Taking Control of Library Metadata and Websites using the eXtensible Catalog

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XC Team Members on the IRC

Take Control.

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Drupal Toolkit, OAI Toolkit

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Metadata Services Toolkit

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OAI Toolkit, NCIP Toolkit

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Project Manager

XC Software Overview

- **eXtensible Catalog** is open source, user-centered, next generation software for libraries.
- Four software components

  can be used independently to address a particular need

  or

  combined to provide an end-to-end discovery system to connect library users with resources.

XC Software Overview

Take Control.

- User Interface
  - Faceted, FRBRized, customizable search interface
  - Web application framework for libraries
- Metadata Tools
  - Automated processing of large batches of metadata
- Connectivity Tools
  - Between XC and an ILS
  - Harvest and synchronize metadata with OAI-PMH
  - Circulation and authentication with NCIP

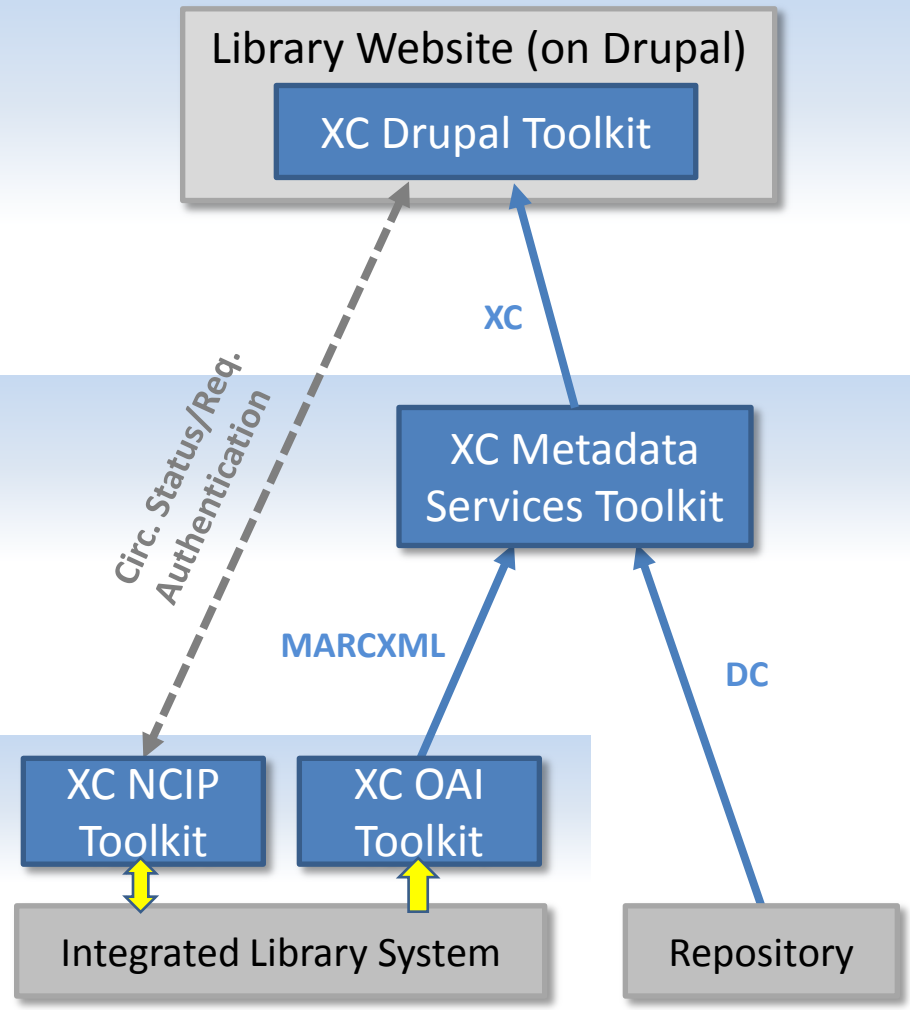
XC Software Components

Take Control.

User Interface for searching and browsing

Tools for automated processing of large batches of metadata

Tools for connectivity between XC and an ILS



Drupal Toolkit

Take Control.

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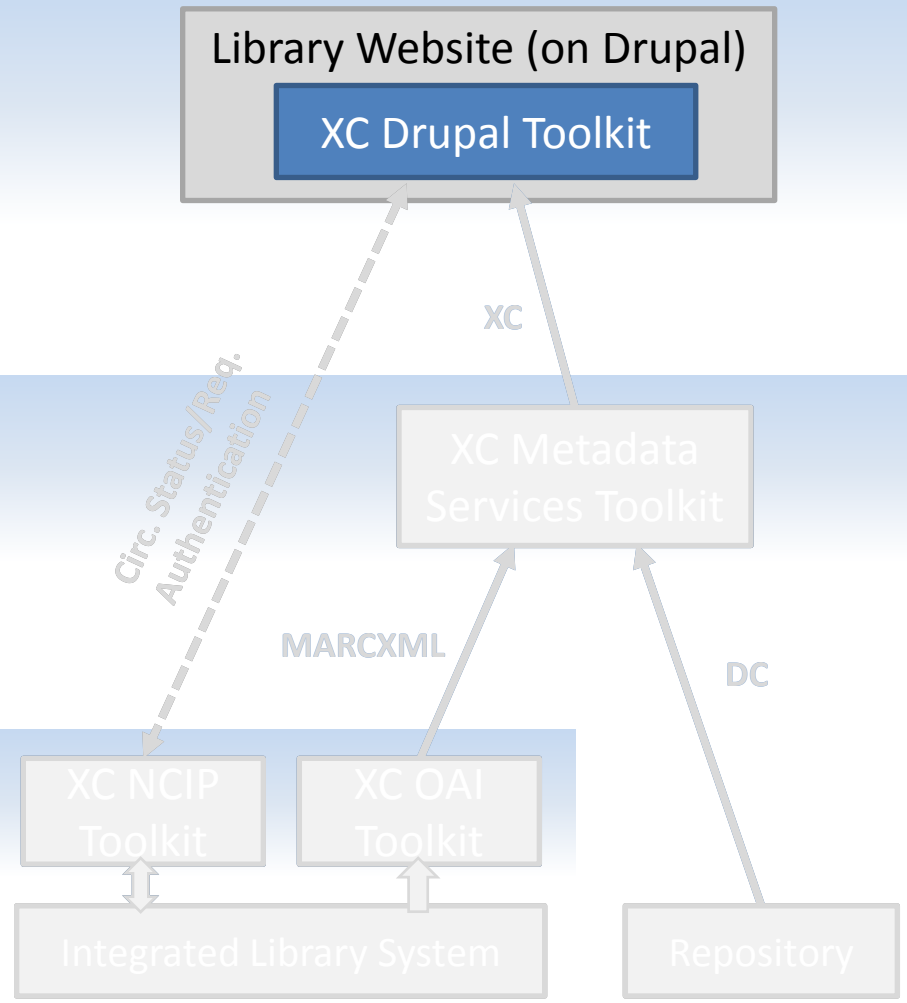
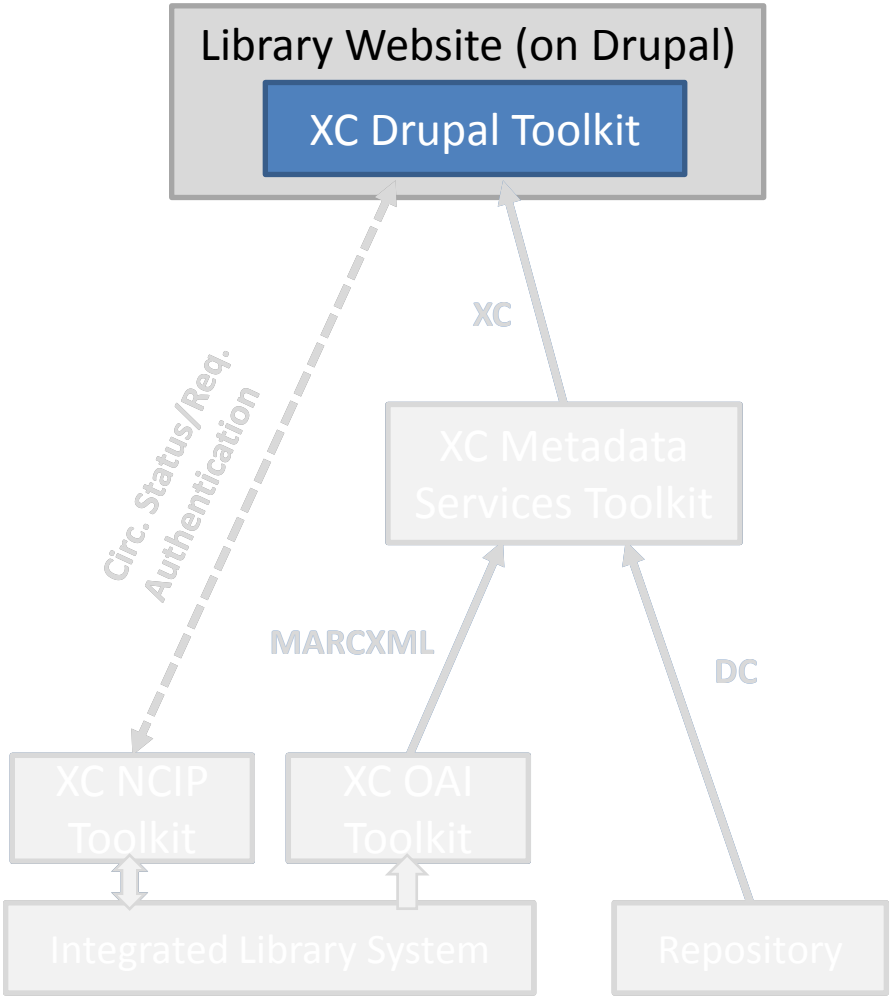


Drupal Toolkit

Take Control.

