Alma Integrations with External Systems

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Document released: January 2015

Web address: http://www.exlibrisgroup.com

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Introduction

Alma integrates with external systems, such as vendor systems, Enterprise Resource Planning (ERP) systems, metadata management systems, and remote storage systems, via standard protocols, such as S/FTP.

Configuring integrations with external systems includes the following steps:

1. Handling the data transition between Alma and the external system, including mapping the exported invoices' fields to the external system fields. For details, see https://developers.exlibrisgroup.com/alma/integrations
2. Defining an external integration profile in Alma, explained in this guide.

This guide describes how to configure integrations between Alma and external systems, and is organized according to the following areas: Acquisitions, Resource Management, Fulfillment, User Management, and Administration.

NOTES:

- In many cases, this guide refers to instructions that are located in other sections of the core Alma documentation. If you are working with the online version, references to other sections are direct links. If you are working with the PDF version, you will need to open these references independently.
- If you are working with Alma in conjunction with bX, see **bX** on page **181**.
- If you are working with Alma in conjunction with MetaLib, you must configure your link resolver in MetaLib. For instructions, refer to the *MetaLib System Configuration and Administration Guide*.

2

Acquisitions

This section includes:

Financial Systems

PERMISSIONS:

To configure integration with financial systems (such as ERP systems), you must have the following role:

- General System Administrator

The Alma acquisitions process includes ordering and receiving materials from vendors, which involves the handling of both orders and invoices by vendors. This can be managed in the institution's financial system. For details on the integration between Alma and financial systems (including XSD and XML samples), see https://developers.exlibrisgroup.com/alma/integrations/finance.

To configure the export and import of invoices:

1 Configure an S/FTP connection to be used by Alma and the financial system, as described in **Configuring S/FTP Definitions** in the *Alma Administration Guide*. (If you are working in a sandbox environment or pre-"Go Live" production environment, ensure that the S/FTP connection you configured is defined as an allowed S/FTP connection for your institution, as described in **Configuring Allowed S/FTP Connections** in the *Alma Administration Guide*.)

2 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.

3 Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.

4 Perform the following actions on this page:

a Enter a code and name for the profile you are defining.

b From the **Integration type** drop-down list, select **Finance**.

c From the **S/FTP connection type** drop-down list, select the name of the FTP connection that you defined in Step 1.

d Indicate the type of financial system with which you are integrating (for Ex Libris' informational purposes). Note that this is mandatory.

e Optionally, enter a description of the integration you are configuring.

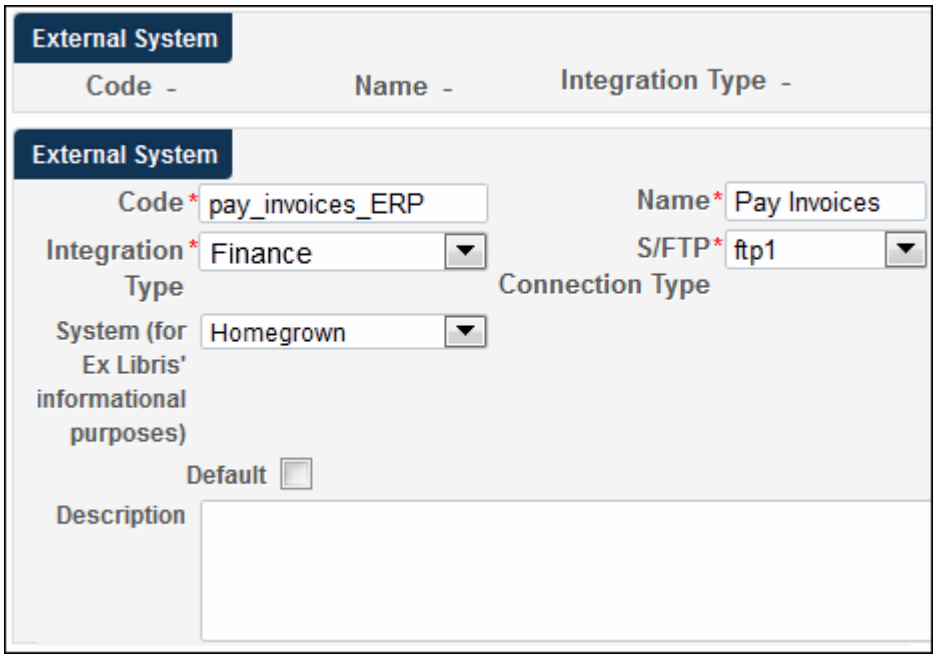


Figure 1: Finance Integration Profile Definition – Page 1

5 Click **Next**. The second page of the wizard opens.

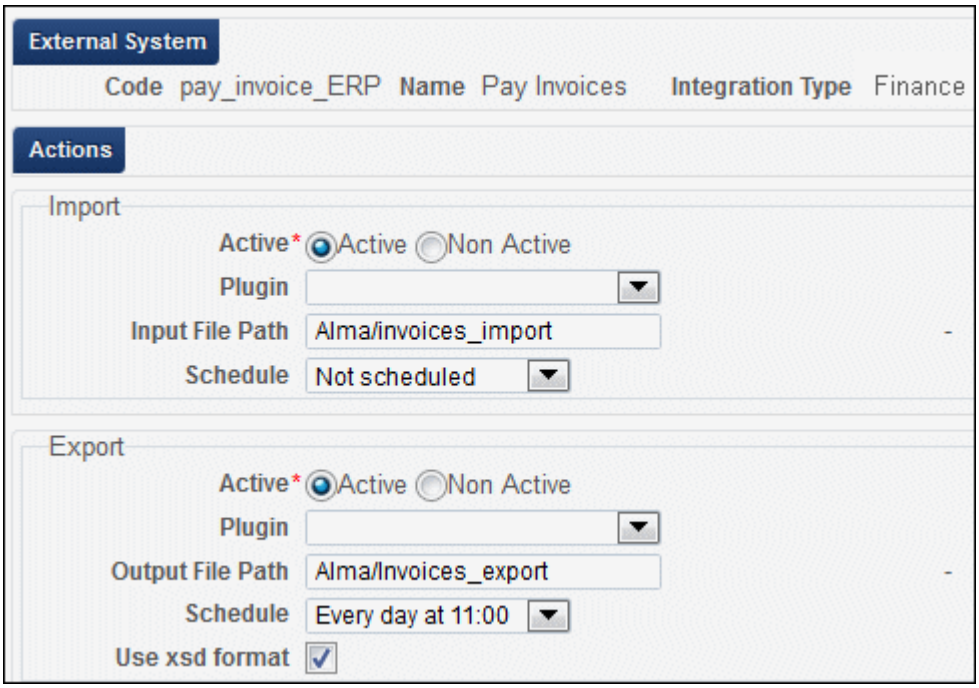


Figure 2: Finance Integration Profile Definition – Page 2

6 Perform the following actions in the Import and Export sections on this page:

a Select whether you want the integration you are configuring to be active or non-active. Note that **Active** must be selected in order for the import/export job to be run. (By default, the **Non-active** option is selected.)

b From the **Plugin** drop-down list, select the out-of-the-box plug-in that is used to run the invoice import/export (not currently in use).

c In the **Input file path/Output file path** fields, enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during S/FTP connection configuration and you enter `payments` in the **Output file path** field, the invoices are exported to the `Alma/payments` directory.

NOTE:
The value of the **Input file path** field cannot be identical to any of the other **Input file path** or **Output file path** values.

d From the **Schedule** drop-down list, select a scheduling option, predefined by an Ex Libris administrator. If you select **Not scheduled**, the invoice import/export job will run only when you manually run it (by clicking **Run**). For details, see **To manually run and monitor the invoice import/export job:** on page **10**.

e In the **Export** section, select **Use xsd format** to export invoices using a new format that includes a well-documented XSD file and an XML example (see https://developers.exlibrisgroup.com/alma/integrations/finance). It is strongly recommended that you select this option.

Selecting the **Use xsd format** check box enables exporting an invoice's explicit ratio to the financial system (see **Creating an Invoice From a PO or Manually** in the *Alma Acquisitions Guide*).

If no explicit ratio was configured, the implicit ratio is imported to the financial system.

If this check box is not selected, no ratio is exported to the financial system.

7 Click **Save**. The integration profile you configured appears in the Integration Profile List.

To manually run and monitor the invoice import/export job:

NOTE:
To run the export job, you must first activate the InvoicePaymentLetter letter, with the channel SUBMISSION (**Administration > General Configuration > Configuration Menu > General Configuration > Letter Activity**).

1 On the Integration Profile List page, locate the appropriate profile and select **Actions > Edit**. The General Information tab opens.

2 Click the **Actions** tab. The import/export details you defined are displayed, together with a **Run** button in each section.

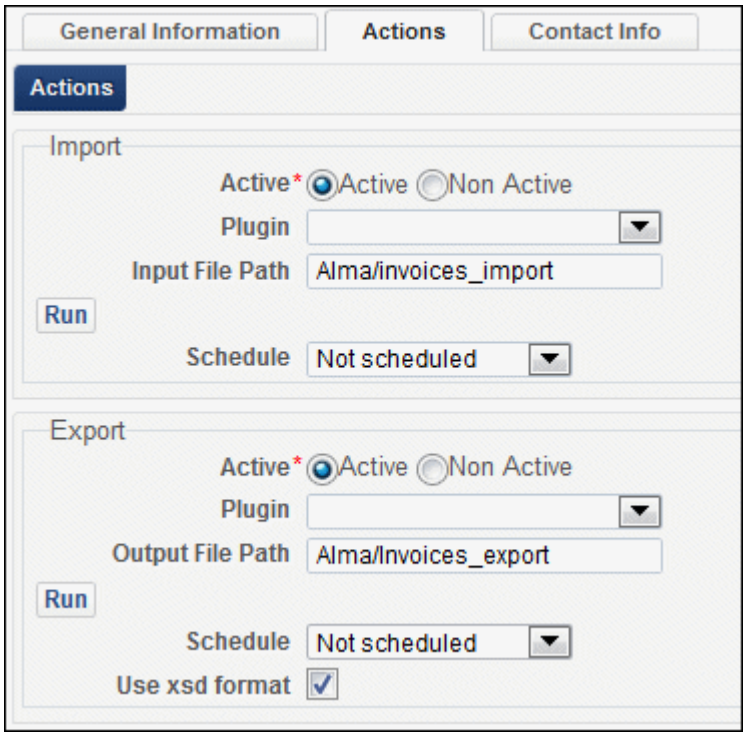


Figure 3: Actions Tab with Run Button

3 Click **Run** in the **Import** or **Export** section. The import/export job is run and the import/export file is sent to the configured FTP location. If email notifications are enabled in Alma, you receive notification via email.

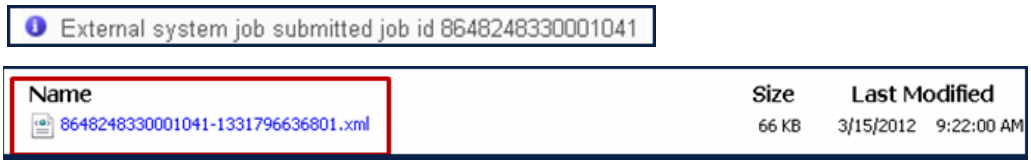


Figure 4: Examples of Message When Running Job and File on FTP Server

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate profile on the Integration Profile List page. For example, the following figure shows a job that completed successfully, processing one file.

Figure 5: Import/Export Job History

NOTE:
The status **Completed Successfully** does not mean that invoices were imported/exported successfully. Rather, it means that the job completed without error.

You can use the **Actions** button on this page to access a more detailed job report, including statistics on the number of invoice records and invoice records with exceptions processed (**Actions > View**), events that occurred during the job processing (**Actions > Events**), and a report of errors (**Actions > Error reporting**).

To configure and manually run the Fund Allocation Loader:

1. On the Integration Profile List page, select **Finance** in the Integration Type filter to display the finance integration profiles.
2. Select **Actions > Edit** for an integration profile, and click the **Actions** tab. The integration profile Actions tab page displays.

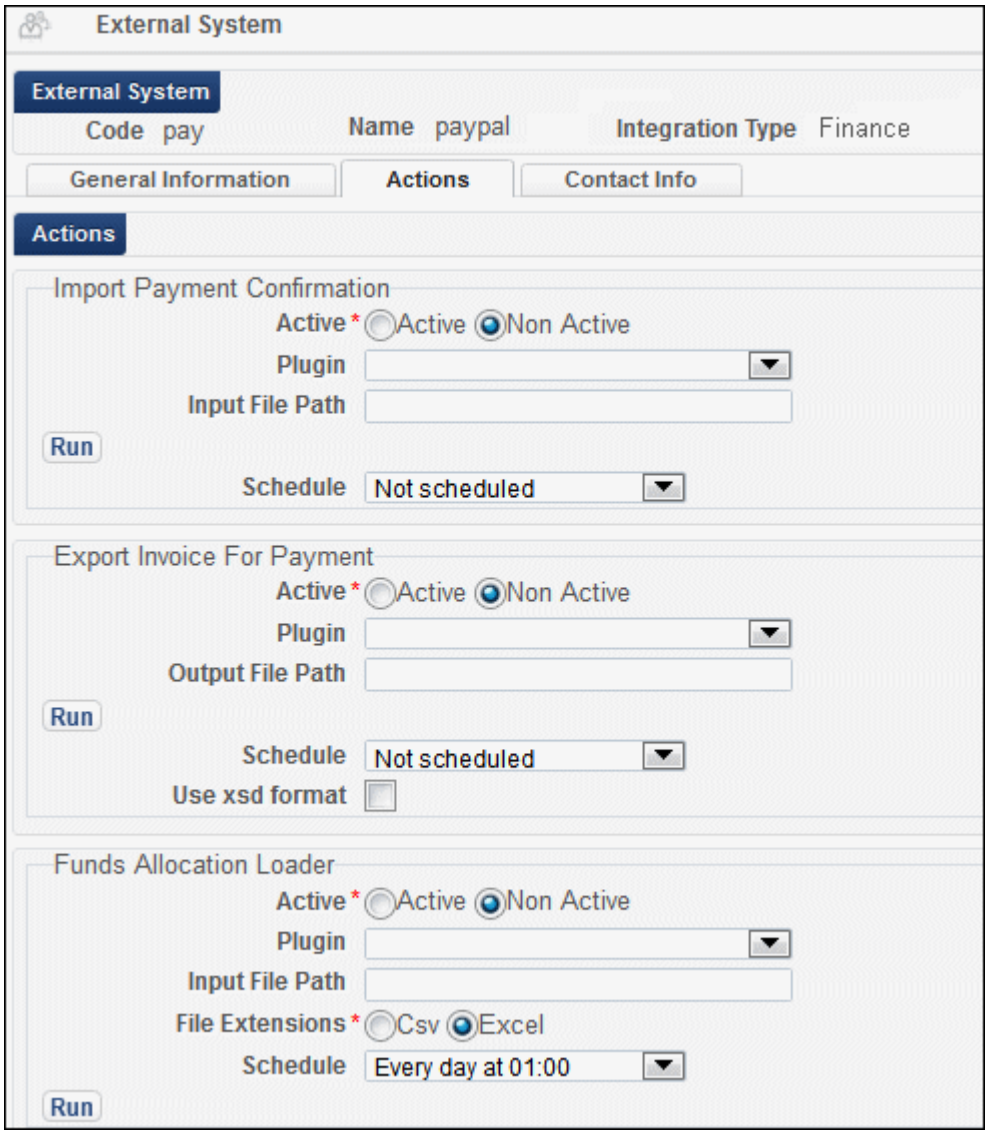


Figure 6: Integration Profile Actions Tab Page

3 Configure the fields in the Funds Allocation Loader section, as described in Step 6 of **To configure the export and import of invoices:** on page 7. In the **File Extensions** field, select the type of file that is being imported for the fund allocation, **.csv** or **Excel** (.xls).

4 To manually run the Fund Allocation Loader, click **Run**. The Fund Allocation Loader job is run and a confirmation message appears at the top of the page.

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate profile on the Integration

Profile List page. For example, the following figure shows jobs that completed successfully.

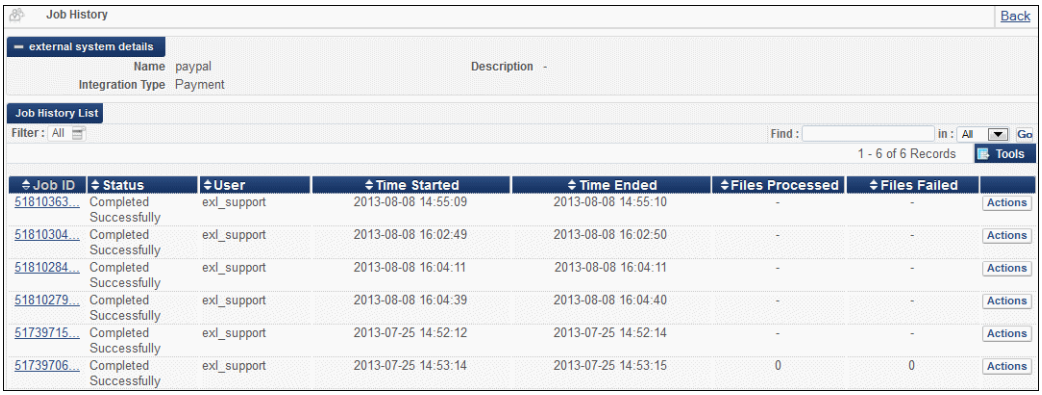


Figure 7: Fund Allocation Loader Job History

To configure and manually run an export of POs:

NOTE:
To run the export job, you must first activate the InvoicePaymentLetter letter, with the channel SUBMISSION (**Administration > General Configuration > Configuration Menu > General Configuration > Letter Activity**).

1 On the Integration Profile List page, select **Finance** in the Integration Type filter to display the finance integration profiles.

2 Select **Actions > Edit** for an integration profile, and click the **Actions** tab. The integration profile Actions tab page displays.

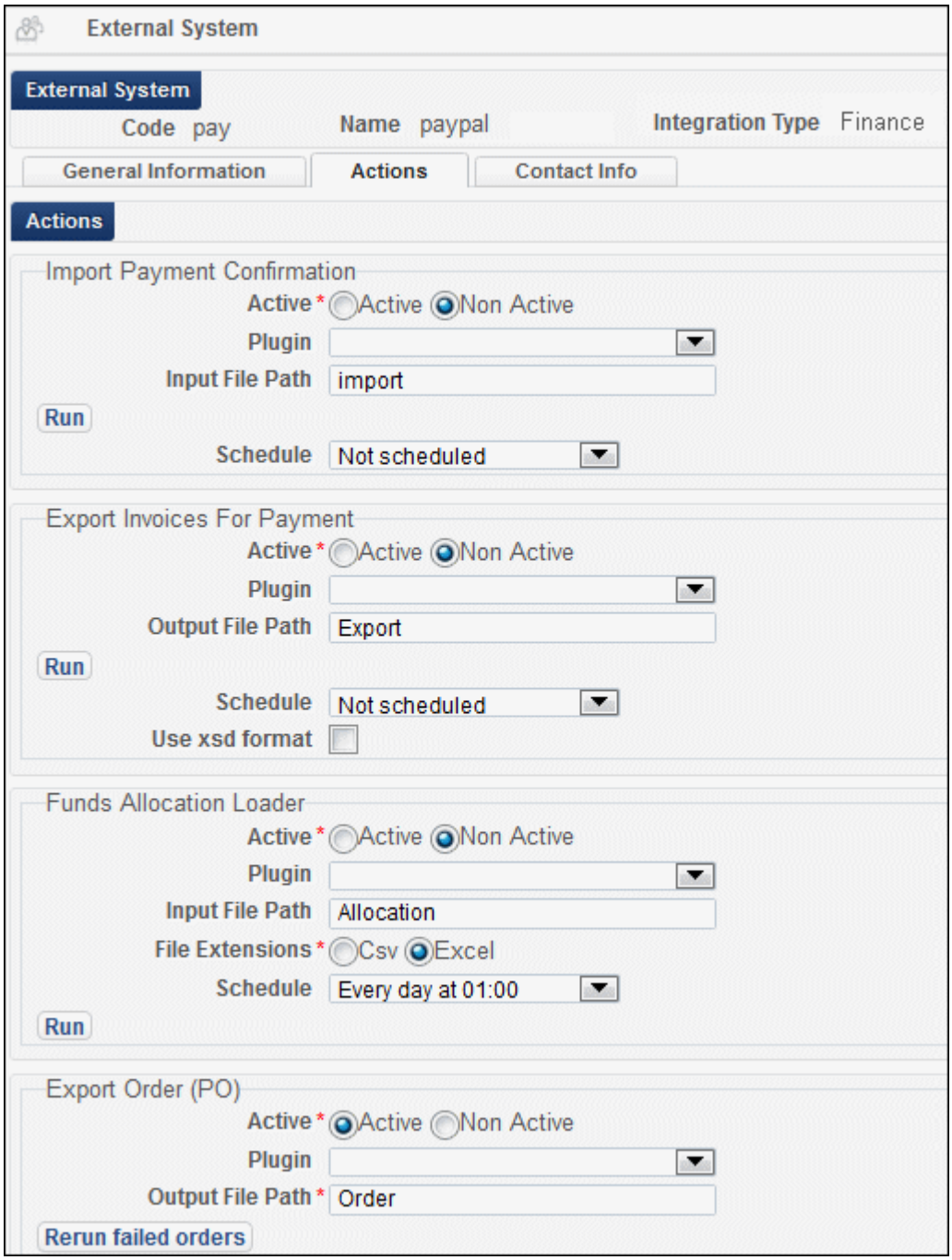


Figure 8: Integration Profile Actions Tab Page

3 Configure the fields in the Export Order (PO) section, as described in Step 6 of **To configure the export and import of invoices:** on page 7.

4 To manually run the export, click **Rerun Failed Orders**. All previously failed orders are sent for export, and a confirmation message appears at the top of the page.

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate profile on the Integration Profile List page. For example, the following figure shows jobs that completed successfully.

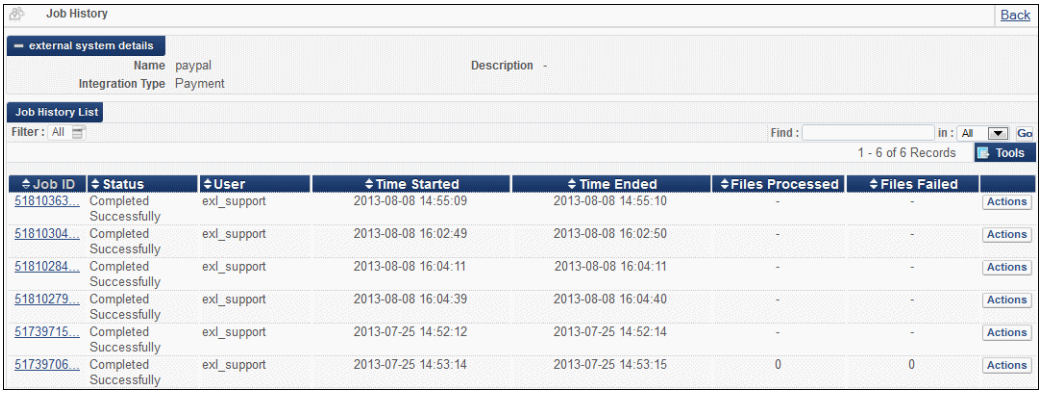


Figure 9: Job History Page

Electronic Data Interchange (EDI)

PERMISSIONS:

To configure EDI communication with vendors, you must have the following role:

- Vendor Manager

The following acquisition activities can support EDI-enabled vendors:

- **Purchase orders** – When purchase orders (POs) are ready to be sent to an EDI-enabled vendor, they can automatically be exported to a specified FTP location where they are fetched via a vendor system number.
- **Invoices** – When invoices are placed at an FTP location by an EDI-enabled vendor, Alma can automatically load and parse the invoices.

The EDI files that are created for orders and/or invoices are based on the international standards for EDI transmission and should be agreed upon with each vendor prior to entering information in Alma. For a description of the EDI standards with which Alma operates, refer to the *EDI Standard Supported in Alma* document, located under **Alma > Product Documentation > Integrations** in the Documentation Center.

IMPORTANT:

For the purposes of EDI communication, the PO and PO line numbers are case-sensitive.

NOTE:

EDI communication has successfully been tested with the following vendors: Baker & Taylor, Coutts (ingramcontent), Dawson, Harrassowitz, Swets, YBP, and Ebsco.

When configuring EDI communication with a vendor, in addition to the vendor EDI code and EDI type, you must enter an EDI code and EDI type that the vendor uses for your institution. Optionally, you can also define an EDI code and type for each library served by the institution. When an EOD is received after an EDI has been loaded, you can reload the EDI.

To configure EDI communication with a vendor:

1. On the Search Vendors page (**Acquisitions > Acquisitions Infrastructure > Vendors**) select a vendor. The Vendor Details page opens.
2. Click the **EDI Information** tab.

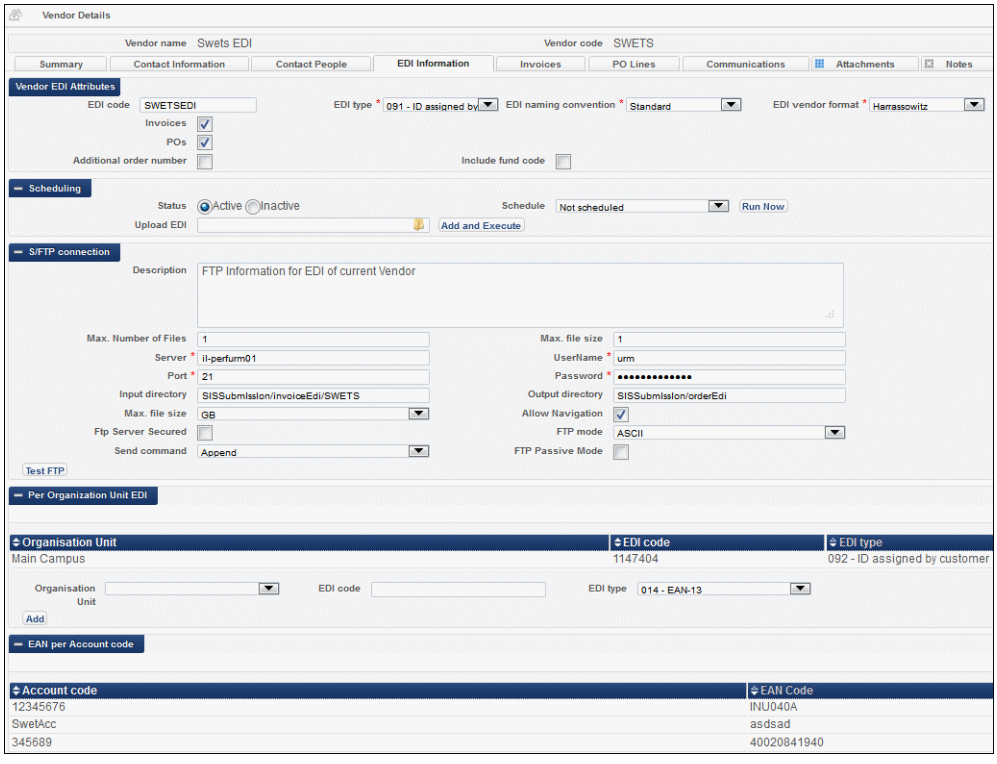


Figure 10: Vendor Details Page – EDI Information Tab

3 Enter the EDI information as required. A description of the fields is provided in the following table.

Table 1. EDI Information Tab Fields

Section	Field	Description
Vendor EDI Attributes	EDI code	A unique code for the vendor, per institution. **NOTE:** When an EDI code is entered, the mandatory fields in this tab are indicated with a red asterisk and must be completed before saving this page.
	EDI type	Select from a list predefined by Ex Libris. You can choose from: ■ 014 – EAN-13 ■ 091 – ID assigned by supplier ■ 092 – ID assigned by customer ■ 31B – US-SAN
	EDI naming convention	Select from a list predefined by Ex Libris. You can choose Alma's standard file naming convention (**Standard**, which is the default), or one of the following vendor naming conventions: **Blackwell**, **Ebsco**, **Ingram**, **Harrassowitz**, **Brodart**.

Table 1. EDI Information Tab Fields

Section	Field	Description
Vendor EDI Attributes (continued)	EDI vendor format	Select the relevant option: ■ **Harrassowitz** – Removes line feeds so that all information is provided on a single line. Can also be selected for Harrassowtiz-like vendors. ■ **Baker & Taylor enriched** – Includes enriched data that is customized for Baker & Taylor. The GIR segment includes library and location information in two separate fields, even though the PO line may not include this data. If you are not working with one of these vendors, select **Other**. **NOTE:** The other options displayed on this list are for future use.
	Invoices	Select to indicate that the vendor submits invoices via EDI files.
	POs	Select to send POs to the vendor via EDI files.
	Additional order number	Select if you want the additional PO number (a unique vendor order number entered in the PO line) to be included in the EDI file sent to the vendor.
	Include fund code	Select if you want the fund code included in the EDI files sent to the vendor and received from the vendor.

Table 1. EDI Information Tab Fields

Section	Field	Description
Invoice Job Parameters	Status	Select whether you want the EDI communication you are configuring to be active or non-active. By default, the **Active** option is selected.
	Schedule	Select the time at which the EDI job runs from a list predefined by Ex Libris. **NOTE:** This is relevant only for invoices and not for POs. To run the EDI job immediately (as soon as the Alma system can accommodate it), click the **Run Now** button to the right of the **Schedule** box.
	Upload EDI	Browse for an EDI file to upload. To upload the file, click **Add and Execute**.
	Do not prorate	Select to indicate that when an invoice is loaded from an EDI file, overhead and discount amounts are charged to their own invoice lines instead of being prorated among all invoice lines.
	Fund	Select the fund from which overhead and discount amounts are charged. This field displays only when **Do not prorate** is selected.

Table 1. EDI Information Tab Fields

Section	Field	Description
S/FTP Connection	Description	Enter an optional description of the EDI submission details.
	Max. number of files	Not in use. Accept the default value.
	Max. file size	Not in use. Accept the default value.
	Server	Specify the IP address of the FTP server receiving the EDI files.
	User name	Specify the user name for logging on to the FTP server.
	Port	Specify the port to be used on the FTP server, if the connection is not secure. This is generally port 21.
	Password	Specify the password for the FTP server.
	Input directory	Specify the name of the subdirectory in which the incoming invoice EDI files are to be stored. By default, Alma displays `invoices` in this field. If you leave this field empty, Alma searches for incoming files in the root directory. **NOTE:** The vendor must define one input directory per institution.

Table 1. EDI Information Tab Fields

Section	Field	Description
S/FTP Connection (continued)	Output directory	Specify the name of the subdirectory in which the outgoing PO EDI files are to be stored. By default, Alma displays `orders` in this field. If you leave this field empty, Alma places the PO EDI files in the root directory. **NOTE:** The input directory must be different than the output directory. (Note that Alma does not validate this.)
	Max. file size (unit)	Not in use. Accept the default value.
	Allow navigation	Select to enable access to other areas of the FTP site. The default is to allow navigation (check box selected).
	FTP server secured	Select if the FTP server is secured.
	FTP mode	Select a mode used for sending the outgoing EDI files, from a list predefined by Ex Libris. You can select from: ■ ASCII – Each EDI file includes many lines, one for each segment (default). ■ Binary – Each EDI file includes one long line.
	Send command	The send commands are predefined by Ex Libris and can be selected from the **Send command** drop-down list. You can select from: ■ Append – Does not overwrite a file on the FTP server if the existing file has the same name as the new file (default). ■ Put – Overwrites a file on the FTP server if the existing file has the same name as the new file.
	FTP passive mode	Not in use.
	Test FTP	Click to verify that the S/FTP parameters entered are valid. In the event of invalid data, an error message displays at the top of the page.

Table 1. EDI Information Tab Fields

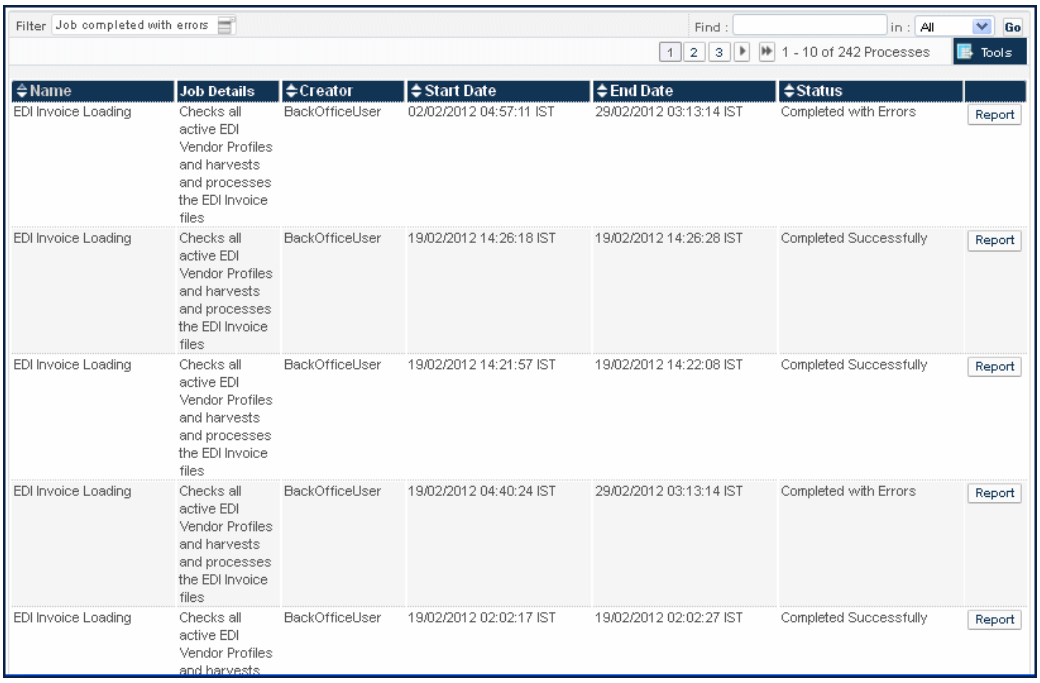
Section	Field	Description
Per Organization Unit EDI		In this section, you must select your institution and define the EDI code and type used by the vendor for the institution. Optionally, you can also select libraries served by the institution and define the EDI code and type used by the vendor for the library. After completing the details in this section, click **Add** to add the EDI file details for the institution/library.
	Organization unit	Select an institution/library from a list predefined by an administrator.
	EDI code	Specify the code used by the vendor for the organization unit.
	EDI type	Specify an EDI type from a list predefined by Ex Libris. You can choose from: ■ 014 – EAN-13 ■ 091 – ID assigned by supplier ■ 092 – ID assigned by customer ■ 31B – US-SAN
EAN per Account		This section maps the EAN (Envelope Address Node) code to the vendor account.
	Account code	Select a vendor accounts code from a list predefined by an administrator.
	EAN code	Specify the EAN code to be mapped to the previously selected account code. Click **Add EAN** to add the code.

4 Click **Save** to store the information you entered.

NOTE:
For Alma to use the S/FTP connection that you defined, you must allow the FTP server access to Alma. For details, see **Configuring Allowed S/FTP Connections** in the *Alma Administration Guide*.

To monitor EDI jobs:

On the Search Vendors page, locate the vendor whose EDI jobs you want to monitor and select **Actions > View history** (available only for EDI-enabled vendors).



Name	Job Details	Creator	Start Date	End Date	Status	
EDI Invoice Loading	Checks all active EDI Vendor Profiles and harvests and processes the EDI Invoice files	BackOfficeUser	02/02/2012 04:57:11 IST	29/02/2012 03:13:14 IST	Completed with Errors	Report
EDI Invoice Loading	Checks all active EDI Vendor Profiles and harvests and processes the EDI Invoice files	BackOfficeUser	19/02/2012 14:26:18 IST	19/02/2012 14:26:28 IST	Completed Successfully	Report
EDI Invoice Loading	Checks all active EDI Vendor Profiles and harvests and processes the EDI Invoice files	BackOfficeUser	19/02/2012 14:21:57 IST	19/02/2012 14:22:08 IST	Completed Successfully	Report
EDI Invoice Loading	Checks all active EDI Vendor Profiles and harvests and processes the EDI Invoice files	BackOfficeUser	19/02/2012 04:40:24 IST	29/02/2012 03:13:14 IST	Completed with Errors	Report
EDI Invoice Loading	Checks all active EDI Vendor Profiles and harvests	BackOfficeUser	19/02/2012 02:02:17 IST	19/02/2012 02:02:27 IST	Completed Successfully	Report

Figure 11: EDI Jobs - Monitor Jobs

By default, both jobs that completed successfully and jobs that completed with errors are displayed. You can use the filter at the top of the page to display only jobs that completed with errors. For each job, you can click the **Report** button to display the Job Report. Note that the reports for outgoing POs are short, containing information on the success or failure of the job. Reports for incoming invoices are much more detailed, containing statistics on the number of invoices and invoice lines processed with errors, the number of related PO lines for these invoices, and details of each of the processing errors.

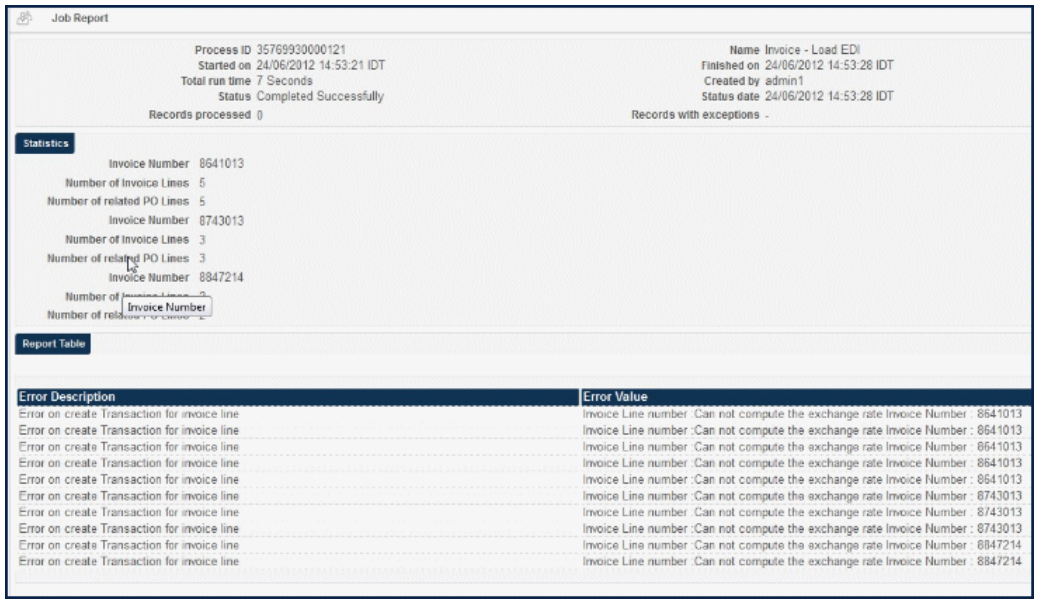


Figure 12: Example of EDI Job Report

To work with EDI files:

1 On the Search Vendors page, locate the vendor whose EDI invoice files you want to edit, delete, download, or reload, or for which you want to view a report, and select **Actions > View EDI files** (available only for EDI-enabled vendors).

Figure 13: EDI Files

2 On the Attachments page, select one of the following options from the **Actions** drop-down list:

- **Edit** – Enables you to add a file with a URL as an attachment to the EDI file.
- **Delete** – Deletes the EDI file from the list of files.
- **Download** – Enables you to download the EDI file.
- **Reload** – Enables you to reload the EDI file after confirming that the EOD was loaded. You must also ensure that the EDI file was received before the EOD was processed and the EDI file did not find any invoice matches.
- **Report** – Enables you to view a report for the EDI file.

Embedded Order Data (EOD) Import

PERMISSIONS:

To create an import profile for EOD files, you must have the following role:

- Acquisitions Administrator

To run an import profile and import EOD files, you must have one of the following roles:

- Purchasing Operator
- Purchasing Manager

EOD files that contain bibliographic titles, inventory (electronic or physical), or purchase order information from a vendor can be loaded into Alma from a local network or an FTP location.

To process EOD files, you must first set up an import profile of the type **New Order**. The import profile defines the way in which the information contained in the EOD files is imported into Alma, including the way in which each record in an EOD file is mapped to the corresponding record in Alma.

VIDEO:

See *Importing Bibliographic Records with Embedded Order Data* for a detailed training Webex session on this functionality. Note that you must be logged on to the Ex Libris Learning Center to access this session.

You can set up an import profile by clicking the **Add New Profile** button on the Run Import page (**Acquisitions > Acquisitions Configuration > Configuration Menu > Purchase Orders > Import Profiles** or **Resource**

Management > Resource Configuration > Configuration Menu > Record Import > Import Profiles).

For information on creating a New Order import profile, see **Configuring New Import Profiles** in the *Alma Resource Management Guide*.

NOTE:
To schedule automatic imports, set the **Load file source** field to **FTP** in the Profile Details section, select a predefined interval from the **Scheduler** drop-down list in the Imported File Processing section, set the **Scheduler status** to **Active**, and configure the FTP-related parameters in the FTP Information section (as described in **Configuring S/FTP Definitions** in the *Alma Administration Guide*). You can choose to schedule an import for all EOD files or only the new files (that is, files with a different name, size, or modification date).

