

Alma

How To Publish to an External System Using the Generic Publishing Profile and OAI

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Publish to an External System Using the Generic Publishing Profile and OAI

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Introduction

- It is possible in Alma to create a publishing profile based on specific institutional needs.
- The profile can:
 - Be customized to run on a specific logical set
 - Have a normalization routine run on all published records
 - Include inventory data expanded into bibliographic data from both physical and electronic inventory



Introduction

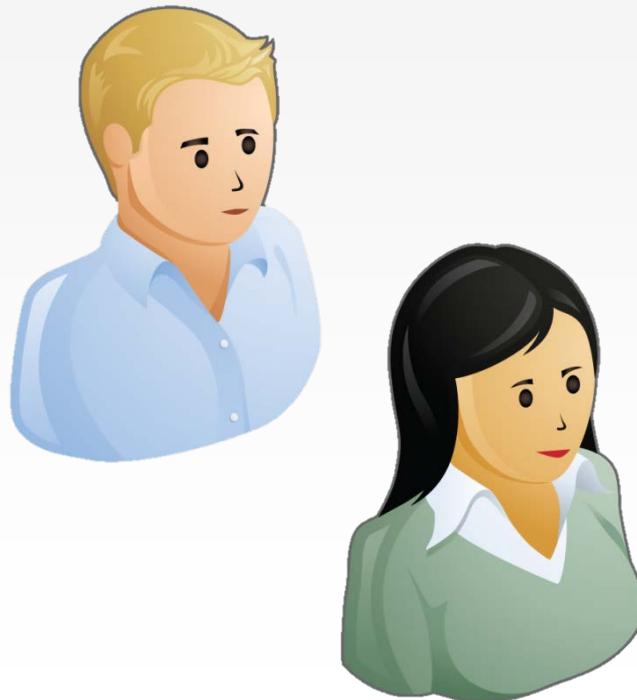
- The data is published incrementally and can be done:
 - To an actual file (MARC binary or MARC xml)
 - Via OAI-PMH
- In other words, rather than creating a separate “hard-coded” publishing profile for each separate system, Alma provides a mechanism whereby specific aspects of a publishing profile can be customized.

Introduction

- Thus each institution essentially can make its own publishing profile.
- In this presentation, we will make a sample profile called “London Library”.

Required Permissions

- The following roles can publish to an external system using the generic publishing profile and OAI:



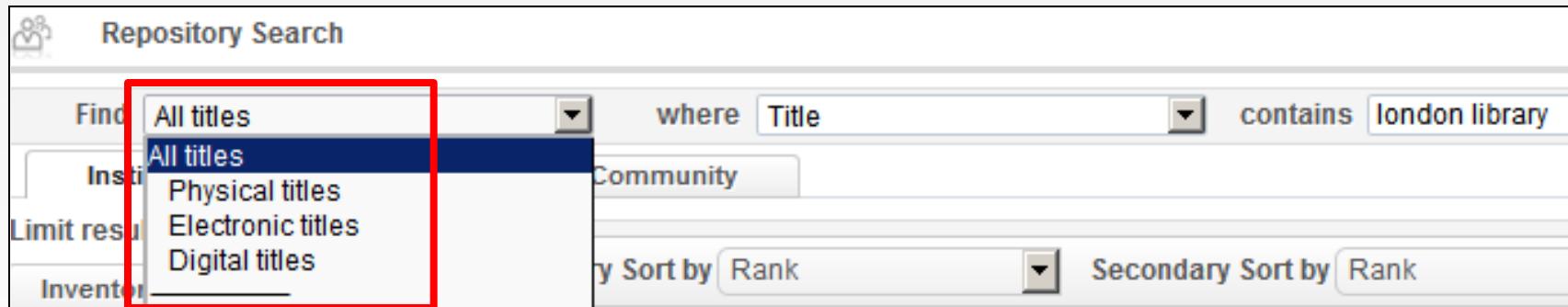
- Cataloging Administrator
- General System Administrator

Initial Setup

- The first step is to create a logical or itemized set (or identify an existing set) that includes all records to be published.
- A typical set is “all records that are not suppressed”.
- It can be named “tag suppressed equals false”.
- We will make a set where word from title is “London library” and the record is not suppressed.

Initial Setup

- The set may be of type “All Titles” and other “titles” sets.



Initial Setup

The Search

Advanced Search

Find All titles

Add conditions

All titles

Find Title Contains Keywords London Library

And Tag Suppressed Equals No

Clear conditions

The Set



Initial Setup

- The second step is to create or identify a normalization routine that you want to run on the records as they are published.
- This routine is called “Remove 9XX and add YILIS”. It removes all local 9XX fields and then adds a 900 field with the text “From YILIS Institute”.

```
Remove 9XX and add YILIS
rule "Remove 9XX and add YILIS"
when
  (TRUE)
then
  removeField "9*"
  addField "900.a.From YILIS Institute"
end
```

Initial Setup

- The rule (or rules) are then added to a normalization process.
- This is because in the publishing profile, only a process may be chosen (not the actual rule).
- Process “Remove 9XX and add YILIS”.

The screenshot shows a software interface for defining a process. At the top, there's a navigation bar with tabs: 'Process Details' (which is highlighted with a red box), 'General Information', 'Task List', and 'Task Parameters'. Below the tabs, there are two main sections: 'Business Entity' (set to 'Bibliographic title') and 'Type' (set to 'Marc 21 Bib normalization'). Under 'Business Entity', there's a field labeled 'Name' containing the value 'Remove 9XX and add YILIS', which is also highlighted with a red box. At the bottom of the screen, there's a section titled 'Marc Drool Normalization' with a dropdown menu. Inside this menu, there's a field labeled 'Drools File Key *' followed by the value 'Remove 9XX and add YILIS', which is also highlighted with a red box.