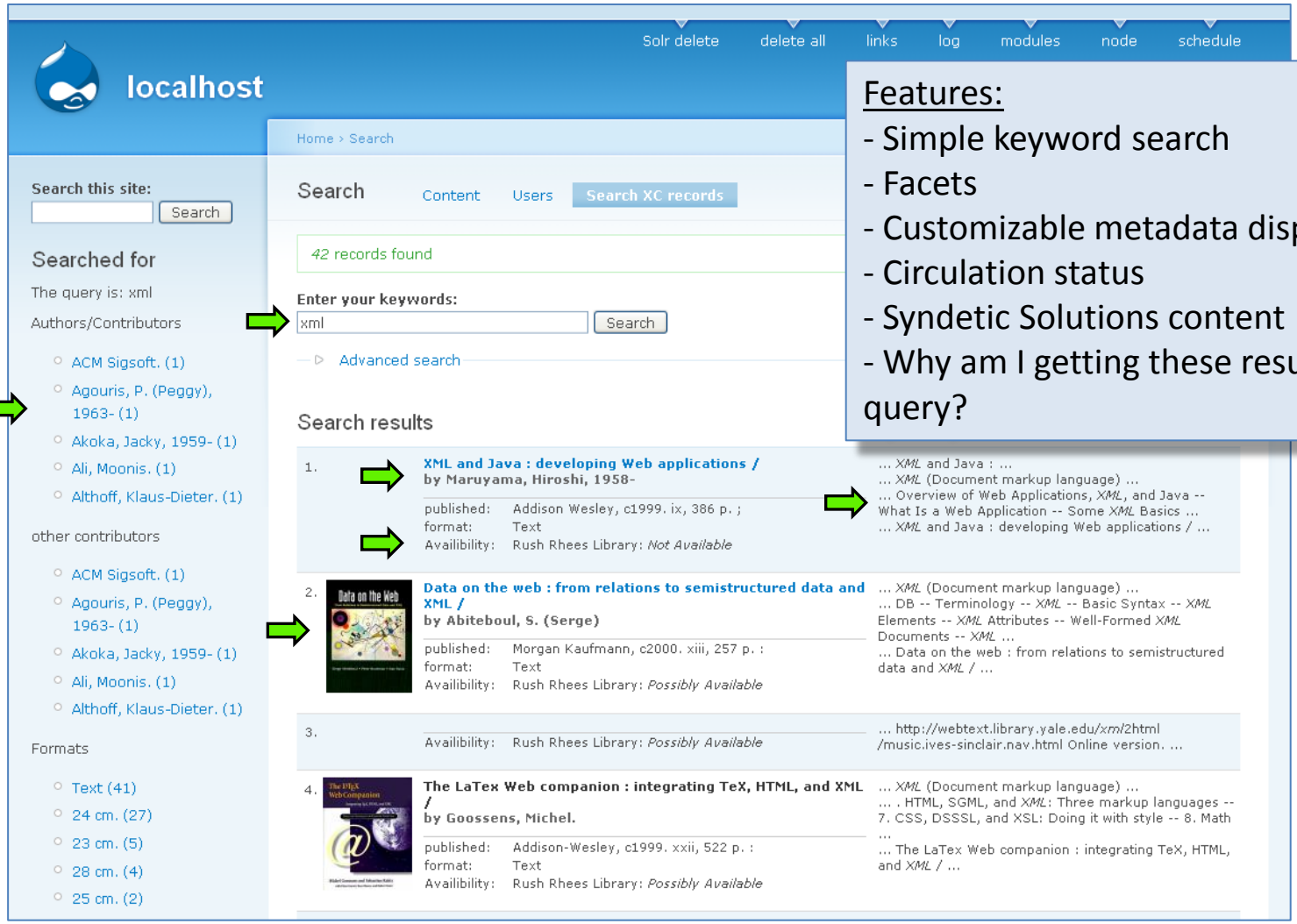
Features

- Adds support for library metadata to Drupal
- Single search interface across:
  - Library catalog
  - Digital repository
  - Website resources
- Faceted browsing of results
- FRBRized metadata
- Extensive customization
- Integration with ILS circulation system



Drupal Toolkit: Search Interface

Take Control.

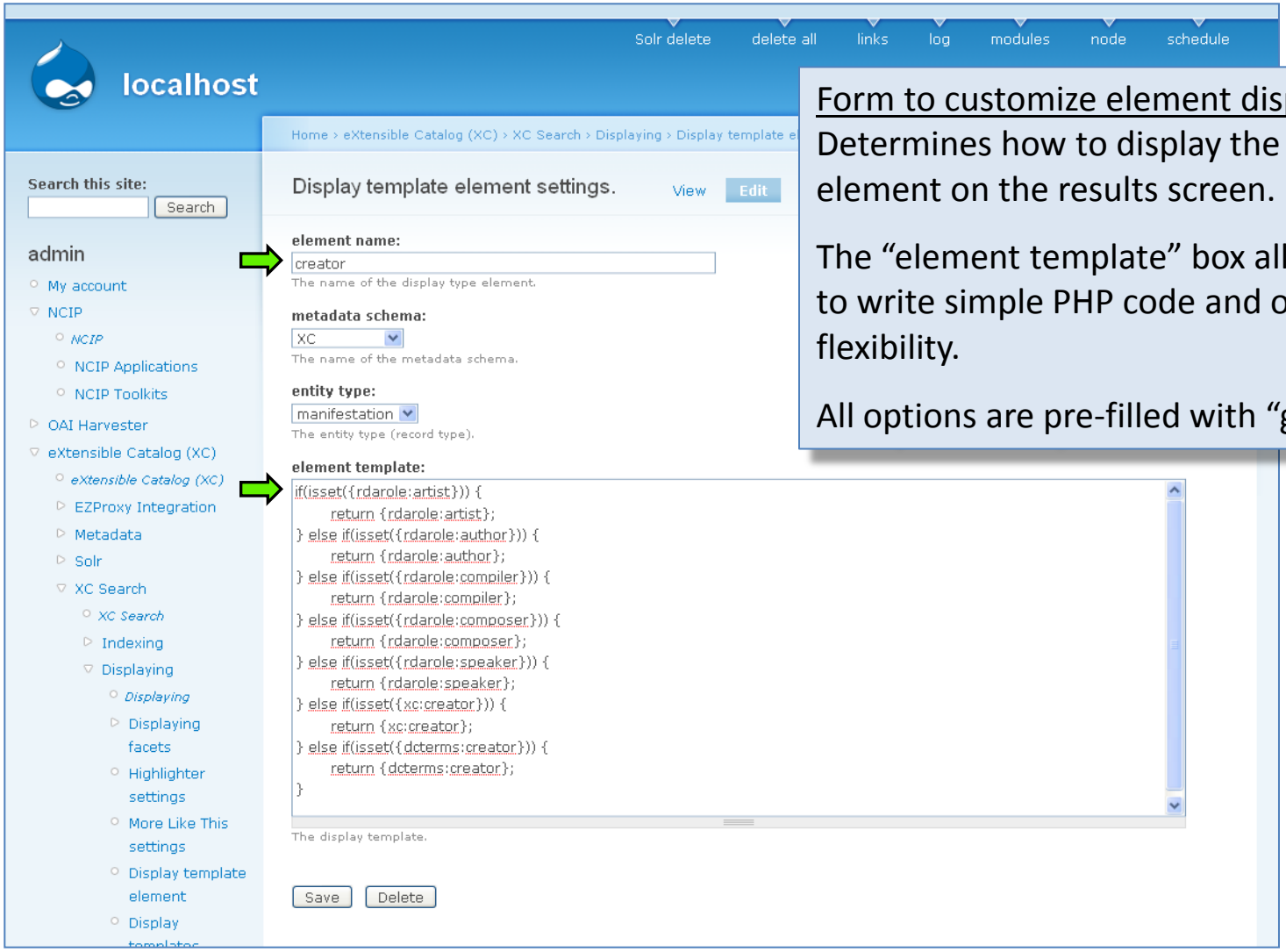


Features:

- Simple keyword search
- Facets
- Customizable metadata display
- Circulation status
- Syndetic Solutions content
- Why am I getting these results for my query?

