Islandora 8 and Beyond

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Mark Jordan and Marcus Barnes
iCampEU, June 2019

Topics

- Functional overview of Islandora 8 version 1.0.0
- Roadmap and support timeline
- Early implementations and pilots
- Closer look at Islandora 8
- Demos
- Discussion

Islandora 7.x

Islandora 8

Functional Overview of Islandora 8

Supported Content Types

Images

Audio

Video

PDFs

Collections

Binary Files (a.k.a “anything else”)

Content Types to Come Soon

Books

Newspapers

Serials

“Compound” Objects

Documentation

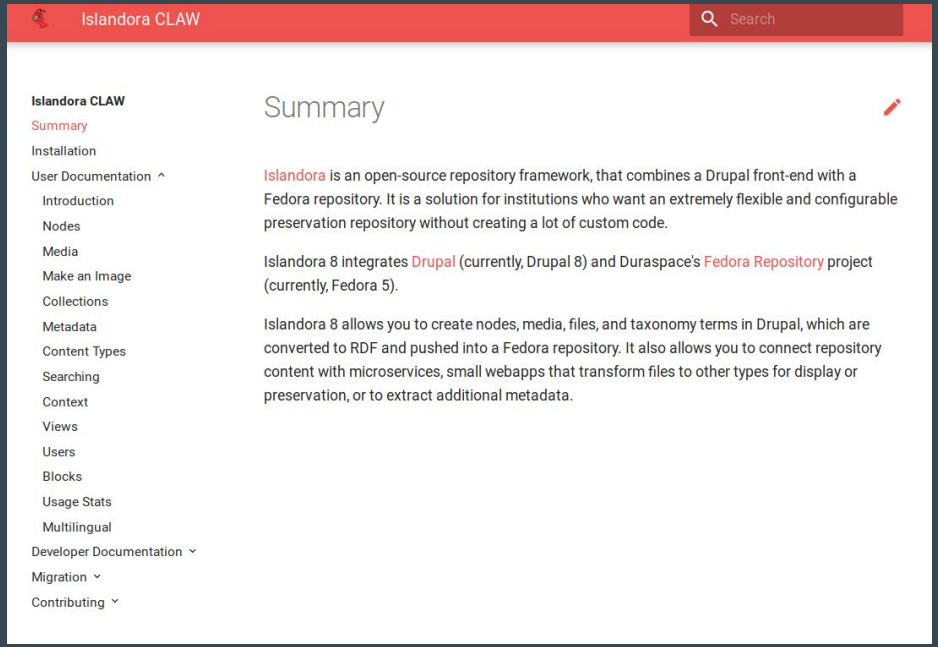
Islandora 8 Documentation Sprint: Complete!

Submitted by manez on Fri, 03/22/2019 - 09:27

The latest Islandora 8 sprint focussed on a key aspect of our first release: documentation. *It has been a stunning success*. From March 4th to 15th, a 22-person team of volunteers worked together to write, review, and publish pages and pages of brand new documentation covering topics for developers, system administrators, and front-end site builders. We're still working on getting everything finished up and put into a new Table of Contents to make the documentation easier to explore, but you can explore samples of new completed work such as:

- What is an Islandora 8 Object?
- Media in islandora 8
- Context in Islandora 8
- Islandora 8 via REST
- Flysystem

What's next for Islandora 8? We're still a sprint away from our first release. Stay tuned for a second call for volunteers to participate in an auditing and testing sprint, running April 8th to 19th, where the new