To run a manual import once you have configured an import profile, see **Importing Embedded Order Data (EOD)** in the *Alma Acquisitions Guide*.

You can monitor both automatic and manual imports using the Monitor and View Imports page (**Acquisitions > Import Processing > Monitor Imports**). For information on monitoring imports, see **Monitoring Imports** in the *Alma Acquisitions Guide*.

Real-Time Integration

An additional acquisitions method, real-time acquisitions, combines APIs with configurations in the Alma user interface to quickly synchronize records from a vendor's database to a purchasing or licensing library's offerings.

For more information, see **Real-Time Acquisitions** in the *Alma Acquisitions Guide*. For extended information including instructions, see the following links on the Developers' Network:

- Real-time overview: https://developers.exlibrisgroup.com/blog/Real-time-Acquisitions
- PO line API, how the bib record is determined: https://developers.exlibrisgroup.com/blog/Create-PO-line-API-how-the-bibliographic-record-is-determined
- Create PO line API: https://developers.exlibrisgroup.com/alma/apis/acq/POST/gwPcGly021rXkIgBNjmJH6pSL6v0plPz/d5b14609-b590-470e-baba-9944682f8c7e

3

Resource Management

This section includes:

Metadata Import

You import bibliographic or authority metadata into the Alma repository using import profiles. For information on the types of import profiles available, see **Profile Types** in the *Alma Resource Management Guide*.

Profile definitions include source format, mapping definitions, and normalization routines to be executed during the import process. For detailed

information on configuring import profiles, see **Creating the Profile Using the Wizard** in the *Alma Resource Management Guide*.

For information on running the configured import profiles in order to import metadata, see **Running a New Import Job** in the *Alma Resource Management Guide*.

Metadata Export

Alma allows you to export repository metadata to external systems. The files containing exported metadata (bibliographic records for example) are made available to the external systems in the following ways:

- placed at an FTP location
- sent via email to a requester
- downloadable from a dedicated Alma page

No prerequisite configurations are required to make use of this integration option. The export process uses the following standard set management and process automation procedures:

1. The Manage Sets page (**Resource Management > Search and Sets > Manage Sets**) is used to create a set of records.
2. The Create Job - Select Job to Run page (**Administration > Manage Jobs > Run a Job**) is used to run an export task on the set. The task is configured with the following:
   - enrichments to run on the set
   - location of the output files

   Refer to **Table 2** for a list of the types of sets that can be exported.

Table 2. Export - Types of Sets

Export Job Type	Content Type	Set Content Type
Export Bibliographic Records	Bibliographic title	All titles, physical titles, electronic titles, digital titles
Export Physical Items	Physical item	Physical titles, physical items
Export Physical Item Labels (for printing)	Physical item	Physical titles, physical items
Export Electronic Portfolios	Portfolio	All titles, electronic portfolios, electronic titles
Export Inventory Entities	Digital title	Digital titles

You can view the exported files by clicking **View Files** for the appropriate process on the Exported Processes page (**Resource Management > Search and Sets > Manage Exports**).

Integrating Remote Digital Asset Management Systems

The remote digital repository uses a configuration that controls how the Alma digital import process interacts with the external digital system.

Integrating a remote digital system requires the following steps:

1 Setting up the repository

For detailed information on working with remote digital repositories, see **Remote Digital Repositories** of the *Resource Management Guide*.

2 Configuring a profile for importing remote digital material

For information on how to set up a remote digital profile, see **Configuring New Import Profiles** of the *Resource Management Guide*.

If you are uploading files from OAI, see also **Setting Up OAI Integration** on page **39** of this guide and in the *Resource Management Guide*, **File upload method**, **OAI Details section:**, and **Testing OAI Flow for a Remote Digital Repository**.

3 Running the import job

For instructions, see **Running a New Import Job** of the *Resource Management Guide*.

4 Managing remote digital resources and inventory

For information, see **Managing Digital Resources** of the *Resource Management Guide*.

Importing Records from OCLC Connexion

PERMISSIONS:

To configure an OCLC Connexion import profile, you must have the following role:

- General System Administrator

Metadata records from OCLC Connexion are uploaded to the Alma server on the port designated and opened by Ex Libris for this purpose (port 5500 as of November 2013; ensure that this port is open for your institution as well). As

part of the upload process, Alma applies the import settings (normalization, validation, and merge routines) defined in the import profile that you configure for this purpose.

IMPORTANT:
Communication via ports other than 5500 will be supported until February 2014. Following this grace period, OCLC communication with Alma will be supported via port 5500 only.

To import records from OCLC Connexion to Alma, you must perform the following actions:

1. Configure an OCLC Connexion import profile in Alma (see below). Note that only one profile should be configured.
2. Configure OCLC Connexion (see below).
3. Export the OCLC records to Alma and ensure that they are properly imported into Alma (see below).

To configure the import profile for OCLC Connexion:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add External System** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. Enter a code and name for the profile you are defining.
   b. From the **Integration type** drop-down list, select **OCLC Connexion**.

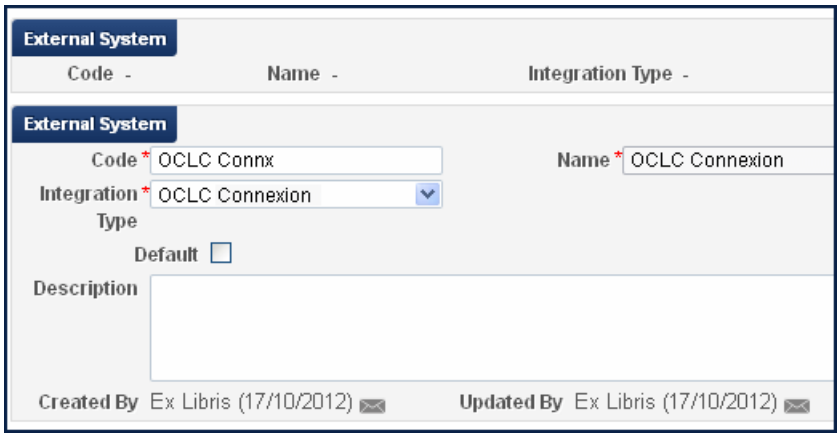


Figure 14: OCLC Connexion Integration Profile Definition – Page 1

4. Click **Next**. The second page of the wizard opens.

5 Under **Actions**, configure the following parameters:

Table 3. OCLC Connexion Profile Fields

Section	Field	Description
Normalization	Correct the data using	Select the appropriate normalization rules file to be used from a list of predefined files. For more information, see **Working with Normalization Processes** in the *Alma Resource Management Guide*.
Validation	Check the data using	Select the method used to handle invalid data as it is being imported. For more information, see **Working with Validation Exception Profiles** in the *Alma Resource Management Guide*. For import profiles, Ex Libris recommends using the MarcXML Bib Import validation exception profile.
Merge	Serial match method	Select from one of the serial match methods predefined by Ex Libris. For a detailed description and examples of some of these methods, see **Match Methods – Explanations and Examples** in the *Alma Resource Management Guide*.
	Non-serial match method	Select from one of the non-serial match methods predefined by Ex Libris. For a detailed description and examples of some of these methods, see **Match Methods – Explanations and Examples** in the *Alma Resource Management Guide*.

Table 3. OCLC Connexion Profile Fields

Section	Field	Description
	Merge method	Select from one of the following merge methods predefined by Ex Libris: ■ **Replace 245 and 035 OCLC if exist** – Adds the MARC 245 and 035 fields from the preferred to the non-preferred records, then replaces all MARC field values in the non-preferred records, except for those in the 001, 245, and 035 fields (whose "a" subfields contain OCoLC or where the first indicator is 9 and the second indicator is #). ■ **Overlay all fields but local** – Replaces all MARC field values in the non-preferred records, except for those in the 001 and 9XX fields. Also replaces values in the 035 fields unless the first indicator is 9 and the second indicator is #. ■ **Keep only old value** – Keeps all MARC field values in the non-preferred records. ■ **Conditional subject headings** – Replaces all MARC field values in the non-preferred records, except for those in the 001, 035, 9XX, 65X, and 7XX fields, then adds the MARC 65X and 7XX field values from the preferred records to the non-preferred records. Alternatively, if you defined merge rules in the MD Editor, you can select these rules from the **Merge method** drop-down list. The descriptions that were entered for the rules are displayed as the method names. **NOTE:** For the OCLC Connexion import, the merge works as with import profiles. See **Working with Merge Rules** in the *Alma Resource Management Guide* for detailed information on merge rules.

Table 3. OCLC Connexion Profile Fields

Section	Field	Description
Management Tags	Synchronize with External Catalog	Select one of the following publishing options for the imported records: ■ Publish holdings only ■ Publish bibliographic records ■ Don't publishCC
Authorization	Password	Enter a password with which you want OCLC Connexion to communicate with Alma. This is the same password that you configure in OCLC Connexion (see below). (Note that it is not the password with which you connect to OCLC Connexion.)

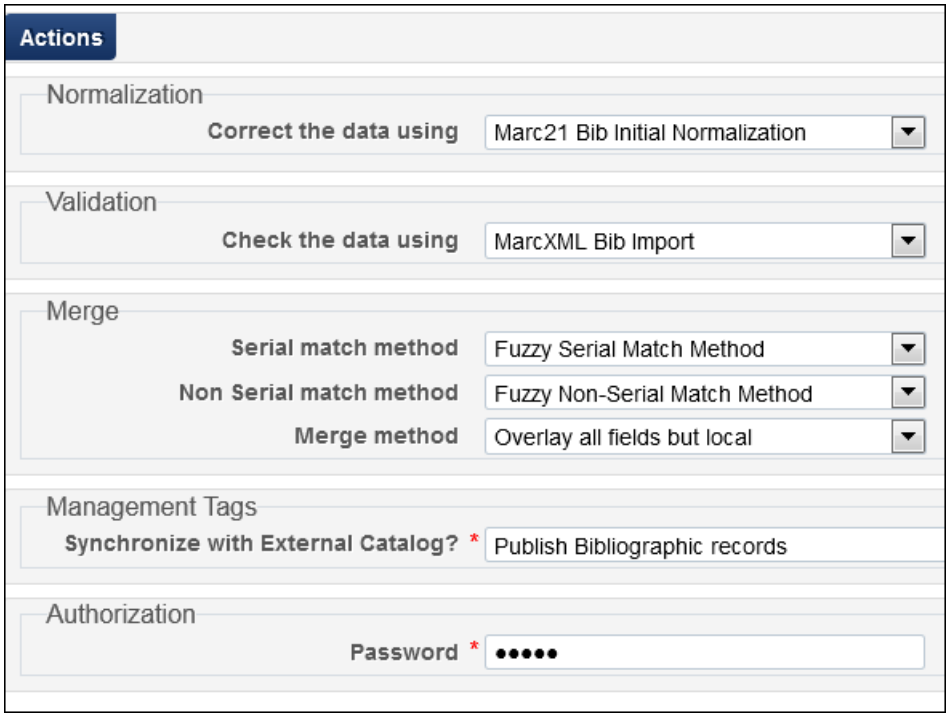


Figure 15: OCLC Connexion Integration Profile Definition – Page 2

6 Click **Save**. The profile you configured appears in the Integration Profile List.

To configure OCLC Connexion to communicate with Alma:

1. Access OCLC Connexion and enter the user name and password that you received with your OCLC subscription.
   - In the OCLC Connexion client (any version), select **Tools > Options > Authorizations** and enter your authorization number and password.
   - In the OCLC Connexion Web application (http://connexion.oclc.org/), enter this information on the login page.
2. Access the OCLC Connexion export options (under **Tools > Options > Export > Create** in the Client, or under **General > Admin > Export Options** in the Web application).
3. In the **Host Name** box, enter your Alma host name, such as `alma.exlibrisgroup.com`.
4. In the **Port** or **Port Number** box, enter `5500`.
5. Select the **Send Local System Logon ID and Password** (Client) or **Send Logon ID** (Web application) check box.
6. In the **Logon ID** box, enter your Alma institution code, such as `01OO_INST`.
7. In the **Password** box, enter the same password you entered for the OCLC Connexion profile in Alma.

IMPORTANT:
Ensure that the **Send User ID** and Permanent Connection check boxes are not selected.

For example:

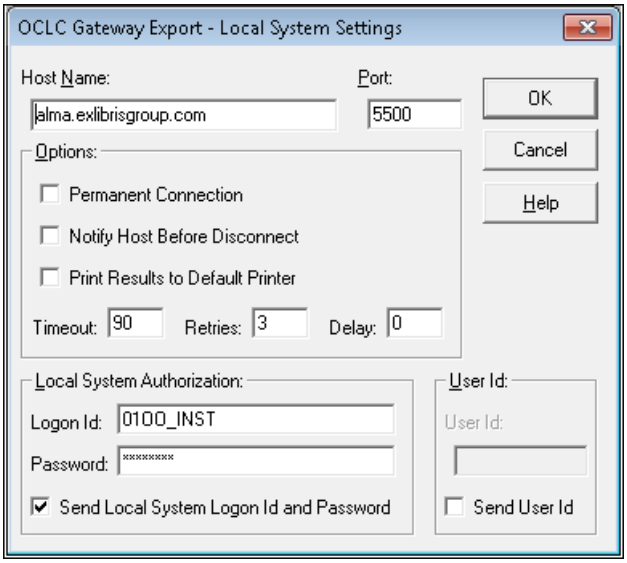


Figure 16: OCLC Client Export Options

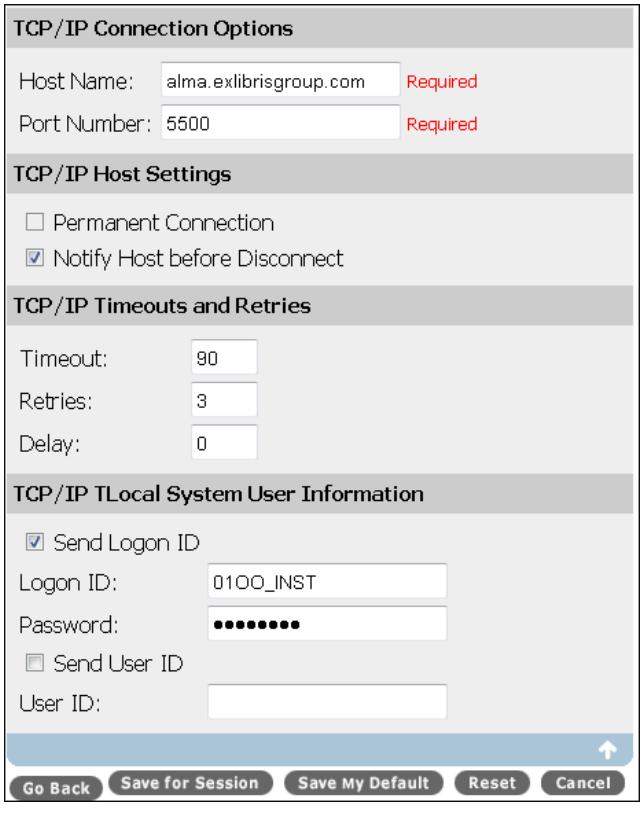


Figure 17: OCLC Web Application Export Options

8 Click **OK** (Client) or **Save My Default** (Web application).

To export an OCLC record to Alma:

1 Locate the record you want to export and open it. For example:

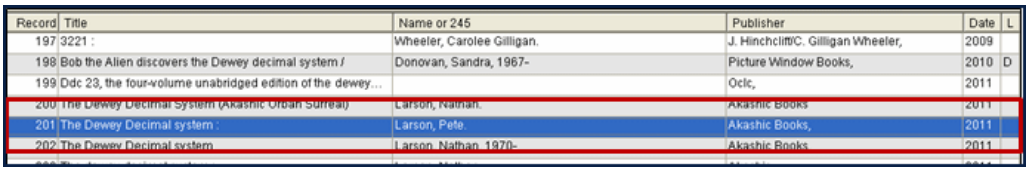


Figure 18: Example of Record to Be Exported

2 Click the **ActionExport** button (in the OCLC Connexion Client).

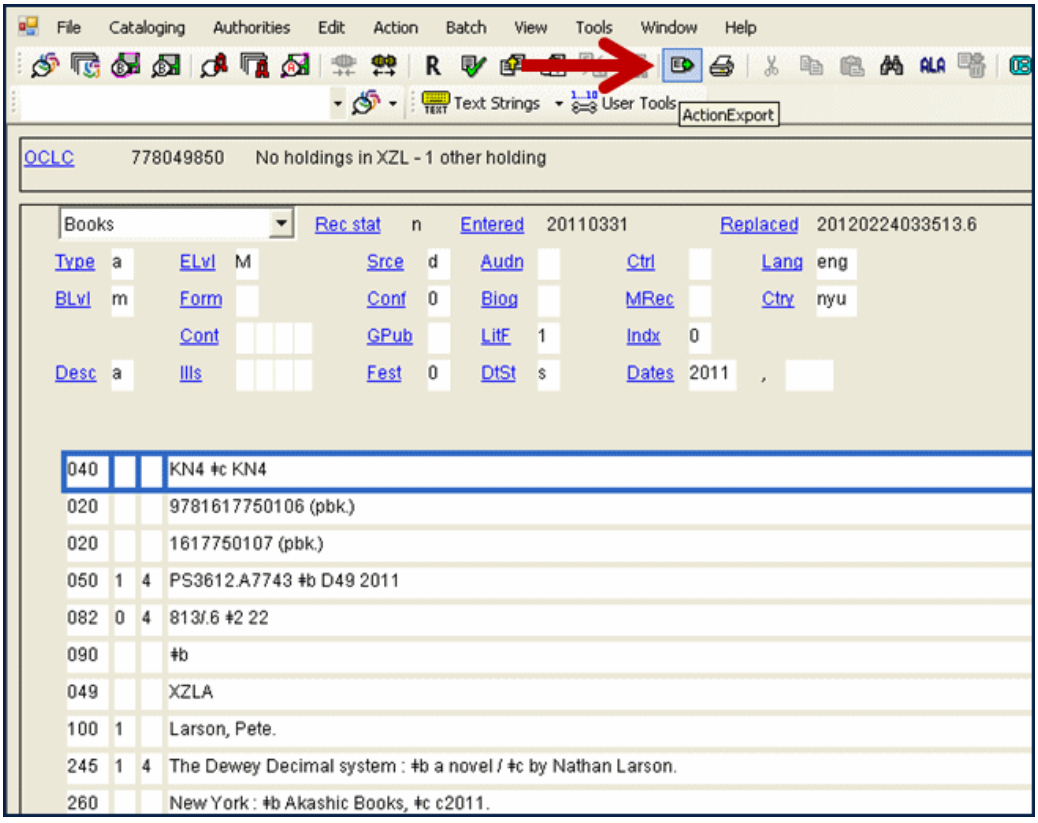


Figure 19: Example of Record to Be Exported

If the record is exported successfully, you receive a message similar to the following:

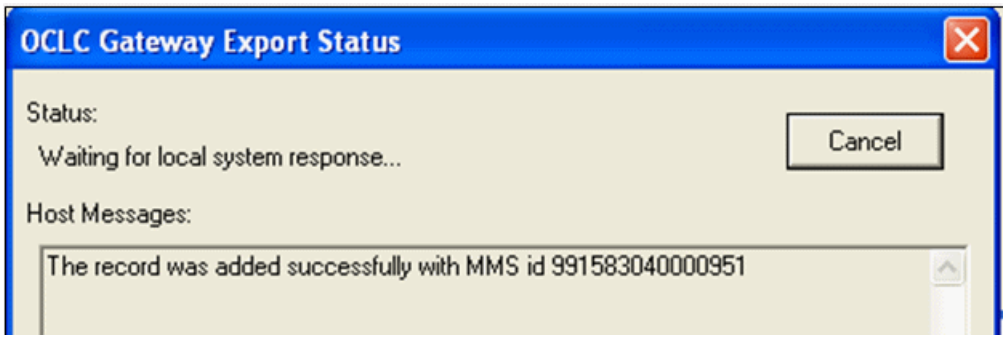


Figure 20: Example of Export Message

You can then use the Repository Search in Alma to search for and view the imported record.

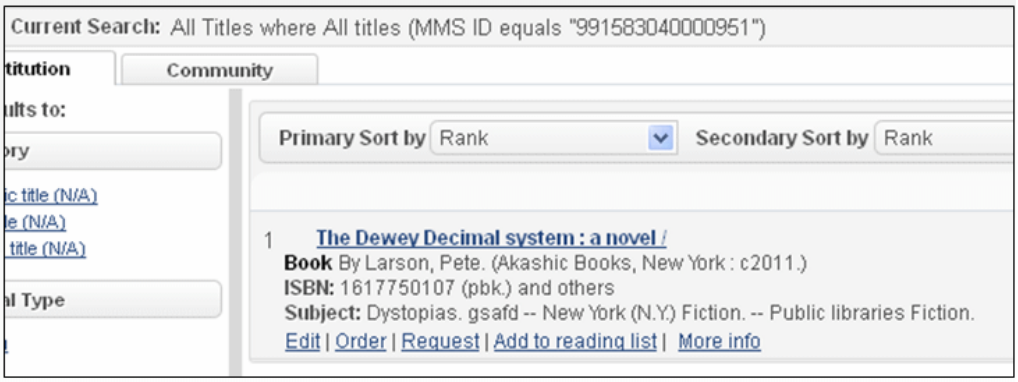


Figure 21: Imported Record in Alma

Setting Up OAI Integration

The Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) is a low-barrier mechanism for developing and promoting interoperability standards that aim to facilitate the efficient dissemination of content across repositories. Data Providers are repositories that expose structured metadata through OAI-PMH. Service Providers then make OAI-PMH service requests to harvest that metadata. OAI-PMH uses six request types ("verbs") that are invoked within HTTP. Using this functionality, Alma can publish metadata (as a Data Provider) which can then be harvested by external tools/repositories (Data Harvesters).

Configuring the OAI integration is the first step toward publishing through OAI. Once you have finished this task, you can set up a publishing profile through Resource Management configuration. When that is complete, your OAI setup should be complete and your database ready to load.

This section shows you how to configure OAI as an integration point for Alma. This allows Alma to expose the records as OAI types and harvest them accordingly. For information on setting up a publishing OAI profile, see **Publishing and Inventory Enrichment** on page **50**.

NOTE:
If your institution already has an OAI integration profile, you cannot add a second one (though you can edit the existing one).

To set up an OAI integration profile:

1 Access the General Administration Configuration page (**Administration > General Configuration > Configuration Menu**) and select **Integration Profiles** from the **External Systems** section.

The Integration Profile List page opens.

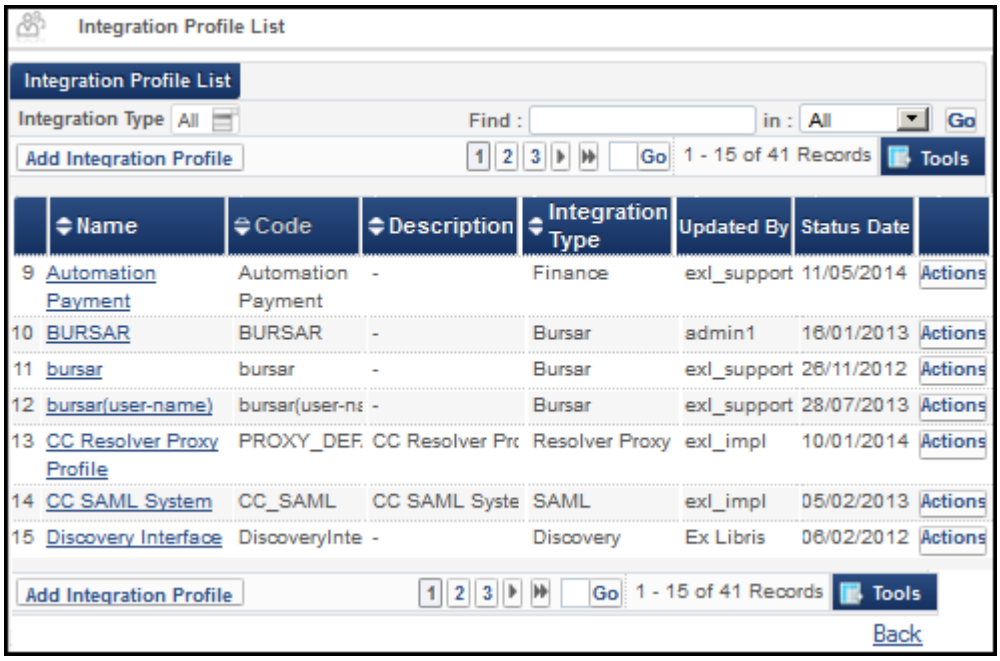


Figure 22: Integration Profile List Page

2 To configure the integration profile for OAI, click the **Add Integration Profile** button above the list.

The first step of the two-step integration wizard opens.

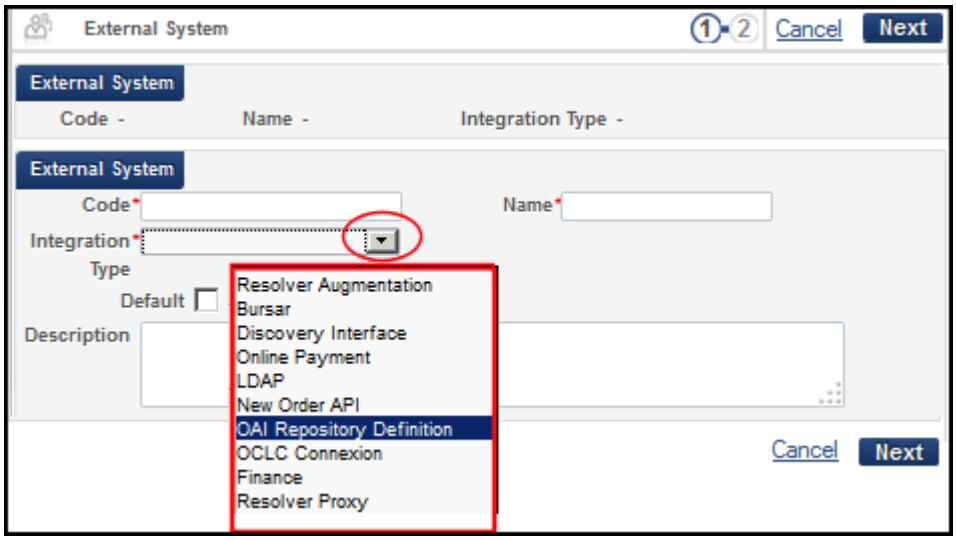


Figure 23: External Integration Profile Wizard, Step 1a

3 From the Integration Type drop-down menu, select **OAI Repository Definition.**

4 The page refreshes with relevant fields for the profile (**Figure 24**).

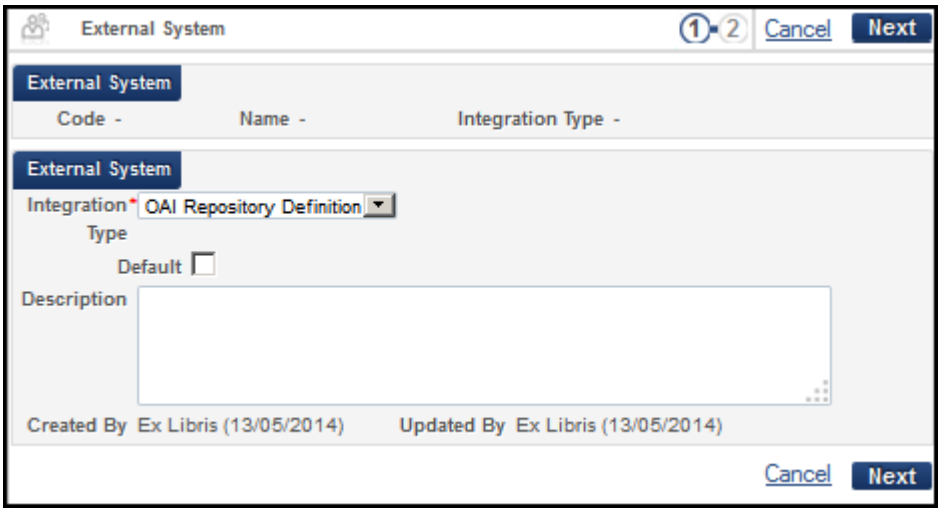


Figure 24: Refreshed Page One of the Integration Profile for OAI

5 Click the **Default** check box to make this integration type the default for your institution.

6 Enter an optional **Description** of the integration profile.

7 Click the **Next** button.

Step 2 of the integration profile wizard opens.

NOTE:
If you have already entered an OAI integration profile in the system, you will be returned to this External System page with the values entered from your first OAI integration profile. You will then be prompted to enter the profile in edit mode, which is the only way you can update the profile if one has already been created.

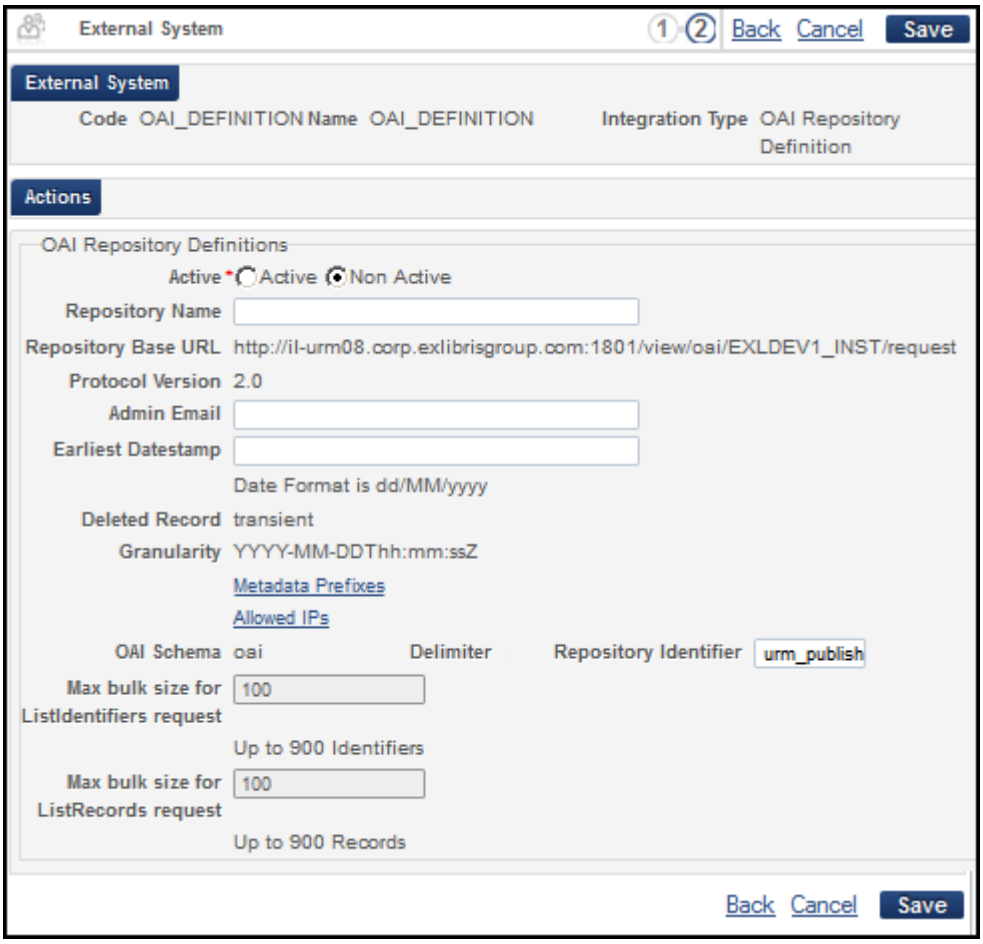


Figure 25: Integration Profile Wizard Page 2 (Parameters)

8 Enter OAI Repository Definitions as needed:

- Active/ Non Active (required) - In order to be used, the repository must be set to **Active**. Leave it as the default value, **Non Active**, to save your settings without activating the repository.
- Repository Name - Used to identify the repository when calling the OAI API.
- Repository Base URL - The fixed, auto-generated base URL for all OAI links, not editable.

- Admin Email - The email address where you want communications related to the integration profile to be sent.
- Earliest Datestamp - The first date stamp of the repository records (which can be used, for example, when querying the repository by date).
- Metadata Prefixes - Currently, only Marc21 is supported.

Figure 26: Configuring Metadata Prefixes

- Allowed IPs - Enter IP information for users/locations who can access the repository (see **Figure 27**), click the **Add Row** button, and click **Customize** when you have finished adding rows. For an IP range, use a hyphen with no spaces (-) between strings. (Syntax corrections will be noted in error messages.)

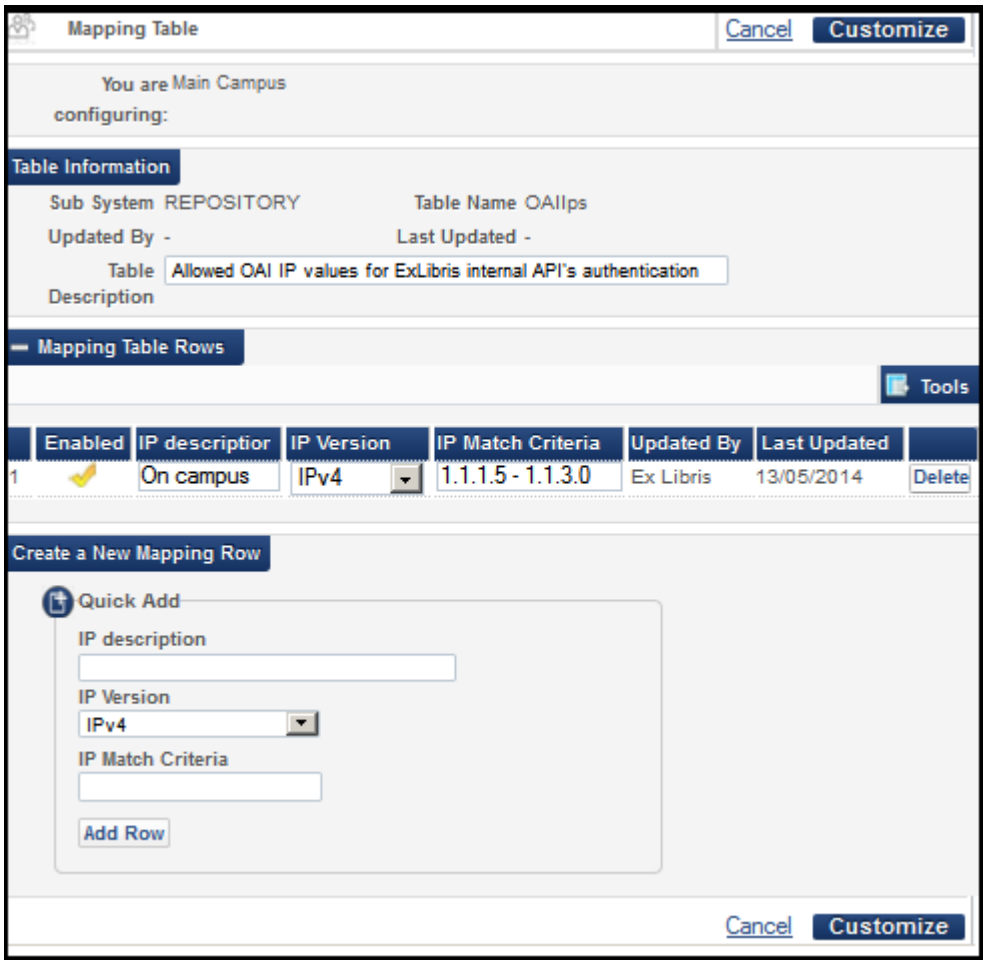


Figure 27: Creating Mapping Rows for IP Addresses with Access

- Enter information for Repository Identifier.

9 Click **Save** to complete the profile.

The Integration Profile List page opens with the new OAI definition listed (**Figure 28**).

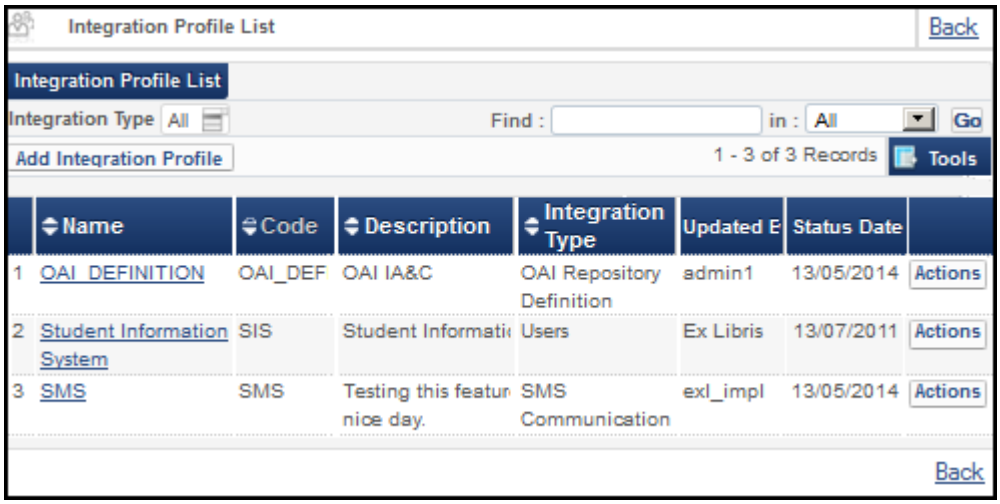


Figure 28: Integration Profile List Page with OAI Integration Profile Added

Because Alma allows for only one OAI setting, if you want to change anything in the integration profile, you must select **Edit** from the **Actions** menu and edit the existing profile.

External System Search

PERMISSIONS:

To configure an external system search profile, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Alma allows you to trigger an online search in any external resource. The records that are displayed in the search results can be imported, merged, or overlaid into existing Alma records.

To enable an online search in an external resource, you must first:

1. Define the external resources you want to search.
2. Create a search profile that defines the order in which the external resources are searched, as well as the search conditions.

To define the external resources to be searched:

1 On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), select the relevant institution or library from the **You are configuring** drop-down list at the top of the page, and then click **External Search Resources** under **Search Configuration**. The Search External Resource Setup page opens.

2 Click the **Add External Resource** button.

3 Under **Find Resources**, enter one or more search criteria to be used in locating a resource.

- **Name** – Enter the name or part of the name of the resource.
- **Name search type** – Select the way in which you want the search word or string to be matched against the resource names: **Contains**, **Exact**, or **Starts with**.
- **Resource type** – Select a type of resource to locate — for example, an e-journal or e-book.
- **Publisher** – Enter the name of a specific publisher from which you want to locate a resource.

4 Click **Find Resources** to display the resources that meet your criteria.

A list of resources that meet the criteria opens on a new page. If the search returns no results, edit your criteria and try again.

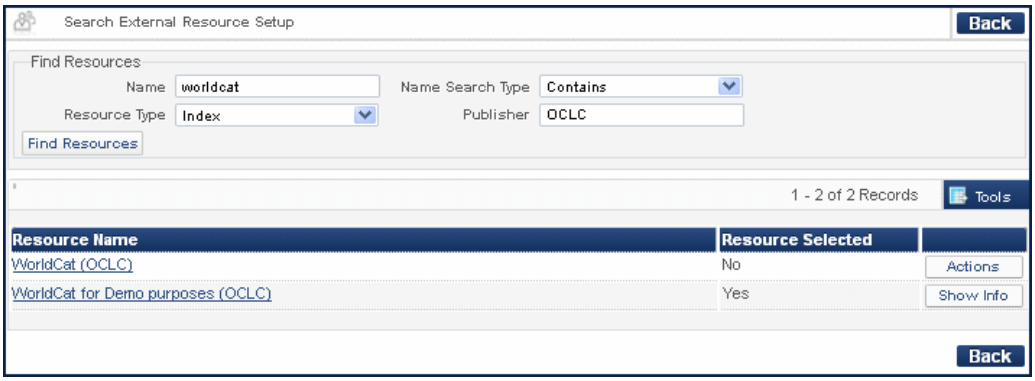


Figure 29: Search External Resource Setup - Results

5 Locate the resource that you want to make available to your institution and select **Actions > Select resource**.

NOTE:
It is possible to have multiple connections to the same resource if the credentials to the resource are different for each connection.

6 Under **Institution Details**, modify, enter, or select the following:

- **Resource name** – Modify the resource name to the name by which the institution refers to the resource.
- **Normalization process** – Select the appropriate normalization rules file to be used from a list of previously defined files. (Normalization processes can be added from the Resource Management Configuration page, in the General section. For more information, see **Working with Normalization Processes** in the *Alma Resource Management Guide*.
- **Merge method** – Select from one of the following merge methods predefined by Ex Libris:
  - **Replace 245 and 035 OCLC if exist** – Adds the MARC 245 and 035 fields from the preferred to the non-preferred records, then replaces all MARC field values in the non-preferred records, except for those in the 001, 245, and 035 fields (whose "a" subfields contain OCoLC or where the first indicator is 9 and the second indicator is #).
  - **Overlay all fields but local** – Replaces all MARC field values in the non-preferred records, except for those in the 001 and 9XX fields. Also replaces values in the 035 fields unless the first indicator is 9 and the second indicator is #.
  - **Keep only old value** – Keeps all MARC field values in the non-preferred records.
  - **Conditional subject headings** – Replaces all MARC field values in the non-preferred records, except for those in the 001, 035, 9XX, 65X, and 7XX fields, then adds the MARC 65X and 7XX field values from the preferred records to the non-preferred records.