Initial Setup

- The third step is to add the profile.
- It uses the set and normalization routine from steps one and two.
- Select Resource Management Configuration Menu > Record Export > Publishing profiles > Add profile > Export Profile.



Initial Setup

- The profile details:

The screenshot shows the 'Profile Details' tab selected in a software interface. The 'Profile Name' field is set to 'London Library'. The 'Status' is 'Active'. The 'Scheduling' is set to 'On the 01 of every month'. The 'Content' section shows a 'Set name' of 'London Library not suppressed'. The 'Publishing Protocol' section shows an 'FTP configuration' of 'ftp.exlibris.co.il'. The 'Files Configuration' section shows a 'MARC output format' of 'MARC21 XML'. A red box highlights the 'Profile Name' field, which is annotated with 'The set which will be published'. A red arrow points from the 'Scheduling' field to the 'Set name' field, which is annotated with 'Will be published once a month'. Another red arrow points from the 'FTP configuration' field to the 'Files Configuration' section, which is annotated with 'FTP server where output will be located'. A red arrow points from the 'MARC output format' field to the 'Files Configuration' section, which is annotated with 'Results can be in Marc or Marc xml'.

Profile Details

Profile Name * London Library

Profile Description

The set which will be published

Status Active Inactive

Scheduling On the 01 of every month

Email Notifications

Will be published once a month

Content

Set name * London Library not suppressed

FTP server where output will be located

Publishing Protocol

FTP configuration * ftp.exlibris.co.il

Files Configuration

Single File Configuration

MARC output format MARC21 XML

Compressed File Configuration

Compressed file name prefix * LL

Results can be in Marc or Marc xml

Initial Setup

- The profile data enrichment:

The screenshot shows a software interface for library management, specifically focusing on profile data enrichment. At the top, there are three tabs: Profile Details, Data Enrichment, and OAI Publishing. The Data Enrichment tab is active.

Bibliographic Normalization: A button labeled "Remove 9XX and add YILIS normalization rules" is highlighted with a red arrow pointing to it from the text "The normalization process".

Physical Inventory Enrichement: A checkbox labeled "Add Holdings information" is checked. Below it is a "Quick Add" section with fields for Holding Tag, Holding Subfield, Bib Tag, and Bib Subfield. A red arrow points from the text "holding field 852 subfields b, c and h are defined to transfer to the bibliographic record also as 852 b, c and h" to the Bib Tag and Bib Subfield fields.

Holding Information Table: A table lists holdings for tag 852. The columns are Holding Tag, Holding Subfield, Bib Tag, and Bib Subfield. The data is as follows:

Holding Tag	Holding Subfield	Bib Tag	Bib Subfield
1 852	b	852	b
2 852	c	852	c
3 852	h		

Electronic Inventory Enrichement: A checkbox labeled "Add Electronic Portfolio Information" is checked. Below it are fields for a repeatable field (859), Access URL subfield (u), Collection Name subfield (a), Interface Name subfield (b), and Coverage Statement subfield (c). A red arrow points from the text "Here portfolio information will be published as bibliographic field 859" to the Link Resolver Base URL field, which contains the URL <http://www.university.com/>.

Initial Setup

- OAI Publishing information
- Here we define “Enable Publishing to OAI Data Provider” with:
 - Set Spec = LLSS
 - Set name = LLSN

 Publishing Profile Details

Profile Id	1689708730001121	Profile Name	London Library
Profile Details	Data Enrichment	OAI Publishing	
OAI Publishing			
Enable Publishing to OAI Provider	<input checked="" type="checkbox"/>		
Set Spec *	LLSS		
Set Name *	LLSN		
Metadata Prefix *	marc21		

The Publishing Results

- The publishing works as follows:
- The first time it runs, all records in the logical set are published.
- Each subsequent time it runs, the following are published:
 - New records in the logical set
 - Updated records in the logical set
 - Deleted records that were in the logical set

The Publishing Results

- Deleted Records include records that still exist (are not deleted) but are no longer part of the logical set.
- The deleted and no longer part of the logical set records are published with a "d" in position 5 of the LDR so that the receiving system knows they are deleted.

The Publishing Results

- The results appear on the ftp server:

/MILIS/publish		
Name	Ext	Size
LL_IEP_new_1405350372868_1689866970001121.tar.gz		12,152 B

- This is the first publishing.
- Here the file name begins “LL”.
- The prefix LL in the file name comes from here in the profile.

Files Configuration

Single File Configuration

MARC output format MARC21 XML

Compressed File Configuration

Compressed file name prefix * LL

The Publishing Results

- After opening the tar.gz file there are many MARC xml files:

Files Configuration

Single File Configuration

MARC output format **MARC21 XML**

Compressed File Configuration

Compressed file name prefix * **LL**

Name
LL_IEP_new_1405350372868_1689866970001121.tar
LL_IEP_new_1405350372868_1689866970001121.tar.gz
2120496860001121.xml
2120889940001121.xml
2121887600001121.xml
2122823410001121.xml
2123037110001121.xml
2123100240001121.xml
2123306790001121.xml
2124242260001121.xml
2124416950001121.xml
2124438530001121.xml
2124442710001121.xml
2126887970001121.xml
2127344630001121.xml
2127648630001121.xml