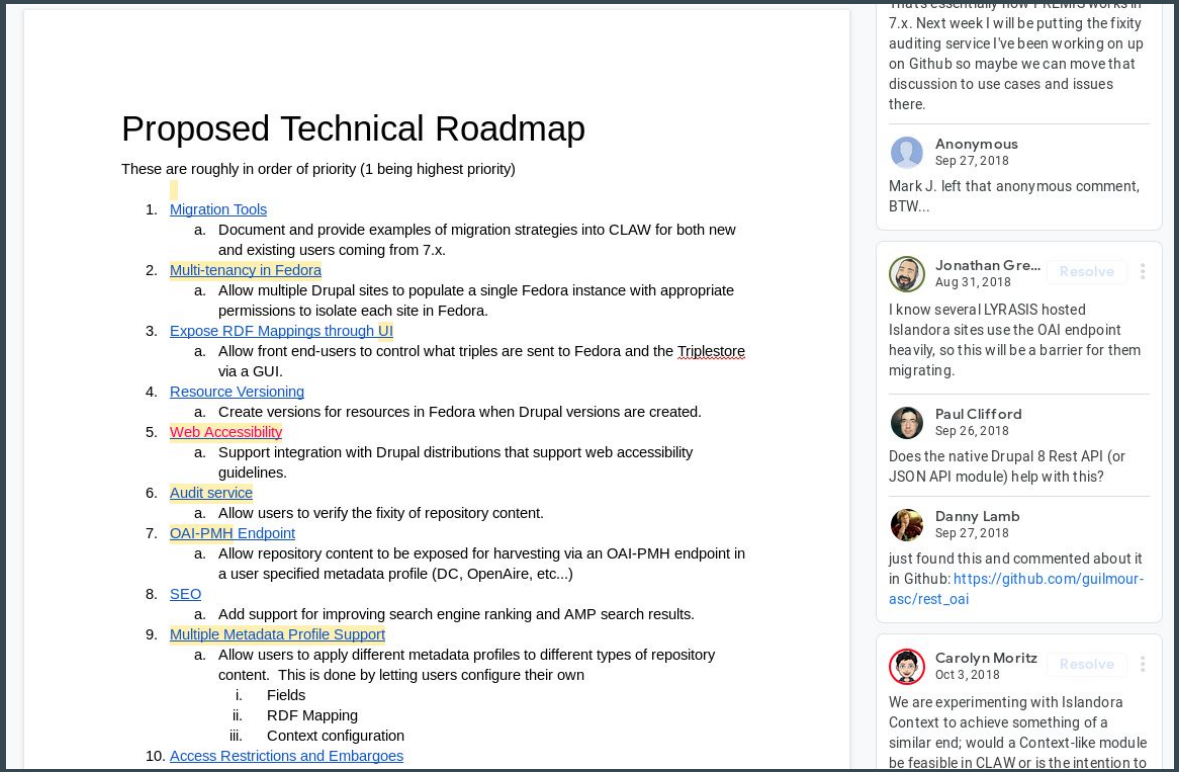


Roadmap and Support Timeline

Roadmap

Managed by the Technical Advisory Group (TAG) but driven by the community

Influence the roadmap by completing the survey: https://t.co/IRUFwuPGA6



Proposed Technical Roadmap

These are roughly in order of priority (1 being highest priority)

1. Migration Tools
   a. Document and provide examples of migration strategies into CLAW for both new and existing users coming from 7.x.
2. Multi-tenancy in Fedora
   a. Allow multiple Drupal sites to populate a single Fedora instance with appropriate permissions to isolate each site in Fedora.
3. Expose RDF Mappings through UI
   a. Allow front end-users to control what triples are sent to Fedora and the Triplestore via a GUI.
4. Resource Versioning
   a. Create versions for resources in Fedora when Drupal versions are created.
5. Web Accessibility
   a. Support integration with Drupal distributions that support web accessibility guidelines.
6. Audit service
   a. Allow users to verify the fixity of repository content.
7. OAI-PMH Endpoint
   a. Allow repository content to be exposed for harvesting via an OAI-PMH endpoint in a user specified metadata profile (DC, OpenAire, etc...)
8. SEO
   a. Add support for improving search engine ranking and AMP search results.
9. Multiple Metadata Profile Support
   a. Allow users to apply different metadata profiles to different types of repository content. This is done by letting users configure their own
      i. Fields
      ii. RDF Mapping
      iii. Context configuration
10. Access Restrictions and Embargoes

7.x. Next week I will be putting the fixity auditing service I've been working on up on Github so maybe we can move that discussion to use cases and issues there.

Anonymous
Sep 27, 2018

Mark J. left that anonymous comment, BTW...

Jonathan Gre...
Aug 31, 2018
Resolve

I know several LYRASIS hosted Islandora sites use the OAI endpoint heavily, so this will be a barrier for them migrating.

Paul Clifford
Sep 26, 2018

Does the native Drupal 8 Rest API (or JSON API module) help with this?

Danny Lamb
Sep 27, 2018

just found this and commented about it in Github: https://github.com/guilmour-asc/rest_oai

Carolyn Moritz
Oct 3, 2018
Resolve

We are experimenting with Islandora Context to achieve something of a similar end; would a Context-like module be feasible in CLAW or is the intention to

Islandora Version Support Timeline

- Drupal 8 version 1.0.0 released: June 5, 2019
- Drupal 7 EOL (end of life) - November, 2021
  - Islandora 7.x
    - One release per year: 2019
    - No new features will be added: November, 2020
    - No new bug fixes will be made: November, 2021
    - No new security fixes will be made: April, 2022
- Drupal 8 EOL: November, 2021
  - Islandora 8.x EOL: N/A. Becomes Islandora 9
- Drupal 9 Release: June, 2020
  - Islandora 9.x Release: August 2020

Drupal 9 Release
1 Jun
Islandora 9 Release
1 Aug
Islandora 7: No New Features
1 Nov
Islandora 7: Bug Fixes End
1 Nov
Drupal 8 EOL
1 Nov
Drupal 7 EOL
1 Nov
Islandora 7: EOL
1 Apr
2020
Jun
Aug
Oct
Dec
2021
Apr
Jun
Aug
Oct
Dec
2022
Apr
2022

Islandora 8 - 9 Transition

- Drupal 8 and Drupal 9 share the same architecture
  - Semantic versioning requires a major version number change because of underlying dependency changes (i.e., Symfony)
- From a user-facing perspective, the “upgrade” to Drupal 9 will be the same as an upgrade from Drupal 8.8 to 8.9
- From a developer perspective, changes to code will be minor and easily implemented
- Contrib module Upgrade Status analyses your site to identify deprecated code

Pilots and Early Implementations

Centre for Digital Humanities, Eötvös Loránd University

The Project: Knowledge Base of Hungarian Philosophy and Research Journals of the Faculty of Humanities

When: September 2019

Contribution: Testing, use-cases, and first proof that It Can Be Done!