  Alternatively, if you defined merge rules in the MD Editor (see **Working with Merge Rules** in the *Alma Resource Management Guide* for the way in which these rules work), you can select these rules from the **Merge method** drop-down list. Note that the descriptions that were entered for the rules are displayed as the method names.
- **Credentials** – The <username>/<password> (using this syntax, with no spaces) to be used for the external resource.

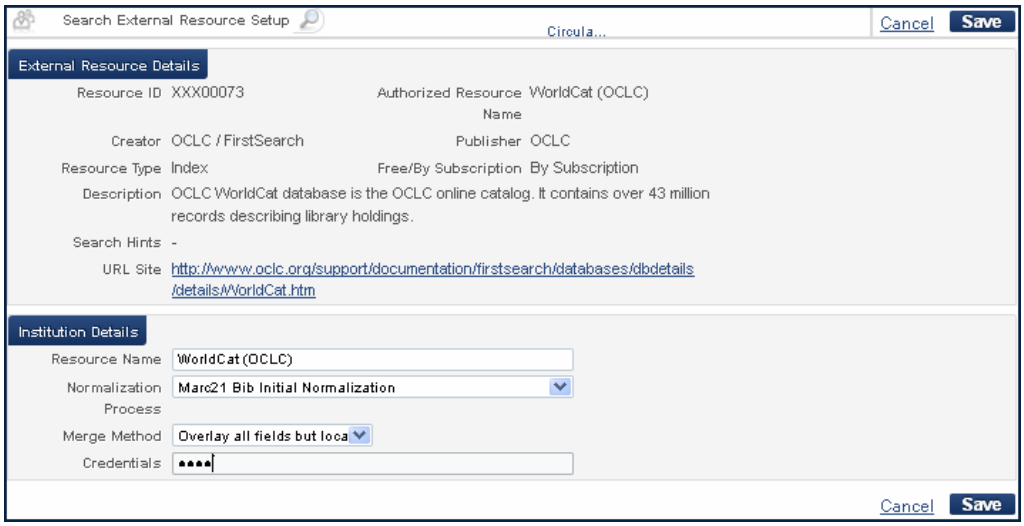


Figure 30: Search External Resource Setup - Institution Details

7 Click **Save**. The resource is added to the list of available external resources.

To create a search profile for the defined external resources:

1 On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), select the relevant institution or library from the **You are configuring** drop-down list at the top of the page, and then click **External Search Profile** under **Search Configuration**. The External Search Profile List page opens.

2 Click the **Add External Search Profile** button. The first page of the External Search Profile Details wizard opens.

3 Enter a name and description (required) for the search profile you are defining and click **Next**. The second page of the wizard opens.

4 Under **Internal Resources Pool**, select **Community Catalog** and click the **Add to Selection** button if you want Alma to search internally (using the MetaLib search engine) before performing a search of external resources.

5 Under **External Resources Pool**, select the external resource you want to add to the profile and click the **Add to Selection** button.

6 Use the **Move Up** and **Move Down** arrows to set the search order for the resources. (To delete a resource, select **Actions > Delete**. To view details of a resource, select **Actions > View**).

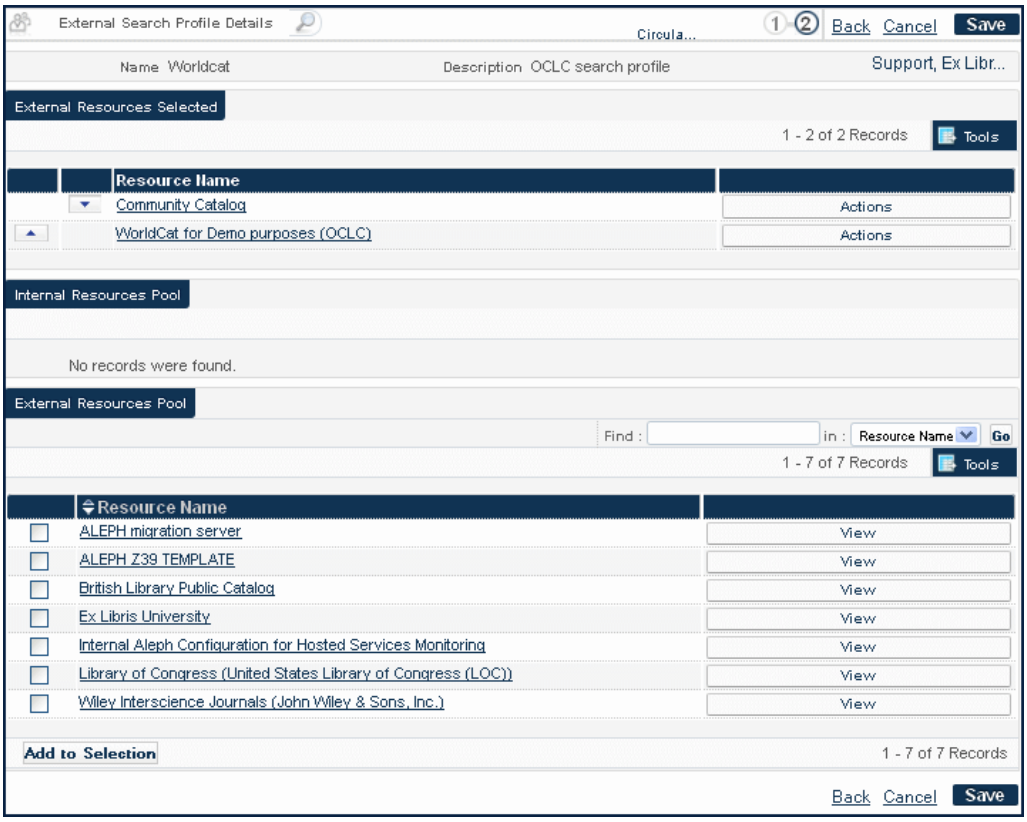


Figure 31: External Search Profile Details – Page 2

7 Click **Save**. The profile is added to the list of external search profiles. It can now be selected from the **Search cataloging profile** drop-down list (**Resource Management > Cataloging > Search External Resources**).

Figure 32: Search External Resources

Publishing and Inventory Enrichment

PERMISSIONS:

To create a publishing profile, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Ex Libris maintains an increasingly versatile, generic publishing model to be used for integrating Alma with third-party systems. This model provides:

- The ability to incrementally publish data through files or OAI-PMH.
- Optional enrichment of inventory-related data. Specifically, the enrichment adds a holdings representation field (852), including the following subfields:
  - Library (b)
  - Location (c)
  - Call number (h)
- The ability to perform normalization (reformatting) of the published data.

In addition to this, a deletion indication appears in the leader position 5, so that when a record is deleted from Alma or removed from the set, the third-party system receives this indication.

To create a general profile for publishing to an external target:

1 On the Resource Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), select **Publishing Profiles** under Record Export.

Figure 33: Publishing Profiles on the Configuration Menu

The Publishing Profiles page opens with a list of available publishing profiles.

Figure 34: Publishing Profiles List Page

2 Click the **Add Profile** button and select **General Profile**. The first page of the add profile wizard opens.

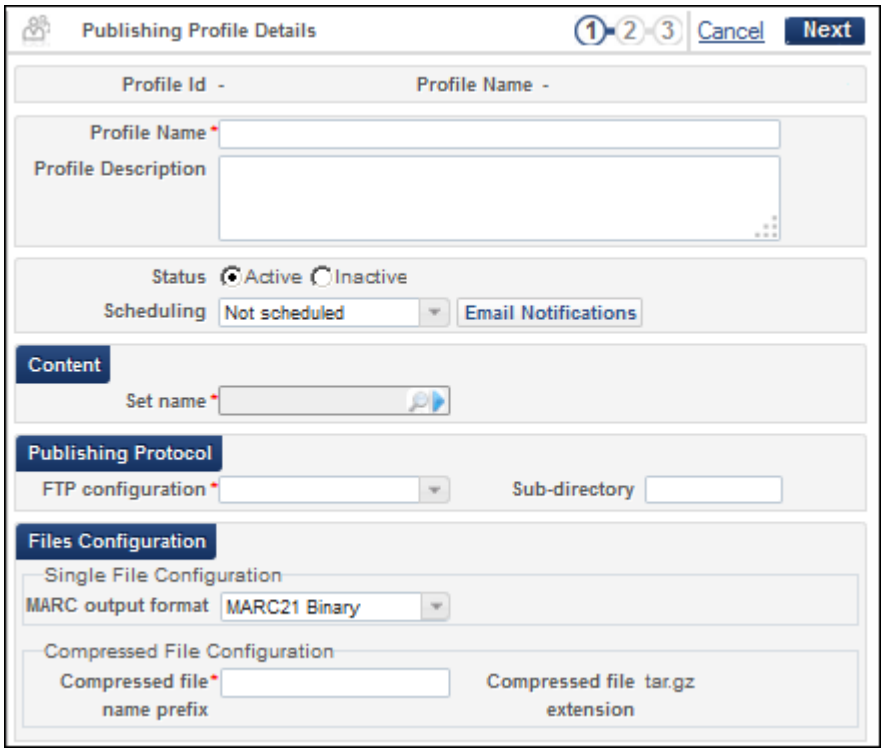


Figure 35: Publishing Profile Details Page, Wizard Step 1

3 Complete the configuration options on page 1 of the wizard using the table below that describes each option.

Table 4. Publishing Profile Details Page - Wizard Step 1

Parameter	Description
Profile name	A name for the profile that distinguishes it from other profiles on the Publishing Profiles List page.
Profile description	A free text description of the profile that shows on the Publishing Profiles List page in the Profile Description field. Enter salient details that allow you and others to identify the profile's optimal use.
Status	Select **Active** or **Inactive**. Active makes the profile available to users. Inactive makes it unavailable but visible in the list of profiles (with a clear check mark rather than a yellow one).
Scheduling	From the drop-down list, select one of the scheduling options provided by the system (dependent on your time zone and data center). If you select **Not scheduled**, the export job for this publishing profile will not run until you select a different scheduling option from the drop-down list for this profile.
Email Notifications	Opens the Email Notifications for Scheduled Jobs page, which allows you to specify which users and email addresses will receive email notifications when the publishing profile has completed. You will have the option to choose whether to send the notifications for successful jobs and/or jobs that contain errors.
Content section	
Set name	Click the search icon to view the available sets for publishing. (Sets of the following type are shown: All Titles, Physical Titles, Electronic Titles, or Digital Titles.)
Publish on item/portfolio level	Select this option to publish on the item or portfolio level. When this option is selected, one bibliographic record is published for each unique item/portfolio associated with the bibliographic record. If one bibliographic record is associated with multiple portfolios/items, the bibliographic record is published multiple times. Alma displays a message to alert you to this method of output processing (refer to **Figure 36**). If this option is not selected, one bibliographic record is published containing all portfolio/item information. This functionality may be useful for integration with external sources such as the Hathi Trust and Aurora (State Library of Queensland).

Table 4. Publishing Profile Details Page - Wizard Step 1

Parameter	Description
Publishing Protocol section	
FTP configuration and Sub-directory	FTP configuration field values come from your institution's setup of the protocol (**Administration > General Configuration > Configuration Menu > External Systems > S/FTP Definitions**)
Files Configuration section - Single File Configuration	
MARC output format	Select MARC XML or MARC binary.
Number of records in the file	Select the maximum number of records per file published. Your options are to choose a maximum of 1,000, 5,000, or 10,000 records per file or to select a single file option with no maximum records specified. The default is 1,000 records per file. This capability enables you to determine how many records are included in each file in order to align with external source requirements regarding file structure.
Files Configuration section - Compressed File Configuration	
Use default file name	Select **Yes** or **No**.
Compressed file name prefix	Enter a short prefix for identification purposes on your compressed output. This is required when you select **Yes** for **Use default file name**. The system appends the process ID and a date/time to the prefix you specify for the file name that is created. **NOTE:** A compressed tar.gz file is not created (as indicated in the UI). Rather, individual MARC files are created.
File name	Enter a single file name to be used for the publishing output that is created. This parameter dynamically displays and is required when you select **No** for **Use default file name**.

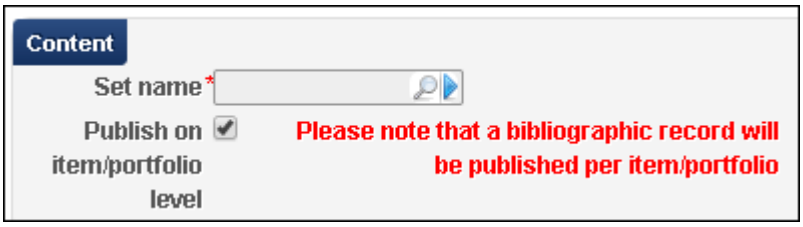


Figure 36: Publish On Item/Portfolio Level Message

4 Click **Next**. The second wizard pages opens.

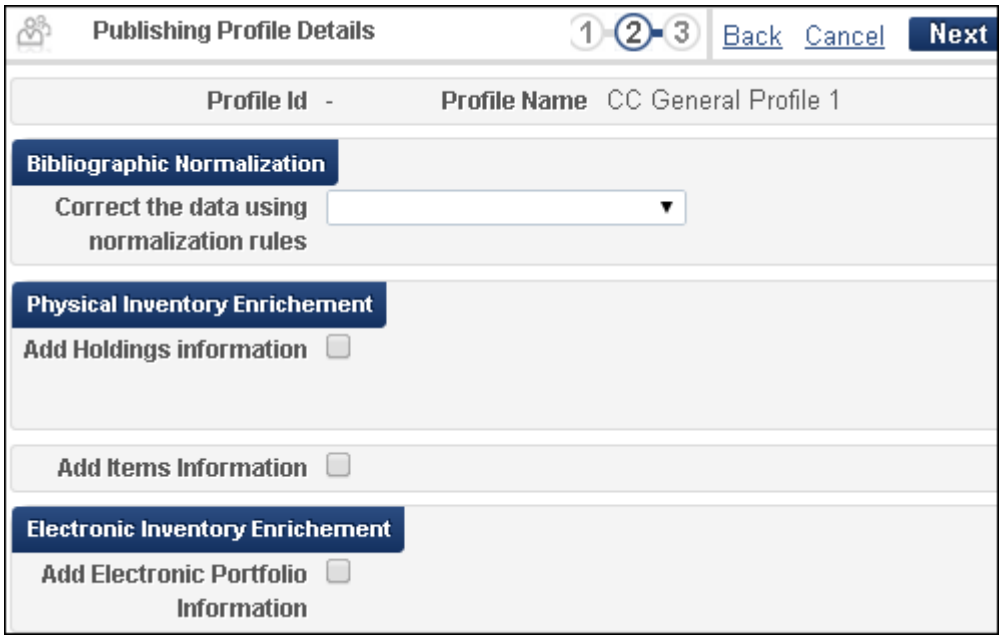


Figure 37: Adding a Publishing Profile - Normalization and Inventory Enrichment

5 Complete the parameters for step 2 of the wizard using the table below that describes these parameters.

Table 5. Fields on the Publishing Profile Details Page - Wizard Step 2

Parameter	Description
Bibliographic Normalization section	
Correct the data using normalization rules	Select a normalization rule (if needed) from the drop-down list of rules (that you previously created and saved).

Table 5. Fields on the Publishing Profile Details Page - Wizard Step 2

Parameter	Description
Physical Inventory Enrichment section	
Add Holdings Information	Select this check box if you want to map the holdings field/subfield information from the Alma database into the bibliographic field/ subfield for the record(s) being built for publishing. The system dynamically opens a Quick Add dialog box for entering your mapping specifications. Click **Add**. Repeat mapping holdings fields/ subfields to match your requirements for this publishing profile. **VIDEO:** For more details about adding holdings information, refer to the *General Publishing Profile: Add Holdings and Item Info* video (8:16 mins).

Table 5. Fields on the Publishing Profile Details Page - Wizard Step 2

Parameter	Description
Add Items Information	Select this check box to include item information in the bibliographic record(s) being built for publishing. Specify the field/subfields to which the related item record information should be mapped in the bibliographic record that will be created for publishing. The following item information can be mapped: item ID, barcode, copy ID, material type, item policy/status, provenance, magnetic indication, enumeration A/B, chronology I/J, description, process type, permanent library/location, current library/location, call number type/call number, alternative call number type/alternative call number, temporary call number type/temporary call number, inventory number, storage location, pages, pieces, notes (Public, Fulfillment, Internal 1-3, and Statistics 1-3), PO line number, and due back date. For every physical item that is related to the published bibliographic record, Alma will create a field/subfield combination in the bibliographic record to publish using the mapping that you identify in the Physical Inventory Enrichment section of this page. For item information such as library, location, and material type that may have both a code and description, only the code is published, not the description. Specific to mapping library/location information, you can use either the permanent library/location or the current library/location options. When you use the current library/location mapping option, the system will publish either the permanent library/location or the temporary library/location information depending on the item's library/location at the time of publishing. **VIDEO:** For more details about adding item information, refer to the *General Publishing Profile: Add Holdings and Item Info* video (8:16 mins).
Electronic Inventory Enrichment section	
Add Electronic Portfolio Information	Select this check box if you want to enrich publishing records with electronic inventory information for the purpose of integrating with third-party platforms. Once selected, the following fields appear.
Repeatable field	Specify the MARC field that will hold the enrichment information in the published record.

Table 5. Fields on the Publishing Profile Details Page - Wizard Step 2

Parameter	Description
Access URL subfield	Specify the subfield that will contain the access URL for the electronic resource. **NOTE:** If you specify this field, you must enter the **Link Resolver Base Resolver** field.
Link Resolver Base URL	Enter the base URL for your link resolver. For Alma Link Resolver, use the following format and insert your institution's information where indicated: `http://<primo server host:port>/openurl/<primo institution_code>/<primo view_code>?`
Collection Name subfield	Specify the subfield that will contain the name of the collection for the electronic resource.
Library subfield	Specify the subfield that will contain the name of the library for the electronic resource.
Interface Name subfield	Specify the subfield that will contain the name of the interface for the electronic resource.
Public Note subfield	Specify the subfield that will contain public notes for the electronic resource.
Coverage Statement subfield	Specify the subfield that will contain the coverage statement for the electronic resource.

6 Click **Next** to open the third step of the publishing profile wizard.

Figure 38: Adding a Publishing Profile, Enable OAI Provider

7 To enable publishing to an OAI provider, select the check box.

8 Click **Save** to enter the profile in the database and return to the Publishing Profiles list page.

To work with existing general publishing profiles:

1. On the Resource Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), select **Publishing Profiles** under Record Export.
2. From the Publishing Profile Type filter, select **General Profiles**.
3. Select one of the following row actions:
   - Edit
   - Delete
   - Run
   - History

Figure 39: General Publishing Profile Row Action Options

Publishing to PubMed

PERMISSIONS:

To configure publishing to PubMed, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Alma allows you to automatically export records to PubMed by using a publishing profile that enables you to share with PubMed your electronic journal inventory that is relevant to PubMed. By sharing this information with PubMed, PubMed will be able to provide a visual indication for the PubMed

titles to which the library has full-text access and provide access to them using the Alma Link Resolver.

You can identify/customize the following PubMed details in the PubMed publishing profile:

- Your PubMed ID
- URL that identifies the icon/graphic file that displays in the PubMed search results
- Text for the link label that displays in the PubMed search results
- Primo base URL/Alma Link Resolver base URL for accessing the resource from the PubMed search results.

The XML file generated from Alma for publishing to PubMed includes:

- PubMed ISSNs (or EISSNs) available in the Alma inventory
- Coverage information (from year/to year) as available
- Embargo/rolling year information as available

To configure a PubMed Publishing Profile:

1. Access the Publishing Profiles page (**Resource Management > Resource Configuration > Configuration Menu > Record Export > Publishing Profiles**).
2. Select **Actions > Edit** for the **Publish electronic record to PubMed** publishing profile. The Publishing Profile Details page opens for the PubMed publishing profile.

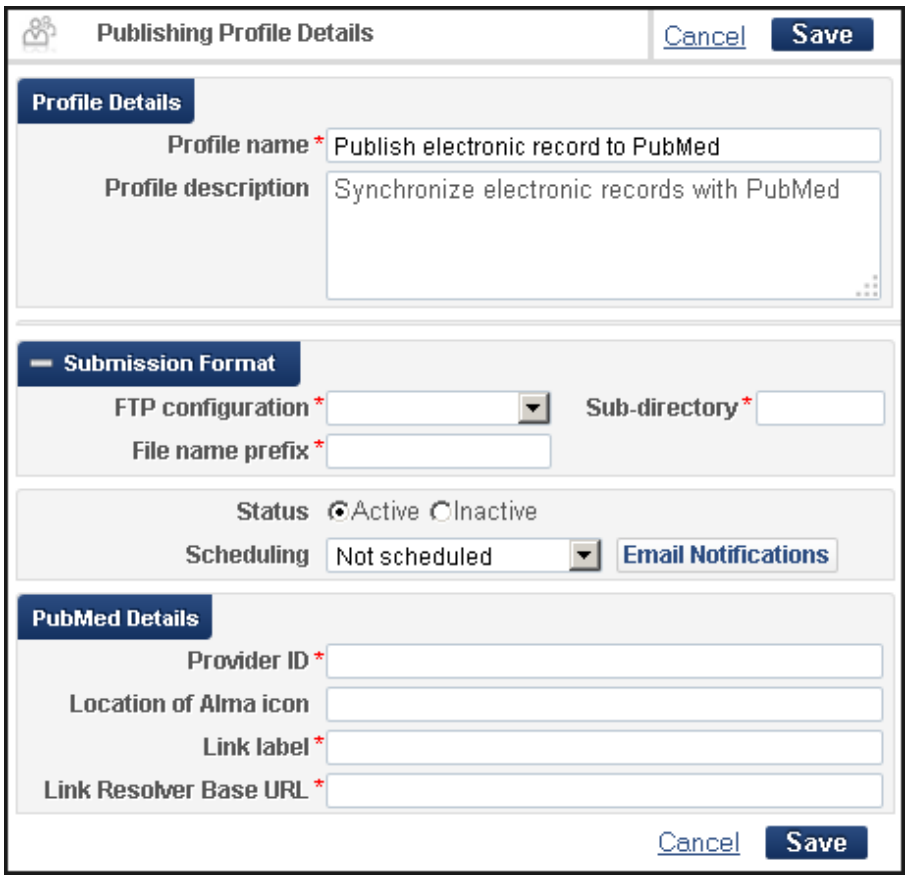


Figure 40: PubMed Publishing Profile Details Page

3 Complete the PubMed publishing profile configuration using the information provided in the table below.

Table 6. PubMed Publishing Profile Configuration Options

Parameter	Description
Submission Format section:	
FTP configuration	Select the FTP configuration to be used from the drop-down list of available FTP configurations. That is, select the FTP configuration that contains the appropriate server, port, user name, and password for the connection (refer to **Configuring S/FTP Definitions** on page **219** in the *Alma Administration Guide*.)

Table 6. PubMed Publishing Profile Configuration Options

Parameter	Description
Subdirectory	Specify the subdirectory in which the files should be placed for the FTP upload. For example, if you specified `Alma` in the subdirectory field for the S/FTP connection configuration, and you enter `PubMed` in this subdirectory field, the data is exported to the `Alma/PubMed` directory.
File name prefix	Enter the alphanumeric characters that you want to use as the prefix for the file name that is created. To this prefix, the system adds a sequence number (starting with 1) and a date suffix in the date/time format of `YYYYMMDDhhmm` and an extension of `.xml`. When there are more than 50,000 records, the system creates a new file and the sequence number is incremented.
Status	Specify whether this is an active or inactive profile. In order for a publishing job to run using this profile, you need to indicate that this is an active profile.
Scheduling	Select the publishing schedule you prefer from the drop-down list of options.
Email Notifications	Opens the Email Notifications for Scheduled Jobs page, which allows you to specify which users and email addresses will receive email notifications when the publishing profile has completed. You will have the option to choose whether to send the notifications for successful jobs and/or jobs that contain errors.
Provider ID	Enter the ID provided to you by PubMed.

Table 6. PubMed Publishing Profile Configuration Options

Parameter	Description

Location of Alma icon	Enter the URL address for displaying an Alma Link Resolver icon (or other icon/graphic file of your choice) in the PubMed search results. The following is provided:
	North America
	`http://alma.exlibrisgroup.com/view/link_resolver.gif`
	or
	`http://na01.alma.exlibrisgroup.com/view/link_resolver.gif`
	Europe
	`http://eu.alma.exlibrisgroup.com/view/link_resolver.gif`
	APAC
	`http://ap01.alma.exlibrisgroup.com/view/link_resolver.gif`
	This parameter is optional and will be published only when something is specified.

Link label	Enter the text that you want used to identify the link's title in the PubMed results (such as Link to Alma).
Link Resolver Base URL	Enter the base URL for the Alma Link Resolver using the following format and inserting your institution's information where indicated: http://<primo server host:port>/openurl/<primo institution_code>/<primo view_code>? If you are unfamiliar with your base URL for the Alma Link Resolver, contact Ex Libris Support for assistance.

4 Click **Save**.

5 To publish the records manually, select **Actions > Run** for the **Publish electronic record to PubMed** publishing profile.

Publishing to Primo

PERMISSIONS:

To configure publishing to Primo, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Alma allows you to automatically export records to Primo via a publishing profile, which defines the inventory types that are included in the export. For details on configuring this publishing profile, see **Exporting Alma Records to Primo** in the *Alma-Primo Integration Guide*.

Publishing to OCLC

PERMISSIONS:

To configure publishing to OCLC, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

IMPORTANT:

If your are transitioning to Alma production from an environment where you have been synchronizing your records with OCLC WorldCat, refer to **Transitioning to Alma Production from a Previous System that was used to Synchonize with OCLC WorldCat** on page **71** for important instructions.

Alma allows you to automatically synchronize either bibliographic records with embedded holdings information, or holdings information only, with the information available for your institution/library in the OCLC WorldCat catalog.

The publishing to OCLC job exports records to a predefined FTP location from which OCLC retrieves them and synchronizes them with the WorldCat records. A record is exported in the following cases:

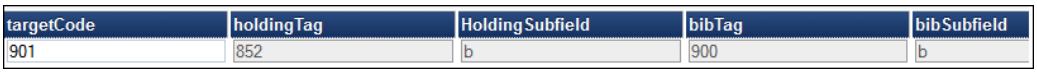
- The record has been changed or added since the last export job ran, or a staff user has manually selected the record to be exported, which is also known as forced export. (Select **Force export to WorldCat** from the MD Editor's **Tools > Set Management Tags** menu).
- The record is set to **Publish bib/Publish holdings only** in the MD Editor (**Tools > Set Management Tags > Export to WorldCat**).
- The appropriate publishing profile has been properly defined and enabled (see Step 5 below).

NOTE:
Bibliographic records whose associated holdings records have been deleted are published as deleted records.

To configure publishing to OCLC, you must perform the following actions:

1. Contact OCLC and obtain an institution code symbol. If you want a specific library to have its own separate code symbol, overriding the institution symbol, you must coordinate this with OCLC and map the library code to the assigned symbol in the **INSTITUTION_EXTERNAL_SYMBOL** mapping table (**Resource Management > Resource Configuration > Configuration Menu > Institution OCLC Symbol**).
2. Open a synchronization project with OCLC. Each such project has a project ID, which is used for data transfer activities between the institution/library and OCLC.
3. Configure an S/FTP connection to be used by Alma and OCLC (see **Configuring S/FTP Definitions** in the *Alma Administration Guide*).
4. If you want to synchronize bibliographic records with embedded holdings information with the information available for your institution/library in the OCLC WorldCat catalog, you must define the field in the bibliographic record that will be used to contain holdings information and how the fields of the holdings records are to be mapped to this bibliographic field and subfields. These mappings are defined in the **Map Bib Record** mapping table (**Resource Management > Resource Configuration > Configuration Menu > Map Holdings Fields to Bib Records OCLC**).

   For example, if you want to replace the 900 b field/subfield in the OCLC bibliographic records with the 852 b field/subfield in your holdings records, you would define the following mapping in the holdingsInBib mapping table:



targetCode	holdingTag	HoldingSubfield	bibTag	bibSubfield
901	852	b	900	b

Figure 41: Map Holdings Fields to Bibliographic Records in OCLC

NOTE:
You can enter any number as the targetCode.

This information is provided to OCLC when the synchronization project is opened and is used by Alma to enrich the bibliographic records with holdings information in a way that OCLC is able to interpret.

5 Customize one of the following types of publishing profiles that exist in Alma:

- **Publish bibliographic records (batch load) to OCLC** – Use this profile to synchronize bibliographic records with embedded holdings information with the information available for your institution/library in the OCLC WorldCat catalog. For more information, see https://oclc.org/batchload.en.html.
- **Publish your local holdings records (LHRs) to OCLC** – Use this profile to synchronize holdings information only with the holdings information available for your institution/library in the OCLC WorldCat catalog. For more information, see http://oclc.org/support/services/local-holdings.en.html.

To configure the OCLC publishing profile:

1 On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), click **Publishing Profiles** under **Record Export**. The Publishing Profiles page opens.

2 Choose either **Publish bibliographic records to OCLC** or **Publish holdings to OCLC** (described above) and select **Actions > Edit**. The Publishing Profile Details page opens.

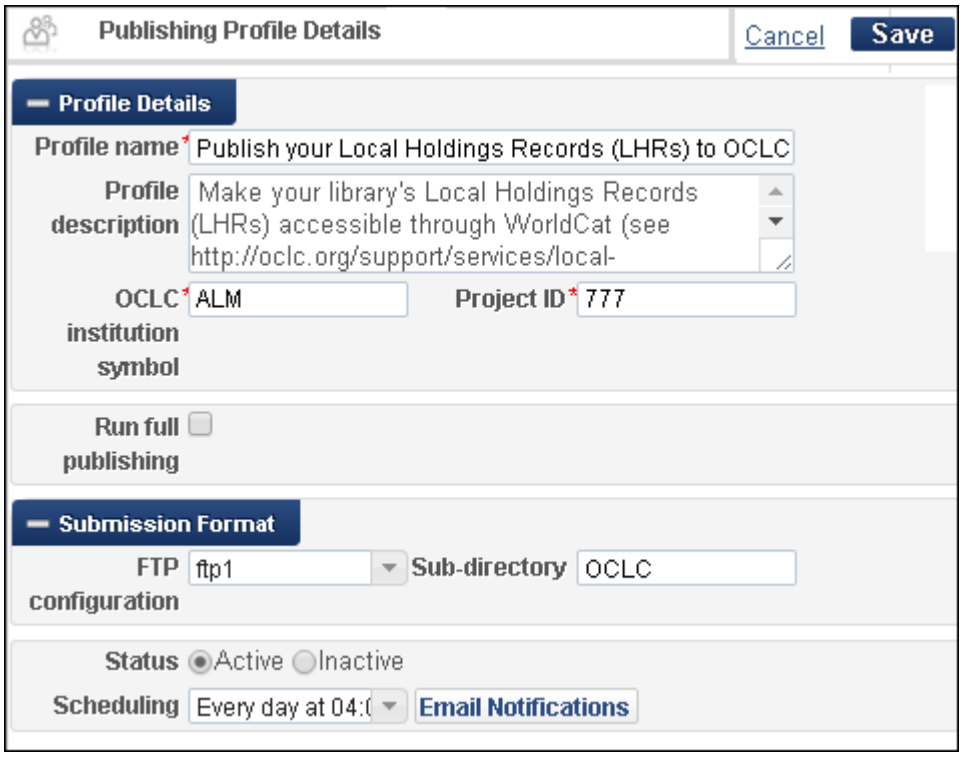


Figure 42: Publishing Profile Details Page

3 Complete the parameters on the Publishing Profile Details page. Use the table below for a description of these parameters.

Table 7. Publishing Profile Details Page Parameters (OCLC)

Parameter	Description
Profile Details section:	
Profile name	Modify the name to meet your requirements.
Profile description	Modify the description to further identify this profile.
OCLC institution symbol	Enter the institution/library code symbol previously agreed upon with OCLC (see Step 1 in the configuration process outline above).
Project ID	Enter the synchronization project ID previously agreed upon with OCLC (see Step 2 in the configuration process outline above).
Run full publishing	Select this option to publish all records. Otherwise, the system does an incremental publishing of only the records that have changed since the previous publishing.

Table 7. Publishing Profile Details Page Parameters (OCLC)

Parameter	Description
Submission Format section:	
FTP configuration	From the drop-down list, select the name of the S/FTP connection that you previously defined.
Subdirectory	Enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the Sub-directory field during S/FTP connection configuration and you enter `OCLC` in this field, the data is exported to the `Alma/OCLC` directory.
Status	Select **Active**.
Scheduling	From the drop-down list, select one of the scheduling options that are predefined by an Ex Libris administrator. If you select **Not scheduled**, the export job for this publishing profile will not run until you select a different scheduling option from the drop-down list for this profile

NOTE:
OCLC retrieves the data from the FTP directory every night at about 2:00 AM (Eastern Standard Time). The publishing process should be scheduled so that it does not interfere with OCLC's data collecting process.

4 Click **Email Notifications** to specify which users and email addresses will receive email notifications when the publishing profile has completed.

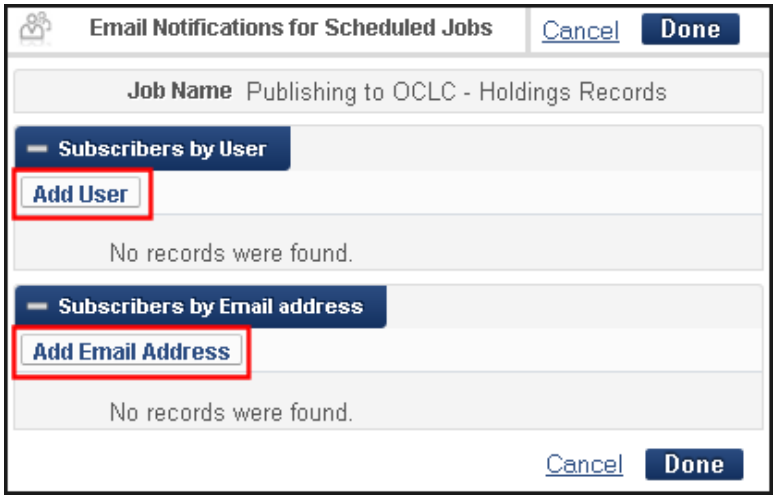


Figure 43: Email Notifications for Scheduled Jobs Page

5 Select the users that you want to receive email notifications.

a Click **Add User**.

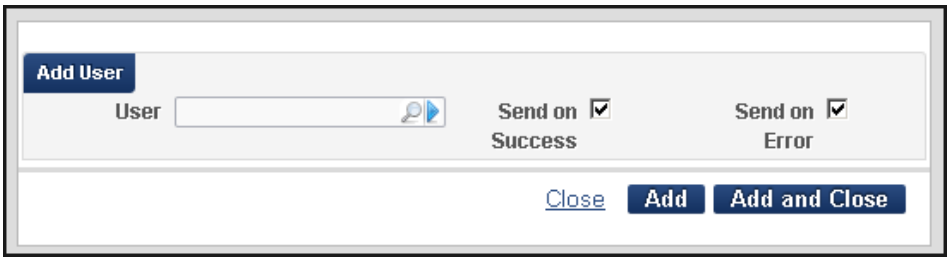


Figure 44: Add User Dialog Box

b In the **User** field, search for and select a user name.

c Select the following options to specify when the email notification will be sent to the user: **Send on Success** and **Send on Error**.

d Click **Add** to include additional users, click **Add and Close** to add the user and also close the dialog box, or click **Close** to exit the dialog box.

6 Select the email addresses that you want to receive email notifications.

a Click **Add Email Address**.

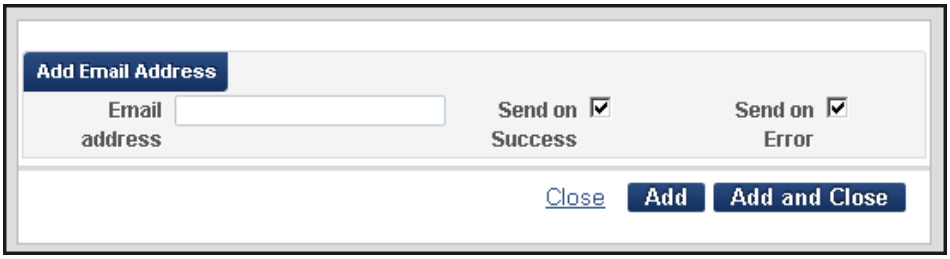


Figure 45: Add Email Address Dialog Box

b In the **Email address** field, enter an email address.

c Select the following options to specify when the email notification will be sent to the email address: **Send on Success** and **Send on Error**.

d Click **Add** to include additional email addresses, click **Add and Close** to add the email address and also close the dialog box, or click **Close** to exit the dialog box.

e Click **Done** to return to the Profile Details tab.

7 Click **Save**. The modified publishing profile appears activated on the Publishing Profiles page. Data that meets the defined criteria is exported to the specified FTP location when the profile is run. For information on monitoring a publishing export job, see **Monitoring Jobs** in the *Alma Administration Guide*.

Transitioning to Alma Production from a Previous System that was used to Synchonize with OCLC WorldCat

The purpose of this section is to provide instructions that will enable you to continue processing incremental changes to OCLC WorldCat (versus reloading your entire database) when you switch from a previous system to Alma production. To do this, you will need to:

- Create a one-time-use OCLC publishing profile
- Run the one-time-use OCLC publishing profile to create a starting point in your database from which Alma can continue with the incremental updates to OCLC

Refer to the procedure **To configure and run the OCLC publishing profile for the transition to Alma production:** on page **71** for instructions regarding how to configure the one-time-use OCLC publishing profile for establishing the starting point from which Alma can continue with your incremental updates to OCLC WorldCat.

IMPORTANT:
It is key that you run the special one-time-use publishing profile/job on your first day or very close to your first day in Alma production.

To configure and run the OCLC publishing profile for the transition to Alma production:

1 Use the steps outlined in the procedure **To configure the OCLC publishing profile:** on page **67** to create your one-time-use OCLC publishing profile except use the Publishing Profile Details page settings described in the table below instead of the settings provided in **Table 7**.

Table 8. Publishing Profile Details Page Parameters (for Transition Profile)

Parameter	Description
Profile Details section:	
Profile name	Modify the name to meet your requirements.
Profile description	Modify the description to further identify this profile.
OCLC institution symbol	Enter the institution/library code symbol previously agreed upon with OCLC (see Step **1** in the configuration process outline above).
Project ID	Enter the synchronization project ID previously agreed upon with OCLC (see Step **2** in the configuration process outline above).

Table 8. Publishing Profile Details Page Parameters (for Transition Profile)

Parameter	Description
Run full publishing	Since there is no publishing index on the first day of production, the entire repository will be published when you run your transition publishing job (without selecting this parameter). As a result, you do not need to select this parameter for your OCLC transition publishing profile. Not selecting this setting is also consistent with how you will want this parameter set, later, when you modify this publishing profile for your ongoing incremental publishing to OCLC. As a result, later, no change will be needed for this parameter when you modify the publishing profile for ongoing incremental publishing.
Submission Format section:	
FTP configuration*	Set the FTP configuration option to a temporary FTP server location that you created especially for this purpose. **IMPORTANT:** This temporary FTP server location/ configuration is different from the one that you have established with OCLC for coordinating the retrieval of records. Normally, the FTP location for the OCLC publishing profile is one that you have coordinated with OCLC from which OCLC can retrieve records to be synchronized with the WorldCat records. However, for this one-time-use publishing profile, the FTP location is one that is different and will be used to publish the records that you maintained on your previous system and have already synchronized with the OCLC WorldCat records. As a result of publishing to this temporary FTP location, Alma, subsequently, will have a starting point for identifying your subsequent changes for incremental publishing with OCLC WorldCat.
Subdirectory	Enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the Sub-directory field during S/FTP connection configuration and you enter `OCLC` in this field, the data is exported to the `Alma/OCLC` directory.

Table 8. Publishing Profile Details Page Parameters (for Transition Profile)

Parameter	Description
Status	Select **Active**.
Scheduling*	Select **Not scheduled**. You will manually initiate running this job.

NOTE:
The parameters that have been identified with an asterisk in **Table 8** are the profile parameters that will need to be changed after you have completed your transition publishing job.

2 After you have saved your profile settings, manually run the transition publishing job (**Actions > Run**) for **Publish bibliographic record (Batchload) to OCLC** or **Publish your Local Holdings Records (LHRs) to OCLC** (depending on which profile you chose to configure).

3 Once your transition job has completed running, reconfigure the parameters marked with an asterisk in **Table 8** to set up your OCLC publishing profile for ongoing incremental publishing with OCLC WorldCat records and discard the records published to the temporary FTP server location.

Publishing to COPAC

PERMISSIONS:

To configure publishing to COPAC, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Alma provides publishing support for the Consortium of Online Public Access Catalogues (COPAC), a UK-based union catalog.

Figure 46: COPAC Catalog Example

Refer to the following sections for a detailed description of this support:

- **Initial Publishing to COPAC** on page **74**
- **Ongoing Publishing to COPAC** on page **78**

Initial Publishing to COPAC

Prior to running your ongoing automatic synchronization process with COPAC, you need to coordinate and process an initial publishing of the Alma records that you want exposed in COPAC.

To do an initial publishing with COPAC:

IMPORTANT:
Read this procedure in its entirety before you begin to insure that you have completed any necessary prerequisites for each of the steps.

