JMAP upgrade for IMAP

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The problem: millions of existing IMAP clients

- Mixed mode: new features via JMAP
  - Keep existing mail sync code
  - Add ObjectID support (RFC8474)
  - Make JMAP calls for new features (e.g. Snooze, send rather than Submission)
- Use JMAP Push as an edge trigger
  - Connect JMAP for pushes
  - Use pushes rather than IDLE to trigger changes
- Full upgrade
  - Take existing IMAP connection and change to JMAP connection without requiring re-entry of credentials
Authentication upgrade

• Possibilities for JMAP connection:
  1. Have the IMAP connection return a per-user URI with enough entropy that it’s secure
  2. Require OAuth for IMAP and have JMAP URI use the same OAuth token
  3. Have the IMAP connection return a URI and a Token to the client (possibly the same token as in #2, but round tripped)

• Seamless vs consent screen:
  • This may add a new “connected device” in the UI at providers. Do we need to throw up a browser with consent / scope selection?
Example Oauth Upgrade

CAPABILITIES JMAPAUTH

C:
TAG GETOAUTH
TAG NO Oauth not supported with these credentials

TAG GETOAUTH
* OAUTH ("user@example.com" "v1-1668081739-6e33c6e6-aa47-4cb8-81de-ab3621e487ff")
TAG OK OAuth token generated
Example JMAPAUTH

CAPABILITIES JMAPAUTH

C:
TAG JMAPAUTH GET
TAG NO JMAPAuth only available with Oauth logins

TAG JMAPAUTH GET
* JMAPAUTH "https://jmap.example.com/s/4c343293-3b31-4a19-a516-1dad6d532f57/"
TAG OK

TAG JMAPAUTH GET
* JMAPAUTH ("https://jmap.example.com/s/4c343293-3b31-4a19-a516-1dad6d532f57/" "v1-1668081739-6e33c6e6-aa47-4cb8-81de-ab3621e487ff")

TAG JMAPAUTH GET
* JMAPAUTH "https://jmap.example.com/jmap/"
TAG OK Use same bearer token to access
Next Steps

• Am I on the right track here?

• Suggested pathways:
  • Should we do a separate “get OAuth”
  • In-band in IMAP?
  • Define a different endpoint? If so, how is it discovered? IMAP command to discover endpoint that gets authed separately somehow?

• Call for adoption (probably ask Jiankang since I’m a chair)

• Anybody else want to author/co-author?