Johns Hopkins University

The Project: Special Collections and Archives (specific use case TBD)

When: Lat 2019

Contributions: Detailed assessment of the stack, use cases

University of Toronto Scarborough

The Project: Dragoman Renaissance Research Platform

When: Beta online. Full launch TBD.

Contributions: Video, Audio, PDF, eventually Oral Histories

University of Nevada Las Vegas

The Project: Migration of photographs, manuscripts, oral histories, and newspapers from ContentDM. Born digital collections to follow.

When: End of 2019

Contributions: Controlled Access Terms, ArchivesSpace integration, OAI-PMH, Desktop Metadata Importer/Editor, Archivematica integration

UNLV

University of Texas at Austin

The Project: Latin American Digital Initiatives (LADI)

When: November 2019

Contributions: Paged content (Books!), multilingual support

University of Prince Edward Island

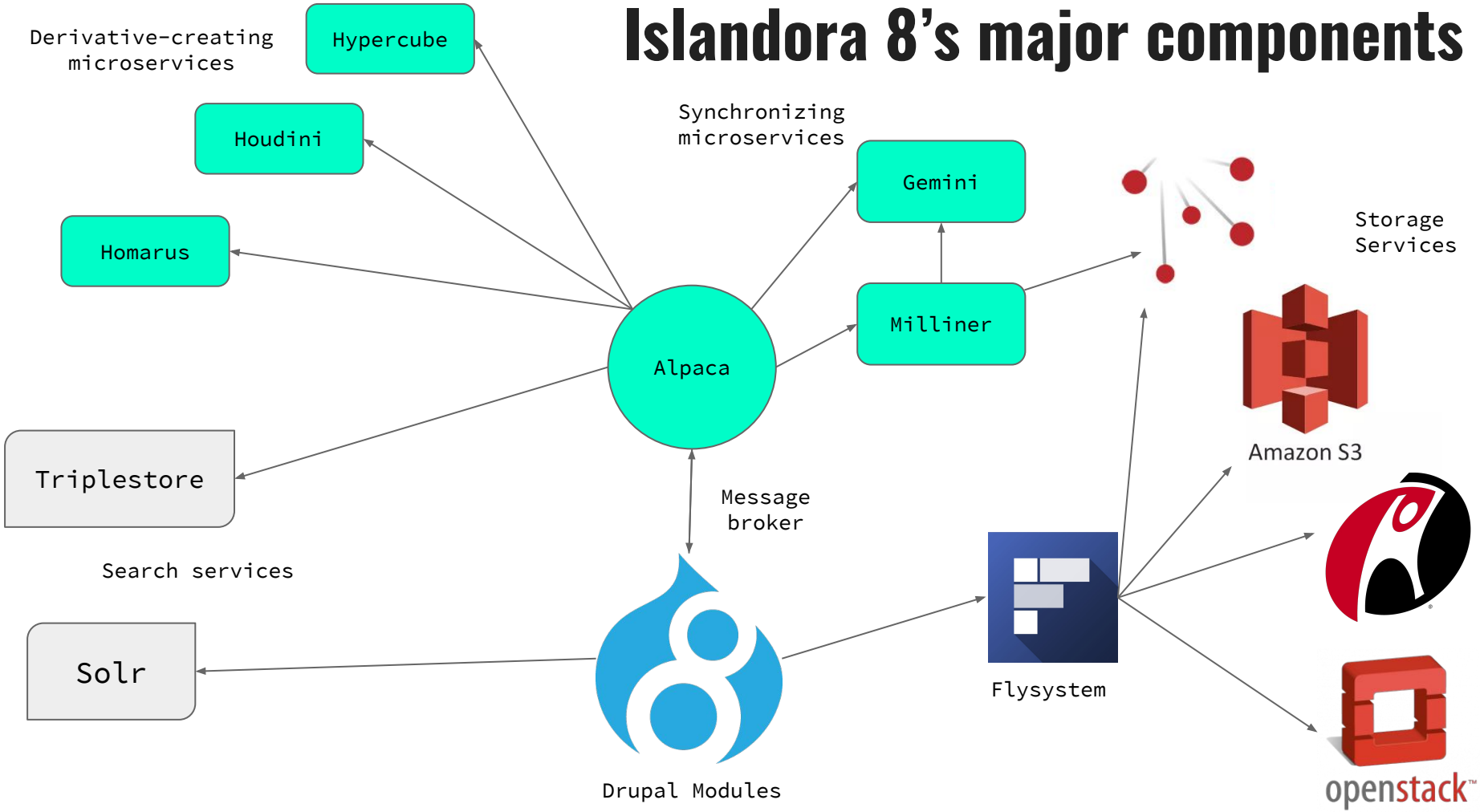
The Project: Research Data Management

When: 2020

Contributions: ORCID; Datacite; preservation reports; FITS; OAI Endpoint; cloud storage support; structured RDF displays; configurable permissions; and content types for Datasets, Grants, Data Management Plans (DMPs), researchers, and organizations.