1 Communicate with COPAC to let them know that you will be running an initial publishing of records from Alma and discuss any profile configurations that need to be coordinated between your institution and COPAC.

   a Prepare for your communication with COPAC by familiarizing yourself with the Alma publishing profile details in the procedure **To create a general profile for publishing to an external target:** on page **51**, and by reviewing any shared information in the Ex Libris Developer Network.

(For an example, refer to https://developers.exlibrisgroup.com/blog/Publishing-to-Copac-Experience-of-the-University-of-York.)

b Prepare a checklist of questions that should address the following Alma configuration requirements:

- FTP configuration details (refer to **Adding S/FTP Connections** on page **220** in the *Alma Administration Guide* for additional information.)
- MARC output format (MARC21 binary or MARC21 XML)
- File size preference (1,000, 5,000, or 10,000 records per file or one single file)
- File naming convention (prefix) for published files
- Publishing schedule

  For your initial publishing job, you will want to run it manually from Alma. For ongoing publishing, you will probably want to set your publishing profile to publish automatically on a certain repeating frequency.

2 Create the logical set of records that you want to publish to COPAC. Refer to the procedure **To add a logical set:** on page **89** in the *Alma Resource Management Guide* for instructions.

If you need to normalize these records before publishing, refer to see **Working with Normalization Rules** on page **220** in the *Alma Resource Management Guide* for more information and/or use the normalization options provided on the **Data Enrichment** tab of the publishing profile (refer to the example below).

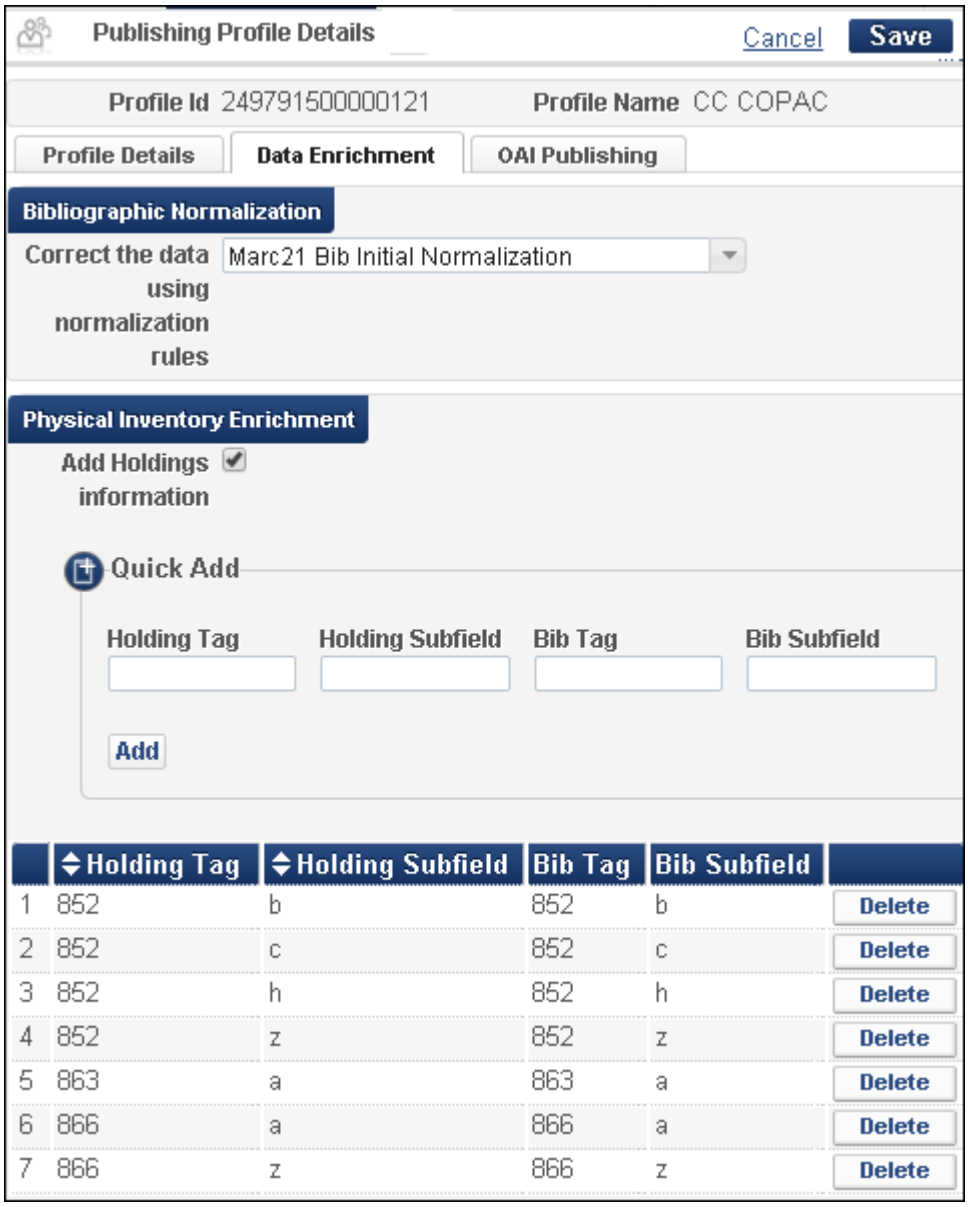


Figure 47: Data Enrichment Tab (Publishing Profile)

3 With the information that you have gathered, create the Alma publishing profile for publishing to COPAC using the procedure **To create a general profile for publishing to an external target:** on page **51**. For additional information about General Profiles for publishing, see **Publishing and Inventory Enrichment** on page **50**. See below for an example of the **Profile Details** tab.

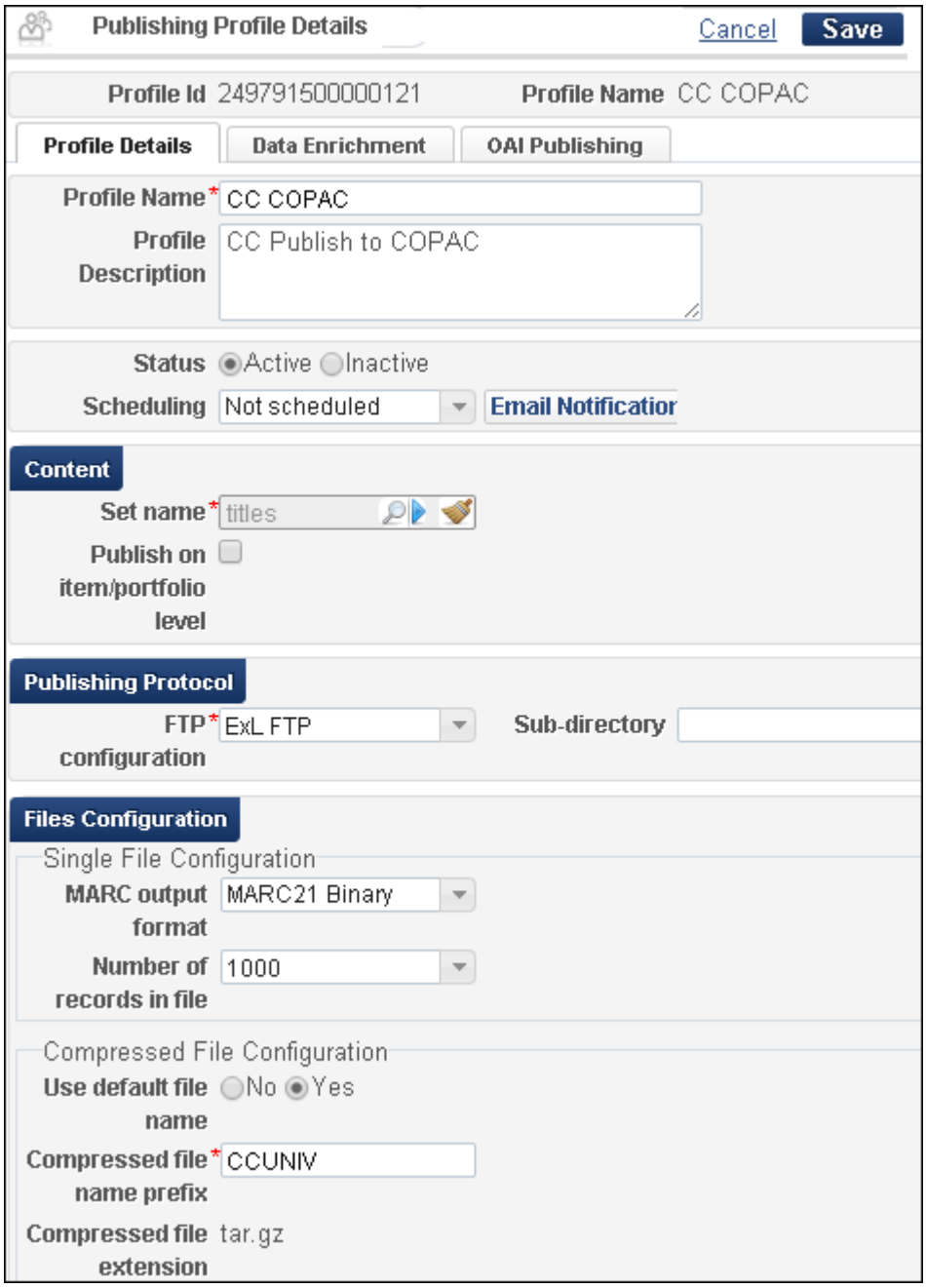


Figure 48: Profile Details Tab (Publishing Profile)

4 Per your pre-arranged schedule with COPAC, run your initial load publishing job.

   a Access the COPAC publishing profile that you have configured (**Resource Management > Resource Configuration > Configuration Menu** > **Record Export section** > **Publishing Profiles**).

   b Select **Actions > Run**.

   c Check the **History** tab on the Monitor Jobs page (**Administration > Manage Jobs > Monitor Jobs**) to determine the status of your COPAC publishing job.

5 Follow up with COPAC to confirm that your publishing job was succesfully received and that your files have been loaded into the COPAC database.

6 Configure your COPAC publishing profile for the ongoing publishing of your records to COPAC. Refer to **Ongoing Publishing to COPAC** on page **78**.

Ongoing Publishing to COPAC

Once you have completed your initial publishing job with COPAC and confirmed that your files have been loaded into the COPAC database, you are ready to begin the incremental/ongoing process of updating your records in COPAC. Alma general publishing is designed to do one initial full upload of records with the necessary logic incorporated to identify the incremental changes to each previous upload and only publish those records that have changed since the last publishing job was run. As a result, republishing a full load is not provided as an option.

For ongoing publishing, you may find it easier to set your publishing profile to run automatically on a repeating schedule.

To configure your COPAC publishing job for a repeating schedule:

1 Open the Publishing Profiles page (**Resource Management > Resource Configuration > Configuration Menu** > **Record Export section** > **Publishing Profiles**) and locate the publishing profile you created for your initial upload to COPAC.

2 Select **Actions > Edit**.

3 Modify the **Scheduling** parameter to match your preference.

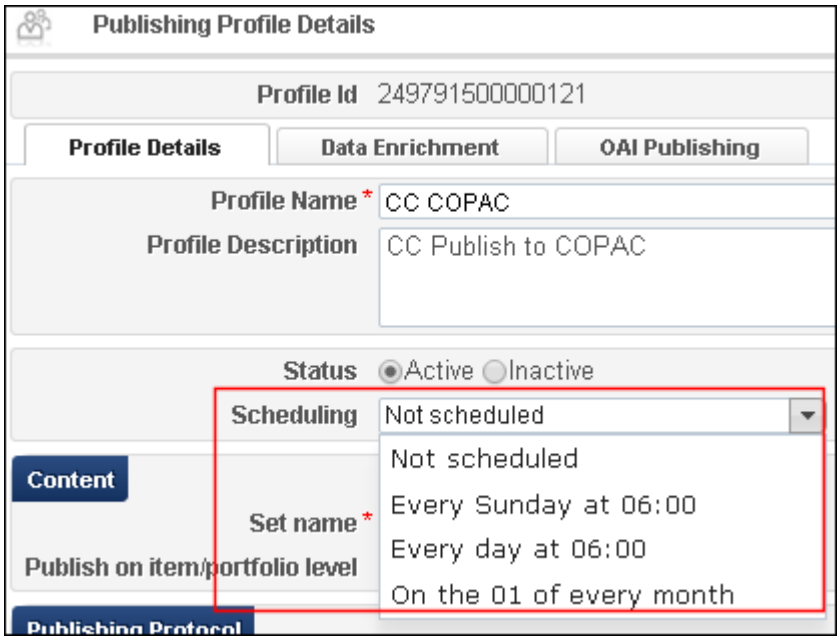


Figure 49: Scheduling Parameter

4 Click **Save**.

Publishing to Libraries Australia

PERMISSIONS:

To configure publishing to Libraries Australia, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

NOTE:

To work with Libraries Australia, the **national_catalog** option in your Customer Parameters needs to be set to `Libraries Australia` by your Ex Libris Implementation contact. Contact Ex Libris Support if you require assistance.

Alma provides support for publishing records to Libraries Australia. This includes profiles that can be configured for initial and ongoing publishing, holdings mappings, and NUC definitions. Refer to the following sections for a detailed description of this support:

Overview of Publishing to Libraries Australia

Alma allows you to automatically synchronize bibliographic records with embedded holdings information with the Libraries Australia (LA). Alma supports the NUC (National Union Catalogue) symbols issued by the LA.

In Alma, each institution that synchronizes its bibliographic/holdings records with the LA must have a NUC code (symbol). Also, specific libraries may have a NUC symbol that overrides the institution's NUC code (refer to the procedure **To configure a library NUC symbol that is different from the institution's NUC symbol:** below).

Limited information about the holdings is embedded in the bibliographic records. Holdings information is sent together with the bibliographic records when the bibliographic records are marked to be synchronized with the national catalog, Libraries Australia.

Field 984 in the bibliographic record is used to contain the holdings information. Specifically, the 984 $a contains the NUC code; and the 984 $c may be configured to contain a call number or a label such as HELD (to indicate that the library has holdings).

Bibliographic records are exported to the LA with embedded holdings information when the following conditions are met:

- The bibliographic record is set or marked to be published, which can be handled in the following manner:
  - The record is set to **Publish bib** in the MD Editor (**Tools > Set Management Tags > Export to Libraries Australia**) as shown in the figure below.

    If the same record is subsequently set to **Don't publish** in the MD Editor, Alma supports publishing this record to the LA so that the LA is synchronized to know that this is a suppressed record.

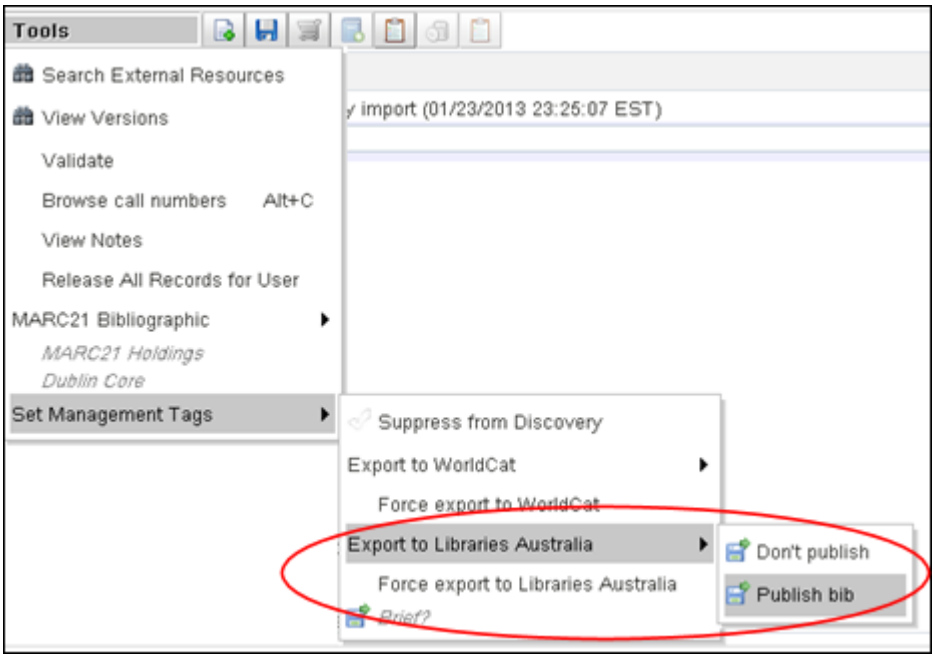


Figure 50: Manually Publish or Force Export

Additionally, holdings records can be marked for suppression (similar to Primo suppression/publishing) by:

- Location configuration

  Select the **Suppress from Discovery** option on the Edit Physical Location page that you access from the **Administration > General Configuration > Configuration Menu**, select a library for **You are configuring**, and click **Physical Locations** in the Locations section.

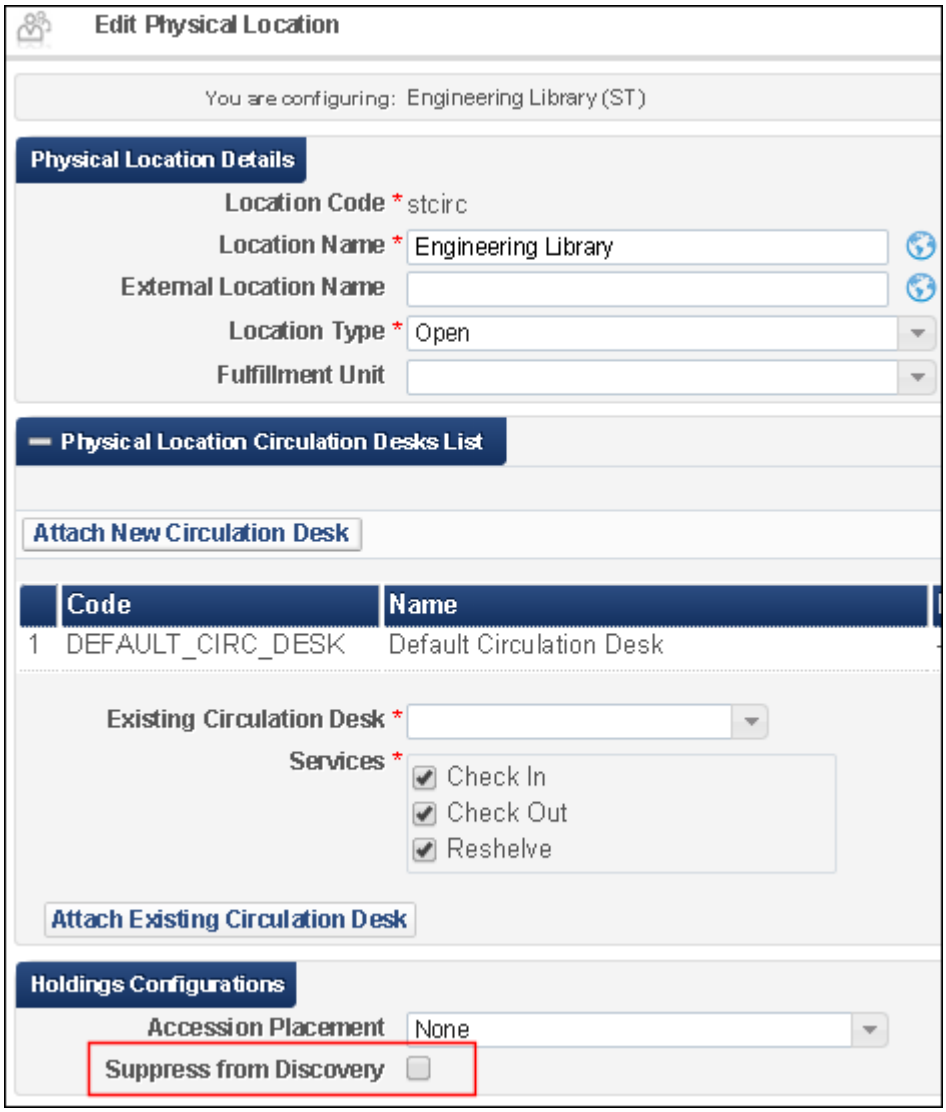


Figure 51: Location Configuration Suppress from Discovery Option

- Using the MD Editor

  You can mark an individual holdings record for suppression in the MD Editor by selecting **Tools > Set Management Tags > Suppress from Discovery** when the holdings record to be suppressed is the active record on the MD Editor page.

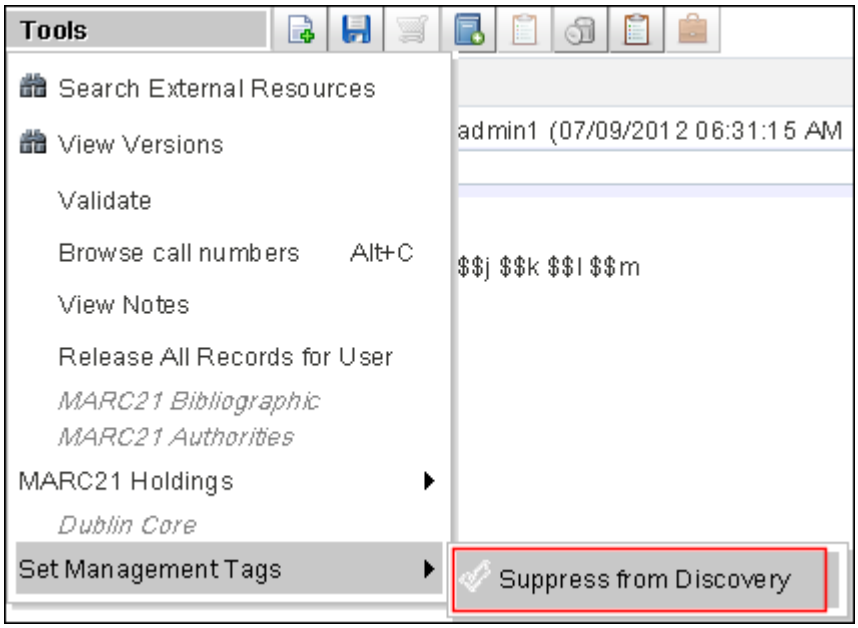


Figure 52: Suppress from Discovery Option for a Holdings Record

- The **Synchronize MMS with national catalog** job that allows you to mark records to publish in bulk is run. For more information, refer to the section **Running Jobs on Defined Sets** in the *Alma Administration Guide* and Step **2** of **To do an initial publishing with Libraries Australia:** on page **86**.
- Records can be marked to publish to Libraries Australia as part of the record import process. (This is the recommended practice when the import will result in records ready to publish to Libraries Australia, to ensure an optimal, ongoing update process for Libraries Australia.) For more information, refer to **Managing Profiles for Record Imports** on page **509** in the *Alma Resource Management Guide*. (The Set Management Tags are described in the table **Import Profile Details Wizard - Page 5 Fields**.)

- The bibliographic record or any holdings record linked to the bibliographic record changed since the last time it was published, or a staff user has manually selected the record to be exported, which is also known as forced export. (Select **Force export to Libraries Australia** from the MD Editor's **Tools > Set Management Tags** menu, refer to the figure below.)
- The appropriate publishing profile has been properly defined and enabled (refer to the procedure **To configure the Libraries Australia publishing profile:** below).

The export contains two separate files of bibliographic records with embedded holdings information. One file contains the new and updated holdings, and the other file contains deleted bibliographic records. These can be identified by the

following naming convention (refer to the table below for an explanation of the naming convention):

```
<NUC_CODE>-<process type>.<format.id><sequence>
```

Example: NCLN-B.D66

Table 9. Export File Naming Convention

File Name Component	Description
NUC_CODE	The NUC code as identified in the configuration.
process type	B – For bibliographic records uploaded with or without holdings D – For deleting bibliographic records
format.id	The format ID of D (data) is used.
sequence	The sequence is a running number of file uploads. The numbers are recycled after reaching the upper limit (99). The last sequence number used is saved as part of the publishing profile. When the sequence number reaches 99, it restarts with 00.

Alma normalizes bibliographic records for export to LA in the following manner:

- Local fields (59X and 9XX) are excluded from the record to be published.
- If 019 $a exists, the contents of the 019 $a are written to the 001 field in the export file. If there is no content for 019 $a, the 001 field is removed.
- The value of the Alma MMS ID (from 001) is copied to the 035 $a

  There is only one 035 field in the export files (that contains the MMS ID in $a) except for instances where (OCoLC) is specified in the other 035 $a.
- The 090 and 091 fields and $9s are omitted.

For each holdings record that needs to be published, Alma creates a 984 holdings information field in the export file. Content from the 852 field (subfields k, h, i, j, l, and m) is used to build the 984 field for export to LA. This is handled in the following manner:

- The 852 field is retrieved from the holdings record.
- The NUC code is retrieved from one of the following:
  - The library NUC code mapping table
  - The configured institution NUC code

- A new 984 field is added to the bibliographic record.
- The 984 $a is set to the NUC code retrieved above.
- The 984 $c is set with either the normalized value of the call number from the holdings record or the label value such as HELD as set on the Publishing Profile Details page (refer to the configuration procedure **To configure the Libraries Australia publishing profile:** below).
- When a bibliographic record is deleted or suppressed from publishing to LA, it contains `d` in the leader position 5 and `deleted` is specified in the 984 $c (refer to the example below).

```
<datafield tag="984" ind1=" " ind2=" ">
       <subfield code="a">SUA:A</subfield>
       <subfield code="c">deleted</subfield>
</datafield>
<datafield tag="984" ind1=" " ind2=" ">
       <subfield code="a">SUA:B</subfield>
       <subfield code="c">deleted</subfield>
</datafield>
<datafield tag="984" ind1=" " ind2=" ">
       <subfield code="a">SUA:C</subfield>
       <subfield code="c">deleted</subfield>
</datafield>
```

- When one holdings record is deleted, all other holdings will be published as an update.
- When one holdings record is updated, only this updated holdings record will be published with the new information.
- When bibliographic record information is changed, all holdings which are not deleted will be published as an update.
- There can be repeating subfields. In the example below, $c and $d are repeating entries. Other subfields, determined by your mapping, may be repeating subfields.

```
<datafield tag="984" ind1=" " ind2=" ">
       <subfield code="a">NUC_TEST</subfield>
       <subfield code="c">MICROFILM 3502-3508 </subfield>
       <subfield code="d">Vol. 1 (1967)-v. 7 (1974)</subfield>
 </datafield>
 <datafield tag="984" ind1=" " ind2=" ">
       <subfield code="a">SUA-R</subfield>
       <subfield code="c">JJ73397-73400 </subfield>
       <subfield code="d">Vol. 8 (1974)-v. 11 (1978)</subfield>
       <subfield code="c">375.905 H674 </subfield>
       <subfield code="d">Vol. 1, no. 1-v. 37, no. 4 (Nov. 1967-Aug. 2004)
          </subfield>
 </datafield>
```

- Other 984 subfields are set according to the configured mapping information (refer to the procedure **To configure the holdings mapping for Libraries Australia:** below).
- When multiple holdings exist, the output is one 984 per NUC, where the $a contains the NUC code, the $c is repeatable with the call number of all the holdings for that NUC/library. Other subfields, that are mapped from the mapping table, are repeatable, too.

NOTE:
Normalized MARC records are transformed to ISO 2709/MARC-8.

Initial Publishing to Libraries Australia

Prior to running your ongoing automatic synchronization process with Libraries Australia, you need to coordinate and process an initial publishing of the Alma records that you want exposed to Libraries Australia.

To do an initial publishing with Libraries Australia:

IMPORTANT:
Read this procedure in its entirety before you begin to insure that you have completed any necessary prerequisites for each of the steps.

1. Communicate with Libraries Australia to let them know that you will be running an initial publishing of records from Alma and prepare any profile configurations that need to be coordinated between your institution and Libraries Australia.
2. Mark the bibliographic records that you want published to Libraries Australia using the MD Editor (refer to the information provided under **Overview of Publishing to Libraries Australia** on page 80) or run the **Synchronize MMS with national catalog** job described below to mark one or more sets of records.
   a. Access the Run a Job - Select Job to Run page (**Administration > Manage Jobs > Run a Job**) and filter the job list by selecting **Marc 21 Bib normalization** as the **Type**.
   b. Select **Synchronize MMS with national catalog** and click **Next**.
   c. Select the set of physical titles that you previously saved for this purpose. These are the titles that you want Libraries Australia to know that you have in your Alma system.
   d. Click **Next**.

e Select **Publish Bibliographic records** and click **Next**.

The other option, **Don't publish**, is intended for suppressing records similar to the option provided in the MD Editor (and described under **Overview of Publishing to Libraries Australia** on page **80**), but for a group of records (set) instead of one individual record.

f Schedule the job and click **Next**.

g Review and confirm the run job options that you selected; and if everything is acceptable, click **Submit**.

3 Identify the holdings records to be published. More specifically, you need to mark the holdings records that you want suppressed. You can suppress holdings records, as a group, based on their location; or you can suppress individual records using the MD Editor. Refer to **Location configuration** on page **81** and **Using the MD Editor** on page **82** for more information.

4 Configure your Libraries Australia publishing profile. Refer to **Libraries Australia Publishing Profile** on page **88** with particular attention to the following:

- Select **Run full publishing** for your initial upload.

  (After Alma has successfully completed running your initial load, it removes the **Run full publishing** selection in your profile in preparation for you to move on to the ongoing phase of publishing.)
- Select **Not Scheduled** from the drop-down list for your scheduling option. You will want to confirm with Libraries Australia the success of your initial load before setting the publishing profile to run automatically.
- Confirm that you have an FTP configuration created that addresses your requirements.

5 Run your initial load publishing job.

a Access the **Upload Holdings to Libraries Australia** publishing profile that you have configured (**Resource Management > Resource Configuration > Configuration Menu** > **Record Export section** > **Publishing Profiles**).

b Select **Actions > Run**.

6 Confirm with Libraries Australia that your initial load has completed successfully.

7 Configure your **Upload Holdings to Libraries Australia** publishing profile for the ongoing publishing of your records to Libraries Australia.

Libraries Australia Publishing Profile

Use the instructions below to configure the Alma publishing profile for Libraries Australia.

To configure the Libraries Australia publishing profile:

1 On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), click **Publishing Profiles** under **Record Export**. The Publishing Profiles page opens.

2 Select **Actions > Edit** for the **Upload Holdings to Libraries Australia** row. The Publishing Profile Details page opens.

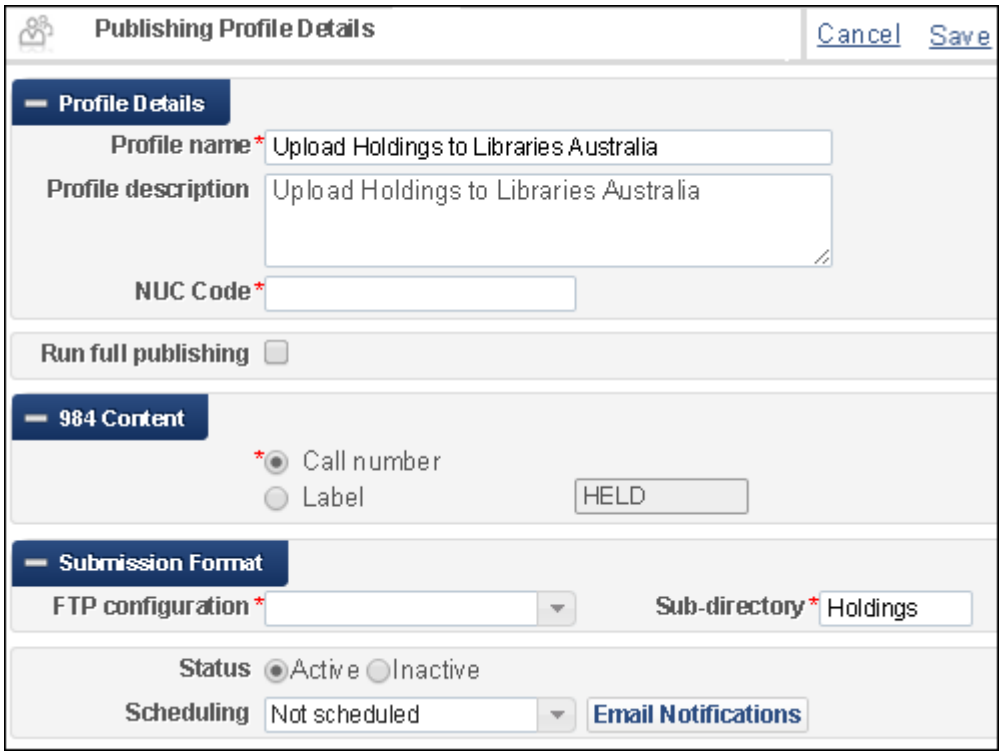


Figure 53: Publishing Profiles Details Page

3 Edit the profile details to match your requirements (see the table below for a description of the options).

Table 10. Publishing Profile Details Page Description

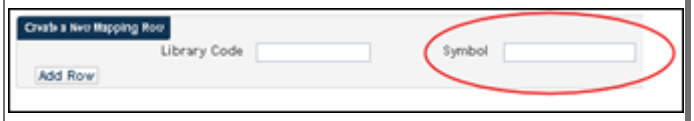
Option	Description
NUC code	Enter the code/symbol by which the institution is identified to the Libraries Australia. **NOTE:** For a library with a NUC symbol that is different from the institution's, the symbol needs to be specified in the **Symbol** field located in **Resource Management > Resource Configuration > Configuration Menu > Record Export > Institution NUC Symbol**. The symbol specified in the Symbol field overrides what is specified in the NUC Code field on the Publishing Profile Details page. 
Run full publishing	Select this option to complete your initial publishing to Libraries Australia. Refer to **Initial Publishing to Libraries Australia** on page **86** for more information. **NOTE:** Once the initial publishing is complete, Alma automatically removes the **Run full publishing** check box selection for this profile to enable it to be used for the ongoing publishing of records to Libraries Australia.
Call number or Label	Select the **Call number** option for the call number to be mapped for export. Alternatively, select the **Label** option and enter a label in the field next to this option to have the label you entered be mapped for export. In the example below, HELD is mapped for export (indicating that the institution/library has holdings). 

Table 10. Publishing Profile Details Page Description

Option	Description
FTP configuration	Specify the FTP configuration to be used from the drop-down list of available FTP configurations. Select the FTP configuration that contains the appropriate server, port, user name, and password for the connection (see **Configuring S/FTP Definitions** in the *Alma Administration Guide*).
Subdirectory	Specify the subdirectory in which the files should be placed for the FTP upload. For example, if you specified `Alma` in the Sub-directory field during S/FTP connection configuration and you enter `LA` in this field, the data is exported to the `Alma/LA` directory.
Status	Specify the status of the profile as active or inactive. **NOTE:** Only active profiles will be run.
Scheduling	Select a scheduling option from the drop-down list of previously set scheduling options. If you select the **Not scheduled** option, the export job for this publishing profile will not run until you select a different scheduling option from the drop-down list for this profile or manually select **Actions > Run** for **Upload Holdings to Libraries Australia** from the Publishing Profiles page.
Email Notifications	Opens the Email Notifications for Scheduled Jobs page, which allows you to specify which users and email addresses will receive email notifications when the publishing profile has completed. You will have the option to choose whether to send the notifications for successful jobs and/or jobs that contain errors.

4 Click **Save**.

Holdings Mapping for Libraries Australia

The publish to Libraries Australia job creates the 984 $a and $c. If you want to map additional 984 fields to be published to Libraries Australia, they need to be mapped in the mapping table described in the procedure below. You do not need to map the call number (from 852 k, h, i, j, l, and m) to 984 $c because this is already done by the system.

To configure the holdings mapping for Libraries Australia:

1 On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), click **Map Holdings Fields into Bib Record Libraries Australia** under **Record Export**. The Libraries Australia holdings mapping configuration page opens.

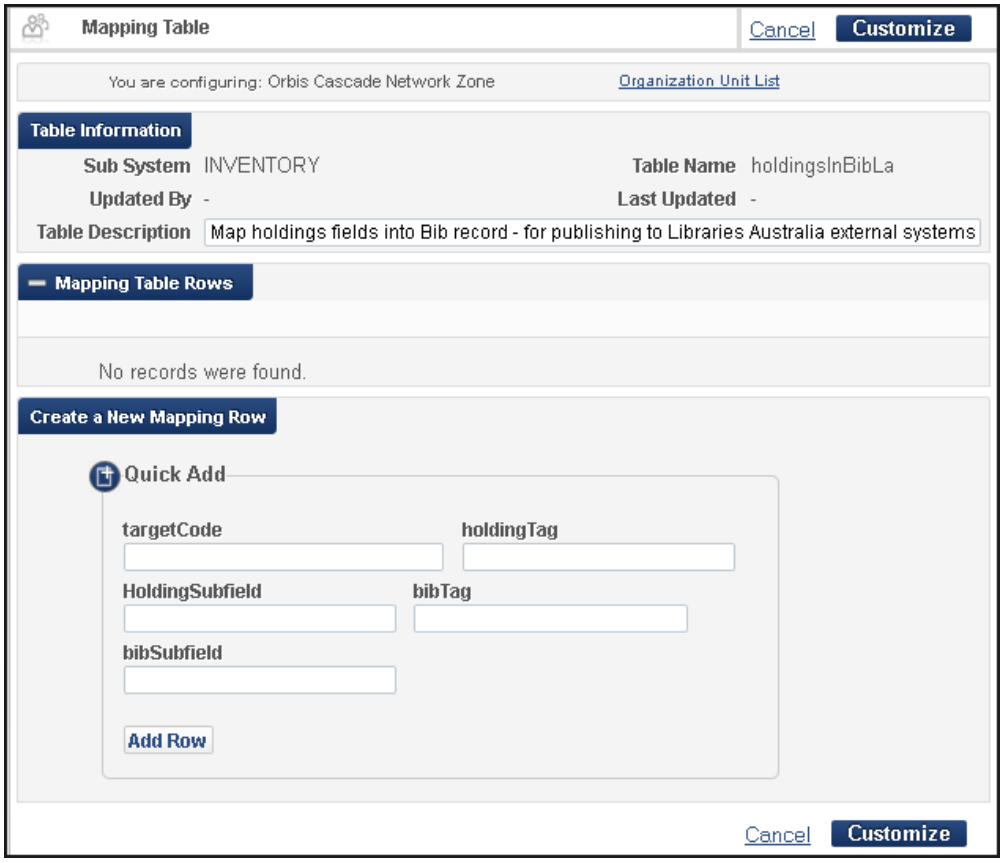


Figure 54: Libraries Australia Holdings Mapping Configuration Page

2 Create one or more mapping rows.

a Enter the holdings mapping configuration details to match your requirements (refer to the table below for a description of your options).

Table 11. Holdings Mapping Configuration for Libraries Australia

Option	Description
Target Code	Enter a unique code to identify the mapping row.
Holdings Tag (field)	Specify the holdings MARC field from which the content is to be mapped to the bibliographic MARC field.

Table 11. Holdings Mapping Configuration for Libraries Australia

Option	Description
Holdings Subfield	Specify the subfield from which the content is to be mapped for the export file. The following 852 subfields are ignored: h, i, j, k, l, and m.
Bibliographic Tag (field)	Specify the bibliographic MARC field to be mapped for the export file. By definition, this is the 984 field.
Bibliographic Subfield	Specify the subfield that will contain the content of the mapped holdings subfield. Libraries Australia's RIS documentation specifies the following allowed subfields: d, e, f, g and h. Subfield a and c are automatically mapped by the publishing process and do not require configuration here.

b For each mapping that you enter, click **Add Row**.

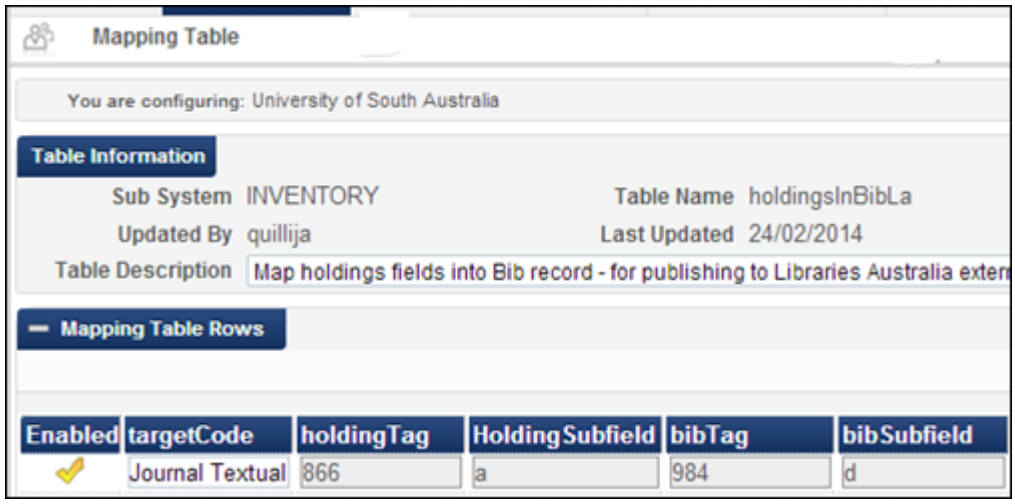


Figure 55: Libraries Australia Holdings Mapping Configuration Page with Mapping Rows

3 When you have completed adding mapping rows, click **Customize**.

Configuring a Library NUC

Use the instructions below to configure a library's NUC symbol that is different from the NUC of the Alma institution.

