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
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**Leganto**
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
DEMO:
Alma APIs and the Refit Framework
Ex Libris Standards Dashboard

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

http://developers.exlibrisgroup.com/standards

Coming Soon!
THANK YOU
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