A Closer Look at Islandora 8

Islandora 8's major components



Fedora in Islandora 8

Fedora is smart storage from Drupal's perspective

Proxy or redirect to external content

Fixity digest generation

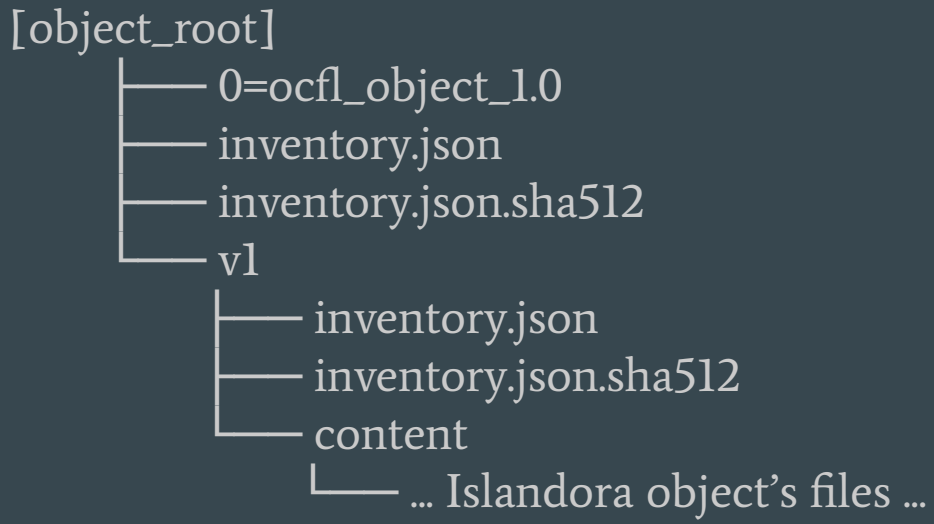
Audit trail

Memento versioning

API-X, which advertises relevant microservices for repository content

In Fedora 6, OCFL (Oxford Common File Layout)

Oxford Common File Layout (in Fedora 6)



Islandora Content as Drupal Nodes

The *key difference* between Islandora 8 and its predecessors.

Shifts Islandora from a framework for managing and accessing Fedora objects to a set of GLAM-specific business rules.

Allows Islandora content to use any standard Drupal contrib module.

Important conceptual shifts:

- Islandora object properties are now Drupal node properties
- Drupal taxonomies, actions/Context, and node field values encode business logic
- Files (images, audio, etc.) are now Drupal Media associated with nodes

Views and Views Bulk Operations

Views Bulk Operations (VBO) allows actions to be executed on items in a View.

Islandora can use it to:

- Regenerate derivatives
- Reindex nodes in Fedora and the triplestore
- Delete files and media
- Update metadata

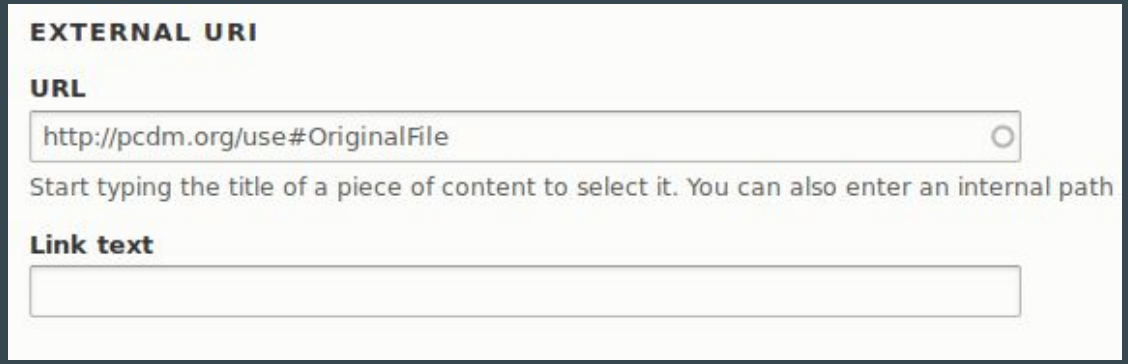
Drupal Taxonomies (Tags)

Authority lists for names, subjects, geographic terms. You can also add your own.

