



OpenXPort JMAP: a PHP library for Data Portability

Joris Baum, Hans-Jörg Happel (audriga)
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DAPSI

The Problem: Lack of unified APIs for „PIM“ data (mail, contacts, calendars files, ...)



- Existing standards are oldies (but goldies)
 - IMAP, (Manage)Sieve, CardDAV/CalDAV, WebDAV
- Main issues
 - Heterogeneous → client configuration difficulties
 - Not optimized for mobile (e.g., batching, push)
 - Difficult/impossible to use for browser/backend communication
 - Hard to extend
 - Lack of standards for various data (tasks, notes, settings)

The Solution:

JMAP (JSON Meta Application Protocol)



- **JMAP** provides **standardized data formats** and REST APIs for email, contacts, calendars, tasks and **more** (RFC 8621)
- Built on the experiences with **IMAP/CardDAV/CalDAV**; uses novel JSON data formats **JSCalendar/JSContact** (successors to iCalendar/vCard)
- Aims to improve **performance, interoperability** and **data portability** → provides **a unified API** for mail and groupware data for client and server implementations
- Adopted by: Cryrus, FastMail, Apache James, HCL Notes, ...
- <https://jmap.io>

Our Open Source work: Generic libraries to easily use JMAP



jmap-java (Client-side; Java)

- Library underneath Ltt.rs client by Daniel Gultsch
- Fork:
<https://github.com/audriga/jmap-java>
 - Added support for Contact, Calendars, Tasks, Files and certain Settings

jmap-openxport (Server-side; PHP)

- Easily add JMAP API to PHP-based systems
- Supports: Files, Calendars, Contacts, Tasks, Sieve, Preferences
- Can be used for easily lifting file-based data (Sieve, vCard, ...)
- Contains **vCard/JSContact** + **iCalendar/JSCalendar** conversion
- packagist.org/packages/audriga/

Our Open Source work: JMAP API extension for several Webmailers



- Horde (read-only)
 - <https://github.com/audriga/horde-jmap>
- Nextcloud
 - <https://github.com/audriga/nextcloud-jmap>
- Roundcube
 - <https://github.com/audriga/roundcube-jmap>
- SquirrelMail (ready-only)
 - <https://github.com/audriga/squirrelmail-jmap>
- Useful for:
 - Portability (Import/export) → large-scale migration project-proven
 - Interoperability (e.g, client software)



Current / future work



- jmap-dart-client / jmap-cli
- JMAP Mail wrapper for Maildir/Mbox

- IETF specifications
 - JMAP for Tasks
 - (JMAP for Notes/Files)
 - JMAP archive format (open equivalent to Outlook PST files)
 - JMAP for Migration and Data Portability
 - <https://datatracker.ietf.org/wg/jmap/documents/>

Feedback?
Questions?

♥ Email ♥