To configure a library NUC symbol that is different from the institution's NUC symbol:

1. On the Resource Management Configuration page (**Resource Management > Resource Configuration > Configuration Menu**), click **Institution NUC Symbol** under **Record Export.**
2. Enter the **Library Code** (as found in the 852 $$b) and the **Symbol** (unique to the library and different from the NUC code specified for the institution on the Publishing Profile Details page).

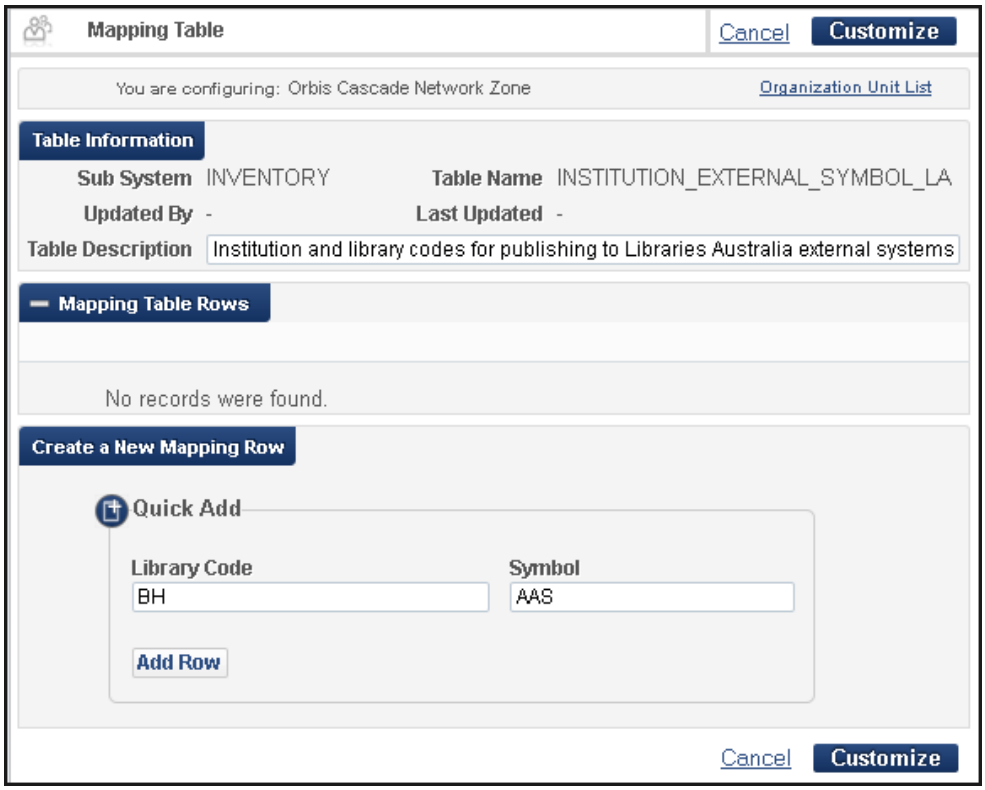


Figure 56: NUC Symbol Unique to the Library and Different from the Institution's NUC Code

3. Click **Add Row**.
4. Click **Customize**.

Publishing Electronic Holdings to Google Scholar

PERMISSIONS:

To configure publishing to Google Scholar, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

To publish electronic holdings to Google Scholar, you must configure the **Publish electronic records to Google Scholar** publishing profile and run it weekly to make sure that holdings information is accurate. This publishing profile allows you to configure the settings used by Google Scholar to display holdings information for your institution.

IMPORTANT:

If your Alma institution belongs to a Collaborative Network (CN), this export process must be run at the NZ institution the day before it is run at each member institution. This allows updates to the network inventory to be included in the holdings file for each member institution.

To configure the publishing profile for Google Scholar:

1 On the Resource Management Configuration page in Alma (**Resource Management > Resource Configuration > Configuration Menu**), click **Publishing Profiles** in the **Record Export** section.

The Publishing Profiles page opens.

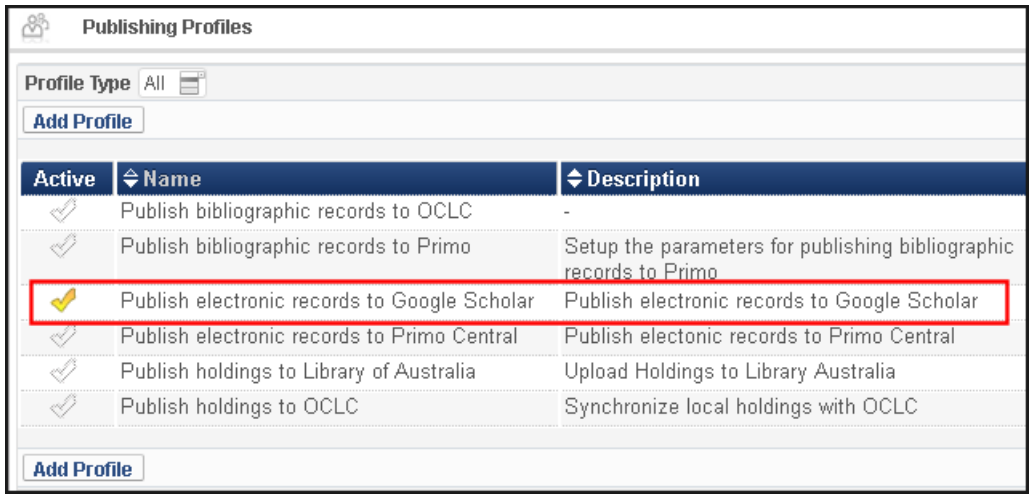


Figure 57: Publishing Profiles Page

2 In the row that contains the **Publish electronic records to Google Scholar** profile, select **Actions > Edit**. For standard configurations, the Publishing Profile Details page opens and displays the Registration Parameters section.

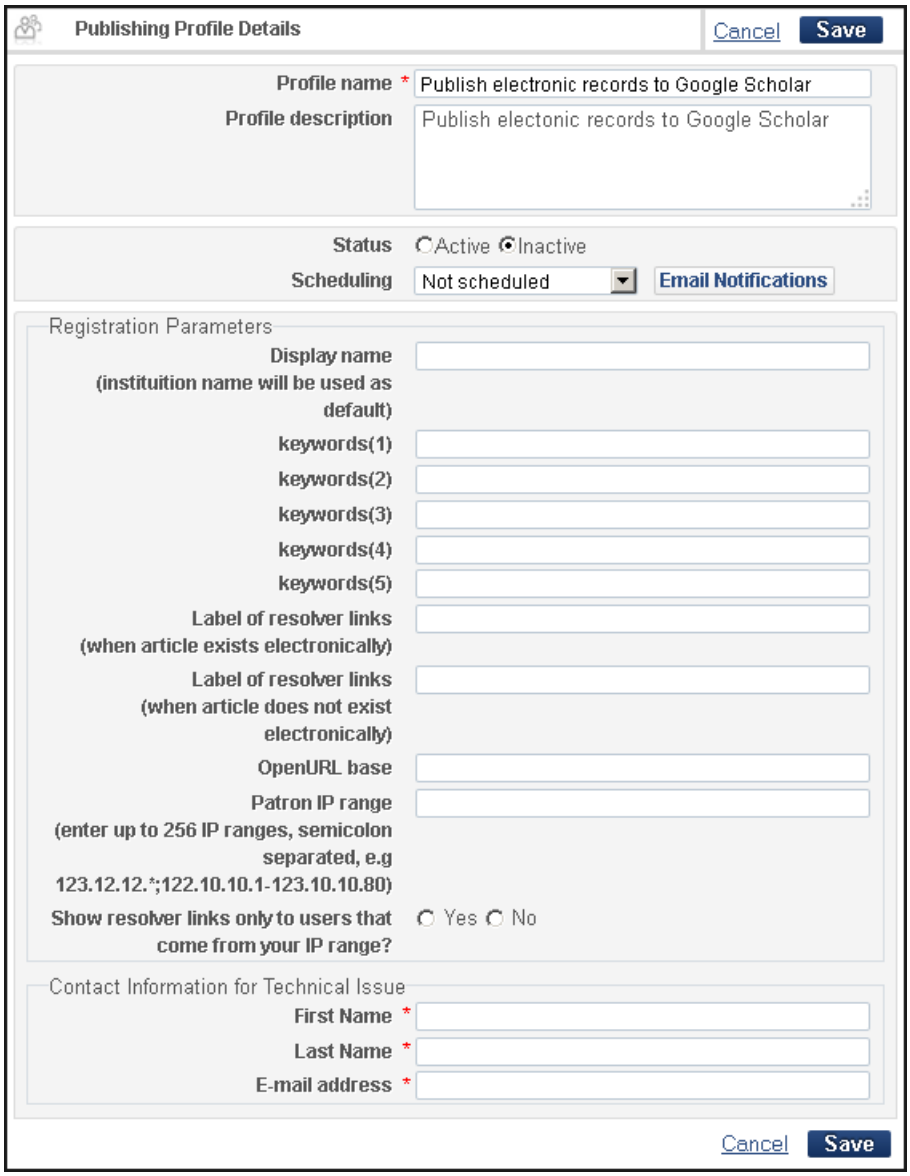


Figure 58: Publishing Profile Details Page (Standard Configuration)

NOTE:
For multicampus configurations, the Publishing Profile Details page opens and displays the Electronic profiles section, which allows you to configure Google Scholar settings per campus. For more information, see **Adding a Profile for a Multicampus Configuration** on page **104**.

3 In the **Status** field, select **Active** to enable the publishing profile.

4 In the **Scheduling** field, select a scheduling option from the drop-down list to identify when you want the publishing job to be run that is associated

with this Google Scholar publishing profile. If you select the **Not scheduled** option, the export job for this publishing profile will not run until you select a different scheduling option from the drop-down list for this profile.

5 Click **Email Notifications** to specify which users and email addresses will receive email notifications when the publishing profile has completed.

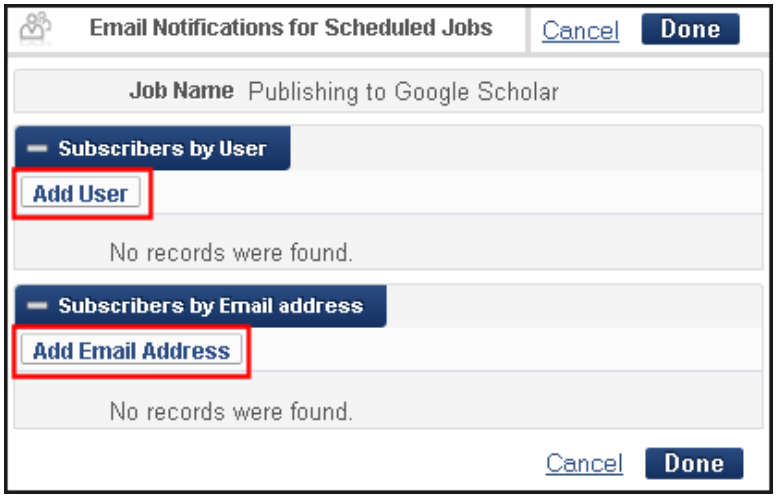


Figure 59: Email Notifications for Scheduled Jobs Page

6 Select the users that you want to receive email notifications.

a Click **Add User**.

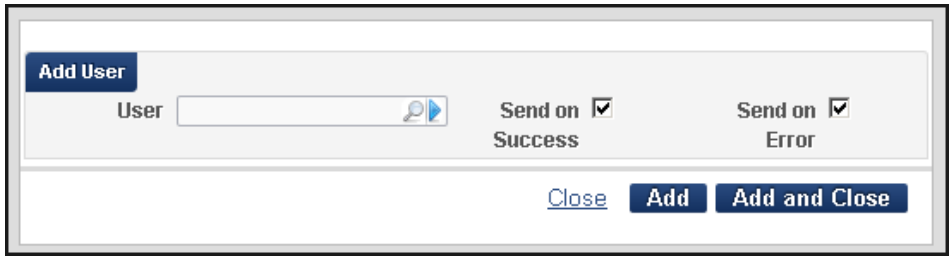


Figure 60: Add User Dialog Box

b In the **User** field, search for and select a user name.

c Select the following options to specify when the email notification will be sent to the user: **Send on Success** and **Send on Error**.

d Click **Add** to include additional users, click **Add and Close** to add the user and also close the dialog box, or click **Close** to exit the dialog box.

7 Select the email addresses that you want to receive email notifications.

a Click **Add Email Address**.

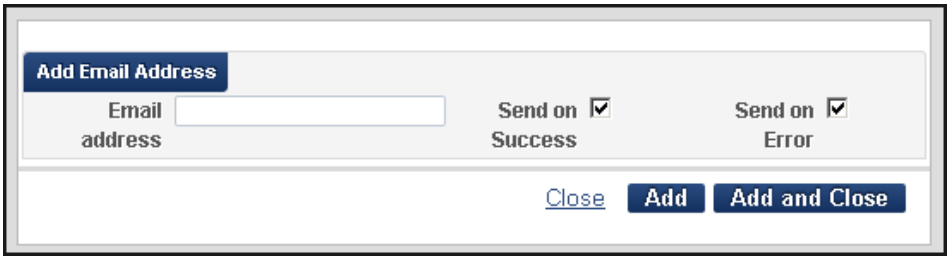


Figure 61: Add Email Address Dialog Box

b In the **Email address** field, enter an email address.

c Select the following options to specify when the email notification will be sent to the email address: **Send on Success** and **Send on Error**.

d Click **Add** to include additional email addresses, click **Add and Close** to add the email address and also close the dialog box, or click **Close** to exit the dialog box.

e Click **Done** to return to the Profile Details tab.

(Running the Google Scholar publishing profile enables Google Scholar to view the changes to the registration parameters. Refer to the next step.)

8 Refer to the following table to configure the parameters in the Registration Parameters section.

Table 12. Registration Parameters

Parameter	Description
Display Name	Enter the name that will display for your institution/ campus in the Google Scholar preferences. If no name is provided, the display name defaults to the institution name.
Keywords 1/2/3/4/5	This field is optional and has a limit of five words or 30 characters. The keywords (such as the school's nickname) enable users to find the library when configuring their preferences in Google Scholar.

Table 12. Registration Parameters

Parameter	Description
Label of resolver links (when article exists electronically)	This field is mandatory and has a limit of 25 characters. It is the label for the link that displays in Google Scholar search results. For example: ViewIt@MyU **NOTE:** If you have an old Google Scholar account, it is recommended that you set a new label for testing purposes, so that you can distinguish between your old and new systems. Following verification, you can change the label back to its required setting.
Label of resolver links (when article does not exist electronically)	This field is mandatory and has a limit of 25 characters. It defines the label for the link that displays in Google Scholar search results. For example: GetIt@MyU

OpenURL base	This field is mandatory and has a limit of 1024 characters. The value is the base URL of the service page in the institution's discovery system (such as Primo).
	
	For Primo, use the following format:
	
	`http://<primo server host:port>/openurl/<primo institution_code>/<primo view_code>?`
	
	Where the base URL includes the following elements:
	
	■ **Primo server** and **port** – Specify the Primo Front End server and port. In the case of multiple FE servers, use the server that serves as the load balancer.
	
	■ **Services component code** – Set to **openurl** to use the services component.
	
	■ **Primo institution** – Specify the institution code used in Primo.
	
	■ **Primo view code** – Specify the code of your Service Page view.
	
	For example:
	
	`http://primo2.prod.alma.hosted.exlibrisgroup.com:1701/openurl/BCL/sp_view?`

Table 12. Registration Parameters

Parameter	Description
Patron IP range	The range of library IP addresses that permit users to access material without signing in to the library.This field is optional. Enter up to 256 IP ranges separated with commas. For example: `123.12.12.*,122.10.10.1-123.10.10.80`
Show resolver links only to users that come from your IP range?	This field is optional. and indicates whether users can see the resolver links in Google Scholar results when they perform searches within the specified IP ranges only. The valid values are **yes** and **no**. The default value is **no**.
Contact Information for Technical Issue	Enter your institution's contact information in the following required fields: **First name**, **Last name**, and **Email address**.

9 Click **Save** to save the changes to the Google Scholar publishing profile job.

10 Wait approximately one week for Google Harvester to harvest the files (this operation usually occurs on Wednesdays).

IMPORTANT:
The label you configured is visible on the live Google Scholar site, which is the reason why it is recommended that you initially configure your profile using a test label. If you are concerned about the display of a test label during implementation, it is recommended that you not test Google Scholar until after "Go Live."

11 Verify that your Google Scholar data is correct, using the **To verify that your Google Scholar data is correct:** procedure below.

To verify that your Google Scholar data is correct:

1 Configure Google Scholar to work with your library:

a Access http://scholar.google.com/ and click **Settings**.

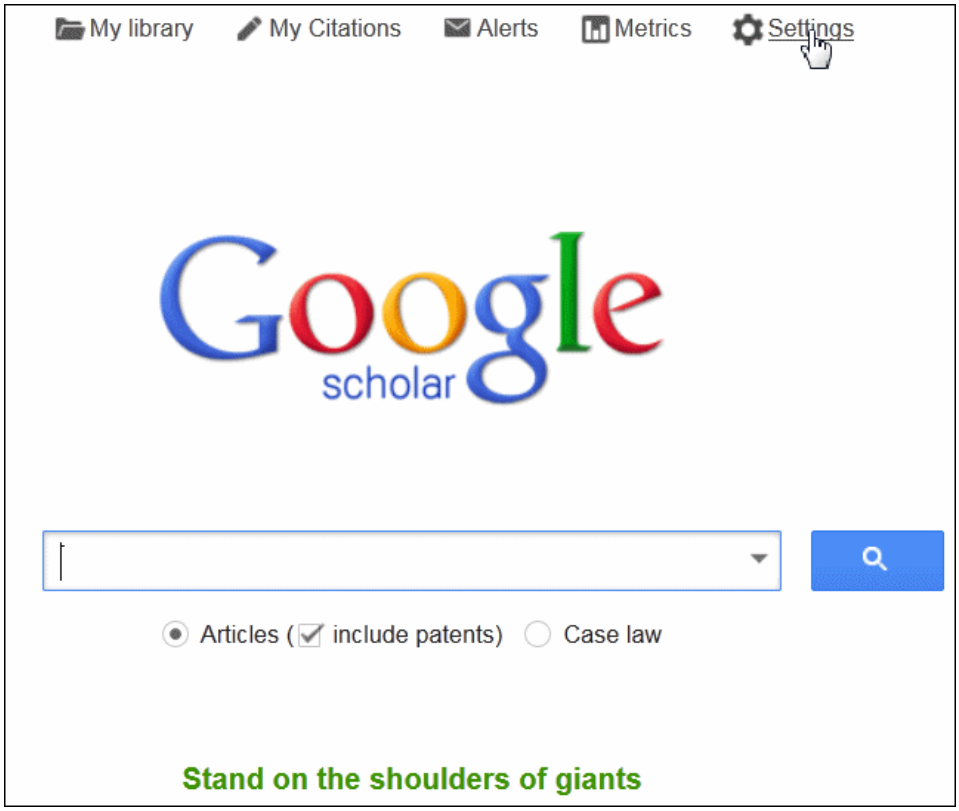


Figure 62: Accessing Google Scholar

b Click **Library links** under **Scholar Settings**.

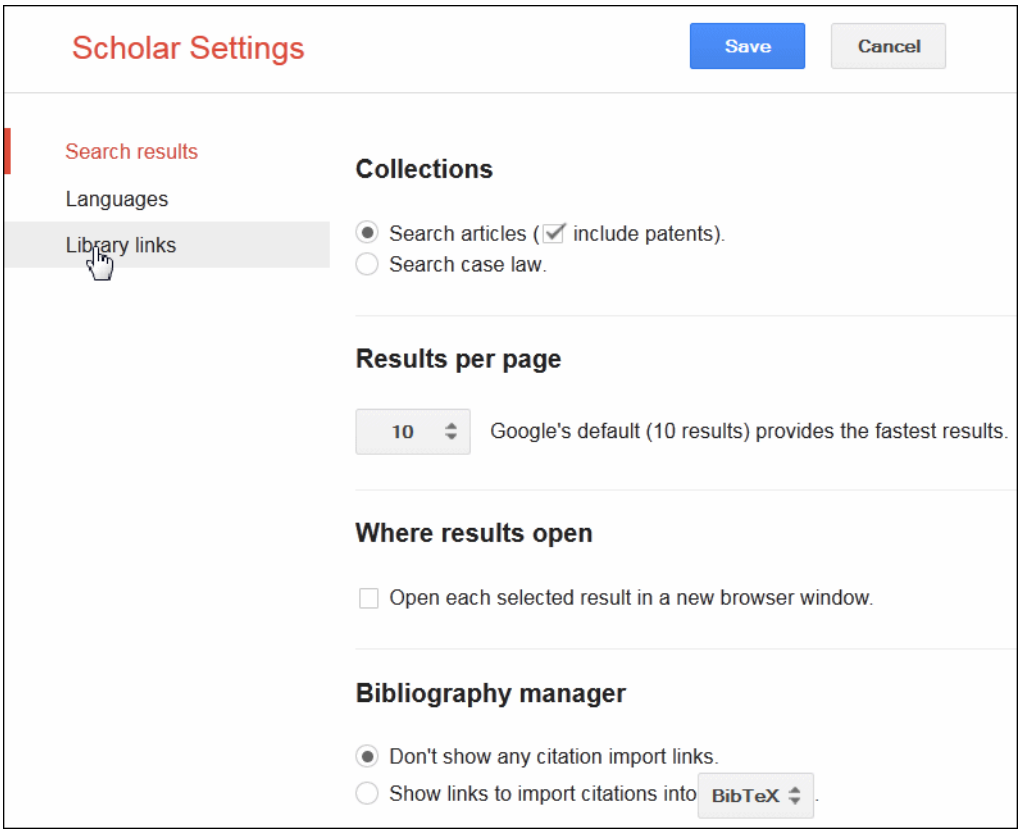


Figure 63: Google Scholar Library Links

c Search for your library, select it, and click **Save**.

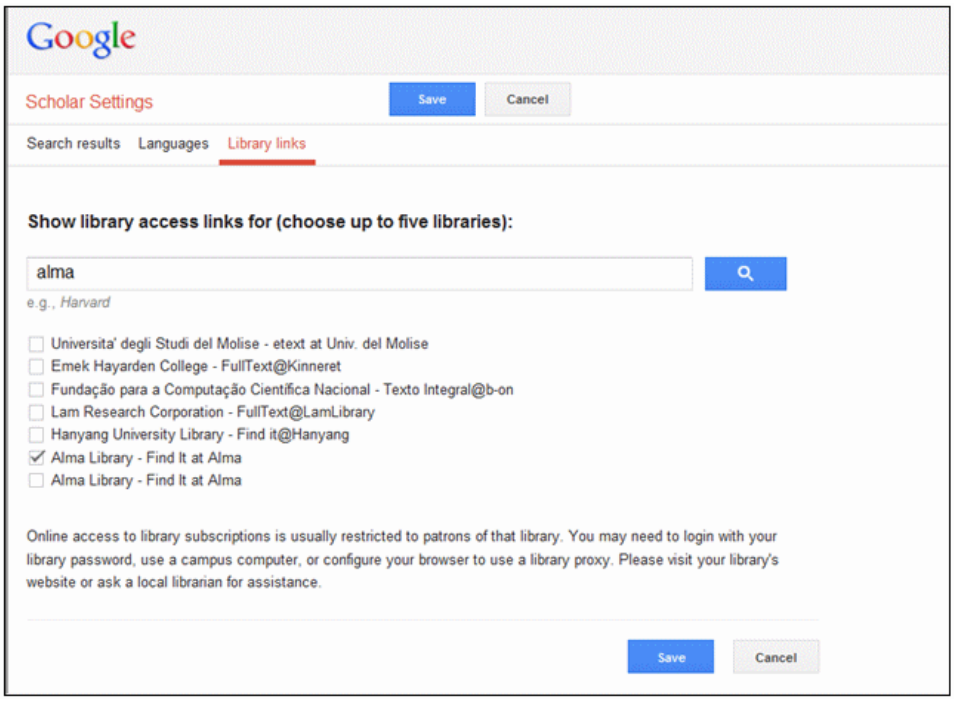


Figure 64: Select Library

2 Search Google Scholar for a title that is available at your library, and click **More**.

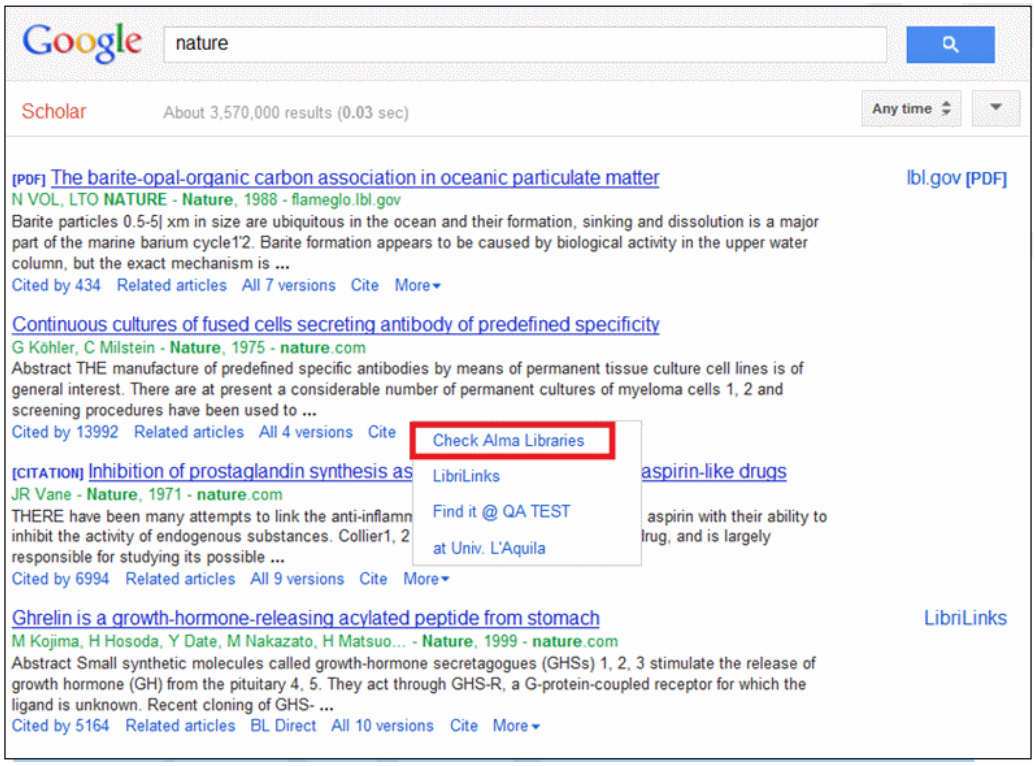


Figure 65: Search Google Scholar

3 Click the relevant label and verify that you are redirected to Primo.

Adding a Profile for a Multicampus Configuration

For multi-campus configurations, the **Publish electronic records to Google Scholar** publishing profile job includes an **Electronic Profiles** section, which allows you to configure different Google Scholar registration parameters per groups of libraries and campuses that are defined as inventory management groups in a multi-campus configuration. This allows you to publish separate holdings information per campus.

VIDEO:

For more information about publishing electronic records per campus/ library, see the *Library-Level Publish to Google Scholar and Primo Central* video (4:08 mins).

To add a Google Scholar profile:

1 On the Resource Management Configuration page in Alma (**Resource Management > Resource Configuration > Configuration Menu**), click

Publishing Profiles in the **Record Export** section. The Publishing Profiles page opens.

2 In the row that contains the **Publish electronic records to Google Scholar** profile, select **Actions > Edit**. The Publishing Profile Details page opens and displays the Electronic profiles section.

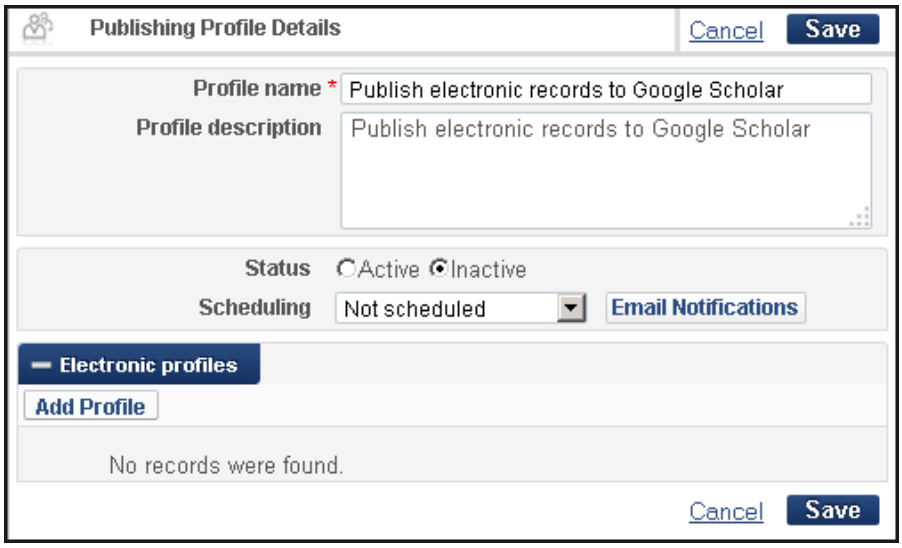


Figure 66: Electronic Profiles Section (Multicampus Configurations Only)

3 In the **Status** field, select **Active** to enable the publishing profile.

4 In the **Scheduling** field, select a scheduling option from the drop-down list to identify when you want the publishing job to be run that is associated with this Google Scholar publishing profile. If you select the **Not scheduled** option, the export job for this publishing profile will not run until you select a different scheduling option from the drop-down list for this profile.

5 Click **Email Notifications** to specify which users and email addresses will receive email notifications when the publishing profile has completed.

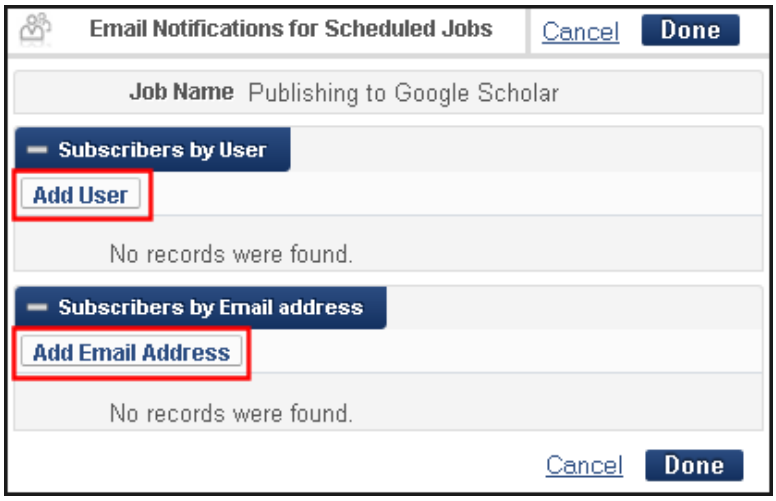


Figure 67: Email Notifications for Scheduled Jobs Page

6 Select the users that you want to receive email notifications.

a Click **Add User**.

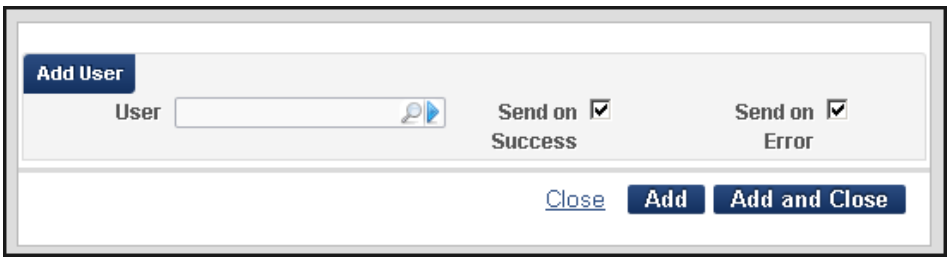


Figure 68: Add User Dialog Box

b In the **User** field, search for and select a user name.

c Select the following options to specify when the email notification will be sent to the user: **Send on Success** and **Send on Error**.

d Click **Add** to include additional users, click **Add and Close** to add the user and also close the dialog box, or click **Close** to exit the dialog box.

7 Select the email addresses that you want to receive email notifications.

a Click **Add Email Address**.

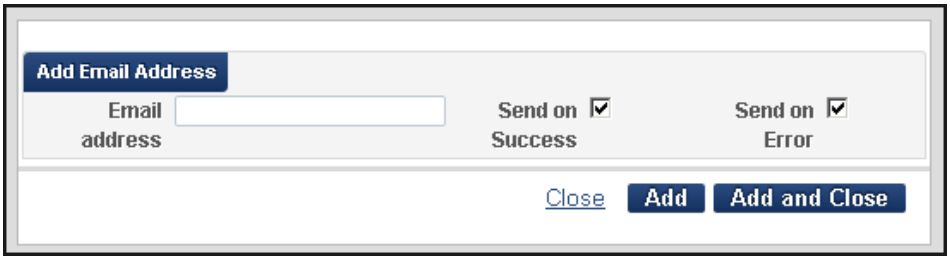


Figure 69: Add Email Address Dialog Box

b In the **Email address** field, enter an email address.

c Select the following options to specify when the email notification will be sent to the email address: **Send on Success** and **Send on Error**.

d Click **Add** to include additional email addresses, click **Add and Close** to add the email address and also close the dialog box, or click **Close** to exit the dialog box.

e Click **Done** to return to the Profile Details tab.

8 Click **Add Profile** to open the Add Profile dialog box.

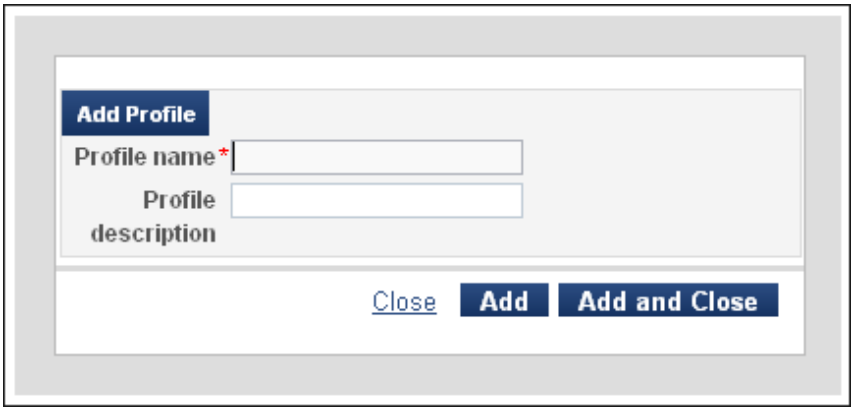


Figure 70: Add Profile Dialog Box (Multicampus Configurations Only)

9 Specify a name for campus or library in the **Profile name** field.

10 Click **Add and Close** to return to the Publishing Profile Details page.

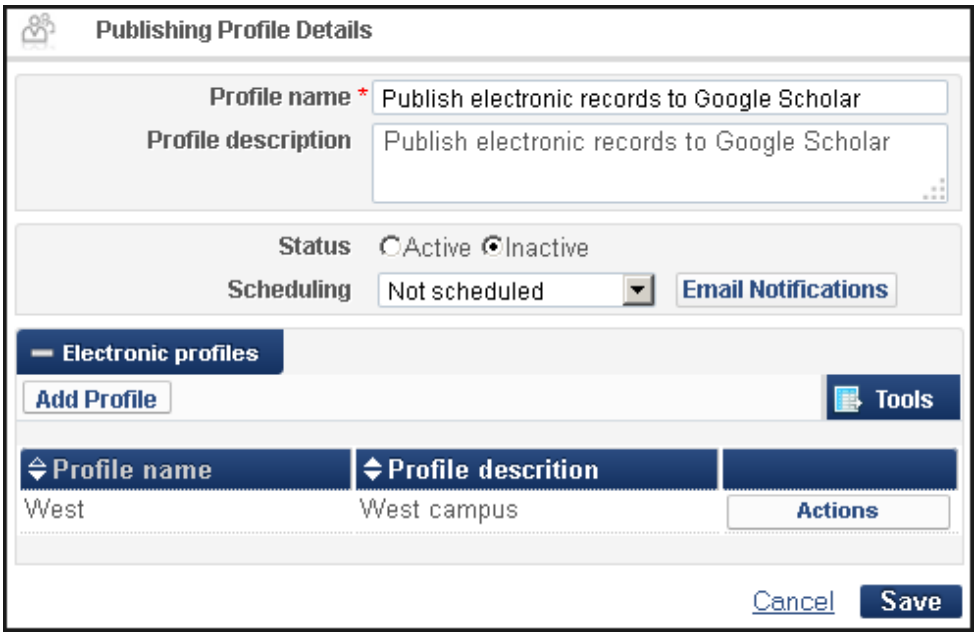


Figure 71: Publishing Profile Details Page (Added Profile)

11 Select **Actions > Edit** to edit the new profile. The Publishing Profile Details page for the selected profile opens.

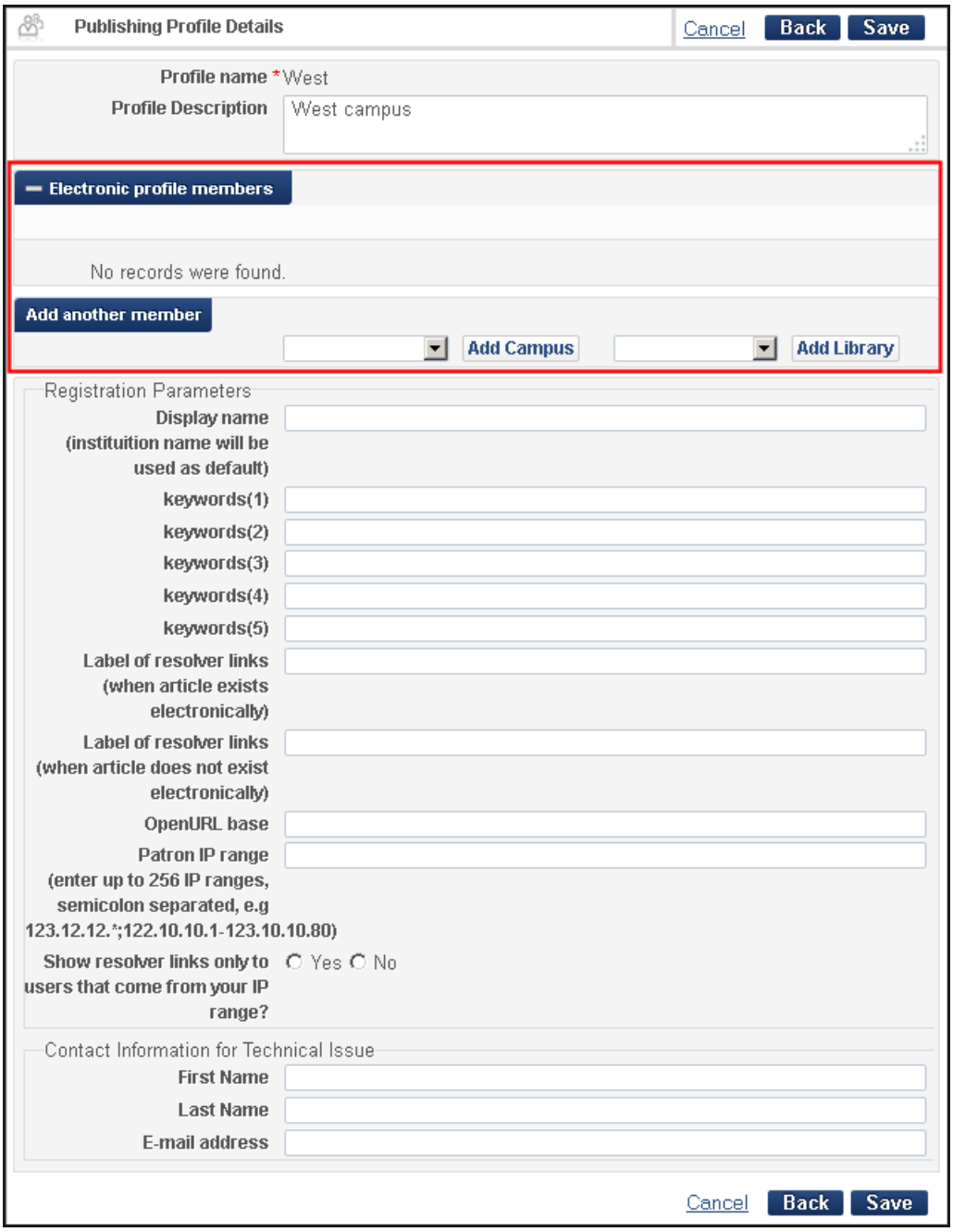


Figure 72: Publishing Profile Details Page (Electronic Profile Members)

12 In the **Add another member** section, use the following fields to add members to the profile group:

- **Campus** – Select a campus from the drop-down list and click **Add Campus**.

- **Library** – Select a library from the drop-down list and click **Add Library**.