Also determine Islandora “models” (image, audio, video, collection, binary) and “media use” (original file, preservation master file, extracted text, service file, thumbnail image).

Used extensively by Context.

One of the ways Islandora can use Linked Data.



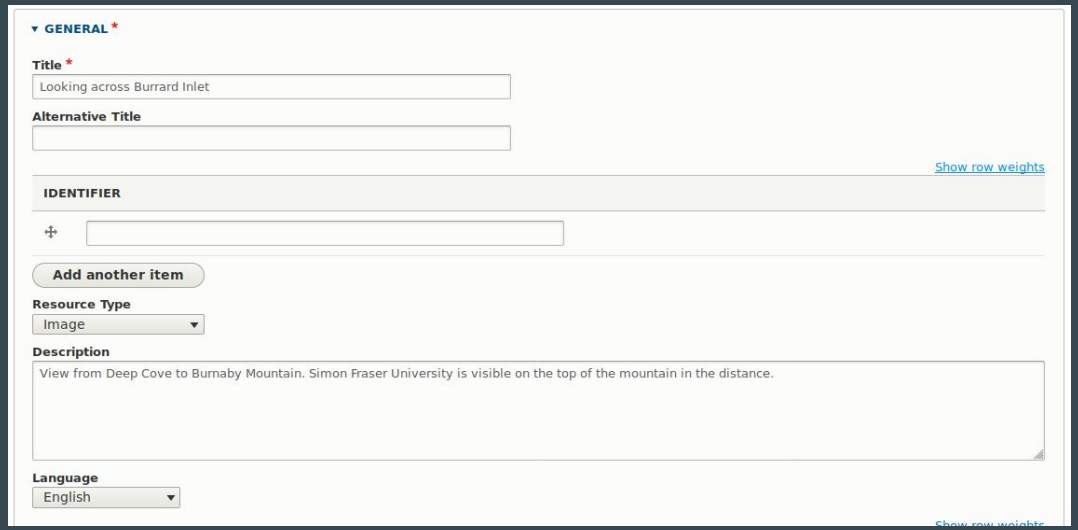
Metadata in Islandora 8

Metadata is stored and managed as fields on Drupal nodes.

It can be serialized into XML/JSON-LD/etc. on demand (e.g., for OAI-PMH requests).

“Profiles” or templates are created via Drupal content types.

Bulk updates, etc. are handled via Drupal’s Views Bulk Operations.



Flexible Storage

- Uses Flysystem, a filesystem abstraction library for PHP
- Swap out filesystems without application-wide rewrites
- Adapters for:
  - AWS S3
  - Azure
  - Digital Ocean Spaces
  - Local storage
  - Drop Box
  - Many more...

Multilingual Capabilities

User interface and metadata (including its Linked Data forms) can be translated into multiple languages.

எடுத்துக்காட்டுப் படம்

admin - Sun, 06/02/2019 - 12:21

இல் உறுப்பினர்
படங்கள் சேகரம்

மொழி
Tamil

விபரிப்பு
இது ஒர் எடுத்துக்காட்டுப் படம்.

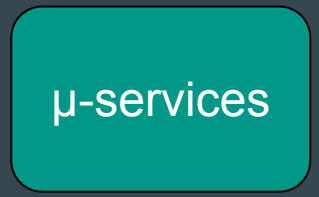
அளவு
1 item

துறை
வோம்பாற், ஆத்திரேலியா

Fedora URI
http://localhost:8080/fcrepo/rest/7f/1a/45/23/7f1a4523-eee9-43dd-8e10-dd9d6621eec8

Microservices

- Single-purpose applications external to Drupal and Fedora
- Uses
  - Synchronize Drupal and Fedora (Gemini, Milliner)
  - Create derivatives (Houdini, Hypercube)
  - Generate and maintain preservation data (FITS, Riprap)
  - Package content for export (Islandora Bagger)
- Benefits
  - Distributed
  - Swapable



Context

A Drupal contrib module that allows configuration of "if this, then that" logic using an administrative user interface.

Defines “conditions” (the “if this” part) and “reactions” (the “then that” part). In Drupal 8, extends reactions to include Drupal Actions.

Contexts defined by Islandora 8 include:

- Which viewer to use for an object (e.g. OpenSeadragon)
- Whether to store specific files in Drupal only or also in Fedora
- For collection nodes, show the block listing its members.