The Publishing Results

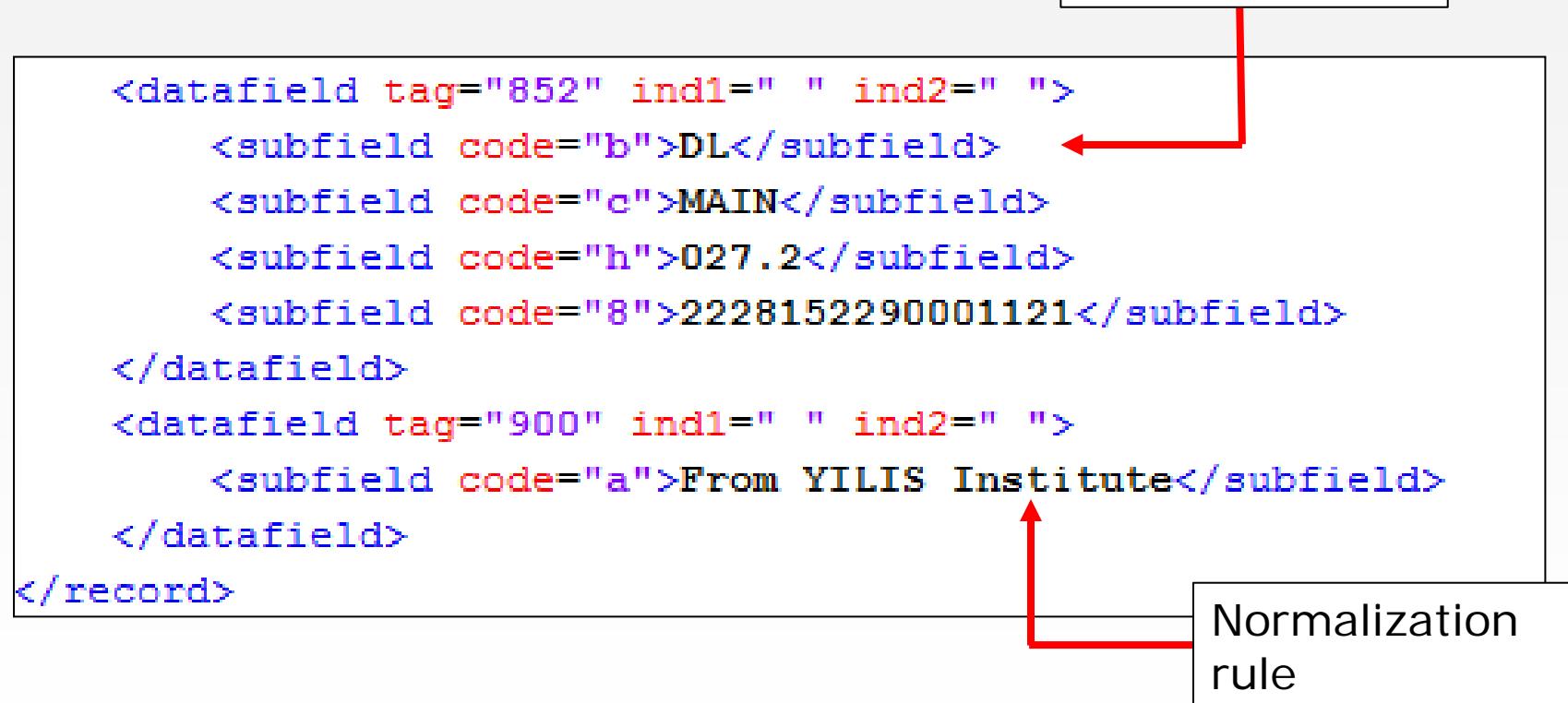
For Physical Inventory:

On the next slide we see that the results include:

- The normalization rule specific in the “Bibliographic Normalization” section of the “Data Enrichment” tab of the publishing profile.
- The holdings data as specific in the rule specific in the “Physical Inventory Enrichment” section of the “Data Enrichment” tab of the publishing profile.

The Publishing Results

- Holding information:



The Publishing Results

For Electronic Inventory:

In the next slide we see that the results include:

- The normalization rule specific in the “Bibliographic Normalization” section of the “Data Enrichment” tab of the publishing profile.
- The portfolio data as specific in the rule specific in the “Electronic Inventory Enrichment” section of the “Data Enrichment” tab of the publishing profile.

The Publishing Results

- Holding information:

Portfolio data

```
<datafield tag="859" ind1="" ind2="">
    <subfield code="b">Free E- Journals</subfield>
    <subfield code="a">Free E- Journals</subfield>
    <subfield code="u">
        http://www.university.com/?u.ignore_date_coverage=true&
        rft.mms_id=9911756590001121</subfield>
    </datafield>
    <datafield tag="900" ind1="" ind2="">
        <subfield code="a">From YILIS Institute</subfield>
    </datafield>
</record>
```

Normalization rule

Ongoing Publishing

- Now a new record with physical inventory is added which meets the criteria of the set:

Working on -An in depth study of (9920969241401121) , Created by exl_support (14/07/2014 16:52:50 BST)	
LDR	00282nam#a2200097#u#4500
001	9920969241401121
005	20140714165250.0
008	140714s2013####xx##### #####000#0#eng#d
100 1	\$\$a Kortick, Yoel \$\$d 1971-
245 1 3	\$\$a An in depth study of the London library in the modern era
650 0	\$\$a Libraries \$\$z London

Ongoing Publishing

- A portfolio in the set is edited (updated):

2  [Transactions of the Linnean Society.](#)

Identifier: 1945-9432 1945-9432 Imprint: London :, The Society, Vol. 1-

Type: Journal Language: English Record number: (CONSER) 07013358

Availability: [Electronic version](#) at Botanicus: Full Text

[Electronic Collection List](#) | [View It](#) | [Order](#) | [Document Delivery](#) | [Publishing information](#) | [More info](#)