Drupal Toolkit: Staff Interface

Take Control.



Form to customize element display:
Determines how to display the creator element on the results screen.

The “element template” box allows libraries to write simple PHP code and offers more flexibility.

All options are pre-filled with “good” defaults.

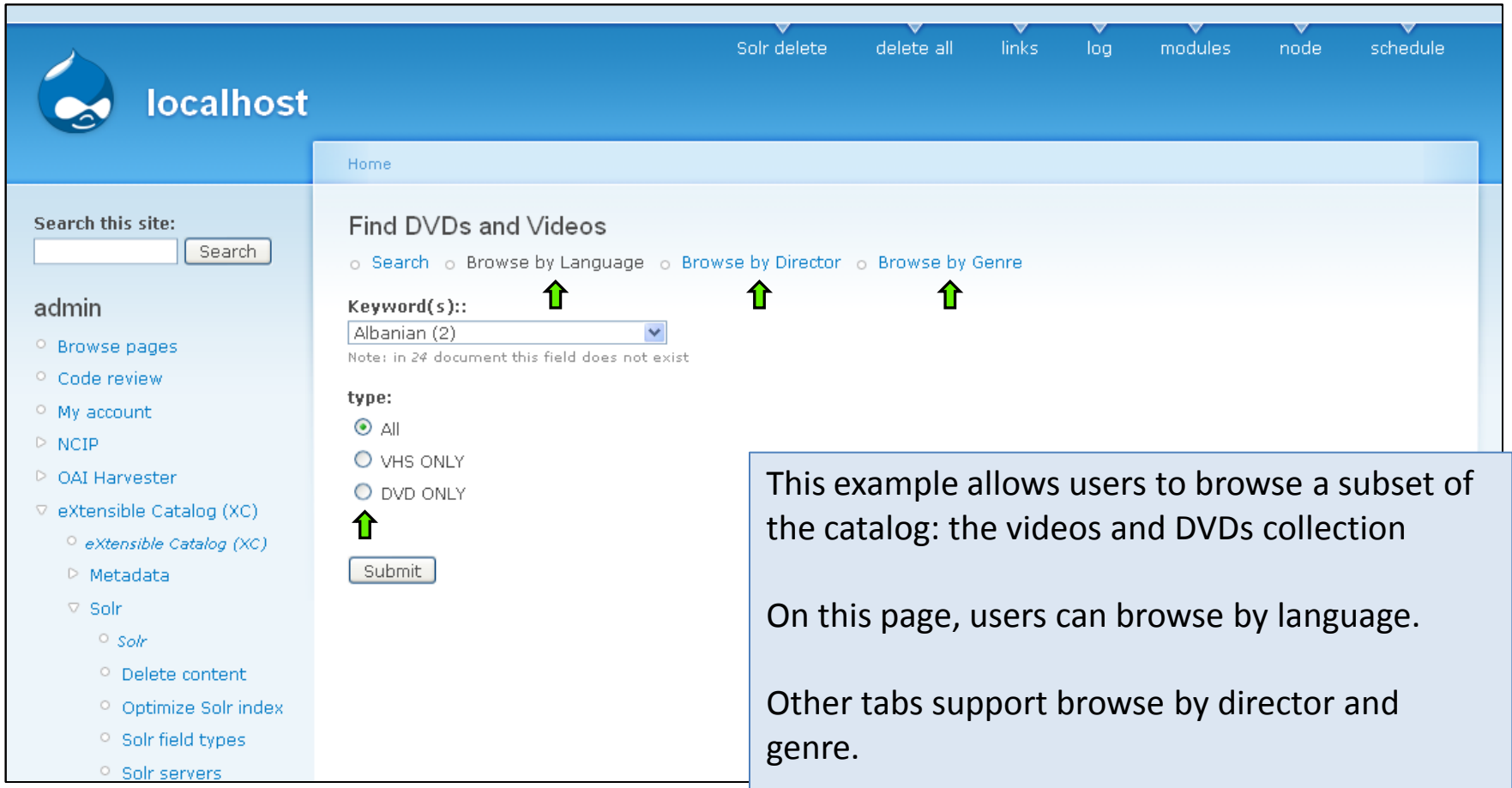
Drupal Toolkit: Custom Search/Browse Pages

Take Control.

- Create custom web applications to browse catalog content by filling out web forms
- Pre-set search limits, customized facets
- Possibilities:
  - Search/Browse eJournals
  - Search/Browse databases
  - Search/Browse collections
- Example: browsable list of videos and DVDs created without any programming

Drupal Toolkit: Custom Search/Browse Pages

Take Control.



This example allows users to browse a subset of the catalog: the videos and DVDs collection

On this page, users can browse by language.

Other tabs support browse by director and genre.

Limits can be set for format: VHS or DVD

Drupal Toolkit: Provided Modules

The Drupal Toollkit is actually a collection of Drupal add-on modules:

- OAI-PMH Harvester
- Metadata Import and export
-MySQL and Solr storage
-NCIP Integration
- Authentication
- EZProxy
- Syndetic Solutions
- Search

Enabled	Name	Version	Description
☑	**EZProxy URL Rewrite**	6.x-1.1-alpha3	Rewrite URL links based on a user's IP address and other advanced options; allowing IP-protected content to be forwarded to an EZProxy or another proxy referral server
☑	**ILS**	6.x-1.1-alpha3	ILS settings Depends on: XC NCIP Toolkit Integration (enabled), XC Core (enabled), NCIP Integration (enabled)
☑	**Metadata Import and Export**	6.x-1.1-alpha3	Import and export metadata to and from the XC system Depends on: XC Metadata (enabled), XC Core (enabled)
☑	**NCIP Integration**	6.x-1.1-alpha3	Client and library for NISO Circulation Interchange Protocol (NCIP/Z39.83) Required by: XC NCIP Toolkit Integration (enabled), ILS (enabled)
☑	**OAI Harvester**	6.x-1.1-alpha3	OAI-PMH Harvester Depends on: XC Utility (enabled) Required by: XC OAI Harvester Bridge (enabled)
☑	**OAI-DC Schema**	6.x-1.1-alpha3	Handles import and export of Dublin Core (oai_dc) schema records Depends on: XC Core (enabled), XC Metadata (enabled)
☑	**Syndetics Solution**	6.x-1.1-alpha3	Syndetics Solution services Depends on: XC Core (enabled)
☑	**XC Authentication**	6.x-1.1-alpha3	Delegates Drupal user account login and registration for XC to external authentication system
☑	**XC Browse**	6.x-1.1-alpha3	Browse records
☑	**XC Core**	6.x-1.1-alpha3	Integrates the eXtensible Catalog (XC) into a Drupal environment Required by: Syndetics Solution (enabled), XC eXternal services framework API (enabled), XC Metadata (enabled), XC NCIP Toolkit Integration (enabled), OAI-DC Schema (enabled), XC OAI Harvester Bridge (enabled), XC Schema (enabled), XC Search (enabled), XC Solr (enabled), XC SQL Database Storage (enabled), ILS (enabled), Metadata Import and Export (enabled)
☑	**XC eXternal services framework API**	6.x-1.1-alpha3	mashupable external services framework API Depends on: XC Core (enabled)
☑	**XC Metadata**	6.x-1.1-alpha3	Adds support for creating, managing, and manipulating metadata structures and their containers and facilitates the import, export, storage, retrieval, and relational organization of metadata Depends on: XC Core (enabled) Required by: Metadata Import and Export (enabled), OAI-DC Schema (enabled), XC OAI Harvester Bridge (enabled), XC Schema (enabled), XC Solr (enabled), XC SQL Database Storage (enabled), XC Search (enabled)
☑	**XC NCIP Toolkit Integration**	6.x-1.1-alpha3	Connects to NCIP Toolkit instances Depends on: XC Core (enabled), NCIP Integration (enabled) Required by: ILS (enabled)
☑	**XC OAI Harvester Bridge**	6.x-1.1-alpha3	Handles the import of metadata into XC via OAI-PMH. This is a bridge between OAI Harvester and XC modules Depends on: XC Core (enabled), XC Metadata (enabled), OAI Harvester (enabled), XC Utility (enabled)
☑	**XC Schema**	6.x-1.1-alpha3	Handles import and export of eXtensible Catalog (xc) schema records Depends on: XC Core (enabled), XC Metadata (enabled)
☑	**XC Search**	6.x-1.1-alpha3	Searching records in the XC system Depends on: XC Core (enabled), XC Solr (enabled), XC Metadata (enabled)
☑	**XC Solr**	6.x-1.1-alpha3	Handles storage, retrieval, and search of metadata to, from, and on multiple Apache Solr servers Depends on: XC Core (enabled), XC Metadata (enabled) Required by: XC Search (enabled)
☑	**XC SQL Database Storage**	6.x-1.1-alpha3	Handles storage and retrieval of metadata using sets of SQL database tables Depends on: XC Core (enabled), XC Metadata (enabled)
☑	**XC Utility**	6.x-1.1-alpha3	Utility functions for the rest of XC modules Required by: OAI Harvester (enabled), XC OAI Harvester Bridge (enabled)