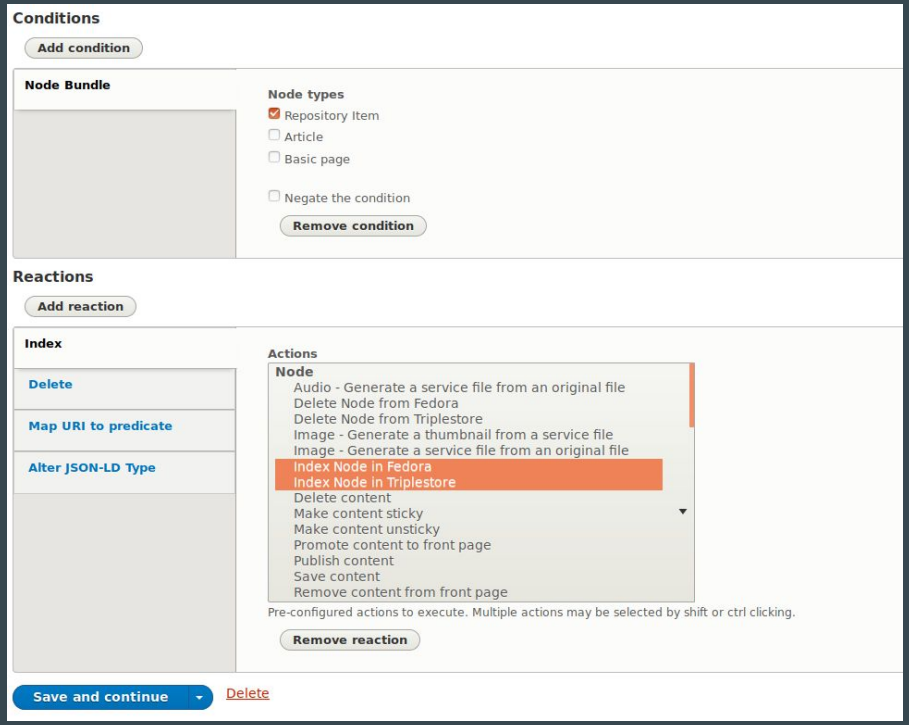
Example “Content” context defined by Islandora

If

- The node’s content type is “repository item”

Then

- Index it in Fedora and in the triplestore.
- [Delete], [Map URI to predicate], [Alter JSON-LD type]



Linked Data Capabilities

Vocabularies for subjects, names, places can use authority links (URIs)

Objects' metadata can be serialized into JSON-LD

Capability to use Linked Data exists but user-facing services do not yet

- Discovery aggregators
- Realtime 'related repository' queries
- Point of creation lookups

Rich REST interfaces

Read, create, update, delete nodes and media

Drupal's JSON:API is also available

Will allow creation of external tools, e.g.:

- Islandora Bagger
- CLAW REST Ingester
- A desktop client

There's a Module for That...

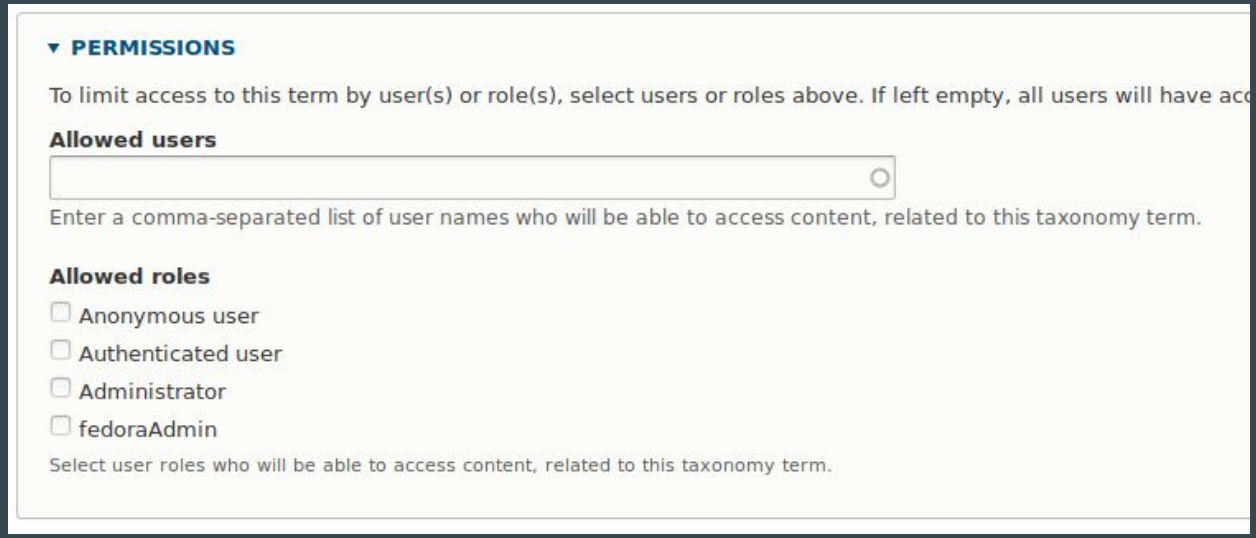
Objects as nodes allows Islandora to use any standard Drupal contrib module.