Ongoing Publishing

- As a result two new files are created in the ftp server:

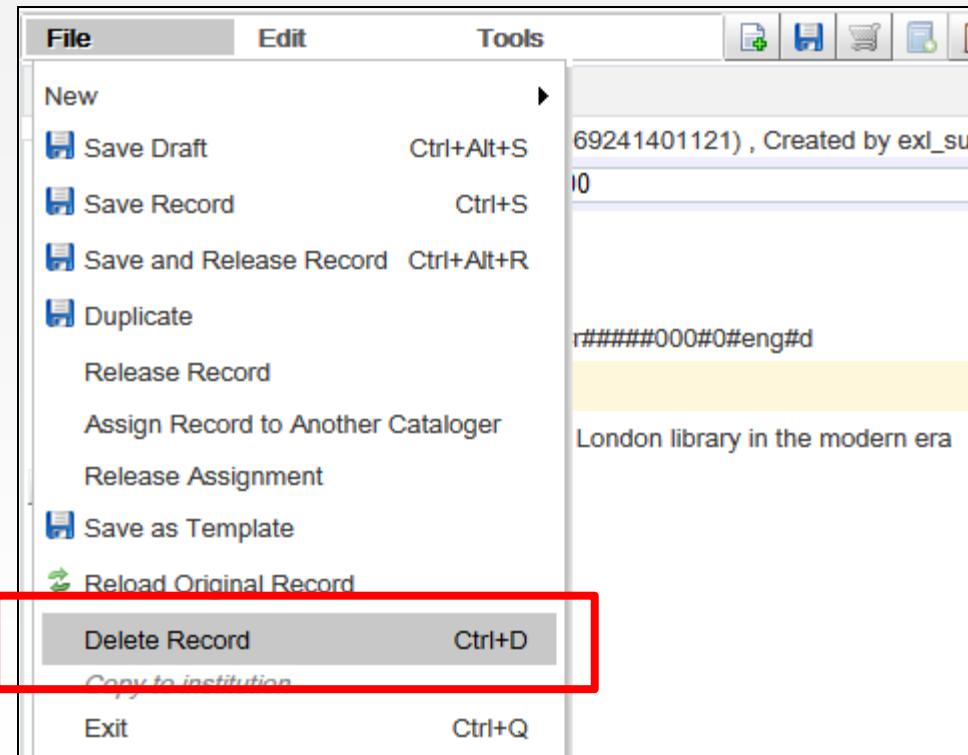
Tar.gz file with new records includes "new" in file name

Name	Ext
LL_IEP_new_1405353447158_1689882940001121.tar.gz	
LL_IEE_updated_1405353447861_1689882940001121.tar.gz	

Tar.gz file with updated records includes "updated" in the file name

Ongoing Publishing

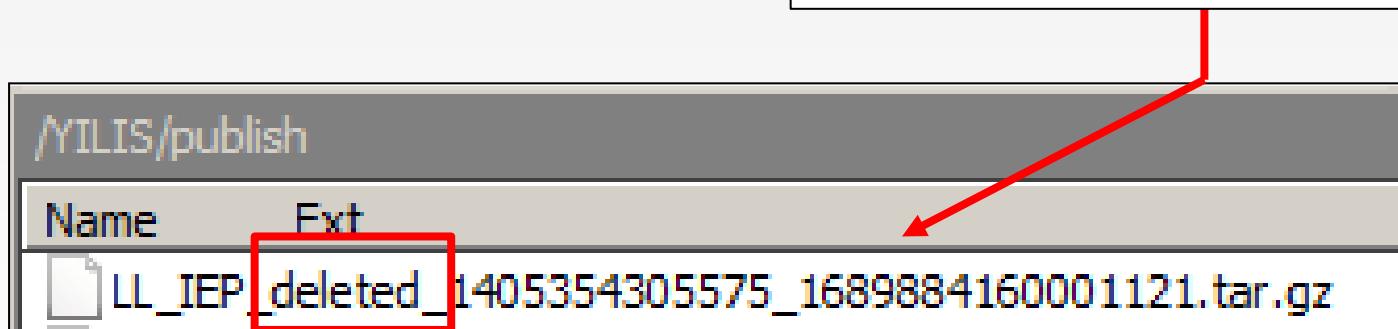
- Now one of the record is deleted:



Ongoing Publishing

- After the publishing the deleted record is in the results:

Tar.gz file with deleted records includes "deleted" in the file name



Name	Ext
LL_IEP_deleted_1405354305575_1689884160001121	.tar.gz

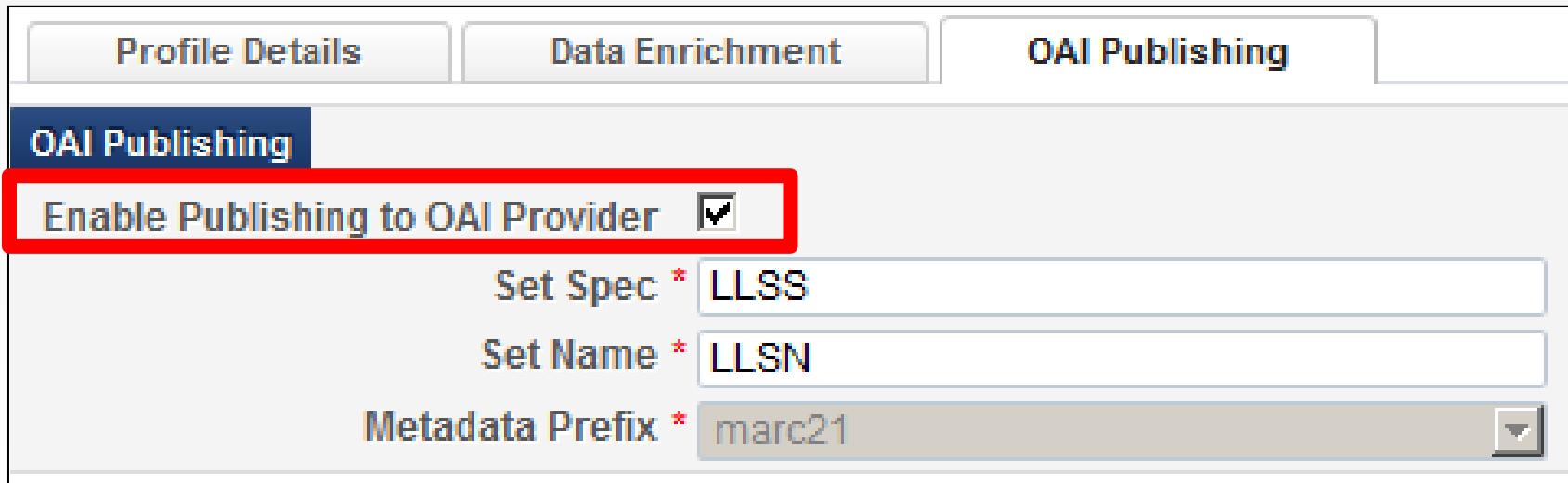
Ongoing Publishing

- The deleted record publishes with a "d" in position 5 of the LDR:

```
<?xml version="1.0" encoding="UTF-8"?>
<record xmlns="http://www.loc.gov/MARC21/slim" xmlns:xsi="http://www.w3.org/2001
http://www.loc.gov/standards/marcxml/schema/MARC21slim.xsd" >
    <leader>00282dam a2200097 u 4500</leader>
    <controlfield tag="001">9920969241401121</controlfield>
    <controlfield tag="005">20140714165250.0</controlfield>
    <controlfield tag="008">140714s2013     xx          r      000 0 eng d</controlfie
    <datafield tag="100" ind1="1" ind2=" " >
        <subfield code="a">Kortick, Yoel</subfield>
        <subfield code="d">1971-</subfield>
    </datafield>
    <datafield tag="245" ind1="1" ind2="3" >
        <subfield code="a">An in depth study of the London library in the modern
    </datafield>
    <datafield tag="650" ind1=" " ind2="0" >
        <subfield code="a">Libraries</subfield>
        <subfield code="z">London</subfield>
    </datafield>
</record>
```

OAI Setup

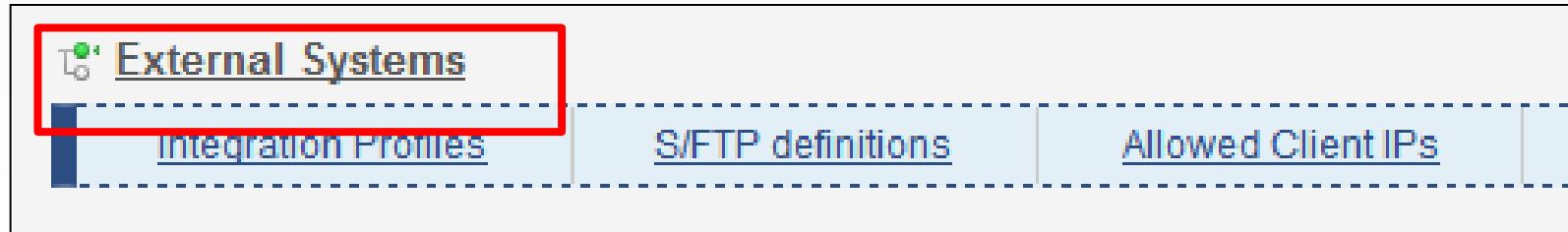
- In the generic publishing profile we defined “yes” (check box checked) for “Enable Publishing to OAI Provider”:



Profile Details	Data Enrichment	OAI Publishing
OAI Publishing		
Enable Publishing to OAI Provider <input checked="" type="checkbox"/>		
Set Spec * LLSS		
Set Name * LLSN		
Metadata Prefix * marc21		