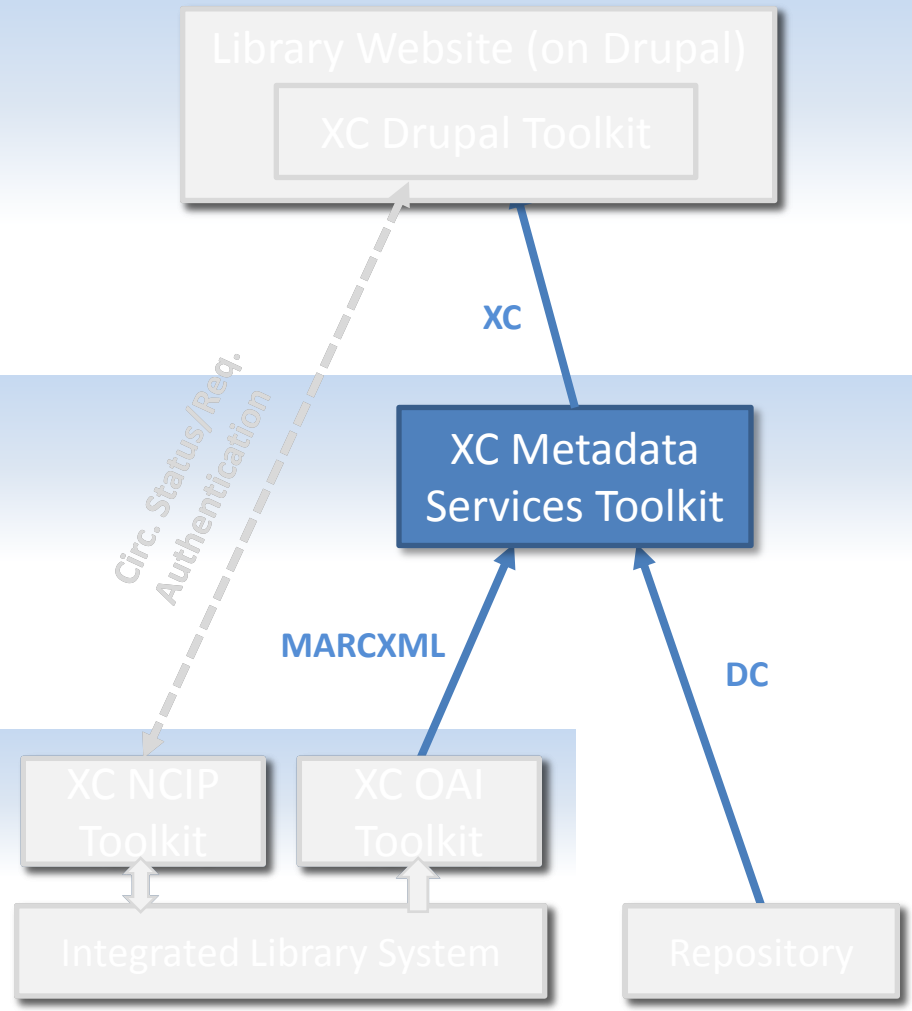
Metadata Services Toolkit

Take Control.

User Interface for searching and browsing

Tools for automated processing of large batches of metadata

Tools for connectivity between XC and an ILS



Metadata Services Toolkit

Take Control.

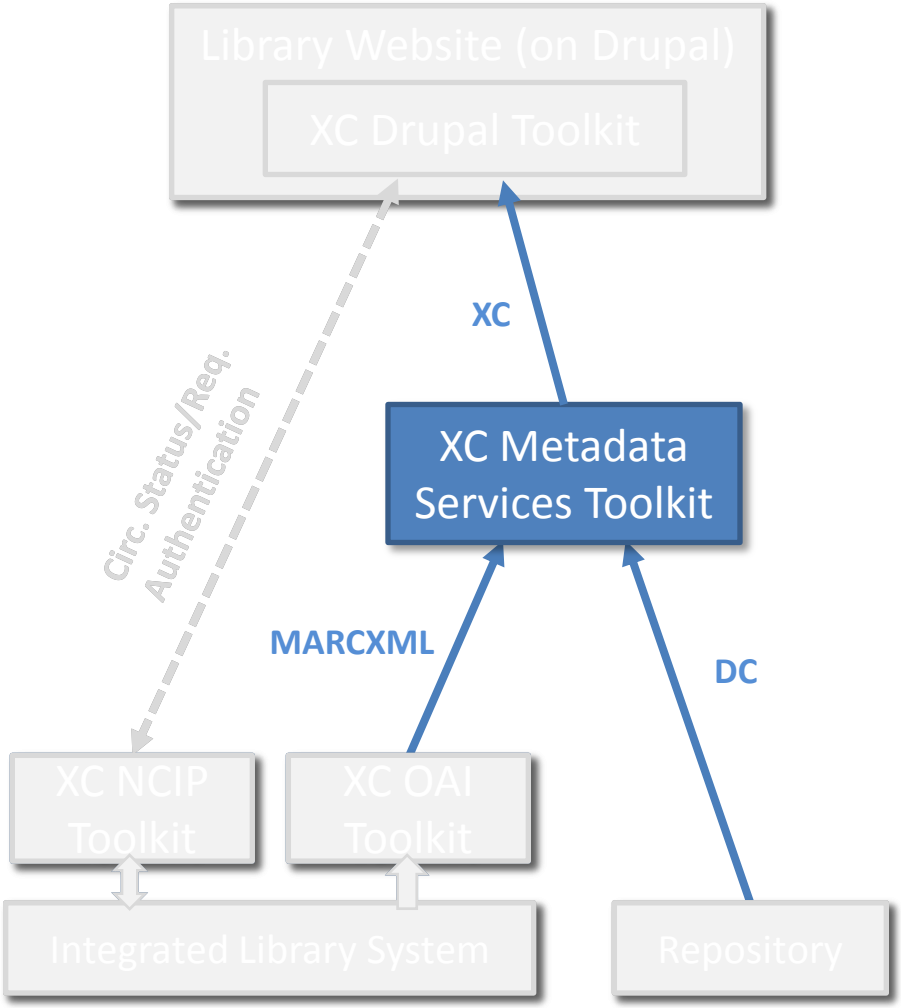
Features:

New type of staff client for processing large batches of metadata through an orchestrated set of services.

Harvest from multiple sources (silos) to address format and quality issues.

Clean up, transform, and aggregate metadata .

Automatic synchronization propagates changes in source metadata through services and on to discovery interface.