Permissions by Term

Provides access control using tags

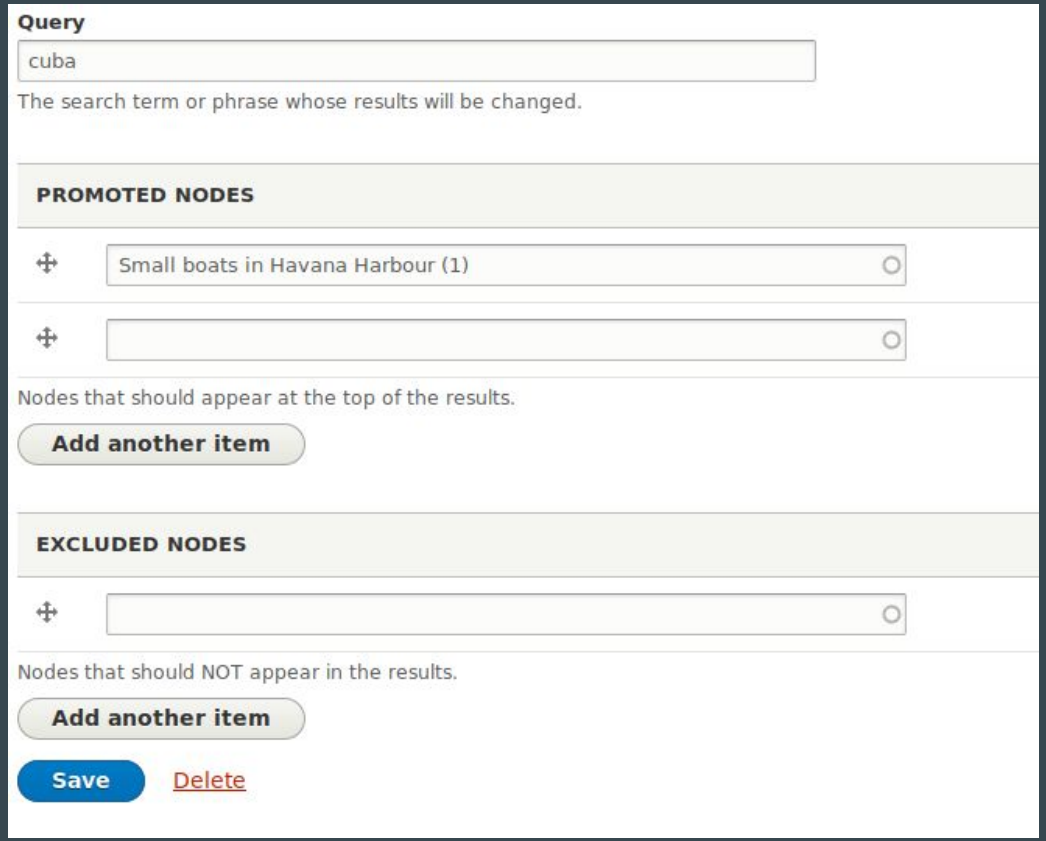
Submodule Permissions by Entity extends this to Media

Within each term's "Edit" tab: "If left empty, all users will have access to content, related to this taxonomy term and this taxonomy term itself."