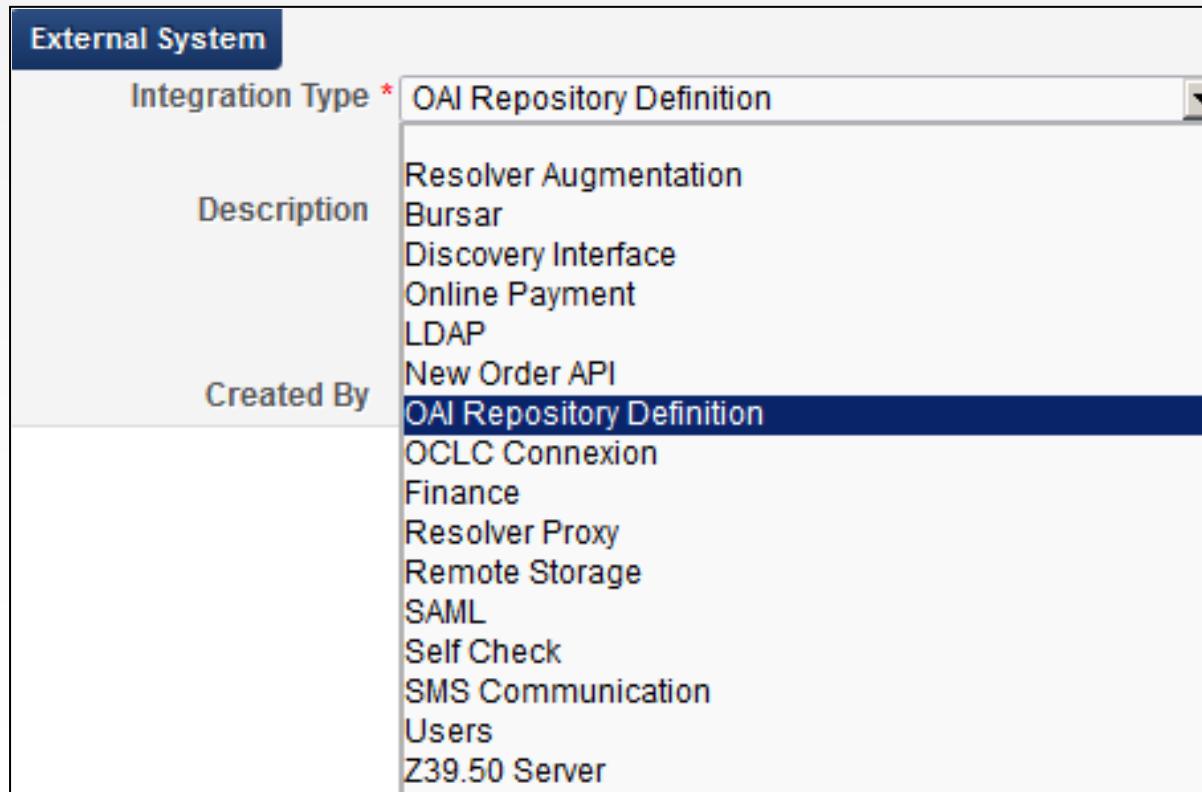
OAI Setup

- In order to be able to view the records in OAI we need to first define an integration profile of type OAI.
- This is done at: Alma Menu > Administration > General Configuration > Configuration Menu > External Systems > Integration Profiles.



OAI Setup

- The Integration Type should be “OAI Repository Definition”:



OAI Setup

- The following is a sample working profile of type “OAI Repository Definition”:

Code	OAI_DEFINITION	Name	OAI_DEFINITION	Integration Type	OAI Repository Definition
General Information		Actions		Contact Info	
Actions					
OAI Repository Definitions					
Active * <input checked="" type="radio"/> Active <input type="radio"/> Non Active					
Repository Name * <input type="text" value="UEL OAI Repository"/>					
Repository Base URL <input type="text" value="https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request"/>					
Protocol Version 2.0					
Admin Email * <input type="text" value="yoel.kortick@exlibrisgroup.com"/>					
Earliest Datestamp * <input type="text" value="01/01/2014"/> Date Format is dd/MM/yyyy					
Deleted Record transient					
Granularity YYYY-MM-DDThh:mm:ssZ					
Metadata Prefixes					
Allowed IPs					
OAI Schema	oai		Delimiter :	Repository Identifier * <input type="text" value="urm_publish"/>	
Max bulk size for ListIdentifiers * request	<input type="text" value="100"/>		Up to 900 Identifiers		
Max bulk size for ListRecords * request	<input type="text" value="100"/>		Up to 900 Records		

OAI Setup

- The following is a sample working profile of type “OAI Repository Definition”:

Code	OAI_DEFINITION	Name	OAI_DEFINITION	Integration Type	OAI Repository Definition
General Information		Actions		Contact Info	
Actions					
OAI Repository Definitions					
<input checked="" type="radio"/> Active <input type="radio"/> Non Active					
Repository Name * UEL OAI Repository					
Repository Base URL https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request					
Protocol Version 2.0					
Admin Email * yoel.kortick@exlibrisgroup.com					
Earliest Datestamp * 01/01/2014					
Date Format is dd/MM/yyyy					
Deleted Record transient					
Granularity YYYY-MM-DDThh:mm:ssZ					
<u>Metadata Prefixes</u>					
<u>Allowed IPs</u>					
OAI Schema oai					
Max bulk size for ListIdentifiers request * 100					
Up to 900 Identifiers					
Max bulk size for ListRecords request * 100					
Up to 900 Records					
Delimiter :					
Repository Identifier * urm_publish					
Explained on next slide					

OAI Setup

- “Metadata Prefixes” allows the user to define which Metadata Prefixes are enabled for OAI:

Granularity YYYY-MM-DDThh:mm:ssZ

[Metadata Prefixes](#)

[Allowed IPs](#)

Table Information

Sub System	REPOSITORY	Table Name	OAI_METADATA_FORMATS
Updated By	-	Last Updated	-
Table Description	OAI Metadata Formats		

Mapping Table Rows

	Enabled	Metadata Prefix	Metadata Schema	Metadata Namespace
1	✓	marc21	http://www.loc.gov/standards/marcxml/	http://www.loc.gov/MARC21/slim

OAI Setup

- “Allowed” IPs allows the user to define which IPs can access the data via OAI.
- IP Match Criteria should be
 1. A Specific IP Address
 2. An IP Range
 - Two valid IP addresses separated with hyphen (-). For Example:
255.255.255.255 or 1.1.1.1-
255.255.255.255

OAI Setup

Granularity	YYYY-MM-DDThh:mm:ssZ
Metadata Prefixes	
Allowed IPs	

 **Mapping Table**

You are configuring: University of East London

Table Information

Sub System	REPOSITORY	Table Name	OAIips
Updated By	exl_support	Last Updated	16/07/2014
Table Description	Allowed OAI IP values for ExLibris internal API's authentication		

Mapping Table Rows

	Enabled	IP description	IP Version	IP Match Criteria
1		All IPs	IPv4	1.1.1.1-255.255.255.255

Open to all IPs



OAI Retrieval

- Now that both the publishing profile and the OAI profile have been defined, and the publishing profile has run, we may view the resulting records via OAI.
- All OAI URLs will be with the “Repository Base URL” as appears in the OAI profile.