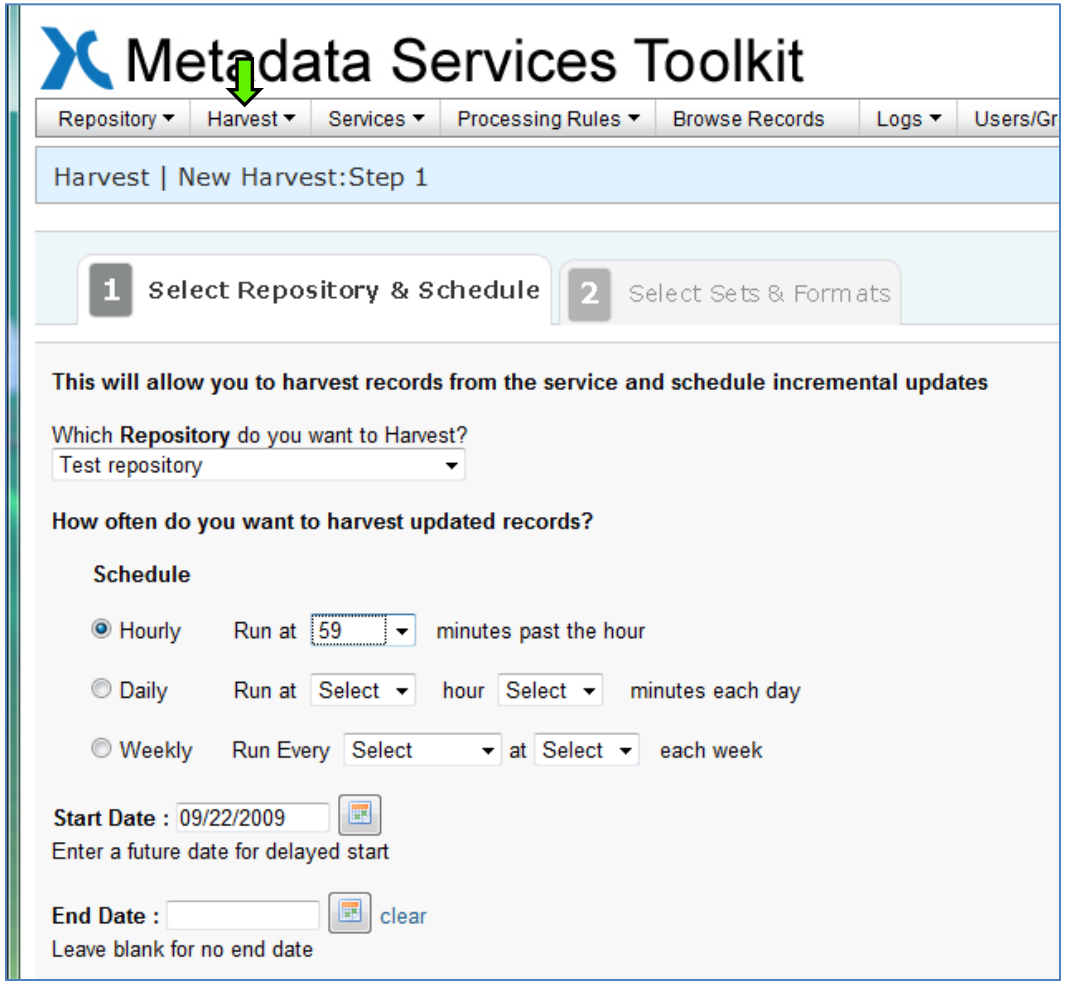


Metadata Services Toolkit

Take Control.

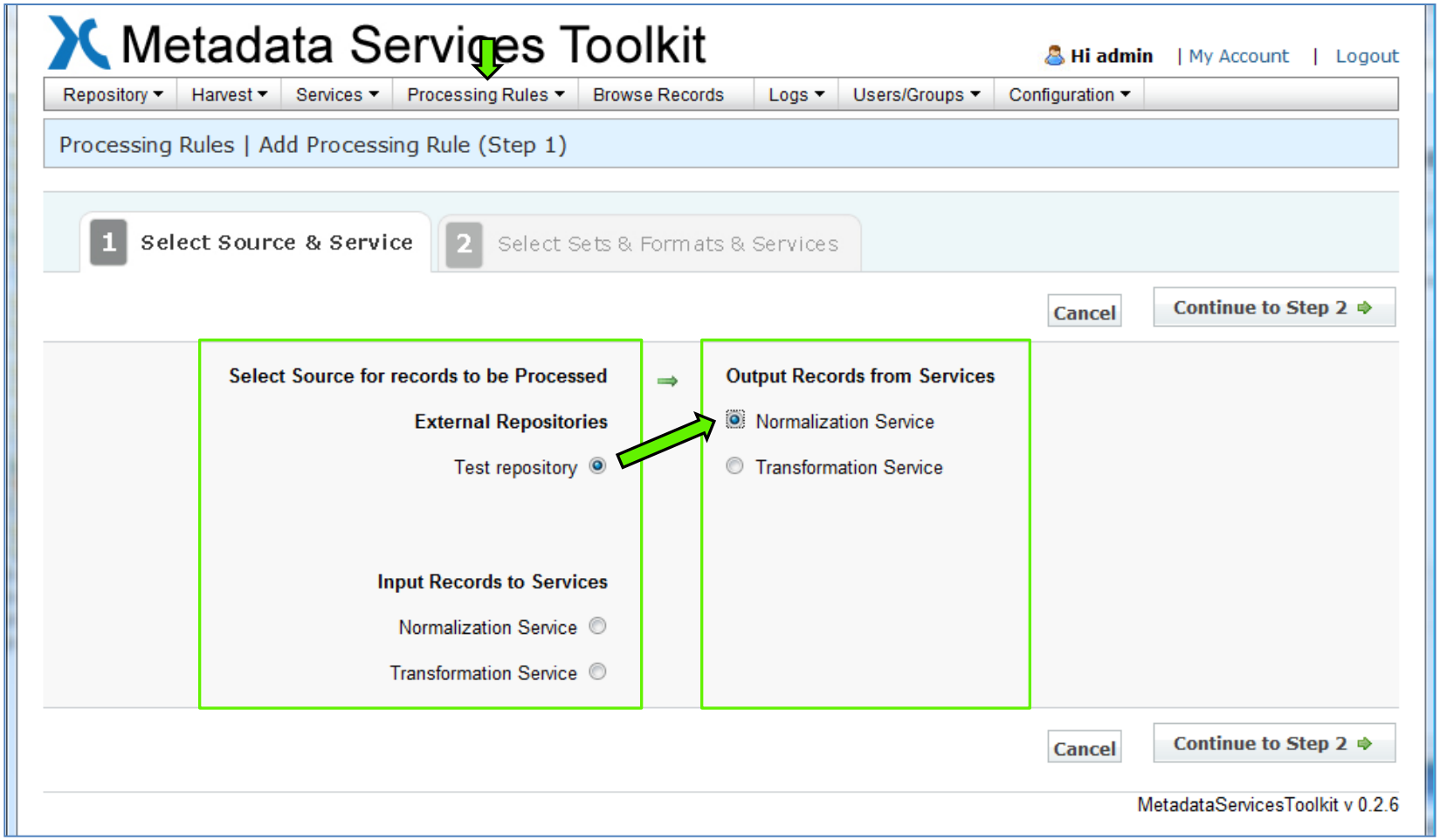
Functions:

- Add Repositories
- Schedule Harvests
- Add Metadata Services
- Add Processing Rules
- Browse Records
- View Logs
- Set up Users/Groups



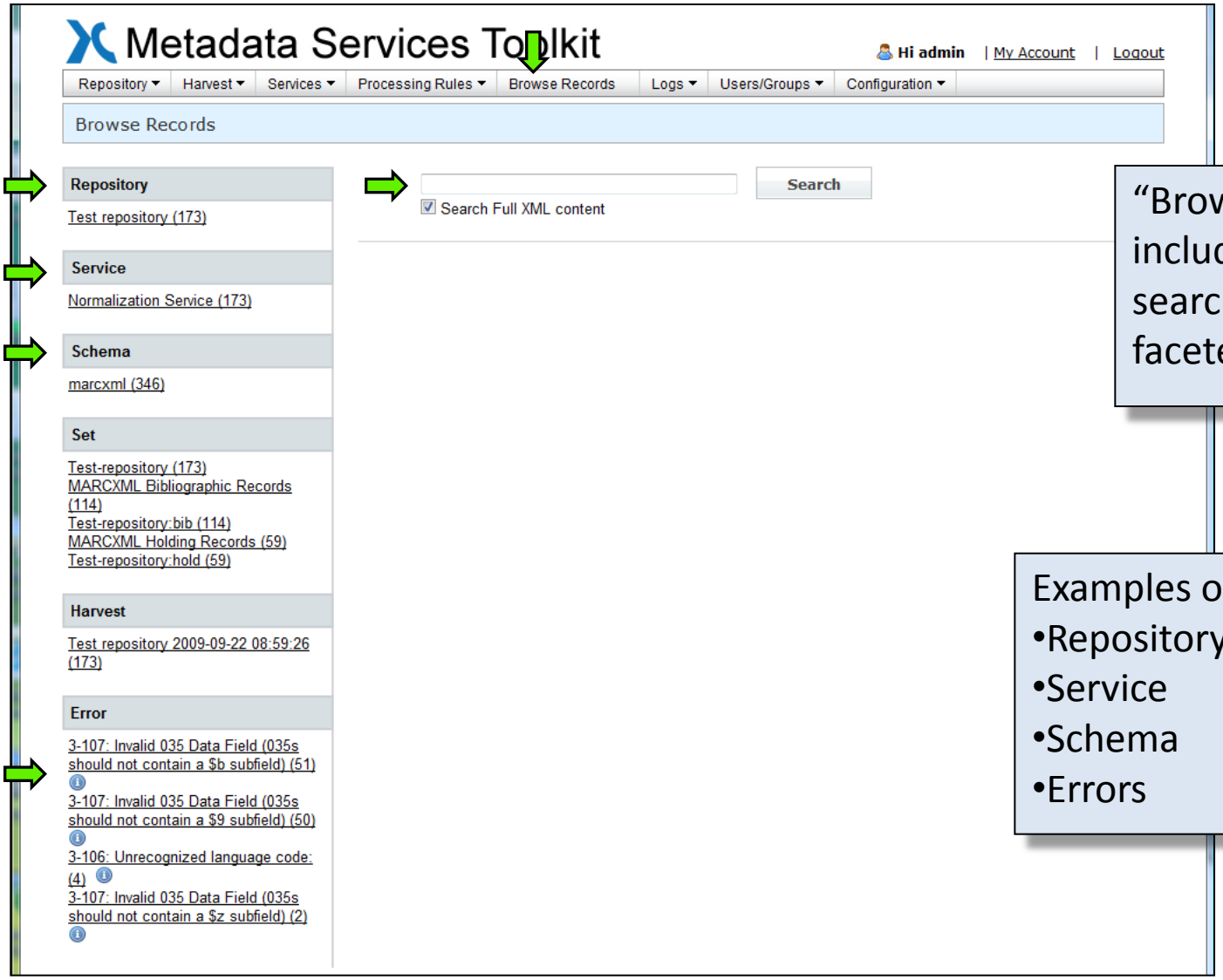
MST Service Orchestration: Add Processing Rule

