

State of the Open Platform Standards Support in Ex Libris Products

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Some background

- Interoperability SIWG
Open Standards
Position Paper – 2017
- Recommended Ex
Libris adopt open
standards for
interoperability
- Prompted a review of
Ex Libris support for
and involvement in
open standards
initiatives

IGeLU/ELUNA Interoperability SIWG - Open Standards

Position paper 2017

One of the five current (2016) Key Goals of the IGeLU/ELUNA Interoperability SIWG (<http://igelu.org/special-interests/interoperability/key-goals>) is about open standards:

Establish “open platform using open standards”, including open data standards, as an integral design principle

In this position paper the Interoperability SIWG clarifies what is meant with the concepts ‘open platform’, ‘open standards’ and ‘open data standards’ and how they relate to interoperability in the Ex Libris products and tools landscape.

Interoperability

On the Interoperability SIWG start page (<http://igelu.org/special-interests/interoperability>) interoperability is described as follows:

AGENDA

- **Standards vs. REST APIs**
- **Currently Supported Standards**
- **Ex Libris Involvement in Standards Bodies**
- **Standards-based REST APIs**



Standards vs REST APIs



Standards allow for turnkey integration between systems without custom development.

Standards promote interoperability.

Wherever industry standards exist Ex Libris prefers to adopt them rather than reinventing the wheel.

Standards vs REST APIs



Ex Libris is committed to providing programmatic access to data and workflows in its products

Sometimes standards either don't exist or are too vague

REST APIs might overlap with functionality exposed via standards to ensure full coverage

The ABCs of Integrations

CAS

CMS

EDI

ERP

LDAP

JSON-LD

NCIP

OAI-PMH

OAuth

RDA/RDF

RFID

SAML2

SIP2

SIS

SRU

SWORD

z39.50



Currently Supported Interoperability Standards

Currently Supported Interoperability Standards

- The following is a (mostly) complete list of interoperability standards supported by Ex Libris products
- In creating the list, we selected standards which have interoperability protocol defined by a standards body (e.g. NISO, NIST, ISO) or by an industry-wide working group
- Not included are:
 - Metadata formats such as MARC or Dublin Core
 - General technologies such as RFID
 - Authentication protocols such as SAML and LDAP

Alma

Standard	Description
SIP2	Version 2
EDI	EDIFACT standard
OAI-PMH	Version 2.0
SUSHI/COUNTER	Reports COUNTER 5 & SUSHI Lite- Road Map
NCIP (NISO Z39.83)	NCIP 2.0
z39.50 (ISO 23950)	Server
KBART	Export Import

Standard	Description
ONIX	Import
ISO ILL (10160/10161)	Version 2
OpenURL (NISO Z39.88-2004)	Version 1.0 Alma Link Resolver Services Page (for Open Source Discovery)
SWORD	Version 2.0
SRU	Version 1.2
IIIF	Presentation, Image APIs- Version 2.1

Rosetta

Standard	Description
SRU	Version 1.2
OAI-PMH	Version 2.0
BagIt	Version 0.97
IIIF	Presentation, Image APIs- Version 2.1

Primo

Standard	Description
OAI-PMH	Harvest
OpenURL	Front end for Alma

Leganto

Standard	Description
Learning Tools Interoperability (LTI)	Version 2.0



Standards Bodies

Ex Libris Involvement in Standards Bodies

- Ex Libris staff volunteer to serve on a number of standards bodies and working groups
- These include international standards bodies (e.g. ISO, NISO) and industry-wide working groups
- Ex Libris is continually evaluating its involvement in these groups and is open to suggestions from the community via the Interoperability SIWG

Ex Libris is currently participating in these efforts:

- [ISO-ILL \(ISO 18626\)](#)
- BIBFRAME- [LD4P](#)
- British Library Document Supply Service ([BLDSS](#))
- [Demand-Driven Acquisition \(DDA\) of Monographs](#)
- [E-Book Bibliographic Metadata Requirements in the Sale, Publication, Discovery, and Preservation Supply Chain \(E-Book Metadata\)](#)
- [Flexible API Standard for E-content NISO \(FASTEN\)](#)
- [KBART \(Knowledge Base and Related Tools\)](#) and [KBART Automation](#)

Ex Libris is currently participating in these efforts:

- [NCIP \(NISO Circulation Interchange Protocol\) Standing Committee](#)
- [Open Discovery Initiative Standing Committee](#)
- [PESC \(Protocol for Exchanging Serial Content\)](#)
- [PIE-J \(Presentation & Identification of E-Journals\)](#)
- [ResourceSync](#)
- [Standard Interchange Protocol \(SIP\)](#)
- [SUSHI Standing Committee](#) and [SUSHI Servers](#) and [SUSHI Lite](#)
- [Tracking Link Origins](#)
- [Transfer](#)



Standards-based REST APIs

REST API Features

Modern REST Principles

- HTTP Verbs
- Status Codes

JSON/XML Support

- WADLs & XSDs
- Content-Type

Authentication

- API Key
- Self-service via Dashboard

Authorization

- Limit access by API area
- Specify read/write and environment access


<https://goo.gl/orz1eB>

That's great- but how does it help me?

- Use of web standards means easier integration with modern development environments:
 - Headers- accept, authorization
 - JSON deserialization
 - HTTP error code exception handling
- Spend more time on business logic and less on plumbing

Example: Refit

- [Refit: The automatic type-safe REST library](#)
- Configuration by convention
- Library handles REST plumbing
 - HTTP Request
 - Headers / Authorization
 - Response codes
 - Serialization/Deserialization

An aerial photograph of a city square, likely in St. Petersburg, Russia. The square is dominated by a large, ornate building with a green roof and a central fountain. The surrounding area is filled with other buildings and streets. The sky is blue with scattered white clouds.

DEMO: Alma APIs and the Refit Framework

igelu
International
Group of Ex Libris Users

ExLibris
a ProQuest Company

Ex Libris Standards Dashboard



Coming
Soon!

- Up-to-date lists of:
 - Standards supported by Ex Libris products
 - Involvement of Ex Libris staff in standards bodies

<http://developers.exlibrisgroup.com/standards>

THANK YOU

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