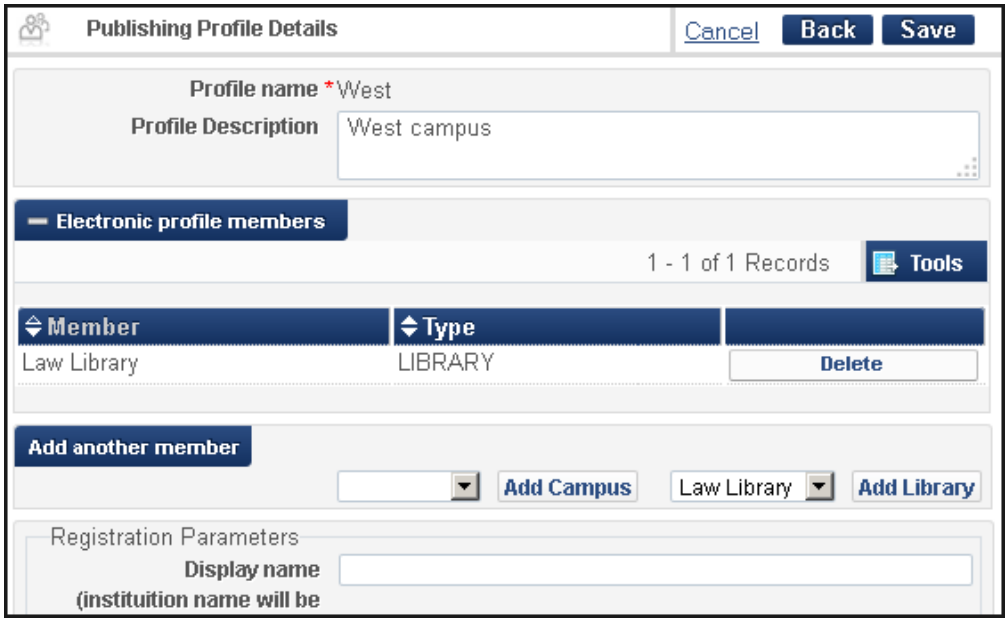


Figure 73: Publishing Profile Details Page (Member Added)

13 Configure the parameters in the Registration Parameters section using the table below that describes your options.

Table 13. Registration Parameters

Parameter	Description
Display Name	Enter the name that will display for your institution/ campus in the Google Scholar preferences. If no name is provided, the display name defaults to the institution name.
Keywords 1/2/3/4/5	This field is optional and has a limit of five words or 30 characters. The keywords (such as the school's nickname) enable users to find the library when configuring their preferences in Google Scholar.

Table 13. Registration Parameters

Parameter	Description
Label of resolver links (when article exists electronically)	This field is mandatory and has a limit of 25 characters. It is the label for the link that displays in Google Scholar search results. For example: ViewIt@MyU **NOTE:** If you have an old Google Scholar account, it is recommended that you set a new label for testing purposes, so that you can distinguish between your old and new systems. Following verification, you can change the label back to its required setting.
Label of resolver links (when article does not exist electronically)	This field is mandatory and has a limit of 25 characters. It defines the label for the link that displays in Google Scholar search results. For example: GetIt@MyU

OpenURL base	This field is mandatory and has a limit of 1024 characters. The value is the base URL of the service page in the institution's discovery system (such as Primo).
	
	For Primo, use the following format:
	
	`http://<primo server host:port>/openurl/<primo institution_code>/<primo view_code>?`
	
	Where the base URL includes the following elements:
	
	■ **Primo server** and **port** – Specify the Primo Front End server and port. In the case of multiple FE servers, use the server that serves as the load balancer.
	
	■ **Services component code** – Set to **openurl** to use the services component.
	
	■ **Primo institution** – Specify the institution code used in Primo.
	
	■ **Primo view code** – Specify the code of your Service Page view.
	
	For example:
	
	`http://primo2.prod.alma.hosted.exlibrisgroup.com:1701/openurl/BCL/sp_view?`

Table 13. Registration Parameters

Parameter	Description
Patron IP range	The range of library IP addresses that permit users to access material without signing in to the library.This field is optional. Enter up to 256 IP ranges separated with commas. For example: `123.12.12.*,122.10.10.1-123.10.10.80`
Show resolver links only to users that come from your IP range?	This field is optional. and indicates whether users can see the resolver links in Google Scholar results when they perform searches within the specified IP ranges only. The valid values are **yes** and **no**. The default value is **no**.
Contact Information for Technical Issue	Enter your institution's contact information in the following required fields: **First name**, **Last name**, and **Email address**.

14 Click **Save** to return to the list of profiles in the Electronic Profiles section.

15 Click **Save** to save the changes to the Google Scholar publishing profile job.

16 Wait approximately one week for Google Harvester to harvest the files (this operation usually occurs on Wednesdays).

IMPORTANT:

The label you configured is visible on the live Google Scholar site, which is the reason why it is recommended that you initially configure your profile using a test label. If you are concerned about the display of a test label during implementation, it is recommended that you not test Google Scholar until after Go Live.

17 Verify that your Google Scholar data is correct, using the **To verify that your Google Scholar data is correct:** procedure.

Z39.50 Search

PERMISSIONS:

To configure a Z39.50 Server profile, you must have the following role:

- General System Administrator

An institution's catalog can be made searchable by external applications. This may be required for a number of purposes—for example, if the institution serves as a copy cataloging source or participates in a resource sharing network.

For general information about the Z39.50 protocol, see http://www.loc.gov/z3950/gateway.html#about

If a Z39.50 Server integration profile is configured, Alma listens for incoming Z39.50 searches. If an incoming request is detected, Alma returns a Z39.50 response, which includes record information in either MARC or OPAC format, depending on your client configuration.

NOTES:

- Only one Z39.50 profile can be defined for an institution.
- The following attributes are supported by Alma: Term (1016, 1017); Author (1, 1003, 1004); Subject (21); Title (4); ISBN (7); ISSN (8); Date (31); Identifier (12); OCLC Number (1211).
- You must configure the Alma IP address, port, and database name on the Z39.50 client machine. The IP address/port to be configured is: `<Alma server>:1921` (or `210`, if you are working with Refworks – see **To configure a Z39.50 Refworks client:**, below). The database name to be used is the Alma institution code—for example, `60univ_inst`. The Alma server to be specified is as follows: `eu.alma.exlibrisgroup.com` for European libraries, `na00.alma.exlibrisgroup.com` or `na01.alma.exlibrisgroup.com` for North American libraries, and `ap01.alma.exlibrisgroup.com` for APAC libraries.
- For filtering Alma's Z39.50 response at a campus level in a multicampus environment, you must add the campus code to the database name that is configured on the Z39.50 client machine using the following format: *base (institution ID>/<campus code>*. For example, *base 60univ_inst/Springfield* may be used at the client Z39.50 machine where *60univ_inst* = the Alma institution code and *Springfield* = the Alma campus code. When this is implemented, Alma's Z39.50 search and present results are displayed/filtered only for resources that are owned by the campus (and its libraries). This enables institutions in a multicampus environment to provide results that belong only to libraries identified within the selected campus.

The following rules govern the return of MARC record information:

- MARC holdings records are returned only if the **Enrich with holdings** check box is selected (see the procedure below)
- MARC holdings records are returned only for permanent locations.
- Suppressed MARC holdings records (**Suppress from discovery** is selected for the record in the MD Editor) are excluded.
- MARC holdings records from suppressed locations (**Suppress from externalization** is selected for the location in **Fulfillment Configuration > Physical Locations**) are excluded.

- Suppressed MARC bibliographic records (**Suppress from discovery** is selected for the record in the MD Editor) and their associated holdings records are excluded.

The following rules govern the return of OPAC record information:

- OPAC holdings records are returned are returned for both permanent and temporary locations (on holding per location).
- Suppressed OPAC holdings records (**Suppress from discovery** is selected for the record in the MD Editor) are excluded.
- OPAC holdings records from suppressed locations (**Suppress from externalization** is selected for the location in **Fulfillment Configuration > Physical Locations**) are excluded.
- Suppressed OPAC bibliographic records (**Suppress from discovery** is selected for the record in the MD Editor) and their associated holdings records are excluded.

To configure a Z39.50 search type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. Enter a code and name for the profile you are defining.
   b. From the **Integration type** drop-down list, select **Z39.50 Server**.

Figure 74: Z39.50 Search Integration Profile Definition – Page 1

4 Click **Next**. The second page of the wizard opens.

5 Under **Actions**:

a Enter a user name and password (optional) for Alma to communicate with the Z39.50 client machine. If these are configured, Alma cannot be searched unless the username and password are provided.

b Select the **Allow access** check box to enable the Z39.50 client machine to access Alma.

c Select the **Enrich with holdings** check box to include holdings information, in addition to bibliographic information, in the Z39.50 response that Alma returns.

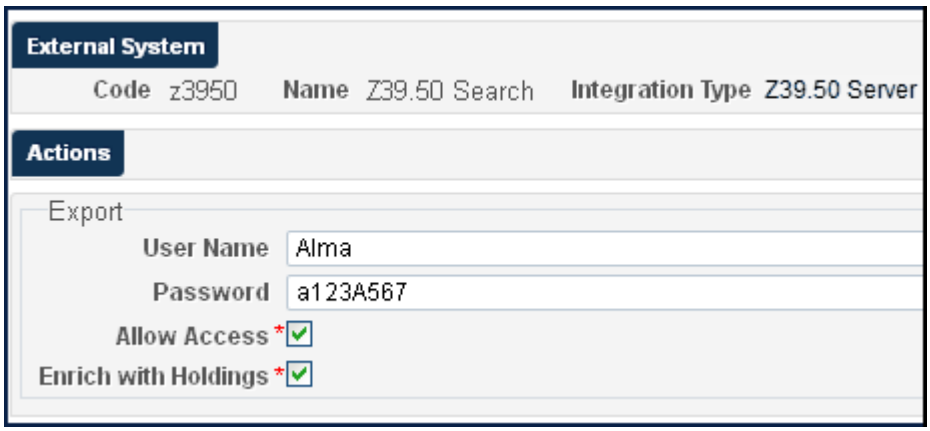


Figure 75: Z39.50 Search Integration Profile Definition – Page 2

6 Click **Save**. The profile you configured appears in the Integration Profile List.

To configure a Z39.50 Refworks client:

1 In the Refworks client administrative application, select **Search > Online Catalog or Database**. The Online Catalog or Database dialog box opens.

2 Click the **Request a Z39.50 Site** link. The Request dialog box opens.

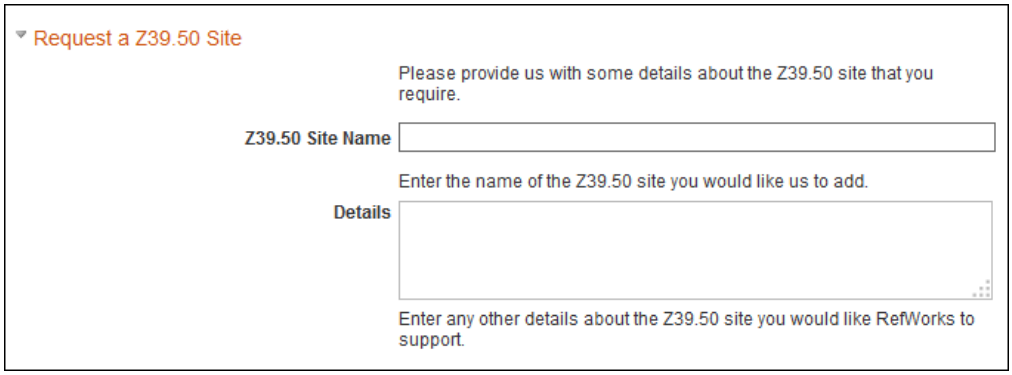


Figure 76: Request a Z39.50 Site

3 In the **Z39.50 Site Name** box, enter the name that you want to display for your institution in Refworks.

4 In the **Details** field, enter the following:

- Server – The Alma server:
  - For European libraries: `eu.alma.exlibrisgroup.com`
  - For North American libraries: `na00.alma.exlibrisgroup.com` or `na01.alma.exlibrisgroup.com`
  - For APAC libraries: `ap01.alma.exlibrisgroup.com`
- Port – Specify `210`
- Database – This is the Alma institution code, such as `01_EXL_INST`
- User and password, if defined in Alma

5 Click **Send request**.

Example of Refworks Client Settings

The following is an example of one Alma customer's Refworks client settings (note that this has not been verified by Ex Libris):

- URL: `na01.alma.exlibrisgroup.com`
- Port: `210`

- Database: `01_EXL_INST`
- Record Syntax: `USmarc`
- Element Set Name: `F`
- Import Filter: `MARC Format`
- Character Set: `ANSEL/ALA/USmarc`
- Requires Password: `No`
- Any Field: `1016`
- Author Field: `1003`
- Year Field: `31`
- Title Field: `4`
- Keyword Field: `21`

Alma Resolver Augmentation

PERMISSIONS:

To configure a resolver augmentation definition profile, you must have the following role:

- General System Administrator

Incoming OpenURLs trigger requests to source discovery systems to augment the OpenURL metadata. The enriched OpenURL is then used to locate a matching bibliographic record (MMS).

In Alma, an integration profile defines the parameters that are used to augment incoming OpenURLs from the following systems:

- DOI
- OAI
- PubMed

NOTE:

Only one resolver augmentation profile should be defined per institution (all three of the above systems can be defined in this profile).

The following is an illustration of the augmentation workflow.

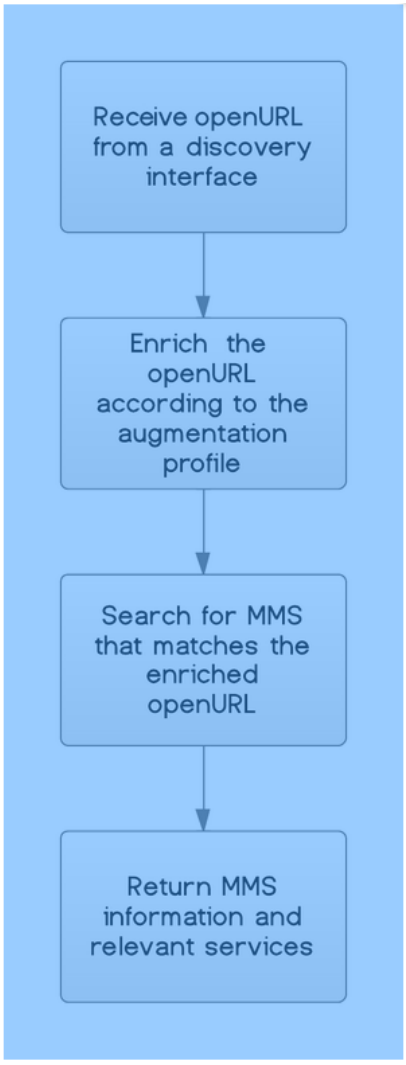


Figure 77: Alma Link Resolver Augmentation Workflow

To configure an OpenURL Resolver Augmentation type of integration profile:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.

2 Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.

3 Perform the following actions on this page:

a From the **Integration type** drop-down list, select **Resolver Augmentation**.

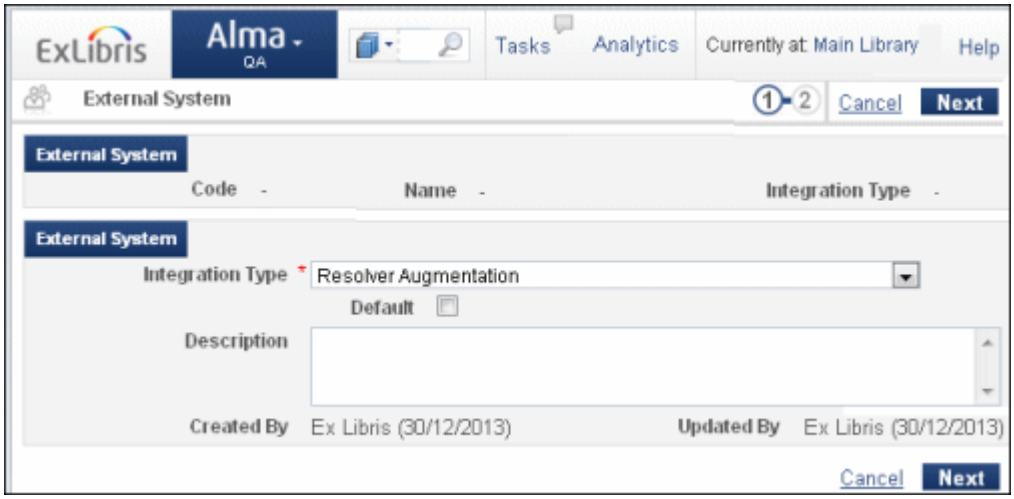


Figure 78: Resolver Augmentation Integration Profile – Page 1

NOTE:
The **Default** check box is not functional.

4 Click **Next**. The second page of the wizard opens.

5 Under **Actions**:

a Redefine the query timeout period (by default, 10 seconds), if necessary.

b For the DOI, OAI, and/or Pubmed definitions, select whether you want the profile to be active. Note that only active profiles can be run.

c For the DOI definition, enter a user name and password to be used in accessing the CrossRef database.

NOTE:
If you are using DOI to get metadata from CrossRef, it is necessary to enter a user name/password. If you are using DOI to link to the article level for certain collections, it is not necessary to enter a user name/password.

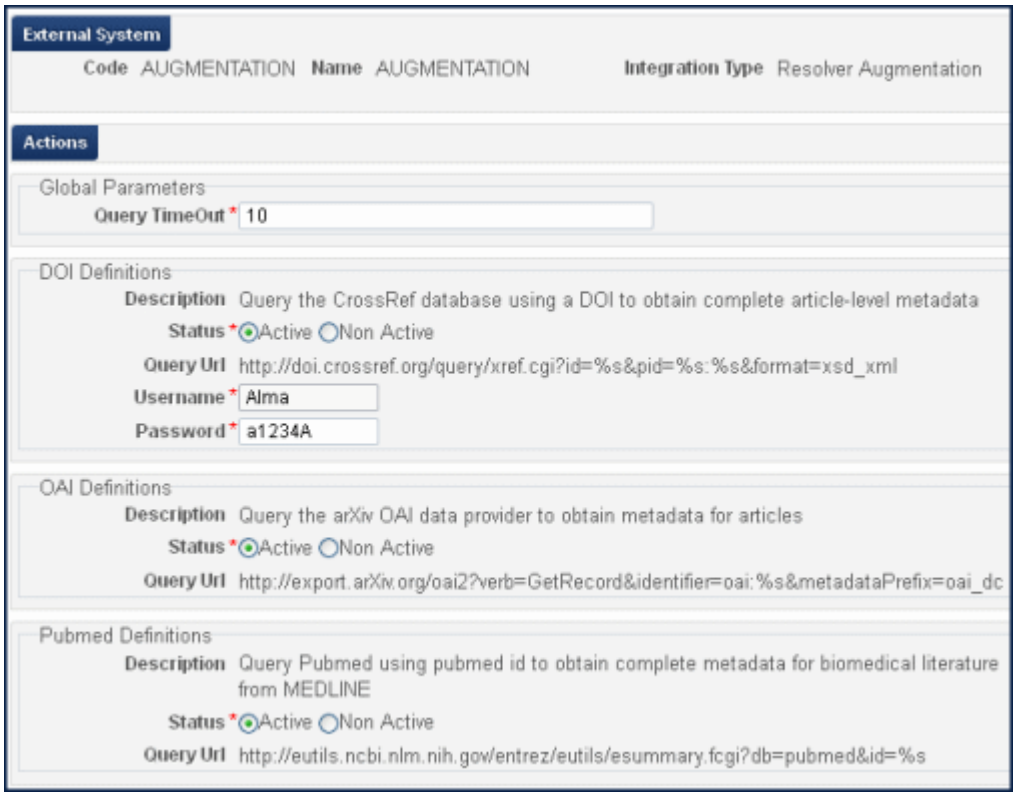


Figure 79: Resolver Augmentation Integration Profile – Page 2

6 Click **Save**. The profile you configured appears in the Integration Profile List.

To test an OpenURL source:

1 Request a test account from an OpenURL-enabled source (such as EBSCO).

2 Set up the base URL for your test account to use your Alma resolver. For example:

```
http://alma.exlibrisgroup.com/view/uresolver/<inst_code>/
openurl
```

The above URL should return a message requesting you to enter search parameters. The following syntax can be used to search for a specific ISSN and year:

```
http://alma.exlibrisgroup.com/view/uresolver/<inst_code>/
openurl?rft.issn=0000-0019&rft.year=2000
```

Resolver Proxies

PERMISSIONS:

To configure a resolver proxy profile, you must have the following role:

- General System Administrator

To enable off-campus users to access full text services at different vendor sites, you must define a proxy server, which is used to authenticate these users.

The Alma Resolver responds to an incoming OpenURL and changes it to an electronic link by automatically including additional proxy information in the resolved URL. Some institutions use a single proxy server, in which case one proxy profile should be defined. If an institution uses several proxy servers, a proxy profile should be defined for each proxy server. You must then define the relevant proxy for each electronic collection, service, or portfolio. Refer to the following for additional proxy information:

- **Table 20** (**Linking Information Tab Options**) in the *Alma Resource Management Guide* that describes the **Linking Information** tab options of the Electronic Service Editor
- **Table 27** (**Electronic Portfolio Editor Page**) in the *Alma Resource Management Guide* that describes the **Linking Information** tab options of the Electronic Portfolio Editor

Refer to **Table 14** below for a description of the relationships between the proxy-enabled setting for electronic collections, services, and portfolios. Portfolios inherit the proxy-enabled setting from the service-level, proxy-enabled setting to which they are attached. As a result, you do not need to set a portfolio-level proxy-enabled setting unless you want it to be something different from the service-level setting. The electronic collection proxy-enabled settings are not inherited by portfolios.

Table 14. Proxy Relationships

Proxy Enabled for Electronic Collection Level	Proxy Enabled for Service Level	Proxy Enabled for Portfolio Level	Proxy Enabled Setting Results
N	N	N	Redirected to resource
N	N	Y	Redirected to proxy login
N	Y	N	Redirected to proxy login Portfolio inherits service setting
N	Y	Y	Redirected to proxy login

Table 14. Proxy Relationships

Proxy Enabled for Electronic Collection Level	Proxy Enabled for Service Level	Proxy Enabled for Portfolio Level	Proxy Enabled Setting Results
Y	N	N	Redirected to the resource The Electronic Collection proxy is not inherited by the service or portfolio level
Y	N	Y	Redirected to proxy login
Y	Y	N	Redirected to proxy login Portfolio inherits the service setting
Y	Y	Y	Redirected to proxy login

To configure a resolver proxy definition type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. From the **Integration type** drop-down list, select **Resolver Proxy**.
   b. Enter a name (Code) for the profile you are defining and, optionally, enter a description.
   c. Select **Default** if you want the profile you are defining to be the default proxy definition profile. (If you previously defined another profile as the default profile, you must clear the **Default** selection in this profile before selecting **Default** in the new profile).

Figure 80: Resolver Proxy Integration Profile – Step 1

4. Click **Next**. The second page of the wizard opens.

5 Under **Actions**:

a Select the type of proxy server that you are using. Alma supports the following types: EZProxy, LIBProxy, OpenAthens, and WAM.

b Enter the proxy URL and proxy IP address.

c Select one of the following values from the **Use Proxy** drop-down list:

- **Always** – The proxy is used for any resolving.
- **Never** – The proxy is never used for resolving.
- **Selective** – The proxy is used only for electronic collections or portfolios that have been defined to use proxies.

Figure 81: Resolver Proxy Integration Profile – Step 2 (Proxy Definitions)

6 Click **Save**. The profile you configured displays in the Integration Profile List.

To edit a resolver proxy profile:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.

2 From the Integration Type filter, select **Resolver Proxy**.

3 For the proxy profile you want to edit, select **Actions > Edit**. The General Information tab on the External System page displays.

Figure 82: General Information Tab (Edit Proxy)

4 After selecting the appropriate tab, make the changes to the proxy profile to match your requirements.

NOTE:
When editing the proxy profile you have the option to add contact information (address, phone, and/or email) on the Contact tab for general communication or reporting errors.

5 When you are finished making your changes, click **Save**.

4

Fulfillment

This section includes:

Courses and Reading Lists

Alma enables you to integrate the Alma-supplied reading list citations and their statuses into a Course Management System (CMS), and provide a link that can be used from within the CMS to view the services that the library can supply for a given citation.

For information on working with the course management Web services, see https://developers.exlibrisgroup.com/alma/apis/soap/course

Resource Sharing Requests

PERMISSIONS:

To configure the communication between Alma and resource sharing systems, you must have the following role:

- Resource Sharing Partners Manager

Resource sharing partners can be created to define the types of request/receive communication that can take place between Alma and a resource sharing system:

- **NCIP** – Communication between Alma and resource sharing systems, such as OCLC Navigator, OCLC iLLiad, VDX, and Relais D2D, via NCIP 2.0 messages. Note that Alma supports the OCLC CIRC ILL and Relais application profiles for both borrowing and lending, as well as the responder role for the following NCIP messages: RequestItem, CheckOutItem, CheckInItem, AcceptItem, LookupUser.
- **ARTEmail** – Communication between Alma and the British Library resource sharing system.
- **ISO** – Communication between Alma and another resource sharing (Alma or non-Alma) system.
- **Email** – The sending of borrowing requests by the Alma borrowing partner via email.

  Email requests are sent in XSL format. The XSL used for formatting the email is **FulOutGoingEmailLetter.xsl** and is configurable on the Configuration Files page (see **Customizing Letters** in the *Alma Administration Guide*).

To configure a resource sharing partner:

1 On the Resource Sharing Partner List page (**Fulfillment > Resource Sharing > Partners**), click the **Add Partner** button. The Resource Sharing Partner page opens to the General Information tab.

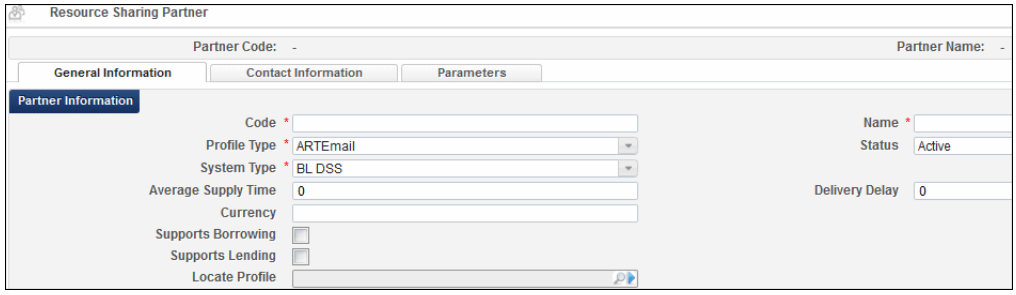


Figure 83: Resource Sharing Partner Page – General Information

2 Enter a code and name for the resource sharing partner.

3 In the **Profile type** field, select the type of protocol—**NCIP**, **ISO**, **Email**, or **ARTEmail**—you want to create.

NOTE:
The **NCIP-P2P** protocol displays in this field, but is not currently functional.

4 Optionally, select **Inactive** from the **Status** drop-down list if you do not want the partner to be active.

5 Select the resource sharing system with which you are integrating from the **System type** drop-down list (for Ex Libris' informational purposes). Note that this is mandatory.

6 Enter values in the **Average supply time**, **Delivery delay**, and **Currency** fields, and select the **Supports borrowing** and/or **Supports lending** check boxes.

If you select **Supports borrowing** and/or **Supports lending**, choose one of the workflows from the drop-down list options predefined by an administrator (in **Fulfillment > Fulfillment Configuration > Configuration Menu > Workflow Profiles)**. For details on configuring workflow profiles, see **Configuring Workflow Profiles** in the *Alma Fulfillment Guide*.

NOTE:
The workflows selected here control the actions that can be performed on the borrowing and lending request task lists for the defined partner.

7 In the **Delivery delay** field, enter the number of days needed for delivery of the item. The due date calculated when the received item is loaned to the requesting patron is automatically advanced by the number of days indicated in this field.

For example, if the due date when receiving the item is June 5, 2013 and **Delivery Delay = 4**, the **Due Date** value displays on the Patron Services page as June 1, 2013, to allow 4 days for item delivery and ensure that the item arrives by its 'actual' due date of June 5.

VIDEO:
For more information about managing the due date for an interlibrary loan, see the *Interlibrary Loan With Due Date* video (7:01 mins).

8 In the **Locate profile** field, select a locate profile to determine how the partner's catalog is to be searched. The **Holding code** field appears.

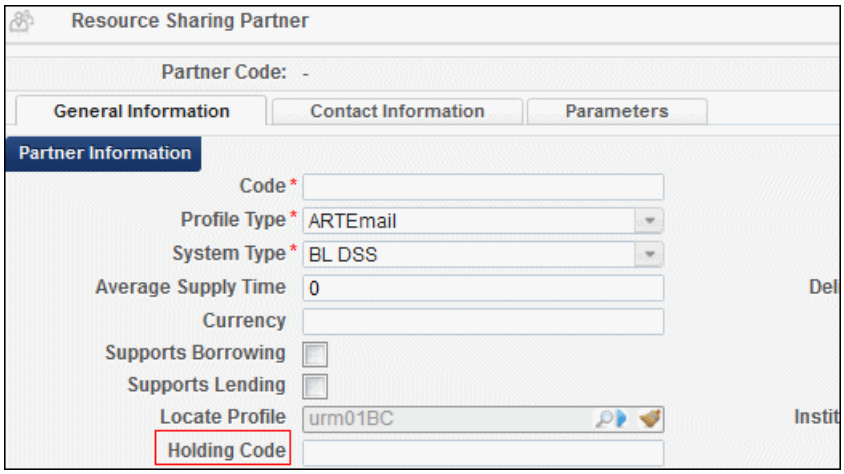


Figure 84: Resource Sharing Partner Page - Holding Code Field

For details on locate profiles, see **Configuring Locate Profiles** in the *Alma Fulfillment Guide*.

9 In the **Holding code** field, enter a library or campus code. The locate process for the partner searches the library/campus indicated by the value in this field.

Specifying a holdings code enables you to do the following:

- Determine whether a requested resource is available at a specific campus of a potential supplier.
- Request the resource from that lender only if the resource is owned at the requested campus.

10 In the **Contact Information** tab, add address, phone number, and email information for the resource sharing partner. For instructions, see **Working With Contact Information** in the *Alma Administration Guide*.

11 In the **Parameters** tab, configure the ARTEmail, NCIP, ISO, or Email resource sharing parameters.

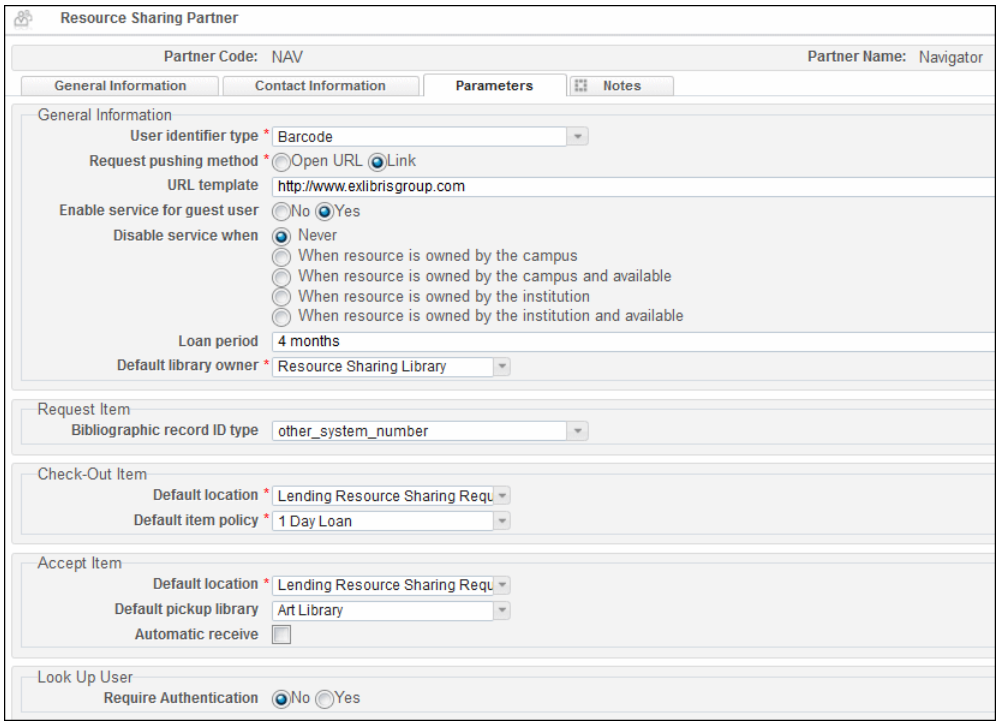


Figure 85: Resource Sharing Partner Page – Parameters Tab

- **ARTEmail parameters** – You must enter the ARTEmail email address. In addition, for each customer ID you add, you must enter a code and password. Optionally, if you want to enable the ability to send requests to an alternate physical location or email address (which you can select to do in the Request Attribute section of the Resource Sharing Borrowing Request page), you may select the **Supports ADD request** check box. You may also select keyword codes—that is, request values—to include. (Refer to the *British Library's Guide to ARTEmail* for an explanation of these values.) These define the communication that is possible vis-a-vis the resource sharing partner.
- **NCIP parameters** – Configure parameters as described in the following table:

Table 15. NCIP Parameters

Section	Field	Description
General Information	User identifier type (Required)	The identification type that will be used to match users when a message contains a user ID. Select one of the options predefined by an administrator.
	Request pushing method (Required)	Select the type of link—**Open URL** or **Link**—that will be used to push the request into the resource sharing system. If you select **Open URL**, the **Add user auto login** field appears.
	URL template	The URL that is used to send patrons from Primo to the resource sharing library's Web site.
	Add user auto login to URL	Select **Yes** to add a user's login credentials to the URL, thereby logging the user in automatically upon accessing the URL. This field displays only when **Request pushing method = Open URL**. Select **Yes** when configuring integration with a Relais system (see **Working with an NCIP Broker** in the *Alma Fulfillment Guide*).
	Enable service for guest user	Indicates whether the link to the partner displays in Primo when the patron is not logged in.

Table 15. NCIP Parameters

Section	Field	Description
General Information (continued)	Disable service when	Select the parameters upon which the service is to be disabled. Possible values are: ■ **Never** – The service is never disabled. ■ **When resource is owned by the campus** – The service is disabled when physical items for the resource are owned by the campus. ■ **When resource is self-owned by campus and available** – The service is disabled when physical items for the resource are owned by the campus and are available (that is, they are not involved in a process). ■ **When resource is owned by the library** – The service is disabled when there are physical items for the resource that are owned by the library. ■ **When resource is owned by the library and available** – The service is disabled when there are physical items for the resource that are owned by the library, are in place, and are in an open location. **NOTE:** When a guest user or a user without a configured campus performs any of the campus-level disabling activities, Alma disables/ hides the service based on a self-ownership check done on the institution level.

Table 15. NCIP Parameters

Section	Field	Description
General Information (continued)	Loan period	The amount of time the user has before having to return the item to the resource sharing library. (This may be seen by patrons in Primo.)
	Default library owner	The resource sharing library which manages the borrowing request created by this profile.
Request Item An NCIP message is sent when a lending request is registered on the borrowing side.	Resource sharing library	The single resource sharing library that is supported for all actions. Select from a list predefined by an administrator.
	Bibliographic record ID type	Defines the index that will be used to match the record that is described in the incoming RequestItem message. Select a value predefined by an administrator (configured in tag 035 – for example, an OCLC number).
Check Out Item An NCIP message is sent when an item is shipped from the lending side to the borrowing side.	Default library (Required)	The resource sharing library to be used as the default, if there are multiple resource sharing libraries (in preparation for a future Ex Libris development).
	Default location (Required)	The temporary location at the resource sharing library that will be assigned to an item that is shipped to a resource sharing borrower. Select from a list predefined by an administrator.
	Default item policy (Required)	The policy that will be attached to an item that is shipped to a resource sharing borrower. Select from a list predefined by an administrator.

Table 15. NCIP Parameters

Section	Field	Description
Accept Item An NCIP message is sent when the arrival of an item is registered on the borrowing side.	Default location (Required)	The temporary location at the receiving library. Select from a list predefined by an administrator. This location is assigned to an item that is shipped to a resource sharing borrower, unless a different location has been assigned by a Temporary Item Creation Rule.
	Resource sharing library	The resource sharing library, if there are multiple resource sharing libraries (in preparation for a future Ex Libris development).
Accept Item (continued) An NCIP message is sent when the arrival of an item is registered on the borrowing side.	Default pickup library	The default pickup location to which temporary items are transferred when an item arrives for a borrowing request. Select from a list of libraries predefined by an administrator.
	Automatic receive	Select to enable receiving resource sharing items automatically. Automatic receiving enables staff to register a Receive action in the broker system, without having to repeat the Receive action in Alma.
	Receive desk	Select a desk at which the item is to be received. The available options are the desks of the library that is specified in the **Default library owner** field. The value you select indicates the location where the item arrives when the AcceptItem message is received. This field displays only when **Automatic receive** is selected.

Table 15. NCIP Parameters

Section	Field	Description
Look Up User An NCIP message is sent when a patron attempts to create a request at the resource sharing system.	Require authentication	Select whether authentication should or should not be required for the resource sharing library's Web site. When working with a Relais broker, select **No**.

NOTES:

You must also configure the following parameters on the NCIP partner:

- the NCIP URL, in the following format: `https://<Alma URL>/view/NCIPServlet`
- the AgencyID, which is your Alma institution code
- the ApplicationProfileType, which is the code defined on the Resource Sharing Partner page (see Step **2** above)

- **ISO parameters**
  - **Server** – The partner's server name (or IP address)
  - **Port** – the partner's ILL port number
  - **ISO symbol** – the symbol by which the ILL partner is referred
  - **Request Expiry** – configure when the partner's lending settings expire. Choose from the following:

    – No expiry: The request does not expire

    – Expire by interest date: The request expires on the date specified in the **Needed by** field on the Resource Sharing Borrowing Request page (displayed when creating a borrowing request).

    – Expiry time: The **Expiry time** field appears, where you enter a number. This value indicates the number of days after the request has been sent to the lender that the request expires.
  - **Send requester information** – Select for resource sharing requests sent via the specified partner to contain the requester's information

  Optionally, select **Supports ADD Address** to include the requester's email in the ILL request, enabling the lending partner to send the shipped resource directly to the requester.

NOTE:
Alma supports the following ISO Resource Sharing messages: **ILL Request**, **Shipped**, **Received**, **Returned**, **Checked-In, Answer – Unfilled, Cancel/Cancel Reply,** and **General Messages**.

- **Email parameters** – Enter the email address to which resource sharing borrowing requests are to be sent. Note that if you are working in a sandbox environment or in a pre-"Go Live" production environment, the entered address must be added to the Email Include List Mapping Table in **General Configuration > Configuration menu > External Systems > Allowed Emails**. For details, see **Configuring Allowed Emails** in the *Alma Administration Guide*).

12 Click **Save**. The resource sharing partner is created and appears on the Resource Sharing Partner List page.

The partner can then be selected from the **Partner** drop-down list (accessible when clicking the **Edit**, **Duplicate**, or **Send** options on the Resource Sharing Borrowing Requests page) or **Supplied to** drop-down list (accessible when clicking the **Edit** or **Duplicate** options on the Resource Sharing Lending Requests Task List page).

NOTE:
A **Notes** tab is available when editing the resource sharing partner (**Actions > Edit**).

Requests to Remote Storage

PERMISSIONS:

To configure a remote storage type of integration profile, you must have the following role:

- General System Administrator

To associate a remote storage profile with a remote storage facility, or update the locations that use the remote storage facility, you must have the following role:

- Fulfillment Administrator

When Alma places a resource request on an item that belongs to a remote storage location, an automatic job exports the requested information to a defined FTP location. The remote storage system then retrieves the file and processes it.

The files placed at the FTP location adhere to the rules defined in the `external_sys_remote_storage_export_requests.xsd` file in the

Documentation Center (under **Alma > Product Documentation > Integrations with External Systems > Sample Files**).

To configure the export of requests to a remote storage system, you must perform the following actions:

1. Configure an S/FTP connection to be used by Alma and the remote storage system (see **Configuring S/FTP Definitions** in the *Alma Administration Guide*).
2. Configure a remote storage type of integration profile (see below).
3. Associate the remote storage profile with a remote storage facility (see below).
4. Update the physical locations that use this remote storage facility (see below).

NOTES:

- For information on running and monitoring the remote storage export job after you have configured all of the above, see **To manually run and monitor the remote storage export job:** on page **140**.
- The XML/NCIP ASRS is currently being developed and is not yet fully functional.

Alma supports integration with a Dematic Automated Storage and Retrieval System (ASRS), which efficiently stores library resources and utilizes an automated system to retrieve resources from remote storage. For details, see **Dematic Automated Storage Retrieval System (ASRS)** on page **142**.

To configure a remote storage type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. Enter a code and name for the profile you are defining.
   b. From the **Integration type** drop-down list, select **Remote storage**.
   c. From the **S/FTP connection type** drop-down list, select the name of the FTP connection that you previously defined.
   d. Optionally, enter a description of the integration you are configuring.