Take Control.



MST: Browse Records

Take Control.



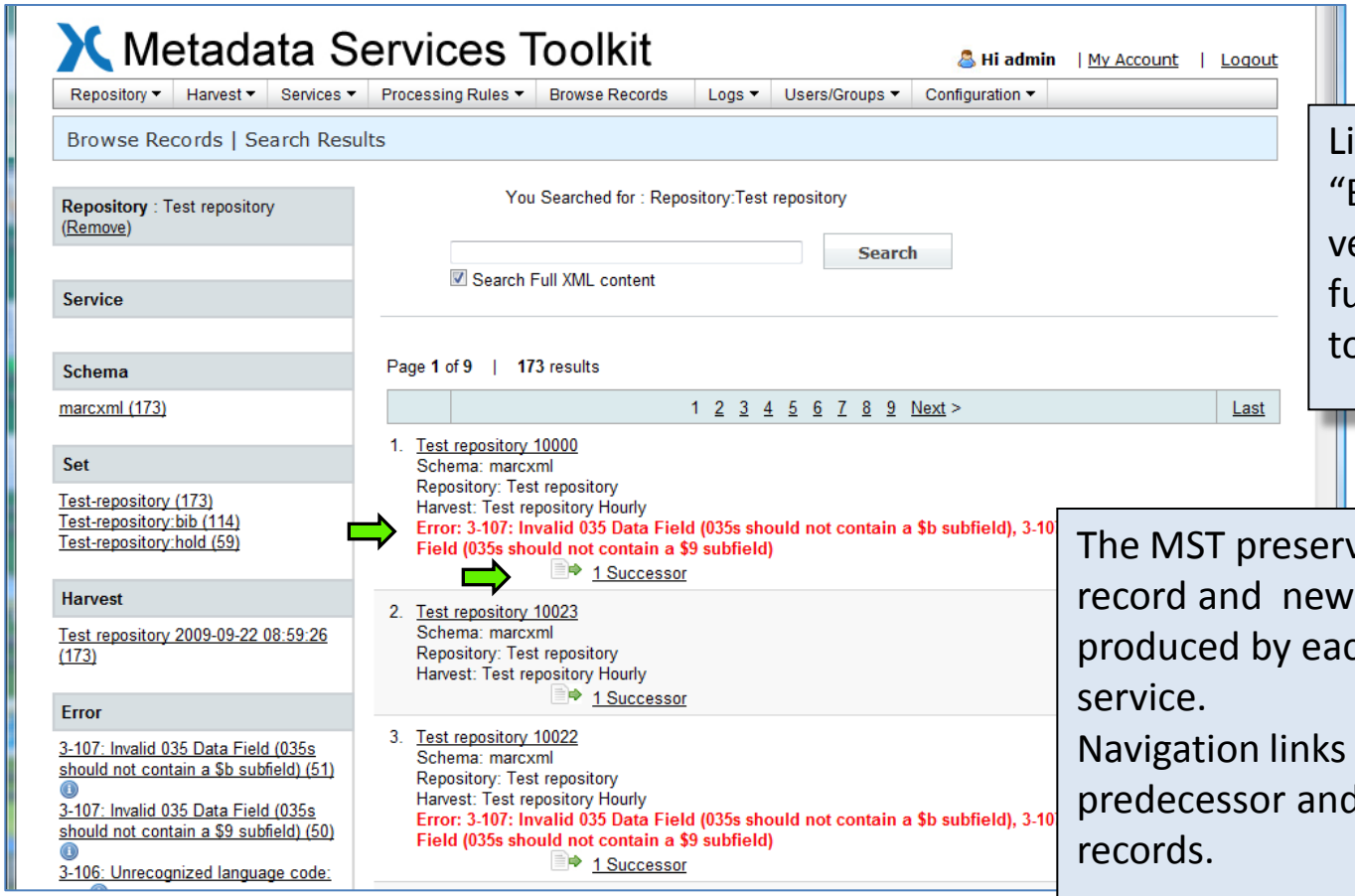
"Browse Records" includes full-text search and faceted browse .

Examples of Facets:

- Repository
- Service
- Schema
- Errors

MST: Browse Records

Take Control.



Library staff use "Browse Records" to verify that services are functioning properly and to debug any issues.

The MST preserves the original record and new records produced by each metadata service.

Navigation links take you to predecessor and successor records.

XC Software Components

Take Control.

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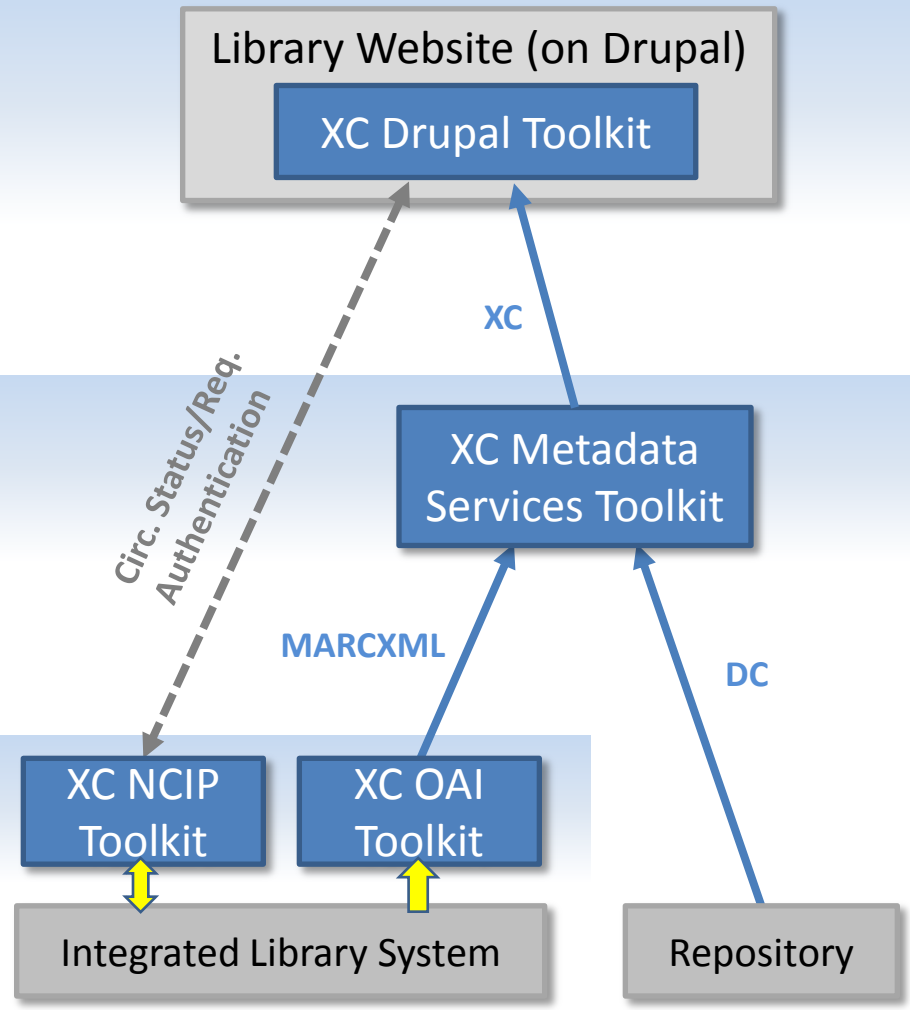


