

Upgration Pilot - York University

Project Overview

The York University Libraries upgration project identifies collections that cover the range of object models that the repository uses. The conservative goal is to perform an upgration on the collections listed below. The stretch goal is an upgration all of all objects in the repository.

By upgration, we mean upgrating and migrating objects and datastreams, along with security restrictions (XACML), in Fedora 3.8.0 to Fedora 4.x. Moreover, we will develop a strategy for upgrading and migrating our content models, including inline XML datastreams, managed datastreams, and external datastreams.

York University Digital Library (YUDL) is an Islandora repository that run on the HEAD version of all Islandora Foundation modules. The repository is run as close a stock/generic Islandora instance where possible. Therefore, this upgration pilot can serve as a basis for a generic Islandora Fedora 3.x to Fedora 4.x upgration.

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Collection Description(s)

Object Models

Fedora 3 Details

- [Storage: Legacy storage \(or Akubra\)](#)
- [XML metadata : datastreams](#)
- [XML metadata : inline](#)
- [Content models](#)
- [Datastream types \(inline, managed, redirect, and external\)](#)
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Fedora 4 Details

Collection Description(s)

York University Digital Library contains approximately 200,000 unique digital assets.

Jean Augustine fonds

- 1 Islandora Collection Content Model object
- 70 Islandora Large Image Content Model objects
- 68 Islandora Video Content Model object
- XACML policies on objects

Web Archives

- 1 Islandora Collection Content Model object
- 14 Islandora Web ARChive Content Model objects

Mariposa Folk Foundation

- 1 Islandora Collection Content Model object
- 160 Islandora Large Image Content Model objects
- 84 Islandora Audio Content Model objects
- 1 Islandora Video Content Model object
- XACML policies on objects

Internet Archive

- 1 Islandora Collection Content Model object
- 684 Islandora Internet Archive Book Content Model objects
- 159,616 Islandora Page Content Models objects

Beer Family fonds

- 1 Islandora Collection Content Model object (w/Externally Referenced EAD datastream)
- 12 Islandora Large Image Content Model objects
- 18 Islandora Internet Archive Book Content Model objects
- 25 Islandora Compound Object Content Model objects

Object Models

Islandora Collection Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **COLLECTION_POLICY** = Collection policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **EAD**
 - Type: Externally Referenced
 - Mime Type: text/xml
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Audio Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: audio/mpeg, audio/wav, audio/x-wav, audio/vnd.wave, audio/flac
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **PROXY_MP3**
 - Type: Managed
 - Mime Type: audio/mpeg
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Basic Image Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml

- Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: image/jpg, image/jpeg, image/png, image/gif
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **MEDIUM_SIZE**
 - Type: Managed
 - Mime Type: image/jpg
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Book Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **ORIGINAL_PDF**
 - Type: Managed
 - Mime Type: application/pdf
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Compound Object Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML

- Mime Type: text/xml
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable

Islandora Page Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: image/tiff
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **JPG**
 - Type: Managed
 - Mime Type: image/jpg
 - Versionable
- **JP2**
 - Type: Managed
 - Mime Type: image/jp2
 - Versionable
- **OCR**
 - Type: Managed
 - Mime Type: text/plain
 - Versionable
- **HOCR**
 - Type: Managed
 - Mime Type: text/html
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Large Image Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**

- Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: image/tiff
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **JPG**
 - Type: Managed
 - Mime Type: image/jpg
 - Versionable
- **JP2**
 - Type: Managed
 - Mime Type: image/jp2
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora PDF Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: application/pdf
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **PREVIEW**
 - Type: Managed
 - Mime Type: image/jpeg
 - Versionable
- **PDFA**
 - Type: Managed
 - Mime Type: application/pdf
 - Versionable
- **FULL_TEXT**
 - Type: Managed
 - Mime Type: text/plain
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Video Content Model

- **DS Composite**

- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: video/mp4, video/quicktime, video/m4v, video/x-matroska, video/ogg
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TECHMD_SAMMA**
 - Type: Managed
 - Mime Type: application/xml
 - Versionable
- **SAMMA_PDF**
 - Type: Managed
 - Mime Type: application/pdf
 - Versionable
- **MP4** = Streaming video
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Islandora Web ARChive Content Model