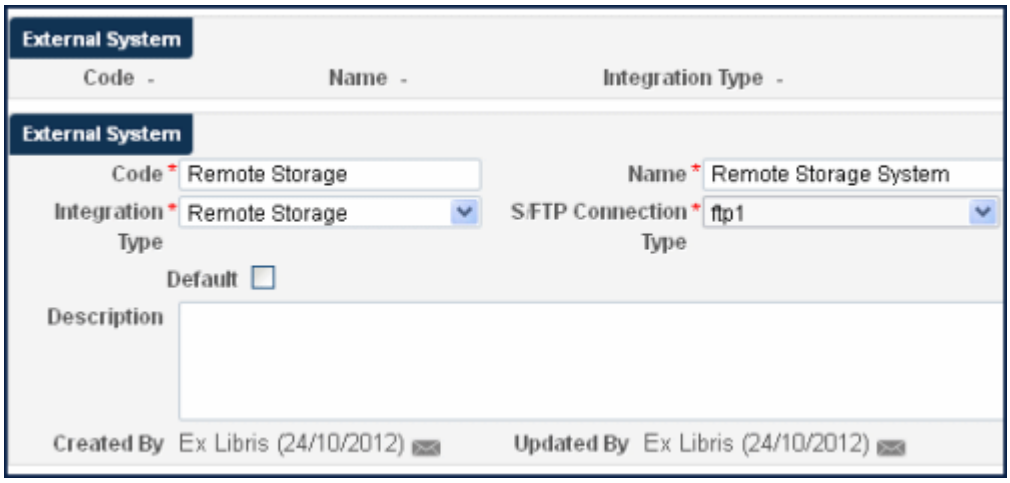


Figure 86: Remote Storage Integration Profile Definition – Page 1

4 Click **Next**. The second page of the wizard opens.

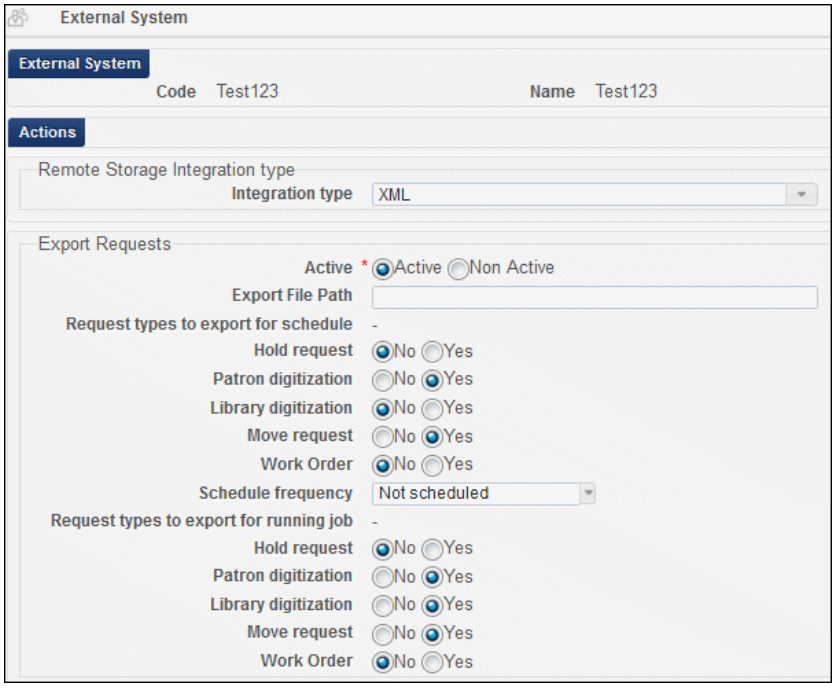


Figure 87: Remote Storage Integration Profile Definition – Page 2

5 In the **Export Requests** section:

a Select whether you want the profile to be active. Note that only active profiles can be run.

b From the **Plugin** drop-down list, select the out-of-the-box plug-in to be used.

c In the **Export file path** field, enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during S/FTP connection configuration and you enter `remote storage` in the **Export file path** field, the invoices are exported to the `Alma/remote storage` directory.

d Under **Request types to export for schedule**, select **Yes** for the request types you want to export with scheduled integration profile export jobs.

In the **Schedule frequency** field, select the frequency by which the export job is to run.

e Under **Request types to export for running job**, select **Yes** for the request types you want to export with manually run integration profile export jobs.

6 Click **Save**. The profile you configured appears in the Integration Profile List.

When the scheduled/manual job runs, one barcode is sent per request, and the following new fields are displayed in the XML:

- Shipping Address of the target pickup location or requesting partner if the request is a resource sharing request
- MMS ID
- Item ID
- Library Code of the Target Pickup Location

The item that is automatically selected by the system is marked as **Not Available**, with **Process Type = Requested**.

When configuring a Dematic ASRS remote storage integration profile for a Dematic ASRS system, you must run the see **Updating Dematic ASRS Inventory** on page **145**.

To associate a remote storage profile with a remote storage facility:

1 On the Fulfillment Configuration page (**Fulfillment > Fulfillment Configuration > Configuration Menu**), click **Remote Storage** under **Physical Locations**. The Remote Storage List page opens.

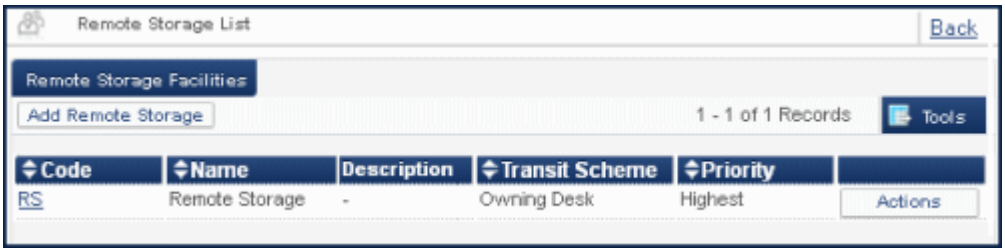


Figure 88: Remote Storage List Page

2 Select **Actions > Edit** for the remote storage facility you want to associate with the previously defined remote storage profile, or click the **Add Remote Storage** button to create a new remote storage facility with which you want to associate the remote storage profile.

3 On the Edit Remote Storage Facility page or in the Add Remote Storage dialog box, select the previously defined remote storage profile from the **Integration profile** drop-down list. (For information on the other fields, see **Adding a Remote Storage Facility** in the *Alma Fulfillment Guide*.)

4 In the **Calendar Management** section of the Edit Remote Storage Facility page, edit the details that define when the remote storage facility is open and closed. For details, see **Adding/Editing Calendar Details** in the *Alma Administration Guide*.

5 Click **Save** to store your changes to the remote storage facility details.

To update the physical locations that use the remote storage facility:

1 On the Fulfillment Configuration page (**Fulfillment > Fulfillment Configuration > Configuration Menu**), select the library for which you want to update the physical locations from the **You are configuring** drop-

down list at the top of the page, and then click the **Physical Locations** link. The Physical Locations List page opens.

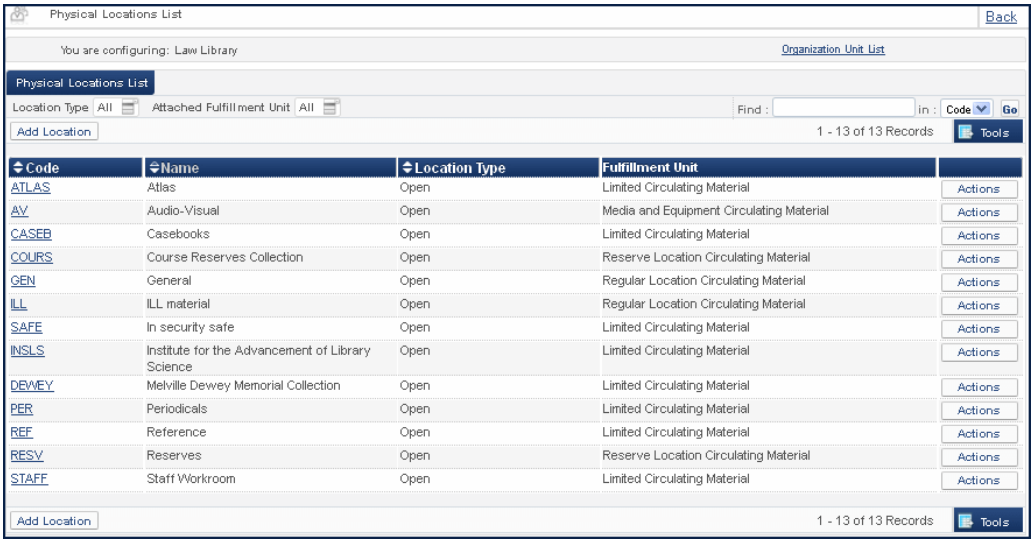


Figure 89: Physical Locations List Page

2 Select **Actions > Edit** for the physical location whose remote storage facility you want to update, or click the **Add Location** button to create a new physical location with which you want to associate the remote storage facility you previously updated.

3 On the Edit Physical Location page or in the Add Location dialog box, select the previously updated remote storage facility from the **Remote storage** drop-down list.

4 Click **Save** or **Add and Close**. The physical location is updated with the remote storage facility you previously associated with the remote storage integration profile you defined.

Perform the above steps for each physical location whose remote storage facility you want to update.

To manually run and monitor the remote storage export job:

On the Integration Profile List page, select **Actions > Edit** for the remote storage profile you defined, click the **Actions** tab, ensure that the **Active** radio button in the **Export Requests** section is selected, and then click the **Run** button.

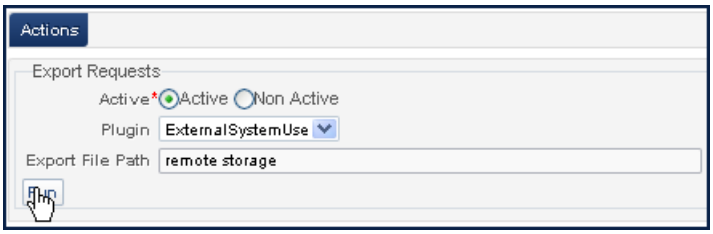


Figure 90: Running the Remote Storage Export Job

The job runs as soon as the system can accommodate it. If email notifications are enabled in Alma, you receive notification via email.

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate remote storage profile on the Integration Profile List page. For example, the following figure shows a job that completed successfully, processing one file.

Job ID	Status	User	Time Started	Time Ended	Files Processed	Files Failed	
34953450000121	Completed Successfully	admin1	2012-07-12 00:55:20	2012-07-12 00:55:20	1	-	Action

Figure 91: Export Job History

NOTE:
The status **Completed Successfully** does not mean that requests were exported successfully. Rather, it means that the job completed without error.

You can use the **Actions** button on this page to access a more detailed job report, including statistics on the number of request records and request records with exceptions processed (**Actions > View**), events that occurred during the job processing (**Actions > Events**), and a report of errors (**Actions > Error reporting**).

Dematic Automated Storage Retrieval System (ASRS)

PERMISSIONS:

To configure ASRS functionality, you must have the following role:

- General System Administrator

To place requests for remote storage items, you must have the following role:

- Fulfillment Services Operator

An Automated Storage and Retrieval System (ASRS) is a system for storing library resources using special cost-effective storing techniques, and based on an automated system which is used whenever a resource needs to be retrieved from the storage. The ASRS utilizes an automated retrieval machine and a special integrated software control system to provide fully automated, high density media archiving.

The Automated Remote Storage must be notified each time items are added or removed from the remote storage. Alma sends messages to the remote storage so that the ASRS can update its own database of inventory stored in the remote storage.

Alma sends an Add Item message to the Dematic ASRS when an item is added or moved to a Dematic ASRS location or when its barcode is changed. The Inventory Add (IA) message that Alma sends to the Dematic ASRS contains the following:

- Barcode
- Title
- Location
- Call number
- Author

Additionally, Alma sends a message to the remote storage whenever a request is created, so that the ASRS system can automatically pull the proper bin off the shelf and supply the requested item.

To activate the Dematic ASRS integration, the following conditions must be met:

- An Integration Profile is defined for the Dematic ASRS
- A Remote Storage facility is defined for the Dematic ASRS and is linked to the Integration Profile
- The Dematic ASRS locations are linked to a Remote Storage facility that has been defined for the Dematic ASRS

- The items stored at the Dematic ASRS system belong to one or more dedicated Dematic ASRS locations
- Stunnel is configured to facilitate communications between Alma and the Dematic ASRS

To utilize Dematic ASRS functionality and invoke its configurations, you must perform the following actions:

- Request a Dematic ASRS item (see **Requesting a Dematic ASRS item** on page **143**)
- Update Dematic ASRS inventory (see **Updating Dematic ASRS Inventory** on page **145**)
- Configure the Dematic ASRS (see **Configuring the Dematic ASRS** on page **146**)

Requesting a Dematic ASRS item

To request a Dematic ASRS item, perform the following procedure:

To request a Dematic ASRS item:

1. On the Repository Search page (**Resource Management > Search and Sets > Repository Search**), perform a search for a title or item whose location is connected to remote storage, or whose integration profile has a type of **ASRS Remote Storage**.
2. Click Request to place a request. If an ASRS item is available to fulfill the request, the item's **Process Type = Requested** on the Repository Search page.

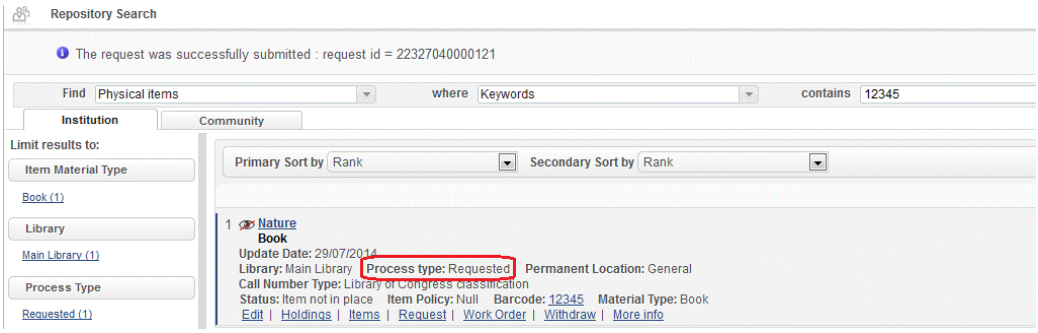


Figure 92: Repository Search Page – Process Type = Requested

The request displays on the Resource Request Monitoring page (**Fulfillment > Resource Requests > Monitor Requests & Item Processes**) with **Workflow Step = Request Communicated to Storage**.

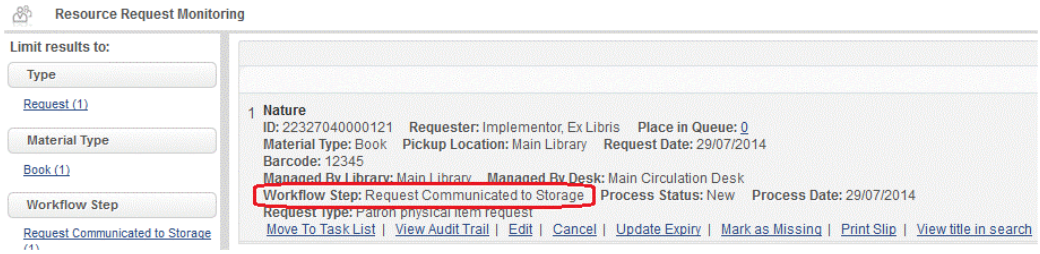


Figure 93: Resource Request Monitoring Page – Workflow Step = Request Communicated to Storage

If the Dematic Interface installed on the ASRS server supports outgoing messages from the ASRS to Alma and the ASRS sends a Request Filled (RF) message response, the **Process Status** on the Resource Request Monitoring page changes to **ASRS Approved**.

NOTE:
Process Status = ASRS Approved displays only when the Dematic ASRS message indicates that the request can be fulfilled and the item can be provided. If the Dematic ASRS system indicates that the request cannot be fulfilled, the request is either sent back to the request queue with the item marked as **Missing**, or is canceled. See the following example.

For example:

If the Dematic interface has been configured to respond with an RF message for every request placed by Alma, the message's Status Code will reflect whether or not the request can be supplied by the Dematic ASRS, and if not, why it cannot be fulfilled.

The **Status Code** field of the RF message indicates whether the request can be fulfilled, as follows:

- If Status Code is **000** – Request can be fulfilled, and ASRS sends the item to Alma
- If Status Code is not **000** – Request cannot be fulfilled and is either sent back to the request queue or is canceled
  - The following Status Codes trigger a **Missing** item: **002**, **003**
  - The following Status Codes indicate that the item cannot be fulfilled but do not trigger a **Missing** item: **006**, **007**

3 When the item arrives at the institution, it is scanned into Alma and is transited (if necessary) and placed on the Hold Shelf until the requesting patron picks up the item.

4 When the patron returns the item, the item's status and process type depend on the **Define as In Transit to Remote Storage at Return** setting, as configured in Remote Storage Configuration:

- If this setting is selected – **Process Type = In Transit to Remote Storage** and **Status = Item Not in Place**.

  When the item arrives at the remote storage location, the **Process Type** is removed and the Dematic ASRS sends an Item Return (IR) message to Alma which changes the **Status** to **Item in Place**.

  Select this setting when the Dematic ASRS can send an Item Return (IR) message.

- If this setting is not selected – When the patron returns the item, **Status = Item in place**.

  When the customer's system does not support sending an Item Return (IR) message from the ASRS to Alma, do not select this setting.

When an ASRS system needs to be automatically updated by Alma with the addition or removal of items from the remote storage facility, the Inventory Remote Storage Update job must be activated (see **Updating Dematic ASRS Inventory**, below).

Updating Dematic ASRS Inventory

You must run the Inventory Remote Storage Update job to update the ASRS with inventory changes.

To run the inventory job to update the ASRS with inventory changes:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), configure the Dematic ASRS integration profile, as described in **Configuring a Dematic ASRS Integration Profile** on page **146**.
2. Click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
3. Select from the following options:

   - To schedule the Inventory Remote Storage Update Job to run automatically, select the interval to run the job in the **Schedule inventory remote storage update job** field, and click **Save**.

     Scheduled jobs are displayed on the Monitor Jobs page, on the Scheduled tab (**Administration > Manage Jobs > Monitor Jobs**), with the following name:

     Inventory Remote Storage Update <Integration Profile Name>

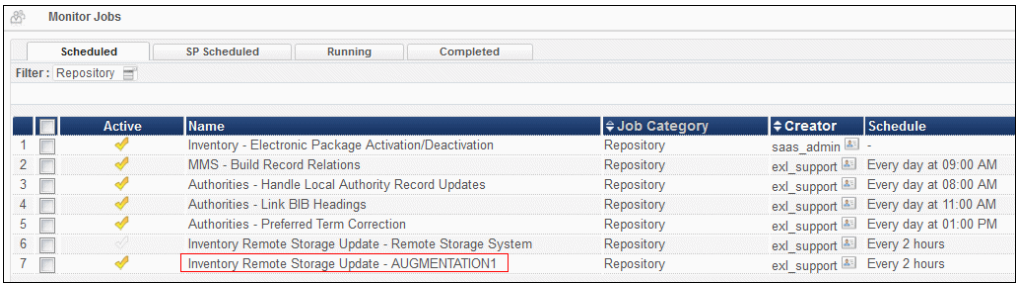


Figure 94: Monitor Jobs Page – Inventory Remote Storage Update Job

- To run the Inventory Remote Storage Update Job manually, click the **Run Inventory Remote Storage Update Job** button.

  The job's output displays on the Job Report page (on the **Monitor Jobs > Completed** tab, select **Actions > Report**).

Configuring the Dematic ASRS

Before requesting a Dematic ASRS item, you must ensure that the ASRS configuration has been properly invoked. This includes:

- **Configuring a Dematic ASRS Integration Profile** on page **146**
- **Configuring Stunnel** on page **148**
- **Configuring Remote Storage** on page **150**
- **Configuring Locations** on page **150**

Configuring a Dematic ASRS Integration Profile

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.

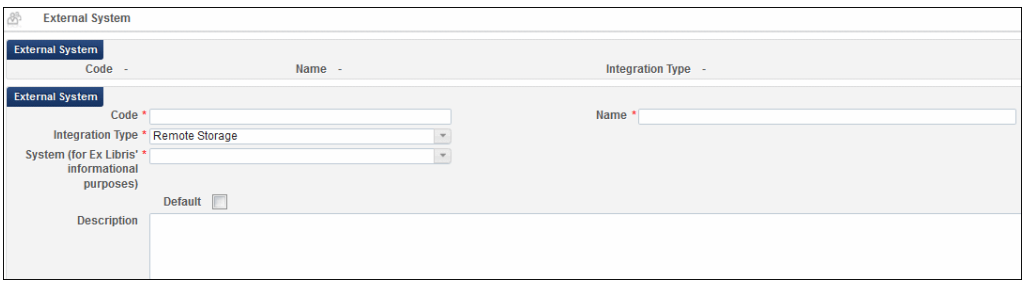


Figure 95: External System Page – Page 1 of Wizard

3 In the **Code** and **Name** fields, enter a code and name for the profile, respectively.

4 In the **Integration type** field, select **Remote Storage**. The **System (for Ex Libris' informational purposes)** field appears.

5 In the **System (for Ex Libris' informational purposes)** field, select **Dematic ASRS**.

6 Click **Next**. The second page of the wizard opens.

Figure 96: External System Page – Page 2 of Wizard

7 In the **Integration type** field, select **Dematic ASRS**. The page refreshes and displays additional fields.

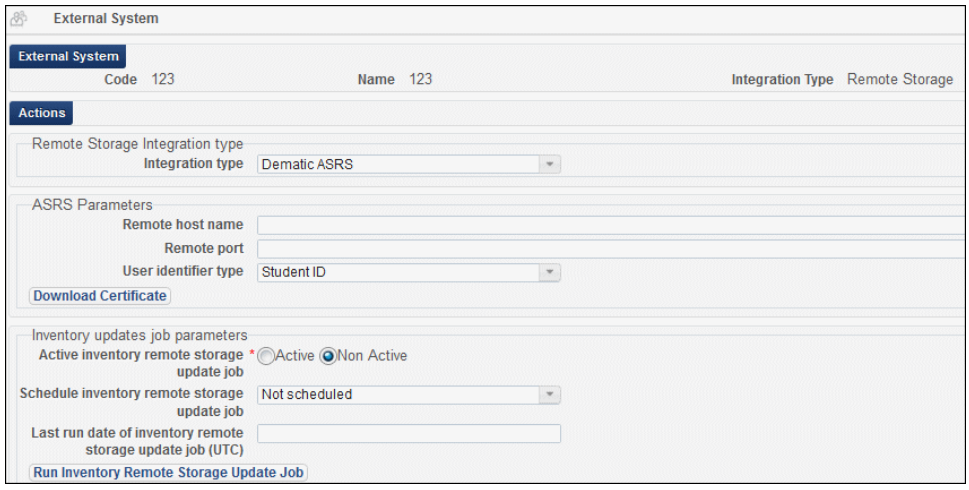


Figure 97: External System Page – Page 2 of Wizard

NOTE:
The **XML/NCIP** option in the **Integration type** field is currently under development.

8 In the **Remote host name** field, enter the Dematic ASRS host name, which is the same value as the hostname in the **Alma Incoming** entry in the Stunnel configuration's **Connect** field.

9 In the **Remote port** field, enter the local port that receives messages from Alma. This value is the same port as in the **Alma Incoming** entry in the Stunnel configuration's **Accept** field.

10 In the **Active inventory remote storage job** field, select **Active**.

11 In the **Schedule inventory remote storage job** field, select the relevant scheduling for the inventory job to run the job automatically.

12 Select from the relevant option to run the Inventory Remote Storage Update job manually (enter a value in the **Schedule inventory remote storage update job** field), or automatically (click the **Run Inventory Remote Storage Update Job** button). For details, see **To run the inventory job to update the ASRS with inventory changes:** on page **145**.

Configuring Stunnel

1 Download Stunnel (https://www.stunnel.org/downloads.html) and install it on the machine on which ASRS is being configured.

2 Edit the Stunnel configuration, as follows:

a Navigate to **Stunnel Menu > Configuration > Edit Configuration**. The configuration page opens.

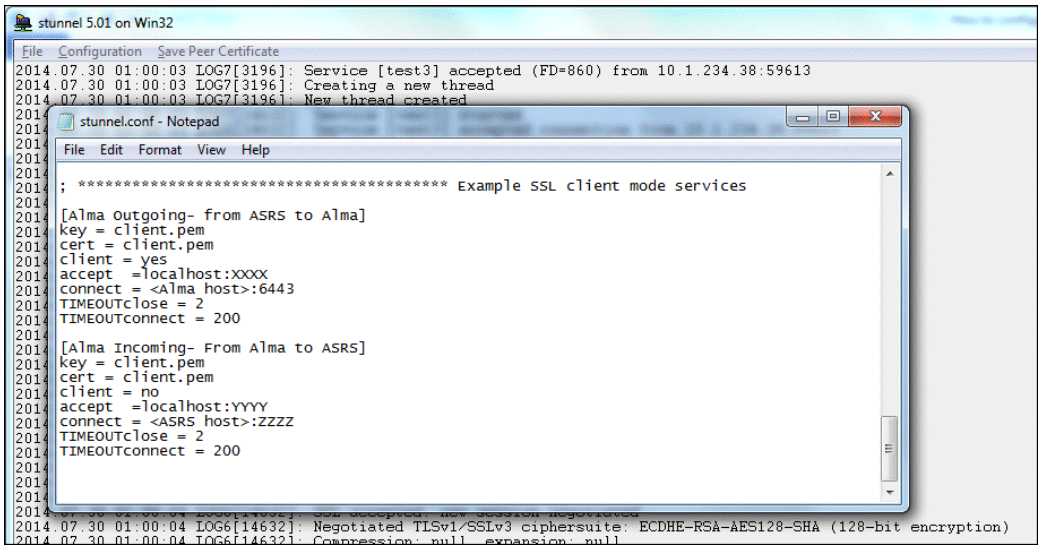


Figure 98: Stunnel Configuration Page

b Configure the parameters as depicted in the image above:

[**Alma Outgoing- from Dematic ASRS to Alma** section]

- **key = client.pem** //File name for the certificate
- **cert = client.pem**

- **client = yes**
- **accept = localhost:XXXX** // Stunnel machine - receive messages from localhost in XXXX
- **connect = <Alma host>:6443** //Alma server - sends the message to Alma in 6443
- **TIMEOUTclose = 2**
- **TIMEOUTconnect = 200**

[**Alma Incoming- From Alma to Dematic ASRS** section]

- **key = client.pem**
- **cert = client.pem**
- **client = no**
- **accept =localhost:YYYY** // Stunnel machine- same port in Integration Profile
- **connect = <ASRS host>:ZZZZ** //Dematic ASRS server
- **TIMEOUTclose = 2**
- **TIMEOUTconnect = 200**

In the above examples, customize the XXXX, YYYY, and ZZZZ ports, as follows:

- **XXXX**: The port to which the Dematic ASRS system sends its messages (Stunnel is listening on this port)
- **YYYY**: The local port that receives messages from Alma
- **ZZZZ**: The local port that receives messages in the ASRS system

NOTE:
The **YYYY** port must be open on the library's firewall.

The following diagram illustrates the information flow from the Dematic ASRS to Alma and back using the Stunnel.

Figure 99: Stunnel ASRS/Alma Flow

3 Download a certificate, as follows:

a On the External System page's Actions tab (**Administration > General Configuration > Configuration Menu > External Systems > Integration Profiles**, select **Actions > Edit** for an Integration Profile), click **Download Certificate**.

b Save the certificate in the Stunnel directory.

4 Reload Stunnel configuration by selecting **Configuration > Reload Configuration** on the Stunnel menu. If configuration is successful, the **Configuration successful** message displays in the Stunnel log.

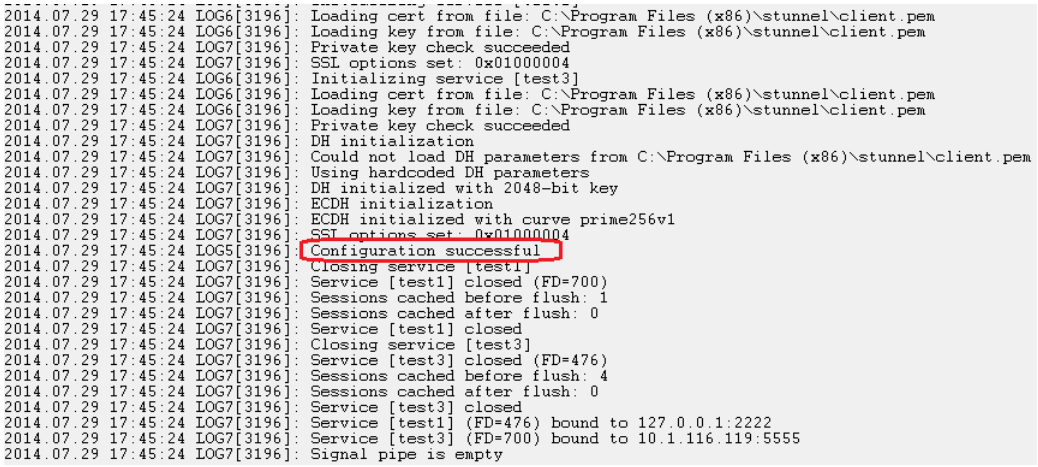


Figure 100: Stunnel Log

Configuring Remote Storage

See **Adding a Remote Storage Facility** in the *Alma Fulfillment Guide*.

Configuring Locations

See **Adding a Physical Location** in the *Alma Fulfillment Guide*.

Self-Check Machines

PERMISSIONS:

To configure a self-check type of integration profile, you must have the following role:

- General System Administrator

To associate a self-check profile with a circulation desk, you must have the following role:

- Fulfillment Administrator

VIDEO:
Learn about Self-Check machines in the *Integration with Self-Service Systems* video (23:24 mins).

Alma receives and acts upon received SIP messages from SIP 2.0 self-check machines and returns responses to these machines. For details on the integration with self check systems, see https://developers.exlibrisgroup.com/alma/integrations/selfcheck

To configure the communication between Alma and a self-check machine, you must perform the following actions:

1 Configure a self-check type of integration profile (see the procedure below).

2 Associate the self-check profile with a circulation desk (see the procedure below). The self-check machine will be able to provide services only to locations that are serviced by this circulation desk. (Note that a circulation desk, if defined as a primary circulation desk, can service other libraries – see **Configuring Fulfillment Relationships** in the *Alma Fulfillment Guide*).

NOTE:
If your institution is in the implementation phase, you cannot perform this step. Contact your Ex Libris project manager to perform this for you.

3 Configure a secure transmission between Alma and the self-check machine, following the instructions located in the Ex Libris developers network: https://developers.exlibrisgroup.com/alma/integrations/selfcheck/stunnel. These procedures should be performed after you configure a self-check integration profile in Alma.

IMPORTANT:
A separate self-check profile and corresponding certificate (see Step **5**) are required for each group of self-check machines that have different capabilities (for example, one for machines that support fee payments and another for machines that support only check-in/checkout). A separate profile is also mandatory for each machine that is linked to a separate circulation desk, as each profile can be linked to only one circulation desk. Note that the certificate you obtain is valid as long as the integration profile exists, regardless of any changes made to the profile.

NOTE:
The format of dates for self-check machine messages is determined by the `system_time_format` parameter (**Administration > General**

Configuration > Configuration Menu > Other Settings). If this parameter contains the z symbol, the time zone is included in the date sent in self-check machine messages.

To configure a self-check type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. In the **Code** and **Name** fields, enter a code and name (respectively) for the profile you are defining.
   b. From the **Integration type** drop-down list, select **Self-check**.
   c. In the **System (for Ex Libris' informational purposes)** field, indicate the type of self-check system with which you are integrating. Note that this is now mandatory.
   d. Optionally, in the **Description** field, enter a description of the integration you are configuring

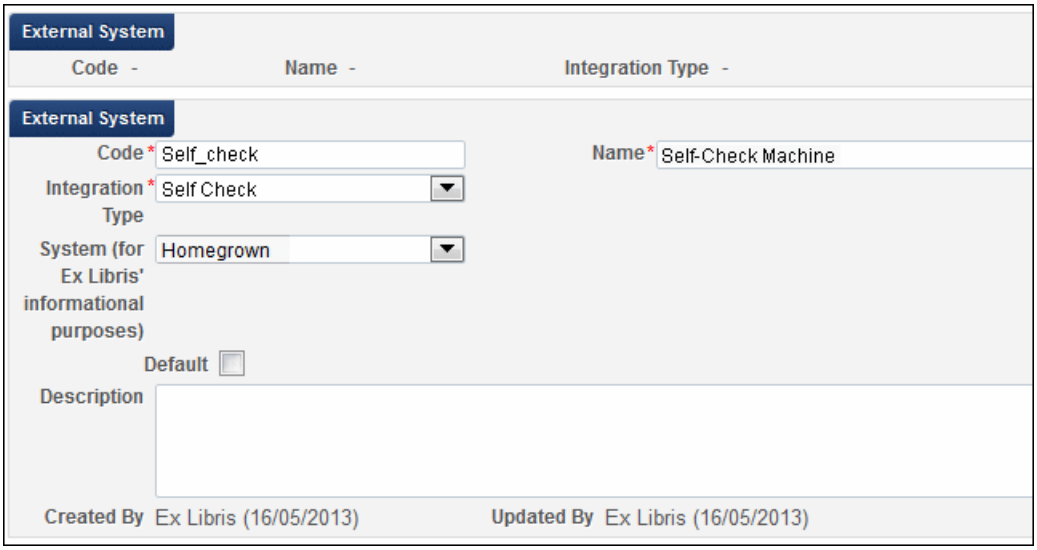


Figure 101: Self-Check Machine Integration Profile Definition – Page 1

4. Click **Next**. The second page of the wizard opens.
5. Under **General Information**, perform the following actions:
   - In the **SC Identifier** field, enter any string.

- Select whether you want the self-check machine to send the following to Alma:
  - Error correction – Select **Yes** for Alma to send/receive sequence numbers and checksums as part of the relevant messages. If this capability is enabled on the self-check machine, it must be enabled here as well. If you do not want to use this option, select **No** and turn it off also on the self-check machine.
  - Alert messages
  - Item transfer messages (not currently supported)
- From the **SC language** drop-down list, select the language in which Alma and the self-check machine communicate.
- In the **Retries allowed** and **Timeout period** fields, enter the number of times you want Alma or the self-check machine to try to send a message following a failure of the first message to reach its destination, and the amount of time, in seconds, between each retry.

NOTE:
Note that the recommended number of retries allowed is 2-5 and the recommended timeout period is 5-7.

- Select the actions to be supported (**Yes**/**No**) between Alma and the self-check machine. (Note that **Return message** is not currently supported.)

NOTE:
If you are using a 3M self-check machine, the **checkin** option must be set to **Yes**, due to a 3M requirement for enabling initial communication. If you do not want the check-in action to be allowed, ensure that you block it when configuring your 3M self-check machine.

- From the **Extension type** drop-down list, select **Extended fines and fees (Extended check-in** is not currently supported) to enhance your self-check messages (SIP2) with additional fields. This option includes the following elements for each open charge in the SIP2 Patron Information Response message and allows self-check users to view this information (if available) when requested:
  - EB - Barcode of the item that is linked to the charge (such as for an overdue/lost item)
  - ET - Title of the item that is linked to the charge
  - EC - Cash transaction type code
  - ED - Cash transaction type description
  - EF - Sum
  - EK - Fee ID

- BZ - Payment transaction number

NOTE:
Not all self-check machines support this option. This option should not be selected for self-check machines that handle only loans and returns (and not payment).

- From the **Item Identifier** drop-down list, select the type of ID—**Barcode**, **Call number**, or **Item ID**—used to match physical items when incoming messages contain item IDs.
- Under **Authentication required**, select **Yes** if you want the patron to be required to supply a password.
- For a secure TCP connection, click **Download Certificate** and save it so that it can be used when configuring Stunnel (see Step 3 in the introductory section above).

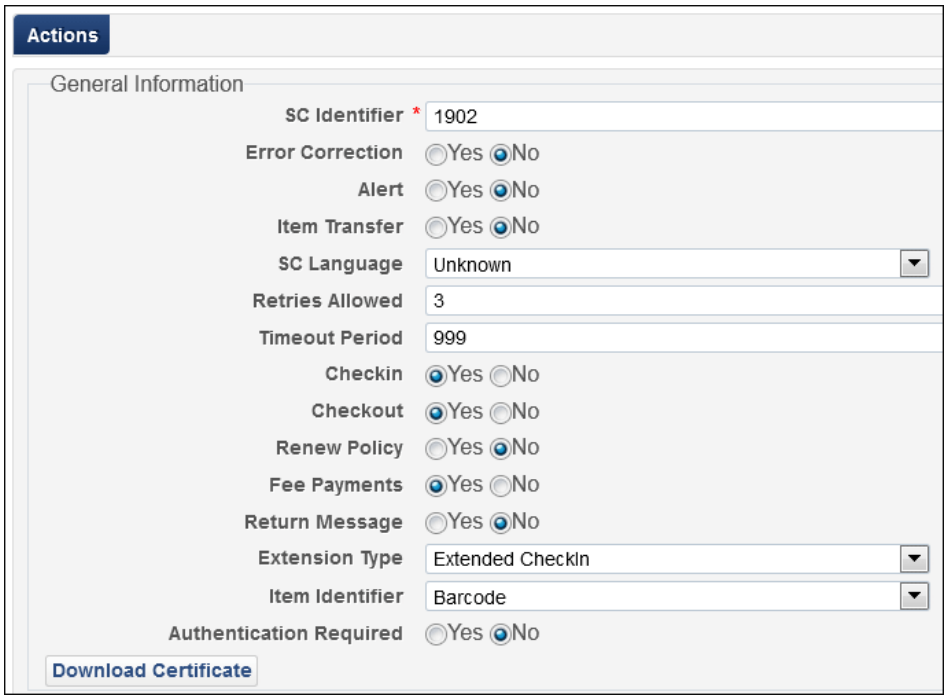


Figure 102: Self-Check Integration Profile Definition – Page 2

6 Click **Save**. The profile you configured appears in the Integration Profile List.

To associate a self-check profile with a circulation desk:

1 On the Fulfillment Configuration page (**Fulfillment > Fulfillment Configuration > Configuration Menu**), select the library whose circulation desk you want to associate with the self-check profile from the **You are**

configuring drop-down list at the top of the page, and then click **Circulation Desk** under **Library**. The Circulation Desks List page opens.

Figure 103: Circulation Desks List Page

2 Select **Actions > Edit** for the circulation desk you want to associate with the previously defined self-check profile, or click the **Add Circulation Desk** button to create a new circulation desk with which you want to associate the self-check profile.

3 On the Circulation Desk – General Information page, under **Self-Check Information**, select the **Has self-check** check box and select a previously defined self-check profile from the **Integration profile** drop-down list. The password for the self-check machine is automatically listed in the **Terminal password** field. (For information on the other fields on this page, see **Configuring Circulation Desks** in the *Alma Fulfillment Guide*.)

Figure 104: Self-Check Information Section

4 Click **Save** to store your changes to the circulation desk.

SMS Communications

PERMISSIONS:

To configure SMS communications, you must have the following role:

- General System Administrator

As part of a library's processes, Alma produces various notifications for the library's users. The notifications may be sent to a user by email, or printed. Alternatively, some of the notifications may be sent as SMS messages to the user's mobile phone. Using SMS messages as the notification channel is now quite popular, as this has become an efficient and effective way in which to contact users.

For details on configuring SMS communications, see https://developers.exlibrisgroup.com/alma/integrations/sms

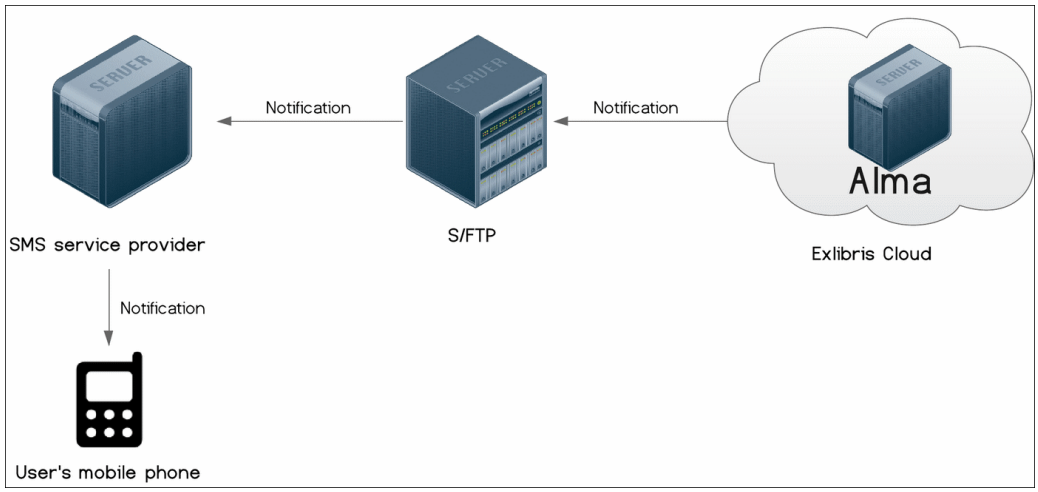


Figure 105: SMS Notifications - Workflow Diagram

SMS communication is enabled for the following notification types:

- Item on Hold Shelf
- Courtesy Letters
- Overdue Notice Letters
- Change Due Date
- Request Cancellation
- Lost Loan
- Lost Loan Notification
- Borrowing Activity

SMS messages are sent to users only if preferred SMS numbers are indicated.

To configure SMS communication with patrons, you must perform the following actions:

1 Configure an S/FTP connection to be used by Alma and the SMS service provider (see **Configuring S/FTP Definitions** in the *Alma Administration Guide*).

NOTE:
It is also recommended that you test your S/FTP connection by clicking the **Test FTP** button. You should receive messages indicating that the FTP upload, download, and delete were successful. If you did not receive such messages, resolve your S/FTP connection issues before continuing.