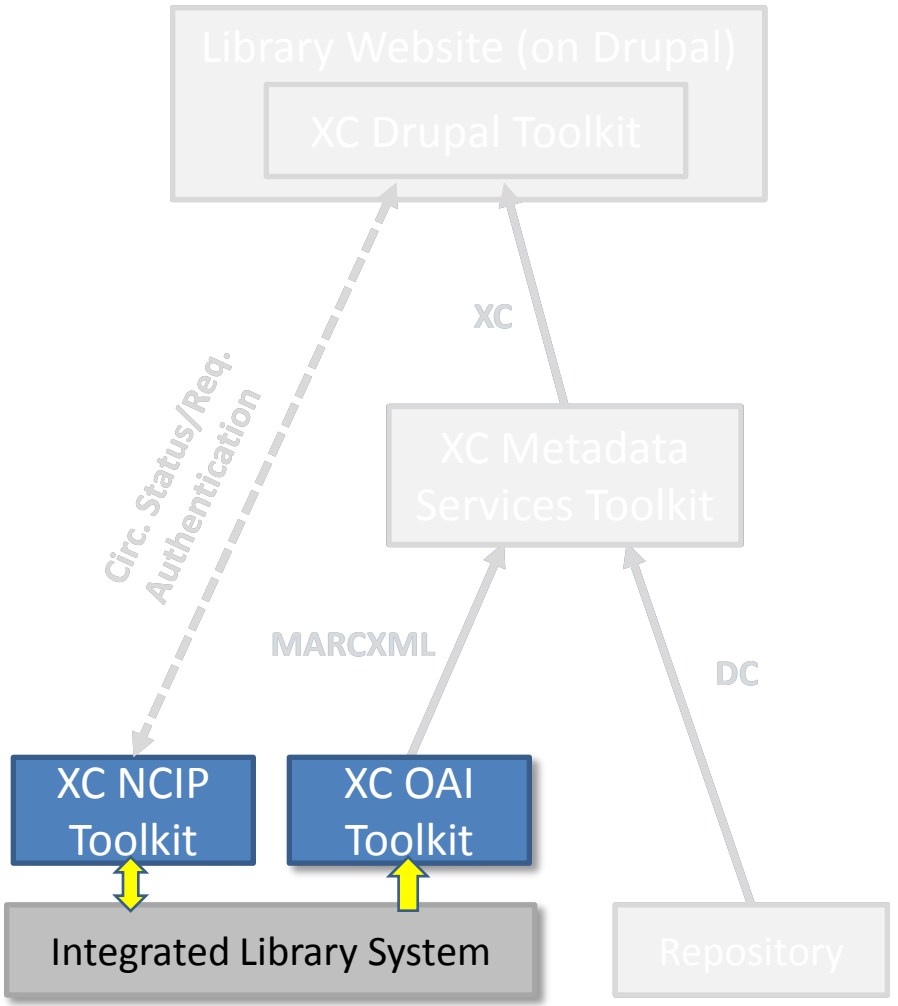
ILS Connectivity

Take Control.

XC OAI Toolkit + XC NCIP Toolkit =

Connectivity between a range of ILSs and XC software

Standards-based to enable other next-generation catalog products to work with many legacy ILSs



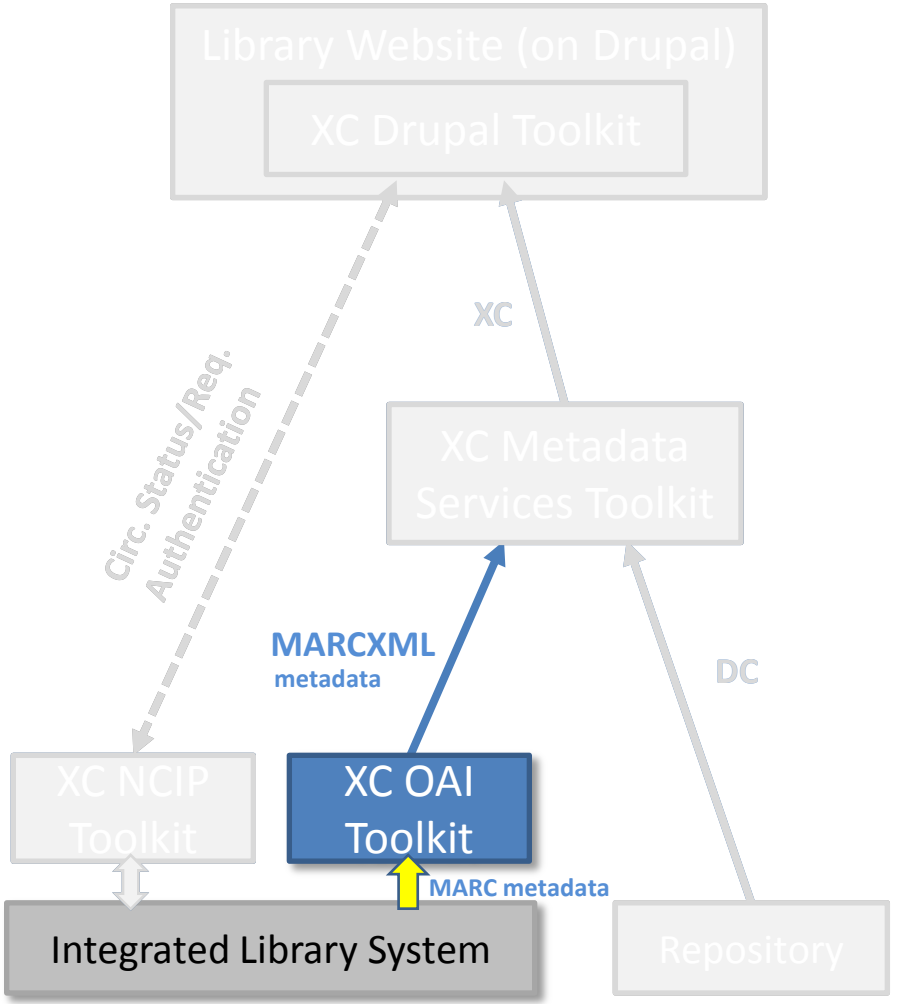
OAI Toolkit

Take Control.

Overview:

Expose ILS metadata to XC's next generation catalog interface and metadata tools.

Synchronize ongoing changes in ILS records with XC software automatically.



OAI Toolkit: Compatibility

Take Control.

Compatibility:

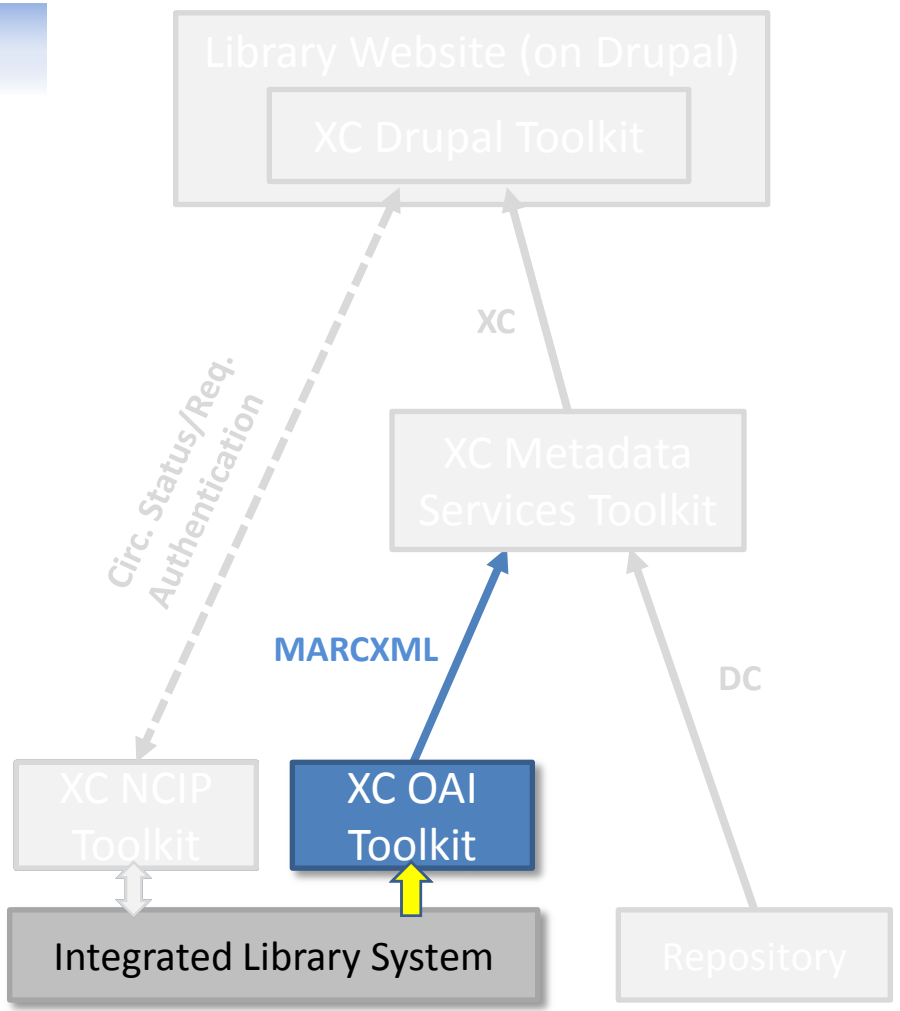
The XC OAI Toolkit works with virtually any ILS that includes MARC export capabilities.