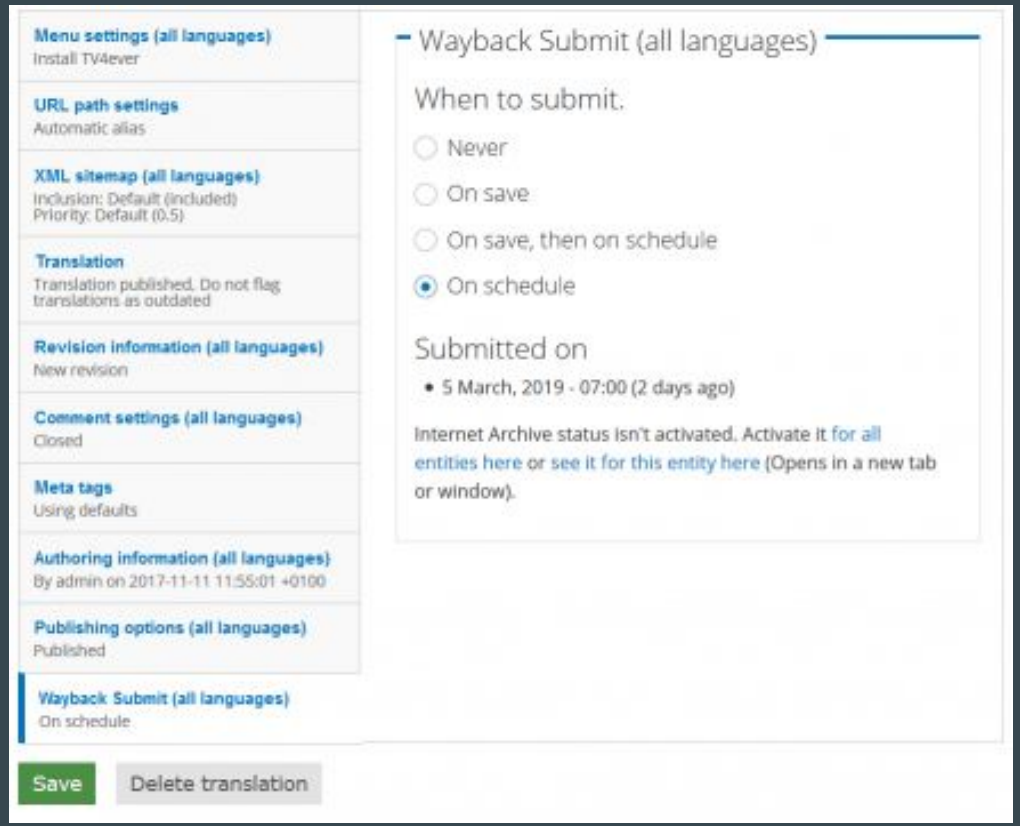
Search Overrides

Admin users “will be able to choose a specific search term, and pick which nodes should be at the top, and also choose to exclude nodes so they will not be shown in the results.”

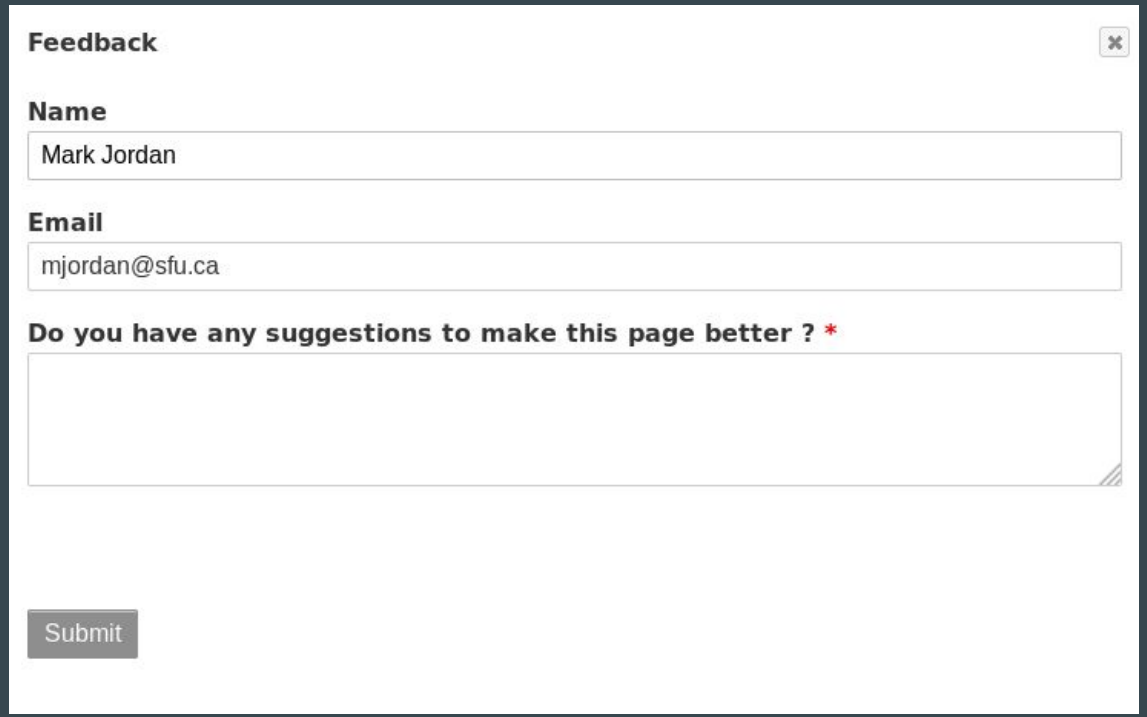


Wayback Submit to Archive.org

“The Wayback Submit module will submit all your [URLs] to The Wayback Machine at Archive.org.”



Content Feedback



"Allows users and visitors to quickly send feedback messages about the currently displayed content."

Feedback is presented To admin users so it can be easily processed.

Moderation Scheduler

“Moderation Scheduler gives content editors the ability to schedule nodes to be published at specified dates and times in the future.”

Live Demos

Bulk Ingest from CSV

1. Configure YAML files
2. Run migration from web interface or command line
3. Web interface: files, then nodes, then media
4. Command line
    - Reimport migration configurations after changes to .yml files: `drush -y fim migrate_islandora_csv`
    - Run all migrations: `drush -y --userid=1 mim --group=migrate_islandora_csv --uri=http://localhost:8000`
    - Roll back everything: `drush -y mr --group=migrate_islandora_csv`

Migration from 7.x to 8

1. Configure YAML files
2. Run migration from web interface or command line
    - Reimport migration configurations after changes to .yml files: `drush -y fim islandora_migrate_7x_claw_feature`
    - Run all migrations: `drush -y --userid=1 mim --uri=http:localhost:8000 --group=islandora_7x`
    - Roll back everything: `drush -y mr --group=islandora_7x`

Discussion