General Information	Actions	Contact Info
Actions		
OAI Repository Definitions		
<input checked="" type="radio"/> Active <input type="radio"/> Non Active		
Repository Name * UFL_OAI Repository		
Repository Base URL https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request		
Protocol Version 2.0		

OAI Retrieval

- Let's look now at the six OAI verb requests:
 - Identify - Retrieves information about the repository.
 - ListSets - Retrieves the list of sets from the repository.
 - ListMetadataFormats - Retrieves available metadata formats from the repository.

OAI Retrieval

- ListIdentifiers - Retrieves identifiers of records in the repository.
- GetRecord - Retrieves a specified record in a specified format from the repository.
- ListRecords - Retrieves records from the repository.
- For more about these verbs and the related qualifiers see:

<http://www.openarchives.org/OAI/openarchivesprotocol.htm>

OAI Retrieval

- For example (we will view these on the next slides):
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=Identify
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListSets
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListMetadataFormats
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListIdentifiers&metadataPrefix=marc21&set=LLSS
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=GetRecord&identifier=oai:urm_publish:2120889940001121&metadataPrefix=marc21
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListRecords&metadataPrefix=marc21&set=LLSS
- https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListRecords&metadataPrefix=marc21&set=LLSS&from=2014-07-18T03:06:13Z&until=2014-07-20T03:06:13Z

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=Identify](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=Identify)

```
<?xml version="1.0" encoding="UTF-8"?>
- <OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/PMH.xsd">
  <responseDate>2014-07-16T02:02:06Z</responseDate>
  <request verb="Identify">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request</request>
  - <Identify>
    <repositoryName>UEL OAI Repository</repositoryName>
    <baseURL>https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request</baseURL>
    <protocolVersion>2.0</protocolVersion>
    <adminEmail>yoel.kortick@exlibrisgroup.com</adminEmail>
    <earliestDatestamp>2014-01-01</earliestDatestamp>
    <deletedRecord>transient</deletedRecord>
    <granularity>YYYY-MM-DDThh:mm:ssZ</granularity>
    - <description>
      - <oai-identifier xmlns="http://www.openarchives.org/OAI/2.0/oai-identifier">
        <scheme>oai</scheme>
        <repositoryIdentifier>urm_publish</repositoryIdentifier>
        <delimiter>:</delimiter>
        <sampleIdentifier>oai:urm_publish:12345678</sampleIdentifier>
      </oai-identifier>
    </description>
  </Identify>
</OAI-PMH>
```

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=ListSets](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListSets)

```
<?xml version="1.0" encoding="UTF-8"?>
- <OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/PMH.xsd">
  <responseDate>2014-07-16T02:03:36Z</responseDate>
  <request verb="ListSets">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request</request>
  - <ListSets>
    - <set>
      <setSpec>LLSS</setSpec>
      <setName>LLSN</setName>
    </set>
  </ListSets>
</OAI-PMH>
```

This is what we defined in the publishing profile

Publishing Profile Details

Profile Id	1689708730001121	
Profile Details	Data Enrichment	OAI Publishing
OAI Publishing		
Enable Publishing to OAI Provider <input checked="" type="checkbox"/>		
Set Spec * LLSS		
Set Name * LLSN		
Metadata Prefix * marc21		

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=ListMetadataFormats](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListMetadataFormats)

```
<?xml version="1.0" encoding="UTF-8"?>
- <OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
    <responseDate>2014-07-16T02:07:20Z</responseDate>
    <request verb="ListMetadataFormats">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListMetadataFormats</request>
    - <ListMetadataFormats>
        - <metadataFormat>
            <metadataPrefix>marc21</metadataPrefix>
            <schema>http://www.loc.gov/standards/marcxml/schema/MARC21slim.xsd</schema>
            <metadataNamespace>http://www.loc.gov/MARC21/slim</metadataNamespace>
        </metadataFormat>
    </ListMetadataFormats>
</OAI-PMH>
```

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=ListIdentifiers&metadataPrefix=marc21&set=LLSS](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListIdentifiers&metadataPrefix=marc21&set=LLSS)

```
<?xml version="1.0" encoding="UTF-8"?>
<OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2014-07-20T05:20:21Z</responseDate>
  <request set="LLSS" metadataPrefix="marc21" verb="ListIdentifiers">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListIdentifiers&metadataPrefix=marc21&set=LLSS</request>
  - <ListIdentifiers>
    - <header>
      <identifier>oai:urm_publish:2120496860001121</identifier>
      <datestamp>2014-07-19T03:06:13Z</datestamp>
      <setSpec>LLSS</setSpec>
    </header>
    - <header>
      <identifier>oai:urm_publish:2120889940001121</identifier>
      <datestamp>2014-07-19T03:06:13Z</datestamp>
      <setSpec>LLSS</setSpec>
    </header>
    - <header>
      <identifier>oai:urm_publish:2121887600001121</identifier>
      <datestamp>2014-07-19T03:06:13Z</datestamp>
      <setSpec>LLSS</setSpec>
    </header>
    - <header>
      <identifier>oai:urm_publish:2122823410001121</identifier>
      <datestamp>2014-07-19T03:06:13Z</datestamp>
      <setSpec>LLSS</setSpec>
    </header>
    - <header>
      <identifier>oai:urm_publish:2123037110001121</identifier>
      <datestamp>2014-07-19T03:06:13Z</datestamp>
      <setSpec>LLSS</setSpec>
    </header>
    - <header>
```