- **DS Composite**
- **RELS-EXT** = Fedora Object to Object Relationship Metadata
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **RELS-INT**
 - Type: Inline XML
 - Mime Type: application/rdf+xml
 - Versionable
- **MODS**
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **DC**
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable
- **OBJ** = Archival object
 - Type: Managed
 - Mime Type: application/warc
 - Versionable
- **TECHMD_FITS** = FITS
 - Type: Managed
 - Mime Type: text/xml
 - Versionable
- **TN** = Thumbnail
 - Type: Managed
 - Mime Type: image/jpeg, image/gif, image/png
 - Versionable
- **JPG**
 - Type: Managed
 - Mime Type: image/jpg

- Versionable
- **PNG**
 - Type: Managed
 - Mime Type: image/png
 - Versionable
- **PDF**
 - Type: Managed
 - Mime Type: application/pdf
 - Versionable
- **WARC_CSV**
 - Type: Managed
 - Mime Type: text/plain
 - Versionable
- **WARC_FILTERED**
 - Type: Managed
 - Mime Type: application/warc
 - Versionable
- **POLICY** = XACML Policy
 - Type: Inline XML
 - Mime Type: text/xml
 - Versionable

Fedora 3 Details

Storage: Legacy storage (or Akubra)

YUDL uses a stock Akubra storage implementation.

XML metadata : datastreams

See object models above.

XML metadata : inline

See object models above.

Content models

See object models above.

Datastream types (inline, managed, redirect, and external)

YUDL/Islandora uses inline, managed, and external datastream types. The list of objects models above should cover all uses of datastream types.

Identifiers

YUDL/Islandora uses custom namespaces for PIDs. In addition, standard Islandora URL structure and can overridden and user friendly URLs can be minted with [Islandora Pathauto](#). For more information, see the [YUDL URI Policy](#).

Indexing strategies (GSearch, RI-Search vs. F4 approaches)

YUDL/Islandora uses GSearch and the Resource Index.

Replication/Journaling

YUDL does not take advantage of replication or journaling.

Security policies: XACML

YUDL/Islandora uses XACML for a variety of access use cases; access to edit specific datastreams, access to view specific datastreams, access to view the object. YUDL/Islandora uses some of the default Fedora 3.x XACML policies, plus [Islandora Foundation supplied XACML policies](#).

XACML Policies

```
$ tree fedora-xacml-policies
fedora-xacml-policies
  repository-policies
    default
      deny-reloadPolicies-if-not-localhost.xml
      permit-anything-to-administrator.xml
      permit-apia-unrestricted.xml
      permit-dsstate-check-unrestricted.xml
      permit-oai-unrestricted.xml
      permit-serverStatus-unrestricted.xml
      readme.txt
    islandora
      permit-apim-to-authenticated-user.xml
      permit-getDatastreamHistory-unrestricted.xml
      permit-getDatastream-unrestricted.xml
      permit-upload-to-authenticated-user.xml
3 directories, 11 files
```

OAI-PMH

YUDL/Islandora does not use the Fedora OAI-PMH module. YUDL/Islandora uses the [Islandora OAI-PMH](#) module.

Versions

YUDL/Islandora takes advantage of version. Nearly every datastream is versionable, and can be view/reverted in the Islandora admin interface given the proper permissions.

Disseminators

YUDL/Islandora does not use disseminators.

Audit history

YUDL/Islandora uses the audit history for the [Islandora PREMIS](#), [Islandora Checksum](#), and [Islandora Checksum Checker](#) modules.

Fedora 4 Details

TODO: Outline Fedora 4 details!

Storage: Legacy storage (or Akubra)

XML metadata : datastreams

XML metadata : inline

Content models

Datastream types (inline, managed, redirect, and external)

Identifiers

Indexing strategies (GSearch, RI-Search vs. F4 approaches)

Replication/Journaling

Security policies: XACML

OAI-PMH

Versions

Disseminators

Audit history