Voyager ILS	Aleph ILS	NTT ILS
III ILS	III/Oracle	...

ILS system administrators can program the OAI Toolkit with a familiar scripting language.

No Java programming is required to make the OAI Toolkit work with a particular ILS.

ILS Export Script-writers Manual



NCIP Toolkit

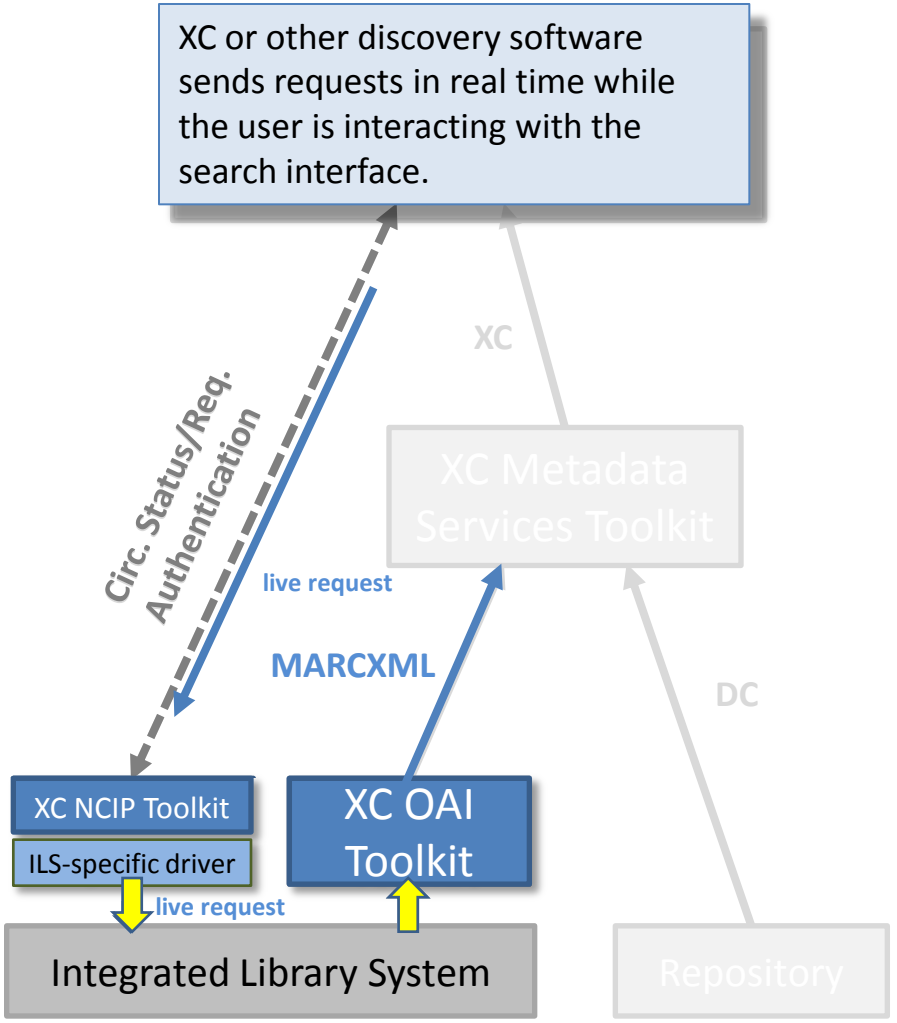
Take Control.

Overview

Enable XC's next generation catalog interface access to ILS authentication, circulation and patron services.

Example Requests

- Circulation status lookup
- Renew an item
- Lookup patron information



NCIP Toolkit: Compatibility

Take Control.

Compatibility:

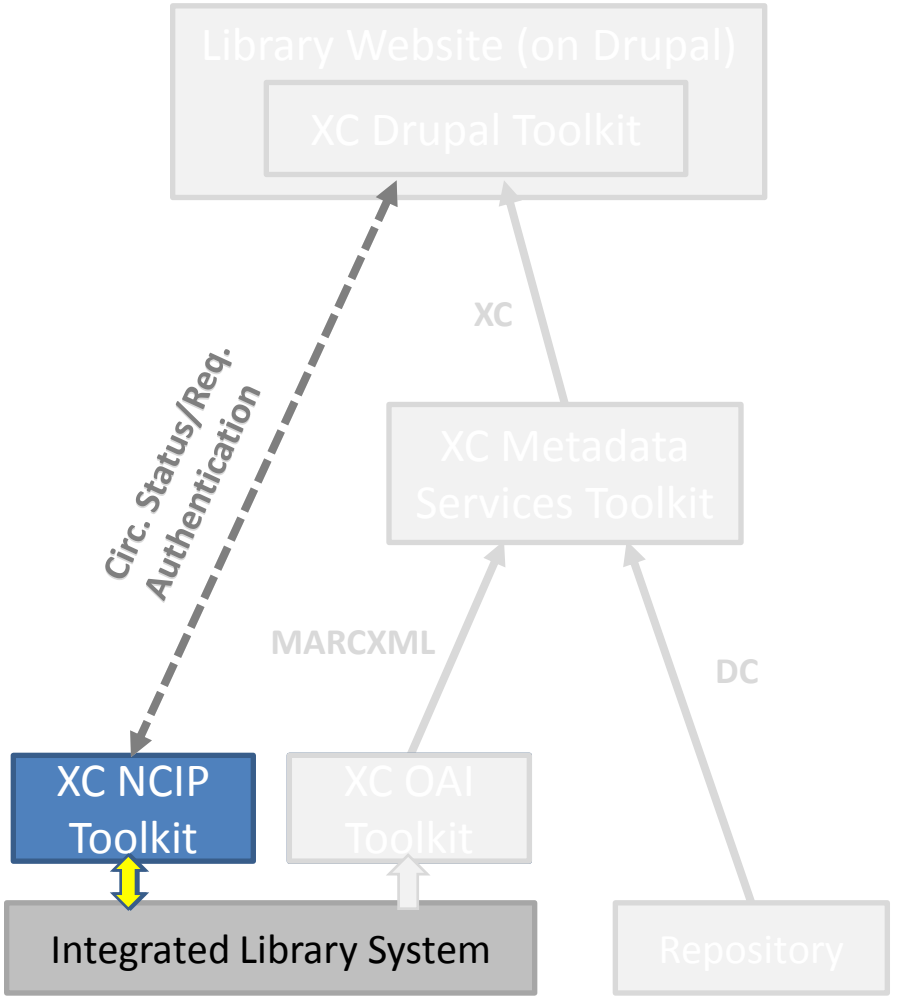
The XC NCIP Toolkit works with many Integrated Library Systems.

Voyager ILS	Aleph ILS	NTT ILS
III ILS	III/Oracle	...

Build your own Java driver to allow the NCIP Toolkit to support an additional ILS.

The NCIP Toolkit allows developers to focus on interfacing with their ILS rather than learning the details of the NCIP protocol.

NCIP Developer Manual



Getting Started with XC Software

Take Control.

- Download XC software at www.eXtensibleCatalog.org
- Post bugs, questions, enhancement requests to XC Google Code or Drupal software sites
- New XC website: sign up for a mailing list
  - Announcements
  - General Discussion
  - Developer Discussion
- Become an eXtensible Catalog Organization (XCO) Sponsor
- Apply for invitation to XCO Meeting, May 6, 2010 Charlotte, NC

Download XC software at

eXtensibleCatalog.org