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=GetRecord&identifier=oai:urm_publish:2120889940001121&m](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=GetRecord&identifier=oai:urm_publish:2120889940001121&m)

```
<?xml version="1.0" encoding="UTF-8"?>
<OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/OAI/PMH.xsd">
  <responseDate>2014-07-20T05:24:06Z</responseDate>
  <request metadataPrefix="marc21" verb="GetRecord"
    identifier="oai:urm_publish:2120889940001121">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_IN
  - <GetRecord>
    - <record>
      - <header>
        <identifier>oai:urm_publish:2120889940001121</identifier>
        <datestamp>2014-07-19T03:06:13Z</datestamp>
        <setSpec>LLSS</setSpec>
      </header>
      - <metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        - <record xmlns="http://www.loc.gov/MARC21/slim" xsi:schemaLocation="http://www.loc.gov/MAR
          http://www.loc.gov/standards/marcxml/schema/MARC21slim.xsd" xmlns:xsi="http://www.w3.or
            <leader>00000cam a2200205 a 4500</leader>
            <controlfield tag="003">UK-LoUE</controlfield>
            <controlfield tag="005">20061027154633.0</controlfield>
            <controlfield tag="008">980121s1978 xxk c 000 0 eng||</controlfield>
            <controlfield tag="001">997034080001121</controlfield>
            - <datafield tag="035" ind2="" ind1="">
              <subfield code="a">(UK-LoUE)000029943UEL01</subfield>
            </datafield>
            - <datafield tag="035" ind2="" ind1="">
              <subfield code="9">64147</subfield>
            </datafield>
            - <datafield tag="035" ind2="" ind1="">
              <subfield code="a">(UK-LoUE)x4261163</subfield>
            </datafield>
            - <datafield tag="110" ind2="" ind1="2">
              <subfield code="a">Geological Society of London.</subfield>
            </datafield>
```

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=ListRecords&metadataPrefix=marc21&set=LLSS](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListRecords&metadataPrefix=marc21&set=LLSS)

```
<?xml version="1.0" encoding="UTF-8"?>
<OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/ OAI-PMH.xsd">
  <responseDate>2014-07-20T05:11:42Z</responseDate>
  <request set="LLSS" metadataPrefix="marc21" verb="ListRecords">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request</request>
  - <ListRecords>
    - <record>
      - <header>
        <identifier>oai:urm_publish:2120496860001121</identifier>
        <datestamp>2014-07-19T03:06:13Z</datestamp>
        <setSpec>LLSS</setSpec>
      </header>
      - <metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        - <record xmlns="http://www.loc.gov/MARC21/slim" xsi:schemaLocation="http://www.loc.gov/MARC21/slim http://www.loc.gov/standards/marcxml/schema/MARC21slim.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
          <leader>00000cam a2200325 a 4500</leader>
          <controlfield tag="003">UK-LoUE</controlfield>
          <controlfield tag="005">20061027153907.0</controlfield>
          <controlfield tag="008">980121r19911990enk 000 0 eng||</controlfield>
          <controlfield tag="001">996890190001121</controlfield>
          - <datafield tag="035" ind2="" ind1="">
            <subfield code="a">(UK-LoUE)000029271UEL01</subfield>
          </datafield>
          - <datafield tag="020" ind2="" ind1="">
            <subfield code="a">0415062411</subfield>
          </datafield>
          - <datafield tag="035" ind2="" ind1="">
            <subfield code="9">62950</subfield>
          </datafield>
          - <datafield tag="035" ind2="" ind1="">
            <subfield code="9">0415062411</subfield>
          </datafield>
        </record>
      </metadata>
    </record>
  </ListRecords>
</OAI-PMH>
```

OAI Retrieval

- [https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request
?verb=ListRecords&metadataPrefix=marc21&set=LLSS&from=2014-07-18T03:06:13Z&until=2014-07-20T03:06:13Z](https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request?verb=ListRecords&metadataPrefix=marc21&set=LLSS&from=2014-07-18T03:06:13Z&until=2014-07-20T03:06:13Z)

```
<?xml version="1.0" encoding="UTF-8"?>
- <OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/" schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/PMH.xsd">
  <responseDate>2014-07-20T05:11:42Z</responseDate>
  <request set="LLSS" metadataPrefix="marc21" verb="ListRecords">https://eu.alma.exlibrisgroup.com/view/oai/44UEL_INST/request</request>
  - <ListRecords>
    - <record>
      - <header>
        <identifier>oai:urm_publish:2120496860001121</identifier>
        <datestamp>2014-07-19T03:06:13Z</datestamp>
        <setSpec>LLSS</setSpec>
      </header>
      - <metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        - <record xmlns="http://www.loc.gov/MARC21/slim" xsi:schemaLocation="http://www.loc.gov/MARC21/slim http://www.loc.gov/standards/marcxml/schema/MARC21slim.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
          <leader>00000cam a2200325 a 4500</leader>
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          - <datafield tag="035" ind2="" ind1="">
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          </datafield>
          - <datafield tag="020" ind2="" ind1="">
            <subfield code="a">0415062411</subfield>
          </datafield>
          - <datafield tag="035" ind2="" ind1="">
            <subfield code="9">62950</subfield>
          </datafield>
          - <datafield tag="035" ind2="" ind1="">
            <subfield code="9">0415062411</subfield>
          </datafield>
        </record>
      </metadata>
    </record>
  </ListRecords>
</OAI-PMH>
```