2 Configure an SMS type of integration profile (see below).

3 Ensure that the SMS channel of notification is activated (see below).

4 Define the format of the notification (see https://developers.exlibrisgroup.com/alma/integrations/sms).

To configure an SMS type of integration profile:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.

2 Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.

3 Perform the following actions on this page:

- **a** From the **Integration type** drop-down list, select **SMS Communication**.
- **b** From the **S/FTP connection type** drop-down list, select the name of the FTP connection that you previously defined.
- **c** Optionally, enter a description of the integration you are configuring.

NOTE:
The name and code are defined for you by the system (both as **SMS**).

Figure 106: SMS Communication Integration Profile Definition – Page 1

4 Click **Next**. The second page of the wizard opens.

5 Under **Actions**:

- **a** Select whether you want the profile to be active. Note that only active profiles can be run.
- **b** In the **Sub-directory** field, enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during S/FTP connection configuration and you enter `SMS` in this **Sub-directory** field, the invoices are exported to the `Alma/SMS` directory.

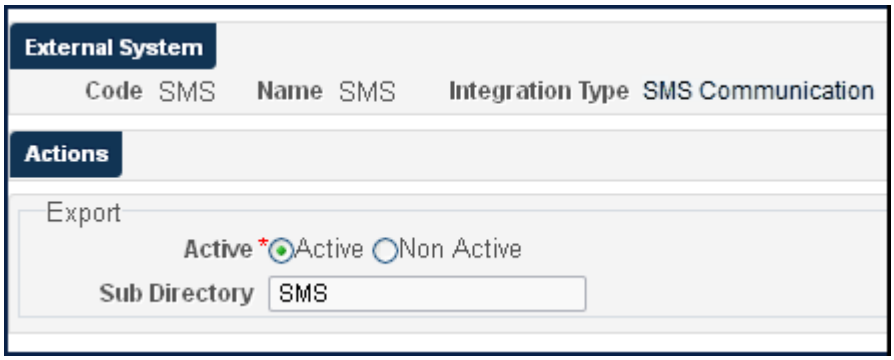


Figure 107: SMS Communication Integration Profile Definition – Page 2

6 Click **Save**. The profile you configured appears in the Integration Profile List.

NOTE:
You can create only one SMS Communication integration profile per institution.

To ensure that the SMS channel of notification is activated:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Letter Activity** under **General Configuration**. The Letter Activity Mapping Table page opens.

2 Ensure that the **FulPlaceOnHoldShelfLetter** type with the **SMS** channel is enabled (the check mark to the left of the type is yellow).

Figure 108: FulPlaceOnHoldShelfLetter Type with SMS Channel Enabled

If it is not enabled (the check mark is gray), click the **Customize** button, click the check mark so that it becomes yellow, and then click **Save**.

NOTE:
There is also a **FulPlaceOnHoldShelfLetter** type with the **EMAIL** channel. This letter type is enabled by default; users who receive hold shelf notification by SMS will also receive notification by email, unless you disable this setting.

5

User Management

This section includes:

Student Information Systems

PERMISSIONS:

To configure a Student Information Systems (SIS) profile, you must have the following role:

- General System Administrator

After a zip file containing an XML file with all the users is placed by the Student Information System (SIS) at a defined S/FTP location, Alma fetches the file, parses the information, and uploads the users (of type External) according to the parameters defined in the SIS integration profile.

Users that owe the library money or contain certain blocks may also be exported from Alma to the SIS to enable blocking these users from certain activities until they clear their outstanding obligations to the library.

For a detailed overview of user management in Alma, see https://developers.exlibrisgroup.com/alma/integrations/user-management. Note that your external authentication system must be up and running before you can begin Alma implementation.

For details on SIS integration, see https://developers.exlibrisgroup.com/alma/integrations/user-management/sis

VIDEO:

For more information on uploading users into Alma, see the *Uploading Users into Alma* video (20 mins). Note that you must be logged in to the Learning Center to view this video.

To configure a User type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. Enter a code and name for the profile you are defining.
   b. From the **Integration type** drop-down list, select **Users**.
   c. From the **S/FTP connection type** drop-down list, select the name of the FTP connection that you previously defined.
   d. Indicate the type of student information system with which you are integrating (for Ex Libris' informational purposes). Note that this is mandatory.
   e. Optionally, enter a description of the integration you are configuring.

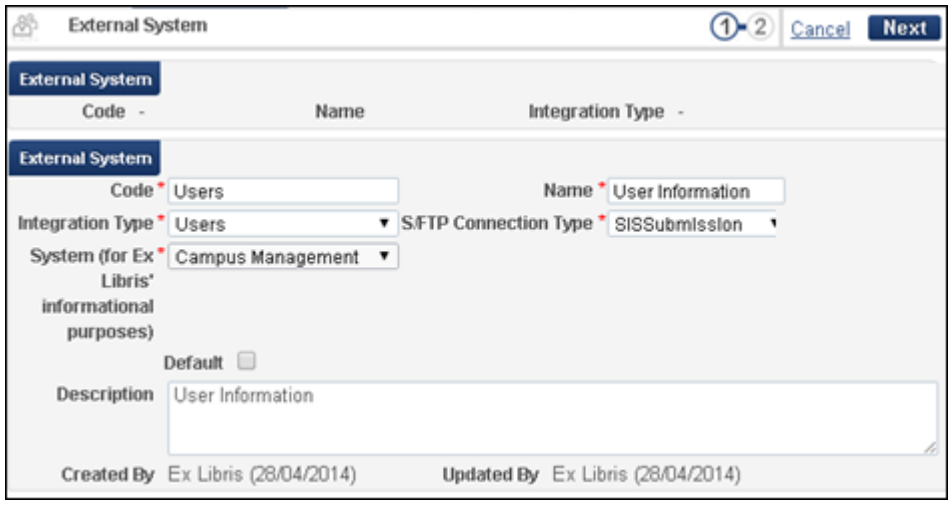


Figure 109: Users Integration Profile Definition – Page 1

4. Click **Next**. The second page of the wizard opens.

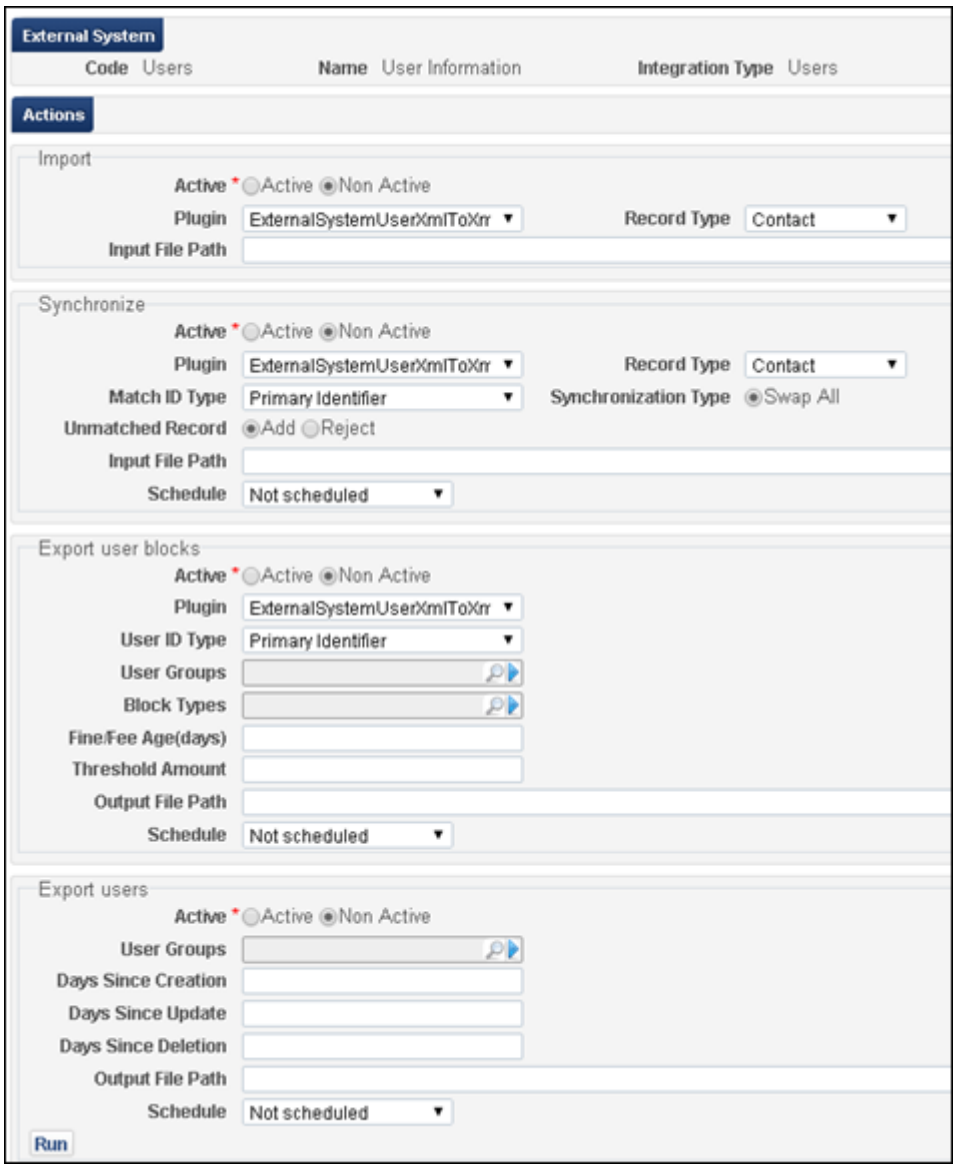


Figure 110: Users Integration Profile Definition – Page 2

5 Under **Actions**, configure the following integration parameters:

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
Import (to be used for the initial import of users that have not been loaded to Alma)	Active/Inactive	Indicates whether or not the job is active. If the job is active, it will run according to the selected scheduling option. If it is inactive, it will not run.
	Plugin	The method of conversion to be used to transform input files of different formats to input that can be recognized by Alma.
	Record type	The type of user record to create in Alma: **Contact**, **Public**, or **Staff**. For more information on selecting the record type, see https://developers.exlibrisgroup.com/alma/integrations/user-management/sis/synch.
	Input file path	Enter a subdirectory of the path specified when creating the secure FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during secure FTP connection configuration and you enter `SIS_import` in the **Input file path** field, the SIS files are imported to the `Alma/SIS_import` directory (under the root FTP directory).

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
	Create Sample File (available in the Actions tab, when editing an existing profile)	Click this button, select an existing user, and click **Create** to create a new user XML file from an existing user. This enables you to preview the way in which a user XML file should be structured. **NOTE:** You can also view a sample XML file on https://developers.exlibrisgroup.com/alma/apis/xsd/external_sys_user.xsd.

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
Synchronize (to be used for the ongoing synchronization of existing Alma users)	Active/Inactive	See the above explanation.
	Plugin	See the above explanation.
	Record type	See the above explanation.
	Match ID type	Select the predefined unique identifiers in the system as the identifiers with which you want to match existing Alma users. For detailed information on match IDs, see https://developers.exlibrisgroup.com/alma/integrations/user-management/sis/synch.
	Synchronization type	This is automatically set to **Swap all**, which means that all existing user records will be replaced by matching incoming user records. For detailed information on the synchronization workflow, see https://developers.exlibrisgroup.com/alma/integrations/user-management/sis/synch.
	Unmatched record	Specify whether Alma will add a new user record if it has failed to find a matching record, or reject the incoming record if no match is found for it. By default, the records are added.
	Input file path	See the above explanation.
	Schedule	Select one of the scheduling options that are predefined by an Ex Libris administrator. If you select **Not scheduled**, the job will run only when you manually run it. For details, see the procedure below.
Export User Blocks	Active/Inactive	See the above explanation.
	Plugin	See the above explanation.
	User ID type	See the above explanation for **Match ID type**.

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
	User groups	Select the user group(s) to which the users that you want to export belong. If no value is specified, users belonging to any of the configured user groups are exported.
	Block types	Select the previously defined block types (see **Configuring Block Preferences** in the *Alma Fulfillment Guide*) whose associated users you want to export. If no value is specified, users matching any of the configured block types are exported.
	Fine/fee age (days)	The users (of the selected groups and with the selected block types) whose fines/fees are older than the stipulated number of days are exported. By default, this number is 0.
	Threshold amount	The users (of the selected groups and with the selected block types) whose fines/fees exceed the stipulated threshold are exported. By default, the threshold amount is 0.
	Output file path	Enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during S/FTP connection configuration and you enter `SIS_export` in the **Output file path** field, the SIS files are exported to the `Alma/SIS_export` directory (under the root FTP directory).
	Schedule	See the above explanation.

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
Export Users	Active/Inactive	See the above explanation.
	User groups	Browse to select one or more user groups to identify the patron records to be considered for export.
	Days since creation	Use this option to set a condition, in number of days, that identifies when to include a patron record in the export. This parameter indicates the number of days since the patron record was created in Alma. The patron record that meets this criterion must also be a member of one of the user groups selected in the User Groups parameter in order for the patron record to be exported. For example, if you specify 10 here, patron records that were created in the past 10 days are included in the export.
	Days since update	Use this option to set a condition, in number of days, that identifies when to include a patron record in the export. This parameter indicates the number of days since the patron record was updated in Alma (see example in **Days since creation**). The patron record that meets this criterion must also be a member of one of the user groups selected in the User Groups parameter in order for the patron record to be exported.

Table 16. Import/Synchronize/Export User Blocks/Export Users Fields

Section	Field	Description
	Days since deletion	Use this option to set a condition, in number of days, that identifies when to include a patron record in the export. This parameter indicates the number of days since the patron record was deleted in Alma (see example in **Days since creation**). The patron record that meets this criterion must also be a member of one of the user groups selected in the User Groups parameter in order for the patron record to be exported.
	Output file path	Enter a subdirectory of the path specified when creating the secure FTP connection. For example, if you specified Alma in the Sub-directory field during secure FTP connection configuration and you enter SIS_Export in the Output File Path field, the files are exported to the Alma/SIS_Export directory (under the root FTP directory).
	Schedule	See the above explanation.

NOTE:
The Online Import functionality is currently being developed and should not yet be used.

6 Click **Save**. The profile you configured appears in the Integration Profile List.

NOTE:
When the export users job is run based on the integration profile you have created, the export process creates an XML file in the format that is used by the Import and Synchronize actions (refer to the Import section and Synchronize section defined under the Actions section on the Actions tab of the integration profile you saved). An XSL file may be used to alter the format. The XSL file, `../xsl/letters/ExportUserLetter.xsl` (with the description export user letter xsl), is available and configurable in Customize Letters (**Administration > General Configuration > Configuration Menu > General Configuration**).

To manually run and monitor an SIS import/export:

In the **Import/Export** section of the **Actions** tab, ensure that the **Active** radio button is selected and click the **Run** button.

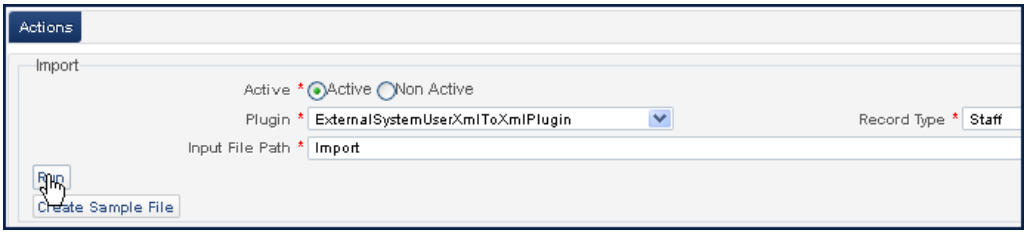


Figure 111: Example - Running an Import

The job runs as soon as the system can accommodate it. A file that is imported is marked so that it is not run again by the system. If email notifications are enabled in Alma, you receive notification via email of an import and the system sends notifications to the SIS of an export.

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate User profile on the Integration Profile List page. For example, the following figure shows an import job that completed successfully, processing one user record.

Figure 112: Import Job History

NOTE:
The status **Completed Successfully** does not mean that all files were imported or exported successfully. Rather, it means that the job completed without error.

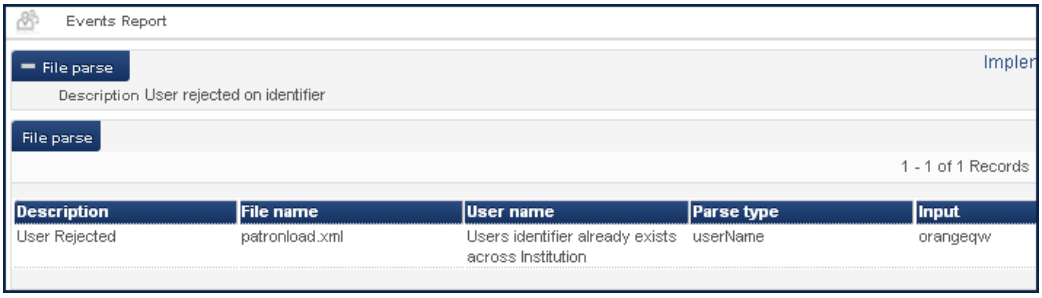
You can use the **Actions** button on this page to access a more detailed job report (**Actions > View**), events that occurred during the job processing (**Actions > Events**), and a report of errors (**Actions > Error reporting**).

You can view a newly imported user's details in the User Management area. The user's account type is **External**.

Figure 113: Imported User

NOTE:
If you import a user whose primary identifier (`userName` tag in the XML) matches a primary identifier of one of the existing users, a **User rejected**

on identifier event is generated.



To manually run and monitor an SIS synchronization:

In the **Synchronize** section of the **Actions** tab, click the **Run** button.

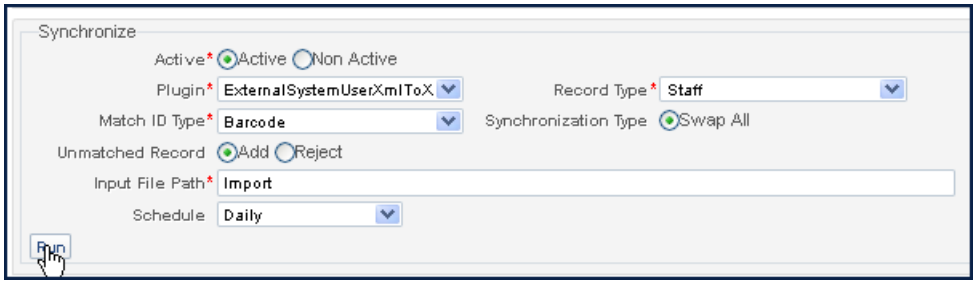


Figure 114: Running a Synchronization

The synchronization job runs as soon as the system can accommodate it. The file that is synchronized is marked so that it is not run again by the system. If email notifications are enabled in Alma, you receive notification via email.

As with the import job, you can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate User profile on the Integration Profile List page. You can then use the **Actions** button on the Job History page to access a more detailed job report (**Actions > View**), events that occurred during the job processing (**Actions > Events**), and a report of errors (**Actions > Error reporting**).

NOTE:

The status **Completed Successfully** does not mean that all files were synchronized successfully. Rather, it means that the job completed without error.

For more information on the synchronization process, see https://developers.exlibrisgroup.com/alma/integrations/user-management/sis/synch.

Bursar Systems

PERMISSIONS:

To configure a bursar publishing profile, you must have the following role:

- General System Administrator

As part of a library's processes, patrons can be charged with various fines and fees. For example, if a patron returns a loaned book after its due date, the patron is charged for each day following the due date. For details, see **Configuring Fines/Fees Behavior** in the *Alma Administration Guide*.

Patrons can be charged fees for various types of activities, such as signing up for a course, extra education services, and so forth. Thus, many institutions handle patron-related charges in a dedicated bursar system. This can be the institution's ERP system or a system that is in charge of patron-related finance. Institutions export fine and fee information from Alma to the bursar system. Exported fines and fees are considered closed in Alma, since they are handled outside of the library's scope.

For details, see https://developers.exlibrisgroup.com/alma/integrations/bursar

To configure a bursar type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add External System** button. The first page of the integration profile wizard opens.
3. Perform the following actions on this page:
   a. Enter a code and name for the profile you are defining.
   b. From the **Integration type** drop-down list, select **Bursar**.
   c. From the **S/FTP connection type** drop-down list, select the name of the FTP connection that you previously defined.
   d. Indicate the type of bursar system with which you are integrating (for Ex Libris' informational purposes). Note that this is now mandatory.
   e. Optionally, enter a description of the integration you are configuring.

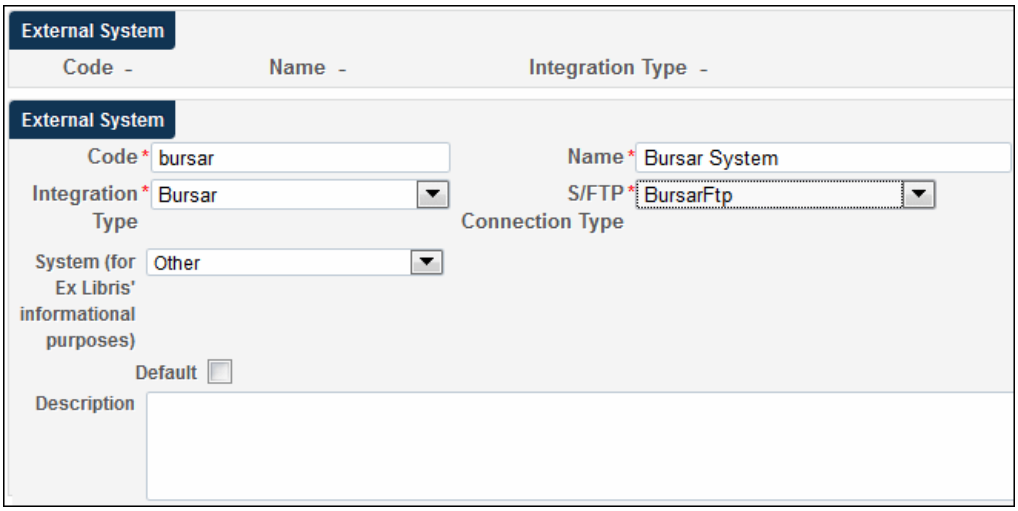


Figure 115: Bursar Integration Profile Definition – Page 1

4 Under **Actions**, configure the following integration parameters:

Table 17. Bursar Integration Profile Parameters

Field	Description
Active (Required)	Select whether you want the integration profile to be active or non-active. Note that only active profiles can be run. By default, the **Non-active** option is selected.
Plugin	The out-of-the-box plug-in to be used.
Time before export (days)	The amount of time, in days, that you want Alma to wait before exporting the fines and fees to the bursar system. If this field is left blank, Alma exports the fine and fee information immediately after it is created.
User identifier type	The identification type that will be used to match users when a file contains a user ID. Select one of the options predefined by an administrator.
User groups	Click the **Browse** icon to select the user groups whose fine and fee information is to be exported. If this field is left blank, Alma exports the fine and fee information for all user groups.
Fine/Fee types to export	Click the **Browse** icon to select the types of fines/fees to export. When this field is entered, only fines/fees of the specified types are exported.

Table 17. Bursar Integration Profile Parameters

Field	Description
Institutional fine/fee	Select whether you want the fines and fees of the institution to be exported to the bursar system. **NOTE:** In order to receive credits, you must select **Yes**.
Library fine/fee	Click the **Browse** icon to select the libraries whose fine and fee information is to be exported. If this field is left blank, Alma does not export any library fine/fee information.
Output file path	Enter a subdirectory of the path specified when creating the S/FTP connection. For example, if you specified `Alma` in the **Sub-directory** field during S/FTP connection configuration and you enter `bursar` in the **Export file path** field, the fine/fee information is exported to the `Alma/bursar` directory (under the root FTP directory).
Schedule	Select one of the scheduling options that are predefined by an Ex Libris administrator.

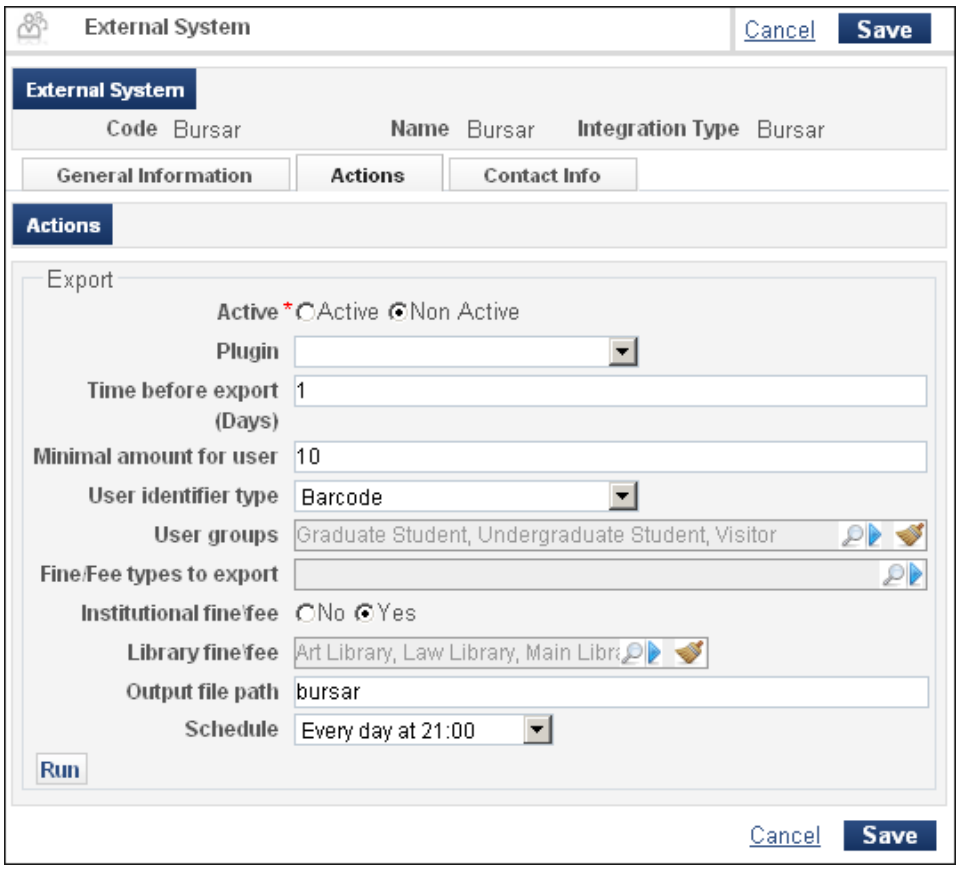


Figure 116: Bursar Integration Profile Definition – Page 2

5 Click **Save**. The profile you configured appears in the Integration Profile List.

To manually run and monitor the bursar export job:

On the Integration Profile List page, select **Actions > Edit** for the bursar profile you defined, click the **Actions** tab, ensure that the **Active** radio button is selected, and then click the **Run** button.

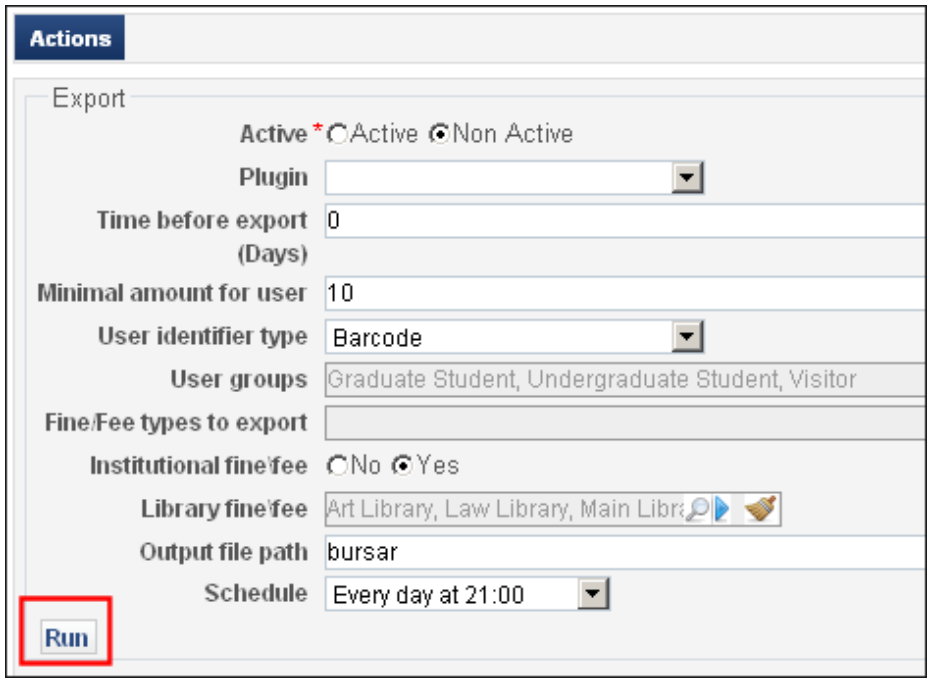


Figure 117: Running the Bursar Export Job

The job runs as soon as the system can accommodate it. If email notifications are enabled in Alma, you receive notification via email.

You can view the status of the job, the number of files processed, and other data by selecting **Actions > Job history** for the appropriate bursar profile on the Integration Profile List page. For example, the following figure shows a job that completed successfully, processing one file.

Job ID	Status	User	Time Started	Time Ended	Files Processed	Files Failed	
34953450000121	Completed Successfully	admin1	2012-07-12 00:55:20	2012-07-12 00:55:20	1	-	Action

Figure 118: Export Job History

NOTE:
The status **Completed Successfully** does not mean that records were exported successfully. Rather, it means that the job completed without error.

You can use the **Actions** button on this page to access a more detailed job report, including statistics on the number of records, users, and fines/fees processed (**Actions > View**), events that occurred during the job processing (**Actions > Events**), and a report of errors (**Actions > Error reporting**).

6

General

This section includes:

LDAP Support

PERMISSIONS:

To configure an LDAP type of integration profile, you must have the following role:

- General System Administrator

Alma Lightweight Directory Access Protocol (LDAP) support shares similar characteristics with other Ex Libris LDAP-supported products while providing user name mapping specific to Alma.

For a detailed overview of Alma LDAP support, see https://developers.exlibrisgroup.com/alma/integrations/user-management/ldap

To configure an LDAP type of integration profile:

1. On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.
2. Click the **Add External System** button. The first page of the integration profile wizard opens.

3 Perform the following actions on this page:

a Enter a name and code for the LDAP profile you are defining.

b From the **Integration type** drop-down list, select **LDAP**.

c Indicate the type of LDAP system with which you are integrating (for Ex Libris' informational purposes). Note that this is now mandatory.

d Optionally, enter a description of the integration you are configuring.

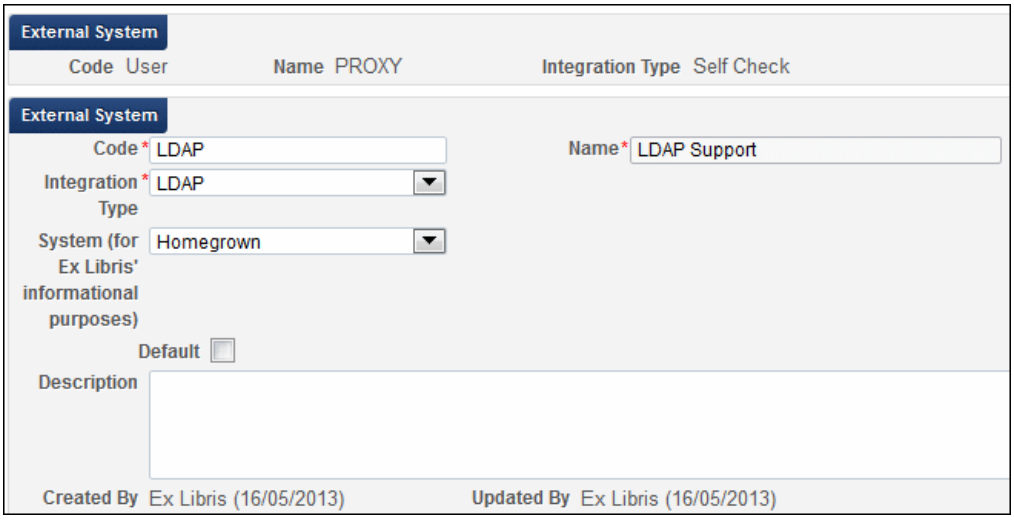


Figure 119: LDAP Profile – Page 1

4 Click **Next**. The second page of the wizard opens.

5 Under **Actions**, enter the LDAP authentication configuration parameters specific to your institution for the LDAP server interaction, as described in the following table.

Table 18. LDAP Integration Profile Configuration Parameters

Field	Description
Active	Select this option to indicate that LDAP is active and available for use.
Host	Enter the host name of the remote LDAP server through which LDAP is accessible.
Port	Enter the port for the remote LDAP server.
Use secure connection	Select this check box to use the SSL protocol to communicate with the LDAP server. **NOTE:** This is now the only supported option.

Table 18. LDAP Integration Profile Configuration Parameters

Field	Description
Use TLS	Select the check box to convert the existing connection to use Transport Layer Security (TLS), which provides an encrypted connection. **NOTE:** This requires LDAP version 3 or later.
Connection timeout	Specify your preference for the timeout value in milliseconds. The default value is 60000 – one minute for the connection timeout.
Initial bind DN	Enter the full DN (distinguished name) for the initial bind.
Initial bind password	Enter the DN password for the initial bind.
DN for binding before each search	Use this parameter to specify the DN when you want to use dynamic password binding instead of a hard-coded password for the initial bind.
Convert password from UTF to charset	Leave this field empty.
Response encoding	Enter UTF8 if response encoding is required. This setting is used to encode the LDAP response before sending it back to the calling application. The only possible value is UTF8.
Search base 1 (through Search base 5)	Enter the full path search in the LDAP directory tree to the user. The system searches the LDAP tree to locate the user's record based on the **Search base** and **Search filter**. **NOTE:** The **Search base** and **Search filter** parameters can be repeated to search in more than one tree. If the results of the Search base/Search filter are not unique (or a zero-size result), the search step is repeated for the next provided Search base/ Search filter.
Search filter 1 (through Search filter 5)	Enter the parameter by which you want to filter the results to return only one object. The system searches the LDAP tree to locate the user's record based on the **Search base** and **Search filter**. (See the note above.)

Table 18. LDAP Integration Profile Configuration Parameters

Field	Description
Map user name	Enter the name of an LDAP attribute, such as **CN**. This attribute is mapped by Alma to serve as the user name. **NOTE:** The Alma user name must match one of the LDAP identifiers, such as **CN**. If it does not, the authentication succeeds but the user is not allocated any permissions/roles.

6 Click **Save**. The profile you configured appears in the Integration Profile List.

SAML-Based Single Sign-On

PERMISSIONS:

To configure a SAML type of integration profile, you must have the following role:

- General System Administrator

Alma supports the SAML 2.0 Web Browser SSO profile. This enables Alma to exchange authentication and authorization information.

For a detailed overview of SAML-based SSO, see https://developers.exlibrisgroup.com/alma/integrations/user-management/saml

To configure a SAML type of integration profile:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page opens.

2 Click the **Add External System** button. The first page of the integration profile wizard opens.

3 Enter the external system information, select SAML as the integration type, and click **Next**. The following is displayed:

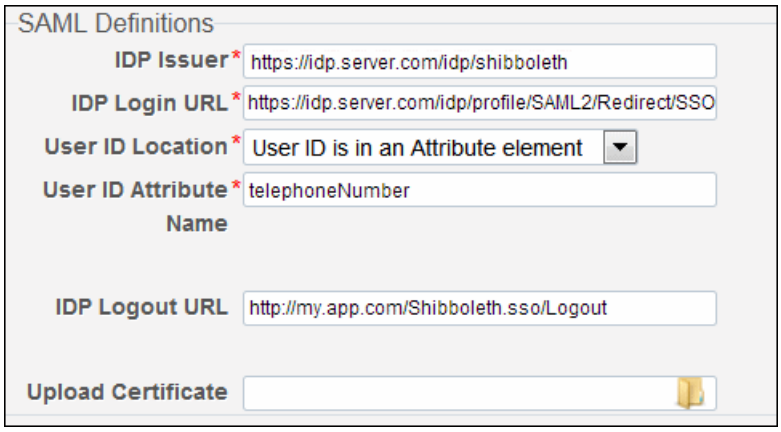


Figure 120: SAML Export Section Settings

4 Enter the settings for the **IDP issuer**, **IDP login URL**, **User ID attribute name**, and **IDP logout URL**. For more information on these fields, see **Defining the SAML Profile** in the *Alma Administration Guide*.

5 Select the certificate to upload (see **Certificate Management** in the *Alma Administration Guide*).

6 Click **Save**.

OpenAthens LA Proxy Support

PERMISSIONS:

To configure proxy support for OpenAthens LA (Local Authentication), you must have the following role:

- General System Administrator

Alma provides support for the OpenAthens LA (Local Authentication) proxy server.

To configure Alma for the OpenAthens LA proxy server:

1 On the General Configuration page (**Administration > General Configuration > Configuration Menu**), click **Integration Profiles** under **External Systems**. The Integration Profile List page displays.

2 Click the **Add Integration Profile** button. The first page of the integration profile wizard opens.

3 For Integration Type, select **Resolver Proxy**.

4 Enter a name and click **Next**.

5 In the Proxy Definitions section, you can now select **OpenAthens** from the Proxy server type drop-down list.

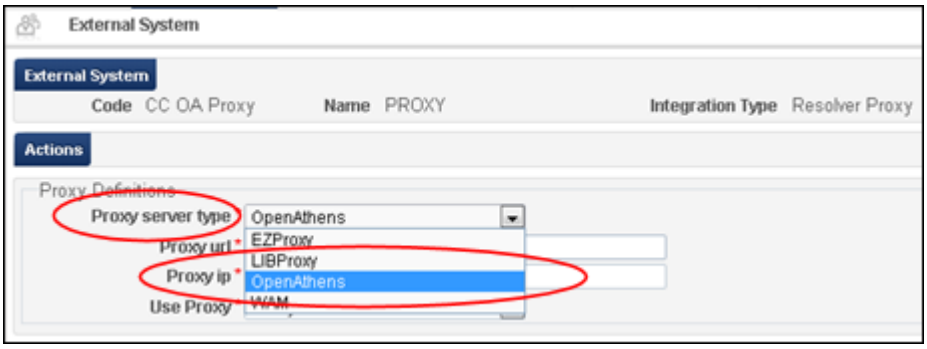


Figure 121: OpenAthens LA Proxy Server Type Option

6 Complete the remaining proxy options (see **Resolver Proxies** on page **121**) and click **Save**.

7

bX

To work with bX in conjunction with Alma, you must define the link resolver base URL in your bX My Profile to point to Alma.

- If you have not yet registered for bX, perform a bX registration as described in the *bX Registration Guide*. Ensure that you configure the link resolver base URL as described below.
- If you have already registered for bX:

1 Copy the license key from the email that you received after registration and paste it into the end of the following URL:

`https://registration.service.exlibrisgroup.com/customer/management/customer.do?licenseToken=<key>`

NOTE:
If you did not receive this email, contact your Ex Libris bX representative.

2 On the Main Menu page, click **My Client Applications**. The View Client Applications page opens.

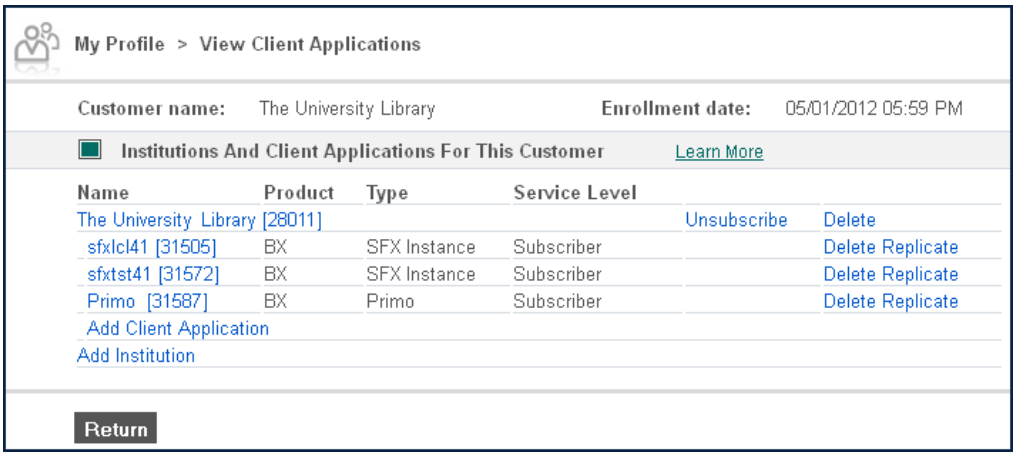


Figure 122: View Client Applications Page

3 Click the name of the relevant Primo application. The View Client page opens.

4 Click **Edit Client Attributes**. The Edit Client Instance page opens.

5 Modify the **Link resolver base URL** field as required. Ensure that you use the following syntax:

```
http://<PRM_SERVER_URL>/openurl/<PRIMO_INSTITUTION_CODE>/
<PRIMO_INSTITUTION_SERVICES_PAGE>
```

For example:

Figure 123: Example of Link Resolver Base URL

6 Click **Save**.

NOTES:

- If you want to add a new institution and/or client application, following the instructions provided in the *bX Registration Guide*. Ensure that you define the link resolver base URL as described above.
- There are no actions that need to be performed in Alma in order to configure the bX-Alma integration.