiplist (hammer_cyrusdb)
- Checksums
Cyrus 2.4 (2010-2014)

- Split metadata – cache on slow disk
- Efficient replication, efficient backups
- Better disk IO – per user \Seen
- EventSource – the basis for push
- Correctness: ImapTest from Dovecot
FastMail-specific dev

- Development on 2.4.x for about a year, while official branch languished

- Per-message annotations

- Search (cross folder, stemming, fast)

- Conversations (cross folder threading)

- Test framework
Cyrus 2.5 (2015)

- Some features from FastMail branch
- CalDAV and CardDAV preview
- Tons of accumulated fixes
- Much better test framework
- New development environment
Cyrus 3.0 beta (Now)

- Everything from FastMail
- CalDAV and CardDAV improved
- “Archive partition”
- Demo object storage integration
- Lots of flux
The Future
JMAP
A better API for email
JMAP is...

- JSON over HTTPS
- Mobile battery/network friendly
- Designed for fast, full-featured clients
Network friendly

- Out of band notifications (push)
- Efficient updates, with flood protection
- Batch operations
Support friendly

• Autodiscovery in the spec
• IMAP + SMTP = partial failures
• Firewall friendly – it’s just HTTP
Clear upgrade path

• Compatible with the IMAP data model

• We’ve built an (open source) JMAP proxy to work with existing IMAP/CardDAV/CalDAV servers

• Building native support into Cyrus
JMAP Proxy

- Full implementation of the JMAP spec, sits in front of IMAP/CardDAV/CalDAV servers
- Written in Perl, MIT licensed
- Source on GitHub + hosted version for testing
JMAP JavaScript Library

- Full implementation of the JMAP model: mail, calendars and contacts to power webmail

- Complete disconnect between making changes and syncing back to server – UI can update instantly

- Full, multi-level undo and redo
Demo Time
(and a quick prayer to the demo gods)
Read it, try it:
http://jmap.io

Run it, hack it:
https://github.com/jmapioio/